

## 7. Appendices



## 7.1. Stories

This thesis is as much about what it is I do and have done, and the learnings that I have taken from these points. The goal of this chapter is to demonstrate, in no particular order, by introducing actual pieces of work that I have done or have been involved with, in a way that will help illustrate my learning and development. These practical narratives I regards as important learning points in my private as well as professional practice as a Change Agent, an Internal and External Action Researcher, a person who prefers to work in a Collaborative way.

The stories I want to tell here are all set in an industrial environment. I realize that this is not the only environment in which learning and change can take place. But this is my life, and as such these stories reflect deeply on me and what it is I do.

I want to introduce the following stories:

- Missing a Beat
- The 5<sup>th</sup> Man
- Safety is more than just a Habit
- Systemic Patterns
- A conversation with Jason
- Self Reflection; An Example of how I Learn
- Conversations with a Difference
- Winning a Contract
- Courage and Humility

These stories, narrative, hold 'embodied values' and knowledge'. They link various aspects of my research and my practice, to my way of being. This is a way to translate concepts into practice, and it is just a way. There might be many others. When I say 'Embodied knowledge', I mean that the work displayed is often years of incremental work that is displayed in its current stage and state. The level of presentation has evolved over many years. An example for instance is how I have represented 'Non Productive Time' in the appendices 7.1.2 (pp. 357), 7.1.4 (pp. 395) and 7.2.2 (pp. 467) for instance, or how I now present my Graphs and diagrams. These are deliberate presentation forms, which I claim to have designed and introduced. The initial stages of this work were trial and error based on creative impulses, snippets of conversations. The results look simple, but beneath these is my 'Embodied Knowledge'. This is the knowledge of 'How to' and 'What was acceptable and clear' to my clients and peers.

I hope that these stories will show my 'Embodied Knowledge' clearly, and clarify some of the points made in the text of this thesis. I equally caution the reader not to copy the concept verbatim, and transplant this into a different sphere and situation. It might not work, because it wasn't developed with them for their situation!

The stories used in this chapter are important to me, because they represent either a change in the way I perceive my influence to be getting stronger, or in making change happen by an intervention or a particular type of conversation. It could also be that I have introduced different ways to get conversations started, or ways in which others can express themselves better to make a change happen. It could also be the outward representation of the issues that are required to change that I consider being important and innovative in generating and sustaining conversations between people. Some examples contain practical examples how to innovate certain tools and use them in a practical setting, or how to combine tools and use the "mix and match" approach in a practical way.

*I have wondered how to represent what it is that is important about these stories, these case studies. Each one has an element to contribute to my current practice. Something I do either consciously or sub-consciously in my practice.*

*From a manager's perspective, if I was the manager hiring a Change Agent to implement a specific change or to improve certain practices, I would have the following brief.*

*I want the Change Agent to work very closely with my staff. I want the Change Agent to educate them, coach them and help them develop their views what could be improved. I would want to see my staff present to me in an accurate, articulate and transparent way what it is they believe should change and how. I would also want the Change Agent to see me personally and advise me on what it is I could do, as the manager, to help make the process easier. I would be looking also to appoint a champion from my workforce to work alongside the Change Agent to learn as much as (s)he could, but also to help the Change Agent as a dedicated focal point to understand the peculiarities of my business; business are not all the same. I would make very clear that*

*I would accept some friction as a normal part of the Change Process, but I would not accept friction on a personal level where there were accusations rather than difficulties, I would equally not accept an unwillingness for the Change Agent to not try*

*various approaches, in fact that is what I would like to see in the personal conversations with the Change Agent: alternative approaches and also from his/her experience what the next hurdles would be i.e. some form of structure in the emergent approach, even if it was only a structure around various activities. I would also be very keen to see that the business was not disrupted, and yet that the Change Agent integrates him/her-self so much that the opportunities for coaching are many and varied but are taken. I would want regular feedback sessions with my employees where difficult questions would be answered.*

*I would also be looking for the Change Agent to advise me on how to approach senior managers in terms of explaining the progress of the change project, and assist with defining potential areas where they could help me. My motto would be "Less is more", i.e. I would be looking for many engagements, but not if the quality would suffer or if this would cause an overload of work for the employees. In a way, Huxham, Sims and Beech (2005, pp 29) echo this statement, when they state that the stories that are effective in practice tend to be extremely terse.*

*As a Change Agent I would be looking to understand if management really was behind wanting to change. Are they willing to engage in this process or not, because if they are not, then that is a major barrier in the way of change that is immediately present. The employees would see this, and therefore this would immediately undermine the Change Agent's position. I would concentrate on the process rather than the results. This way I ensure that I integrate myself with the employees and that I ensure that the change is not about what I want, but what they want. If the process is right, then the results will follow, and there is no need to justify any results because the employees will do this for us. I would look for champions within the employees for particular issues or concepts. Some people have just a natural ability once they feel that they have been 'liberated'. I see this as an important element of creating change to form very strong and close relationships built on respect for each other. I have time and time again been astonished to find people in all sorts of walks of life or positions who have skills which they either don't know about or choose not to use. Often astonishing skills (A favourite of mine to break the ice in a group meeting is to ask people to write down on a piece of paper something they are proud of and that nobody knows. These papers are then read aloud and the team has to guess who this is. That person then tells a small story about*

*this 'secret'. After this exercise people often look at their colleagues in a very different way) that can help transform a Change Process. I would want to team up with some of these people because it is so much easier to create a path forward in pairs or groups. That is essentially my main contribution to the process, and that is that I will not stick to one reductionistic theory, but bring various aspects of various theories into play and allow the group to find a use for these parts. I bring an Inclusional approach into play, with people, with theories and with emergence. This is my process, my Ontology, the way I am and would like to be (Reflective Comment, 2009).*

Weber has commented about the need for rationalization.

*"Rationalization might be viewed as Weber's principal innovation to social and economic thought. His discovery, if it can be so called, held that modern societies are forever striving to order what in its 'natural' state is less ordered or even randomly occurring. Where people once noisily milled about, now they are put in rows or ranks of quiet obedience; where fiscal accounting was done from memory and rough approximation, now it is taken to a hundredth of one percentage point, or beyond; where the music was the work of a single minstrel inventing melodies and lyrics as he strolled, now it requires an orchestra that plays perfectly in unison from a printed score, wilful deviation from which is a cardinal sin. Weber realized that the organization of thought and action into regimented forms had virtually replaced religion as the unquestioned, motivating creed across much of 'advanced civilization'. And while he recognized in these developments admirable achievements, particularly in the production of material goods, he saw as well those seedbeds of pathology that affected individuals as much as the societies in which they struggled, vainly he thought, to maintain their individuality and freedom."*

(Turner, 2000, pp. 42)

*What I try to be as a co-creative, Inclusional transformational Change Agent is to integrate the benefits of reductionistic and rational thought with creative and boundless thought (The Edge of Fluidity); to integrate order and chaos, because they complement each other; to integrate individuality and freedom with structures and processes; to constantly challenge and advance my development and help others to do the same, so that dynamic relational changes can be accommodated in boundaries, that these are modified as and when required whilst still recognizing that there needs to*

*be a structure and an order; to use concepts of the social sciences and engineering and integrate them wherever possible; and in all this to be totally transparent in what it is I do. The epistemology contained in this thesis is a different way of approaching the concept of Change Management, particularly in industry and organizations.*

*This thesis has used post-modern perspective in some parts to deconstruct concepts and frames. It is only by doing this that the differences become obvious. At the same time the possibilities of integration of the deconstructed concepts also become clear. Even here I see complementary attributes between a reductionistic, deconstructive process and a holistic approach. And this is what in my view Inclusional allows as a transformative concept.*

*It has been this difficulty that I have struggled with in writing this thesis. That is why this thesis is as it is, because I know no other way to represent the various aspects of theory and practice as they have combined in my mind (Reflective Comment, 2009).*

### **7.1.1. Missing a Beat**

The telephone goes in my office. It's about 6PM, and it's been a long, long day.

The operator in Aberdeen says: "Sir, hold the line, I will connect you."

Geraldine, my wife, says: "Graham, your mother has had a heart attack 2 days ago, and she is in Poole hospital. "

I am at this moment 150 miles North of Aberdeen, and am feeling completely helpless. What I have to do now is organize my departure from this offshore platform by helicopter to Aberdeen, and then to book a flight from Aberdeen home. I also have to ensure time off work. There are interactions with my clients that need to be managed. I have to clear this with my employer. In the meantime I am also trying to call the Hospital to get a better picture of what has actually happened. I can't get consistent answers. There are long pauses where people just walk away to ask someone else.

*I feel like I'm out of control. I'm tumbling off a high, very, very high cloud into a swirling black pit. There are people just laughing all around me as I tumble down and down. I just want to get off this ride. I want it to stop.*

I snap out of this, and start making decisions. I want to be home, and yet I also am aware of commitments and obligations I have to other people.

I can't remember how I got home. All I can remember is a high state of anxiety, aggravated by the physical discomfort of travel over large distances. Travelling, sitting in chairs, has the effect on me of roaming around in my brain. I start thinking of all sorts of scenario's and permutations.

I went over to the hospital as soon as I got home, and was told that I was here at the wrong time.

*"You are Sir? Well you do know that this is not visiting hours right now!"*

*"Well, when is then. My mother is in there, and she has had a heart attack!"*

*"I am very sorry Sir, but you will have to come back later!"*

*"At least you can tell me what is going on".*

*"I can't. The notes are with the sister in charge!"*

*"Can I see her then please!"*

*"We are very busy, but I'll ask!"*

*"I'm the Ward Sister. I understand your mother is Mrs. Van Tuyl. Is that how you pronounce it?"*

*"Yes. I have come from Aberdeen, and have travelled to get here since 7 AM this morning! "*

*"You are the gentleman who has been ringing a few times. Alright; I'll take you to see your mother!"*

This is how I recall the conversation going, after all this time. Twenty-six years ago, this would have been like a *Red Rag to a Bull*. I think I would not have been able to cope with this sort of reaction of people.

What I saw shocked me. Emotionally seeing your mother in a confused, immobilized, frightened, bed ridden state is not good. But there was other information working its way into me, either consciously or sub-consciously;

*'What ward is this; Where are the nurses; Why is it difficult to get information; Why doesn't my mother know what is going on? '*

Luckily for me, both Geraldine and her sister work in or with the NHS in a medical capacity, so this allowed me to understand in more detail what should happen. I had the ability to ask someone. I knew who to ask.



Both have worked on wards as Sisters in Charge. Now Geraldine is Health Visitor, and her Sister lectures in Nursing at Brighton University.

I was shocked, angry, upset. I was determined to do something about this situation. A minimum would be to get my mother off a gynaecological ward, into a specialist ward. What happened next can be read in the text contained in letters to and from the Hospital in Appendix 7.1.1.1 (pp. 347). I have annotated the text with feelings and comments I had in 2003.

Additionally, just at this time, in a Doctoral review session at Bath University, a member of my peer group, working for the NHS Centre for Change in Wales had written a thesis on how the “flow” of patients, clients in the NHS terminology, should be from admission to discharge. A very linear, algorithmic, cause and effect type thesis. In this there is an element of statistical evaluation that looks at minimizing people taking bed space. In principle, I support this as an element for inclusion in making decisions. The terminology Paul used for people in beds was “*Bed-Riders*”.

I actually spoke up, and stated that I thought that this was a most disrespectful way to talk about patients.

It is now 2 years on, and I am re-reading these notes as I am writing this, and re-living these feelings. The anger has gone, although I can still see my sarcasms and distrust in the letters and comments that I wrote then.

What I see is a complex mess of different interests. I have attempted to show these in the drawing on the right (Diagram 27)

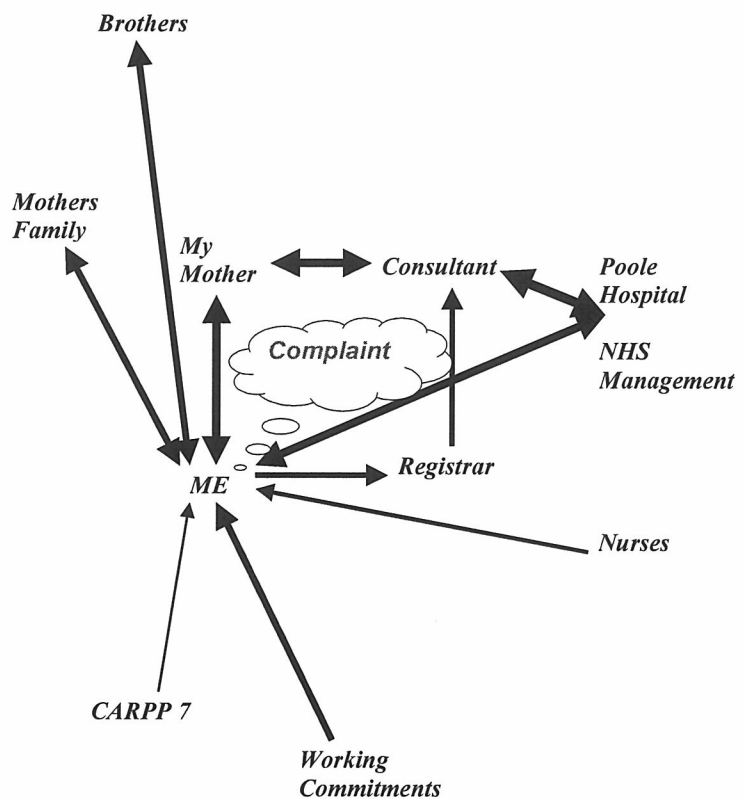


Diagram 27

There are a whole host of influences working on me from all sorts of different directions. There are lines of communication, and what is clear there is that not everyone talks to the right person,

i.e. information is often second hand. In some cases it is even further removed than from the original source. This has consequences for the content and the accuracy of that message. This also has consequences for the emotions felt.

It is also clear that there are groupings, systems if you like, with boundaries around them, built on a particular relationship. These could be family ties, organizational structures or through expertise. There is an emergence of very diverse patterns in relationships. I have tried to show these in the diagram 28. The groupings shown are ones that come to mind easily. There are more which aren't shown, to make the principle clear.

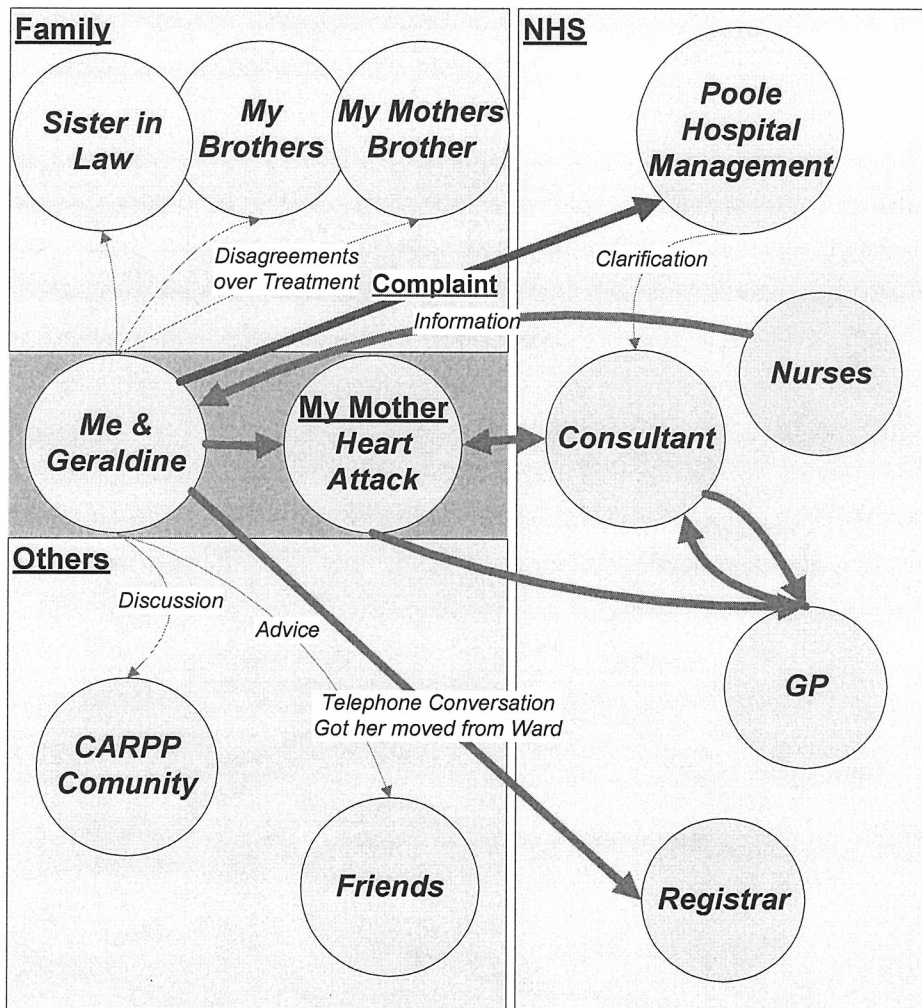


Diagram 28

My experience is also that this is just a picture of everyday life. People in all sorts of walks of life, live in various inter-related systems. The difference for me being between now, and the past, that I am more and more able to recognise this as a pattern of behaviour that forces people to act in the way that they do, rather than a choice they make in that moment with intent. I am seeing this now as 'the way it is', rather than the 'way I/they choose it to be'.

I claim to know this because I am more and more rational in how I work within this context when I believe to see the reactions of others, and less and less angry. My reactions are more controlled and harmonious, by recognizing that there are 2 legitimate entry points into a discussion on moving a boundary.

There are issues of complexity, of Politics, of knowledge, of blame but also a way of me being in the world and knowing.

In understanding these boundaries, and in recognising the boundaries, there is also an issue of language. Language in how issues are described within boundaries can be the cause of conflict in itself, or be a hindrance in creating solutions.

Recognizing a boundary is the first step in being able to move the boundary.

I propose to use this understanding to analyse what it is about a situation that causes such reactions in people. I suggest exploring the whole issue around values and beliefs in order to recognise and understand boundaries, and draw out similarities with doing this within Industry. Stories like these are no different that the 5th man story (Appendix 7.1.2, pp. 357) or any other story.

*Charles Handy (1994, pp. 22) states that 'Framing the confusion, is the first step to doing something about it'. I think that is essentially what I am describing here. What I am framing in this story, and it could have been any other story for that matter (planning laws, education and university selection, refund policy for consumer goods, airline delays and responsibilities, ) is to listen to the narrative (i.e. the explanations given by people, or the lack of it and the non-transparency) and to understand that the narrative heard (or not heard) is a direct reflection of the situations (system and consequent boundaries) that that individual that the conversation is with has. The narrative is a direct reflection of the constraints in which the conversation is taking place.*

*Recognising this, and reacting to the other persons situation with understanding, politeness and probing for ways in which the current situation can be changed (Who, can do What, Where and How??), always in respect of the person who is relating the narrative, is allowing me much more influence in a particular situation than before.*

*People react and act in response to a 'system" that they are in. Often, I feel, they recognize this, but don't know how to articulate this. Narrative such as 'They" or 'Management" or other expressions are heard, referring to a 3<sup>d</sup> person who has power and control. Showing that one has understood this and showing an understanding that situations are beyond their direct control usually makes people respond very positively. A firm belief I have is that given a chance almost everyone will want to do the best job they can.*

*Recognizing the associated behaviours of people as part of boundary conditions helps people to understand what is possible and not. Behaviour could be that a sister on a nursing ward decides that she is in charge and will not pass on any information. Or if one rings a company to complain about a faulty product, the person on the receiving end of a call will not give their surname but equally will not pass you on to a manager if you disagree with the conversation.*

*These are all behaviours resulting from imposed conditions within a system to avoid certain action; in my language, avoidance to create conditions for the boundaries to be permeated. And this is also important to understand about systems and conversation. A system has been created for a very particular purpose. Over time, there are possibly some vested interests attached to maintaining a systems status quo. An example today is the way bankers are rewarded bonuses for particular behaviours and results, even though this might be against the general interest of the public who bank with them. And that is for me the fundamental learning, recognising the systems at work in any conversation and situation, recognizing as many as possible and the people who can help change the conditions within the systems is important. Without this no change is possible.*

*This story reflects a change at a local level. A change was made, but the system itself was not changed. Therefore, a further reflection is required on 'At what level is a*

*systems change possible" to fundamentally change a systems way of working and the outcome of a system.*

*What is also a key learning is that any person, through their own behaviour, can extend their sphere of influence, particularly if this is done in relation with and with the co-operation of the other person(s) within a system. When people cooperate, and understand the other persons needs and constraints, and what this does in terms of emotions and wasted effort, but also when they understand that you mean no harm and are willing to listen, it is amazing how quickly and easily boundaries can be identified and often modified (Reflective Comment, 2009).*



#### **7.1.1.1. Correspondence with Poole Hospital**

The articulated comments within the body of text are comments added to the original letters to show my thoughts on reading the points made.

To: Patient Liaison Manager  
Poole Hospital Trust  
Poole

Monday, 20 October 2003

Ref: Mrs I. van Tuyl-Bower

Dear Ms. Stone,

My mother was admitted to hospital by ambulance in the night of Sunday Oct. 12<sup>th</sup> 2003. She had called 999 with chest pains.

She was admitted to A&E, and I believe she remained 1 day on this ward, and was then moved to the Ansty ward (a gynaecological ward). I intervened on Thursday 16<sup>th</sup> Oct with a telephone conversation (Dr. Wenniker) and this resulted to my mother being moved to the Avonbourne (special care) ward.

In essence I believe your procedures and attention to good patient care were out of control! To substantiate this, here are some points made to Dr. Wenniker.

*“..What a carry on this was. Calling the Consultant's secretary, and having the feeling not being taken seriously. She said a few times to address the Consultant as Doctor! As if this made her special! I lied and said that I was also a Doctor (Just to see what happened?) to get on even terms. It worked and I spoke to the Registrar. At first it was medical talk. I felt that the barrier was being erected here. I know from experience that this is an easy way to show other people that what they know isn't important in this instance. So I quickly stepped in and stated that this was nothing to do with technical (medical) competence. This was all about Organization and management outside the clinical sphere. I used the clean speak model in my conversation with the Consultant. and this worked well. I wanted a commitment from him to at least look at what I said. I got his commitment!”*

It took 24 hrs. before someone on the ward to contact a close member of my mother's family, despite repeated requests and offers to pay even!



A patient with heart problems is looked after in a gynaecological ward. It wasn't until my mother was moved to the right specialist ward, that we realised how much different (and better) specialist care is. Examples are:

- Nurses recognise the doctors. Nurses actually stated that they did not know who the doctors were.
- When asking for information, answers ranged from: "... *Can't read the doctors handwriting*"; "... *I don't know what is happening, I'll try and find out*".
- ECG's were not done routinely on the Ansty ward, they are on the Avonbourne ward. You also get the feeling that the staff is much more clued up on "heart and related" problems.
- No information. Part of the information is to reassure patients and family. I became more and more uncomfortable with the lack of knowledge or even educated guesses based on history (i.e. what the nurses had seen before).
- No senior nurses on duty, and the rest really worked to the bone. There was no slack in the system anywhere.
- Misinformation was rife. We didn't know until speaking to Dr. Wenniker what had actually happened (a heart attack). This was after 4 days. None of the nurses actually knew for sure. I believe this is entirely related to the point above.

I want to stress that this is not about clinical competence, but about a managerial system that in my view could have resulted in my mother slipping through the net. I believe we have this now for the time being on the ward.

*"..One of the sisters on the ward took me to one side, and stated that this was often the case. Patients being moved around, Doctors walking in and out. At this stage I remember having a flashback to when my oldest boy was carried off a rugby pitch with a neck brace, and transported in an ambulance to this same hospital. In the A & E department, suddenly this man in blue walks in and starts taking off the brace. I grabbed his arm and physically stopped him from further action, and asked him who he was. He was shocked; he couldn't move his arm at this stage, because I had gripped this. He explained he was the Registrar on duty. I apologized, and explained that I had a need to know competent people were looking at my son's injuries."*

At present we have a further set of conflicting issues to deal with. My mother now has to go for a scan of the heart and circulatory system (angiogram). This will be in Southampton, Brighton or King's in London. The decision is up to my mother, but for visiting reasons I would like to ask for Southampton. The fact is that if a problem is found, further intervention will follow in the hospital that can do the intervention (one of the 3). This places a massive strain on all the family members, if the distance is so great. How can this be resolved?

*".. I was wondering how we as a family would combine our commitments (work, school,) with travel to these remote places. It seemed an obvious case of the financial system of the hospitals (efficiency rate of the scanners) being more important than the welfare of the family in other ways; for instance being together, making things easier in case of emergency."*

I believe this is a system that is out of control due to external pressures. The only reason my mother ended up in Ansty was bed space and a lack of slack in your system. I believe your system endangered my mother more than was necessary, and as such urge you do look at this seriously.

Yours sincerely  
Graham van Tuyl

From: Poole Hospital Trust  
Poole

11 November 2003

Dear Mrs. Van Tuyl - Bower,

I am writing to advise you I have completed my investigation into the details of the complaint your son raised on your behalf regarding his concern that "procedures and attention to good patient care were out of control". Copies of your son's letter had been forwarded to Dr. Bruce, Consultant Cardiologist and to Miss. Sullivan, Assistant General Manager with responsibility for the medical wards for their comments: I now have these and am able to respond to the points your son made.

I understand from Dr. Bruce that you were admitted on the evening of Sunday, 12<sup>th</sup> October 2003 to the Accident and Emergency Department. Dr. Bruce has advised me she saw you at approximately 08:00 hours and confirmed that the examination and blood tests indicated you had an acute coronary syndrome, which necessitated you remaining in hospital so that the appropriate medication could be commenced and also so that arrangements could be made for you to have an angiogram carried out.

*"..My wife tells me my mother was barely able to understand in any sense what was being said or done. The nurses weren't helpful. So yes, Dr. Bruce, you might have well said to my mother what you state here. But it is ticking a box. Have I told her? Answer: Yes! Has she understood: Answer: Yes, she speaks English." It is a matter of "Hitting the Target, but missing the Point". There is something patronizing in this. There is an element of being political here. The words convey a different message that my feelings tell me. For me there is almost an element of deceit here."*

Miss Sullivan has confirmed that you were subsequently transferred to the Ansty Ward, the Medical Assessment Unit at approximately 13:10 hours. During your stay on Ansty Ward, the senior charge nurse has advised Miss Sullivan that all appropriate treatments were carried out including the specific blood test to confirm a diagnosis of a heart attack.

From a review of your notes, it would appear your son telephoned from Aberdeen on 14<sup>th</sup> October 2003 and he was made aware of the diagnosis.

*"..I remember that call very well. The nurse didn't know, and there was not a staff nurse on the ward who did know. This is when one nurse actually confided in me that she couldn't read the notes."*

The senior charge nurse also believed that you had spoken to your family that day using one of the telephones on the Ward.

At 09:15 hours you were transferred to the Kingston Lacy Ward, where you remained until 18<sup>th</sup> October, when you were transferred to the Avonbourne Ward, at approximately 02:45 hours. The decision to transfer you from one ward to another ward was because of the extreme pressure on beds around this time. Whilst you were transferred to the gynaecology ward, Kingston Lacy does admit medical patients when there are no other medical beds available in the hospital. Dr. Bruce has commented that at no time can she recall you having further significant chest pain, nor new ECG changes and I also understand that your condition was stable throughout the whole of your admission.

*"..Where is any mention of the conversation I had with the Registrar. This was the direct cause of the move". This now sounds like they would have moved her without my intervention and this are pertinently not the case.*

Your son was concerned that Ansty Ward was a gynaecology ward; however, as I have indicated above, it is in fact the hospital's medical assessment ward. The senior Charge Nurse was concerned that you were subsequently transferred to Kinston Lacy Ward

*"..This again came from pressure / a conversation I had with the senior nurse on the ward. This nurse was explaining to me how the under funding has caused great shortages on the ward. "There are large numbers of Philippine and Spanish nurses, and there is often no one in charge" she actually said. I asked her to talk to the ward management staff, if she thought my mother was better off in another ward. She agreed, and did. "*

and he has since spoken to the senior nursing team as well as the clinical management team reinforcing the point that patients with cardiac conditions should be transferred to wards within medical speciality.

Your son also expressed concern that you were told you could attend one of three different hospitals for your angiogram. Dr. Bruce has asked me to explain that it is usual practice to list all patients requiring an angiography on the waiting list at Brighton, Southampton and King's College in London, as these are the centres that are used to seeing our patients. If a request is made to only one centre, then there is every chance that patients will have a longer wait, particularly for Southampton hospital.

*"..This is a classic. Here we are, my mother waits 4 weeks in a hospital bed, whilst she was actually capable of going home. The reason is that she would then get onto a different waiting list, and loose priority status. She tied up a bed for 4 weeks, and I have no idea who else we deprived of a bed in the ward, just because 2 different systems collided. " These comments actually were also made by the senior Nurse in Charge.*

Whilst Dr. Bruce and I appreciate that all patients admitted in Dorset would probably prefer to go to Southampton, they would have to wait a great deal longer than they wait to go to some of the other centres. Miss Sullivan has informed me that you were discharged from Avounbourne Ward on 30<sup>th</sup> October 2003 and I understand that you will be seen in outpatient clinic.

*"..My mother was discharged with the standard average amount of drugs. Never mind that she hadn't swallowed a pill in her life. Never mind that in Jan. 2003 she underwent major surgery for an aortic aneurism. The pills amounted to 5 pills 3 times a day: co-agulants, blood thinners, after 3 weeks on these my mother was like a drug addict. She couldn't remember names, was un-steady on her feet. The GP saw my mother, and insisted that the Consultant reduced the dose. She did, and now she is back to normal. Where is the care in all this? This is management by numbers and is principally wrong!"*

With kind regards.....

From: Poole Hospital Trust  
Poole

23 December 2003

Dear Mrs. Van Tuyl - Bower,

Further to my letter of 11 November 2003, I have now received a response from Sister Rix regarding your son's concerns over a lack of specialist care on Kingston Lacy Ward.

I understand from Sister Rix that you were transferred from Ansty Ward to Kingston Lacy ward on the evening of 14 October 2003. The nursing staff from Ansty Ward documented that your daughter-in-law had been informed of that ward believed you had spoken to your family that day.

With regards to a lack of specialist care on Kingston Lacy Ward, Sister Rix has confirmed that staff on this ward is not experts in the care of patients with acute heart problems. They are specialists in the care of woman with gynaecologic and surgical problems. However, she has asked me to reassure you that as registered general nurses they give care to the best of their ability. Whilst this may mean that the staff were not always able to give immediate answers to all questions, I know that both sister Rix and her staff are more than happy to obtain answers.

*"..Poor girl. She did the best she could for me, she was very helpful and very sympathetic. At no time did I have the impression she would wilfully do anything at all to endanger people. What I mean is, she would have asked if not sure. Here we go again. The poor woman at the front is being talked too. She is being forced to speak because of my complaint. But the system – the hospital management and legal system – had put her in a conflict situation. She chose to help me, and that is a generous gift. It helped me – it helped my mother – but I am sure it did not help her! I wonder if she will ever do this again? If the hospital and the consultants have anything to do with this, then the answer must be no. Isn't this just a classical case of a boundary conflict within interest groups!"*

Sister Rix has confirmed that the senior ward team were unexpectedly depleted at the time. One of the senior staff nurses was on annual leave and sister Rix was on sick leave. The ward's remaining Senior Staff Nurse was on duty for one day of your stay as she works on a part time basis. Sickness was also an issue at the time as including Sister Rix, three staff members were off that week. Due to the pressure on emergency admissions, Kingston Lacy Ward had also had to open an additional 2 beds to cope with the demand.

*"..Brave woman. I hope that something has come out of this. What is noticeable is that none of the Doctors and managers have been spoken too. Why? Or if they have, why can't this be mentioned."*

In conclusion, Sister Rix has advised me that she was aware of your sons concerns and did all they could to try and address these.

Yours sincerely.....





### 7.1.2. The 5th Man Case Study

From 2001 to mid 2004 I was working in Germany in various locations. The client organization initially wanted the focus to be entirely in the drilling side of the business.

I was not new to Germany, and could at this stage speak and understand the language well. I also understood the social nuances that play a very big part in the German culture. I understood what my place was in German society, and I was able to know how I was doing through non verbal communication”.

If I was better educated for instance than the person I was speaking to, then I should be addressed as Sir, whilst I could use the other person’s first name, or preferably his surname. But this gets complicated when the formal power position is taken into account. To complicate matters for me even more, my nationality was and is an issue in Germany. A Dutchman interacting with a German has historical complications.

The brief was initially to introduce and get the crews on the rigs as well as the office staff to fully implement a new management process related to improving performance. I was in this role that I would be present on a drilling installation, with the view to improving performance. There was some very bad recent performance because the crews and management didn’t really see the benefit of the new management process and did not accept the value it could intrinsically bring. Therefore I wasn’t the most welcome person on the rig, because of what I was supposed to do.

Fortunately I had known a number of people for a long time, and had a relationship with them. I believe this was important to break the ice.

*“One morning, over a hot mug of coffee for breakfast, a chance remark by the senior man on the rig caught my attention. We had to stop the operation, because with the current crew manning levels (4 workers + 1 crew manager); the work had to be interrupted. Drilling is a 24 hour operation, and the critical element is either drilling rock away or doing any supporting activity as fast as possible to allow drilling to continue.*

*It was in a supporting activity, that we didn’t have enough people, and work slowed down, stopped in terms of drilling activity. There was nothing that could be done at that moment, except to unload trucks.*

*I asked the Oil company manager on the rig what had happened here. The hostility was palpable in his answer. It was a mix of none of your business; what*

*do You know; are you questioning me here or what? And nobody cares in any case because it won't be reported. When I asked the contractors manager (a long standing friend), he explained this to me in terms of choices that the oil company makes – lower direct personnel costs, but extra costs due to various work processes being executed in longer time frames. He also pointed out that the measurement was difficult, because the current system (in actual fact the International Drilling Contractors report format – legal standard) did not cater for this at all.*

*I was left with the question how often this happened. This is where I was fortunate, because I had actually been in charge of some of these jobs. I knew what was technically involved, and knew where to look. I had technical credibility, and knew where to direct the questioning. And that is what I did over the next week or so. I targeted all the different crew members (30 odd people) and compiled the narrative. It turned out that there were numerous instances, but they were all concentrated in certain work flow phases. And instinctively I knew that this was right. But also in most cases there was scepticism amongst the crew that nothing would change. This was the way it was.*

*I went back to the 2 senior managers on the rig and told them my observations. They both agreed, and yet again there was scepticism. Listening to them, I went to the head office and showed my findings to the operations manager. He was surprised, and allowed me to look at this, with a view to feeding back a recommendation.*

*Now I had to find a way to record what was going on. And the only ones who could do this were the crew managers. There were three shifts of eight hours. I asked them to record on a sheet where in their shift they thought time could have been saved. I would then take that on a daily basis and discuss with the two senior people on the rig if this was reasonably or not. I.e. a judgement would be made for counting this time (possibly adjusting the time) or not. The rule I introduced was, if there was any disagreement at all, the lowest estimate would be taken, or if there was an impasse the entry would be disallowed.*

*The first week, there were maybe 4 entries. The same happened in the second week. Then the entries rose to approx 10 week. It seemed this was like pulling teeth. But I also knew that 10 entries a week would increase with the crews*

*seeing that this was taken seriously. But even at this level, that was 40+ points to look at.*

*I got the crews together to discuss the trends that I had seen, and the times the managers had agreed on, and I proposed to measure this and show the trends on a monthly basis. This ensured their cooperation.*

*General management wanted to see the results verified over a longer period, and wanted to see repeatable patterns. This took as long as 10 months to do.*

*In the end this particular oil major (a 50% Shell and 50% Mobil Germany partnership) agreed to reinstate the 5<sup>th</sup> man. I presented this with an oil company representative to all the oil companies in Germany, including the two drilling contractors and all agreed to reinstate the 5<sup>th</sup> man. At this meeting a very well respected manager stood up and said: "I can't believe that I need to hear this from a consultant. I helped reduce the crew numbers, and now I will put that man back. It is the correct thing to do."*

*The crews were happy. But equally, one older person said: "Just wait and see. This will last a few years, and then the same thing will be done all over again to save money. I have seen this before."*

(Graham van Tuyl, Diary entry 2005)

The 5<sup>th</sup> man is an initiative that worked well. Building on a theme that was raised in a previous chapter, I was able to combine a role of Insider Action Researcher and Outside Action Researcher in this context. I at this stage also had the benefit of 5 – 7 years of experience in facilitation. I also had the benefit of very solid relationships with various people. Harald Schulenberg (a manager in the client organization) writes for instance in Appendix 7.2.2 (pp. 514-515):

*"When Graham arrived in the Drilling department, I was the alone in the task of introducing the new management process. The resistance in the department against Change that the process brings with it was strong amongst my colleagues and superiors, and I myself couldn't do much as I saw it then.*

*When Graham arrived, we coordinated our activities, and we often asked each other the following question: "What would happen, if we did x-y? What would the*

*opposition be and from whom? What can we do if this happens?" This caused us to be very well prepared and allowed us to navigate around resistance in a safe way. This allowed us also to introduce a lot of "tools" and Methods successfully.*

*Graham was my "sharp end" on the rig, and I worked in the head office. Graham has through his specialist subject competence, his stubbornness and his high social skills managed to gain respect on the rig site and in the head office, but also scoped out these friendly contacts to people who make decisions and people who acted as multipliers (a word we used for people who became the resident knowledge base in the client companies for tools, processes.). This deserves even more recognition, because of the work areas in which he moved (The site supervisors felt like small kings, and acted like that also). It is remarkable that Graham was able to build up relationships with both the crews (simple people) and management at the same time, and managed to keep both sides' confidence.*

*With all Methods and Tools that we have introduced, he has always managed to give the Drillers the feeling that they invented this themselves. He has always guided the users of these Tools and Methods along, rather than being confrontational. This is why they didn't realize that they were using Tools, etc, that a few months before were a "no go" area.*

*The way we worked with Contractors has improved markedly through the introduction of the Interface Management Meetings. Graham has managed to achieve that the way we work with other people is much more open and more as partners. This meant that we were more focused on our goals and achieved them.*

(Harald Schulenberg, Appendix 7.2.2, pp. 514 – 515)

The biggest shock is the actual realization, that it was the 'I', the single individual, who made a decision to inquire, which caused the momentum to gather place.

In this case I was actually put on the rig with the very specific tasks of finding just such moments, such opportunities, issues that could benefit from being done differently.

A second realization is also, when looking at the interactions that occur, is to be able to get the transition from stage to stage right. At any point in the event chain as pictured, someone could

stop the process. This could happen for all sorts of emotional, personal, relational or unintentional reasons.

To get the 5<sup>th</sup> man back is for me still my best work to date. It was right, it felt right, and people believed it to be right also. It just took nearly a year to do. It took time, lots of time, and lots of patience.

It is here that I began to doubt the narrative given by Patricia Shaw (2002). Roy Ison describes her contribution as:

*“We are dealing with communicative action - Systems Thinking means engaging in a way which takes into account that kind of process”.*

- Patricia Shaw offers us as practitioners an invitation to find ways of speaking directly to ‘managers’ experience of interdependence and emergence.
- ‘ I have begun to make sense of my work with Organizations by talking in terms of a joint inquiry into who we are and what we are doing together in such a way that we pay attention to how continuity and change emerges simultaneously from within the conduct of our sense-making conversations’.

(Roy Ison, <sup>Footnote 28</sup>)

These statements all make sense to me, but I am missing a way to structure and understand what is happening. How does Patricia Shaw understand what is happening, and how does she understand the fundamental issues underlying the unease, the conversations? It seems that Shaw espouses Inquiry. I am questioning the quality of it, and the general impact it has on the people you inquire with?

It is equally at this point, that my interests are drawn to Malcolm Gladwell’s (2005) writings (Blink and The Tipping Point) where he describes conditions for change to be dependent on certain attributes in individuals. He makes a very strong case for certain individuals having far superior “results” in terms of change happening, changing an outcome of an event.

At the heart of this observation is a living contradiction that change is emergent on one side and that change is also dependent on the individuals involved on the other. Change is Emergent and change is also structured. There is a tension between these two findings for me, that I both hold to be true.

Equally important in my view was the ability to make visible what was actually happening, and being able to create from the narrative a form of representation which showed a completely

different benefit than the traditional accounting methods did. In particular, the accounting methods never show a link between person's costs and work efficiency.

This story also raises some questions for me about the way a conversation and an insight actually occurs. And then how this insight is translated into a workflow, a set of actions that actually change the immediate reality for these people around an issue.

There are issues of creativeness and how that creative tension is used. There are issues about collaboration with other people on how the collective interpretation and validation occurs. And there are issues surrounding conflicts with other "systems" that might occur.

Each one of the issues will be addressed as a separate discussion point in this thesis.

*There have been some major learnings in this work for me, most notable how good and proud this has made me feel to have been part of this.*

*Scepticism and hostility are not un-usual. The time taken to help people understand what this was about was quite long, and in addition I was an expert in the technical and organizational matters concerned. The scepticism and hostility was caused by not understanding how the in-efficiencies could be made visible. In fact I struggled with this also, because up until then I had not been required or wanted to show how issues like safety and cleanliness on a worksite were related to work efficiency.*

*I had always stated that a clean and tidy worksite, where people were organized and weren't hurrying around, was an efficient and safe work site in terms of cost management and injury management. But I had never really sought to demonstrate that there was a correlation between for instance having more people onsite, resulted in large efficiency savings.*

*What I discovered for the first time here in factual terms, was that it is very difficult to reconcile this statement and belief with the traditional accounting and cost management system. In fact I would state, after having done this once, that it is very difficult to replicate this easily for any other industries or worksites. There is a fundamental discontinuity between the way we measure efficiencies in economic terms and in human wellbeing. The connection between the two and the associated value base is so different that this caused a lot of work to create an empirical database to value certain human activities. I look at this now, and think that the work that Yunis (2007)*

*is fundamentally right, but I also recognize that this is contradictory with our economic value system and the rules we have created in our society. My own feeling is that the economic system that we use today dates back from the 17<sup>th</sup> century and has been developed over the years. But by the 20<sup>th</sup> century, essentially to major elements of our current system were enshrined in constitutional law and generally enacted upon.*

*What has happened since is a reductionistic approach whereby the single elements within the systems have been refined, but the system itself has been undisputed. But if we return to the essential beliefs that prevailed in the days of the development of economic theory, then it is clear that the human element was not considered important. There was a working class, and these people worked for the gentry. Life expectancy was low, and religious and other cultural norms ensured a lack of development within the classes producing the goods. As late as the 1950, there are still very demonstrable effects visible in our "Western" and developed society. Apartheid in South Africa, segregation in the US and the "stolen generation" of Aboriginal mixed blood children in Australia.*

*My point is that quantification of a value on social and human activities was then not done, and today I suggest as a result of our history and development it remains difficult. John Hurst states the following:*

*"In this regard, I wish to raise some general points about values; how we construe and interpret them in respect of material culture and how we might reconstruct them. The ways we think about and act on our values are of crucial importance, since they give shape to society. Our very notions of what is a 'problem' and what counts as a 'solution' are bound up inextricably with what is 'best', 'right', 'important' and 'desirable'. The way values are constructed has to be clear to give us intellectual freedom of movement. While I do not propose to outline a system of values for design in a sustainable society, I do intend that the points raised will advance the development of such a system".*

*(Hurst, 1996, pp. 39)*

*Hurst in this thesis advocates that we, as a society, needs a different way of valuing what it is we do and choose to do.*

*“What is proposed in this paper is that, as an international community, we must reappraise the way we construe what is valuable in our use of the material world and ask what gives us the most convivial form of life, instead of seeking to stockpile or consume as much as we can of what we have been led to believe is good for us.”*

*(Hurst, 1996, pp. 47)*

*The definition of Conviviality is "autonomous and creative intercourse among persons and the intercourse of persons with their environment and thus in contrast to the demands made upon them by others and by a manmade environment" (Hurst, 1996, pp. 45; based on Ivan Illich).*

*Many of his Hurst points are based on viewing a situation according to a curvilinear logic of value (Hurst, 1996, pp. 41).*

*This is a notion made public by Charles Handy (1996), in which he defines curvilinear logic as:*

*“The discipline which says that the past might not be the best guide to the future, that there can be another way, and that some of the ‘myths of the future’ will help. We must however beware that we do not abandon the first curve too early. The second curve needs the resources and the time which only the first curve can give. The secret of balance in a time of paradox is to allow the past and the future to coexist in the present.”*

*(Handy, 1994, Chapter 3, pp. 49 - 64)*

*This whole notion of Conviviality, of the Curvilinear logic (also known as the Sigmoid Curve), is important in this chapter, because this is in a sense what has happened with in the story of the 5<sup>th</sup> Man.*



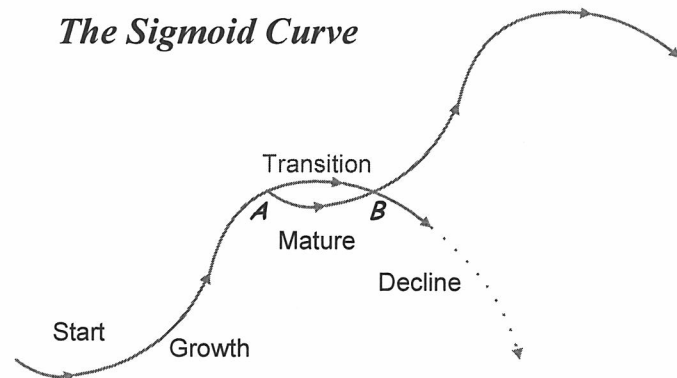


Diagram 29 (Handy, 1994)

*Without letting go of important attributes, conventions and practices of the past, new ones have been developed and a new way of working was introduced; always in a convivial, co-creative and Inclusional way.*

*In fact what I see writers like Hurst, Handy, Rayner and others do is linking and making visible what the 'Edge of Fluidity' is. The 'Edge of Fluidity' is a place where these concepts integrate, where people co-create a new way of being in a convivial manner, which also requires new ways of showing how human values can be integrated with social and economic values.*

*This is why the 5<sup>th</sup> man is so important to me. I feel that this was the first truly integrated piece of work I have done, where I have worked on the 'Edge of Fluidity'. It is only now that I start to understand better what the different influences are to enter into more meaningful, consistent and creative way of working (Reflective Comment, 2009).*



**7.1.2.1. “The 5th Man”**

***As presented by H. Schulenberg, B. Gerhartz and G. van Tuyl  
DGMK (Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und  
Kohle e.V.  
28 / 29 April 2003, Celle Germany  
Pp. 223 - 224***



## SPE Thesis Number xxxxxx

### Process Optimization and People Development through Coaching; Feedback from an Operators Perspective

D. Durkee, E. Eide, and H. Schulenberg, ExxonMobil Production GmbH; G. van Tuyl, RLG International

#### Abstract

This thesis describes the experiences of a German operator with coaching in a land drilling environment, and is largely based on a presentation given at the DGMK, Celle, Germany by Schulenberg et al. This thesis will describe some of the challenges faced during the implementation phase, and will highlight a particular set of circumstances, and aims to show that a participatory approach to incremental Change Management, with certain proactive measures, can increase the chance of a successful outcome. This thesis will demonstrate that a Coach can add a different perspective and show by example, what elements (often behavioural) need to be added to increase performance.

Three distinct core issues were identified as critical to success. These are more or less standard components of any management activity, and became the focus of behavioural changes required:

1. The Plan
2. The Expectations
3. Coaching for Success

Success was defined as follows: **Doing the job right the first time, is the safest and most efficient way we can work!** Key concepts related to the plan are therefore:

- No rework. I.e. the better the plan is, the better the execution is expected to be.
- Safety is related to minimising unexpected work.
- Efficiency is related to working smarter, not faster!

The plan is the basis for good work in all situations. But the plan has to be executed. Here it is important to ensure that expectations of all are clear. Not just clear, but accepted by all. And this means that managers need to become coaches for their people and themselves.

Every activity can be viewed as a set of actions that have taken place. It can be technical, behavioural interactions, systems and procedural or cultural issues. But you can always ask the following questions:

- What was supposed to happen?
- What did actually happen?
- Why the difference?
- What can we learn?
- How do we use what we have learnt?

The coach has to facilitate a way where managers can on the one hand allow emergence of new ideas and complexity (the often chaotic side of creativity), and on the other hand somehow build a system based on rules and control. Within this process there are milestones that are indicative of success, and a set of questions that need to be constantly asked in order to reflect on what it is we collectively want to achieve? This is a dichotomy of being gamekeeper and poacher at the same time!

Managers cannot “ride” in a system, and fix this at the same time. Managers are caught in the trap of having too much to do, and therefore have no time to reflect!

### **Implementation Background and Methodology**

The Coach position remained for 2 ½ years within EMPG. Initially it was to help introduce the DTL™ concept developed by Shell (Bond, et al., 1996). The aim was to implement DTL™, and the Operator chose to do this with an external coach for 2 main reasons:

1. They wanted to use the established methodology, but utilize external expertise tailor it to the existing culture.
2. To integrate specialist, conceptual knowledge with practical knowledge and know-how – i.e. integrate theory and practical know-how (Michael A. Lapré et al.)

An observation, that remained constant throughout the entire period was, that in general there is a very high level of technical knowledge. The average experience of Drilling Supervisors (DSV) is approx. 20 years. To this came equally experienced Service personnel in Germany. But there were very defined boundaries around positions. This is partly cultural, but also partly due to the way work is allocated, i.e. planning, execution and service. This meant that the focus would not

be on technical improvements, but rather on (interpersonal) behaviour, on systems and processes and cultural issues.

In order to find out where breakdowns occurred, the performance on the drilling sites was analysed using a modified version of the Shewart cycle (Deming, et al.). Specifically used was the Plan-Execute-Measure-Learn model (Lynch, et al).

With the new EMPG structure, 2 existing systems (BEB and ExxonMobil) and cultures had to be merged. This was seen as very complex for a number of reasons.

