

The Value of Information and success factors for a NDR

Source :

<http://www.agiweb.org/ngdrs/ndr5/postconference/presentations/Tonstad.ppt>

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Content

- Short presentation of Statoil
- The value of Information
- Information “front end loading”
- The Whale – “from ambition to action”
- The Diskos project – a simple “pay back” evaluation
- National Data Stores - important success factors

This is Statoil