First, there was a large amount of detail to be dealt with. Second, a spontaneous emergence of ways to work between various people and groups had to be structured and organised, and delayed effects of actions taken disconnected in time and space had to be managed and controlled. This became an enlarged work scope for the Coach.

The scope enlargement is essentially described by the FAIR-methodology (Focus – Accountability – Involvement – Response) (Lynch, et al.)

Each of these components answers a discrete question:

- Focus           What are we trying to do?
- Accountability   Who does What, When, Where and How
- Involvement    How do we get a participatory approach of all the key players involved
- Response        How should managers react in order to achieve the required behaviours required to achieve the goals?

In order to get results you need a plan. In order to make these results good, there needs to be involvement of all people concerned. In order to make these results sustainable, there needs to be a feedback loop. This feedback loop is both “single” and “double loop” learning. Argyris explains this as problem solving (single loop), and developing a behaviour that allows critical reflection on their own behaviour, and identify the ways they often inadvertently contribute to the Organizations problem and inability to learn. (Argyris, 1991).

An example from the planning process that became important and apparent with regards to the focus, was whether to optimise for Time or for “Train wreck” avoidance. These are clearly very different ways to focus the way people work. The focus shifted from time optimisation to train

wreck avoidance (i.e. managing and engineering out risks) with clear results (see Diagram 30). Results for wells 5 & 6 are well below the average for 2002.

### The Role of a Coach - What does this Person do?

In the “Best Practice” (HBR reprint) “Learning Across Lines, The Secret to More Efficient Factories” (Michael A. Lapré et al.) give some insight as to why certain change initiatives are more successful than others. They argue that based on studies done in a steel cable manufacturing organization, with many different plants across the world, only a quarter of all change initiatives could be classified as outright success. Half produced no or little change, and 25% reduced efficiency.

In this article, the authors identified 2 key commonalities in all successful projects.

- High conceptual learning ability
- High level operational know-how

The complete matrix is shown in Diagram 31.

Lapré et al define the following:

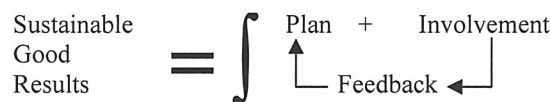
*Conceptual learning yields KNOW-WHY; it involves acquiring a better understanding of cause-and-effect relationships through statistics and other scientific methods.*

*Operational learning yields KNOW-HOW. It involves implementing a theory and observing results*

This was in essence implemented in how the Coach was to operate within EMPG. The Coach was an external person who understood the drilling operations and organizational change concepts. Also in the initial phases a highly experienced Drilling Supervisor (over 30 years experience) was added full time to the change implementation team. The idea behind this was twofold:

- To transfer knowledge within BEB later EMPG
- To ensure a harmonious process.

This worked extremely well, and in a way confirms instinctively some of the statements made by Lapré et al. the client company? This combination was a major learning!



How does a Coach work? There is no real starting point, except to say that a Coach:

- Listens and looks at all the aspects of interaction taking place around him/her.
- Looks for ways to make this transparent.
- Involves people who can change this (power based on position, knowledge or



- personality).
- Steers this re-iterative process until a champion takes control.

A further key element was management support. From the start there were agreed “milestones”. These were reviewed periodically, and modified as required. This ensured that any change undertaken would fit with current operational or strategic requirements. It also ensured that management time was aligned with the focus of the coach.

This is a key learning, management has to be involved in an active and proactive way from the start of any Change Process, and that it has to actively show it’s collective commitment to the employees. “*Walk the Talk!*” This, as Argyris points out, is the difference between “Espoused theory of action” and “Theories-in-use” (Argyris, 1991).

An important part of the process was to document some key examples. These examples help to make the learning and interconnectedness transparent. Some of these examples are given in the next paragraphs.

#### **Example 1; Time and/or Risk Optimization?**

The DTL™ methodology has elements of time optimization and risk management. The typical planning sequence will involve group sessions where the entire plan will be looked at in detail. The idea is that sequences are optimized for time. This is done by using offset data and peoples experience, risks are minimized.

In Germany each well is inherently different, even in the same fields due to the Geology. This induces a higher element of risk. The realization grew whilst drilling the Klosterseeelte Z6 well, that shifting the focus more to managing risks could be beneficial. This was re-enforced with the merger and the subsequent introduction of OIMS. This document has very specific procedures to evaluate and avoid risk as part of a proactive planning process.

An important breakthrough in a change of focus came with serious well challenges on Klosterseeelte Z6. It could be argued that moving away from the DTL™ concept, to a much more rigorous risk assessment scenario allowed the well to be completed successfully! There are various tools that can be used to look at and define risk. An example, are decision trees. As part of the Coaching process DSV’s were shown how to evaluate options using a decision tree. One is included in the appendices Diagram 32 and shows a decision to either mill away a 9 5/8” casing or to cut and pull this casing. The most efficient option as far as time was to cut and pull. This was also in the plan. In view of the risks (based on recent experience) the decision was made to mill.

This emergent realization that risk and time optimization could be conflicting priorities, created a change in Focus of the drilling manager. He made it clear that the single most important cause

for lost time were single problem events. The focus became “No Train wrecks!” This example shows how a particular system or focus can cause unintended effects.

The effects of this combined change can be seen in Diagram 30. To date, with 2 wells finished, there has been an approx. 70% reduction in major single event budgetary costs. In addition, throughout the merger and afterwards the Safety statistics have improved to the best seen so far, even compared to the pre-merger statistics (Diagram 34).

*This whole concept of risk has such huge implications for the work we do with in the drilling industry. Risk has to do with a degree of uncertainty in the outcome of a particular operation. If this definition is applied, then risk can be managed, by managing collective experience. Keeping the unknown “permutations” to a bare minimum reduces risk! In essence it is about controlling complexity to manageable proportions!*

This is common sense you might argue. But in reality this is an interaction of various disciplines, which doesn’t work optimally. There are clear boundaries between for instance drilling engineering (planning) and operations. These are not treated as places of integration and identity, but more as divisions of domains and responsibility. What we learned was the great power in combining the operational know-how as proactively and as early as possible, and to make this transparent to all in the organization by training in management tools and techniques.

Milestones in this process are:

- Do we have evidence of operational input in the planning stages of a well
- Have we in place:
  - o Technical risk reviews
  - o Risk lists and mitigating actions
  - o Management reviews

Questions to ask are for instance:

- Who owns the commitments to this plan?
- What are the underlying assumptions are these transparent?
- Does this plan capture previous learnings?
- Have we got the right people working this plan?
- How do we track progress against the plan?

### **Example 2; The 5<sup>th</sup> Man**

The German land drilling contractors work with in general 4 crews. Each crew would typically consist of a Driller and 4 crewmembers. This is a contractual arrangement laid down in a national contract between operators and contractors. Land drilling rates are on average € 2.500/h (2001/2002).

In conversations with the DSV and the crews, a comment was casually made that work was often interrupted due to people being required to unload transports, or due to mixing requirements, i.e. the rig would work slower, but this was not reported on daily drilling reports. In general, no daily drilling report has a provision for reporting efficiency of the operations. It reports durations, and codes these as NPT or not!

In a debrief (or After Action Review – DTL™) with the crews and senior rig personnel after a particular liner cementation job, they stated collectively that in their opinion if there had only been a 4-man crew, a 'down' time of 18 h would have occurred. The critical point here is that a correlation had been made between the two options available, a 4-man crew and a 5-man crew. The crew had been re-enforced to 5 men for this particular job, due to a weekend rotation.

This observation was discussed on the rig, and further refined. The drilling rig crew added narrative and expanded the options to other hidden areas where the lack of the 5<sup>th</sup> man was causing hidden time losses. Emerging was that the operations would not be stopped, but would continue slower. Therefore the operational activity reporting system would not report on a sub-optimal use of resources. This point was fed back to the regular Interface Management Meeting (see further) for management comment.

At the end of Q3, 2001 for the duration of the Klosterseele Z6 well a 5<sup>th</sup> man would be permanently added to the crew. It would be the task of the Coaches to find a way to measure the impact and return on investment (ROI).

This was done in a cooperative inquiry format. Essentially the Drillers were asked to fill out a sheet on what the 5<sup>th</sup> man had actually saved that day. Agreed was with the parties that the senior operational representative and contractor representative would agree on the minimum estimated savings (rig down time), and record the data on a daily basis.

Before this actually worked smoothly, took 5 – 6 months! This was the most difficult part of the entire exercise. We were asking people to monitor themselves. We were asking for an empirical measure. Essentially were asking crews to trust the management. This is a key example of managing the expectation. The expectation here being that the crews reported back, and

management would evaluate! The main issue was coaching all involved, in the value of being open and looking for meaningful measures!

What did we learn? The narrative of the employees could be substantiated and made transparent in data. Having this 5<sup>th</sup> man cost € 31k/month extra, but the leveraged effect on rig time was such that only 0,5h/day had to be saved to breakeven. This data is represented in Diagram 33.

An interesting comment occurred at a site meeting where the 5 main operators in Germany were invited to comment on this result. A senior drilling superintendent stated: "I find it incredible that we need a consultant to tell us something we instinctively know. I helped reduce the crews in the first place based on a sound rationale!" Senge et al, point out that metrics can hinder changes being made. In this case the metric that never shows up in any drilling operation, is the efficiency of each operation, although attempts are being made by various operators to make this more transparent; the hidden and invisible lost time. Therefore there is only empirical data available, and this is not accepted in for instance traditional management accounting systems. We have seen however that this sort of data is valuable to measure the effectiveness of a business system.

The 5<sup>th</sup> man spent a lot of time cleaning, organizing materials, painting, Visitors to the drilling site always commented how clean and organized the rig was. And yet we have not been able to quantify this in terms of an "Input" into the safety performance of the drilling site. All however state this as a major contributing factor. We have seen how the "climate" on the rig changed to very open discussions about what people do and how!

This 5<sup>th</sup> man is now a standard addition to all crews with the EMPG in Germany. Agreed annualized savings (ROI) documented after monitoring the effects for a year were approx. € 400k (netto)/rig/annum. EMPG believes that this was the right thing to do. But they are equally aware that engaged thinking can create a creative solution to an existing problem.

### **Example 3; Interface Management Meeting**

The whole Change Process was tailored to an evolving and changing set of objectives. A mechanism needed to be created to report back to management what had been achieved, and what was being implemented. At the same time, it was seen as imperative that management understood, approved and supported any initiative.

What evolved was a business review on a monthly basis with a set agenda. Participants were: From the operator side: Drilling Manager, Drilling Superintendent, Drilling Engineer and other specialists dependent on the operations. From the contractor side, The Rig Manager and Country manager. If this meeting were held on the drilling location, the TP and DSV would also attend.

The Coach would prepare the documentation (which was always distributed in advance, including to the DSV and TP) and facilitate the discussion, but the Drilling Superintendent would own the meeting and invite attendants. Action points would be noted in the meeting and distributed. These would partly act as input for the next meeting.

The meeting is approx. 2h in duration. The agenda would typically be:

1. Welcome
2. Action points – Status
3. Safety
4. Operational issues
5. Organizational learning and process issues
6. Other issues (open session)
7. Close

The term thinking partner has been used before. This whole meeting was about making transparent issues of concern. Ranging from participation in safety programmes, leadership issues, reporting on progress of for instance the 5<sup>th</sup> man trial, time utilisation and efficiency of the rig, A typical discussion could also range from investment opportunities in equipment, cost – benefit, to 3<sup>rd</sup> party service issues.

The meeting owner would make decisions, but in the discussion all had an equal voice. It would also be the facilitator's job to clarify statements, and to focus the comments concisely on manageable issues in terms of Who, does What, When, Where and How? How will we know it works? Nancy Kline et al, explain this well. Kline describes a 10-step methodology. This is a systematic approach called the Thinking Environment, with at its core the "Incisive Question" within coaching conversations. Imagine if someone asked you: "If you had all the money in the world, what and how would you do?" Kline demonstrates that usually people know the solution, but are inhibited in the implementation.

What did we learn? It takes discipline to attend these meetings. But the rigor allows a very quick, concise picture to emerge of the operation. It also allows managers to be involved, and get 1<sup>st</sup> hand feedback. It allows quick, seamless decision making to occur. The drilling locations can effect changes for their benefit, and have ownership! What we have not established is how these meetings can be the same without a 3<sup>rd</sup> party, neutral facilitator. The process has to be managed!

## **Concluding Remarks**

In This thesis, a narrative of how change can be implemented has been shown with three examples. Many, many more interventions happened. Leadership meetings, personal coaching, reports were written, after hour conversations at the coffee machine,

In all these examples a number of commonalities seem to emerge. These are:

### **Required Skills:**

- Inquiry works better than advocacy
- Listen to understand. If you talk more than listen, how can you hear what your people are telling you?
- Change works by co-creating an acceptable path!
- Transparency is key (The art of presenting clear, compelling relevant data or narrative!)
- Time for reflection is limited; manage your time!

### **Managing the Process:**

- Pro-active planning is better than reactive fire fighting!
- The value of steering the process is underestimated. Someone needs to manage this!
- The results are better if conceptual knowledge and practical know-how are combined!
- Management systems can distort a business system!
- Multipliers are essential for knowledge transfer
- Milestones allow better monitoring of the process
- Up front management involvement is essential
- Dedicated middle management to help facilitate the Change Process is seen as beneficial.
- Change takes time

Often change is sought for the sake of change. It is enforced. It is however far better to understand and build on the solid foundations, which are to be found in every company, of what it does well! And then only to change the areas of weakness in incremental steps. How do you know where these are? You listen, you inquire, you have conversations, and you make the points transparent, you agree actions, you follow through and hold people accountable, and you review the results! A Coach can help, guide and teach through example. But a Coach is no substitute for decisive and reflective management.

We need to constantly look for different ways to describe what is happening. Narrative is not often used, and yet so rich. Collectively the industry needs to find ways to tap into the rich

378

experience that is present in the people that populate it. We need to find an accepted format to do things in a different way! Ask yourself:” *How often have I been involved in trying to solve in ways that I know are not right. There must be a different way!*” And yet somehow, the thought passes till the next time.

## References

Schulenberg, H., Gerhartz, B and Tuyl, G. van

“Process optimization and people development through LEAD\*-Coaching; Feedback from an Operators perspective”

ISBN 3-936418-03-9

Bond, D.F., Scott, P.W., Pp., P.E., and Windham, T.M.

“Applying Technical Limit Methodology for Step Change in Understanding Performance”

SPE Thesis 35077, 1996

Lapré, M.A and Wassenhove, N. van

“Learning Across Lines, The Secret to More Efficient Factories”

Harvard Business Review, October 2002, R0210H

Deming, W.E.

„Out of the Crisis“

MIT Centre for Advanced Engineering Study, Cambridge, MA (p88) (1986)

Lynch, D. and Hay, B

“Theoretical Maximum Performance – making Technical Limits Work”

SPE 1997

Argyris, C.

“Teaching Smart People How to Learn”

Harvard Business Review, May-June 1991, # 4304

Senge, P, Kleiner,A., Roberts, C. and Ross, R., Roth, G. and Smith, B.

“The Dance of Change - A fifth Discipline Resource”

ISBN 0-385-493223

Kline, N.

“Time to Think”

ISBN 0-7063-7745-1 (Ward Lock 1999)



Diagram 30 – Drilling results 2002 / 2003

### *Drilling Results*

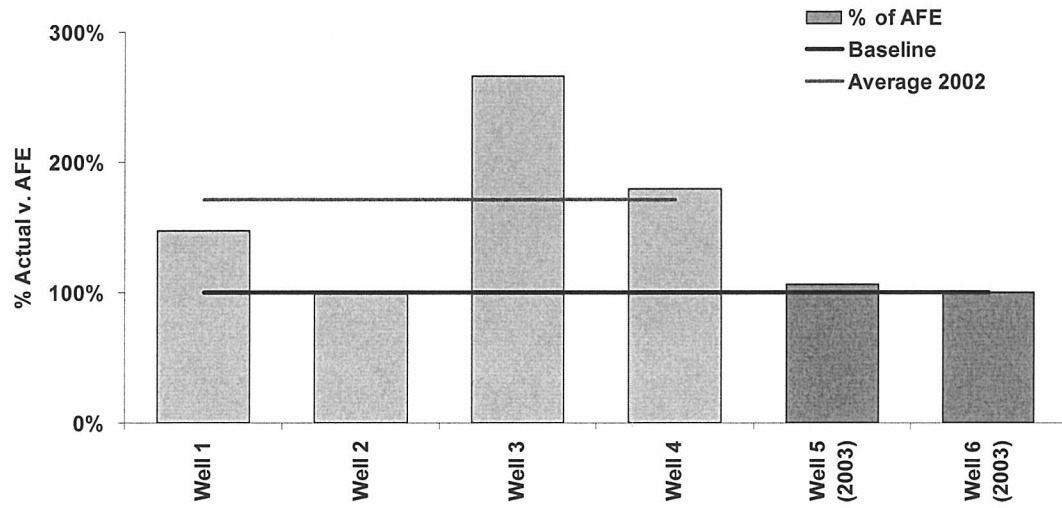


Diagram 31 – From Firefighting to Full Understanding; A Project Matrix

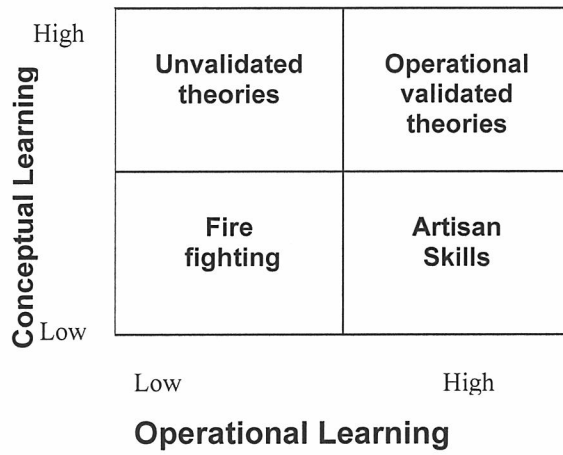


Diagram 32 – Decision Tree Milling operations made by Drilling Supervisors

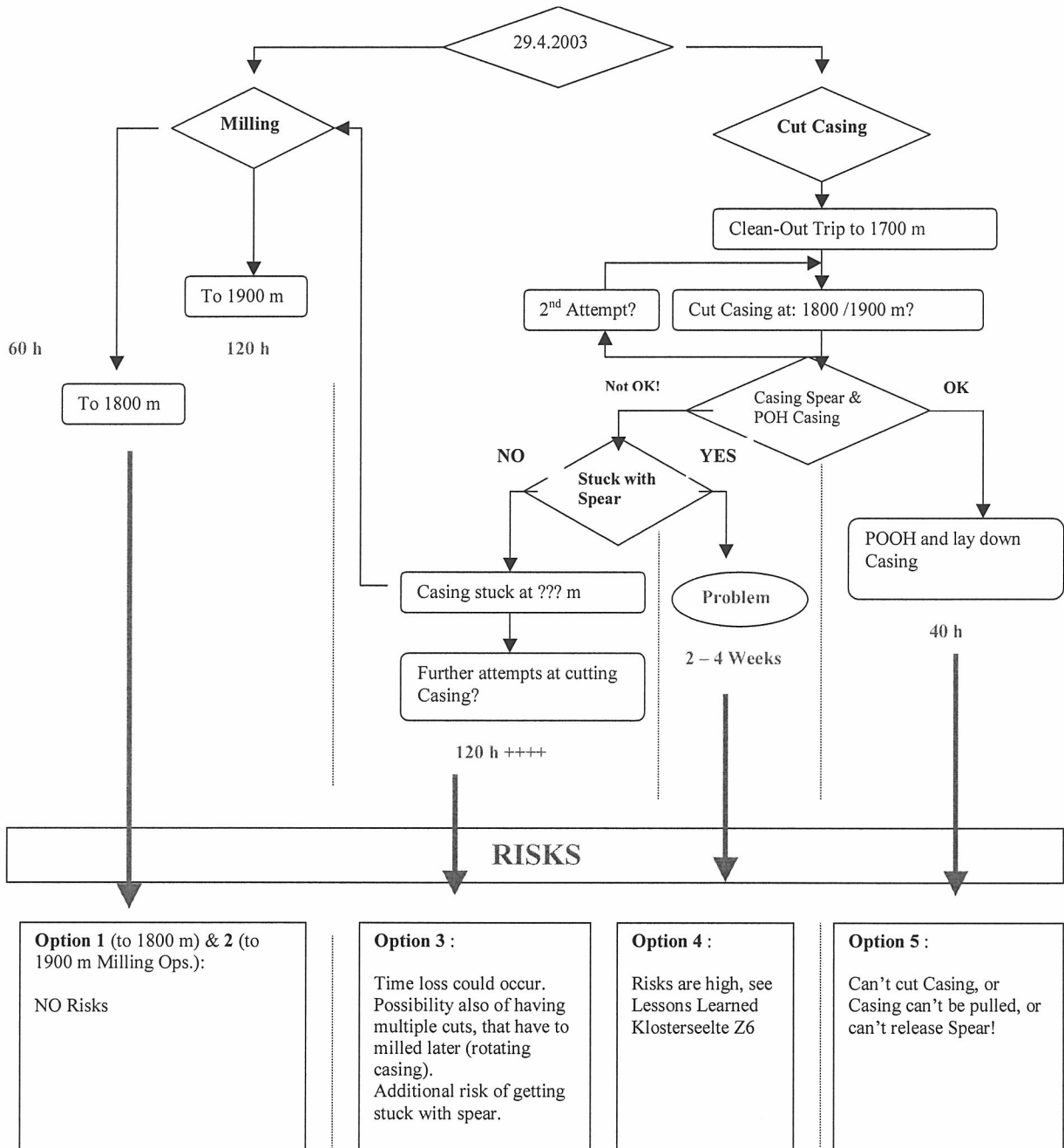


Diagram 33 – Operational Time Savings due to an Expanded Crew (5<sup>th</sup> Man Addition)

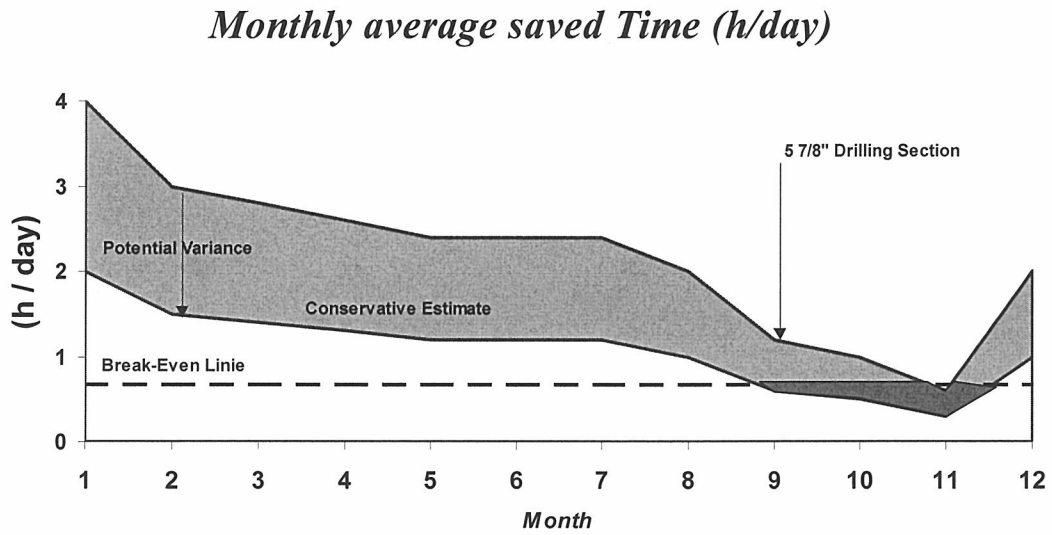
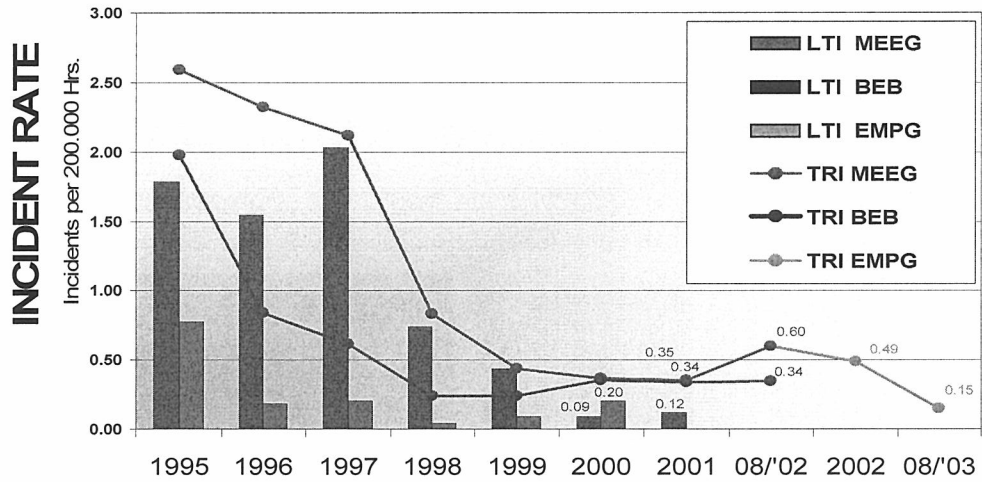


Diagram 34 – Safety Statistics

# Safety Performance EMPG

August 2003





### 7.1.3. Safety is more than just a Habit

Late 2004, and throughout the 1<sup>st</sup> half of 2005, I was asked to look at organizing and implementing behavioural workshops for new units starting within the business. These were specifically drilling units, starting new operations within the division of the oil company I was working in. In one particular case it was a new sub-contractor to the client company and it had designed a totally new mechanical unit to do the work. It was a "1<sup>st</sup> of its kind. " In addition, these crews had no background in drilling for oil. The equipment was originally used for tunnelling in mountains and that is where the people had built up their knowledge.

For me this was a challenge at this time, because from my experience I had a number of contradicting thoughts and questions around behavioural change:

- Behavioural change was strongly linked with performance of the units. There is no direct proof of this, but I had seen time and time again that Safe units were efficient units.
- There was a perceived conflict between "doing all this safety stuff" stops us from doing "real work. " Real work being getting on with the Technical execution, and not wasting time.
- This is for "Them"; it isn't for "Us". I.e. it's a management thing!

At that time, a person in the safety department in the U.S.A. stated a simple belief, which I took up. He stated that behavioural change was a cumulative effect of two things that managers could do or interact with:

1. Increasing the number of interventions that managers have with the people in the work force.
2. Increasing the quality of each intervention that is had.

And that if both these actions were done, then that would result in a decrease of Incidents. This could be business incidents, financial incidents and people getting hurt.

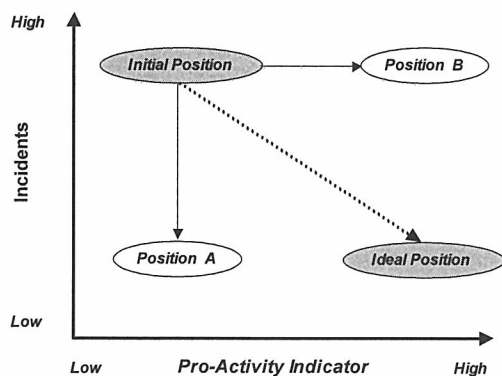


Diagram 35

In terms of safety (I saw this as a simple graph, diagram 35, pp. 387). The definition of safety being: No harm to people, the environment or other business assets (damage).

The Pro-Activity Indicator is mathematical deduction of the number of interventions each person had had. Since this had to be a comparable unit across various stand alone units of different sizes and composition, this became based on the man-hours worked.

$$\frac{\sum \text{Pro} - \text{Active} \dots \text{Efforts}}{\text{Man} - \text{hours}}$$

I realize that what I have just presented is a simple concept. What I have added is a mathematical methodology to compare different units and a visualization possibility. It is now simple to see a correlation of incidents and pro-active interventions over time.

What therefore was created could be a way of looking at what interventions actually are. Kline (2001) and Shaw (2002) view a conversation as an intervention. Gladwell (2005) adds that various other attributes such as personality and contacts base add to the quality of an intervention, Shapiro (2004) sees systems, personal development and consequences all adding to the quality of interventions, and she adds that development level of not just the person who intervenes but also the other party is important.

But it is more. If quality is required then conversations with Intent need to happen. It is here that Covey (1990), Argyris (1990) and others show that to do this, requires personal development. Aubrey C. Daniels (1994) adds that quality in conversations and actions comes from "positive reinforcement".

It seems there is physical act of creating a contact, and there is intent in getting a message across.

I settled for the following as a definition of an intervention when I presented this thesis to the client management:

*"Any interaction anyone has with a fellow person or groups of persons that could result in a person doing something different. A development opportunity for a person to reach a higher level of understanding on how (s)he could do something different themselves or for others."*



Within the various operational units, there was an inconsistent mix of interventions that already took place. It was in general a mix of the various opportunities listed below.

- Management site visits
- Safety meetings
- Pre-job planning meetings
- Safety observation cards recorded and reviewed
- Training events
- Wellness programs
- Near miss reports
- Incident investigations
- The list is far from complete, and I invite the reader to think of more.

At this stage I had no idea if this would actually work, and I set out to see if I could collect data from 2 individual operational units. Unit A was a German unit working on land operations. This was a small unit with a total of around 50 people. The average age was around 50 years old, and most had been with their company for all their working lives. This was their chosen job, and this is where they would retire.

Unit B was a British manned operational Unit working offshore. This unit consisted of approx 200 people, and there was a far greater variation in ages and career lengths. In addition, this unit at that stage had been recruiting a significant minority of employees from the Baltic States and there had been a significant percentage turnover in staff.

I decided to look at the recorded data, and show this pictorially. I need this visualization to understand if there are changes.

Both diagrams 36 and 37 (pp. 390) show the changes over time as they occurred.

A caveat has to be made, in the sense that when I communicated my intent, and asked approval and cooperation of the crew and their line managers, they pointed out that a number of data points weren't recorded, or differently recorded in earlier days. Never the less, they agreed on the whole with this picture.

I had to go to the rig management and explain what it is I wanted to do and why. It took a lot of persuasion, and there was also a lot of discussion what the exact definition was of an intervention and how quality could be measured. There was a lot of defensive posturing by the teams,

because it was obvious to all, including myself that comparisons could be drawn. The way that this was overcome, was to make this a collaborative effort with each team. Each team was allowed to use as wide an interpretation as they wished.

The results came in, and are displayed below over the same time span. It is clear that operational unit A was far below operational unit B; even if the number of people was taken into account.

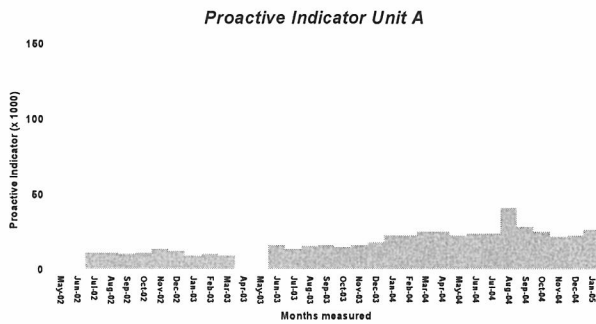


Diagram 36

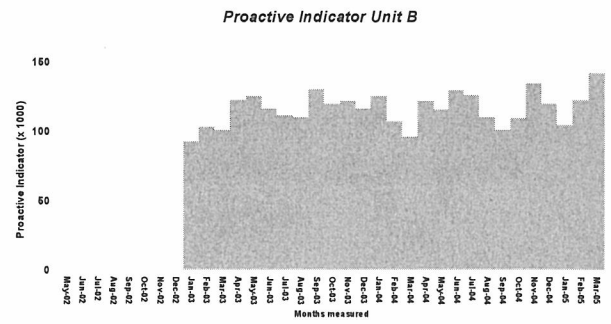


Diagram 37

A second review that I undertook with the operational units management was to review if there had been any intervention quantity changes in the results over time. Unit B did not show any, but unit A did (diagram 38).

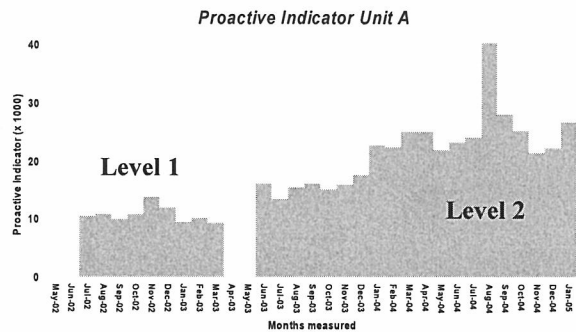


Diagram 38

This coincided with the Unit temporarily being off contract. At this time a new policy was introduced that all operational Units starting a contract, disregard of their familiarity with the company's policies and procedures had to undergo a 2 day safety and Induction program.

Immediately after this there is marked improvement in Intervention participation. Further more, the company introduced a very much enhanced package of performance evaluation, whereby the contractors had to demonstrate through their safety commitment and performance that they should remain on the contractor selection list.

This was a lucky coincidence, but it had a very good effect, as can be seen. Participation quadrupled.

The real interesting part comes when this picture is overlaid with the incidents that happened in this period. There are two pictures that are of interest:

- The overall safety incident rate
- The specific injuries to people.

Diagram 39 conveys the actual occurrences of the incidents on unit A. What these graphs show very clearly is that with increased interaction a decrease in Incidents occurred.

My conclusions from this information were very simple:

- Increased intervention awareness decreases incidents
- The decrease in incidents is in absolute numbers, and in decline of incident frequency
- There equally seemed to be a cross over point – A “Tipping Point” (Gladwell, 2000)
- This data is inconclusive of quality of interventions.
- The severity of the injuries also reduced

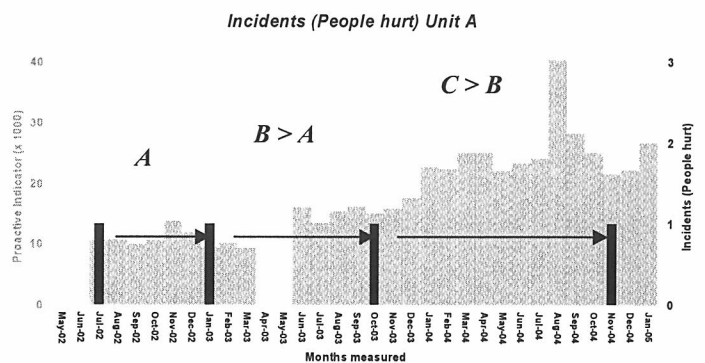


Diagram 39

I presented this data as a debating point to the entire crews on a further team building event. I asked them to reflect on what it is I had observed, and asked them what it is they saw in these numbers or the pictures and how they could explain this.

One of the site managers stood up, and actually stated in front of the entire group that he was proud to have been associated with this performance. He believed that the increased awareness had paid off. He wasn't quite sure how, but he was sure that knowing that what they were doing was working, would help sustain the effort.

In the meantime, operational unit B had a different story. Diagrams 40 & 41 (pp. 392) show the actual number of incidents where people got hurt.

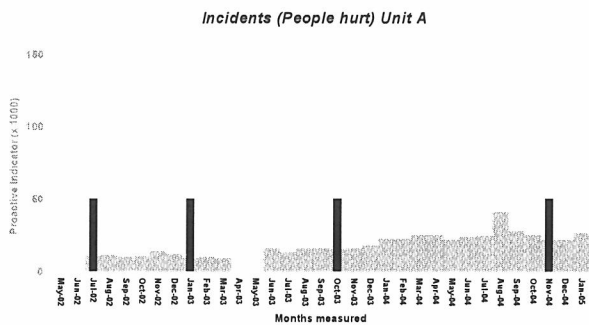


Diagram 40

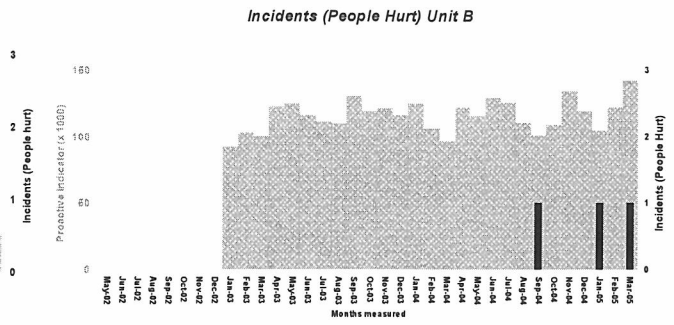


Diagram 41

Despite the fact that unit B had a much higher participation, despite the fact that various safety training programs were run, and despite the fact that the Unit seemed to be regarded as an example of behavioural participation, the incidents frequency actually increased. This led to a review of the quality of the interventions, and indirectly centred on staff turnover rates and how new employees were trained and immersed in the required culture. The issue that was found to be at the core, was the sub-contractors culture of complacency – the material had become dull, wasn't being refreshed, and essentially was done because it had to be done!

It isn't data that is the key element in change transformation. It is the understanding how to make visual the things that really matter and using this constructively to engage the people affected. It is using this as a sensitive feedback mechanism, to allow people to judge for themselves whether their action are useful or not.

The use of data is a key element in creating change and I will discuss that further.

Safety is important to me as it is important to others. To illustrate this point, when this data mentioned above was introduced and shown to managers and the workforce of one of the business units, a competition was started to raise awareness for safety amongst all. The winner produced the following poem.

IT'S UP TO ME

*I want a work place that is injury free  
 And if that is going to happen, then it's up to me  
 I can't take it for granted, that anyone  
 Has done all the things that I should have done*

*I must take the time with each task I do  
To look for hazards and think the job through  
To check the procedures and follow them all  
And reject taking short cuts, no matter how small  
When I walk though the workplace I must stay alert  
To watch for those things where people get hurt  
And should I see a hazard I won't rest until  
I've corrected the problem or I know someone will  
I must question each unsafe behaviour I see  
And encourage all others to do that for me  
I will always give safety the best I can do  
And expect that performance of all others too  
I must always remember to let people see  
That their safe behaviours is important to me  
Every act is important, no matter how small  
For safety for one is safety for all  
We can have a workplace that's injury free  
If we, each one, commit to making it be  
If we all do our part and each of us see  
If it's going to happen - then IT'S UP TO ME*

*The main concern I have with everything I do, is how I make very transparent a link between actions that people take, and a shift in significant behavioural results. This has been, and still remains a very daunting challenge, because of the difficulty in valuing certain results that are not part of our social economic system.*

*What is demonstrated in this example, and was accepted by the operator and drilling contractors as proof, was that it is entirely possible to show (graphically) that increased behavioural effort by the members of a team, with a focus on safety, reduced the level of incidents in one operating unit. What it also shown in the second unit is that at a certain level of behavioural interventions, it is not the volume of the interventions anymore that determines the outcome, it is the quality.*

*What I have demonstrated in this thesis, through my own actions and learnings, is that in order to develop as a person the first stage of the development seems to be fact that one (I) is immersed inaction. I.e. actually engaging in action, and doing the best one can do, given the stage of development. It is this action that will encourage further action to follow, particularly if this action is done in a deliberate way, possibly a co-creative way, and where feedback is obtained in an Inclusional, wholistic way. It is this cycle of improvement, whether it is a Deming Cycle, Checklands Soft System Methodology, Handy's Sigmoid Curve doesn't really matter. They all have elements to offer that taken together increase the quality of the next intervention.*

*The learning for me is that I as a "Coach" can help people to embark on these steps of active engagement, with a very specific focus. But I am there also to help people reflect on what it is that has happened, mainly through my own reflections. It is this cycle of interpersonal engagement that builds and develops a person.*

*The other element that is important, is that I have demonstrated that engineering techniques (statistics, and graphical representation) can and do work as a stimulus for social engagement. They compliment each other, and this is again and again what I see (Reflective Comment, 2009).*

## 7.1.4. Systemic Patterns

In my quest for understanding what was actually happening on units, I started experimenting with visualizing Non Productive Time (NPT) in 1997. Non Productive Time being any time that has been wasted in the pursuit of a goal, whether it is personal or material. In this case it was time to produce a product.

I was engaged as a consultant in looking for ways to understand how we could reduce the NPT, and what the underlying causes are.

In 2003, I made a first tentative step in this area, see also Appendix 7.2.2 (pp. 492); "A roadmap for Change". I linked a whole number of causes to a simple representation.

I looked at over time how with a single unit, Lessons Learned from the past had been incorporated, and what changes that had created on the working patterns of this unit. The representation was also something I had created in 2000 approx, by showing a simple picture of 24 hr days plotted against the days worked. In simple terms anything that was red or black was NPT, and anything that wasn't shaded was considered productive time.

These pictures are shown on the right, diagram 42.

Chronologically the top picture shows the first well drilled, the one below the next one, and so on. This is a time period spanning approx. 450 days.

For me what is noticeable were two distinct types of patterns.

- The large solid blocks of NPT
- The scattered and low level random types of NPT.

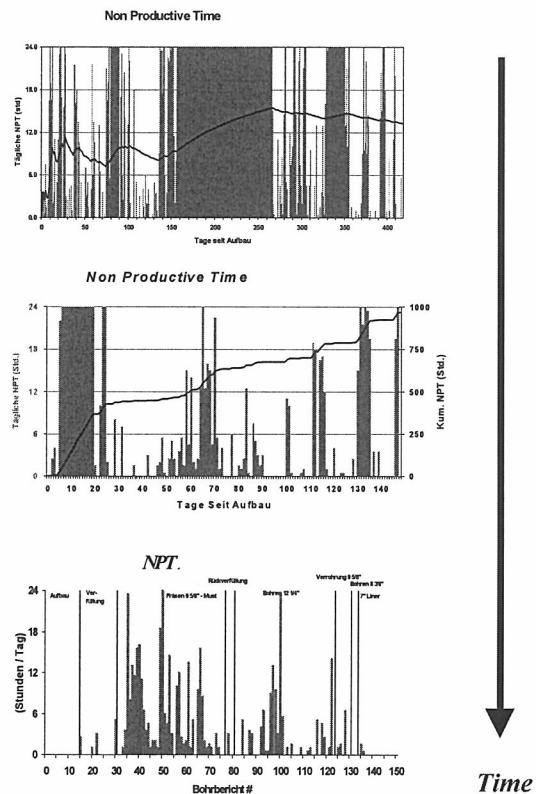


Diagram 42

I believed that there was a possibility of looking at groupings of work, and with my experience and previous analysis of the work done, to make broad-brush statement about what was going on,

and I equally believed that showing this to the relevant managers would cause them to take note and reflect on what it is they were doing or not!

This opportunity came in 2004, 2005. Instead of working at a relatively low level (the above was a single units operation); I was in a divisional unit. I had the opportunity to interact with the European Division, and look at the work that was being done there.

Many authors have described this as the 'Helicopter View'. Obeng (2001) describes as a quest. Know what it is you want, but don't quite know how to get there.

This statement fits with one of my fundamental beliefs; I know I have something in an instant when I see it. What has changed in this belief over time, and is now a firm additional belief that nothing will ever change (or be done about this situation) if others can't see what I see! How does it become important for them? How do I convey my message, and how do we then start transforming this message, vision into action diagram 43 show the overview, a snap shot in time of an entire division. I would encourage the readers to think about what it is they are seeing, and compare that to my statements of what I am seeing. I am aware that I might have made the conversation less diverse by framing this question with this chapter's text.

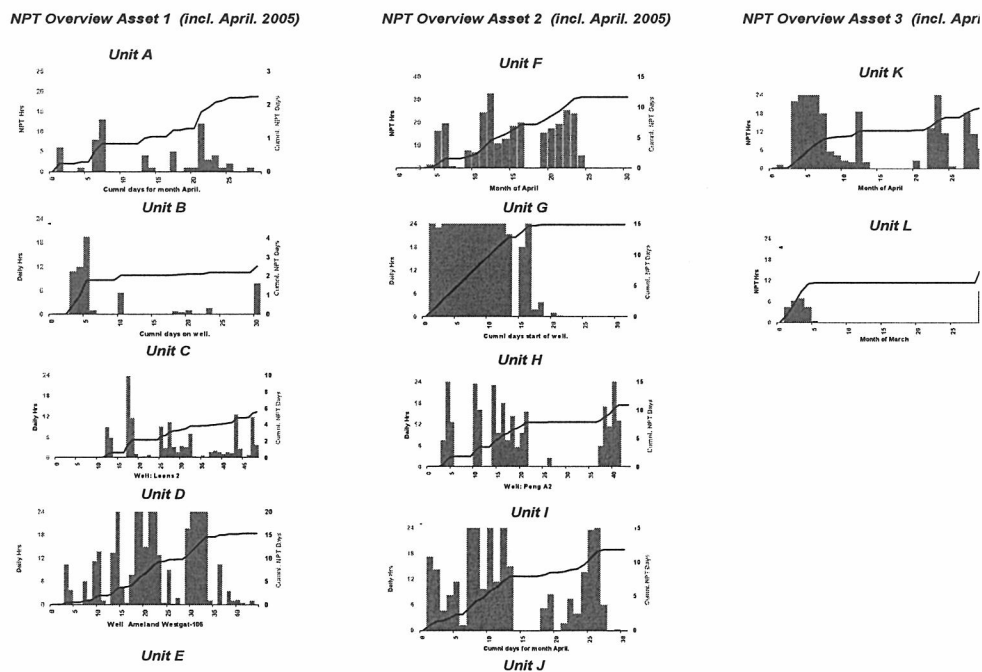


Diagram 43



The interesting overall picture that emerges with this is that there are 10 units, and the all without exception are showing protracted areas of shading. I.e. it is not sporadic NPT, but sustained periods of 24 hrs per day. This in terms of production is a shutdown of productive work. Usually it means remedial work or repairs.

Additionally, from other work in the Unit, it was know that experience levels were low, and that turnover off staff was higher than average. It was equally known that there were frequent changes of plan. This often means that inefficient work will occur, double work or rectification or changes to previously finished work.

All in all, my first observation, when seeing this pattern was there are issues with planning the work. This is not at unit level, but more corporate and engineering work. The planning was not as it should be!

This combined view, and the other information confirmed gut feelings in the management, and retention of staff became a priority as did limiting career changes.

Over time a view amongst the staff had grown that the company was there as much for their own personal development, as for generating rewarding work. The management now has the difficult task of changing this view.

My learnings are that displaying information at the right level in the right way creates change. In this case I believe it showed a "systemic" pattern. A combination of policies, expectations, and the way work was done combined with industry realities that needed to be brought back under the sphere of control for this division's management.

*This example is important as a continuation of the story told in Appendix 7.1.1 (pp. 339). I told the story in that chapter that in order to get changes to occur, that they can only be made possible by people at a certain level. I am referring to the telephone conversation with the doctor in charge of my mother's case being able to move her very quickly after our conversation.*

*This chapter demonstrates that this is indeed the case, but that it isn't just people who stop boundaries being modified, but also systems, processes and values. It is some of these values, processes that exist in and around sub-systems that we live in that cause particular situations to continue.*

*The argument is mainly, that if this is not recognised, what other influences there are to maintain the status quo, and at what level they are, then the chances of creating a change will be harder. I would like to be very clear, that I am not excluding that a change might occur, I am merely referring to the severity of the barriers (internal and external) that have to be overcome. At best the change will require a lot more time and effort.*

*But knowing this, knowing what is required and recognizing what it is that is actually holding back change, what the barriers are, allows a framing of the solution.*

*Co-creation of solutions is also about co-creating solutions with people who can actually help formulate solutions (Gladwell, 2000 and Shapiro, 2004) or state the incisive questions (Kline, 2001). There is an element of design in co-creation and Inclusionality.*

*Handy states this as follows:*

*“It is a paradox, one best captured by Jung, who said that we need others to be truly ourselves. ‘I’ needs ‘We’ to be fully ‘I’. Looking up however, at the office-blocks in every city, those little boxes piled on top of each other up into the sky, one has to wonder how much room there is for the ‘I’ amid the filing cabinets and the terminals.”*

*(Handy, 1994, pp. 42)*

*In Diagram 12 (pp. 144) in this thesis, I have shown how Results, Interfaces between systems and processes and behaviours are linked. This linkage is a place of integration and division, and it is often here, by design or through un-intended consequences, that there is tension between the ‘systems’.*

*It is particularly in our current society where:*

*“The defining characteristic of modernity is its relentless advance of the forces of rationalization and ‘disenchantment’ which have the combined effect of undermining those ideas and beliefs on which we have relied for so long to provide the grounds for our ideas of legitimacy. This is particularly true with the demise of ‘natural law’.”*

*(Turner, 2000, pp. 96 – 97)*

*Weber (Turner, 2000, pp. 91 - 92) described three types of legitimate rule: Charismatic, Traditional and Legal Rational (Bureaucratic).*

*It is the current pre-dominance in our society of the Legal Rational Bureaucratic rule that is at the heart of part of the systemic issues that create barriers to change.*

*“The real problem, in Weber’s view, occurs in the tendency of bureaucracy to extend its role beyond its legitimate province and to transform what Weber considered to be genuine politics of leadership into routine administration. In a modern state in which strong political leadership is lacking, the probability is that the higher ranking officials are likely to win their battles with their nominal superiors, simply because of their possession of the specialist knowledge which bureaucracy contains.”*

*(Turner, 2000, pp. 92)*

*These points are made transparent in Chapter 3.5 (pp. 123), where the economic model is shown. I also show how this bureaucratic pattern governs a large part of our lives, because this is now the Legal Rational Bureaucratic rule at the centre of our constructed, rational society, but as such also a formidable barrier to change at various levels (Reflective Comment, 2009).*



### 7.1.5. A conversation with Jason <sup>Footnote 56</sup>

This video was recorded in Jack Whitehead's university office with Paul Hocking, Jason Nicholls and Jack himself. This is in Jack's capacity as mentor to three Ph.D. students. It was customary to get together and to support each other in our own inquiry processes. This video clip is included on the CD provided with this thesis.

I made a transcript of the conversation that took place, which is included below. The date is 6 February 2004, and the importance of including this work in this "Stories' chapter is the following:

- The importance in being able to Listen with empathy, and also to ability to question with empathy
- Silence is an extraordinary tool in important conversations
- Reflecting questions back as people have answered them, and checking for correctness is a fundamental part of creating trust and honesty
- Having fun and yet remaining serious, without any judgement are also important parts of a conversation

The recording of this conversation is included in this thesis, and can be listened to.

The narrative of the conversation is listed below, with times of the event in minutes after the recording started. The names of the people involved in the conversation at that time, and any emotional changes as seen by the writer on the recording. I have also included comments about myself after more than 4 years of time movement between recording and today (15 May 2008). I intend those comments to be a reflection on how I have changed also.

00:00      **Jason:** *Talks about the progress that he has made since our last report. He has been involved in the re-design of an outpatient's area. He explains that the process he wanted and has followed was about giving the people who work in the department, involvement in the design of their own workspace. He calls this 'Democratizing the Workplace'.*

00:41      **Jason:** *The staff has produced two particular plans, and there is a great deal of explanation of why 1 set of plans is better than the other.*

---

Footnote 56:      *Jason Nicholls has give permission for this video to be used in this thesis*

- 02:47 **Paul:** *I really like that, particularly plan A.*
- 02:50 **Jason:** *Follows this up with a concise explanation of why certain plans were rejected.*
- 03:23 **Jason:** *"It is delightful for him to see these ideas and plans, which are really the ideas and plans of the staff, actually being implemented and built". "They are set in concrete" is an appropriate pun, and the group all laugh.*  
*He wants to share the fact that something is actually happening among the outpatients reception redesign.*
- 04:24 **Jason:** *"I want to show you some data from the NHS on which I have done some simulations and which I have used to show the staff the effects of their choices". "Positivistic Numbers" he calls these.*
- 04:35 **Graham:** *"He [Jason] has moved on! (again the group all laugh).*
- 04:38 **Jason:** *Explains some of the data in detail.*
- 05:57 **Jason:** *"OK, so what do you all think?"*
- 05:59 **Graham:** *"I will ask you a very simple question, and this is meant constructively; This is a small scale project. It is nothing special, happens all the time elsewhere. But what makes this special for you?"*
- 06:10 **Jason:** *"There are really 3 things that make this special for me:  
Firstly, there is empathy. I have learnt that there is a feeling of vulnerability under the staff I don't like the feeling of control in the workplace, and I don't like the notion of someone controlling others in the workplace.  
Secondly, there is an educational impact on the organization, not just in terms of results but also vocabulary. The traditional view in the National Health Service (NHS) is not one of 'Democratizing the Workplace'.  
Thirdly, the work that was done with this small outpatient's team has expanded to other units; Management has seen the benefit and have asked me to expand this type of work.*
- 08:52 **Graham:** *"Is that the answer to my question? I will push you hard (I am laughing when I say that), because everything you have said is all about other people. There is nothing about Jason. There is a huge inconsistency because you are never talking about your leadership in all this? You are talking about others, and yet You are the person who 'grabbed' this opportunity; you are the person who successfully drove this on; You got some form of collaboration going; and You are the person who closed this question down; and You are the person who implemented this. So there is something about leadership"*

*"When you started at CARPP (Centre for Action Research at Bath University on 29 Jan 2002), you had very strong political visions, you never wanted to be there (acknowledge issues like leadership, power, data, etc). There is a huge transformation in Jason and you are not acknowledging that this has happened".*

*"There is something strange happening to me now! I think that you should acknowledge that [change], I think you think about that [acknowledging your role and learning]"*

10:23 **Paul:** "What are the tensions that you are finding?"

10:26 **Graham:** "When I hear Jason speak about 'Democratizing the Workplace', that is an abstract notion to me. What I believe Jason has done is taken a problem, listened to the people, and driven the solution forward. He has achieved something".

*"But my gut feeling is, well saying it bluntly; Kicking leadership, kicking the establishment, kicking management has all stopped. You aren't there anymore [in that frame of mind] You are not talking about that. You are talking about your internalizing a process about leading others"*

*"I am not hearing what that means? I am not hearing how you are doing this?"*

11:37 *There is laughter in the room, and someone saying something about Jason waving the Red [communist] flag.*

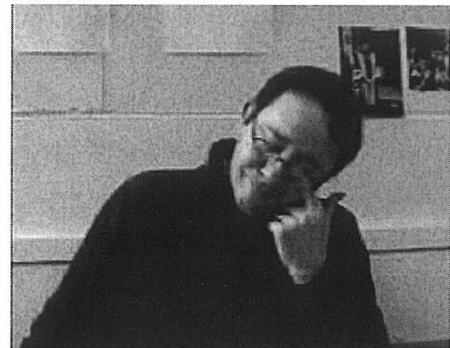
11:48 **Jason:** "The design was easy". But he also talks again about the sense of vulnerability he felt, and still feels for the staff in the outpatient's area. He makes very clear, repeatedly that this is important to him.

12:29 **Graham:** "So, did you set out to do this, or did it just happen?"

12:30 *There is Silence, and an emotional change in Jason. See photograph 4.*

12:59 **Jack:** "Stay with that sense of vulnerability, because it is clearly an important question and it matters a lot. Stay with this and talk about the grounds of that. There is something crucial".

Photograph 4



13:26 **Jason:** [He is on the verge of tears] "There is something around this being close to death as a youngster. My parents were going through a divorce. There is something about helping others not to feel today what I felt then."

- 14:21 **Jack:** *“Stay with this. Whilst you are doing what you are doing, suddenly I felt privileged to feel the emotion. It was a surprising question that mattered to you. When did this question connect with you?”*
- 15:07 **Jason:** *“When I arrived at this outpatients centre, there was a manager and staff. The manager stated at a meeting that he believed there was a moment when the staff all opened up; the atmosphere changed! There was a moment when someone said that a particular idea was stupid.”*  
*“Why is this idea stupid” is what I asked, please explain.*  
*Jason then went on to explain that the reason he asked this question was to do with a deeply held beliefs he holds, his value base: “Things that were done to you that I don’t like, I don’t want to see happening to others“.*
- 16:50 **Graham:** *“Are you complete? Are you sure?”*
- 17:00 **Jason:** *He talks about some of his learnings*
- 17:05 **Jack:** *“You learnt what?”*
- 17:08 **Jason:** *“I’ll explain this learning. Managers see consultation as ; We are going to do what we want to do, but we will make sure that there isn’t a huge amount of opposition”*
- 17:50 **Graham:** *“There is a large amount of emotion in that statement?”*
- 18:00 **Jason:** *“I accept that, but it is more of an assumption”*
- 18:15 **Jack:** *“I suggest that Jason is tapping into peoples vulnerabilities to open up creativity. Graham points out that you know yourself and that there is a way that you use these processes to tap into that creativity.*
- 19:37 **Graham:** *“But the interesting thing to me is how we [Jason] got here? I was surprised at the reaction, but Jason has done this before – with Ian’s poem for instance”*  
*“I was suspecting you were hiding your true feelings, and that is based on what you said in the past and your repeated reactions such as today. I was/am lost?”*
- 20:16 **Jack:** *“Graham has seen something else” [a question to Jason]*
- 20:30 **Graham:** *“Jason skirts around the subject in all his writings, he puts a barrier up. I have noticed a few times that based on the reactions that there is something about his feelings I am not connecting with. You are not what you write” [I say that in a friendly, laughing way]*
- 21:30 **Jack:** *“There is an open invitation here to outline the deep experiences” [directed at Jason]*  
*“There is still the evocation of the emotion which is raw. You become very creative when something taps into this emotion.*



*"I disagree with Graham. You have got a kind of economic analysis which links part of the structural problems and influences. The humanizing values you hold are not supported by the economic and political structures.*

*This conversation is an example of a person reaching his "Edge of Fluidity". This conversation for Jason exposed some fundamental questions for him. But this is only possible in a group of trusting co-creative individuals who are prepared not to judge, who will hold that trust that is given within a conversation like this, and who are prepared to be Inclusional, in relation to sharing observations they have made which are also fundamentally important to them.*

*This conversation did not just arise, as Shaw states (2002). This conversation started because there were specific goals that each of the participants wanted to achieve. This was not a spontaneous, un-planned conversation. This was a planned and structured conversation in which emergence of ideas was accommodated.*

*Kline (2001) describes a significant skill set that can transform conversations in her work, Tolle (2004) describes how being in the moment, fully emotionally attached, listening with empathy is critical to having conversations like this. The Clean Talk Model and other concepts (see Section 3.7.1, footnote 32, pp. 173) help to make a conversation like this very much more constructive.*

*What I hear myself doing is also introducing humour into a conversation, but also silence. A deliberate silence, sometimes so long that I also find the conversation a scary place to be in. But it is the combination of all the above that generates a meaningful conversation.*

*What if this could be replicated within an organized, pre-planned set of business improvement meetings? What if in advance the participants were made aware that this would be a conversation, or set of conversations with a difference. I do this by pre-distribution of the agenda. But the agenda is different than most agenda's seen (see Table 6, pp. -236 - 237). What if people knew about some of the requirements in advance, and that this might cause them to prepare in advance?*

*My experience has been that this often generates a more meaningful, a deeper conversation. In the case of Jason, the participants were all well skilled in and more developed in terms of understanding development levels, and social change. In industry, that is not the case, and additionally there is a hierarchy to work with and within.*

*I use the 'excuse' of a meeting as an opportunity to have a coaching set of conversations with the managers in charge. Just like I have demonstrated in Appendix 7.1.8 (Winning a Contract, pp. 419), managers have to 'Walk the Talk' (Covey, 1990) in these meetings, because otherwise they will not be transformational meeting. A Transformational meeting is in the sense that there is a transformation in the individual and collective beliefs that a change can be made, and that this team or set of individuals can do this. A transformational in the sense that there is a belief, an inner will and strength to see the change through and a preparedness to change oneself to reach the 'next' level (Reflective Comment, 2009).*

### 7.1.6. Self-Reflection; an Example of how I Learn

I have included a transcript from my diary below to explore more what actually happens in conversations between me and the other people. I did not find this an easy process at first. I had feelings of shame, incompetence, and resistance to scrutinize myself. After all '*I haven't done badly in life, why beat yourself up!*'

This extract of my diary can be used with diagram 6 (pp. 119), described in Chapter 3.4 in this thesis, as an example of how I use models and apply that to myself. It is also useful to see what I do with the learnings that I have from using a model like this.

*Meeting: 18 April 2002*

Hannover: 14.00 – 19:30

*9 People attend. Names have been omitted, just initials are stated. EE is the general manager, BG is the department manager, the rest are specialists. I am GvT.*

Most of the discussion is a highly technical discussion. AF is talking about a sub-process. He is linking in a new way data with a problem we had before.

I find myself liking what he is doing here. It is intelligent. I am asking myself how I can influence him to use this intellect on other issues, like Organizational problems we have. I am asking myself if this is linked in some way with the presence of PW and KK in the room.

In this discussion PW is diverging from the topic, in a very smart way. He introduces a discussion about the validity of the underlying theory AF is using, disguised as a question. RG. brings the discussion back on track.

My reactions at this point are mixed. I am sitting here trying to understand why PW is asking that question. I know from my own background that he is asking a question that he knows the answer to. I am more and more aware of my feelings that he as a Supervisor is in this room to bring his experience to bear. I am thinking that he isn't doing this, and am wondering Why? I am also making a mental note to see if this is happening more. But then I also think: Graham, how fair is this thought, and if you do find this to be the case, then what? Will he accept this from me. How would I start a conversation like that?

*The fact that RG is calling us back on track is very helpful. I am also aware that he has come a long way. He was a very vocal opponent of the position I had taken in the team. And now I find him looking at me when he talks. Almost as if seeking approval? I am confused about this.*

*Belief 1: PW is avoiding his responsibilities*

*Belief 2: The others around him know this*

*Perception 1: PW is satisficing (a combination of the words 'satisfying' and 'sufficing'), he is trying to avoid all responsibilities? I realise writing this, that this is an assumption I am making; If PW is avoiding something? What is it?*

*Perception 2: This is a key guy, if he isn't on board, then this Change Process might never have the effects that EE is looking for.*

*Self Talk: This is a dangerous point to bring up. PW is powerful, has many friends.*

*Comfort Zone: I am not comfortable with these thoughts.*

KK now also makes a contribution. He has data and puts a slide on the OHP and talks very well about this additional subject. BG then asks what his recommendation is. KK shrugs his shoulders. BG looks across at me, and I pick up his glance. I then ask KK what he would do if he was in charge. KK answers: "...I would truck the stuff off site." BG looks at him, and effectively accepts KK's recommendation verbatim.

KK's reaction is what I had expected. I am not surprised at this, and am accepting this as a reaction of a person who will not be changed in a hurry. I am impressed with the quality of the data he has put together and so is the rest. It just confirms in me a result from one of the previous leadership days. Technically extremely capable; but communication wise, respect for others, voluntarily helping others to do their job better is not there. KK is extreme. Again I am wondering how I will get this subject up in a discussion with him. I am deciding not to. I am making a decision that it is probably far more effective to coach BG further on this. The issue is accountability. Clearly assigning accountability and responsibility and then following up on who does what, when and where! I decide that this is an important coaching point to continue to explore with BG and EE.

*BG looking across is great. I almost feel that he is letting me know that he has spotted this also. At least he is unhappy with the reaction.*

*KK's answers the point on my question. But why does it have to be dragged out like this, and why does it have to be answered like this. I am now aware that this is a turn off for me.*

*What disturbs me most is that I think that he knows that he is doing this. He wants to be seen in this light. Why, I wonder? What is he trying to square off here? He told me once over a beer, that the Company had never made good on a restructured pay package. He reckons they owe him DM 40.000, and growing each month. I wonder if this is his way of showing he is worth more.*

*Someone once told me: If you understand why people believe what they believe, you can work and live with those beliefs. This one, if what I am thinking now, is not acceptable to me. This is a belief I hold; Up front sort and state your problems, and work through them. But once you have sorted these out, then keep your peace. This clearly not holds true for KK. He is supported by PW and RG. Both have similar complaints. There is a clear moral difference here, which I need to understand. Hold that thought and find a way to live, work with this!!!*

*I make the decision that KK is not a key player for me; I am not going to spend emotional energy on him.*

*Belief : If you accept a job you do it the best you can.  
(I wonder in this moment if this is as easy as I think it should be?)*

*Perception 1: KK is very knowledgeable. I think he is using this way of expressing himself to show the others that he is important*

*Perception 2: Others are seeing this, and he is losing credibility with the others.*

*Self Talk: Watch this carefully. If KK is pushed into a corner then he will come out. He knows I have done exactly the same job as his now, so he is looking at me in a competitive way. I don't want that fight!*

*Comfort Zone: Doing nothing is the easy option here for me. Wait for the bigger opportunity.*

MR is a new young Engineer. He is a PhD recipient, with great charisma and practical ability. He is liked by all. He is manning the keyboard, and capturing all the data on the projected computer file. (We are switching between OHP and beamer as required). He is asking some very good questions. And the sheet is filling up, with lots of action points, names behind them and dates when an answer is required. But there are also lots of questions. All this is open, and cleared off in the room. After the meeting is finished I ask EE and BG to reflect. They say this is a great meeting. Lots of points generated, with clear leadership. EE says that although he is happy, he is still wondering "...How do I get this entire horsepower on the road...?"

*I notice that EE dominates the conversation. I am trying to get BG into this conversation by directing direct questions at him. 'What do you think?' I find myself asking him. I am making a note how to get this point across to EE and am thinking that I need to soften him up with some reading materials, and then address this subject. He said before to me that he is a great listener. All the others contradict this in private conversations. I wonder how I can make him aware of this. I think I have the trust to tell him, but is this my place I wonder. I am drawing boundaries around certain areas in my job. I am also wondering if this ties in with feedback from our group (CARPP 7) to me ".Things need to be perfect for Graham, otherwise he is not happy...".*

*BG and EE are happy that the TEBT people now do not contradict each other anymore after meetings, along the lines off:"...They decided that, I wasn't there, and in my opinion it should have been....". Quietly I am happy about that. At least we have achieved that. But what is it worth? Need to think about that, but the 4 territories of knowing spring to mind here. Look that up again I think.*

*Belief :* EE is looking for help. He is leaving the door open. He is very good at his job, otherwise he wouldn't be where he is.

*Perception 1:* He is under tremendous pressure. He is likely to loose his job in this merger (Shell gossip!)

*Perception 2:* EE doesn't listen. He hears what he wants to hear, and uses this in the way he wants.

*Self Talk:* EE is my check signer, so be sure that he sees benefits. But equally he is the guy who can take over some of the coaching that I can't do with PW and KK.

*Comfort Zone:* With EE I want to stick to things I know. I also like it when he knows about my plans in advance, but also my underlying thoughts. He always seems to have a good extra angle!

*This is essentially a picture, a snapshot of the thoughts that I had in a meeting in 2002. Reviewing this 'Self Talk' now in 2008, I cannot say that the conversations are any different in the sense that I have them. What however I am now more inclined to do than then is to express some of the observations I have, and to clarify them in the moment.*

*I have learnt that these observations that I make, whilst clarifying them privately after conversations or meetings have taken place, are often shared by others in the room.*

*This is the concept of the 'Shadow' that Barry (2008) introduces, and one that is in my view crucially important to understand, particularly in a co-creative transformational and Inclusional environment that I am describing in this thesis as a place where change can happen.*

*Without this development, I believe that the quality of engagements, the creativeness that comes from being at the 'Edge of Fluidity' is less effective and less sustainable. Essentially what is described is a deeper and more fundamental level of learning within co-creative partnerships and/or individuals. This is what Argyris (1990) and Flood (1999) describe as second loop or triple loop learning. It is what de Geus (1999) describes as the ability in business to learn faster than your competitors (Senge, 1992, pp. 4).*

*Change without addressing these personal issues is in my view entirely possible. But what will not be addressed are the root causes. The fundamental problem or reason why a system stays in a status quo, why a boundary cannot be modified, remains, and therefore change without this level of engagement and development will result in an unsustainable change.*

*A real difficulty is however to ask, coach people to do this in private for themselves, let alone in public. Particularly in an industrial setting, this is difficult and not easy to do.*

*“Interpreted in its most consequential form, this rationalization thesis (Weber in Zweckrationalität) maintains that the essential driving mechanism of purposive or instrumental rationality is ‘intellectualization’ or the increasing dominance of abstract cognitive processes. Rationalization can thus include pervasive features of modern life such as standardization, commodification, measurement in terms of efficiency, cost-benefit analysis, legalistic administrative procedures, and bureaucratic coordination and rule. The last of these features – the tendency towards ‘bureaucratization’ in public affairs, which Weber tends to characterize*

as 'inescapable' and an 'objectification of mind' – therefore becomes an exceptionally obvious example of a more and deep-rooted cultural development.”

(Turner, 2000, pp. 104 – 105)

*Coaching, self-reflection and other self-improvement method are just not part of the instrumental reality, the rationalization and standardization of the legalistic bureaucratic management process that is now part of our cultural norms. Although this is now changing, see the work by Bridges (1993), Covey (1990) and Whitmore (2001) to name a few on the work of coaching and the significance of the emotional help that is required, this is a major area where transformational Change Agents can help to bring new and exciting techniques into the Change Process (Reflective Comment, 2009).*



### 7.1.7. Conversations with a difference

The previous chapters have all left an impression on me in my working career. They have meant something to me in a number of ways.

In the example of a Conversation with Jason, see Appendix 7.1.5 (pp. 401), I show how a direct conversation, showing respect, and yet directly questioning why a person has come to believe what he believes can create a moment of vision. There is a moment of understanding in the other person about personal issues that need looking at.

The 5<sup>th</sup> Man, the example about Safety and behavioural connectedness and the example about looking at systemic patterns are all important to me.

The last 3 chapters also show how I use data in a carefully representative form to convey information.

It is here that I hold a duality, a living contradiction (Whitehead, 1993). It is also here that I have experienced limited understanding about what it is I am doing.

I would like to use a further example of a management workshop that I designed an implemented to highlight my contradiction.

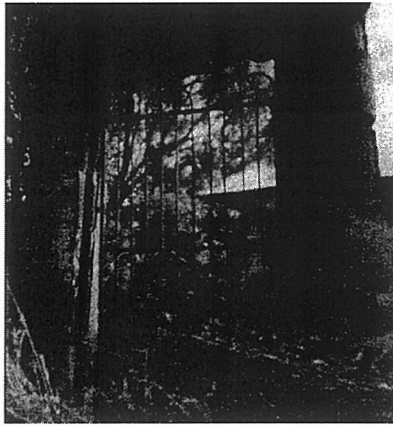
In 2003 I designed a workshop for senior management to explore what it is they perceived to be issues with their organization. I used a concept whereby pictures had to be used as a metaphor to express where each individual thought their division was at this time. To frame the situation, the reader needs to know that 6 months earlier two companies had merged into this division. The managers present in the workshop were from both companies.

The pictures shown below were selected as a response to the following question:

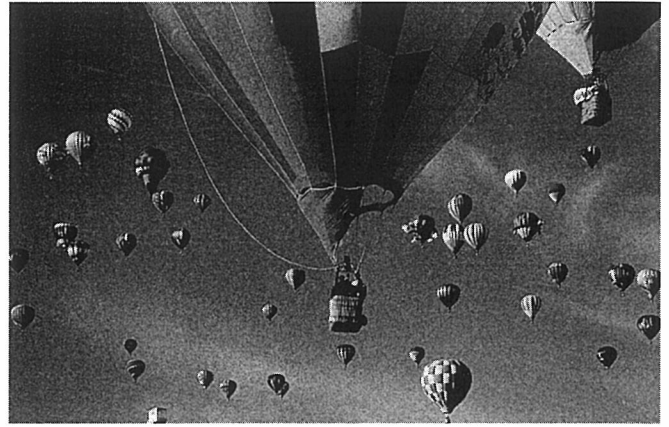
*“What would be the single thing that you want to change?”*

I remember from this workshop, that in general the managers participated in this with some sense of disbelief, and wondered how this sort of methodology could possibly help them communicate. The reaction afterwards was that this was the first time that they had got to deeper levels of communication than they had been before. There was an emotional content that was released and that entered the relational space between the people in the room.

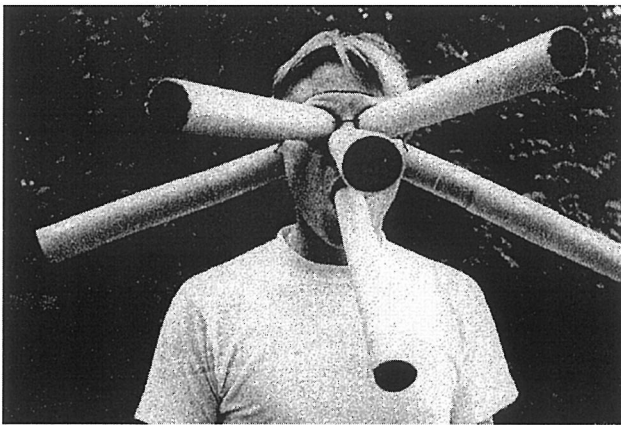
The pictures on page 414 were selected.



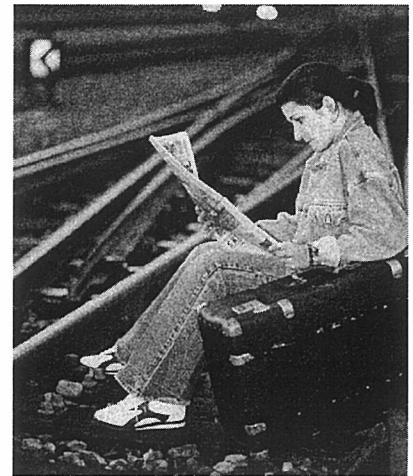
*A Graveyard: "I feel sombre and I see this all around me" Photograph 5*



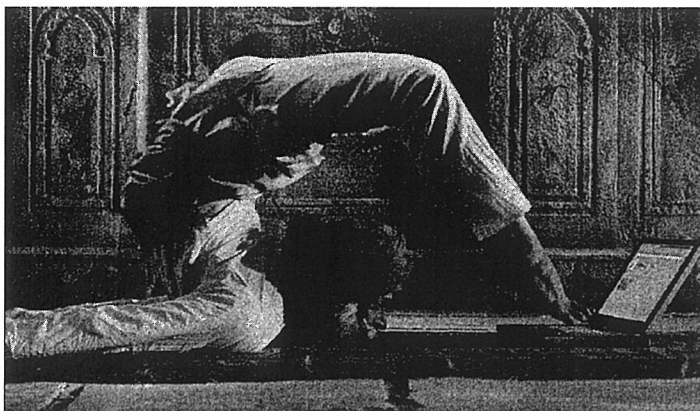
*Hot Air Balloons: "Everybody is all over the place. Feel that we are all isolated. Need to shout to reach people" Photograph 6*



*Tunnels: "Everything is so narrow, and funnels in. I have no overall picture at all. I see, hear, smell and feel everything in narrow confines" Photograph 7*



*A Girl sitting on a railway line, reading a newspaper:  
"All my information comes from this. I feel that a train could come along and run me over any minute. I feel completely out of control, on a strange journey" Photograph 8*



*A Fakir typing with his feet:  
"I have to bend myself in all sorts of ways just to get something done. It feels very uncomfortable, but somehow we get things done" Photograph 9*

A further way of engagement that I have experienced in different forms is severe mental stress. When I was drafted in the Army, the first few weeks are designed to ensure that people are receptive to a message. This is usually done by extreme training and physical effort. Tiredness, combined with rewarding certain actions and punishment work very well indeed.

A similar methodology was used in a personal change workshop that I attended. Long periods of reflection in solitude. Explaining one's actions in front of groups, All these can work also.

An emotional engagement for me is also for instance seeing pictures of the Somme, while listening to poetry such as "*In Flanders Fields the Poppies Blow*" (John McCrea 1915), or the Poem "*Remember me when I'm Gone*" by Jan Berry 1941. The film Schindler's List is equally powerful due to the interplay of music and narrative. I suppose that I am also emotionally bound to this subject due to my family's experiences in camps like this.

I am stating that I fully emphasise with the various ways of creating engagement and ensuring that when conversations take place, that all the participants have an emotional connection. I believe this to be paramount in creating the creativity within individual, and this in turn is part of the first steps in creating change at a local level.

My argument is however, that data and graphing materials can equally lead to emotional engagement, as I believe I have shown in previous chapters. It is a form of visualization that, when done in specific and meaningful ways can speak to many people.

The graphing has to be precise and in a very specific way. Tufte (2004) describes very eloquently what should be included and what not in making the graphs.

But I have also found that the graphs should be very clear also on what it is they are trying to convey. The picture that the graphs show has to be relevant and directly meaningful to the discussion and the change issues that are required.

The reader might in this context, want to look at the timing of introducing this form as material. I have seen that this is particularly successful, after preliminary discussion, and when I know what it is the group wants to change. I do not advocate that the data is an entry condition for creating change. Mainly because this is single focus, and there is no empathy and ownership for the picture the data conveys. I believe this is using Artistic Form.

This now is a paradox for me as described. I believe that I have described in essence a participatory view (Reason, 2001). Action Research has introduced a technique to help create social change. As such there was an active move in the academy away from a post-modernistic perspective and the use of reductionist approaches.

However I have demonstrated that a Qualitative Research approach, deconstructing the elements in a Post Modern way can add a very valid perspective to the issue of moving social issues along.

I believe this to be a very important debate in Action Science (AR), that I believe is not strongly represented in the literature and the academy. The issue for debate is how these techniques are brought into the AR frame. Equally it is my belief that due to the make up (i.e. learning patterns and experience) of the individual AR academy, that science and more scientific methodologies are disregarded due to the inherent qualities that the people in the academy have. There are difficulties in cross education (f.i. the sciences and the humanities) to allow this sort of thinking and argument to emerge and have it's place. This is a living contradiction for me. Stephen Rowland states:

*“how can we speak to each other, and learn from each other, across divides between the disciplines and roles we take on. At a practical level, what (and how) can a dentist learn from a historian about teaching and learning. At a more theoretical or philosophical level, what assumptions about what it means to know something underlie teaching in dentistry and history and how do they differ.”*

(Stephen Rowland, 2000, pp. 2)

*I show these photographs and the captions to potential clients, either individuals or groups of people who have a change project issue that they want to progress. The reactions are often astonishing. Equally the emotions that are produced if the individuals and/or the groups want to proceed with this activity.*

*What I really like about this type of work, is that this is a truly individual, creative and truly fluid moment when the picture is chosen to represent a particular situation. This could be a present situation, a future goal or an aspiration. It could also be a reflection of a feeling within an individual that (s)he has difficulty expressing. As such, when this exercise is conducted, it will move people to the 'Edge of Fluidity' very fast. It is creative, and can be very scary.*

*I now realize that I as a transformational agent have to prepare these experiences very well indeed. There are elements of trust, of support for the individual but also an element of after-care that are required as well as follow-up conversations that allow the moment to be re-lived and expanded upon. In groups this exercise can be seriously threatening to the current status quo, and as such needs to be framed within the goals*

*of the participants. I.e. it needs to expose the areas within a system that the can influence if they want to change them, even if that seems a difficult task at that moment.*

*For me, as a co-creative agent, I see it also as part of my ongoing development to expose myself to new and challenging techniques like this. Techniques that truly bring out emergent qualities within people. It requires me to develop, because I believe that I can not help others to develop, if I do not show that I am at a development level where I can demonstrate and hold the qualities that the usage of a tool like this requires in relationship, in an emerging and dynamic relationship with other people, at a time when holding trust and integrity is vital (Reflective Comment, 2009).*



### 7.1.8. Winning a Contract

In November 2007 I was invited, on a previous client's recommendation, to discuss potential work with a central European natural resources company. The contact was made through my previous client in an e-mail. I hadn't corresponded with him for 3 years, and it seemed he still remembered the work done with the 5<sup>th</sup> Man (Appendices 7.1.2.1 – pp. 367, and 7.2.2 – pp. 467) in Germany.

The trigger for this call was a serious accident on an operating unit, where an inexperienced section head, through his actions had seriously maimed and nearly killed one of his men at work. There was a Health and Safety Investigation, which seriously criticized both the Operator and the Contractors. There were issues with behaviours the report stated, and this had led to a bad safety performance.

The Operations Manager of the natural resources company followed up this contact, and invited me to present to them what it is I could do. He, however, did not give very many details. His brief was to come on over, get acquainted, and I should present to him and his management team what I had done in the past. I should demonstrate Results and Processes and how they had resulted in positive change.

I set about building a presentation, and showed this to two friends in Doha, Qatar who are both in a position to hire a consultant like me.

There were some interesting points made:

- Any examples shown should not contain any data and names. I needed to show the general trends and results only.
- I did not show what it is that I actually did in relation to any Change Process.
- They both believed I was too honest in stating: *"If management were not fully committed, then there was no point in starting."*

There was 1 particular slide, which content during my presentation created a lot of conversation, which is shown below:

*To create a Sustainable Change, I believe what is needed:*

1. *A Requirement for Change – Challenging Goals*

2. *A Collaborative Approach to how this Team will approach Change – Diagnostics, Workshops, Coaching Conversations, Data*
3. *Formulate a Plan – Priorities, Milestones & Champions*
4. *Work the Plan – Various Reiterations, Continuous Improvement*
5. *Transfer Ownership as the Plan is Implemented*
6. *All Levels are involved, Internal as well as External relevant to the Change*

Present in the room at that stage were a regional technical Vice President, The Operations Manager, the Drilling Manager and the Country Health and Safety Advisor. What I made very clear in conversation about this slide is that there would be frequent engagements with this team on how to proceed if they wanted the project to succeed. Their involvement was crucial. And where this would all start is to define point number 1 in such a way that the entire workforce actually could understand the reasons for doing this. In fact it is worth repeating the points made in this conversation, because they are of crucial importance to what I believe.

There has to be a requirement for Change and this has to be clearly understood by all. There is, in my view, no point in engaging in any Change Process if the people who are engaged with what needs to change do not understand the need, and do not feel any involvement or requirement to change themselves and to set an example. In this case, there was a real need to change, because a person was very severely injured and there was a significant amount of un-planned work which caused unfavourable returns on investment.

There was a positive reply to the suggested collaborative approach. The diagnostic were seen as essential, and particularly important was to get a better understanding on the atmosphere and the culture within the organization.

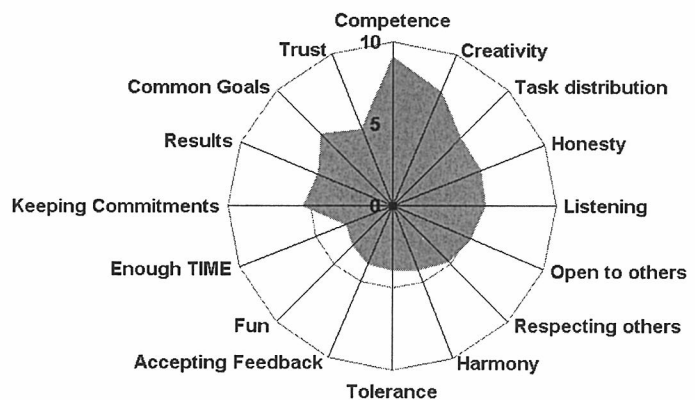


Diagram 44

The spider diagram 44 was seen as important, and they believed that this could be a way to measure progress.



To formulate a work plan was seen as a very natural step initially. It is here that I started a discussion that we needed to be careful to understand priorities and impact. We could only go as slow as the slowest man or unit, and we would have to consult in every case. That would also mean to give on-site training and coaching as required with a consistent message. It also would mean making sure that if a milestone was achieved, we had to be sure it was embedded within the organization and that a champion was identified who could sustain the continuous effort required.

There was a big discussion on which levels were involved. It was initially seen as them (management) changing the work force. I countered this with the question; "*What will you do if the Work Force points out areas where you have to change?*" This had not been considered by any of them.

As I left the meeting, the general agreement was reached that they would like to continue with a dialogue. It was here that the Operations Manager informed me that he had spoken to a friend in Germany, and asked about me. I was working at the time with another Change Management consultant who had no background within the industry. The comment made by the friend was: "*It doesn't always work. It depends on the person. He recommended me, but he had also seen this go wrong*".

As a result, the initial conversations were around how quick the Client Company could terminate the contract. And this was after having shown the following slide:

*Time required for Change – From My Practice & Projects*

➤	<i>US</i>	<i>14 Months</i>	<i>Deep Water Drilling</i>
➤	<i>Holland</i>	<i>20 Months</i>	<i>New Automated Rig</i>
➤	<i>Germany</i>	<i>24 Months</i>	<i>New Process / Merger</i>
➤	<i>Holland</i>	<i>24 Months</i>	<i>Business Unit start-up</i>
➤	<i>Qatar</i>	<i>36 Months</i>	<i>New Technology Department</i>

*Creating a sustainable Change is a slow and difficult process. Industry wide results show only 25% of Change Projects having a big and lasting impact!*

*Table 7*

They wanted a 1 week termination clause. And this requirement in itself showed up some of the divisions within this company.

*I now look at this as a symptom of barriers existing within companies. The legal or contracts department wants to ensure that money is saved if the contract doesn't work out. But they do not choose the person who does the work, the Operations department does. And what is surfacing here are the conflicting goals of each sub-group and what is happening is that the communications across the boundary are not very clear.*

*This stalemate resolved itself, when I intervened. I stated that I would not be interested in contractual conditions like this, because it meant that they were not serious about change, particularly since in my experience there would always be points in the process where people would feel uncomfortable and possibly threatened. I pointed out that this clause would give them an option to not continue, and that on this basis I could not be sure about their resolve to give a Change Process a chance of working.*

*There are some very clear messages in this story. There needs to be reasons for change. There is also a clear case for collaboration on how to create change, but there is a process to follow. There is a beginning (a fact finding mission), there is an execution and collaboration phase where the change is designed and implemented, and there is a sustaining phase where the change is embedded within the organization and this change now becomes the "new" way of working.*

*This story is in essence how I am prepared to state what it is I do to other people. I work as a consultant, and my and my family's prosperity is dependent on the quality of my work and what I stand for. The concepts stated here are the general beliefs I hold and am prepared to defend when I am talking to others about Change Management.*

*This contract started in June 2008 and what has happened is that due to the economic situation, oil price has collapsed from \$ 145 / bbl to less than \$ 40 / bbl, this Company has stopped virtually all its investment programs. But I am not one of them. The reason is two-fold in my opinion.*

*A collaborative and co-creative process designed to their needs and a constant and honest feedback session with managers and staff alike. I have built up a trusting relationship with the Drilling Manager, based on my honest thoughts, doing the hard work and documenting this in a very transparent way, always allowing them the choice as to what the next steps are, and being discreet but also honest.*

*This fits with consistent feedback that I have had all my life: I am prepared to be hard working and I want to do the things that I believe are right. Gabriel points out (2005, pp. 7) that this could be a critical super-ego inherited from one's parents' You don't try hard enough!' This theme is echoed elsewhere in this paper also, particularly in relation to my 'Shadow' (see for instance Chapter 4.4.3 - pp. 244 and Chapter 4.5 pp. 251)*

*Fundamental to all this is that I want to be in the best position to help my family fulfill their dreams (see Appendix 7.2.1 - pp. 464, Project Manager Excellence where Bill Anderson states these points as observations he has made).*

*All the other chapters in this thesis reflect on either the theoretical developments leading to this approach, or highlight the practical execution of certain parts.*

*What I have come to realize that is most important to my success is that I cannot do this alone. I do not live in a vacuum. What I have learnt is that trusting people is important, but if I combine this with a trust in a process and explain this process to the people I work with, then I am comfortable with almost any change that I have to go through myself, because I know that this is what is best. This is not a random, completely unexpected and forced change. This is part of a pattern that I know will happen, I just don't know the details. But when this change requirement comes, either me or others or all of us, then I am comfortable within myself to actually stand up and state my beliefs in this change because it is co-created based on sound principles.*

*I wonder why these beliefs are so instilled in me and so strong. My parents were not religious, but both served in the forces after the Second World War. My God Parents were equally not religious, but again were very upright people (Dourlein, 1953). What was unusual about them that most of the people I knew when I was young, and that has continued to today, are marriages between different nationalities and a wide mix of countries where my friends or colleagues live and/or work. My father was Dutch, 10<sup>th</sup> generation living in Indonesia, my mother is English, and I grew up in both countries.*

*Maybe there is an element of this Calvinist heritage that I have assimilated, along the lines that Weber (Turner, 2000) described as:*

*The ideal-type of capitalist was a man who avoids ostentation and unnecessary expenditure, as well as conscious enjoyment of his power, and is embarrassed by the outward signs of the social recognition which he receives. His manner of life is... often... distinguished by a certain ascetic tendency... He gets nothing out of his wealth for himself, except the irrational sense of having done his job well (Protestant Ethics, pp. 71)*

*(Turner, 2000, pp. 155)*

*(Reflective Comment, 2009).*

### 7.1.9. Courage and Humility

This chapter is based on personal experiences. I believe that constantly stepping into a zone of physical and mental uncertainty, whilst managing the risks associated, is a way to build confidence and allow personal growth.

The events described here are from our family holiday to New Zealand in 2007. New Zealand had always attracted us because of its natural beauty. But in addition New Zealand has a very 'Can Do' type of mentality. Extreme sports have been made very accessible and set in stunning locations.

Queenstown in New Zealand is often billed as the capital of extreme sports. But when you get there it almost becomes infectious. There are so many people, who come here with the same expectations and fears, that when talking to them, a common bond and understanding builds up around the topic. But more importantly, the risks are also talked about, and then it becomes very clear that when the whole process is deconstructed that under the fear and adrenaline rush, there is a very strict, secure structure in place that ensures safety. But the people who work on these attractions do their utmost to make sure that this does not take away from the experience.

I use this concept of safety when setting up any group or coaching session, see also footnote 16.

My youngest son Alex was determined to do a bungee jump. The first opportunity that arose was in Auckland, where there is a pod construction under the Harbour Bridge about 40 m above the tidal Auckland Sound. Photograph 10 shows him being 'kitted up' ready for his jump.



Photograph 10

The walk out to the pod is dramatic in itself. One has to walk to the middle of the bridge on a workman's grating which gradually climbs up to the pod. There is only a thin metal grating below you and a single railing between you and the Ocean? And the drop grows constantly. When one gets to the pod, spectators are separated from the jumpers. In this case there were 10 or so jumpers, and Alex was one of the last. He did jump, and one could see that this was hesitant. But he jumped never the less and completed his first real act of over coming fear and trusting the judgment of himself and others.

In Queenstown both my sons, James and Alex did exactly the same again from the Kuwara Bridge. This is a similar jump, but into a canyon with rapid flowing glacial water. Photographs 11 and 12 show these jumps.



Photograph 11



Photograph 12

Photograph 11 shows James' first jump. Again he was apprehensive. In fact we all felt that he made this jump to prove to himself and all of us that he could do this. And so he did.

Alex in contrast, by this stage had made 2 other jumps (see the narrative below for my wife Geraldine), and he asked to be dipped in the water. This entails the bungee rope to be extended just enough for the jumper to submerge under water with their head and shoulders. Photograph 12 shows the moment of impact. He had clearly now gone beyond his fears and was actually enjoying stepping into a zone of mental challenges.

But the biggest surprise for all of us was when my wife Geraldine decided to do a 'Canyon Swing' <sup>Footnote 57</sup>. In essence this jump is 109 m high and 60 m of the decent or so is less than a yard away from the Shotover River canyon wall. After this point the way the cables are set up the tension will start arc-ing the jumper away from the wall.

Alex had done this jump twice now. And all the while Gerry had been relatively quiet. Then suddenly, Gerry stepped forward and states that she will do this also, because it looks beautiful and that 'she will always regret not doing it'. She walked straight up to the platform and allows herself to be strapped in. The video clip 6 is a recording of her jump and is on CD 3 in the attachments in the back of this thesis. The photographs of when she came up say it all. These are shown in photographs 13 and 14 below. Gerry enjoyed this. She smiled and couldn't stop laughing. There seemed no real fear present, just elation that she had done this.

---

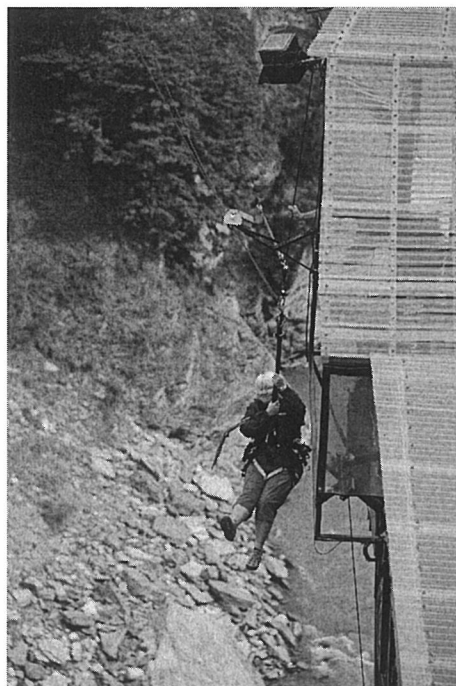
Footnote 57: [www.canyonswing.co.nz/index.php](http://www.canyonswing.co.nz/index.php)

Both James and I stood watching this, and I can remember thinking something along the lines of: "I can't believe she is doing this. She's not even scared". But at the same time thinking: "WOW! She got some guts! That's my wife there". James actually said: "I can't believe that that is my mum, that's my mum". So he was clearly proud also.



Photograph 13

Photograph 13 shows how far this fall actually was. Photograph 14 shows Gerry on the way back up. The real point here is the smile on her face. She is very happy indeed.



Photograph 14

Throughout this holiday, we did many things that stretched our sense of adventure and danger. The boys and I went whitewater surfing on the Kuwarau River <sup>Footnote 58</sup>. This is 14 km of grade 2 – 4 white water on a belly-board. The water moves at incredible rates, thousands of cubic meters of water per second and the trip is a serious test of nerve and stamina. But what fun.

I have done this sort of thing all my life. Either parachuting in the Army, Hang Gliding in Scotland and Dorset, Diving (3rd Class BSAC Diver), Surfing in the ocean and various cross ocean yacht trips including a Fastnet race attempt. I have made a point through my sons' lives to help them gain confidence in themselves by promoting what some people would call extreme or challenging sports or adventurous training. Both boys have been to Norway and have participated and completed a week's training course in arctic conditions whilst in the Combined Cadet Force at school. They are both also qualified kite surf instructors.

---

Footnote 58: [www.riversurfing.co.nz](http://www.riversurfing.co.nz)

In the first case they were instructed by Royal Marines Arctic warfare and mountain leaders and in the second case by the head instructor for the British Kite Surfing Association. The point I want to stress is a core value that I have. These courses or experiences might be called extreme, but they were conducted with some of the best people around to do this. I believe in shaping an environment that is safe that allows one to explore your own courage. It is in company of people who do not boast, who show you also that humility, a core value that you show people that you are still their equal and not better than them, is vital.

The point is that this sort of activity builds courage, but also humility towards the challenges that will come in a person's life. I believe that it is very helpful if a person can go through challenges and come out a stronger person at the other end, because they have learnt something about themselves. It doesn't matter if this is a physical, mental or other challenge. I believe that a person becomes stronger because that person will know the limitations that were conquered.

I want to leave this story by stating that I also realize that sometimes it is not the right thing to do. It is person dependent, and can only happen in an environment where the person involved feels safe. It is essential that the choices therefore are made by that person themselves. I can only help make the choice if there is complete trust and discretion.

There is not much more to expand upon, mainly because this text has been written in recent times. Courage and humility are required in all people who aspire to be co-creative transformational agents. Courage because embarking on a journey of discovery is very hard and difficult to do. As Handy states:

*"The book is about the personnel dilemmas of leadership, but the important message for me was that there are never any simple or right answers in any part of life. I used to think that there were, or could be. I now see paradoxes everywhere I look. Every coin, I now realize, has at least two sides, but there are pathways through the paradoxes, if we can understand what is happening and if we can be prepared to be different."*

*(Handy, 1994, pp. 3)*

*Particularly as Handy contends (1994) that the time when to be different is when everything is going well. One needs to deliberately step into the next Sigmoid curve*



*(Handy, 1994, Chapter 3) at a stage where seemingly everything is going well. This requires a lot of courage.*

*It also requires humility, because at the same time this is about accepting that there are always further personal frontiers, further development that can be undertaken.*

*This requires humility to look for, and accept that feedback.*

*The video of Geraldine's jump is included in the attachments, clip 6. This clip shows the incredible calmness and composure that she displayed (Reflective Comment, 2009).*



### **7.1.10. Boundaries and Space – Clip 5 Transcript (Alan Rayner)**

This is a talk that has been given by Alan Rayner and is included in the Attachments of this thesis.



If you see boundaries as the basis of a subjective, objective divide, and you view them in this particular way, then this can lead to a loss in communication.

So how can you show that there can be boundaries, and that these boundaries can give identity, and that this identity is important to communication and the very basis of communication?



*Photograph 15*

The way I like to show this, is using a simple plain sheet of thesis. I use this to represent a one-ness with respect to itself, and also a one-ness in relation to me in its encirclement with my body. So it is at one with itself and at one with me through its encirclement with my body.

We can turn it into a two-ness by introducing a fold. And as soon as we have done that, we have given identity to two sides. One side and the other side. But by introducing a two-ness we have also necessarily have to have a three-ness by introducing the fold. Pp. one, and pp. two, and the fold is the third. This third realm allows the one and the other to communicate. And it also allows communication in turn through my body.

So what this fold does, it allows the one pp. to pivot off the other. So that as when one moves, the other reciprocally moves. One moves in a dance with the other.

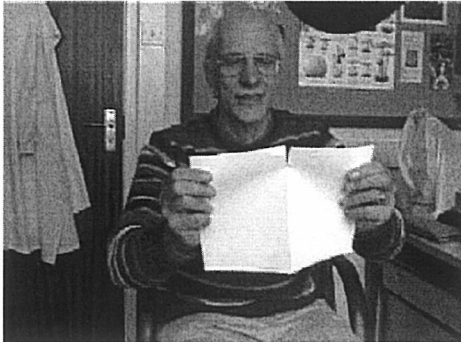
So we have this dance created, where we have this dynamically moving boundary, The boundary is making distinct, but not discreet. It is also the fulcrum, the medium, with which one and the other reciprocate each other's movements. So now we have a true communication, with a distinctness, which is essential to the communication and mediated beautifully through this boundary.

Now what has happened in rationalistic culture is of course that is that the boundary has not been treated as a place of integration and identity, but as a place of severance.

So all of a sudden we have created a situation what was a two-ness, that was simultaneously a three-ness, is now a two-ness without any communication between one and other.

So what we have done is we have literally removed something of pivotal significance. The boundary was a pivot that enabled one and other to reciprocate each other's movements. Now that possibility for reciprocation is gone.

And this catches us in a bi-polar way of looking at the world, or dualistic way of looking at the world, where we look to one, we look to other, We look to plus, we look to minus; we look to subject, we look to object; we look to good, we look to bad; we look to left,



we look to right; we look to male, we look to female; ...but all the time we look to those who used to be together, are severed from one and other. And we are caught in a kind of bi-polar craziness, we are bewitched by this bi-polar craziness, where we feel we have to distinguish between one and the other all the time and see them as distinct.

*Photograph 16*

We can go even further than that, because it is extremely uncomfortable to keep wondering is it nature or is it nurture; is it good is it bad; whatever it might be.

And actually come to ignore one, so we come even further stuck into rationalistic positivism. We just see the one all the time, and are fixed on this one in complete disregard and ignorance of the other. And that feels in a way very comfortable, because we are not constantly questioning where the other is.

But sooner or later, we have this awful sense that something is missing. Someone might tell us that something is missing. And so we bring the other back into play, but then we get caught in bi-polarity again. So that's a very uncomfortable state, so we might be tempted to hide the other again, and fix once again only on the one which is before us.

But if we really want the dance we need some cello tape.

## **7.2. Papers – Internal Company Publications and Published papers**

This thesis is as much about what it is I do and have done, and the learnings that I have taken from these points. The goal of this chapter is to demonstrate, in no particular order, by introducing

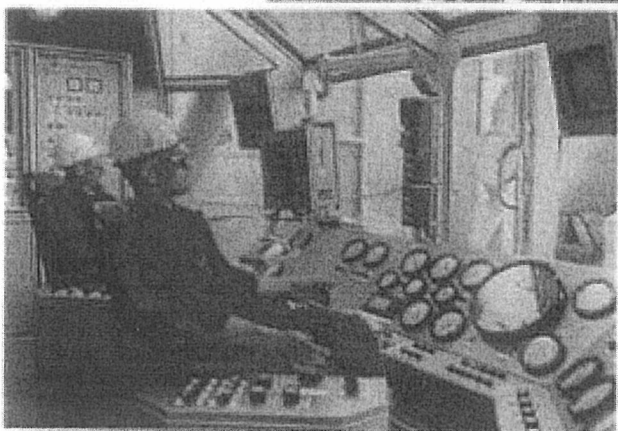
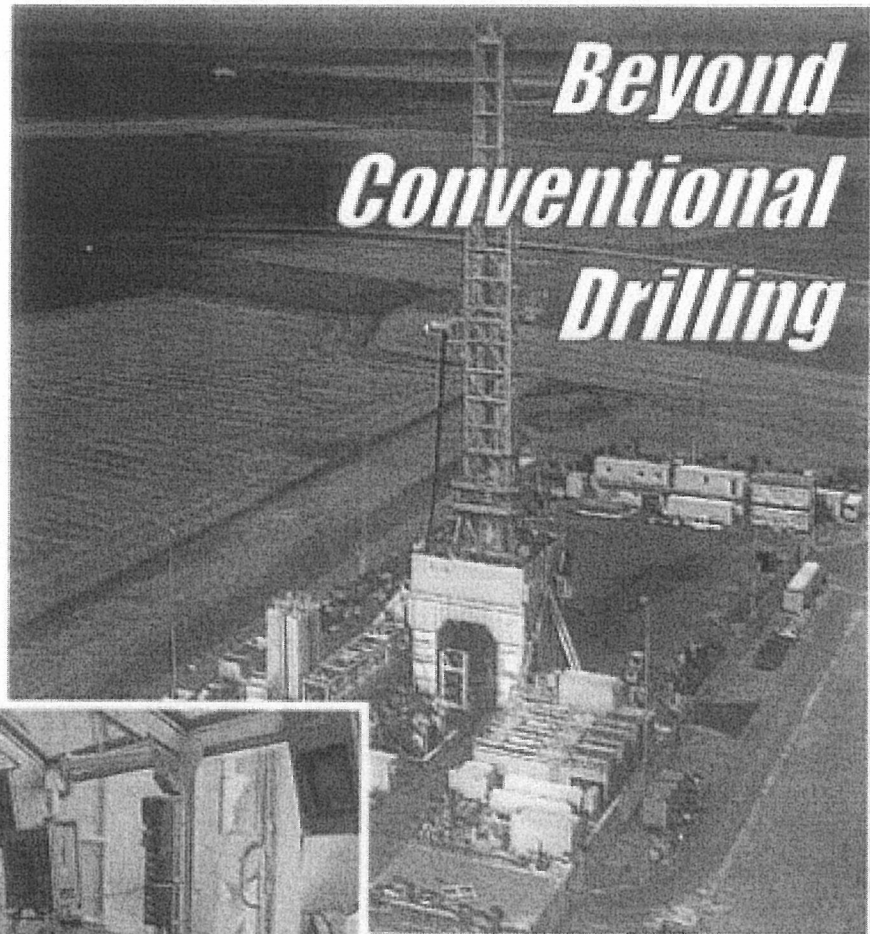




### 7.2.1. “Best of the Best” Submission 1998

*RLG’s International experience with Deutag Nederland BV on the PT2000 drilling rig in the Netherlands*





RLG International's experience with Deutag Nederland B.V. on the PT2000 drilling rig in the Netherlands

Project Managers: Graham van Tuyl & Peter de Jong

Senior Manager: Bill Anderson



## RLG INTERNATIONAL LIMITED

June 21, 1999

The Best of the Best Committee  
RLG International  
750-375 Water Street  
Vancouver, BC  
Canada

Re: **1999 Best of the Best Nomination  
PT 2000, Deutag Drilling  
Graham van Tuyl & Peter de Jong**

Attention: Best of the Best Committee Members;

I am pleased to nominate the **PT 2000, Deutag Drilling** project, for consideration for this year's Best of the Best Award. The PT 2000, Deutag project was lead by **Graham van Tuyl and Peter de Jong**, and supervised over the past 18 months by Bill Anderson. Deutag Drilling invited RLG to participate in this project in 1997 in response to increased performance demands from their clients and their own internal commitment to Continuous Improvement. This project was a test case for working with onshore Rigs and partnering with a Drilling Contractor.

The PT 2000 project meets all the criteria required for a Best of the Best Nomination and has exceeded my expectations for a great project on many counts. The tangible results are very significant in absolute and relative gains and have been clearly documented by the client from the outset. The success of this as a pilot project for both onshore Rig implementations and for Deutag Drilling is evident by new work with Deutag on the PT47 in Holland (NAM) and the T 76 in Germany (RWE-DEA). Over the past year the PT 2000 project has been used as an example and reference for Deutag and other Industry players. I am most impressed and pleased with the quality of partnering with Deutag and the level of sustainable commitment that remains on site despite our completion almost 6 months ago. Deutag's willingness to share this success story both internally and externally is testament to the quality of this implementation.

41 Queens Lane South, Aberdeen, AB15 4BF, SCOTLAND 01224 324 880 Fax 01224 324 883  
Registered in Scotland No. 170608 - VAT Registrations Number 682 8822 93  
Canada • United States • United Kingdom • Chile • New Zealand • Australia • Netherlands • Norway

440

---

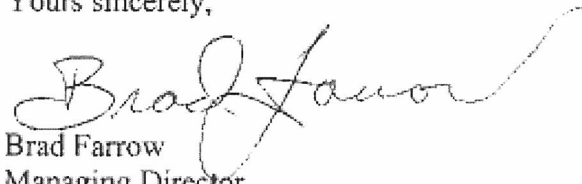
A thesis submitted for the degree of Doctor of Philosophy; April 2009  
Graham van Tuyl, University of Bath, School of Management, England  
From Engineer to Co-Creative Catalyst; An Inclusional and Transformational Journey.

I hope that you enjoy reviewing the project submission. The results themselves are extensive and exciting, however the quality of the relationship with the client and their commitment to the process is undoubtedly the best measure of success and one that the PT2000 team can be proud of.

I am proud to submit the **PT 2000, Deutag Drilling** project, lead by **Graham van Tuyl and Peter de Jong**, to you for the 1999 Best of the Best award.

Thank you and good luck with your deliberations!

Yours sincerely,

A handwritten signature in cursive script that reads "Brad Farrow". The signature is written in black ink and is positioned above the printed name and title.

Brad Farrow  
Managing Director  
RLG International  
41 Queens Lane South  
Aberdeen, Scotland  
AB15 4BF

# **PT 2000**

## ***Beyond Conventional Drilling***

---

RLG International's experience with Deutag Nederland B.V.  
on the PT 2000 drilling rig in the Netherlands

Project Managers: Graham van Tuyl & Peter de Jong  
Senior Manager: Bill Anderson



# Contents

Project Overview .....	1
The Key People .....	2
Implementation Process .....	3
Terms of Reference .....	5
Data Results .....	6
Plan / Execute / Measure / Learn .....	8
The FAIR Model .....	12
Client Satisfaction .....	14
Project Manager Excellence .....	15
Marketability and Tourability .....	17
Sustainability and Resilience .....	18
Appendices .....	19

# Project Overview

The PT 2000 is a new generation drilling rig. It is the most advanced onshore drilling unit in the world. All the new and advanced technology was causing the rig difficulties in reaching its design potential. After two years, Deutag decided to use RLG to help the rig reach its potential.

RLG introduced Theoretical Maximum Performance (TMP) in October 1997. The TMP process has been applied to all wells since. The method has been internalised by Deutag personnel and it has become part of their business.

The project began with a diagnostic phase, which included data analysis and a cultural assessment. From this came the Terms of Reference for the project.

Five key performance areas were selected. Plan / Execute / Measure / Learn and the FAIR Model were introduced. Specific training such as a three-day leadership course was also given.

Some significant project results are:

- Overall well performance has increased by 30%.
- Downtime is reduced by 50%.
- Rig-moves have gone from 16 days to 11 days.
- 8.5 millions Dutch Guilders of savings were generated.
- The project return is 6.5 : 1.

For RLG this had led to:

- A project extension on the PT 2000.
- Implementation of TMP on a second rig in the Netherlands (PT 46).
- Deutag has invested resources in an in-house coach (Laas Elzenga).
- Start-up of a new Deutag project with a new operator in Germany (T 76).
- Synergy with Deutag's client NAM, thereby enhancing RLG's reputation.

## Process

TMP introduced to Deutag  
Diagnostic phase conducted  
Terms of Reference established  
Five key result areas identified  
PEML and FAIR models used

## Results

Savings generated: DfI 8.5 millions  
ROI 6.5 : 1  
30% increased well performance  
All targets reached

## Behavioural Change

Quote from Eelco van der Leij, Managing Director of Deutag Europe GmbH, in his New Year speech to Deutag Netherlands:

*The PT 2000 has changed beyond all recognition. The rig is a player in the highest division. Freek, Alois and Henk, with their crews and the Rydberg Levy Group, have shown us what state of the art equipment and a motivated crew can do. Planning, Execution, Measuring, and Learning are now their way of life. Results:*

- Rig move times reduced 25%.
- Halved the downtime.
- The speed -- handed over 5 wells, in a budgeted time for 4, and LWO-3 completed 30 days ahead of schedule.
- Safety -- Second year LTI free on March 7<sup>th</sup>.
- The Client -- NAM is very happy.
- The PT 2000 is now the most modern land-drilling rig, with a superb team. You can see that, you can feel that. A superb effort!





# The Key People

During the project we worked with a number of people. The list you'll find below is not exhaustive. The intention is to place some of team in the foreground. These people have been great supporters of the project. Without their commitment, the change and success would have been less impressive.

<b>Deutag</b>	
Eelco van der Leij	General manager
Fokke Fennema	Technical manager
Hans Schroër	Technical manager
Freek Zuidema	Rig manager
Alois Lügering	Deutag drilling supervisor
Henk Grootveld	Deutag drilling supervisor
Herbert Blömers	Deutag Controller
<b>NAM</b>	
Nigel Shuttleworth	Well construction team manage
Hendrik Hendriks	Senior well engineer and TLD representative
Kåre Pederson	Drilling engineer
<b>Foxdrill</b>	
Edwin Swart	Manager, Rigmoves
Marcel Oogink	Project manager, Rigmoves



# Implementation Process

## Theoretical Maximum Performance

All the wells drilled since the introduction of the TMP tool have yielded significant success. The process of breaking the well down into small distinct tasks within phases is a process that the PT 2000 has now integrated into its planning process for up-coming wells.

A total of 29 action points were generated at the first TMP meeting. Some of these points provided significant quick wins:

- Extension of the mouse-hole – DFI 250,000 estimated savings.
- Have a Kelly Cock on site with HT 55 threads – a safety win.

The TMP process went on to generate over 400 Action Points on rig moves alone. The rig move contractor has now taken responsibility to collect and evaluate the points.

The rig team now produces a TMP stretch target line for each well. An action list is also produced and later followed up for completion in the toolpushers and drillers meetings.

The first well drilled with the TMP stretch target produced a target line 45% under budget and was completed 20% under budget. All wells since have shown a similar pattern. The last and most difficult well (LWO 3) was completed 26% under budget. This was only 10% more than the TMP stretch target.

## Diagnostics

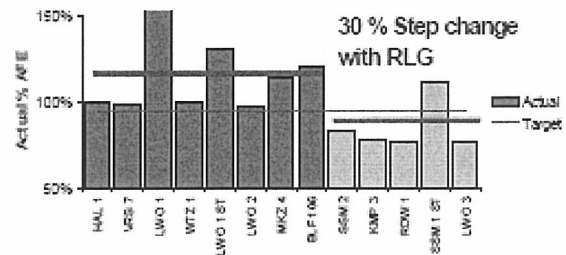
Diagnostics for the PT 2000 project were conducted in two steps. First a Cultural Assessment was conducted to gain the crew's opinions on FAIR model issues. Secondly, data from past performance were analysed to identify improvement opportunities. A value tree was prepared as a framework for developing key performance indicators.

### Cultural Assessment

The cultural assessment comprised a tailored interview conducted with more than one third of the PT 2000's crew. Questions addressed safety, leadership, communication on the rig and with head office, morale, feedback, etc.

The Cultural Assessment was beneficial for providing an introduction to RLG's work. More importantly, many existing strengths of the PT 2000's culture were identified, as were opportunities for improvement.

PT 2000 Well Overview



### Diagnostics Synopsis

- Cultural Assessment  
35 people interviewed 1<sup>st</sup> month  
six follow-up interviews in month six
- Performance Tree BLF 107



### Strengths:

- Safety: the clarity and confidence in company goals and targets.
- Innovation: the pro-active approach in investing in state-of-the-art equipment.
- Involvement: good crew morale, good involvement at the drillers and toolpushers level.
- Crews: strong technical background and large experience base.

#### **Perceived Improvement Scores**

Use of Planning: Rig-move	80%
Clear Focus on Priorities	75%
Recognition	60%
Crew understanding of KPIs	45%
Communication	35%

*Data from Follow up Cultural Assessment: Data represents senior crew's perception of improvements.*

### Opportunities:

- Lessons Learned: the need to develop a way of capturing and transferring information.
- Leadership: change the distance between management and crews.
- Operational: rig moves. Introduce planning, and have clear accountabilities.
- Operational: improve the working relationships between NAM, Deutag, and Foxdrill.
- Operational: address the Starracker problems (crucial to improved pipe handling operations).
- Leadership: alignment of the service departments within Deutag to support the rig.
- Leadership and Safety: management to set the example for the crews by "walking the talk".

### Numerical Analysis

Reasons for doing the numerical analysis are:

- To find support for the Cultural Assessment.
- To find support for ideas raised in the Cultural Assessment.
- To determine the biggest opportunity areas.
- To generate baselines for Key Performance Indicators.

#### **Time Distribution BLF 107**

<b>Productive Time</b>	<b>21.5%</b>
Drilling	21.3%
Coring	0.2%
<b>Planned Flat Time</b>	<b>38.5%</b>
Pipe handling	17.1%
BOP work	4.0%
Rig Move	2.9%
Scheduled Maintenance	1.4%
Logging operations	5.1%
Mud and Circulation operations	4.4%
Directional operations	2.1%
Cement operations	1.1%
<b>Unplanned Flat Time</b>	<b>40.0%</b>
Hole problems	20.7%
Incidents and downtime	15.9%
Unplanned maintenance	3.4%



# Terms of Reference

Diagnostic work identified areas for improvement on the PT 2000. In January 1998 Fokke Fennema, then Deutag Operations Manager (subsequently replaced by Hans Schroër), identified targets in six areas (see box). These clearly specified key success factors for the project and lead to the development of a number of KPIs.

<b>PT 2000 Targets for 1998</b>	
January 1998, Hans Schroër / Fokke Fennema	
<b>Safety</b>	Incident free year Re-introduction STOP program
<b>Rig Moves</b>	Less than 7.5 days No incidents
<b>Productive Time</b>	30% Improvement
<b>Planned Flat Time</b>	15% Improvement
<b>Downtime</b>	1998 under 5% 1999 under 2%
<b>Pipe Handling</b>	Starracker. A reduction in fluctuations of trip speeds

The following KPIs were identified and tracked:

Key Success Factor	Indicator	Level in Pyramid	Base Line	Project Average	Change
Safety	PAER Incidents (Incidents to Personnel, Assets, Environment and Reputation)	Top	4 per month	3 per month	25% reduction
	STOP cards	2 <sup>nd</sup>	6 per month	6 per month	No change
Overall Performance	Duration of Well Compared to Budget	Top	115% of budget	84% of budget	31% reduction
	Time – Depth Curve	2 <sup>nd</sup>	47 days behind 1997	50 days ahead 1998	97 days saved compared to baseline, 50 days saved compared to budget
Rig Moves	Rig Move Duration	3 <sup>rd</sup>	16.1 days per move	11.1 days per move	30% reduction
Planned Flat Time	Downtime	3 <sup>rd</sup>	8.85% 1997	4.10% 1998	53% reduction
	BOP Test Time	3 <sup>rd</sup>	9 hours per test	6.1 hours per test	20% reduction
Unplanned Flat Time	Starracker downtime	4 <sup>th</sup>	3.45% 1997	1.93% 1998	44% reduction
	Other Downtime	4 <sup>th</sup>	5.4% 1997	2.22% 1998	59% reduction



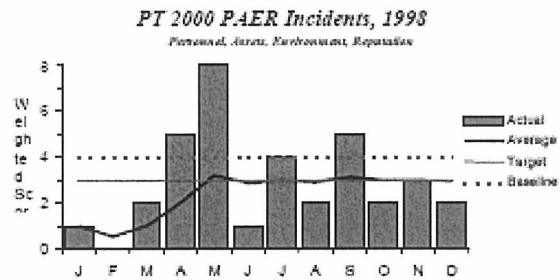
# Data Results

## Quantitative Success Criteria

### Safety

The priority goal was for Deutag to maintain a good safety record on the PT 2000. 1998 remained free of Lost Time Incidents.

An additional success was a reduction of the number and severity of incidents to Personnel, Assets, Environment and Reputation (PAER). The PAER score (a weighted number for severity and events) was four per month in 1997. This was reduced to three per month in 1998.



1998 PAER Incidents achieve target of 25% reduction from 1997.

### Rig Operating Time

Drilling operations are highly time-sensitive. The top-level key success factor for operations is delivering wells on time. The key performance indicator here is actual well time expressed as a percentage of AFE time (budget time).

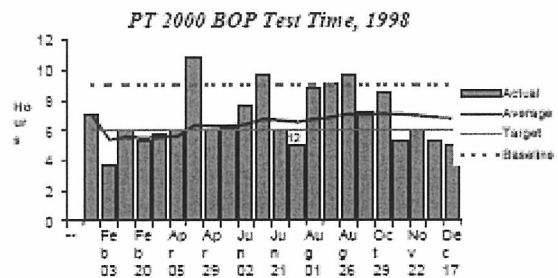
This indicator demonstrated a 30% improvement in 1998 over 1997. The PT 2000 finished 71 days ahead of AFE (budget).

Second level key success factors relate to the effective use of planned flat time (e.g. BOP tests, Rig Moves) and unplanned flat time (e.g. downtime)

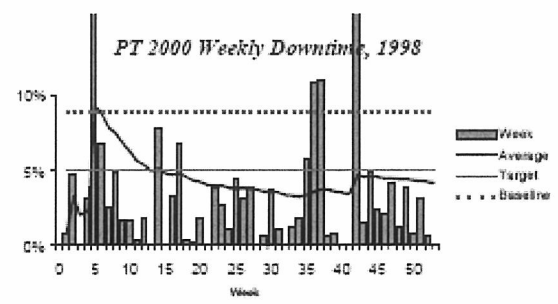
BOP tests achieved a 20% reduction in time and are now considered to be near optimal level.

With Rig moves, the PT 2000 now moves the rig in 11 days, a five-day saving in each of the five moves conducted in 1998. This is a 30% reduction in move times.

Unplanned flat time, represented by rig downtime, was reduced by 53%. The 1998 target was exceeded.



1998 BOP Test time averages 6.8 hours, down 24% from 1997.



1998 Downtime equals 4.15%, reduced in half from 8.85% in 1997.



## *Dollar Impact of Indicators*

The main objective of TMP was to lift the performance of the PT2000 to the levels envisaged when it was designed. For Deutag this meant an investment of resources. The contract that Deutag has with NAM ensured those financial benefits would accrue to NAM, with the costs of the project falling to Deutag.

There are three ways to evaluate financial benefit:

- For NAM            Time saved in the year  
                          Well construction costs per meter drilled
- For Deutag        Effective increase in day-rate

The overall well indicator is the main indicator to determine the impact of TMP. The saving made for 1998 was 71 days. Each hour represents a DFI 5,000 impact on costs. This is a saving which accrues directly to NAM.

**DFI 8.5 millions**

The LWO 3 well enabled Deutag for the first time to enter into an incentive agreement where Deutag shares in the risks and rewards. The well came in 31 days ahead of budget and gave Deutag a one-off net profit share of DFI 340,000. This resulted in a 20% increase in profit for the operating time in question.

Deutag's contract with NAM defines distinctive operating rates based on the amount of downtime per month and whether major maintenance or shutdown requirements are necessary. By reducing the level of downtime from 8.85% in 1997 (3.45% due to the starracker and 5.40% due to other) to 4.15% in 1998 (1.93% due to the starracker and 2.22% due to other), Deutag was able to realise extra revenue.

## *Return on Investment*

Return on investment for the project using the overall well indicator was 6.5 : 1.

**6.5 : 1**

This is a return of investment on Deutag costs and the increased savings the TMP generated on the well sequence.

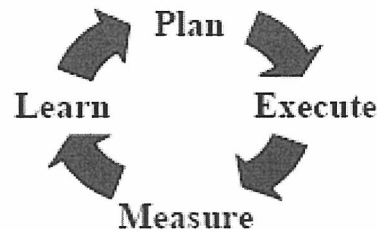
An intangible return for Deutag is to still have five rigs operating in the Netherlands at present. If this is compared to Germany, where due to the low oil price, the land rig fleet contracted from 12 rigs to four rigs. Deutag in the Netherlands maintained its presence with five rigs. Deutag Netherlands is in a strong position for the future.



# Plan / Execute / Measure / Learn

## Planning

Planning was key to the success on the PT 2000. The outstanding examples here are the rig move planning and the TMP well planning.



## Rig Moves

Rig move planning is a process that involves both Deutag and Foxdrill. There was no detailed plan before. Now an MS Project file details 488 concise steps integrating standard move elements to specific move elements (extra cleaning, repairs and modifications, inspections, etc). A key change is the clarity now of the Critical Path and the toolpushers ability to monitor the elements making up the Critical Path. The main elements that contributed to the success of rig moves are listed (box).

	Pre RLG	Post RLG
Pre-move meetings	Limited	Yes
MS Project . move Gantt chart	No	Yes
Daily move morning and evening planning meetings	No	Yes
Standard rig move plan	No	Yes
Rig move KPIs	No	Yes
Foxdrill move summary	No	Yes

The impact has been a tremendous learning curve transferred to the other rigs and beyond. Foxdrill is implementing the complete rig move approach developed on the PT 2000 throughout Europe. This has become a standard way of working for an entire company, and a major quality item.

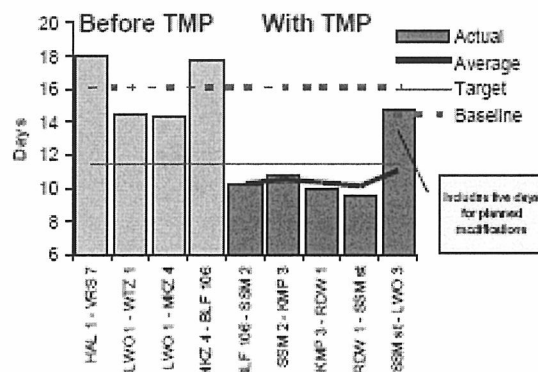
Deutag and Foxdrill have implemented morning and evening meetings to review past performance and to fine-tune the planning of upcoming tasks. During those meetings, lessons learned are captured.

Foxdrill provides a move summary, including all lessons learned and a distinct number of performance indicators for further analysis.

## Well Planning

TMP well planning has been a major success. Deutag has adapted the original TMP meeting format to their needs. Currently senior rig crew attend toolpushers and drillers meetings to evaluate and improve the client's well plan. TMP times are set as stretch targets for each step of the well.

PT 2000 Rig Move Overview

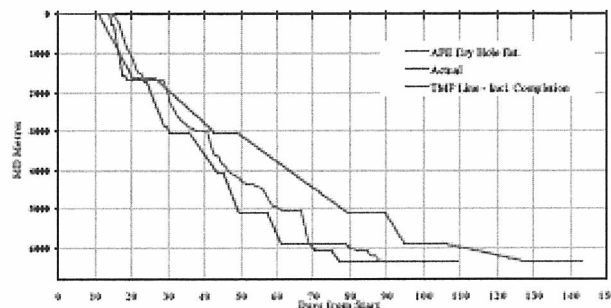


Before each TMP session a draft detailed plan, currently produced by the night toolpusher, is prepared. This helps speed up the TMP session and it ensures more ownership of the final plan.

This draft plan is produced using a fit-for-purpose software package. During the well, variance is easily captured and lessons learned are generated within this software package.

Five wells benefited from this approach during 1998. Three wells were completed on average at 26% below budget. The final well of 1998 was also completed at 26% below budget, but was significantly more challenging.

LWO-3  
Rig: PT-2000



## Execute

Good execution requires attention to detail. Here two areas stand out – BOP testing and the maintenance schedule. The BOP tests showed potential. Crews typically tested in different ways. Freek Zuidema appointed one driller to come up with a revised procedure, to verify its accuracy, and to ensure that other crews would use the procedure. This led directly to improved operational performance on the rig.

A further revision to the execution process was the maintenance schedule. This is a reporting system used on the PT 2000 to capture and schedule routine equipment maintenance and lubrication requirements. It was developed and generated by the drillers and accepted by the toolpushers as a consistent way to monitor and ensure compliance with manufacturer’s recommendations.

A safety audit system has been developed. This audit system ensures distinct areas of the rig are being checked on regular basis for safety and house keeping. Toolpushers and drillers developed the schedule to raise the safety awareness. Having an area checked twice per week not only reinforces the importance of safety, it also “guarantees” safe areas.

## Measure

The operations manager and rig managers defined all key success factors. Crews were involved in the creation of appropriate measurement systems. The result of this system was the creation of a poster, which was updated monthly to show progress on the various KPIs. This poster was used on the rig by Freek Zuidema to update crews during the weekly safety meetings.

The indicators show measurements at various levels of the operations. Links between levels of these pyramiding indicators

### Quote

*The atmosphere between the drilling crews and Foxdrill has improved tremendously the last year.*

*Freek Kamphuis (Foxdrill Foreman)*



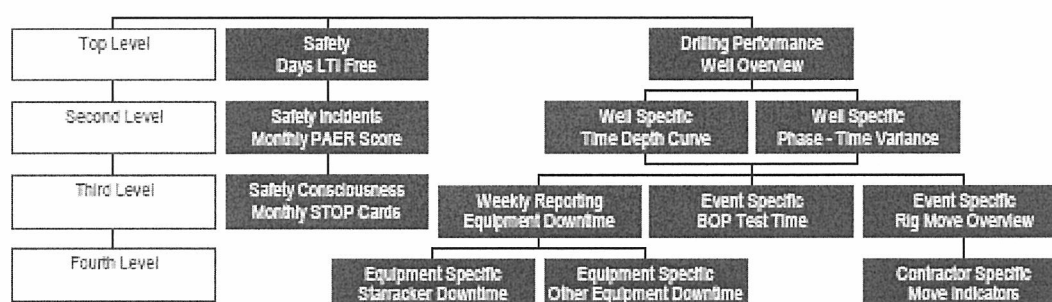


is shown on the next page. Top-level indicators are safety and operational performance.

Safety is a paramount indicator with a clear link to operations. Under no circumstances was it permitted to compromise safety through speeding up performance. RLG's program encourages "working smarter, not faster."

The well overview is the top level operational KPI. Here all operations are combined, and the

### Structure of Pyramidizing Indicators



project achieved a 30% reduction in operational time in this success factor. All elements of well construction are encapsulated in this KPI. Each well has two lower level indicators, the Time – Depth Curve and the Phase-Time Variance indicator. The Time Depth Curve shows clearly the difference between flat time (no progression in depth) and productive time. The Phase-Time Variance graph shows each phase compared to budget. This is part of the TMP process.

Each phase can be broken down into second level indicators. These would be downtime, BOP testing, and rig moves. The rig move indicator shows a sequence of wells and shows progression towards the goal. Foxdrill has developed separate move indicators that show the individual phases of a move. Not shown here is the extension of the sub-contractor KPIs. Foxdrill has also produced KPIs showing clear connections between the various resources used on location, the number of cranes, and number of people used versus move times. This has allowed tremendous progress on the most recent PT 28 rig-move.

### Organizational Learning

The Plan / Execute / Measure / Learn cycle has been integrated into the Deutag culture. Eelco van der Leij has written this repeatedly in the TOPDRIVE (Deutag Netherland employee magazine). He uses the model when he speaks to employees and clients.

Freek Zuidema and his rig management team use the model on the PT2000. Rig move meetings, the TMP meetings, and toolpusher and drillers meetings continue. Freek states that the outputs of these meetings are improving in quality. He believes that people enjoy working like this.



Freek has helped another Deutag Rig Manager, Rieks Botter (Rig Manager for the PT 46 and PT 28), to implement the TMP approach on the PT 28. This resulted in a dramatically reduced rig move time. This represents clear indication of lateral learning and an internalisation of the concepts.

In order to ensure continuation and complete transfer of the TMP process Deutag has created two employment positions within the organisation. A Deutag in-house coach was appointed on January 1<sup>st</sup> 1999, and a Supply Chain Engineer position was created on the PT 46. The latter has the responsibility to ensure planning issues, including TMP stretch targets, are generated. He has a cross-functional capacity to ensure more rig autonomy. RLG helped identify the need for the Supply Chain Engineer position.

Freek Zuidema released the current night toolpusher to ensure the TMP process is being kept alive. The night toolpusher's new responsibilities include planning TMP sessions, capturing lessons learned, analysing improvement areas, keeping track of actual times and variances, and taking appropriate actions to capitalise on opportunities or to eliminate risk.

The night toolpusher's role will be very similar to that of the Rig Supply Chain Engineer now being developed and implemented on the PT 46. Deutag is acting on our proposal for the Rig Supply Chain Engineer position.

**Quote**

*Office and rig are now working as a team, especially the mechanical and electrical side.*

*Bertus ter Stege (Rig Clerk)*



# The FAIR Model

## Focus

There is a clear sense of Focus within the organisation. Members from the entire organisation were involved in a constructive way.

The key success indicators were defined, and have caused a good discussion on how to measure and more importantly what they represent.

The rig manager clearly stated that he would make his toolpushers “the captain of the ship.” This provided a strong focus on the rig. In order to do this, behavioural issues have been taught formally and in 1 : 1 coaching sessions. Freek has clearly sought to understand and pass on the concepts of Leadership to his senior rig based personnel.

In order to enhance Focus, he has been delegating more areas of responsibility to the rig, for instance financial information on performance and costs.

## Accountability

The accountability within the organisation was only limited to operational matters. Now there is a measurement system in place to pinpoint opportunities and to indicate strengths. These indicators are being tracked and evaluated on the rig location once a week. This is equally a 1 : 1 feedback meeting between rig managers and site managers.

Clear roles and responsibilities have been defined. A clear example here is the overall control during the move. Previously control was distributed between the Umbaumeister, the toolpusher and the Foxdrill site foreman. Now the single person maintaining overall authority is the Deutag toolpusher. Another example is the maintenance schedule where clear responsibility is with the drillers to ensure compliance and follow up.

<b>FOCUS</b>	
Goals established	> 75%
Group involved in creation	> 75%
Communicated to all stakeholders	> 75%
Key success criteria identified	> 75%

<b>ACCOUNTABILITY</b>	
Indicators pinpointed	
Managers	> 75%
Work force	40 – 75%
Measurement system in place	> 75%
Scheduled evaluation meetings	> 75%
1 : 1 Feedback meetings	> 75%
Roles and responsibilities defined	< 40%



## *Involvement*

Performance measures are tracked from the top management right down to the crews. There is involvement. In the Cultural Assessment a comment from the crews was that they were not involved. Now they are, and they want to be. Here an example is the crews voluntarily selecting the best “manipulator” for the Starracker. This is a job that requires concentration to electronically move the equipment. Before, this position was shared on an equal basis between all shift members. Now the best man sits there longest. It shows in a better tripping average. Pipe is being pulled 10% faster and more consistently.

Action plans are being developed. There is much better co-ordination between the maintenance departments and the operations department. Partly from the work RLG has done, a re-organisation occurred that aligned these departments to maximise the effort in the critical part of the business – “making hole”.

## *Response*

Examples of positive recognition include Freek sending a bunch of flowers to all the wives of the crew after a sustained good performance on the rig.

Eelco van der Leij provided another example of positive recognition. He consistently came to the majority of Toolpusher / Drillers meetings to speak. He hosted a party in recognition of sustained good rig move performances. Positive recognition is understood and perceived to be important.

Actions are now being written down and followed up. Particularly the rig move summary is a clear concise document that invites good discussion and feedback.

The rig and site management is modelling the PM’s behaviour, particularly in time management, effective meetings and the use of key performance indicators.

<b>INVOLVEMENT</b>	
Scheduled business reviews	< 40%
Participation in reviews	
Managers	> 75%
Work force	< 40%
Action plans developed by:	
Managers	> 75%
Work force	40 – 75%
Targets set by:	
Managers	> 75%
Work force	40 – 75%
Performance measures tracked by:	
Managers	> 75%
Work force	40 – 75%

<b>RESPONSE</b>	
Recognition practised by:	
Managers	> 75%
Site managers	40 – 75%
Written results / planning reports	
Managers	> 75%
Site managers	40 – 75%
Modelling P./M. / Teaching sessions	
Managers	> 75%
Site managers	40 – 75%



# ***Client Satisfaction***

Letters from the following people are included to substantiate the claims made.

1. Eelco van der Leij, Deutag General Manager:

Without the improved performance we have witnessed over the past year, the PT 2000 would probably not be working right now. It is working and it's working very well. And that gives a lot of smiles.

2. Hans Flikkema, Technical Well Engineering Manager, NAM:

The results are clear – the PT 2000 previously had a difficult time living up to the expectations we all had for this new hardware. Now the PT 2000 crews drill wells faster and move the rig quicker. This occurred with no compromise to safety.

3. Herbert Bloemers, Deutag Controller:

The process of the rig move was hated by the drilling workers – now they have fun to beat the rig move performance indicator.

4. Freek Zuidema, Rig Manager for the PT 2000:

By making performance visible through key performance indicators, the crews became more focussed and also more willing to accept increased responsibility. A significant performance improvement has been achieved, the crews are involved and proud of their rig again.

5. Kore Pedersen, Well Engineer, NAM:

Overall I think the TMP process has been beneficial, the strongest point being that it helps get increased involvement of the rig crews in the process. More knowledge equals better decisions.

6. Marcel Oogink, Project Manager Rig Moves, Foxdrill B.V.

It is very important to train the leaders so that the normal workpeople will have joy to perform well.



## DEUTAG NEDERLAND B.V.

DEUTAG NEDERLAND B.V.

Schepersmoat 4  
NL - 9405 TA Assen

P.O. Box 227  
NL - 9400 AE Assen

Phone 0592 335500  
Telefax 0592 335522

A Member of the  
Preussag Group

RLG International Limited  
Attn.: Mr. B. Farrow, Managing Partner  
41 Queens Lane South  
Aberdeen, Scotland AB15 4BF

Assen, 12 April 1999  
Our reference: LET 99.040/file 14  
Re: "Best of the Best"

Dear Brad,

I am writing in support of the PT 2000 as "Best of the Best" in RLG. We have seen some important changes on the rig as a result of Theoretical Maximum Performance and Deutag is now very interested in securing TMP as part of the way we work. It contributes to our competitive edge.

The PT 2000 was built in 1995 to be the technically most advanced land drilling rig in the world. After two years of use, it still had not lived up to its potential. The engineering mindset in our industry meant that solutions to the problems on the PT 2000 were all oriented towards hardware, but these were not achieving the goal. On top of that, Deutag in the Netherlands was only formed in June 1994 with personnel that still belonged to the operator, Deutag Group and third parties. No common culture was around.

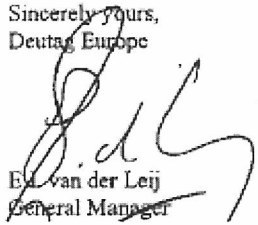
My background makes me more comfortable with non-technical solutions. It became clear to me that we needed more emphasis on planning rather than execution. When we shopped around, we found that RLG could help us with this.

We have found that the TMP process has helped to develop a fundamental sense of teamwork, and this is great to see. Undoubtedly the quality of decision making has increased. The rig crews are taking more responsibility for their rigs and their operations. As Covey would say, these guys are much more effectively working within their expanded sphere of influence. Their sphere of influence is now continuously expanding.

As for results, they are very impressive. Drilling performance has improved dramatically and these were achieved without substantial expenditure on hardware. I have been pleased to see our results updated each month on our poster. Typically managers have to chase the performance numbers in the accounting system. It is a nice change to have the numbers delivered to my office where I put them on the wall for everyone to see.

At Deutag we view the competence of our people to be a major component of our competitive strategy. We are striving to let those closest to the show, RUN the show. RLG and TMP have definitely helped us to develop in this direction. Without the improved performance we have witnessed over the past year, the PT 2000 would probably not be working right now. It is working and it's working very well. And that gives a lot of smiles.

Sincerely yours,  
Deutag Europe



Ed van der Leij  
General Manager

Nederlandse Aardolie Maatschappij B.V.



NAM

Technical Services

Schepersmaat 2  
Postbus 28000  
9400 HH ASSEN  
Telefoon : (0592) 369111  
Telefax : (0592) 363009

Mr. Brad Farrow  
Managing Partner  
RLG International  
41 Queens Lane South  
Aberdeen, Scotland AB15 4BF

Your ref:

Our Ref: 199904000296

Direct line: (0592) 362325

Assen, 13 April 1999

subject: PT-2000 Best of the Best Submission

Dear Brad,

I am pleased to hear you nominated the PT-2000 TMP Project as one of RLG's "Best of the Best". As you know, I supported the introduction of Theoretical Maximum Performance (TMP) in the Netherlands. Now to determine the impact I just have to look at the graphs! The results are clear – the PT-2000 previously had a difficult time living up to the expectations we all had for this new hardware. Now the PT-2000 crews drill wells faster and move the rig quicker. This occurred with no compromise to safety. I really commend the way PT-2000 now operates.

The second major benefit we have derived from RLG is that TMP helped pave the way for Shell's Technical Limit Drilling Initiative (TLD). TMP on the rig increases everyone's awareness of the need to improve in today's difficult market. When Technical Limit Drilling came it was nothing new to people on the PT-2000. They got on with it and we all saw the benefit on the LWO-3 well when it was completed 42 days ahead of budget.

RLG has a role to play helping us to improve the way we run our business. Your people are now doing the same work on the PT-46 and you are also helping us reorganise our engineering and well contraction teams. This is necessary and important work, and good facilitation is a key success factor

Thank you for the contributions you have made to date. I heartily support the nomination on the PT-2000 as RLG's "Best of the Best" for 1998.

Sincerely yours,

Hans Flikkema

459




## DEUTAG NEDERLAND B.V.

DEUTAG NEDERLAND B.V.

Scheepersmaat 4  
NL - 9405 TA Assen

P.O. Box 227  
NL - 9400 AE Assen

Phone 0592 335500  
Telefax 0592 335522

A Member of the  
Preussag Group 

April 14, 1999

Mr Bill Anderson  
Senior Manager  
RLG International

Re: PT2000 Best of the Best support letter

Dear Bill,

The PT2000 is a very modern drilling rig equipped with state of the art pipe handling equipment. The rig is designed to drill wells with minimum crewing levels. It was designed to be 20 - 30% faster than the standard drilling rigs.

The crews assigned to run the rig were no drilling experts. They needed to improve their drilling expertise and needed to learn how to operate this very modern and fully automatic rig. In the past, the crews were not listened to. Small issues were blown out of proportion.

By having TMP sessions to plan the well, we not only achieved a better focus, but also a coherent rig team. Before the TMP meeting takes place, the (night)toolpusher prepares a detailed well plan. This plan is used during the TMP meeting. By quickly taking action on 'low hanging fruit', the crews became aware of the fact that the office now supports them fully. By implementing pre/post move meetings and morning/evening meetings during the move, we were not only able to improve our planning but also to capture lessons learned. Again, quickly closing out these lessons learned re-installed the confidence and commitment of the crews again. We also implemented a regular office-rig maintenance meeting. During this meeting improvement ideas are brought forward.

We were also able to shift more accountability and responsibility to the drillers and toolpushers. They designed a 'safety audit system' and a 'lubrication schedule'. The safety audit system helped improve safety. The lubrication schedule combined with the additional maintenance activities on the starracker during the rig move helped reduce the level of downtime considerably. See table below.

Key Performance Indicator	Baseline	Target	Actual	Improvement
Safety (Personnel, Assets, Environment, Reputation)	4	2,9	2,9	1,1
AFE compliance (time %)	115	95	80	35 %
BOP testing (hours)	9	6	7,8	1,2 hrs
Duration of rig moves (days)	16,1	11,5	9	7,1 days
Overall downtime (%)	8,85	5	4,15	4,7 %
Starracker downtime (%)	3,45	2,34	1,93	1,52 %
Other downtime (%)	5,4	2,64	2,22	3,18 %

By making performance visible through key performance indicators, the crews became more focussed and also more willing to accept increased responsibility. A significant performance improvement has been achieved, the crews are involved and proud of their rig again.

What worked very well was the fact that RLG was at the rig 24 hours a day, this level of exposure helped change the culture. RLG's ability to change the attitude of the people in a simple but effective way definitely contributed to the success.

I really enjoyed working with Peter, Graham and you. It allowed me to improve the rig's performance quickly and I'm also convinced the change will last.

With regards,

Freek Zuidema  
Rig Manager PT2000





## DEUTAG NEDERLAND B.V.

DEUTAG NEDERLAND B.V.

Scheepswaard 4  
NL - 9405 TA Assen

P.O. Box 227  
NL - 9400 AE Assen

Phone 0592 335500  
Telefax 0592 335522

A Member of the  
Preussag Group

RLG International  
Attn: Mr. B. Anderson  
Senior Manager

Assen, 23 March 1999  
Our reference: LET 99.028/file: 14  
Re: Deutag PT 2000 Performance Improvement Project

Dear Bill,

The PT 2000 represents the major investment of the DEUTAG group in a new rig during the last 5 years. It is valued at approximately 40 million Deutsche Marks. The expectations in the performance of this rig were very high, expressed by a reduction of well cost by approx. 30 %.

The main objective for RLG was to achieve this expectation in order to satisfy our customer. We are able to state that the present performance of the Rig PT 2000 fulfills the original performance expectations. The proof of this statement is that the main indicator **meters drilled per year** increased from approx. 12.079 meters during the year 1997 to 20.353 meters during the year 1998. This increase of rig "output" makes a tremendous difference for our customer.

This overall increase of the rig performance was possible by the major TMP approach

### **Plan / Execute / Measure / Learn**

on the different processes during the construction of a well like rig move, pipehandling, BOP testing, etc. etc. I am convinced that this approach also initiated a cultural change of the people working at the rigsite. The best example is the process of the rig move. The process of the rig move was hated by the drilling workers - now they have fun to beat the rig move performance indicator.

In terms of DEUTAG operating results, I have to state that due to the contractual background of the rig (actual cost) our customer took the main advantages of improved performance. But at least a reasonable amount of an incentive for the **Lauwersoog-well** is expected to be paid out shortly.

Last but not least I like to take this opportunity to thank Graham and Peter for their information and explanations given to me with respect to operation at the rigsite and especially with respect to the stories behind our customers AFE's.

Sincerely yours,  
Deutag Europe

Herbert Blömers/Controller



Friday, April 16, 1999

Mr Bill Anderson,  
Senior Manager,  
RLG International.

Dear Bill:

I am responding to your request for insight into the TMP Project on the PT 2000 during 1998. I have been the Well Engineer on the PT 2000 since 1997 during which time 8 wells have been drilled. Overall I think the TMP process has been beneficial, the strongest point being that it helps get increased involvement of the rig crews in the process. Graham and Peter facilitated that process very well.

I saw in the beginning that it was a tough situation for RLG because they worked for Deutag but needed strong support from the operator, NAM. The project had to prove its worth with performance improvements before it really got support.

Now I see that the rig is much keener on up-front planning at the start of a well. For example it used to be that nobody had a clue about the critical path of the rig move. It's pretty hard to improve if you don't understand that. Measuring has really improved too. The wall chart showing the performance numbers really made it clear how well (or not so well) we were doing. This information helped us to discover the root causes of why we were improving or getting worse.

I have one issue with the process. The improvement drive on the rig seemed to make planning in the office as the main cause of performance problems. Sitting on the rig, it is easy to have that point of view. I felt that way too when I worked on the rig. Now being responsible for the drilling plan, I see how much work and information has to come together to make a useable plan. I would like to see the rig team supporting our planning and not try to finger point in this direction.

I saw things work very well on the LWO-3 well. It probably was the pinnacle of 1998. We had experience from LWO-1 and 2. Learning from the TMP process helped a lot, putting us ahead of the game for NAM's Technical Limit Drilling. It was very important to involve the guys as early in the process as possible. The Deutag night toolpusher is a great example of the cooperation we were seeing. He had prepared timing estimates for all the steps in the well. Then at the TMP Session when we discussed the well plan he was there defending every step. It was a great change for me – usually I'm the one in the firing line but this time I could just sit back.

I think the guys have appreciated being involved in the whole thing. The TMP process is definitely worthwhile. More knowledge on the rig site equals better decisions. I hope Peter and Graham win RLG's Best of the Best award.

Sincerely yours,

Kåre Pedersen

Bill Anderson  
Senior Manager  
RLG International  
Office: Deutag Europe  
Postbus227  
9400 AE Assen

Foxdrill B.V.  
P.O. Box 341  
7550 AH Hengelo, Nederland  
Clamantsstraat, 20  
7554 TA Hengelo, Nederland  
Telefoon 074 2454845  
Telefax 074 2454400  
Bank: ABN-AMRO, Oldenzaal  
Rek. nr. 47.78.85.918  
K.v.K. Eerschede nr. 06034345

Dear Bill,

Thank you for your letter of March 22, 1999. I have written down some thoughts that came up reading the letter.

**Background:**

- RLG was brought to the PT2000 team because of their organisation skills. RLG initiated the Plan/Do/Review circle; which is necessary for carry out a project successful.
- Each individual has its own responsibility for doing a job well. RLG has introduced this principle to the rig. When you give everybody their responsibilities, people will get interested for their own job.

**Objectives:**

- Make the process for moving the rig from location A to location B more stable and shorten the rigmove time when the process is stable.

**Tools:**

**TMP Process:**

- This process gives the contractors an opening for saying what they need to carry out their job theoretical optimal.

**The Plan/Execute/Measure/Learn Cycle:**

- RLG taught the various parties to carry out a project with the above-mentioned cycle. First there must be a plan, and then it will be carrying out. During the executing, measures will be taken to improve the process. And finally the learning points will be written down and used for the next project.
- It is very important to carry out above steps for improving the process.

**Leadership development:**

- During RLG's presence on the PT2000, their first concern was to develop the leadership of various managers.
- It is very important to train the leaders so that the normal workpeople will have joy to perform well.

**Results:**

- The rigmove of the PT2000 has stabilised and the rigmove is going faster with the same resources.

**Cultural changes:**

- The rig culture during a rigmove is changed  
From: "During the rigmove Foxdrill will carry out the work."  
To: "Foxdrill / Deutag are partners and carry out the move together."

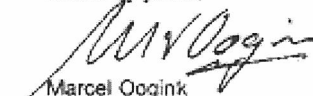
**Project Managers:**

- RLG did support the need to have project managers on site during a rigmove. The project managers must control the process and the Plan/Execute/Measure/Learn Cycle

**How was it fun?**

- When I speak for myself, I will thank Graham and Peter for their support and interested discussions during the time they were on the PT2000.
- To answer the question, I must admits that it was fun and more then that. I have learned a lot.

Sincerely yours,

  
Marcel Oogink  
Project Manager Rigmoves  
Foxdrill B.V.

# Project Manager Excellence

(Prepared by Bill Anderson.)

## Graham van Tuyl

Graham joined RLG in July 1997. The PT 2000 is his first performance management project. He has a lengthy career in drilling hence his transferable skills in the technical area were many. The challenges of project management provided Graham with many learning and growth opportunities. He has taken advantage of these opportunities and he has developed tremendously during the period we have worked together.

Graham's outgoing attitude and ever-present enthusiasm is infectious. Everyone in the work place knows him and engages comfortably with him.

His work ethic is clear – he rolls up his sleeves and gets in there to get the job done. His desire to do “the right thing” is clearly evident in everything he undertakes.

A very special element of this project was witnessing the relationship between Freek Zuideman and Graham. Initially Freek, the rig manager, would have dispensed with RLG and performance management without reservation. Over time, thanks to Graham's insight (and perseverance), Freek began to value “fresh eyes” and to try new methods. The bonds between Graham and Freek grew.

A final attribute about Graham, worthy of mention here, is his very strong commitment to his family. Graham and Gerry provide tremendous mutual support – in the demanding life of a Project Manager working a full rotation and participating in the other aspects of RLG life, this attribute is a major strength.

## Graham van Tuyl

Key Result Area	Rating	Comment
Initiative	4	Graham works Independently best when the directions are very clear. Well established targets were an integral part of the success of the PT 2000.
Decision Making	3 – 4	Terms of reference help Graham know the framework for his timely decision-making. His sense of risk assessment develops over time in RLG.
Accountability	4	Graham fully acknowledges his mistakes and takes corrective action where necessary.
Reliability	4 – 5	The standard of work Graham produces is consistently of a high standard. He meets deadlines and can be trusted to do the job.
Verbal Communication	3	Graham is tri-lingual. He worked on the PT 2000 in Dutch and in English. He now works in German and English.  Graham can be very effective in front of groups, especially where he is very familiar with the material. His increasing knowledge of RLG core tools increases his ability include this material in his verbal communication.
Written Communication	3 - 4	Graham's material is concise and written to a good professional standard. Written material is now being prepared in German.
Feedback	4	Graham provides effective feedback to clients. Two-way feedback between Graham and the Senior Manager occurs regularly. Defensiveness is not an issue. Graham acts well on feedback, especially after brief reflection.
Relationship Building	4	Graham easily establishes comfortable relationships with many, many people. He was instrumental in establishing a PIWT on the project.
Leadership Development	4	The target was to make Freek Zuidema a champion. Freek acknowledges Graham's support and contributions.
Core Implementation Tools	3 – 4	A sustainable implementation of the PEML model occurred.
Application of Business Skills	3 – 4	Graham has excellent understanding of technical elements on the rig with important impact to the business. He acknowledges opportunity to grow with the development of other business skills as necessary.
Contribution to RLG	3	He has contributed to retreats by giving technical presentations and by helping to organize them.



# Marketability and Tourability

A key element in the process is how much of it has been of use to the client. Clearly the project has been successful. They have achieved a 30% change in performance.

## Marketability:

“Success sells” could be the slogan for this project. Deutag managers have been key promoters of RLG methodologies. One of the key people, Freek Zuidema Rig Superintendent, had a positive and contributing influence in the decision making process for awarding RLG a contract in Germany with RWE-DEA on the Dieksand 3 well.

Eelco van der Leij has promoted the TMP concept throughout the Deutag organisation and talks are currently underway between Deutag and Brad Farrow about partnering the TMP approach into the way Deutag operates.

The results of the PT 2000 project are to be presented to the Society of Petroleum Engineers in Abu Dhabi this November. Joint authors of the paper are Eelco van der Leij and Bill Anderson.

The results of this TMP project have allowed Deutag to increase its marketing of the PT 2000. The sustained improved performance has allowed the PT 2000 to live up to its reputation as a premiere land rig.

The NAM adopted elements of the RLG processes and tools in their TLD initiative. Also the NAM currently uses the results as reference.

## Tourability:

We took a rather structured approach to achieve the required results. Adopting the PEML model to the project ourselves, we were able to manage the change more effectively. It also generated confidence amongst all level within the client organisation. Four RLG project managers have had the opportunity to gain first hand experience.

### New Business

- Extension of work in the Netherlands with Deutag.
- In-House Coach position established with Deutag (Laas Elzenga).
- New project with new client: RWE-DEA T-76 Dieksand 3 well.
- Pending: partnering between Deutag Europe and RLG.
- Pending: NAM is to pick up the contract for all RLGers currently working in the Netherlands.

### Client Tours

- Deutag International management comes to a TMP meeting
- Freek Zuidema helps RLG to lay contacts for contract extension in Germany
- Deutag Senior Managers provide direct testimonials to Norsk Hydro managers
- Norsk Hydro tours eight people to the PT 2000 to learn more about TMP

### Additional Publicity

- Eelco van der Leij attends Farrow retreat in Amsterdam, November 1998
- PT 2000 poster winner of top prize Amsterdam project poster competition
- NAM uses PT 2000 results in the Technical





**7.2.2. “Best of the Best” Submission 2003**

***A Roadmap for Change  
One small turn at a time***





# *A Roadmap for Change*

**One small turn at a time**



 **BEB**  
*Unternehmen Erdgas*

**ExxonMobil**  
*Development*

## ***Best of the Best Submission 2003***

<i>David Durkee</i>	<i>ExxonMobil</i>
<i>Egil Eide</i>	<i>ExxonMobil</i>
<i>Harald Schulenberg</i>	<i>ExxonMobil</i>
<i>Siegmar Behnke</i>	<i>ExxonMobil</i>
<i>Graham van Tuyl</i>	<i>RLG International</i>

 **RLG**  
INTERNACIONAL

## **Index**

*References*

*Project Overview*

*Nomination Letter*

*Introduction*

*Implementation Process*

Focus

Accountability

Involvement

Response

Time and/or Risk Optimization

*Project Results*

The 5th Man

Interface Management Meetings

Lessons Learned

*Return on Investment*

Costs

Safety

*Marketing and Tourability*

*Sustainability*

*Client Satisfaction*

David Durkee

Egil Eide

Harald Schulenberg

Siegmar Behnke

Ben Gerhartz

*Project Manager Excellence*

## ***Project Overview***

I consider this project a very good project for myself, and the client. Why? Well, there have been results. Some key results will be highlighted in detail in this report, but some are:

- Return on Investment between 4 and 11.5 (*See report for detailed explanation*)
- Great client letters
- A position being coach, business manager, mentor.
- A changed process. I am particularly proud of the 5<sup>th</sup> man in the crews. This is now operational as a direct result of this work in most of the German operations. This is good for the client; this is good for the Contractors, and particularly good for the crews.
- Working through a merger; i.e. the amalgamation of 2 entirely different working methods and methodologies.
- Introduction of coaching in the work process
- Learning to properly write and speak German (I can tell jokes in German now!)

I consider this project not to be about results first and foremost, but about people. Trusting that the people involved knew what would be best for them. Trusting that with facilitation the right way would emerge. I believe this happened.

The testimonials talk about friendships being built. I for one have had a great time. There were hard days. *Egil Eide* talks about me taking hard hits. Well without his support these hits wouldn't have been absorbed. *Sigmar Behnke* talks about how we fitted well together as a team. I want to extend that compliment to him also. He was key to translating the concepts into reality; keeping my feet firmly on the ground. *Harald Schulenberg* talks about that also. He provided a structure for me to work in. I am not normally organized and precise. He is, and once I learnt to work with that, we became friends and drivers of this process. *Ben Gerhartz* talks about how I helped him with tools. He kindly ignores the fact that it was he who developed into a good manager, by trying these out. He made that decision, not me.

*Dave Durkee* is the last person (chronologically) that I got to know. He was businesslike, but fair. An American living in Germany, married to a German lady. This helped me tremendously to see the cultural differences, between the worlds I inhabited and the one I worked in. He listened, and we mixed laughter with work. This is a rare combination indeed.

The last for me is key. I don't know how to convey this, but working in Germany with an Anglo-Saxon concept as Change Management is a serious challenge. The language isn't there. German

is an incredibly precise language, and how do you fit the vagueness of the English language, and specifically the management concepts, into this. We, as a team, succeeded.

This was for me I suppose my biggest challenge. Writing the “Zwischenbericht” was hard. Very hard. But it was worthwhile. It showed that we did understand the technical aspects, but we linked these to the organizational side, and the personal issues causing sub-optimal performance. And most importantly we linked them in a harmonious way, tailored to the cultures present.

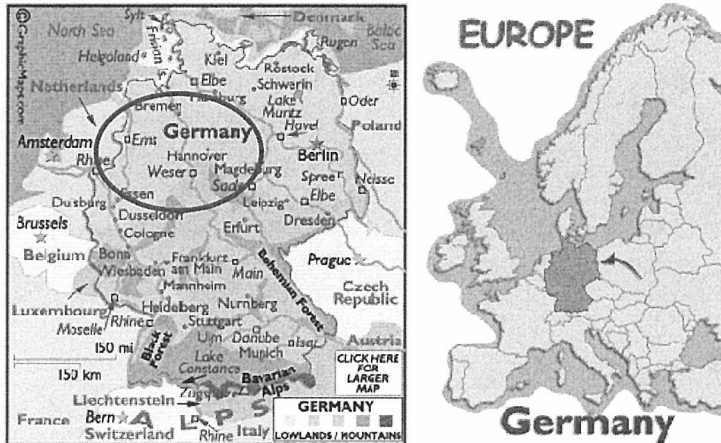
I will miss the BBQ’s on the rig, the *George Bush* jokes with *Dave*, the late evening corridor coaching conversations, the beers in Celle with *Harald*, lots of things.

I have had fun.

Thanks.

Graham

## References



### **David L. Durkee**

Field Drilling Manager Germany/France

Safety Vision: Nobody Gets Hurt

ExxonMobil Production Deutschland GmbH (EMPG, Germany)

### **Egil Eide**

ExxonMobil Production Deutschland GmbH (EMPG)

Manager Engineering

### **Harald Schulenberg**

ExxonMobil Production Deutschland GmbH (EMPG)

### **Roger Laing**

COO RLG European Division

Aberdeen

### **Scott McKenzie**

RLG VP European Division

Aberdeen



## ***Nomination Letter***

Mr. Jim Vincent  
Chairman, 2004 Bob Committee  
RLG International

Dear Jim:

“Model a process for others to follow” These are the words I offer to each of our Project managers as they set in place their plans for each project. In doing so we set the bar high in terms of expectations and establish a principle of leadership regardless of where they are in the RLG structure.

Graham van Tuyl took these words to heart as this project evolved. Throughout the course of the project we saw a change in ownership, the shifting of several key players both inside and outside the organization and the ever-constant development of understanding of what this process should and could mean for our client partners. Throughout this process Graham excelled at listening to his client –partners and in the shaping of interventions that served their needs while bringing the full spectrum of RLG skills to play at various stages of the process. At each step of this process Graham designed and delivered interventions that opened up both understanding and ownership of key aspects of leadership development and operational improvement to both owner companies and several contractors involved on the process.

Four factors serve to distinguish this project and Graham’s work:

**Data changes:** The material that follows illustrates a fundamental change in operating results within the drilling operations of Exxon Mobil-Germany. Through the rigorous application of the P\_E\_M\_L <sup>Footnote 59</sup> this client realized significant changes in both safety and NPT metrics. The client-agreed impact of these changes in results was between 4 and 11.5, depending how you measure it.

---

Footnote 59: *Plan – Measure – Execute – Learn (Variant on the Deming model)*

**Flexible processes:** Exxon doesn't hire external consultants. They are known around the world for the clarity of their processes at every stage of their business model. Once developed and institutionalised these processes are then replicated around the world. It was into this world that Graham made his place. Into this world of standardized processes, Graham brought new tools for implementation and leadership development. These leadership tools served a particularly powerful role in accelerating the merger of two very distinct cultures and opened the door for Graham to step into the role as personal and team coach for the executive team in Germany.

**Sustainable changes:** The story presented within this document illustrates the sustainability of these changes. Graham may be gone but months later the impact of his work continues. In this project design is one of the few contractual commitments for ongoing interaction between the coach and the client. Each quarter Graham visits the client site for a few days of observation, conversation and strengthening at every level of the project. This intervention helps to keep alive the concepts and strengthen the accountability for ongoing development of the tools delivered while on project.

**Personal Development:** There are times when in our work we focus primarily on the development of client capability and client results. One of the distinguishing features of this project was the blossoming of Graham as a fully capable member of the RLG team. The offer that Graham developed and the confidence he gained in the delivery of these offers strengthened his courage, deepened his insights and illustrated his capacity to move seamlessly between the executive office and the drill floor. As Graham has made his clients stronger in this process, so also Graham was made stronger. Through the life of this project Graham increased to power of his offer and consequently increased his own value to his future client partners and RLG.

In the story of this project I invite you to look for ways that this intervention can make us all stronger implementers. Graham's task was simple, "Model a process for others to follow". I believe he did his part and I urge us to all to learn from what he has produced.

Respectfully submitted

Roger Laing  
COO European Operations  
RLG International



## Introduction

Date	Comment
19 March 2001	Start project BEB.
29 October 2002	Contract extension with ExxonMobil Germany. Merger completed of BEB and ExxonMobil into ExxonMobil Production GmbH (EMPG).
28 August 2003	End Contract
Audits	10 – 13 November 2003 1 <sup>st</sup> Audit visit 7 – 11 June 2004 2nd Audit visit Graham van Tuyl to Hannover.

The project started in March 2001. The contract was initially with BEB Germany, which at that time was a 50% Shell International Operating Company and 50% Mobil (MEEG).

The rationale why RLG was contracted at the time was:

- Make the Shell International “Drilling the Limit”™ methodology operable in BEB.
- Utilize the strengths of the Company to obtain performance improvements.
- Do all this in the German language and culture.
- To train from the start in-house coaches.
- To focus only on the Drilling units.

At the start of the project, BEB appointed Siegmars Behnke as the in-house coach to work with Graham van Tuyl. Siegmars was a very experienced Drilling Supervisor (DSV)<sup>Footnote 60</sup> who had been employed in

---

Footnote 60: A Drilling Supervisor is the Operators representative on a drilling rig.

## Project

### Implementation

#### Locations:

- Burgmoor
- Klosterseelte
- Sölingen
- Hannover

#### People:

##### BEB / ExxonMobil:

- Harald Schulenberg (contract)
- Siegmars Behnke (coach)
- Dieter Bojes (coach)
- Egil Eide, Drilling Manager BEB
- David Durkee; ExxonMobil Drilling Manager

##### RLG:

- Roger Laing (COO)
- Graham, van Tuyl (coach)

### Quote:

*Performance and Success are not due to luck, rather the outcome of good planning and good execution.*

*Egil Eide*

the drilling business for approx. 25+ years. Siegmar was I believe a very good choice, and key to the success of this project.. He would always state:

*“...I see you (Graham van Tuyl sic.) as a tool that I can use to improve what it is we do. I need to use you in the right way, and that is up to me.”*

The task set was to look at performance at the rig site, and specifically through the DTL™ methodology. The initial reporting structures were through the Drilling Superintendent Peter Weustermann, with RLG’s contractual focal point in Hannover being Harald Schulenberg.

So the original remit was very narrow, and the control was tight. Siegmar was a very great help in guiding RLG through the various cultural and hierarchical issues on the rig sites, which turned out to be important. Harald did exactly the same in the head office site.

Within this project there were some critical issues, in my view, and these will be highlighted in this report in various ways. In chronological order these were:

#### **Gaining management support.**

RLG’s work scope was initially restricted to the rig site. After 2 months, the Drilling Section Manager became involved, Klaus-Peter Buyken, and then through the regular Interface Management Meetings senior management became involved after ca. 4 – 6 months. These were the Well Engineering Manager Egil Eide and the Wells Delivery Manager Otto Geier. In EMPG this then was taken over by Drilling Manager David Durkee.. With more and more management



*„...We have invested a lot of time and money in the development and optimisation of Technology. This is the first time in my 25 years in the industry, that we are investing in people!”*

*“...The work force on the rig (KCADeutag T25, sic.) are beginning to accept us more and more. They are beginning to realise that they can instigate change, like for instance the crew size which was increased from 1:4 to 1 : 5”.*

support, based on more credibility through increasing results, the project evolved to being seen as a key investment by both BEB and EMPG <sup>Footnote 61</sup>.

### **Understanding the German culture.**

There are very distinct cultural norms in Germany. Engineers are a very respected and dominant group

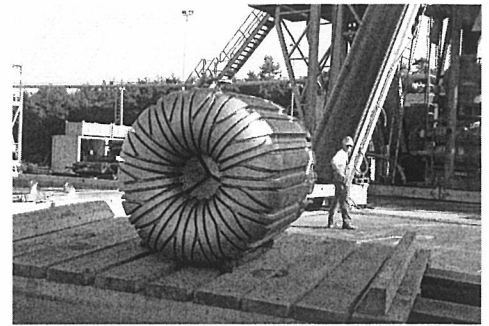
in German society, and this is linked with a very hierarchical structure in interactions. The entire project had to be done in German (reporting, spoken and non-verbal). The German language is also very precise, and as such the management theory had to be translated. There wasn't much available in the German language. This was a steep learning curve. Simply put, if you can't communicate, you cannot influence anything. Language and culture are important elements.

### **Helping with the transition to EMPG.**

The project with BEB came to an end on the 28th of August 2002. A large number of people in the old BEB structure would be retired or moved to other posts within Shell or BEB Germany production. At the same time ExxonMobil employees would come in as the dominant partner. This would mean helping to merge 2 operating philosophies ( OIMS <sup>Footnote 62</sup> and DTL™); 2 different cultures (hierarchical, risk averse versus consensus, managed risk) and a whole set of issues around behaviors.

### **Transferring Processes and Tools**

This was a key element in both projects. The BEB management initially, and the EMPG management



### **Quotes:**

*The hard facts show that the use of a performance coach can be financially justified. When one adds the "soft" benefits, and the combination of internal and external coaches, then it can be stated that for BEB this was an sound investment, in order to increase the effectiveness of the rigs. Because on one side we (BEB sic.) can't do this ourselves yet, and on the otherside a faster integration of both Drilling Departments can be achieved with EMPG, we recommend that Performance Coaching should be continued.*

**Egil Eide  
Harald Schulenberg**

---

Footnote 61: ExxonMobil Production Group

Footnote 62: Operating Management Information System

later on wanted key processes transferred. These were specified, and were checked through regular milestone updates with management.

### **Audit visits to EMPG**

The new management within EMPG, Drilling Manager David Durkee, and Well Engineering Manager Egil Eide, wanted regular visits of RLG to Hannover (3 / annum for 4 days each). This is in order to help sustain the momentum and achievements made in the entire implementation process. This is a new and original way to support sustainability of the process.

In August 2002, a report was produced for BEB, which was signed of by both Egil Eide as the senior manager, and Harald Schulenberg as the RLG contract manager in which the results were highlighted. These results are given in detail in this report at later stages. The quotes in the text box summarize some of the results.

It was the ex-BEB management who initially convinced the incoming EMPG manager to retain RLG's services.

Rather than having a longer contract, Dave Durkee insisted on 3-month rolling contracts, with clear milestones attached. This worked very well.

Within the EMPG transition period, a change in focus for the RLG coach also occurred. A large element of the work became behavioral coaching of individuals. This included the entire management.

At the end of the EMPG project, a "Road Map" was made for senior management, as a guide to help them steer any further change required or the solidify the progress made. This road map contained 3 major elements.

➤ **Deliver the Promise.**

Key here is delivering the right plan, executed in the right way. Doing things right the first time is the safest and most efficient way to do business. The promise is everything from reserves replacement to cost control.

➤ **Manage the Expectations.**

People need to know what is expected from them, and what they can expect from management. Key is the communication of the right message.

➤ **Coaching for Success.**

Managers and the team members need to understand that they can, through their support and behavior, help others to deliver better results.

EMPG has achieved all these. Safety results are good, and far below the individual companies best levels prior to the merger. Wells are now being delivered at +/- 5% of planned Approved Field Expenditure (AFE). This is 65 % down on pre-merger results.

**THE PLAN**

Having Good Sustainable Plan ready before the project starts relies on Involvement and Feedback!

Goal: To be able to be confident that the Plan is the best use of the companies resources:

1. Technical Feasibility
2. People .....(Own and 3<sup>rd</sup> Party)
3. Time. ....
4. Interface Alignment.(DREN, DROx & DRSL)
5. Financial ..... (better Budgets)

**MILESTONES for the PLAN**

? Operational Input (DSV's) in the Planning Process  
Goal: To have the plan reviewed and checked with an operations viewpoint with regards to:

1. Optimum Operational Risk in the Execution
2. Most Efficient Time Utilisation
3. Conformity to Standards

? **Do we have in place?**

- Operational and Technical Risk Review
- Risk list and Documented Risk Mitigation Documents are part of Drilling Plan
- Past Learning's are addressed in the Plan
- Peer review
- Management Review
- Plan is signed off on time.
- Plan distributed, inclusive to Internal Service departments!

**QUESTIONS TO ASK!** (Rigorous planning)

- Who owns the commitments in this plan?
- What are the underlying assumptions/risks in this plan?
- **TRANSPARENCY** is key!
- Does this plan capture previous learning's?
- Have we got the right people working this plan?
- Is this the right plan for this process?
- How will we track progress against this plan?

- What help is required to ensure flawless execution?

**THE EXPECTATION**

Is everyone engaged and knows what is expected?

What is the **FOCUS**?

Who is **ACCOUNTABLE**?

Who is **INVOLVED** (or should be?)

Are we **RESPONDING** in consistent ways to get the behaviours required?

Goal: Everyone understands and is committed to his or her Roles and Responsibilities in the Project.

**MILESTONES for ENGAGEMENT**

- ? Are targets identified:
  - Is plan optimised for Risk or Time?
  - Realistic Targets based on Facts & offset data
    - DSV, Engineering meetings
    - Days to last avoidable time loss
    - Rig efficiency?
    - Etc.
  - Built-In and shared Ownership of indicators that reflect the priorities on:
    - Safety and Environment
    - Efficiency
    - Economy
    - Ethics
- ? Is performance regularly reviewed?
  - Celebrating Targets met in Public.
  - Are we having End of Section / End of well reviews within 10 days of section / well end?
  - Periodic Business Reviews in Operational phase (Interface Management Meetings with Thinking Partners – Drilling Contractor)
- ? Effective Meetings (If not, do we need them):
  - Efficient time usage
  - Decision maker present
  - Meeting notes to be made
  - Action points are reviewed
- ? Proposed targets for development of the team:
  - Champions have been identified and are actively supporting our primary strategies.
  - We have scheduled and executed

- regular reviews of learning's and success.
- We have evidence that the process is being utilized regularly across departments.
- Feedback on performance is a regular part of all of our key meetings
- Our meetings are seen to be effective forums for communication and learning.

**QUESTIONS TO ASK!** (Flawless execution)

- Who owns the delivery of each phase?
- How do They/I/We know if they are successful?
- Are we talking to the right people at the right times?
- What are we learning as we proceed?
- Are we communicating changes effectively?
- Are we acknowledging success?/ How?
- What else could/should we be doing do optimize this process?

**COACHING FOR SUCCESS**

The senior Management team could be Coaches for their people. Keeping peoples eyes on the ball, directing when required, helping when needed! Staying off the playing field when possible!

Goal:

1. To set the expectations (Goals and Targets)
2. To help people understand the expectations
3. To Listen
4. To Understand
5. To foster open Feedback

**QUESTIONS TO ASK!** (Developing the team)

- What have we done to develop the capacity of this team lately?
- What have we done to ensure we are listening to team concerns?
- What have we done about what we are hearing?
- Who are our multipliers?
- How are we celebrating success?

## Implementation Process

### Focus

“...The objective for using a consultant in BEB was to develop improved leadership skills amongst the supervisors responsible for managing more and more complex drilling projects. In addition office staff should be trained to work as a team to meet future challenges. We realized that in our organization we had a huge resource of strong individuals which working as a team would be able to make step change improvements in performance”.

Egil Eide

Activity	> 75%
Vision developed	✓
Group involved in creation	✓
Communicated to all stakeholders	✓
Goals established	✓
Key success criteria identified	✓
Strategies developed	✓

There were a number of issues, which needed to be addressed early on. One was Focus. What were we here to do and how would we do this. How would we further review the process to make sure the right changes were being implemented in an acceptable way.

BEB			
<b>Planung 24-Stunden</b>	<b>Sa, 30. Sep 06:00 Uhr</b>	<b>Sa, 30. Sep 18:00 Uhr</b>	
Beschreibung Arbeitsschritt	Dauer, h:mm	Ende (Datum)	Kommentar (Parallelarbeiten)
Bahnenbau: Richtföhren, Leistungsföhren von 2588 m bis 2595 m @ 6 m/h	4,0	Sa, 30. Sep 10:00	Ausrüstungen und Vorrichtungen zum Fahrzeil Umsetzen überprüfen
Spülen/Kugelzirkulieren	2,0	Sa, 30. Sep 12:00	
Aurkauen bis zutage und Stabilisierung ablesen	12,0	Mo, 1. Okt 00:00	
Proventer Hobezinrichtung montieren	3,0	Mo, 1. Okt 00:00	Leufkettanzfind eingekünet, Schelle unter Rinproventer muß nachjustiert werden
<b>Planung 5 Tage (DWOP)</b>	<b>Mo, 1. Okt 08:00 Uhr</b>	<b>Du, 4. Okt 17:00 Uhr</b>	
Beschreibung Arbeitsschritt	Dauer, h:mm	Ende (Datum)	Kommentar (Parallelarbeiten)
Fahrzeil von 10 fach auf 12 fach umsetzen	3,0	Mo, 1. Okt 16:00	Einschließen Klarterzeile 22.
Leiqing (inkl euf u. abbau)	9,0	Di, 2. Okt 01:00	Zurätzliche Mozzungquid kombiniert aufahren Weatherford Greu, Kran, und Hilfrgeratel muß zum Ende 1. annehbararbeiten
Neckhahergeritel zur emmerstellen, einbauen für 21625m (abblänge vom Kahlker)	9,0	Di, 2. Okt 09:00	Zur Diskuzien (Hr. Breuer!!)
Neckhahergeritel von 21625m für 21700m	1,0	Di, 2. Okt 16:00	
Spülen aufsteig	2,0	Di, 2. Okt 18:00	
21625m Neckhahergeritel, abblänge 8983	10,0	Mi, 3. Okt 04:00	
16" Rehrinbau anfang, Weatherford aufbauen	3,0	Mi, 3. Okt 07:00	LKW's für Spülungsgrauteruch zuzubereiten
16" Rehrinbau	25,0	Du, 4. Okt 09:00	(Zementation zur rürten aufbauen)
Spülen	3,0	Du, 4. Okt 11:00	
Zementation Equipment aufbauen	1,0	Du, 4. Okt 12:00	
Zementation	5,0	Du, 4. Okt 17:00	Spülungsgrauteruch nach Zementation
<b>Lessons Learned und Bemerkungen während der letzten 24 h:</b>			

### What people say!

“...We always had these morning calls. But now we sit with the whole rig team and talk to the whole office team every day. I like that”.

**W. Sprick (DSV)**

„...The 24 hr. / 5 day Look-ahead has had the side effect that it also coaches the DSV's into our way of thinking”.

**P. Brauns (ex Drilling Engineer BEB)**

“...The 24 hr. / 5 day Look-ahead helps me as a contractor plan ahead much better than before. It allows us to anticipate and coordinate our work much better”.

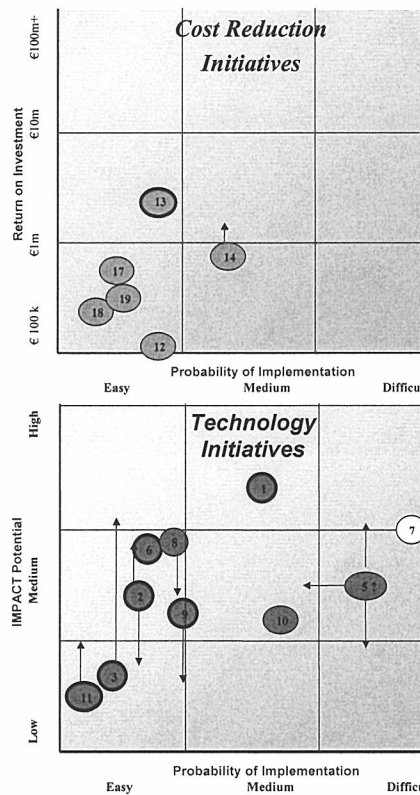
**W. Mitchker (KCADeitag Rig Manager T25)**

Simple tools were introduced initially to gain trust, the 5 day Lookahead is a great example. But coming from this was also an acceptance by the Team members to hold workshops to list and categorise issues that needed attention. 4 Behavioural departmental workshops were held, where large numbers of issues were focused upon. The entire department participated. Topics were:

- Clear Rules
- Communication
- Learning process
- Organizational capacity
- Personnel and Resources
- Motivation
- Computing infrastructure
- Procurement issues
- Project lead times

These were initially big issues, but were on a local level within the department. With EMPG a major opportunity came to expand the focus into the strategic future of the business. This was to formulate and document strategies and associated feasibilities of these strategies for board review. This was a major success. Some of the outcomes are documented in the graphs in this pp.

A key success story was the 5<sup>th</sup> man. See the “Results’ chapter for this in more detail. But this describes in



### *Drill Well Cost Reduction Initiatives!*

#### **Purpose:**

- Identify actionable near term Drilling and Completions costs reduction opportunities
- Team should challenge existing Paradigms
- Evaluate Return on Investments v. Business Risks

*Note: The notes corresponding with the graphs above are confidential. Hence reduced transparency.*

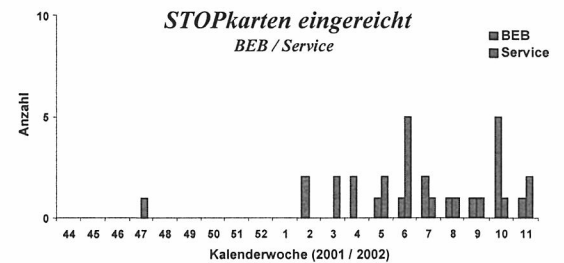
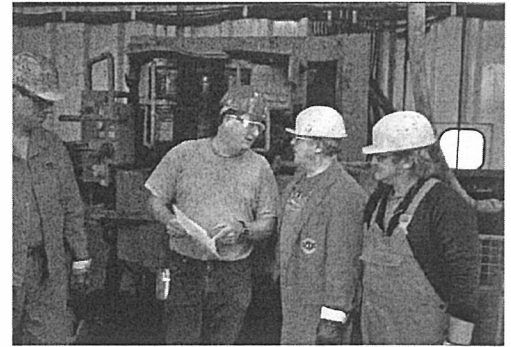
essence the whole FAIR approach.

This project also focussed very much on improving bottom line results in the drilling process. This was a key function of introducing the Lessons Learned system.



## Accountability

Activity	> 75%
Indicators developed and used:	✓
Managers	
Department heads	
First line supervisor level	
Workforce	
Measurement systems in place:	✓
Idem	
Scheduled Team evaluation meetings	✓
Scheduled one on one feedback meetings	✓
Idem	
Roles and responsibilities defined	✓



## Measurement

There were many, many detailed measurements made each was also tied to a very specific results area. Key was that behaviours required, were always linked with a result. From the top to the bottom.

The Graph shows the influence of measurements. This was a step change in participation of oil company staff in STOP Card participation. We wanted this, and this measure helped create the awareness and continued participation.

Rigorous measurement and the use of action points for instance were introduced within BEB and EMPG. Throughout this document there are examples of a structured approach that was brought.

The most significant one was the Interface Management Meeting as it became known, initially the handover meeting.

The term “handover” was found to be inadequate right from the start. Because *Siegmar* was part of the implementation team, there was never a sense of “justifying” to the client what it is that had been done or achieved. These meetings became from the start meetings where there was a co-creative, partnership approach with items discussed. These meetings grew into a very valuable forum to quickly

give a very congruent overview of the operations, and link actions that needed to be taken with results and measurement and reporting requirements.

One of the best examples of accountability was the introduction of the 5 Day Lookahead. Up until this time, the impression remained in many DSV's that giving this information was harmful.

*"...Why should I tell the management, they should know in any case".*

In actual fact, the lookahead was for 2 months signed by the DSV, with the comment

*"...ohne Gewähr – No responsibility"*

A large number of these measurements and reporting structures are still in place. The major one being reduction of Risk.

## Involvement

---

Activity > 75%

---

Scheduled 3 weekly reviews ✓

Participation in Business ✓

Reviews:

Managers

Department heads

First line supervisor level

Workforce

Regular Scheduled Crew ✓

meetings

Targets / Objectives set by: ✓

Idem

Performance measures tracked ✓

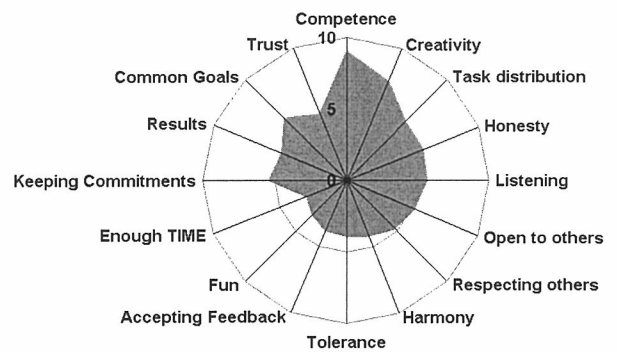
by:

Idem

---

From an initial beginning on the rig site, where the focus was mainly on technical improvement issues in a very controlled environment, this project moved into the entire office environment, with a remit to look at behavioural and strategic issues to 1 : 1 coaching of senior management.

All people became involved, to the extent that the interface management meetings became a meeting between management of the various companies involved (Operator and main Drilling Contractors). This was at the top level. Other weekly meetings were held and structured at the rig site, we introduced end of well reviews and specific After Action Review meetings.



## Behaviours

The above spider diagram is a self-assessment of the entire group. What are we good at, and what do we need to strengthen.

This is an example of the openness that was achieved after a few months. The whole team was involved.

## Quote:

*„...Just think of the following: We as people with White Helmets (managers wear these only, a form of differentiation on many drilling sites. Sic.) are representatives of or employers, who set expectations of their employees and contractors. We are always being observed, and therefore have an obligation to set and show the right examples and behaviors.*

**Benedikt Gerhartz**

There were also specific problem solving meetings, and departmental improvement meetings. In all these meetings the entire department has been involved. There is not a single person in the entire Drilling department who has not been involved.

We produced a German language "Zwischenbericht" (*Interim Status Report*) with over 75 recommendations to change the department based on all the input and observations received. This was read and commented on by a board member of BEB.

The boxes on this pp. show the depth of the process, and the openness in participation.

*"...The energy required to make these small steps was huge, only Graham's passion helped to succeed.*

*There were moments that he had to take hard personal hits."*

*Egil Eide*

## Response

---

Activity	> 75%
----------	-------

---

<i>Recognition practiced and internalized</i>	✓
<i>Managers</i>	
<i>Department heads</i>	
<i>First line supervisor level</i>	
<i>ParticipWritten monthly reports:</i>	✓
<i>Managers</i>	
<i>Department heads</i>	
<i>First line supervisor level</i>	
<i>Coaching Conversations</i>	✓
<i>Managers</i>	
<i>Department heads</i>	
<i>First line supervisor level</i>	
<i>Regular whole group Coaching interactions:</i>	✓
<i>Idem</i>	
<i>New methods introduced:</i>	✓
<i>Idem</i>	

---

This was probably the most challenging part in the entire project. There was a large element of structured personal coaching required, and this was in a culture that is very hierarchical and engineering dominated. Through personal 1:1 coaching sessions getting people to change their response was achieved.

Positive recognition is being seen as a valuable tool



## *Positive Recognition*

**Alfons Oschem** is looking forward to a meal on Klosterseele Z6 as recognition of a very difficult well, brought to a successful closure. Management from HV has traveled to the rig, and has also awarded all the team a polo shirt in recognition. This shirt is worn now with pride!

to manage performance.

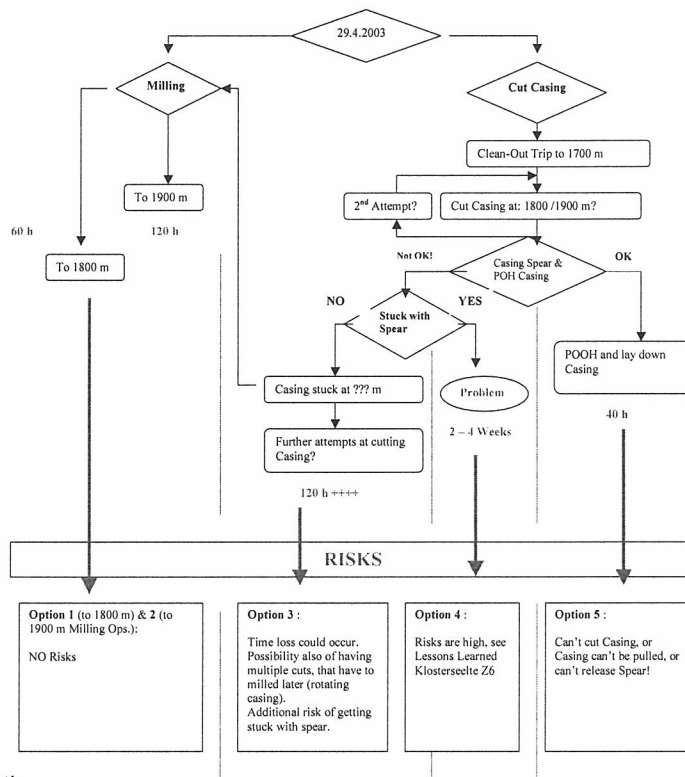
There was very little positive recognition, and very little internal coaching going on. This all changed.

The company now actively celebrates good achievements with dinners like the photograph shows. A major part of a different response of management and site representatives is the morning call.

Here the calls used to be a private affair between the drilling site representative and the selected individuals in HV

Footnote 63. Now there is a conference telephone installed in both the meeting rooms at both ends. The most dramatic response occurred on the rig site. Here the entire senior crew would assemble for the morning call. But instead of the Drilling representative talking, each individual who had technical or area authority for a service would now talk when his / her topic came up. This was a major departure from tradition and required a lot of courage. Now everyone agrees that this is the best way to communicate; for themselves, for the business and it bonds the two sides. Instead of managing information, the process is now managed (in a very open and honest way).

Time and/or Risk Optimization?



### Decision Trees

This tool was introduced after a problem in the Klosterseele Z6 well. Various people used it. **Gerd-Rayner Aink** made the above example on the Sölingen Z6 well.

### Quote:

*“...I will use these tools again. At first when you came, I thought not now. I have enough to do. But this enabled me to convince my management of the merits of taking a different approach. They listened.  
Gerd-Rayner Aink, DSV EMPG*

Footnote 63: Hauptverwaltung = Head Office

The realization grew whilst drilling the Klosterseeelte Z6 well, that shifting the focus more to managing risks could be beneficial. This was reinforced with the merger and the subsequent introduction of OIMS. This document has very specific procedures to evaluate and avoid risk as part of a proactive planning process.

An important breakthrough in a change of focus came with serious well challenges on Klosterseeelte Z6. It could be argued that moving away from the DTL™ concept, to a much more rigorous risk assessment scenario allowed the well to be completed successfully!

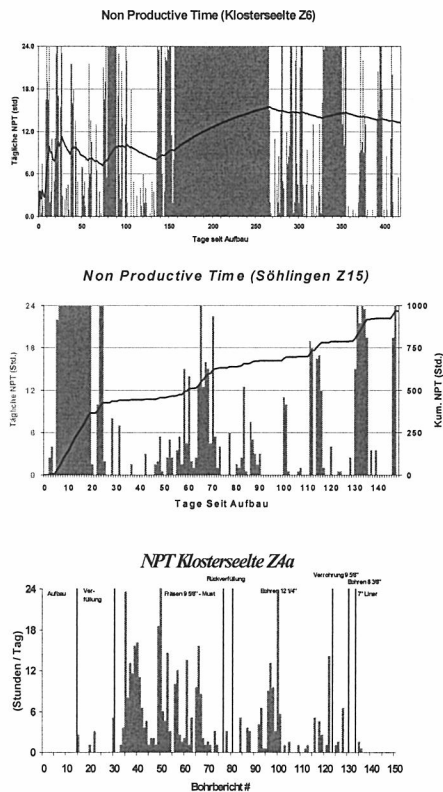
There are various tools that can be used to look at and define risk. An example, are decision trees. As part of the Coaching process DSV's were shown how to evaluate options using a decision tree. The one shown on this pp. is to either mill away a 9 5/8" casing or to cut and pull this casing.

This emergent realization that risk and time optimisation could be conflicting priorities, created a change in Focus of the drilling manager. He made it clear that the single most important cause for lost time were single problem events. The focus became "*No Train wrecks!*"

To date, with 2 wells finished, there has been an approx. 70% reduction in major single event budgetary costs. In addition, throughout the merger and afterwards the Safety statistics have improved to the best seen so far, even compared to the pre-merger statistics.

The Graphs below show chronologically how the chunks of downtime were reduced (The less red seen, the better the productive time utilization is).

The vertical axis are the 24 hrs in the day, the horizontal axis are the days on a well.



### *Non Productive Time*

The balance between time optimisation and risk management shifted in the Klosterseele Z6 well. The above graph shows the difficulties (the red blocks are non productive time elements). This was strengthened with the introduction of OIMS after the merger, and significantly reduced.

ExxonMobil as a company believes very strongly in minimising risk. In order to accomplish this there is a system called "Management of Change" in place.

### *Quote:*

"...Coaching of RLG during the DTL-Projects and the EMPG migration phase helped all of us in BEB to focus on our decision making process (How do we make the right decision? Do we already have enough information to make the right decision? Are all roles and responsibilities well defined and clear for everybody"?)

*Benedikt Gerhartz, EMPG*

*(Note: The top graph shows the impact on this well of a Slim-hole Casing design, where a major problem with the execution of this concept caused downtime)*

This is common sense you might argue. But in reality this is an interaction of various disciplines, which doesn't work optimally. There are clear boundaries between for instance drilling engineering (planning) and operations. These



are not treated as places of integration and identity, but more as divisions of domains and responsibility.

With integrating operational know-how as proactively and as early as possible, and to make this transparent to all in the organization, this should be a sustainable achievement. This was a major change achieved after the merger.

## Project Results

### The 5<sup>th</sup> Man

The German land drilling contractors work with in general 4 crews. Each crew would typically consist of a Driller and 4 crewmembers. It was observed that a 5th man might add benefits in rig efficiency.

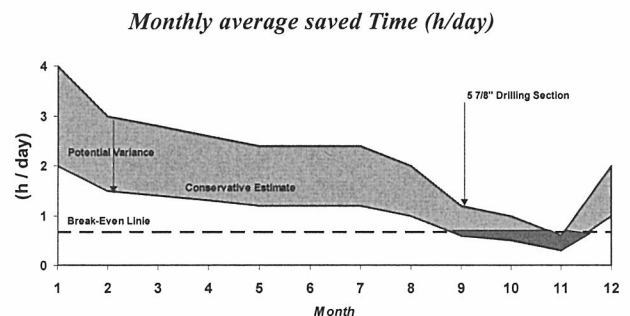
This was discussed with management, and agreed that the coaches would find a way to measure the impact with a trial on the T25 drilling rig.

### What did we learn?

The narrative of the employees could be substantiated in hard data. Having this 5th man cost EUR 31k/month extra, but the leveraged effect on rig time was such that only 0,5h/day had to be saved to breakeven.

A paradigm shift occurred, a change of heart based on sound rationale and narrative. A senior drilling superintendent stated: "I find it incredible that we need a consultant to tell us something we instinctively know. I helped reduce the crews in the first place based on a sound rationale!"

The 5th man spent a lot of time cleaning, organizing materials, painting, Visitors to the drilling site always commented how clean and organized the rig was. We were not able to quantify this in terms of an



### Savings

The figures are for a drilling location **EUR 400.000 / rig / annum.**

This was implemented across all the EMPG rigs in Germany, taken up in the AKO (*general unionised working contracts*) and implemented on all the work over units.

### Quote:

On the effect of the 5<sup>th</sup> man:  
"...For me it is of utmost importance that the rig is clean. There are many reasons why; no more wasted time in searching for equipment; no trip hazards; The 5<sup>th</sup> man allows this, and as such the workers are working safer and more efficient."

*Garelt Fecht, Toolpusher T25*

“Input” into the safety performance of the drilling site. All however state this as a major contributing factor. This is a major contributing factor in the reduced incident rates.

This 5th man is now a standard addition to all crews with the EMPG. Agreed annualised savings (ROI) documented after monitoring the effects for a year were approx. EUR 400k (netto)/rig/annum. EMPG believes that this was the right thing to do. This was extended to all the rigs working for EMPG in Germany, after the coach left.

#### Interface Management Meeting

The whole Change Process was tailored to a evolving and changing set of objectives. A mechanism needed to be created to report back to management what had been achieved, and what was being implemented. At the same time, it was seen as imperative that management understood, approved and supported any initiative.

What evolved was a business review on a monthly basis with a set agenda.



#### Quote:

*These meetings evolved. I used to facilitate and would be solely reporting to the group. The picture above shows Otto Geier in the group. This was the first time that the senior Technical Director showed interest, and this moment transformed these meetings. People were seeing that the meetings were useful.*

*It also directly led to more interaction. Rather than just me presenting, various people with action points would present.*

*The meetings became participative and co-created to suit with the business needs at that moment of the client and major contractor.*

*I look back on these meetings as an achievement I am proud to have participated in.*

**Graham van Tuyl**

*“...I would continue the 14 day Handover Meetings. I believe, that these meetings are a very helpful and important methodology for the management, to be informed in a short and concise way about all important issues on the rig!”*

**Klaus-Peter Buyken, Drilling Chapter Manager (retired 2002)**

Participants	Agenda (2 Hrs)
Drilling Manager	Welcome
Engineering Manager	Action Points
Drilling Superintendent	Safety
Drilling Engineer	Operations
Specialist	Organizational issues
Contractor Rig Manager	Any other Business
Contractor Country Manager	Review new Actions
Crew /Site Manager / DSV	Close

The Coach initially, and later the Safety Engineer, would prepare the documentation (which was always distributed in advance, including to the DSV and TP) and facilitate the discussion, but the Drilling Superintendent would own the meeting and invite attendants. Action points would be noted in the meeting and distributed. These would partly act as input for the next meeting.

The term thinking partner has been used before. This whole meeting was about making transparent issues of concern; from participation in safety programmes, leadership issues, time utilisation and efficiency of the rig, investment opportunities in equipment, 3rd party service issues. In the discussion all had an equal voice. It would be the facilitator's job to clarify statements, and to focus the comments concisely on manageable issues in terms of Who, does What, When, Where and How?

What did we learn? It takes discipline to attend these meetings. But the rigor allows a very quick, concise picture to emerge of the operation.

## Lessons Learned

Over 300 Lessons Learned were collected during the BEB implementation project, and a further 50 with EMPG. The source of these is listed in the table below.

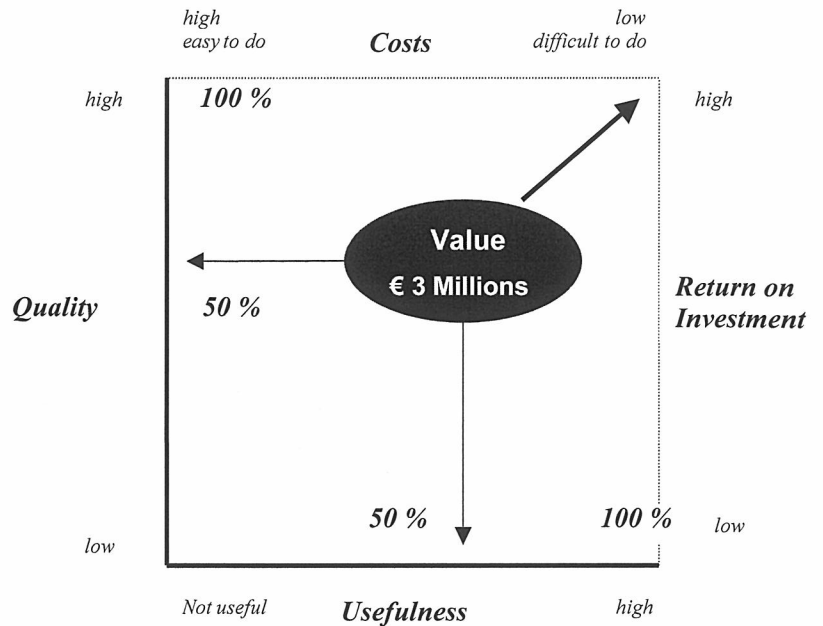
Source of 'Lessons'
Morning Calls
Daily Drilling Reports
Incident Reports
Non Productive Time
Breakdowns
Variance Logs (Actual v. Planned Time comparisons)
Weekly rig meetings
Interface Management Meetings

In August 2002, the value of the Lessons Learned that had been implemented was estimated at EUR 2.5 millions. Estimated is that a further EUR 0.5 millions were added during the EMPG phase, giving a total of EUR3 millions.

Siegmar's comment is completely true, and this was acted upon in a number of ways.

Helmut Dreikhausen instigated the first LL review for incorporation in the well Klosterseelte Z4a

Gerion Pust has redesigned the LL format, so that any LL entered from the



### Quote:

"...The value of the 'Lessons Learned' is between € 1 Millions and € 5 Millions. There are various 'Lessons Learned' that could have cost us the entire well. But all the Lessons aren't worth anything, if they aren't used"

*Siegmar Behnke*

"...The analysis of the Liner problems in Klosterseelte Z6 with all the "involved personnel were exemplary. This is why we managed to achieve it the 2<sup>nd</sup> time"

*Peter Brauns, Drilling Engineer  
16.5.2002*

rigs is now discussed and closed out at morning calls.

We have managed to create a culture now where important LL are documented and evaluated on the rig site, and sent in for management consideration. This is the start of detailed discussions often that lead to improvements.

Many small items of positive change lead to a collective big change.

## Return on Investment

### Costs

The results of the entire period can be represented in various ways. The easiest and most representative way is to show the impact of the entire EMPG team (and this includes the results prior the merger of BEB and ExxonMobil as a collective effort.

There has been a drop of 65 % in delivering the Results in AFE against planned budget. This means a saving in extra expenditure of EUR 5,2 Millions / annum per rig.

## Calculation methodology:

### During 1<sup>st</sup> phase:

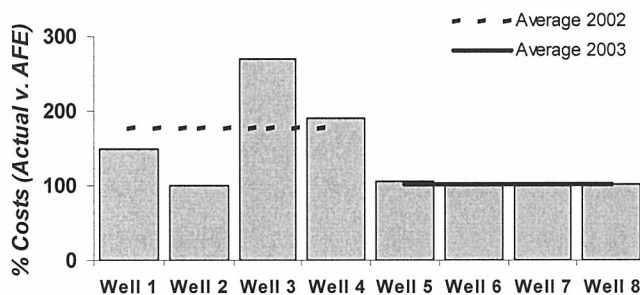
70% Non Productive Time (NPT)  
in 1 year is:  $365 (1 - 1/1.7) = 150$  days

### After Merger:

5 % Average NPT = 18 Days

### Savings:

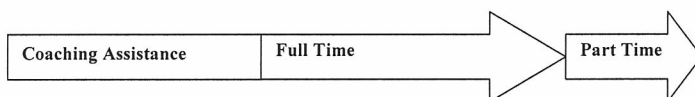
$132 \text{ Days} \times \text{EUR } 40.000 / \text{day} = \text{EUR } 5,2$  Million



$$\{2 \frac{1}{2} \times \text{EUR } 5,2 \text{ Millions}\} / \text{EUR } 1,130,000.-] = 11.5$$

“...As one of the strengths in the Klosterseelte Z6 project, we have seen the very detailed tracking of time and costs on a daily basis, as well as the 24 hr detailed daily drilling look ahead linked with the 5 day look ahead.”

**H. Scholefeld, BEB Audit department (Internal Audit no 11/2001)**



Wells 3 and 4 included new technological challenges. Well3 introduced a “slimhole casing design” and well 4 “short radius technology” in a sour gas field. Therefore there was an accepted higher risk built into these wells.

The Cost for RLG over the entire period was **EUR 1,130,000.-]**

The graph shows 4 wells that were delivered like this. 2 ½ were with RLG presence, therefore the ROI is calculated as:

**R.O.I. (indirect) 11.5**

A different approach to estimating the value added is to look at direct contributions that can be attributed to initiatives started by RLG, and implemented by the entire Team.

This was the methodology used in the "Zwischenbericht".

In effect 2 very specific items could be attributed clearly to efforts made by RLG. One Process Improvement Initiative was the 5th Man. The other the captured value of Lessons Learned.

Costs RLG EUR 1.13 millions

---

Value Lessons Learned EUR 3 millions

Value 5th man Efficiency EUR 1.6 millions

---

R.O.I.(direct) 4

-----Original Message-----

Sent: 18 May 2004 14:28

To: Van Tuyl, Graham NAM-TWM

Subject: Re: FW: Best of the Best Return on Investment Chapter / EMPG /GvT

Graham,

*I confirm that the data used are correct and also that the improvements achieved is a collective effort. In my view it is important to look beyond the pure cost figures. Drilling deep gas well in Northern*

*Germany is in many ways challenging due to high pressure salt formation, sour gas, small fields with few wells in each field In most cases it takes years between each drilling activity in the*

**Calculation methodology:**

*Value Lessons Learned:*

*1) BEB time EUR 2.5 millions*

*2) EMPG time EUR 0.5 millions*

---

*Total EUR 3 millions*

*Value 5<sup>th</sup> Man rig efficiency gains:*

*For a Rig /annum EUR 400.000*

*Estimated 4 rig years benefit*

---

*Total: EUR 1.6 millions*

*{EUR 3 Millions + EUR 1.6 millions } /*

*EUR 1,130,000.-] = 4*



*same field.*

*In addition I consider coaching successful if the impact on the team is sustainable. The team must be able to openly communicate, using data to prepare for decisions and together foster a learning environment. I think we as a drilling team have just started this journey.*

*Mit freundlichen Grüßen/Regards*

*Egil Eide*

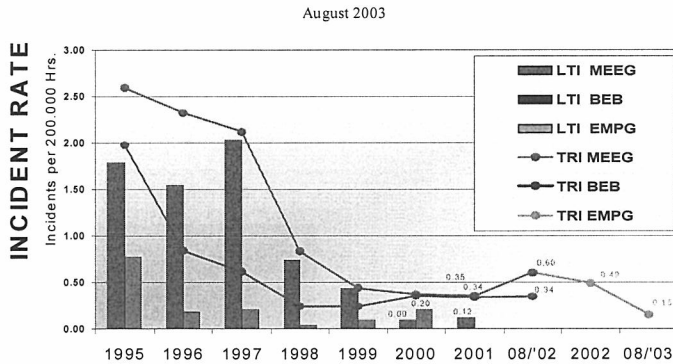
*Drilling Engineering Manager*

*Drilling Vision "Nobody Gets Hurt"*

There are 2 different ways of calculating the return on investment included. The second one shows a direct impact, the 1st one a much wider impact. There is no real way of stating the exact return on investment, suffice to say the TEAM made a significant change under Dave and Egil. I was proud to be part of this talented group of people.

Safety

Safety Performance EMPG



A further significant result is the reduction of the non-productive time is linked with a significant improvement in Safety results within EMPG. The graph above shows the overall reduction, to a level which is 60% below pre-merger conditions and lower than the levels of the separate companies before hand.

The Graphs in the right hand border show the Drilling Departments safety record. It also shows that the Contractor community is the biggest contributor to the incidents (This graph represents both the Work over units as well as the Drilling units).

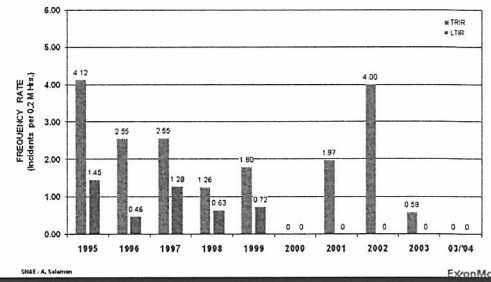
Some very specific steps that have contributed to the increased safety performance were:

- Safety Days
- Interface Management Meetings
- Toolpusher Meetings

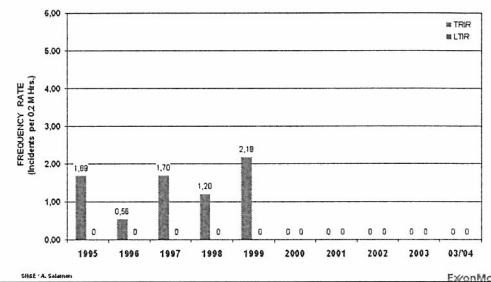
*Drilling: Individual departmental Contributions to Safety*

The overall graph shown in the main text is very impressive. The data is up to the end of April 2004, These 3 detailed graphs show the contribution of the Drilling Staff, and this is then broken out into Drilling staff own employees and Contractors.

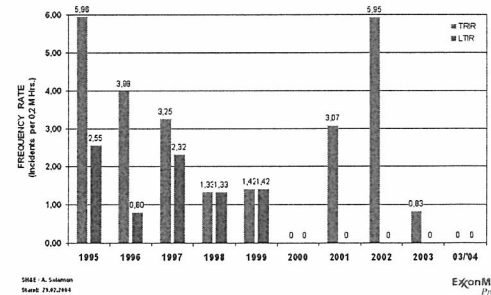
Drilling, Employees & Contractors



Drilling, Employees



Drilling, Contractors



## **Marketing an “Tour-ability” of Project**

There have been a number of different marketing and touring opportunities that are worth highlighting.

The first is the work that has flowed from the initial BEB project. This was by internal recommendation.

The result of the work done was a 1 year contract with ExxonMobil

*The reasons I have included this as a different project are:*

*A new Company signed the contract*

*ExxonMobil doesn't work with consultants.*

*This was a special case.*

*Work continued with a new drilling contractor*

*New processes had to be implemented (From Shell to Exxon)*

*A major external opportunity was the presentation of the work done at the DGMK <sup>Footnote 64</sup>. This was a combined thesis by Harald Schulenberg, Benedikt Gerhartz (replaced H. Buyken as Drilling Section Manager) and Graham van Tuyl. This thesis was called “Process optimisation and people development through LEAD-coaching;*



## **Changing the way Business is done in Germany**

*The photograph shows the attendants to a meeting on the 21<sup>st</sup> September 2001, on the KCADeutag rig T25. The meeting was to show the German Operators what could be achieved with the coaching approach.*

*From left to right (if only the company is mentioned, then these individuals are the respective Drilling Managers for their company in Germany):*

*H. Buyken (BEB - TEBT)*

*H. Sprung (Wintershall – Superintendent)*

*J. Richter (BEB – DSV)*

*T. Ruttman (Wintershall – Engineer)*

*S. Behnke (BEB – DSV)*

*G. van Tuyl (RLG)*

*H. Zehetleitner (ExxonMobil – Engineer)*

*Hr. Wegener (Preussag Energie)*

*H. Tschaffler (ExxonMobil)*

*H. Schulenberg (BEB - DTL™)*

*E. Eide (BEB)*

*B. Siefken (Wintershall)*

*W. Mitschker (KCADeutag – T25)*

*F. Zuidema (KCADeutag – T2000)*

*H. Posnien (KCADeutag – Toolpusher)*

*B. Anderson (RLG)*

This photograph contains 4 of the 5 Drilling Managers in Germany as the Operator representatives, and it also contains 50% of the German Drilling Contractor community at that time.

---

*Footnote 64: DGMK German Society for Petroleum and Coal Science and Technology. [www.dgmk.de/english.htm](http://www.dgmk.de/english.htm)*

*Feedback from an Operators perspective [ISBN 3-936418-03-9], and presented in Celle Germany on the 29th April 2003 with the permission of ExxonMobil. As a direct result from this work, contact was made with Shell International, the Smart Field development group (Siegfried Mussig and Pieter Kapteijn).*

A proposal was sent to Shell International, Smart Field Developments, for 1 – 3 people. The status at present is a verbal commitment to go-ahead.

*From: Scott McKenzie  
Sent: 28 May 2004 09:49  
To: Van Tuyl, Graham NAM-TWM  
Subject: RE: Requests  
Hi Graham,*

*We have met three times with Siegfried Muessig, after he was impressed with your presentation. He saw several possible opportunities world-wide with Shell in partnership with their SMART Fields concepts roll-out. He and I last spoke 26 May 2004. There has been little progress on the SMART fields work, and Siegfried holds small promise for our involvement in the near future. The issue seems to be strict budget constraints in the areas where SMART implementations are being considered. Siegfried was frustrated by the progress for both himself and us.*

*To: Graham van Tuyl  
The areas where he is getting interest is in Gabon. The other potential areas are in Russia and the Middle East, but these are at very early stages of discussions even for the SMART applications, and the necessity of an outside consultancy group to address behavioural, organizational and cultural changes has not been raised.*



## ***Quotes from Wolfgang Mitschker***

*“...We also have a cultural change in the relationship between Toolpusher-Drillers-Crews. This is the modern way, how one should work with one and other. To have an independent person on the rig, who facilitates, who follows up issues and who documents these, is an enormous help for me and my work.”*

*“...The 24 hr / 5 day look ahead helps me to better plan ahead. It enables me to coordinate the upcoming activities much better.”*

*„...Just looking at the interactions between the Toolpushers – Drillers – Crews, then we can already see cultural change. This is the modern way, how to treat ones employees. To have an independent person on the rig site (coach, sic.), who facilitates, who follows up problems and initiatives and who cleanly documents these, is a very big help for me and my work. But having said this, the process would at this present time collapse without the coach”*

*I said we would like to keep in touch, and offered any assistance that he might find useful from any of us. In my mind we should consider that this is a closed opportunity for now.*

*Scott*

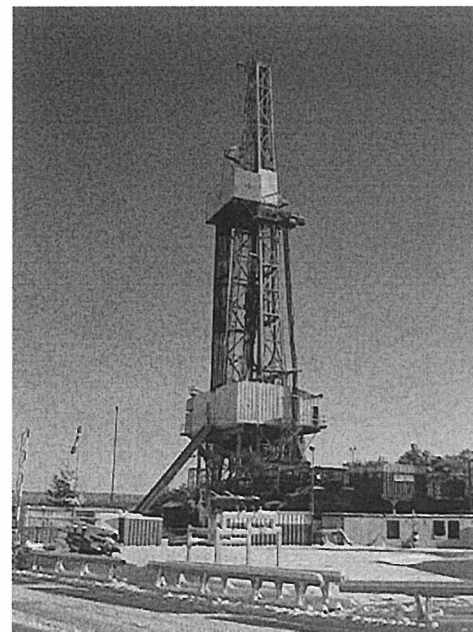
Clients who have visited the sites in Germany:

Client	Comment
Wintershall	Past client in various projects
ExxonMobil	Took up contract as result of BEB
Preussag Energy	No contract
KCADeutag	-Past client. -Partner with RLG in TLS Aberdeen.
SHELL	-Current client in NAM (various people on the project worked in the NAM) -Possible contract with Smart Fields

5 Potential Clients toured the site.

There were a number of internal publications, and external ones. These are all included in this report. Included also in the appendices is a draft thesis that at present is being co-written by Egil Eide, David Durkee, Harald Schulenberg and Graham van Tuyl for publication the the Society of Petroleum Engineers.

Publication	Comment
BEB Mosaik	Performance Coaching (volume 5 + 6 / 01)
Bohrtechnik	Experiences with a new Method for Designing and Drilling Wells. [October 2001, 117 <sup>th</sup> year, Volume 10] <i>(Erfahrungen mit einer neuen Methodik zum Planen und Abteufen von Bohrungen.)</i>
DGMK	Process optimisation and people development through LEAD-coaching; Feedback from an Operators perspective [ ISBN 3-936418-03-9 ]
SPE (draft)	Process optimisation and people development through LEAD-coaching; Feedback from an Operators perspective



### Quotes:

*“...Today the department is in the position to make further progress without direct coaching. As from mid 2003 it was decided to review progress quarterly with RLG if we were strong enough to make further improvements on our own which so far has worked out”.*

**Egil Eide**  
ExxonMobil Production Deutschland GmbH (EMPG)

*“...In the meantime I am back in Production, but the management tools I learned from this one year working with you in drilling are helping me very much in my new position (especially a better understanding of the relationship between "superior and personnel": How do I have to act as superior to get the results I expect e.g. pull for information)”.*

Benedikt Gerhartz  
ExxonMobil Production Deutschland GmbH (EMPG)

## ***Sustainability of Implementation***

This is an extract from a feedback meeting with *David Durkee* and his management team.

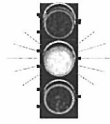
In our contractual commitment we have specified major commitments, with associated areas of focus and associated processes against which we can together evaluate our progress. Each of these commitments is reviewed below along with a brief statement of progress.

Broaden exposure to CI tools and processes: building on the existing core of participants, move to introduce other members of this team to the tools and processes that will heighten their effectiveness individually and collectively.

With the commitment for more visible direction setting from the leadership group coupled with the incorporation of core operating practices, we have identified the necessity to equip a broader community of individuals and team competent to lead their groups in processes designed to increase the level of ownership for business results through the involvement of increasing numbers of their operations. These tools, simple in design but powerful in effect provide the mechanism for achieving this ambition. Four elements helped direct our efforts in this area.

Hold participant forum to introduce concepts and tools

Begin coaching with influences in the



## ***Changing the way Business is done in Germany***

*The photograph shows the attendants to a meeting on the 21<sup>st</sup> September 2001, on the KCADeutag rig T25. The meeting was to show the German Operators what could be achieved with the coaching approach.*

*From left to right (if only the company is mentioned, then these individuals are the respective Drilling Managers for their company in Germany):*

*H. Buyken (BEB - TEBT)  
H. Sprung (Wintershall – Superintendent)  
J. Richter (BEB – DSV)  
T. Ruttman (Wintershall – Engineer)  
S. Behnke (BEB – DSV)  
G. van Tuyl (RLG)  
H. Zehetleitner (ExxonMobil – Engineer)  
Hr. Wegener (Preussag Energie)  
H. Tschaffler (ExxonMobil)  
H. Schulenberg (BEB - DTL™)  
E. Eide (BEB)  
B. Siefken (Wintershall)  
W. Mitschker (KCADeutag – T25)  
F. Zuidema (KCADeutag – T2000)  
H. Posnien (KCADeutag – Toolpusher)  
B. Anderson (RLG)*

This photograph contains 4 of the 5 Drilling Managers in Germany as the Operator representatives, and it also contains 50% of the German Drilling Contractor community at that time.

department who can lead the shift to new ways of working

EMPG team members are starting to utilize tools and processes as a regular part of their work

We have seen significant progress with a substantial number of people in this area of our commitment. (see examples below) I have lead a number of workshops and provided individual coaching to ensure adequate follow-up. On an individual basis there is good participation. In group dynamics the individuals do not show their grasp of these tools. On the whole these individuals are not / don't feel responsible for sharing this with others. This continues to be a key area with significant potential yet we are well aware of the presence of significant resistance with some individuals.

Progress achieved:

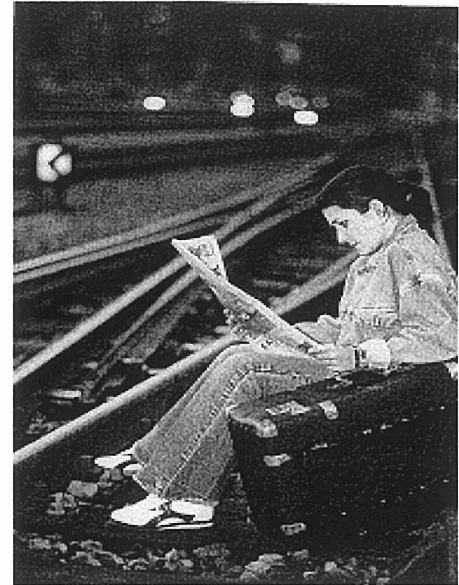
<b>Name</b>	<b>Attribute or Change</b>
P. Weustermann	Leading Arctic Survival Exercise DSV workshop 2 End of Section reports Soehlingen Z15
G. R. Aink	Decision Tree Soehlingen Z15 CT work Database management, pre-work database "End of Drilling meeting Soehlingen Z15"
S. Behnke	Leading various IMM meetings Coaching colleagues Making data transparent, decision trees
D. Bojes	Leading 1 IMM meeting Initiation "Entsorgungs Project"
J. Richter	Introduces 24h/5 Day Look ahead to hMEEG on Soehlingen Z 15
M. Görtz	End of Well meeting (preparation, Organization, and moderation) Co-moderation + Protokols Weekly WOT's
All DSV's	Morning meeting rig site Leading weekly rig meetings
E. Eide	Setting up Agenda's for workshops Coaching GvT on some difficult questions Actively asking for personal feedback
G. Pust	Leading IMM meetings Open Leadership at DSV workshop
D. Durkee	Self reflection due to open attitude on feedback Willingness to invest time for management self development Initiated rig meeting to identify lines of authority and communication
H. Dreikhausen	Initiated 1 <sup>st</sup> LL meeting to integrate LL into KsZ4a well plan. Initiated 1 <sup>st</sup> real in depth problem identification and solving meeting on the rig. (In LEAD coaches experience).



This is the area where great progress has been made. There are numerous examples.

The aim of this piece is to show that there is a tremendous will to move forward, and that there is an open discussion around the issues that matter. This is demonstrated in all the evidence presented in this submission and the warmth and strength that come out of the testimonials.

The results (Operations and Safety are till the End April 04), this is considerably past the 6 months limit set in the expectations in the B.o.B. criteria.



### *Management Workshop*

The use of photographs was pioneered, to allow participants to express emotions about what was going on in the business, easier. One person picked the photo above, and used the metaphor below:

A girl sitting on the railway line, on a suitcase reading a newspaper.

*"...I feel like I get my information just from documents and e-mails. I need to go out there and buy this newsthesis. It is uncomfortable like sitting on the case in a rotten place. I have to make the effort, and if I am too late, then this train comes along and flattens me. I.e. events just overtake me, and like in the company, I get blamed for not knowing and not doing something to help. It's a mess.*

## ***Client Satisfaction & Comment***

From: egil.eide

Sent: 07 May 2004 17:59

To: Van Tuyl, Graham NAM-TWM

Subject: Re: Best of the Best Nomination support *Graham van Tuyl*

Graham,

To whom it may concern:

RLG represented by *Graham van Tuyl* started to work with BEB (previous operating company for Shell and ExxonMobil in Germany) on March 2001 and continued his work after the start-up of EMPG, the new ExxonMobil Production Affiliate in Germany in September 2002.

The objective for using a consultant in BEB was to develop improved leadership skills amongst the supervisors responsible for managing more and more complex drilling projects. In addition office staff should be trained to work as a team to meet future challenges. We realized that in our organization we had a huge resource of strong individuals which working, as a team would be able to make step change improvements in performance.

Management realized that big steps were made on the technical side of the business, however not much training has been provided to supervisors and Engineers to meet future leadership challenges. This was the first time we invested in training individuals using known tool and techniques to improve their leadership skills.

*Graham van Tuyl* had a challenging task ahead of him trying to change the minds of strong, experienced individuals.

The task was more demanding than we ever had thought of. We often went two steps forwards and one backwards simply because staff would not understand why they needed to change. The improvement slowly came as Graham started coaching on a one to one basis and in incremental steps demonstrating to others that working in today's environment is about learning new things.

Simple things such as learn to use small software tools helped to break the ice. On this basis small successes could be demonstrated to the team and reduced some resistance in the system. The energy required to make these small steps was huge, only Graham passion helped to succeed.

There were moments that he had to take hard personal hits, however he never gave up. I would like to thank him for this tremendous effort, which went far beyond just being paid for doing a job. Without his leadership skills we never would have been able to continue the process.

Towards end of BEB prior to start-up of EMPG in September 2002 we had made good progress in most areas. The team was open to discuss all sorts of questions, using data to make decision, improvement in leadership skills (Preparation for meetings and presentations ) was recognized. All contractors were involved in the planning of activities (24 h/5 days-plan) and due to improved communication all parties contributed to agreed goals.

At start-up of EMPG in September 2002 a discussion took place if we should continue to coach our staff using Graham as champion for this task. The new company recruited staff from former BEB and MEEG (ExxonMobil, Germany). Different style and cultures came together. It was important for the new company to overcome these hurdles fast in order to perform as one company.

The decision was taken to continue coaching with clear objective to bring both units together fast. With the experience from BEB as well as agreed milestones the department gained momentum, considerable progress was made in short time frame. An early start-up workshop and close monitoring of controversial issues have been key to success.

Today the department is in the position to make further progress without direct coaching. As from mid 2003 it was decided to review progress quarterly with RLG if we were strong enough to make further improvements on our own which so far has worked out.

I much appreciate the time and effort RLG with help of Graham van Tuyl has spent to improve our leadership skills at all levels. A personal thank to Graham van Tuyl for a very challenging and rewarding period.

Regards.

**Egil Eide**

ExxonMobil Production Deutschland GmbH (EMPG)  
Manager Engineering

From: david.l.durkee  
Sent: 03 June 2004 15:19  
To: Van Tuyl, Graham NAM-TWM

Graham,

I agree with the note Egil wrote.

From my perspective I offer the following thoughts.

Background: My first contact with the coaching effort came with the merger of MEEG and BEB. The project had been initiated by BEB and several people had used the coaching opportunity to learn more and improve their skills. Others made no effort to improve and - no surprise- did not improve. For the active and positive employees, the merger provided a unique opportunity to make real progress.

With a merger comes a period of chaos that can be used effectively to make change work. Having a coach in place that had already gained the trust of key BEB personnel was a key to the success. The timing was perfect; we had a trusted coach within the group at a time of a forced transition (merger). The upheaval created an environment that accepted change. We worked together to focus this energy toward changes that would improve the performance and provide long-term stability.

We found that it was essential to define what good performance looks like and came up with three very simple goals.

- 1) Work safely
- 2) No train wrecks, and
- 3) Learn.

One of the biggest transitions for the DSV was the "loss" of the Senior Drilling Supervisors. Here, the work done before the merger proved once again valuable. The DSVs were learning how to lead discussions and solicit input from the available expertise at the rig site. The quality of the weekly rigsite meetings improved dramatically when the DSV took ownership in the absence of the senior drilling supervisors. This ownership is also seen in the daily operations in improved decision-making. (see results)

One of the biggest benefits of coaching for the leadership team and me was to have another set of "thinking ears" in the group. Having a trusted member of the group working in the field and the office and transmitting information, emotions, and situations about the health of the organization is a powerful tool. The success of this tool is very much dependent on how the coach himself interacts with the two groups (office and field) and what the management does with the information (actions). In our situation the coach was able to maintain the trust relation, and the field personnel realized they could use the coach to help them effect the changes they thought were important. In hierarchical organizations or new organizations where the lines of communications are not yet fully established this is important.

The simultaneous coaching of the field and office personnel was another important issue. This should not be done as another initiative to teach the field how to act. The leadership team actively participated in the workshops and used the coaching / facilitation in small private sessions as well. In fact when the coach told me about something that needs attention or made observations I could frequently say " I know you are right because this verifies my gut feeling and makes me uncomfortable that I have not yet acted on it".

Another important learning (something that we know, but frequently forget), is the use of data. This is an incredibly powerful tool for making change happen in the right direction. There are several examples like the 5th man.

As a final learning, the leadership team has to set goals with the coach and a "graduation day". Progress toward these goals must be reviewed frequently (every 2 -3 months). Graduation day will tend to slide but at some time must become firm. Scheduled follow up visits by the coach have proven to be beneficial.

Overall, the experience was a tremendous benefit to our newly merged group. I doubt we could have made the progress or achieved the performance we did without an effective coach.

Mit freundlichen Grüßen / Regards,

David L. Durkee

Field Drilling Manager Germany/France

Safety Vision: Nobody Gets Hurt

ExxonMobil Production Deutschland GmbH (EMPG, Germany)

From: harald.schulenberg  
Sent: 01 June 2004 15:59  
To: Van Tuyl, Graham NAM-TWM

Hallo Graham,

Als Graham zur damaligen BEB (jetzt EMPG) zum Drilling kam, war ich noch allein und hatte die Aufgabe, das Shell-Projekt "Drilling the Limit (DTL)" als Einzelkämpfer bei BEB einzuführen. Der Widerstand in der Abteilung gegen den Change, den DTL mit sich bringt, war bei Kollegen und Vorgesetzten sehr groß und ich konnte alleine nicht viel ausrichten. Als Graham hinzukam, haben wir dann alle Aktivitäten abgestimmt und uns gegenseitig immer wieder die Frage gestellt "Was wäre, wenn wir die xy-Methode einführen? Mit welchen Widerständen müssen wir rechnen? Was können wir dagegen tun?". Wir waren als Ergebnis der Diskussion danach immer sehr gut vorbereitet und konnten den Widerstand "auf sanfte Art" brechen und viele Tools & Methoden erfolgreich einführen. Graham war dabei meine "Speerspitze" auf dem Bohrturm und ich habe in der Verwaltung versucht, Einfluß zu nehmen. Graham hat sich durch sein Fachwissen, seine Hartnäckigkeit und seine hohe Sozialkompetenz nicht nur Respekt auf dem Bohrturm und in der Hauptverwaltung verschafft, sondern auch freundschaftliche Kontakte zu wichtigen Entscheidern und Multiplikatoren aufgebaut. Dies verdient umso mehr Anerkennung, als er sich in einem sehr rauen Umfeld (die Bohrmeister fühlten sich alle wie kleine Könige und benahmen sich auch so) bewegte. Erstaunlich ist auch, daß er bei "einfachen" Leuten aus der Bohrmannschaft UND beim Management sehr gut ankam und Vertrauen aufgebaut hat.

Bei allen Methoden und Tools, die wir eingeführt haben, hat er den Drillern immer wieder das Gefühl geben können, daß sie es selbst erfunden haben. er hat die Anwender von Tools und Methoden immer "mitgenommen" statt sie damit zu konfrontieren. Deshalb haben sie schon garnicht mehr gemerkt, daß sie mit Begeisterung Tools anwenden, die sie noch vor ein paar Monaten strikt abgelehnt haben.

Der Umgang mit Kontraktoren (hauptsächlich ITAG und DEUTAG) hat sich durch die Einführung der IMMs deutlich verbessert. Graham hat dafür gesorgt, daß der Umgang miteinander sehr viel offener und partnerschaftlicher und damit

auch zielführender wurde.

Die Zusammenlegung MEEG + BEB = EMPG wäre ohne ihn sicher nicht so reibungslos verlaufen. Er hat dafür gesorgt, daß Probleme thematisiert, diskutiert und gelöst wurden statt sie totzuschweigen. Größere Konflikte zwischen hMEEG- und hBEB-Mitarbeitern kamen so erst garnicht auf.

Persönlich haben wir uns hinsichtlich der Arbeitsweise (Quantität und Qualität) sehr gut ergänzt. Graham hat mir - in sehr netter Form - immer wieder den Spiegel vorgehalten und mir gezeigt, wie mein Verhalten auf andere wirkt. Auf diese Weise konnte ich enger mit den Drillern zusammenarbeiten, was dem Projekt sicher gut getan hat. Ich mußte meine adverses Bild vom "typischen Consultant" korrigieren. Graham hat mir gezeigt, daß er nicht nur konzeptionell gute Ideen hat, sondern auch in der Lage ist, diese in der Praxis erfolgreich umzusetzen.

Insgesamt habe ich die Zusammenarbeit mit Graham sehr geschätzt. Ich bin auch der Überzeugung, daß er erst BEB und später EMPG sehr dabei geholfen hat, besser zu werden.

Harald Schulenberg

*Translation (made by Graham van Tuyl. In order to ensure that this translation is correct, the German original has been included).*

*When Graham arrived in the previously named BEB (now EMP) in the Drilling department, I was the alone in the task of introducing the "Shell Drilling the Limit™" in BEB. The resistance in the department against Change that the DTL process brings with it was strong amongst my colleagues and superiors, and I myself couldn't do much as I saw it then.*

*When Graham arrived, we coordinated our activities, and we often asked each other the following question: "What would happen, if we did x-y and ? What would be the opposition and from who? What can we do if this happens?" This caused us to be very well prepared and allowed us to navigate around resistance in a safe way. This allowed us also to introduce a lot of "tools" and Methods successfully.*

*Graham was my "sharp end" on the rig, and I worked in the head office. Graham has through his specialist subject competence, his stubbornness and his high social skills managed to gain respect on the rig site and in the head office, but also scoped out these friendly contacts to*

people who make decisions and people who acted as multipliers (a word we used for people who became the resident knowledge base in the client companies for tools, processes, ). This deserves even more recognition, because of the work areas in which he moved (The DSV's felt like small kings, and acted like that also). It is remarkable that Graham was able to build up relationships with both the crews (simple people) and management at the same time, and managed to keep both sides confidence.

With all Methods and Tools, that we have introduced, he has always managed to give the Drillers the feeling, that they invented this themselves. He has always guided the users of these Tools and Methods along, rather than being confrontational. This is why they didn't realize that they were using Tools, etc, that a few months before were a "no go" area.

The way we worked with Contractors (mainly ITAG and KCADeutag) has improved markedly through the introduction of the IMM's (Interface Management Meetings). Graham has managed to achieve that the way we work with other people is much more open and more as partners. This meant that we were more focused on our goals and achieved them.

The integration of MEEG and BEB to EMPG would undoubtedly without him not have gone so smoothly. He has made sure that problems were put on the agenda, discussed and solved, rather than ignored. Bigger conflicts between hMeeg and hBEB (h is a term used to denote past tense, stands for heritage sic.) employees did therefore not appear.

On a personal level, looking at our working methods (Qualitatively and Quantitatively) we complemented each other. Graham, in a very polite way, held a mirror up to my face, and showed me how my actions influenced others. In this way, it was possible for me to work much more closely with the Drillers, which influenced this project positively. I had to change my perception of "a typical consultant",. Graham showed me that he didn't just had conceptually good ideas, but that he was able to transform these in a practical way.

All together I have very much valued the cooperation with Graham. I am in no doubt, that he has first helped BEB and later EMPG, to become better.



From: Siegmar Behnke  
Sent: 30-May-2004-16:49  
To: Van Tuyl, Graham NAM-TWM; David.durkee  
Subject: Antwort auf Best of the best

Bergen 30.05.2004

Hallo Graham

Ich möchte einen kurzen Rückblick über meine Arbeit als Performance Coach bei der BEB / EMPG in Zusammenarbeit mit RLG geben

Ziel der Aufgabe war die Arbeitsabläufe / Arbeitsprozess zu optimieren um Zeit / Kosten einzusparen, dazu wurde in erster Linie großer Wert auf Sicherheit / Arbeitssicherheit gelegt. Wichtig ist dabei, dass die einzelnen Mitarbeiter ihr persönliches Wertgefühl nicht verlieren, und der Arbeitgeber die Change wahrnimmt das Wertgefühl zu steigern.

Für mich als Neuling im Performance Coaching war es eine Herausforderung die ich meiner Meinung nach nicht einmal im Ansatz alleine bewältigen konnte.

Die Zusammenarbeit mit Graham war für mein Empfinden menschlich und fachlich sehr gut!

Die Kombination professioneller Performance Coach in Person Graham van Tuyl mit seiner großen Erfahrung, und meine Person mit der Erfahrung an der Bohranlage und Firmeninternen Abläufen hat sich für mich als gute Kombination erwiesen wobei die persönliche Motivation sehr wichtig ist.

Wichtig für den Erfolg des Veränderungsprozess waren für mich auf jeden Fall die konsequente Hilfe aus der Hauptverwaltung, und die gute Zusammenarbeit mit meinen Kollegen und Auftragnehmer auf der Bohranlage.

Zum Beginn der Aktivitäten war für mich ein solches Endergebnis nicht vorstellbar.

Der Ablauf stellte sich für mich so dar:  
Analysieren und Erkennen der Verbesserungsmöglichkeiten  
Einleiten der Veränderungen mit bleibender Wirkung

Aus meiner Sicht positive Ergebnisse

Das Einführen der JSA (Job Safety Analyse) bei der Fa. Deutag

Durch die erweiterte Runde der Gesprächsteilnehmer im Morgengespräch im Versammlungsraum und Lautsprecher kommt das Verständnis auf der Bohranlage besser (Team fördernd Bohranlage <-> HV Technik /Planung ) an

Durch die Konstruktiven Gespräche ( Handover in Hannover) in dem Gesprächskreis = Abteilungsleitung, Betriebsleitung, Fachfunktionen, Betriebsleitung des Hauptauftragnehmer, und Vertreter der Bohranlage konnten sehr viele Themen intensiv besprochen werden und forcierten die Ergebnisse.

Auf der Bohranlage ist die Moderation der Wöchentlichen Anlagenbesprechungen (WOT) durch den Rigsupervisor vor Ort zur Normalität geworden.

Es wurde eine Lesson Learned Datei eröffnet, mit der Fortführung der Datei wird sehr viel Verbesserungspotential erfasst, und für weitere Projekte genutzt

Durch die Analyse einzelner Arbeitsabläufe wurde erkannt, das eine Person mehr je Schicht für die Fa. BEB / EMPG ein Finanzieller und Sicherheitstechnischer Vorteil ist.

Mit einer 24 h / 5 Tage Vorplanung wird für alle Beteiligten das Projekt = sichtbarer und ist somit Team fördernd (alle Beteiligten können die Arbeitsabläufe besser vorbereiten und die gewünschte Initiative des einzelnen wird dadurch gefördert)

Die Mentalität der Auftragnehmer im Team hat sich sehr zum Positiven gewendet, d.h. es wird offener über Anstehende Aktivitäten und Probleme gesprochen.

Es ist einiges in Zusammenarbeit mit der Firma RLG erreicht worden.

Operationssupervisor Fa. Exxonmobil Deutschland

Siegmar Behnke  
29303 Bergen

*Translation (made by Graham van Tuyl. In order to ensure that this translation is correct, the German original has been included).*

*I would like to give a short overview on my work as a Performance Coach internally with BEB and EMPG in connection with RLG.*

*The goal of the project was to optimize work processes and results in order to save either Time or Costs, but always bearing in mind that first priority was Safety.*

*Important was also that every single employee and worker was left with a feeling of being valued and respected, and equally to give people who observe the Change happening, to be proud of this.*

*For me as “new kid on the block” in terms of being a Performance Coach, was a challenge that I could not have done alone.*

*The relationship with Graham was for my feelings very good socially, and technically very good. The combination of a professional performance coach (Graham van Tuyl) with a lot of experience, and my person, with the experience of working on Drilling rigs and the company knowledge, has proved to be a very good combination, where personal motivation is very important.*

*Important for the success of a Change Process was for me in any case, the consistent help from the head office, and the very good relationship and help from my colleagues on the rigs.*

*I could not have imagined at the start of this process the results.*

*The process for me can be described as:*

*Analyze and identification of improvement possibilities*

*Introduce change with sustainable results*

*From my viewpoint positive results:*

*Introduction of JSA (Job Safety Analysis) in KCADeutag*

*Through the increased participation in the “morning call” in the conference room, through a conferencing speaker telephone, we have achieved a better understanding and involvement on the rig (head office <> Rig)*

*Through constructive conversations (handovers in Hannover) with the following participants;(see Chapter IMM sic.), a lot of focus areas could be addressed and results achieved.*

*On the rig location, through the facilitation of the Weekly Rig Meetings (WOT). This is now routinely done by the DSV, and is considered normal.*

*A Lessons Learned database was established. With the capturing of this data, a lot of improvement potential was captured, and used in further projects.*

*Through analysis of individual work processes, it was recognized that an extra person in the crews for BEB and EMPG, had a safety and financial benefit.*

*With the 24h / 5 day look ahead it is more visible (as well as building more of a team). All people involved could prepare better for the upcoming work, and therefore initiatives were completed better.*

*The mentality of the Contractors in the Team has changed very much in a positive sense. There are more open conversations about upcoming work, and problems are discussed.*

*There have been achievements with the cooperation with RLG.*

From: benedikt.gerhartz  
Sent: 16 April 2004 16:50  
To: Van Tuyl, Graham NAM-TWM  
Subject: Re: RLG Best of the Best submission

Hallo Graham,

Thanks for your request. I enjoyed working with RLG and especially with you as coach. You really helped me to get a better understanding of my role as Superintendent (responsible for people, technology and budget), especially in the quite difficult surrounding of drilling.

Coaching of RLG during the DTL-Projects and the EMPG migration phase helped all of us in BEB to focus on our decision making process (How do we make the right decision? Do we already have enough information to make the right decision? Are all roles and responsibilities well defined and clear for everybody?)

In the meantime I am back in Production, but the management tools I learned from this one year working with you in drilling are helping me very much in my new position (especially a better understanding of the relationship between "superior and personnel": How do I have to act as superior to get the results I expect e.g. pull for information).

Mit freundlichem Gruß / Best Regards  
Benedikt Gerhartz

ExxonMobil Production Deutschland GmbH (EMPG)  
Operations Gas Production Weser Ems West  
Supervisor Field Operations

## ***Project Manager Excellence***

When we first designed this element of the BOB process we were looking for evidence that the PM had taken full advantage of the client opportunity and had adapted our tools and processes to bring new value and sustainability to the opportunity. Graham has done this in some very powerful ways with this client. Some of these elements include:

### **Project Design**

This process began as a standard TMP exercise with strong emphasis on the lessons learned aspect of this process. Throughout the term of the project, including the Merger, it was necessary for this design to shift with the enlarged scope and new culture. Throughout this process Graham made solid assessments, considered several alternatives and secured strong executive support for a design that could work within this dynamic situation. The design element of our work is a unique ability not evidenced evenly across our team. In this instance Graham demonstrated strong skills in crafting an offer that worked powerfully for a strong client.

### **Scope of Personal Coaching**

For years we have sold coaching as a core element of our offer. Recently, we have come to realize that what we have been calling coaching may be more realistically referred to as conversations with a consulting edge. In the European Operations, coaching has not been a strong element of our historic offer. In the transition to the broader offer Graham has moved powerfully to engage participants at all levels in the examination of their own skills, styles and habits of all elements of the FAIR model. His capacity to move with these tools from the drill floor to the executive office is clearly demonstrated in the letters attached to this nomination and clearly felt in each of those opportunities that I have had to sit in and observe Grahams clarity and courage in this aspect of our work.

### **Introduction of new tools**

Modelling a process for others to follow must include some new aspects of our work. Within the European Operations Graham has been one of our strongest advocates of experimenting with new ways of bringing ideas to our clients. Drawing on his formal studies in Action Learning at Bath University along with his amazing informal networking system, Graham has brought some new and useful tools that we have incorporated across the team. One specific example is what

we call the "Picture Exercise". Drawing on a set of some one hundred photographs, participants are asked to identify an image that speaks to the way their organization, team or particular challenge feels now. At the same time they are asked to select a picture that speaks to the way they want the world to look and feel in the future. What a simple idea! What a powerful process! This tool was first tried with the EMPG team in Germany with very strong positive feedback and has since been used in Shell, BP and Nexfor to help executive speak much more honestly about the current and future aspects of their organization. It has become a core element of our toolkit in Europe and is very suitable for use around the RLG world.

### **Language skills**

In his introduction Graham spoke very personally about the challenge of working both cross culturally and within a new language. As one who has sat through Business Review meetings on a Germany Drilling Rig I understand that this is more than language competence. The particular skill of thinking as the client does within a new culture and expressing those ideas in a language that is grasped by the listener in their setting is a particular skill. When done well it looks and feels easy. Graham has this skill and because he has worked hard at it he does make it look ease and puts his clients at ease. For a company with international experience it is delightful to know that I have a skilled coach in Graham and others who can make our international experience come true so professionally.

This aspect on PM excellence goes right to the heart of our BOB process. It looks for ways in which this individual has grasped the opportunity and brought all of our tools, all of their skills and crafted a place where learning, results and sustainability can occur. The examples listed above are some of the keys ways in which Graham has stepped fully into this challenge with success for himself, his clients and RLG

Roger Laing  
COO European Operations  
RLG International



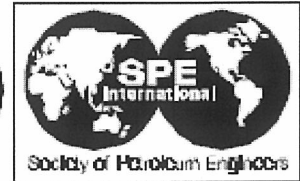


**7.2.3. Theoretical Maximum Performance; ProStar Rig 2000**

***SPE / IADC Thesis57557***

***As presented at the 1999 SPE / IADC Middle East Drilling Conference held in Abu Dhabi, UAE; 8 – 10 November 1999***





SPE/IADC 57557

## Theoretical Maximum Performance, ProStar Rig 2000

E. van der Leij, and F. Zuidema, Deutag Europe; and G. van Tuyl, P. de Jong and B. Anderson, RLG International

Copyright 1999, SPE/IADC Middle East Drilling Technology Conference

This paper was prepared for presentation at the 1999 SPE/IADC Middle East Drilling Technology Conference held in Abu Dhabi, UAE, 9–10 November 1999.

This paper was selected for presentation by an SPE/IADC Program Committee following review of information contained in an abstract submitted by the author(s). Contents of the paper, as presented, have not been reviewed by the Society of Petroleum Engineers or the International Association of Drilling Contractors and are subject to correction by the author(s). The material, as presented, does not necessarily reflect any position of the SPE or IADC, their officers, or members. Papers presented at the SPE/IADC meetings are subject to publication review by Editorial Committees of the SPE and IADC. Electronic reproduction, distribution, or storage of any part of this paper for commercial purposes without the written consent of the Society of Petroleum Engineers is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 300 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgment of where and by whom the paper was presented. Write Librarian, SPE, P.O. Box 833636, Richardson, TX 75083-3636, U.S.A., fax 01-972-962-9435.

### Abstract

The PT 2000 was built as a state-of-the-art land drilling rig designed to achieve safe and efficient operations through automation and the removal of personnel from the working envelope. After two years of mediocre performance, Theoretical Maximum Performance (TMP) was adopted as a method for improving rig operations by developing people in the workplace. Performance coaches were placed on the rig for a twelve-month period. They encouraged innovative thinking and greater commitment to the job. By invoking numerous tools around the Plan / Execute / Measure / Learn continuous improvement cycle, the crew of the PT 2000 achieved substantial performance gains, specifically in rig move times, rig downtime, and BOP Testing. The rig's impressive safety record was not compromised. Using this approach, the PT 2000 drilled five wells in 1998 and saved 71 days from the budgeted time for these wells. Deutag Drilling sees this innovative approach as a valuable contribution to its business.

### Introduction

**Conventional Wisdom and the Competitive Drilling Environment.** The land drilling service industry has a long history of striving for improved drilling performance. Our customers seek reduced bottom line well costs while designing ever more complex wells. Environmental and regulatory pressures demand quieter, more easily transported rigs that must operate at smaller drilling locations. Our desire to ensure the wellbeing of our employees demands safety refinements.

These pressures apply across the industry and the conventional method for addressing these issues involves capital expenditure. Greater horsepower, increased pump capacity, and more pulling power, for example, are necessary elements for

drilling at greater depths and increased deviations. Operating in the Netherlands, Deutag Drilling is one of the companies striving to make innovative responses.

Deutag Drilling has worked in close cooperation with the Nederlandse Aardolie Maatschappij (NAM) for 25 years. Established in 1994, the ProStar alliance between operator, drilling contractor, and other service providers is the current basis for this cooperation. Early in this decade a need for a 2000 horsepower land rig was articulated. The ProStar partnership determined that proper rig design could lead to safety improvements and time savings in standard operations. Areas of interest relate to flat time operations and include rig moving, rigging up and rigging down, tripping pipe, picking up and laying down tubulars, running casing, and blow-out prevention work.

The partnership designed a rig with "hands off" operational features where personnel are removed from the working envelope, as described by Wehling and Steckhan<sup>1</sup>. The PT 2000 land rig was built in eight months and it went into operations in the Netherlands during October 1995. Technical features of the rig are summarized in Table 1.

**Innovative Thinking.** After the PT 2000 had operated for two years, critical assessment revealed that conventional wisdom – that is, capital investment – was necessary but insufficient to ensure performance gains. The PT 2000's state-of-the-art technology was required for the type of wells it was drilling for NAM, but wells were not consistently being drilled within budget. Bottom line well costs were not diminishing.

In its first two years of operation the PT 2000 drilled eight wells including an extended reach well of 6,100 meters. Four of the wells were delivered on time while four ran between 14% to 65% over budgeted time. Further, rig moves were lasting between 14 and 18 days – much longer than the eight days expected when the rig was designed.

Despite the early optimism expressed by Boering and others<sup>2</sup>, the overall performance of the PT 2000 was lack-luster. Concerns were expressed about the performance potential of the rig. The crew's morale, initially enthusiastic because of the investment in high technology equipment, declined. Most importantly, future contracts for the rig were in jeopardy if the mediocre performance trend continued.

The drilling contractor's critical assessment next looked inside the organization. Was the company making best use of

its employees? What was the unrealized human potential for performance improvement? Senior managers for the drilling contractor were aware that historically the bulk of the workforce's effort, energy, and attention were dedicated to the "execution" of the work. Knowing the logic of continuous improvement theories, they decided that a shift towards improved planning, performance measurement, and organizational learning was required.

The managers faced a dilemma. Many employees in this and other industries grew up in a period when management expected them to leave their brains at the gate, bringing only their hands and back into the workplace. The company needed to redress this imbalance by engaging the creativity of employees and applying that to planning and organizational learning. Drilling managers were seeking lasting results. They wanted employees to redefine the way they work, to redefine the way they conduct their business.

Releasing this creativity and establishing a shift in mindset required more than just training. Employees needed tools to enable their transition, they needed practice in using the new tools, and they needed regular feedback on their effectiveness. Just as sports teams go on the field with coaches to help guide their performance, Deutag Drilling decided to use performance coaches to facilitate this effort. RLG International was hired to introduce a long-term performance management program centered on Theoretical Maximum Performance (TMP).

The process focussed almost exclusively on the rig site, implementing a program to develop planning, execution, performance measurement, and organizational learning. Performance management coaches began working on the PT 2000 on a full time basis in October 1997.

Investing in this mindset change has to have conventional returns. Within 12 months, senior management expected a 30% performance increase compared to plan on the time depth curves, a 15% performance increase on rig moves, and an ever-increasing improvement on the safety performance.

### Theoretical Maximum Performance

**Overview.** TMP is a composite of continuous improvement tools presented to the rig crew through a coaching process. It shares many of the Total Quality Management approaches that have been applied to drilling (Croucher and others<sup>3</sup>). TMP enables the very successful Technical Limit approach (Bond and colleagues<sup>4</sup>) by bringing the strengths of this technique to the rig site (Lynch and Hay<sup>5</sup>). Performance management coaches are on site to assist with improvement program development and to ensure success.

The method addresses each phase of the Plan / Execute / Measure / Learn cycle. It goes further by addressing the leadership skills that need to be developed in the rig's managers to ensure their personal success. The purpose is to:

- improve planning and share those plans with all levels of the rig crew;
- achieve better execution of the well where possible by ensuring standard procedures and checklists are developed and followed;

- measure performance and make the performance measures visible to the rig crew;
- use measures of past performance to stimulate analysis and organizational learning; and
- ensure that lasting skills are passed to the rig crew to permit the development of sustainable, more effective ways of conducting well planning and execution.

TMP supports and enables technical limit drilling by building commitment in the drill crew and by ensuring follow through during execution of the well. The approach specifically involves the crew and helps to ensure they focus on the important next steps. Increasing accountability of the rig site managers helps them to gain a deeper understanding of the performance of their operations.

Two performance management coaches worked on a back-to-back rotation providing the PT 2000 with full-time coverage for a twelve-month period. A supervisor based in the contractor's Netherlands office provided support. Their job was to aid the rig's crew in a continuous improvement effort that provided results.

**TMP Meetings.** The purpose of TMP Meetings is twofold. First, they stimulate out of the box thinking – "What could happen if everything went right the first time?" Secondly, they encourage all members of the team to commit to doing their part to improve performance. "What must we do to allow that to happen?"

A TMP Meeting brings together people from each discipline participating in a well, including Senior Engineers down to roughnecks from the rig. By involving 25 to 35 people, typically representing some 400 to 500 person-years of drilling experience, tremendous new ideas can be unleashed on an upcoming well.

In the carefully orchestrated meeting, small syndicate groups (drill floor hands face-to-face with their office colleagues) dissect the well in four steps:

1. **Step by Step Well Review:** Syndicates review the well in sections to see if the plan is properly sequenced. Can some steps be done off the critical path? Are some steps unnecessary?
2. **Establish Theoretical Maximum Performance Times:** How long is required to complete each step, if it is completed right the first time?
3. **Identify Risks and Opportunities:** What could go wrong if we try too aggressively to save time? What new opportunities should we be undertaking to ensure our success?
4. **Create Action Plans:** Who has to do what by when to capture the opportunities and mitigate the risks?

These meetings typically produce between 60 and 100 Action Points. The TMP Time for the well, established by syndicates of experienced drill crews and well engineers typically is 50% to 60% of the well's budgeted time (Figure 1). The TMP time is not a new target for the well – rather it is an indication of the performance opportunities that need to be explored. Following through on the rig site to achieve the potential gains remains the challenge.

**Rig Site Improvement Activities.** Over the course of a well, commitment to improved planning of specific jobs, measuring actual performance versus plan, and assessing variances between the plan and actual performance are critical steps to follow through. Impressive gains come from the hard work of paying attention to detail, achieving effective communication, and motivating the crew.

The rig-move process provides an example. Despite the stated importance of the move, and the need to integrate maintenance and modifications into the move period, no written plan was in place to describe the process. The performance management coaches helped bring the move contractor together with the drilling contractor to create a workable plan detailing more than 650 steps.

The plan was posted at the rig-site and reviewed twice daily at revised operations meetings. These meetings were effective at assessing the current situation and identifying next steps. Of particular importance were the evening meetings where tasks for the night shift were clarified, leading to much greater efficiency of that crew.

Lessons were captured during each move and used to revise subsequent plans. Anyone on the rig was welcome to put forward ideas of how things could be made safer, done faster, or made more efficient. More than 100 lessons were captured during the first rig move alone.

The improvement process helped improve drilling operations also. The night-pusher took over responsibility for creating the rig's plan of action for completing the drilling program. This helped increase the rig's sense of ownership of the drilling plan and created better awareness of upcoming jobs.

Reducing downtime on the rig was an important issue. This was addressed by increasing the involvement of maintenance workers in routine operations. Relocating the rig-site maintenance cabin closer to the toolpusher's office helped increase communication between operations and maintenance. Improving the schedule for lubrication on the rig is an example of how greater attention to detail was encouraged.

**Developing Leadership on the Rig.** The drilling contractor committed to strengthening the position of toolpusher to allow better decision-making on the rig. It was felt that office based managers were unnecessarily taking too many decisions for the rig, undermining their strengths, and eroding the rig's commitment to outstanding performance. A "why should we worry, it's the office's problem" attitude resulted from too much office involvement in decision-making. This attitude resulted in reduced utilization of rig skills and a diminished desire on the rig to ensure successful outcomes.

To counter this attitude, the drilling contractor adopted the position that the toolpusher must be the "captain of the ship" – the toolpushers responsibility and accountability for rig operations needed to increase. Roles and responsibilities for all the rig crew were clarified along the lines of increased rig autonomy. The toolpusher became a stronger leader providing greater responsibility and better supervision to the drillers.

Time was freed up to spend outside the toolpusher's office because of better delegation of administrative tasks.

The performance coaches facilitated this change by helping the toolpushers become stronger leaders. Time management support was provided by helping the toolpusher replace "urgent but not important" tasks with "important but not urgent" ones, using Covey's model<sup>6</sup> (Figure 2). Indeed, almost all the performance management tools embodied in the Plan/ Execute / Measure / Learn cycle address issues that are highly important, but not urgent. Assessing the variance between actual performance and planned performance, looking for root causes and capturing learning points are not urgent, but they are important keys for ensuring better operations in the future.

As a result of improved time management, toolpushers were better able to spend time touring the rig to oversee operations rather than being bound in their office with paperwork. The value of a talented rig clerk was realized.

Toolpushers were also coached on Blanchard's leadership styles<sup>7</sup> so they could more effectively assess the skill levels and commitment of individuals. Knowing when to delegate and when to be highly directive relieved the toolpusher of unnecessary over-management of the best people, while ensuring that he could provide the right mix of support and instructions to others.

Another important element in this approach is the need to make performance visible to everyone on the rig. Performance indicators are identified to track the gains in performance. Toolpushers become involved in defining these indicators, setting targets, and updating them on a regular basis. A performance poster is updated monthly and placed on the rig to illustrate progress.

### Performance Results

**Safety First.** Deutag Drilling fundamentally believes that safety has no alternative. Yet, some people think that performance coaches are on site to "speed things up," therefore safety will be comprised. This thinking is wrong. Performance improvements require people to work smarter, not faster. Eliminating errors and avoiding unnecessary repetition (doing it right the first time) leads to safer and more efficient operations.

The safety record on the PT 2000 is excellent. The rig is over 1200 days since its last Lost Time Incident. As shown in Figure 3, the number of reportable incidents is down from previously. 1997's weighted score averaged four each month. A target representing a 25% reduction was set and this target was realized.

The STOP program was revitalized and to increase safety awareness, the PT 2000 developed a safety audit schedule. This schedule is being used on a regular basis and has been shared with other rigs.

**Improved Well Performance.** The implementation of the Plan/ Execute/ Measure/ Learn cycle yielded substantial performance gains. Closer attention to detail and better involvement of crews in operations allowed the PT 2000 to

complete six of its next seven wells under budget. The performance coaches were on site for five wells and performance gains continued after their departure (Figure 4).

TMP was applied to a particularly challenging extended reach well. The budget time for the well was 143 days but the well was completed in 95 days, realizing a saving of 48 days on this single well.

**Shorter Rig Moves.** Five rig moves were conducted during the improvement program. Four of these were achieved in less time than the new target of 11.5 days. Extra time was required for the fifth move due to major rig modifications. These five moves were conducted in an average of 11.1 days, down from the previous average of 16.1 days. The net effect of this improvement was 25 days saved over the year.

Sustainability of the improvement process is demonstrated by the fact that the three moves occurring after the performance coaches left the PT 2000 continued to get faster. Recently a seven-day rig move was completed (Figure 5). Managers have noted that the crew now takes great satisfaction beating the previous move records and that morale during moves has been dramatically improved.

**Better Rig Maintenance.** Rig moves have an impact on equipment downtime. Historically nearly half of all rig equipment downtime occurred in the first two weeks after a move. Careful attention to maintenance during the improvement program had important consequences. In 1997 the PT 2000 recorded almost 9% downtime due to surface equipment failure. In 1998 the amount of downtime was reduced by more than half to 4.15% (Figure 6). This reduction in downtime contributed approximately an additional 15 operational days to the drilling program in a single year.

**Reduced BOP Test Times.** Regulations in the Netherlands require that BOPs (Blow Out Preventors) be tested once every 14 days. Analysis of past performance indicated that BOP testing took nine hours on average despite management's expectation that the testing procedure should be done in as little as six hours. The cumulative impact of the extra hours adds up to three days of extra time testing BOPs over the course of a year.

Over time each driller on the PT 2000 had developed his own way of testing the BOP. Once the rig was made aware of the importance of streamlining the procedure, one member of the crew took it upon himself to prepare a revised standard procedure for the test. One best method was developed from the different approaches used by the various drillers and this was implemented. The realized improvements are impressive (Figure 7). While not quite able to achieve the six hour target (including repair time), the PT 2000 crew averaged 6.8 hours on 23 tests – more than two days were saved from BOP testing alone during the year.

**Reduced Bottom Line Well Costs.** Individual performance gains are listed in Table 2. The net result of these performance

improvements summed 71 days in 1998, calculated as the difference between the actual time required to drill five wells compared to the budget allocated time. This saving accrued to the operator who benefited from reduced time-related costs on these wells. This amount is estimated at 8.5 million guilders on reduced rig time alone.

The contractor benefited from being able to achieve incentive bonuses on one of these wells, totaling 0.5 million guilders. More importantly, the contractor is better positioned to obtain work for the PT 2000 given its improved operating record.

### Cultural Improvements and Rig Autonomy

The TMP process gave the PT 2000 clear and achievable targets. As these targets were realized the rig crew gained pride and a greater sense of being able to control their own destiny. Positive recognition from senior management was important in reinforcing this feeling. Early in the process and after a very successful well, senior management organized a recognition dinner, inviting all rig crew and service hands. This gesture was significant at signaling to the rig that performance matters, and that senior managers knew what the rig had accomplished. Everyone's efforts were appreciated.

Improved teamwork was especially apparent during rig moves where improved communications and coordination of work activities occurred between members of different companies. Sharing of ideas and recognizing each other's wins at the rig site were clear signs of improved teamwork.

The drilling contractor has continued to develop the concepts of rig autonomy, TMP, and performance improvements. Deutag Drilling's mission and strategy embrace the notion that the people at the front line have the best information about what is going on in the operations. Management has created a new position for each of its rigs, namely the "Supply Chain Engineer," who assists the toolpusher ensure that the rig successfully runs its *business* (and not just its *operations*) from the rig.

### Conclusion

The TMP initiative on the PT 2000 was a marked success because of the strong managers and toolpushers. These leaders were able to take up the ideas forwarded by the new approach and incorporate them into a new and better way of ensuring safe and efficient operations.

The experience of the PT 2000 demonstrates how the TMP method can have a significant positive impact on rig operations, including safety. By promoting innovative thinking and by facilitating the introduction of continuous improvement tools, the rig crews were able to drill five wells significantly under budget, reduce move times by 30%, cut rig downtime in half, and conduct BOP tests 24% faster. The operator realized a net saving of 71 days.

The drilling contractor has a more proactive, skillful workforce and the PT 2000 now drills in the manner originally intended for this state-of-the-art technology. TMP has been introduced on other rigs, reinforcing management's commit-

ment to innovation in both technology and the workforce. As the industry continues to increase the complexity of wells and demand more reliability in safety, regulatory compliance, and reduced bottom line well costs, Deutag Drilling continues to develop its capacity to perform.

#### Acknowledgements

We thank Deutag Drilling, RLG International, and the Nederlandse Aardolie Maatschappij for their support throughout this project. Additional thanks to the ProStar partners (Baker Hughes Inteq, Schlumberger-Dowell, and BPB Wireline Services) and all personnel for their contributions to improved rig site performance.

#### References

- 1 Wehling, H, Steckhan, H: "A First-Hand Look at an Automated, New Generation Drilling Rig at Work." Paper SPE 35045 presented at the 1996 IADC/SPE Drilling Conference, New Orleans, 12 – 15 March.
- 2 Boering E, Swart D, and Young, T.F.: "Pro-Star 2000: Investing in State-of-the-Art Drilling Technology in Order to Reduce the Overall Well Cost Without Compromising on Quality and HSE Issues." Paper SPE/IADC 37601 presented at the 1997 SPE/IADC Drilling Conference, Amsterdam, 4 – 6 March.
- 3 Croucher T, Sandstad B, Combo G: "Creative Changes in Phillips Petroleum Norway's Drilling Management Philosophy Leads to Significant Improvements in Drilling Performance." Paper IADC/SPE 35075 presented at the 1996 SPE/IADC Drilling Conference, New Orleans, 12 – 15 March.
- 4 Bond DF, Scott PW, Page PE, Windham TM: "Applying Technical Limit Methodology for Step Change in Understanding and Performance." SPE Drilling & Completion, September 1998.
- 5 Lynch D, Hay B: "Theoretical Maximum Performance – Making Technical Limits Work." Paper presented at the 1997 IADC Conference, Berlin, 5 – 6 June.
- 6 Covey SR. *The Seven Habits of Highly Effective People*. Simon & Schuster, London, 1989.
- 7 Blanchard K, Zigarmi P, Zigarmi D. *Leadership and the One Minute Manager: Increasing Effectiveness through Situational Leadership*. William Morrow, New York, 1985.

## Tables

**Table 1. Technical Description of the PT2000.**

Built by Bentec Drilling and Oilfield Systems, modern systems aim at a hands-free work place with an automated pipe-handling system, draw-works control system, fully instrumented driller's cabin, and a compact modular mud tank. Extensive mechanization of the rig reduces manual work to a minimum as an important factor in accident prevention. The PT 2000's modular design allows for rapid assembly and disassembly reducing move times.

The PT 2000's mast is 50 meters with a hook-load capacity is 450 tonnes. The draw-works are 2000 horse-power and the Varco top-drive allows circulation and rotation while coming out of the hole, and drilling with stands that can be made up concurrent to drilling operations. A soft-torque system minimizes slip stick. The circulating system achieves 7500 psi.

**Table 2. Results Summary**

Area	Target	Outcome
Scheduled Flat Time	Rig Move	Reduced from average of 16.1 days to average of 11.1 days on five moves. 25 days additional operating days provided to NAM. Further improvements continue.
Unscheduled Flat Time	Surface Equipment Failure	Downtime reduced in half from 8.85% in 1997 to 4.15% in 1998. 14 days of operating time saved over the year.
Scheduled Flat Time	BOP Testing	BOP test times were reduced by 24% to 6.8 hours. 3 days saved over the year.
Overall Well Performance	Actual Well Time Compared to Budget	The PT 2000 finished 1998 71 days ahead of AFE. In reduced rig time alone, this is valued at 8.5 million guilders.

## Figures

- Figure 1. TMP Time Example
- Figure 2. Time Management
- Figure 3. Safety Incidents
- Figure 4. Well Overview
- Figure 5. Move Summary
- Figure 6. Maintenance Downtime
- Figure 7. BOP Testing



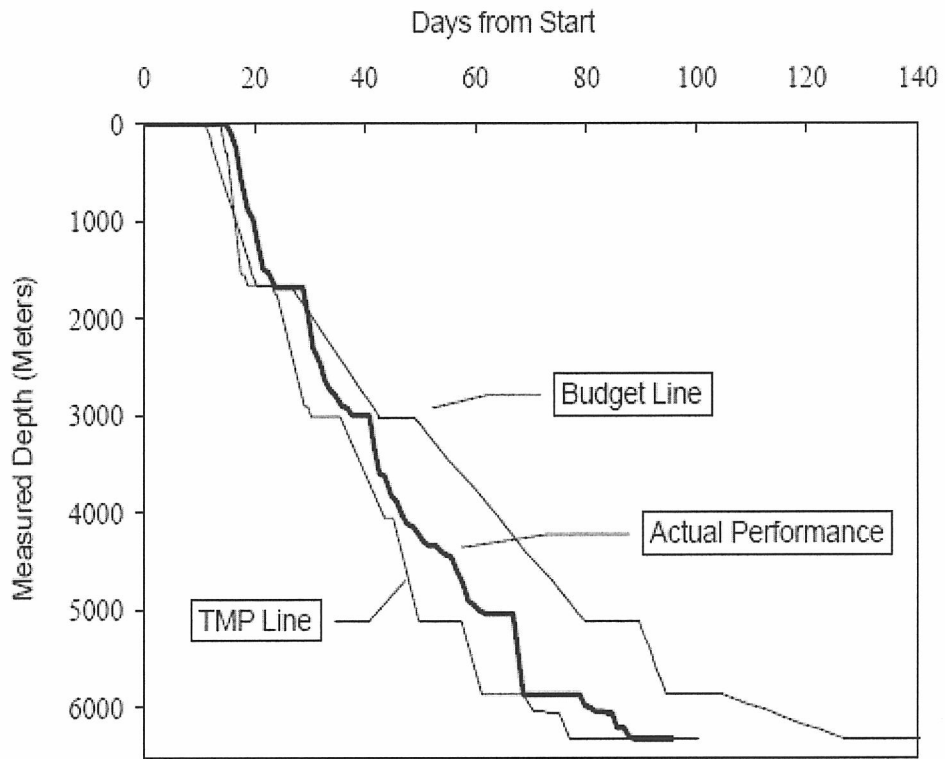


Figure 1. TMP Time Example

### PT 2000 PAER Incidents, 1998

*Personnel, Assets, Environment, Reputation*

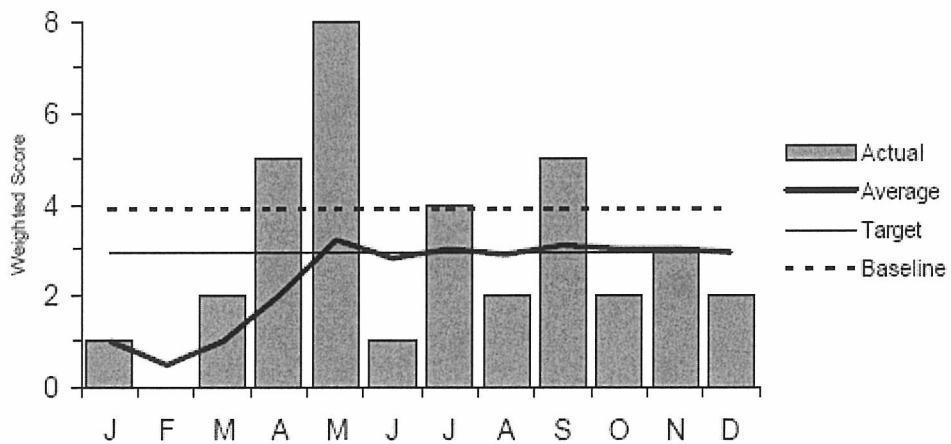


Figure 3. Safety Incidents

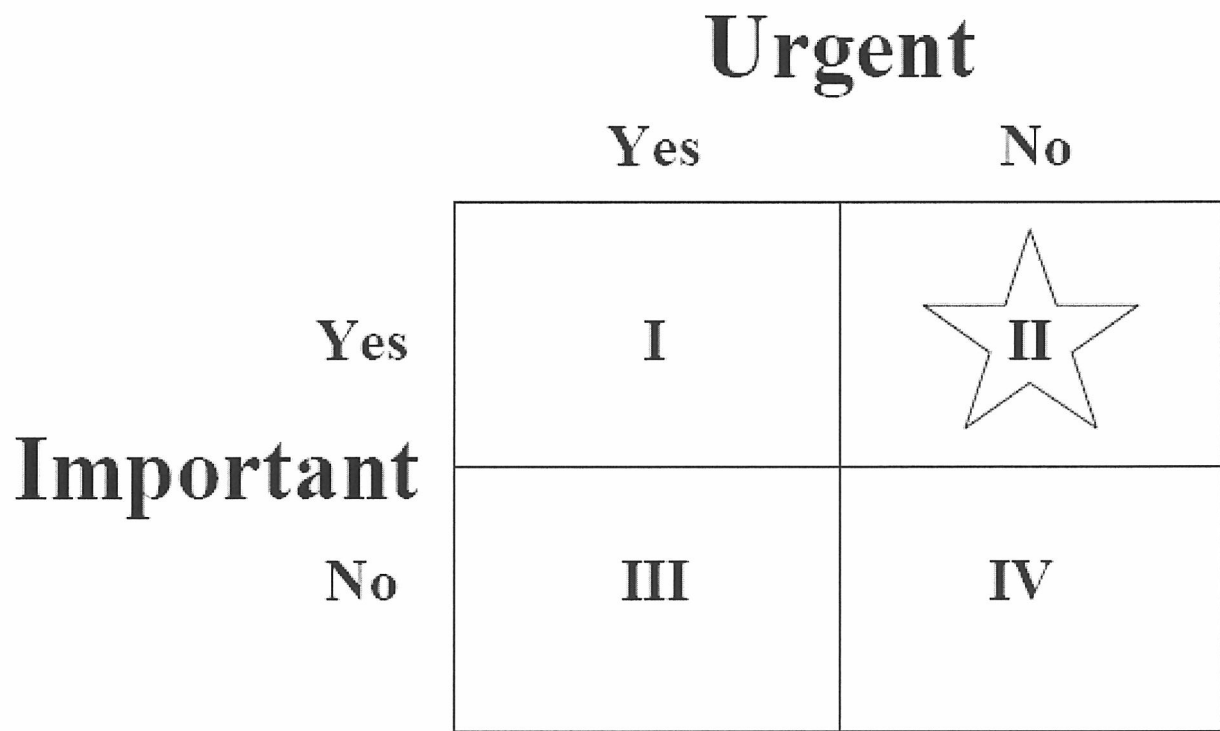


Figure 2. Time Management

### PT 2000 Well Overview

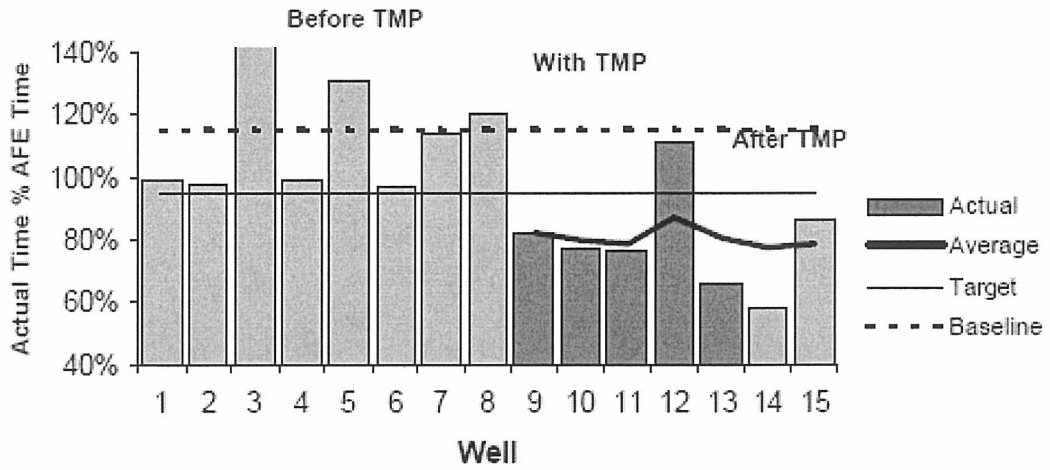


Figure 4. Well Overview

### PT 2000 Rig Move Overview

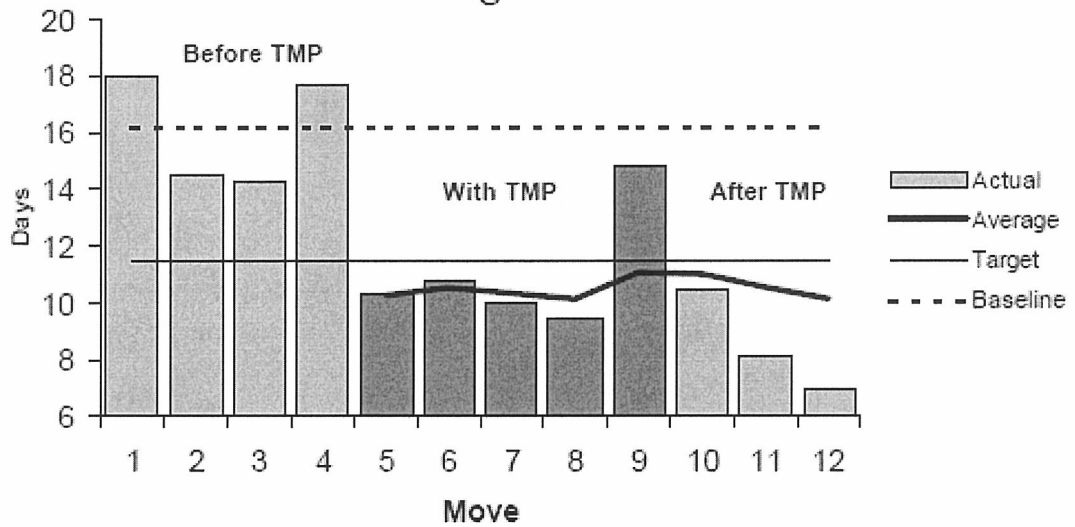


Figure 5. Move Performance Summary

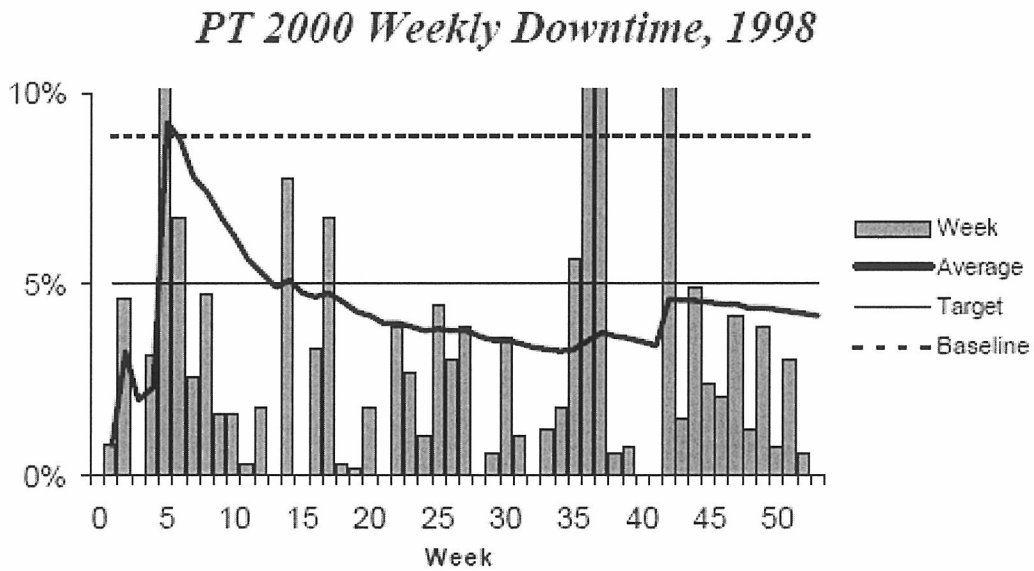


Figure 6. Maintenance Downtime

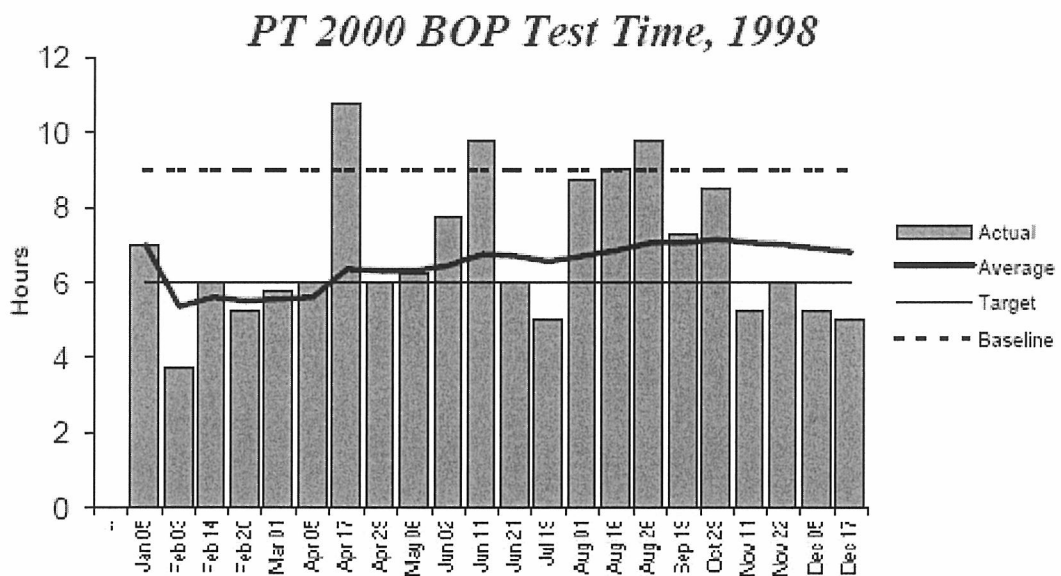
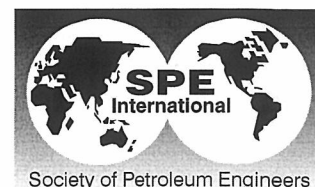


Figure 7. BOP Testing

#### 7.2.4. “Process Optimization” Through LEAD Coaching

*SPE thesis Draft with ExxonMobil, Germany*





SPE Paper Number xxxxxx

## Process Optimization and People Development through LEAD-Coaching; Feedback from an Operators Perspective

D. Durkee, E. Eide, and H. Schulenberg, ExxonMobil Production GmbH; G. van Tuyl, RLG International

Copyright 2003, Society of Petroleum Engineers Inc.

This paper was prepared for presentation at xxxxxxxxxxxxxxxx held in xxxxxxxx

This paper was selected for presentation by an SPE Program Committee following review of information contained in an abstract submitted by the author(s). Contents of the paper, as presented, have not been reviewed by the Society of Petroleum Engineers and are subject to correction by the author(s). The material, as presented, does not necessarily reflect any position of the Society of Petroleum Engineers, its officers, or members. Papers presented at SPE meetings are subject to publication review by Editorial Committees of the Society of Petroleum Engineers. Electronic reproduction, distribution, or storage of any part of this paper for commercial purposes without the written consent of the Society of Petroleum Engineers is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 300 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgment of where and by whom the paper was presented. Write Librarian, SPE, P.O. Box 833836, Richardson, TX 75083-3836, U.S.A., fax 01-972-952-9435.

### Abstract

This paper aims to show some of the experiences of a German operator with coaching in a land drilling environment, and is largely based on a presentation given at the DGMK, Celle, Germany by Schulenberg et al.

It will describe some of the challenges faced during the implementation phase, and how the process evolved. In this 2 ½ year period, the main challenges were threefold. To implement a change process (from the parent company), a declining German market and a merger.

The aim is also to list some of the learning's that were deemed significant. Whilst realising that each company is different and faces different problems, the main issues remain the same in all companies. Managing the People, managing Expectations, managing the Operation and managing the Process.

This paper will highlight a particular set of circumstances, and aims to show that a participatory approach to incremental change management, with certain proactive measures, can increase the chance of a successful outcome. The paper aims to demonstrate that a Coach can add a different perspective and show through example, what elements need to be added to increase performance. It is based on systematic analysis, and the following set of questions:

- What was supposed to happen?
- What did actually happen?
- Why the difference?
- What can we learn?
- How do we use what we have learnt?

The coach has to facilitate a way where managers can on the one hand allow emergence of new ideas and complexity (the often chaotic side of creativity, where new ways emerge), and on the other hand somehow build a system based on rules and control. The article uses the word system. A system is a representation off interconnected issues or situations, within a set boundary. Within a system there are processes that regulate the interconnectedness.

Managers cannot “ride” in a system, and fix this at the same time. Managers are caught in the trap of having too much to do, and therefore have no time to reflect!

### Introduction

In 2000 BEB Erdgas und Erdöl GMBH introduced the Drilling the Limit™ (DTL) methodology in 2 wells: Burgmoor Z3 and Klosterseelte Z6. The Klosterseelte Z6 well was just coming to completion, when in September 2002 ExxonMobil Production Germany (EMPG) was founded, as the merger between BEB and ExxonMobil. It was noticed that many elements of the DTL process, which had been implemented, were defined as part of the ExxonMobil “Operations Integrity Management System” (OIMS).

From March 2001, BEB created a dedicated position (Performance Coach), which evolved into a wider scope from September 2002. This was named LEAD-Coaching (Leadership, Effectiveness and Development). In essence the scope was enlarged from rig based performance improvement initiatives (operational issues), to interface issues between the rig and the Headoffice, as well as planning structures, “Best Practice” issues and the elimination of certain positions (for instance the Head Toolpusher function).

### Implementation Background and Methodology

DTL is a well-known concept developed by Shell (Bond, et al, 1996). BEB wanted to implement this methodology, and choose to do this with an external coach for 2 main reasons:

1. They wanted to use the methodology, but tailor it to very specific culture in BEB. This meant in praxis to identify the specific department strengths and keep these, and change and enhance areas that were challenging. I.e. no wholesale change for the sake of change.

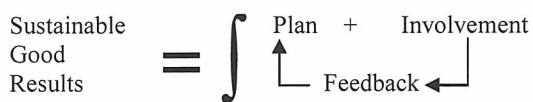
1. To integrate specialist, conceptual knowledge with practical knowledge and know-how inherent in BEB – i.e. integrate theory and practical know-how (Michael A. Lapré et al.)

BEB at the time had a very high level of technical knowledge. The average experience of Drilling Supervisors (DSV) and Drilling Engineers was approx. 20 years. To this came equally experienced Service personnel in Germany. At the same time, there was a need to develop a process, which enabled a systematic incremental approach in order to realise any remaining potential in performance improvements. The initial methodology used was a modified version of the Shewart cycle (Deming, et al.). Specifically used was the Plan-Execute-Measure-Learn model (Lynch, et al).

With the new EMPG structure, 2 existing systems and cultures had to be merged. This was seen as very complex. Complex in the sense that there was a large amount of detail to be dealt with, a spontaneous emergence of ways to work between various people and groups had to be structured and organised, and delayed effects of actions taken disconnected in time and space had to be managed and controlled. In order to manage this complexity, based on positive experience of the Performance Coaching within BEB, the scope of the coach was enlarged and the position renamed to LEAD-Coach. The scope enlargement is essentially described by the FAIR-methodology (Focus – Accountability – Involvement – Response) (Lynch, et al.) A brief summary:

- Focus What are we trying to do?
- Accountability Who does What, When, Where and How
- Involvement How do we get a participatory approach of all the key players involved
- Response How should managers react in order to achieve the required behaviours required to achieve the goals?

A simple way of showing this in a different way is:



In order to get results you need a plan. In order to make these results good, there needs to be involvement of all people concerned. In order to make these results sustainable, there needs to be a feedback loop. This feedback loop is both “single” and “double loop” learning. Argyris explains this as problem solving (single loop), and developing a behaviour that allows critical reflection on their own behaviour, and identify the ways they often inadvertently contribute to the organisations problem and inability to learn. (Argyris, 1991).

An example from the planning process that became important and apparent with regards to the focus (as an example) was whether to optimise for Time or for “Train wreck” avoidance. These are clearly very different ways to focus the way people

work. The focus shifted from time optimisation to train wreck avoidance (i.e. managing and engineering out Risks) with clear results (see Figure 1). Results for wells 5 & 6 are well below the average for 2002.

### The Role of a Coach - What does this Person do?

The person, company selected has to have expertise and demonstrable results in implementation of a change program. This in practise has to mean being a *consultant*, brought in from outside to analyze the situation and advise on change, to a *facilitator*, who helps the participants understand their own situation. It also means that the role is one of service. Service that helps and enables the people involved understanding their situation better. An example is giving feedback on performance, in single and double loop terms. In terms of LEAD-Coaching this also meant that there was an element of individual *coaching*.

In the “Best Practice” publication “Learning Across Lines, The Secret to More Efficient Factories” (Michael A. Lapré et al.) give some insight as to why certain change initiatives are more successful than others. They argue that based on studies done in a steel cable manufacturing organization, with many different plants across the world, only a quarter of all change initiatives could be classified as outright success. Half produced no or little change, and a quarter actually reduced efficiency.

In this article, the authors identified 2 key commonalities in all successful projects.

- High conceptual learning ability
- High level operational know-how

The complete matrix is shown in Figure 2.

They define the following:

*Conceptual learning yields KNOW-WHY; it involves acquiring a better understanding of cause-and-effect relationships through statistics and other scientific methods.*

*Operational learning yields KNOW-HOW. It involves implementing a theory and observing results*

This was in essence implemented in how the LEAD-Coach was to operate within EMPG. Initially specified was that the external person had to understand the drilling operations. Also in the initial phases a highly experienced Drilling Supervisor (over 30 years experience) was added full time to the change implementation team. The idea behind this was twofold:

- To transfer knowledge within BEB later EMPG
- To ensure a harmonious process.

This worked extremely well, and in a way confirms instinctively some of the statements made by Lapré et al. The terminology used within the teams to describe this learning, and in essence a focal point for learning, is the noun “Multiplier”. Key in everything that is done is a process to



transfer the know-how to a dedicated person. This is also a measure of the effectiveness of the coach. How effective is the sustainable transfer of the process approach and tools to within the client company?

A further key element was management support. From the start there were agreed “milestones”. These were reviewed periodically, and modified as required. This ensured that any change undertaken would fit with current operational or strategic requirements. It also ensured that management time was aligned with the focus of the coach.

A key learning is that management has to be involved in an active and proactive way from the start of any change process, and that it has to actively show its collective commitment to the employees. “*Walk the Talk!*” This, as Argyris points out, is the difference between “Espoused theory of action” and “Theories-in-use” (Argyris, 1991).

The whole realm of performance management is caught up in a host of lineages; Systems Thinking, Cybernetics, Social sciences, etc. But on the whole there are very limited examples of how the change was implemented, and what the difficulties were. An important part of the process within BEB and later EMPG was to document some key examples. These examples help to make the learning and interconnectedness transparent. Some of these examples are given in the next paragraphs.

#### **Example 1; Time Optimization and Risk**

The DTL™ methodology has elements of time optimization and risk management. The typical planning sequence will involve a session where the entire plan will be looked at in detail. The idea is that sequences are optimized for time. By using offset data and peoples experience, risks are minimized. This could cause the focus to be mostly on time optimization. In the case of development drilling this process has shown to bring large cost reductions due to improved learning curves.

In Germany each well is inherently different, even in the same fields due to the Geology. This induces a higher element of risk. The realization grew whilst drilling the Klosterseele Z6 well, that shifting the focus more to managing risks could be beneficial. This was re-enforced with the merger and the subsequent introduction of OIMS. This document has very specific procedures to evaluate and avoid risk as part of a proactive planning process.

An example to illustrate this, are decision trees. As part of the LEAD-coaching process DSV's were shown how to evaluate options using a decision tree. One is included in the appendices figure 3 and shows a decision to either mill away a 9 5/8" casing or to cut and pull this casing. The most efficient option as far as time was to cut and pull. This was also in the plan. However once the DSV's had shown this decision tree to the planning engineers, the option was made to mill.

This was entirely due to a change in Focus of the drilling manager. He made it clear that the single most important cause for lost time were single problem events. He stated “*No Train wrecks!*” This example shows how a particular system or focus can cause unintended effects.

The effects of this combined change can be seen in figure 1.

To date, with well 6 still in progress, there has been an approx. 70% reduction in major single event additional budgetary costs.

This whole concept of risk has such huge implications for the work we do with in the drilling industry. Risk has to do with a degree of uncertainty in the outcome of a particular operation. If this definition is applied, then risk can be managed, by managing collective experience. Reducing multiple uncertainties occurring at the same time is a further step to reducing uncertainty. Keeping the unknown “permutations” to a bare minimum reduces risk! In essence it is about controlling complexity to manageable proportions!

This is common sense you might argue. But in reality this is an interaction of various disciplines, which do not reflect on the issue as described above. It is a job that needs getting on with! The engineers have theoretical knowledge. It is only by augmenting this knowledge by the practical know-how of the DSV's that the overall picture emerges. In a way this is building on the theory of Lapré et al. It could also be argued that if the focus had not changed, then additional uncertainty (risk) would have been added with unknown consequences. In the drilling industry this invariably means more costs as a minimum!

The learning is to combine the operational know-how as proactively and as early as possible, and to make this transparent to all in the organization by training in management tools and techniques.

In addition the LEAD-coach is active in fostering double loop learning with the management and the employees. This has been done with coaching conversations, and the fostering of a growing realization within managers that they in addition to being a manager for their workforce, also need to be coaches for each other and their employees.

In all this discussion the main drilling contractor was very much involved by design. Without changing the contractual relationships, ways were sought to achieve a “thinking partnership” (Kline et al). This was achieved by creating the interface management meetings, transparency of data, etc.

#### **Example 2; The 5<sup>th</sup> Man**

The German land drilling contractors work with in general a single Toolpusher (TP) in charge of the operation, and as liaison to a single operator DSV. This TP will have a mechanic, an electrician and possibly up to 4 crews working for him. These shifts tend to work 8 h rotations (day, evening and night) for 3 weeks, with a week off to complete the 4<sup>th</sup> week. Each shift would typically consist of a Driller and 4 crewmembers. This was a contractual arrangement laid down in a national contract between operators and contractors. Land drilling rates are on average € 2.500/h (2001/2002).

A point to note is that the German market is a very mature market. In terms of performance improvement initiatives in areas of either Fixed Costs, One-off Costs or Variable Costs

had been identified and implemented.

In conversations with the DSV and the crews, a comment was casually made that work was often interrupted due to people being required to unload transports, or due to mixing requirements, etc. But there was no firm data to substantiate these comments, and no known way to measure this. Further more, the belief on the drilling location at the time of recording these comments was such that it wasn't worth telling people in "the office, because they didn't care". *"What do they know, they were the ones who cut the guy out of the crews. This enabled fixed crew costs to be reduced by 20 %"*. The history is such that there was a 5<sup>th</sup> man in the crews until the mid nineties.

It was then noticed, because the LEAD coach measured and recorded a sequence of events, that whilst running a 7" liner, with a weekend in this sequence (this is significant because a weekend has only 2 crews on site working 12 h shifts due to change over routines), and also because of mud mixing requirements, work continued without stoppage. The crews were temporarily re-enforced to a 5-man crew for this period. In a debrief (or After Action Review – DTL) with the crews and senior rig personnel, they stated collectively that in their opinion if there had only been a 4-man crew, a stoppage time of 18 h would have occurred!

The critical point here is that a correlation had been made between the two options available, a 4-man crew and a 5-man crew.

This observation was discussed on the rig, and further refined. The drilling rig crew added narrative and expanded the options to other hidden area's where the lack of the 5<sup>th</sup> man was causing hidden time losses. What was emerging was that the operations would not be stopped, but would continue slower. Therefore the operational activity reporting system would not report on a sub-optimal use of resources. This point was fed back to the regular Interface Management Meeting (see further) for management comment.

At the end of Q3, 2001 for the duration of the Klosterseele Z6 well a 5<sup>th</sup> man would be permanently added top the crew. It would be the task of the LEAD-coaches to find a way to measure the impact and return on investment (ROI).

This was done in a cooperative inquiry format. Essentially the Drillers were asked to fill out a sheet on what the 5<sup>th</sup> man had actually saved that day. Agreed was with the parties that the senior operational representative and contractor representative would agree on the minimum estimated savings (rig stoppage time), and this would be recorded on a daily basis.

Before this actually worked smoothly, took 5 – 6 months! This was the most difficult part of the entire exercise. We were asking people to monitor themselves. We were asking for an empirical measure. Essentially were asking crews to trust the management. This process had some other interesting effects. People on the drilling site and the head office slowly became very much more aware of the impact certain operations have. At the simplest level reactive work was far more labor intensive than pro-active work. Issues like organization of

work, pre-planning. The conversations about the 5<sup>th</sup> man utilization also had the effect of gradually opening conversation between DSV and TP to coaching conversations. People actively involved in trying to understand each other. The statements of the shifts underline the difficulty in this process, that if this information were ever used in a negative way, they would stop to cooperate!

What did we learn? The narrative of the employees could be substantiated and made transparent in data. Having this 5<sup>th</sup> man cost € 31k/month extra, but the leveraged effect on rig time was such that only 0,5h/day had to be saved to breakeven. This data is represented in Figure 4.

An interesting comment occurred at a site meeting where the 5 main operators in Germany were invited to comment on this result. A senior drilling superintendent stated: " *I find it incredible that we need a consultant to tell us something we instinctively know. I helped reduce the crews in the first place based on a sound rationale!*" Senge et al, point out that metrics can hinder changes being made. In this case the metric that never shows up in any drilling operation, is the efficiency of each operation, although attempts are being made by various operators to make this more transparent. I.e. the hidden, invisible lost time. Therefore there is only empirical data available, and this is not accepted in for instance traditional management accounting systems. We have seen however that this sort of data is valuable to measure the effectiveness of a business system.

The 5<sup>th</sup> man spent a lot of time cleaning, organizing materials, painting, etc. Visitors to the drilling site always commented how clean and organized the rig was. And yet we have not been able to quantify this in terms of an "Input" into the safety performance of the drilling site. All however state this as a major contributing factor.

We have seen how the "climate" on the rig changed to very open discussions about what people do and how!

This 5<sup>th</sup> man is now a standard addition to all crews with the EMPG in Germany. Agreed annualized savings (ROI) documented after monitoring the effects for a year were approx. € 400k (netto).

### **Example 3; Interface Management Meeting**

The whole change process was tailored to a evolving and changing set of objectives. A mechanism needed to be created to report back to management what had been achieved, and what was being implemented. At the same time, it was seen as imperative that management understood, approved and supported any initiative.

What effectively evolved was a business review on a 3 weekly basis with a set agenda, and a specific participants group.

The participants were:

From the operator side: Drilling Manager, Drilling Superintendent, Drilling Engineer and other specialists

dependent on the operations. From the contractor side, The Rig Manager and Country manager. If this meeting were held on the drilling location, then the TP and DSV would also attend.

The Lead-coach would prepare the documentation (which was always distributed in advance, including to the DSV and TP) and facilitate the discussion, but the Drilling Superintendent would own the meeting and invite attendants. One person, usually the Safety Department representative, who would take notes, and redistribute these to all concerned. These would partly act as input for the next meeting.

The meeting is approx. 2h in duration. The agenda would typically be:

1. Welcome
2. Action points – Status
3. Safety
4. Operational issues
5. Organisational learning and process issues
6. Other issues (open session)
7. Close

The term thinking partner has been used before. This whole meeting was about making transparent issues of concern. Ranging from participation in safety programmes, leadership issues, reporting on progress of for instance the 5<sup>th</sup> man trial, time utilisation and efficiency of the rig, etc. A typical discussion could also range from investment opportunities in equipment, cost – benefit, to 3<sup>rd</sup> party service issues.

The meeting owner would make decisions, but in the discussion all had an equal voice. It would also be the facilitator's job (LEAD-coach) to clarify statements, and to focus the comments concisely on manageable issues in terms of Who, does What, When, Where and How? How will we know it works? Nancy Kline et al, explain this well. Kline describes a 10-step methodology. This is a systematic approach called the Thinking Environment, with at its core the "Incisive Question" as a means to have coaching conversations. Imagine if someone asked you: "*If you had all the money in the world, what and how would you do?*" Kline demonstrates that usually people know the solution, but are inhibited in the implementation.

What did we learn? It takes discipline to attend these meetings. **But the rigor allows a very quick, concise picture to emerge of the operation.** It also allows managers to be involved, and get 1<sup>st</sup> hand feedback. It allows quick, seamless decision making to occur. The drilling locations can effect changes for their benefit, and have ownership! What we have not established is how these meetings can be the same without a 3<sup>rd</sup> party, neutral facilitator. The process has to be managed!

### Concluding Remarks

In this paper, a narrative of how change can be implemented has been shown with three examples. Many, many more interventions happened. Leadership meetings, personal coaching, reports were written, after hour conversations at the coffee machine, writing the next rolling three month contract, etc.

In all these examples a number of commonalities seem to emerge. These are:

#### Required Skills:

- Inquiry works better than advocacy
- Listen to understand. If you talk more than listen, how can you hear what your people are telling you?
- Change is best managed by co-creating an acceptable path!
- Transparency is key (The art of presenting clear, compelling relevant data or narrative!)
- Time for reflection is limited, so manage your time!

#### Managing the Process:

- Pro-active planning is better than reactive fire fighting!
- The value of steering the process is underestimated. Someone needs to manage the process!
- The results can be managed to a better degree if conceptual knowledge and practical know-how are combined!
- Management systems can distort a business system!
- Multipliers are essential for knowledge transfer
- Milestones allow better monitoring of the process
- Up front management involvement is essential
- Dedication of an inline middle management position to help facilitate the change process is potentially beneficial.
- Change takes time

A key element as described is full management involvement and commitment. A clear description of why change is undertaken, with clear goals. The senior manager has to be able and willing to state his/her case for change and most importantly there has to be a mechanism to check that the process is being followed through. This is not just a check on how the consultant is delivering the programme, but fundamentally if the internal transfer and acceptance is also taking place. Are people delivering on what they agreed to deliver! There has to be flexibility to allow for emergent ideas.

Often change is sought for the sake of change. It is enforced. It is however far better to understand and build on the solid foundations, which are to be found in every company, of what it does well! And then only to change the area's of weakness in incremental steps. How do you know where these are? You listen, you inquire, you have conversations, and you make the points transparent, you agree actions, you follow through and hold people accountable, and you review the results!

We need to constantly look for different ways to describe what is happening. Narrative is not often used, and yet so rich.

Collectively the industry needs to find ways to tap into the rich experience that is present in the people that populate it. We need to find an accepted format to do things in a different way! Ask yourself: *“How often have I been involved in trying to solve in ways that I know are not right. There must be a different way!”* And yet somehow, the thought passes till the next time.

## References

Schulenberg, H., Gerhartz, B and Tuyl, G. van  
“Process optimization and people development through LEAD\*-Coaching; Feedback from an Operators perspective”  
ISBN 3-936418-03-9

Bond, D.F., Scott, P.W., Page, P.E., and Windham, T.M.  
“Applying Technical Limit Methodology for Step Change in Understanding Performance”  
SPE Paper 35077, 1996

Lapr , M.A and Wassenhove, N. van  
“Learning Across Lines, The Secret to More Efficient Factories”  
Harvard Business Review, October 2002, R0210H

Deming, W.E.  
„Out of the Crisis“  
MIT Center for Advanced Engineering Study, Cambridge, MA (p88) (1986)

Lynch, D. and Hay, B  
“Theoretical Maximum Performance – making Technical Limits Work”  
SPE 1997

Argyris, C.  
“Teaching Smart People How to Learn”  
Harvard Business Review, May-June 1991, # 4304

Senge, P, Kleiner,A., Roberts, C. and Ross, R., Roth, G. and Smith, B.  
“The Dance of Change - A fifth Discipline Resource”  
ISBN 0-385-493223

Kline, N.  
“Time to Think”  
ISBN 0-7063-7745-1 (Ward Lock 1999)  
[www.uncharted-worlds.org/explore/TtT.htm](http://www.uncharted-worlds.org/explore/TtT.htm)

Figure 1 – Drilling results 2002 / 2003

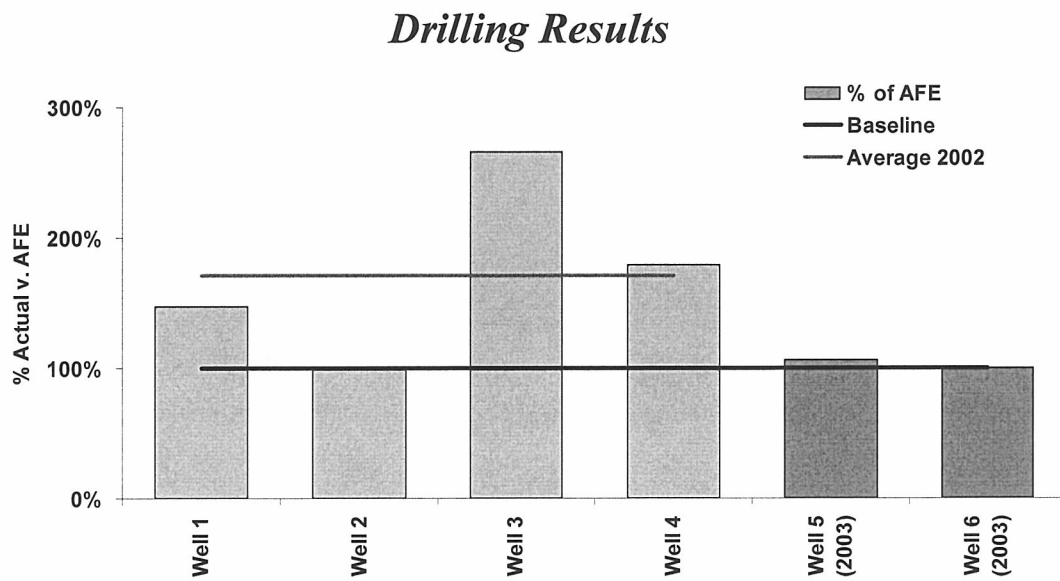


Figure 2 – From Firefighting to Full Understanding; Project Matrix

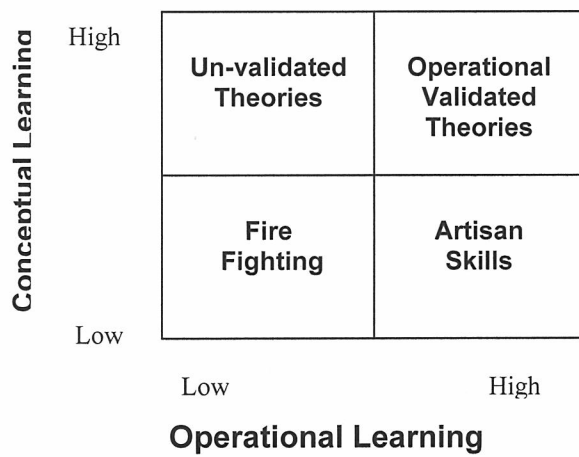


Figure 3 – Decision Tree Milling operations made by Drilling Supervisors

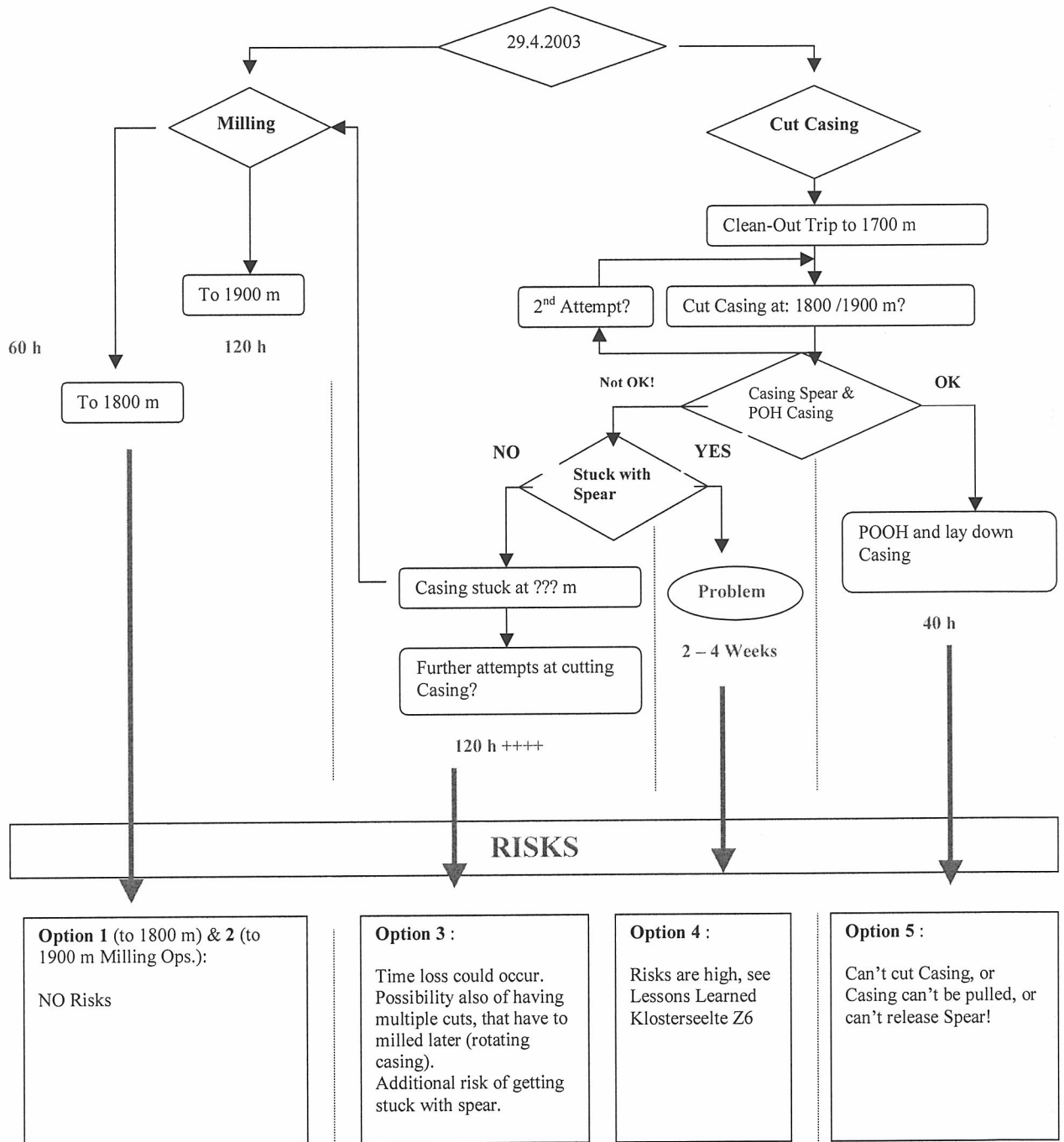
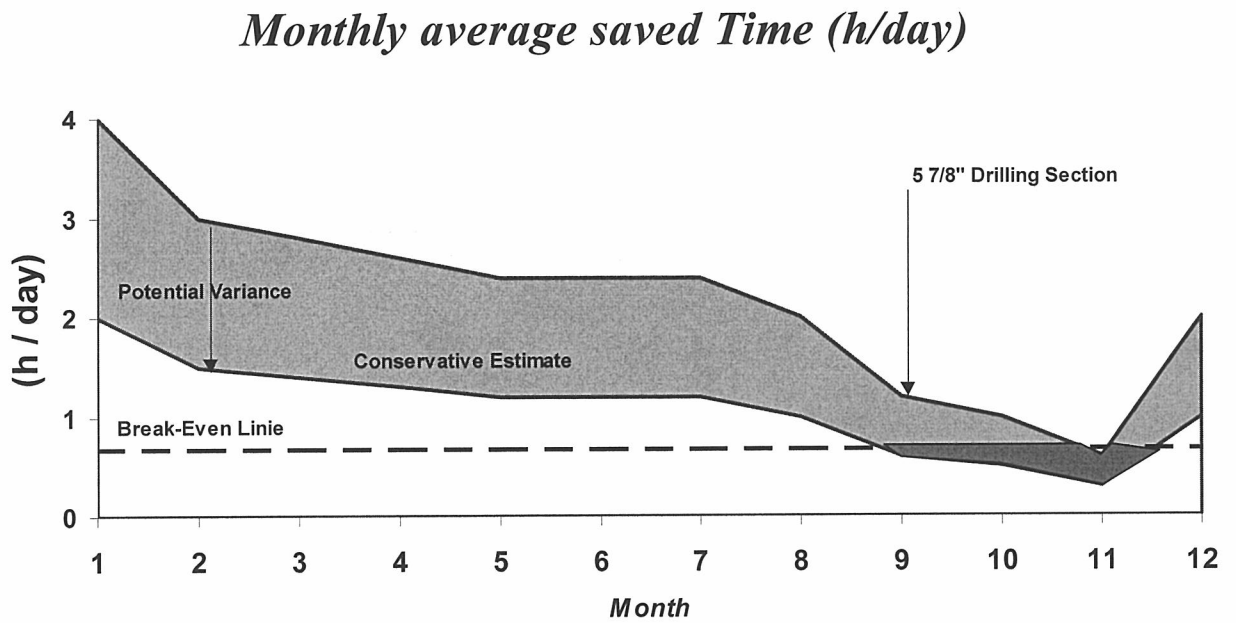


Figure 4 – Operational Time Savings due to an Expanded Crew (5<sup>th</sup> Man Addition)







**7.2.5. Prozeßoptimierung und Mitarbeiterentwicklung durch LEAD-Coaching – Erfahrungsbericht eines Bohroperators**

**As presented by H. Schulenberg, B. Gerhartz <sup>Footnote 65</sup> and G. van Tuyl <sup>Footnote 66</sup>  
DGMK (Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und  
Kohle e.V.  
28 / 29 April 2003, Celle Germany  
Pp. 223 - 224**

ISBN 3-936418-03-9

---

*Footnote 65: Employed by ExxonProduction Company Germany*

*Footnote 66: Employed by RLG International, Aberdeen, UK*



## Einleitung

Bei der BEB Erdgas und Erdöl GmbH wurde Anfang 2000 das Drilling the Limit™ (DTL) – Pilotprojekt mit den beiden Bohrungen Burgmoor Z3 und Klosterseele Z6 begonnen. Darüber wurde berichtet. Nach der Gründung der ExxonMobil Production Germany (EMPG) im September 2002 wurde festgestellt, daß viele der Elemente und Vorgehensweisen, die im Rahmen von DTL schon bei BEB implementiert wurden, sich auch in ExxonMobils weltweit gültigem OIMS wiederfanden.

Im Rahmen dieses DTL-Pilotprojektes wurde ab März 2001 auch das Performance Coaching eingeführt, welches dann auch ab September 2002 mit geänderten Aufgabenstellungen und Schwerpunkten von EMPG als LEAD-Coaching fortgeführt wurde.

## Entwicklung

DTL ist ein Konzept der Shell, welches auch bei BEB eingeführt wurde. Das Konzept enthielt eine Menge guter Ideen. Es gab im Rahmen des DTL-Projektes im wesentlichen zwei Gründe für den Einsatz eines externen Performance Coaches:

- 1.) Unterstützung beim Maßschneidern des DTL-Konzeptes auf die Verhältnisse bei BEB. Das bedeutete die Stärkung dessen, was gut lief und die Veränderung von Abläufen, die Verbesserungspotential boten.
- 2.) Das Einbringen von speziellem, methodischen Know-how unter Berücksichtigung der praktischen Erfordernisse eines Bohrbetriebes – die Integration der wissenschaftlichen Theorie in die Praxis.

Die Analyse des Ist-Zustandes ergab, daß es bei BEB einerseits ein großes technisches Know-how gibt. Andererseits mußte aber noch ein Prozeß entwickelt werden, der es systematisch und in kleinen Schritten ermöglichte, Verbesserungspotentiale zu realisieren. Der erste Schritt dazu war die breite Einführung des PAML-Zyklus und des Zeitmanagement durch den externen Coach.

Der Stand des Performance Coaching zum Zeitpunkt der Restrukturierung (Gründung der EMPG) wurde in einem "Zwischenbericht Performance Coaching" dokumentiert. Es handelt sich um eine wichtige Dokumentation der Theorie des Performance Coaching und dessen spezifischer praktischer Umsetzung bei BEB.

Die Gründung der EMPG brachte durch die Einführung neuer Systeme, die verschiedenen Unternehmenskulturen und die neuen Schnittstellen eine sehr viel höhere Komplexität mit sich. Um diese Komplexität zu managen, wurde aufgrund der positiven Erfahrungen mit dem Performance Coaching dieses mit geänderter Aufgabenstellung als LEAD-Coaching fortgeführt. Dazu war es notwendig, das eher faktenorientierte PAML-Modell durch das FAIR-Modell, welches die „weichen“, verhaltensbedingten Faktoren berücksichtigt, zu ergänzen:

<b>F</b> Focus (Fokussierung)	Was ist die Vision, die Strategie? Was sind die Geschäftsziele? Was sind die Treiber in der Wertschöpfungskette?
<b>A</b> Accountability (Verantwortung)	Wer macht was bis wann und wo? Was sind die Prioritäten und das Timing?
<b>I</b> Involvement (Einbindung)	Auswahl der richtigen Strukturen zur richtigen Zeit, um die Menschen einzubinden, die am besten in der Lage sind, zu einem verbesserten Ergebnis engagiert beizutragen.

## R Response (Rückkopplung)

Wie reagieren Führungskräfte auf ihre Mitarbeiter? Die besten Absichten können zunichte gemacht werden mit einer unbedachten, adversen Geste des Managements<sup>ii</sup>.

Die folgenden Funktionen sollen die Zusammenhänge verdeutlichen:

- ◆ Ergebnisse =  $f$  (Plan)
- ◆ Gute Ergebnisse =  $f$  (Plan + Einbindung)
- ◆ Nachhaltig gute Ergebnisse =  $f$  (Plan + Einbindung + Rückkopplung)

Die letzten beiden Funktionen beinhalten die Komponenten I bzw. I und R des FAIR-Modells. Ein Beispiel für die Fokussierung (F) ist die Management-Entscheidung, ob die Bohrplanung und -ausführung im Hinblick auf die Zeit optimiert werden soll, oder dahingehend, daß „Train Wrecks“ unbedingt vermieden werden müssen. Dies sind einander ausschließende Vorgaben, die unterschiedliche Verantwortlichkeiten für verschiedene Beteiligte bedeuten.

Wo stehen wir heute? Der LEAD-Coach kann nun mit seinen methodischen Kenntnissen zur Prozeßoptimierung und dem Überblick über die EMPG-spezifischen Abläufe in der Praxis Veränderungen initiieren und vorantreiben. Er konzentriert sich auf die Abläufe (nicht auf die Technik) bei der Bohrungsplanung und -ausführung, gibt dem Management mit Hilfe von Daten und Analysen Rückkopplung über die Prozesse und moderiert die Diskussion von Verbesserungsmöglichkeiten.

### Elemente und Merkmale des LEAD-Coaching

Die genaue Beschreibung der Elemente und Merkmale des LEAD-Coaching ist komplex, da es kein universell einsetzbarer, standardisierter Verbesserungsprozeß ist. Vielmehr müssen die Inhalte flexibel gehandhabt und an die Situation und Unternehmenskultur angepaßt werden können.

LEAD-Coaching auf der Bohranlage und in der Hauptverwaltung unterstützt den Aufbau und die Verbesserung von Abläufen und Beziehungen und die Beseitigung von Störungsquellen, um die Effektivität des Bohrplanungs- und -ausführungsprozesses nachhaltig zu erhöhen.

W. Bridges<sup>iii</sup> unterscheidet zwischen Veränderungen (Change), die durch

- 1.) Entscheidungen des Managements (entscheidungsbedingt)
- 2.) Verhaltensänderungen bei den Prozeßbeteiligten (verhaltensbedingt)

oder Kombinationen von beiden gesteuert werden. Es versteht sich von selbst, daß im Fall 2.) die Veränderungen tiefgreifend verankert werden können, während sie im Fall 1.) oft nur an der sichtbaren Oberfläche erfolgen. Der Unterschied liegt darin, ob die in den Prozeß involvierten Mitarbeiter nur auf Anforderung des Managements oder aus innerer Überzeugung mitarbeiten. Hier ist es die Aufgabe des LEAD-Coaching, methodisch mitzuhelfen, daß Verhaltensänderungen erfolgen, um die gewünschten Veränderungen nachhaltig zu implementieren.

Ein „Best Practice“-Artikel aus der Harvard Business Reviewiv zeigt, worum es beim LEAD-Coaching geht. Die Autoren studierten die Daten von Prozeßverbesserungsprojekten einer belgischen Firma namens N.V. Bekeart S.A., dem weltgrößten Hersteller von Stahlseilen. Die Studie zeigte, daß nur ein Viertel der Projekte erfolgreich war. Die Hälfte hatte unter dem Strich keine Verbesserungen gebracht, ein Viertel sogar adverse Ergebnisse für die Produktivität. Das heißt nun nicht, daß generell nur jedes vierte Verbesserungsprojekt erfolgreich ist. Die Autoren fanden heraus, daß die erfolgreichen Projekte eines gemeinsam haben: Sie ermöglichten sowohl konzeptionelles als auch operationelles Lernen. Konzeptionelles Lernen zielt auf das KNOW-WHY. Es konzentriert sich auf die Analyse von Ursache-Wirkungs-Beziehungen durch Statistik und andere wissenschaftliche

Methoden. Man versteht, warum sich ein Problem ereignet. Operationelles Lernen dagegen bezieht sich auf das KNOW-HOW. Es umfaßt die Implementierung einer Theorie in die Praxis und die Beobachtung der positiven Ergebnisse. Man testet eine Lösung für das Problem und weiß, wie man sie anwendet und zum laufen bringt. Das Geheimnis erfolgreicher Verbesserungsprojekte ist die Kombination beider Angehensweisen, die

Kombination von Theorie und Praxis. Die Autoren haben aus diesem Konzept folgendes Modell entwickelt:

<b>Konzeptionelles Lernen</b>	<b>Hoch</b>	<b>Unbestätigte Theorien</b>	<b>Operationell bestätigte Theorien</b>
	<b>Gering</b>	<b>Fire Fighting „Hüftschüsse“</b>	<b>„Künstlerische Werke“ Zufallsergebnisse</b>
		<b>Gering</b>	<b>Hoch</b>

*Operationelles Lernen*

Die Aufgabe des LEAD-Coaches ist es, mit seinen methodischen Kenntnissen das Zusammenführen von Theorie und Praxis, von operationellem und konzeptionellem Lernen, zu moderieren und unter Einbeziehung der Unternehmenskultur die richtige Balance zu finden. BEB hat damals für den LEAD-Coach zur Voraussetzung gemacht, daß er die Bohrtechnik und –industrie kennt (Drilling Engineer). Das hat es erleichtert, diese Balance zu finden. Ferner erleichtern die bohrtechnischen Kenntnisse es dem LEAD-Coach, die richtigen, zur Situation passenden methodischen Werkzeuge (z. B. Entscheidungsbaum, Risikoanalyse) zu identifizieren und anzuwenden.

Das Management muß vom Beginn eines Verbesserungsprojektes an aktiv einbezogen werden und sein Engagement (Commitment) auch gegenüber den Mitarbeitern sichtbar machen.

In einem Artikel des MIT mit dem Titel „Nine deadly mistakes“v thematisiert Tom Curran die Fehler, die in Unternehmen bei einem Veränderungsprozeß (Change) auftreten können:

1.) Keine Fokussierung auf Effektivität

Die Fokussierung liegt auf Kosten und Zeit. Die einfache Forderung der meisten Bohroperator ist, daß Bohrungen innerhalb des Budgets, der vorgesehenen Zeit und sicher abgeteuft werden müssen. Für EMPG bedeutete dies: keine Train Wrecks (siehe oben), d.h. eine Optimierung zur Vermeidung dieser einzelnen Ereignisse mit großer Tragweite. Dies geschieht bei EMPG u. a. durch eine Identifikation, Bewertung und Umgehung von Risiken gemäß OIMS und die systematische Implementierung operationellen Know-hows in den Planungsprozeß.

- 2.) Fehlen einer überzeugenden Strategie  
Das Management muß zuallererst eine Strategie formulieren. Diese wird dann durch einen kontinuierlichen Rückkopplungs-Zyklus weiter verbessert. Diese Rückkopplung kann z. B. auf Toolpusher-Meetings, Management Workshops, IMM erfolgen. Beispiel bei EMPG ist die Definition eines OIMS-konformen Bohrplanungsprozesses.
- 3.) Versäumnis, die zwingende Notwendigkeit für eine Veränderung klarzumachen  
Durch diese Unterlassung fehlt die Einsicht bei der Mitarbeitern. Sie bleiben stehen und tragen den Veränderungsprozeß nicht mit.
- 4.) Keine Unterscheidung zwischen entscheidungsbedingten und verhaltensbedingten Veränderungen (siehe oben)  
Es gehört zu den konzeptionellen Aufgaben des LEAD-Coach, dem Management Team diese Unterschiede aufzuzeigen. Im Falle der ehemaligen BEB und heutigen EMPG kann die Implementierung zunächst von DTL und nun von OIMS als überwiegend entscheidungsbedingt bezeichnet werden. Dies erklärt den anfänglichen Widerstand diesen Konzepten gegenüber.
- 5.) Versäumnis, Schlüsselpersonen/-gruppen zu mobilisieren und zu verpflichten  
Dies wird bei EMPG auch als „Konzept der Multiplikatoren“ bezeichnet. Dies sind wenige, einflußreiche Personen, die motiviert, willens und fähig genug sind, eine Initiative wie diese weiterzutragen. Die Mobilisierung dieser Personen passiert nicht von selbst, sondern muß vom LEAD-Coach gestaltet werden. Es ist nicht damit getan, einfach einen Bedarf zu kommunizieren. Essentiell ist auch die pro-aktive Steuerung durch das Management. Beispielsweise waren bei BEB die IMM ein wichtiger Faktor, um die Unterstützung des eigenen und des Bohrkontraktoren-Management für die testweise Einführung eines 5. Mannes je Schicht und die Auswertung der Ergebnisse zu erhalten.
- 6.) Zu großes Vertrauen in Strukturen und Systeme zur Verhaltensänderung  
Neue Strukturen und Systeme (z. B. OIMS) sind, nur weil sie existieren und vorgeschrieben sind, noch lange nicht implementiert. Es gehört zu den Aufgaben des LEAD-Coach, diese Prozesse zu verfolgen und Abweichungen zu thematisieren.
- 7.) Mangel an Kenntnissen und den richtigen Ressourcen  
Die Fähigkeiten, die man haben muß, um am Veränderungsprozeß mitzuwirken sind nicht nur technische Kompetenz, sondern auch Beziehungs- und Prozeßkenntnisse. Während Ersteres meistens kein Problem ist, müssen Beziehungs- und Prozeßkenntnisse bei den Mitarbeitern durch den LEAD-Coach übertragen und aufgebaut werden.
- 8.) Unfähigkeit / Unwillen der Führungskräfte zu erkennen, daß sich auch ihre Rollen ändern müssen  
Persönliche Einschränkungen bestimmen wie schnell und wie weit ein Veränderungsprozeß gehen kann. Deshalb gehört die methodische Hilfe bei der Überwindung dieser Einschränkungen zu den Kernkompetenzen, die der LEAD-Coach mitbringt. Persönliches 1 : 1-Coaching und Workshops zur Verbesserung der zwischenmenschlichen Qualifikation sind deshalb integraler Bestandteil des LEAD-Coaching bei EMPG.
- 9.) Unfähigkeit, die verschiedenen Initiativen zu integrieren oder aufeinander abzustimmen  
Zu viele Dinge zu schnell und unkoordiniert sowie ohne Verbindung zueinander zu wollen, paralyisiert die Ressourcen statt sie zu fokussieren. Dieses transparent zu machen, zu thematisieren und methodisch bei der Lösung zu unterstützen, ist eine wichtige Aufgabe des LEAD-Coaching.

Ein weiteres wichtiges Element des LEAD-Coaching ist Transparenz. Wenn die zugrundeliegenden Daten als Grundlage für Entscheidungen transparent und nachvollziehbar sind, werden die darauf basierenden Entscheidungen als vernünftig angesehen und akzeptiert.

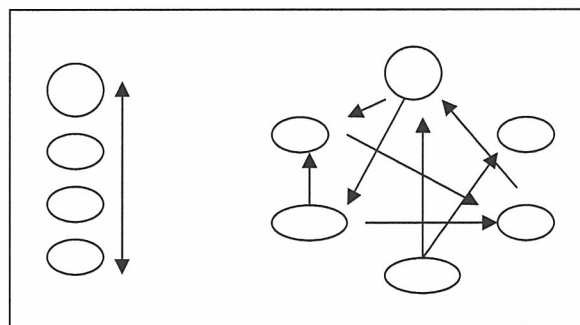
Eine immer wieder gestellte Frage im Zusammenhang mit dem LEAD-Coaching ist, ob die Effektivität der Abläufe wichtiger ist als die Arbeitssicherheit. Die Antwort ist: Effektivität und Arbeitssicherheit schließen sich nicht aus, sie sind zwei Seiten derselben Medaille. Einen Job beim ersten Mal richtig zu machen ist der sicherste und effektivste Weg überhaupt.

### Beispiele aus der Praxis

Nachfolgend sind einige praktische Beispiele für die Umsetzung der zuvor geschilderten Theorie bei der BEB bzw. EMPG aufgeführt. Es gibt noch viele weitere, die hier aber aus Platzgründen nicht erläutert werden können.

### Meetings

Die verschiedenen Meetings auf der Bohranlage boten hinsichtlich Ablauf und Inhalt einiges an Verbesserungspotential. Bedingt durch die traditionell vollkommen technisch orientierte Ausbildung der DSVs werden hervorragende Fachleute ausgebildet, aber es fehlen oft methodische Kenntnisse, z. B. wie man Besprechungen effektiv plant und durchführt, wie man effektiv kommuniziert usw. Hinzu kam bei EMPG, daß die Funktion des Lead Supervisor (Bohrinspektor) weggefallen ist. Daraus ergab sich erst recht die Notwendigkeit für die weitere Entwicklung der DSVs, so daß sie übergeordnete und eher koordinierende Aufgaben vom Head Toolpusher übernehmen konnten. Die DSV sollten in die Lage versetzt werden, den gesamten Prozeß „Ausführung einer Bohrung“ managen zu können statt nur Informationen zu liefern. Dazu mußten verschiedene Meeting-Strukturen für unterschiedliche Zwecke eingeführt werden. Ziel ist es, Informationen weiterzuleiten (lineare Struktur) oder anstehende schwierige Probleme in einer offenen Kommunikationsstruktur zu diskutieren (kreisförmige Struktur):



Die DSVs lernten, daß zuhören und nachfragen oft lohnender ist als das unreflektierte Eintreten für die eigene Lösung.

*Ich möchte diese Zusammenkunft mit den Kollegen von den Servicefirmen vor und während des eigentlichen Morgentelefonates mit der Hauptverwaltung immer haben. Es macht mein Leben einfacher! Erst habe ich gar nicht verstanden, daß es wichtig ist. Jetzt will ich das nicht mehr missen.*

R. Aink, DSV

Hinsichtlich der wöchentlichen Anlagenbesprechungen wurde die bei BEB bereits bewährte Struktur aufgegriffen, gestrafft und lediglich in einzelnen Punkten verfeinert. Nach einer Einführung erfolgte ein kurzer Wochenrückblick und danach der Ausblick und die Besprechung der Arbeiten für die kommende Woche. Weitere tagesaktuelle Themen können hinzukommen. Der DSV und der Drilling Engineer sind federführend und die Arbeiten für die kommende Woche

*Die Agenda für die Anlagenbesprechung hilft unheimlich. Sie stellt sicher, daß alle wichtigen Punkte auch angesprochen werden. Ich kann Fragen, die ich mir vorher überlegt habe, auf die Tagesordnung setzen.*

F. Strasser, DSV

werden klar in Sektionen unterteilt. Üblicherweise geben die Arbeitssicherheit und die Aktivitäten der Servicefirmen die Struktur vor: Spülung, Richtbohren, Meißel Aktionspunkte werden aufgenommen und Personen für die Bearbeitung zugeordnet. Dies wird zur Dokumentation und Nachverfolgung kurz protokolliert. Wichtig für einen effektiven Ablauf der Anlagenbesprechung sind die vorbereitenden Arbeiten. Immer wird vorab vom DSV eine Agenda erstellt. Das Meeting selbst ist in der Regel auf 2 Stunden limitiert.

Meetings sind wichtig. Wenn sie gut vorbereitet und durchgeführt werden, können kreative Energie und Ideen freigesetzt werden. Wenn nicht, können sie aber auch Zeitverschwendung bedeuten. Dieses zu erkennen und umzusetzen ist neu für die meisten Leute in unserer Industrie. Die Fähigkeiten dazu sind nicht leicht zu lernen.

Alle 5 DSVs für die Bohrung Söhlingen Z15 durchliefen dieses Coaching und innerhalb von 3 Monaten konnten die Fähigkeiten und Strukturen nachhaltig implementiert werden.

Eine wichtige Voraussetzung für den schnellen und nachhaltigen Trainingserfolg ist der Umstand, daß das LEAD-Coaching online erfolgt. D. h. der LEAD-Coach begleitet den DSV vor Ort auf der Bohranlage bei seinem Tagesgeschäft und spricht mit ihm über sein Verhalten und methodische Vorgehensweisen sowie Verbesserungsmöglichkeiten. Im Vergleich dazu bringen externe Seminare (offline), bei denen zwangsläufig die Inhalte abstrahiert werden müssen und oft das gerade Erlernte im Tagesgeschäft nicht unmittelbar angewendet wird, kaum nachhaltige Erfolge.

#### **24 h / 5 d-Plan**

Zur Verbesserung der internen Kommunikation zwischen Engineering/Operations sowie Hauptverwaltung/Bohranlage und der externen Kommunikation mit den Serviceunternehmen wurde vom LEAD-Coach die Einführung einer 24 h / 5 d-Planung initiiert.



Diese Empfehlung wurde schließlich umgesetzt. Die Planung enthält folgende Informationen:

- Eine detaillierte Planung der nächsten 24 Stunden und eine weniger detaillierte Vorausplanung für die nächsten 5 Tage (möglichst auf Basis der DWOPlandaten)
- Die geschätzte Dauer für jeden dieser Schritte
- Bemerkungen hinsichtlich Lessons Learned, Logistik und Sicherheit.

Das Format ist in der Abbildung zu sehen. Einige Stärken dieses Dokuments sind:

- 1.) Das Format zwingt dazu, täglich eine strukturierte, detaillierte und abgestimmte Planung zu erarbeiten.
- 2.) Die Detail-Plandaten aus dem DWOP-Workshop als Produkt der großen Erfahrung der Teilnehmer am Workshop kann so in die tägliche Detailplanung einfließen.

**Planung 24-Stunden**

von So, 30. Sep 06:00 Uhr bis So, 30. Sep 10:00 Uhr

Beschreibung Arbeitsschritt	Dauer, hh:mm	Ende (Datum, Uhrzeit)	Kommentar (Parallelarbeiten, besondere Vorkehrungen, Logistik,
Bohren bzw. Richtbohren, Leistungsbohren von 2588 m bis 2595 m @ 6 m / h	4,0	So, 30. Sep 10:00	Ausrüstungen und Vorrichtungen zum Fahrseil Umschereen überprüfen.
Spülen / Kugel einzirkulieren	2,0	So, 30. Sep 12:00	
Ausbauen bis zutage und Stabilisierung ablegen	12,0	Mo, 1. Okt 00:00	
Preventer Hebeeinrichtung montieren	8,0	Mo, 1. Okt 08:00	Laukatzen sind eingehängt, Schelle unter Ringpreventer muß noch installiert werden

**Planung 5 Tage (DWOP)**

von Mo, 1. Okt 08:00 Uhr bis Do, 4. Okt 17:00 Uhr

Beschreibung Arbeitsschritt	Dauer, hh:mm	Ende (Datum, Uhrzeit)	Kommentar (Parallelarbeiten, besondere Vorkehrungen, Logistik,
Fahrseil von 10 fäch auf 12 fach umschereen	8,0	Mo, 1. Okt 16:00	Einschließen Klosterseele Z2.
Loging (inkl aufw. abbau)	9,0	Di, 2. Okt 01:00	Zusätzliche Messung wird kombiniert gefahren Weatherford Crew, Kran, und Hilfspersonal muß zum Ende Loggen bereitstehen.
Nachbohrgarnitur zusammenstellen, einbauen bis 2023 m (abhängig vom Kaliber)	8,0	Di, 2. Okt 09:00	Zur Diskussion
Nachbohren von 2023 m bis 2700 m	7,0	Di, 2. Okt 16:00	
Spülen, antrieb	2,0	Di, 2. Okt 18:00	
POH Nachbohrgarnitur, ablegen BHA	10,0	Mi, 3. Okt 04:00	
16" Rohreinbau anfang, Weatherford aufbauen	3,0	Mi, 3. Okt 07:00	LKW's für Spülsaustausch stehen bereit.
16" Rohreinbau	25,0	Do, 4. Okt 08:00	(Zementationsausrüstungen aufbauen)
Spülen	3,0	Do, 4. Okt 11:00	
Zementation Equipment aufbauen	1,0	Do, 4. Okt 12:00	
Zementation	5,0	Do, 4. Okt 17:00	Spülsaustausch nach Zementation

**Lessons Learned, Logistik, Bemerkungen und Kommentare:**

*Für mich ist es von höchster Wichtigkeit, daß die Anlage sauber ist. Dafür gibt es viele Gründe. Kein Suchen nach der Ausrüstung, kein Stolpern über die Ausrüstung. Sicherstellen, daß alles an seinem Ort ist. Das kann alles am besten auf einer ordentlichen Anlage gemacht werden. So sieht man Dinge besser und früher. Die Mitarbeiter arbeiten sicherer und effizienter durch den 5. Mann.*

G. Fecht (Toolpusher Deutag T25)

*Der 5. Mann war definitiv das richtige, nicht nur aus finanzieller Sicht.*

G. Pust (Superintendent Drilling Operations)

- 3.) Die Informationen werden EMPG-intern und extern gegenüber den Servicefirmen und dem Bohrkonztraktor transparent gemacht, ohne daß extra nachgefragt werden muß. Dieses Werkzeug wird inzwischen von allen DSVs verwendet und hat sich zur Planung, Identifikation von Risiken und Stärkung pro-aktiver Denkweise hervorragend bewährt.

*Die 24-Stunden-Berichterstattung/ 5-Tages-Ausblick hilft mir dabei, viel besser als zuvor vorausplanen zu können. Sie ermöglicht uns, unsere Arbeit viel besser vorauszusehen und zu koordinieren.*

W. Mitschker (KCA-Deutag Rig Manager T25)

*Wo bleibt der Plan?*

K. Windt (Bühnenmann T25, als der Plan 15 Min. nach der gewohnten Zeit noch nicht in der Mannschaftskaue ausing )

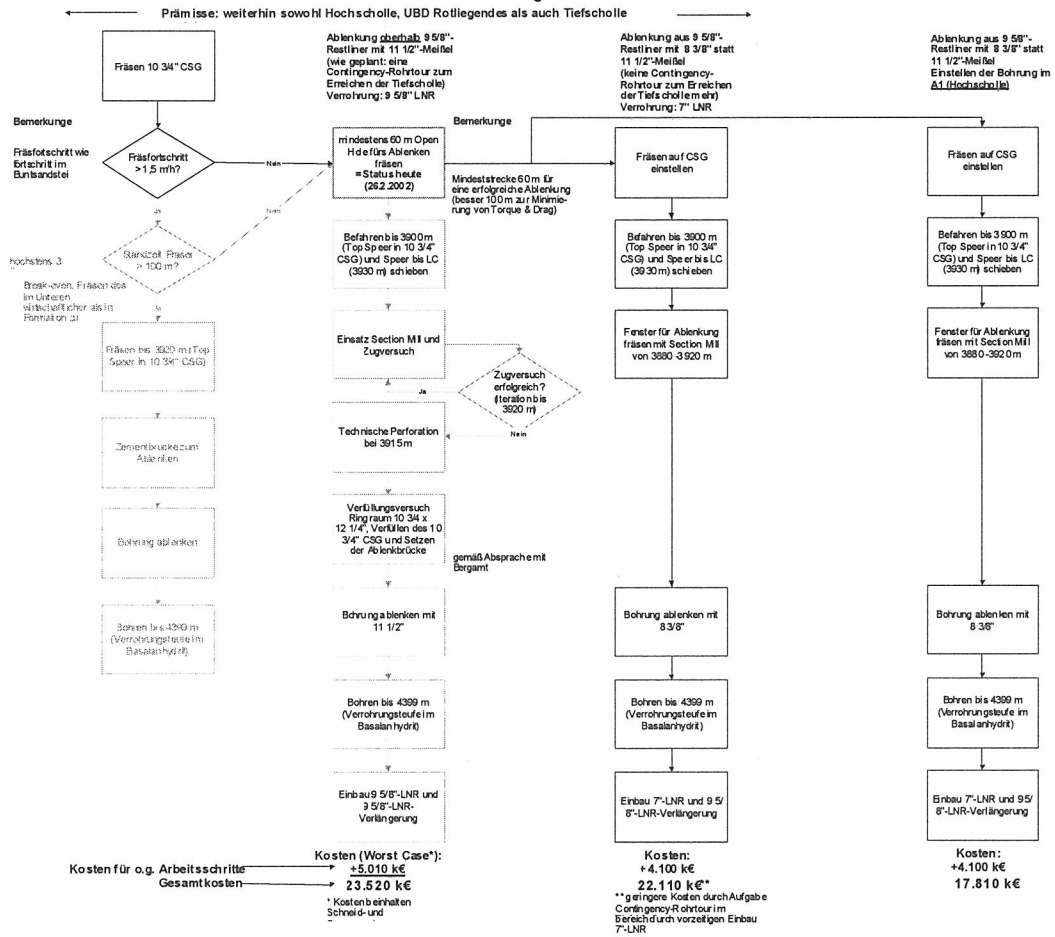
### **Der 5. Mann**

Arbeiten auf einer Bohranlage, die auf dem kritischen Pfad liegen, verzögern sich oft, weil ein zusätzlicher Mann fehlt. Wenn z. B. beim Roundtrip und BHA aufnehmen/ablegen ein LKW entladen werden muß, fehlt ein Mann auf der Bühne. Auch bei Abschnitten, in denen mit Oil Base Mud gebohrt wird, sind zusätzliche Arbeiten erforderlich. Daher wurde von BEB eine Kosten-/Nutzen-Analyse durchgeführt, ob die Schichtbesetzung von 1:4 auf 1:5 erhöht werden sollte. Aufgrund der positiven Einschätzung wurde entschieden, dies probeweise einzuführen. Seitdem verfolgte der LEAD-Coach federführend, welchen Nutzen die zusätzlichen Personalkosten durch Einsparung von Anlagenzeit hatten. Die Schichtführer wurden gebeten, täglich aufzuschreiben, wofür der 5. Mann tatsächlich eingesetzt wurde. Dies wurde dann mit dem Toolpusher und dem DSV täglich besprochen und es wurde konservativ abgeschätzt, was durch den 5. Mann an Anlagenzeit eingespart wurde. Alle Beteiligten erkannten, daß dies eine subjektive Einschätzung war, aber sie war die einzige verfügbare. Die Auswertung zeigt, daß der 5. Mann ökonomisch sinnvoll ist. Der Aspekt der Arbeitssicherheit ist nicht in Geld zu bewerten, aber ein wichtiger Zusatznutzen. Auf dieser Basis wurde bei EMPG entschieden, die Schichten generell 1:5 zu besetzen.

### **Entscheidungsbaum**

Die Entscheidungsbaum-Methodik ist sicher jedem bekannt. Die tatsächliche Verwendung dieses Werkzeuges in der täglichen Praxis unterbleibt jedoch oft.

## Weiteres Vorgehen Klosterseele Z6



### Vor- und Nachteile, Risiken

- + Minimierung Torque & Drag zum Einsetzen des Tiefsch
- lange Fräsebrücke, mehr Metallkolle im Bohrvoh
- zu viele Abzweige/Reinigungsgehänge zur Risikominimierung für 2. Linienerebau

- + Eventuelle Metallteile einseitig
- Erhöhtes Torque & Drag, dadurch möglicherweise Teil der "GWCh Tiefscholle erbohren" gefährdet

- + geringere Kosten
- + Standard-Liner
- gleiche Ringraumverhältnisse (Clearance) wie bei 10 3/4\"/>
- Hohes Risiko, die Tiefscholle nicht zu erreichen

- + geringere Kosten
- + Standard-Liner
- Reduzierung IPS-Kosten um 500 k€
- gleiche Ringraumverhältnisse (Clearance) wie bei 10 3/4\"/>
- kein Aufschlag auf Rottliegend und Tiefscholle

Auf Initiative des LEAD-Coach und mit seiner methodischen Unterstützung wurden für die Fräsarbeiten auf einen fest gewordenen 9 5/8" / 10 3/4"-Liner mit diesem Instrument die in dieser komplexen Situation erforderlichen Entscheidungen transparent gemacht und mit den wirtschaftlichen Konsequenzen verknüpft. Nach dem ersten erfolglosen Schneid- und Ziehversuch wurde vom Drilling Engineer zusammen mit 2 DSVs zur Bewertung der Optionen der Entscheidungsbaum entworfen. Dieser Entscheidungsbaum wurde in der weiteren Diskussion mit den Fachleuten weiter verfeinert und schließlich dem Management zur Entscheidung vorgelegt (siehe Abbildung).

Dieses einfache Beispiel zeigt, wie durch die Identifikation und Bewertung von Risiken Technik und Wirtschaftlichkeit miteinander verknüpft werden können und deren Abwägung gegeneinander transparent gemacht werden kann. Diese Methodik erfordert jedoch den Input von quantifizierten Risiken, entweder auf Basis von Erfahrungswerten der Fachleute oder aus einer Datenbank.

### Lessons Learned (LL)

Die Lessons Learned-Methode ist ein Instrument, um eine gewonnene Erkenntnis bzw. Idee, die auf der Bohranlage oder in der Hauptverwaltung entstanden ist, systematisch zu erfassen, zu dokumentieren (siehe Abbildung) und verfolgen zu können.

Das LEAD-Coaching hat sich von Anfang an nicht auf spezifische technische Fragen der Bohranlage konzentriert, wie z.B. eine Schraube am Tank B sollte Größe X sein. Vielmehr wurden Sachverhalte betrachtet, die mit der Planung, der Sicherheit und den betrieblichen Abläufen zu tun haben. Das Augenmerk galt höherwertigen LL. Ohne LEAD-Coach wurden keine LL gesammelt und dokumentiert. Die Verantwortung für die Sammlung und Umsetzung der LL wurde im Rahmen des Transfers von LEAD-Coaching-Aufgaben auf die DSVs der EMPG übertragen.

Als wichtigster Auslöser für das Aufnehmen einer LL wurde die Entstehung von Non Productive Time (NPT) verwendet. Dabei

wurde die Ausfallzeit in Invisible Lost Time (z.B. ein Roundtrip verzögerte sich, da naß gezogen

<b><i>Erkenntnis / Ideenblatt</i></b>													
<b>Datum:</b> 14.02.2003	<b>Abschnitt:</b> 5 7/8"												
<b>Eingetragen durch:</b> G. Reiner Aink	<b>Bereich / Grund:</b> Bohrstrang												
<p><b>Problemumschreibung:</b> Beim Ausbau der Richtbohrgarnitur waren die Züge beim Brechen trotz geöffnetem Zirkulationsventil noch zu 1/3 gefüllt.</p>													
<p><b>Lösungsvorschlag:</b> Am RS vor dem Ausbau eine Ziehpille (ca. 4 m<sup>3</sup> mit grober Kreide beschwerte Umlaufspülung) verpumpen. Dadurch sichereres Ausbauen (keine herumspritzende Spülung) sowie eine große Zeiteinsparung. Damit beim nachfolgendem Einbau möglichst wenig Kreide in die Tankanlage gelangt, muß der Triptank über die Schüttelsiebe leergepumpt werden und nicht über Bypassleitung direkt in die Tankanlage. Die restliche Kreide kann beim Bohren durch Zentrifugeneinsatz entfernt werden.</p>													
<p><b>Einordnung der Erkenntnis/Idee:</b></p> <p><u><b>Umfang des Nutzens:</b></u></p> <p><b>Kosteneinsparung:</b> 3000 €</p> <p><b>Zeiteinsparung:</b> ca. 1 - 2 h</p> <p><b>Sicherheitsrelevant:</b> Ja</p> <p><b>Wiederkehrend:</b> Ja</p> <p><b>Für:</b> Anlage / HV</p>													
<table border="1"> <tr> <td style="text-align: center;">Hoch</td> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">Nutzen / Qualität</td> <td style="text-align: center;">2</td> <td style="text-align: center;">5</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">Niedrig</td> <td style="text-align: center;">4</td> <td style="text-align: center;">7</td> <td style="text-align: center;">9</td> </tr> </table>	Hoch	1	3	6	Nutzen / Qualität	2	5	8	Niedrig	4	7	9	<p>Gut / Einfach    <b>Nutzbarkeit/</b>    Schlecht <b>Realisierbarkeit</b></p>
Hoch	1	3	6										
Nutzen / Qualität	2	5	8										
Niedrig	4	7	9										

werden mußte) und Visible Lost Time (z.B. Festwerden) unterteilt. Dies bietet wertvolle Erkenntnisse. Der Wert vieler LL mit hohem Potential konnte jedoch nicht voll erschlossen werden, da oft die Ressourcen fehlen, um diese in der Hauptverwaltung zu bearbeiten und umzusetzen.

Die wesentlichen Quellen für Lessons Learned waren der morgendliche Anruf und die Frühbesprechung, der tägliche Bohrbericht, Ereignisberichte, Non Productive Time-Aufzeichnungen, der Vergleich zwischen DWOP-Plan und aktuell erreichten Ergebnissen und die wöchentliche Anlagenbesprechung.

Der gesamte Wert der bisher erfaßten 325 LL der letzten 2 Jahre, d. h. das sich aus der künftigen Berücksichtigung der LL ergebende Einsparpotential beträgt ca. 2,75 Mio €.

### **Interface Management Meeting (IMM)**

Von Beginn an wurden die Interface Management Meetings etwa alle 2-4 Wochen durchgeführt. Es geht darum, an der Schnittstelle zwischen Bohroperator und Bohrkonztraktor Punkte zu thematisieren und partnerschaftlich diskutieren zu können, die in irgendeiner Weise in Beziehung zur (Sicherheits-)Leistung der eingesetzten Bohranlage(n) stehen. Auch spezielle Themen können vorgebracht und diskutiert werden. Die Agenda wird vorher abgestimmt, damit ggf. noch weitere Teilnehmer eingeladen werden können. Das Meeting wird vom Drilling Operations Superintendent geleitet.

Das IMM ist für das interne und das Bohrkonztraktoren-Management eine einfache Möglichkeit zu erfahren, wo auf der Bohranlage „der Schuh drückt“ und unmittelbar eine Lösung herbeizuführen. Themen waren z. B.:

- Non Productive Time: Gemeinsame Ursachenanalyse und Einleitung von Maßnahmen
- Bessere Ausbildung der Driller zur Entlastung der Toolpusher
- Diskussion der Ergebnisse durch den 5. Mann (siehe Abschnitt 4.3)
- Initiative zur verstärkten Einbindung der Servicefirmen in das STOPkarten-System
- Diskussion von sicherheitsrelevanten Ereignissen und Konsequenzen
- Aktuelle Abrechnungsfragen

Die Resonanz bei den beiden Bohrkonztraktoren und den internen Teilnehmern ist durchweg positiv.

### **Risiko-Management**

Das bisherige Risiko-Management war überwiegend eine personenbezogene und erfahrungsabhängige Einschätzung von Risiken und eine Entscheidung, ob diese Risiken getragen werden sollen.

Viele Lessons Learned und NPT-Analysen durch den LEAD-Coach zeigten, daß Risiken vorab besser erkannt, quantifiziert und umgangen werden müssen. Es wurde erkannt, daß ein strukturierter, professioneller Prozeß für das Risiko-Management von Bohrungen notwendig ist. Mit der Einführung von OIMS steht dieses Werkzeug zur Verfügung und die Anwendung wird obligatorisch.

Bei EMPG ist man noch einen Schritt weiter gegangen und hat die bisher gewonnenen Lessons Learned aus der Praxis im Rahmen des Risiko-Management-Prozesses analysiert und je nach Eintrittswahrscheinlichkeit und möglichem ökonomischen Schaden kategorisiert. Diese Analyse für eine konkret geplante Bohrung ergab, daß einige Risiken unakzeptabel hoch waren und ein Re-engineering erforderten.

Ein personenunabhängiger, objektiver Risiko-Management-Prozeß unter aktiver Einbeziehung des Operations-Personals ist integraler Bestandteil des Bohrplanungsprozesses.

### **Bewertung des Nutzens**

Die Kosten für das externe LEAD-Coaching haben sich u. a. durch die Einsparungen durch den 5. Mann und den Wert der Lessons Learned mehr als amortisiert.

Der Nutzen geht jedoch weit über das in Geld bewertbare Ergebnis hinaus. Dieser nicht traditionell zu quantifizierende Nutzen wurde anerkannt. Er liegt im Bereich von Datenanalyse, Information, Transparenz, Risiko-Management, „Mann-zu-Mann“-Coaching, Management Feedback, Workshops und Moderation. Ohne das LEAD-Coaching wären all die geschilderten Beispiele aus der Praxis nicht implementiert worden.

Ohne die Unterstützung und das Commitment des ehemaligen BEB- und heutigen EMPG-Managements hätten diese Resultate jedoch auch nicht erzielt werden können.

*Wir haben so lange ich mich erinnern kann, in Stahl und Material investiert. Dies ist das erste Mal in 25 Jahren, daß in Menschen investiert wird.*

S. Behnke (DSV)

### **Zusammenfassung und Ausblick**

EMPG und vormals BEB blicken nunmehr auf eine über zweijährige Erfahrung mit dem LEAD-Coaching bzw. Performance Coaching zurück.

Die Entwicklung des LEAD-Coaching und die flexible Anpassung des Veränderungsprozesses an sich ändernde Randbedingungen werden erläutert. Dabei bewegte man sich von der Verbesserung „harter“ Faktoren (Zeit, Geld) immer mehr in Richtung „weicher“, verhaltensbedingter Faktoren. Im Zusammenhang mit dieser Entwicklung wird das FAIR(Focus, Accountability, Involvement, Response)-Modell erläutert. Der theoretische Hintergrund von Veränderungsprozessen wird dargelegt und der Bezug zu den diesbezüglichen praktischen Erfahrungen des Bohroperators EMPG bzw. BEB hergestellt.

Konkrete Beispiele aus der Praxis eines Bohrbetriebes werden erläutert. Das Spektrum reicht von dem „online“-Coaching der Führungskräfte während ihrer Arbeit auf der Bohranlage und die Vorbereitung / Leitung effektiver Besprechungen über Lessons Learned bis hin zur Entwicklung und praktischen Nutzung von Planungswerkzeugen für die Detailplanung auf der Bohranlage, das Risiko-Management und das Entscheidungsbaum-Verfahren. Regelmäßige Meetings mit dem Management des Bohrkonztraktors wurden eingeführt und stellen die offene Kommunikation sicher.

Nach der Gründung der EMPG bot sich das LEAD-Coaching als ideales Werkzeug an, um das Zusammenwachsen der zwei Organisationen ExxonMobil (MEEG) und BEB zu beschleunigen. Die Erfahrung zeigt, daß die Kosten des LEAD-Coaching auch bei einer konservativen Schätzung allein schon durch die „Hard Facts“ getragen werden. Nimmt man die Soft Facts, also die Verbesserungen, die zwar von allen Beteiligten bestätigt werden, aber nicht unmittelbar in Geld zu bewerten sind, hinzu, ist das LEAD-Coaching eine attraktive Investition (in die Mitarbeiter).



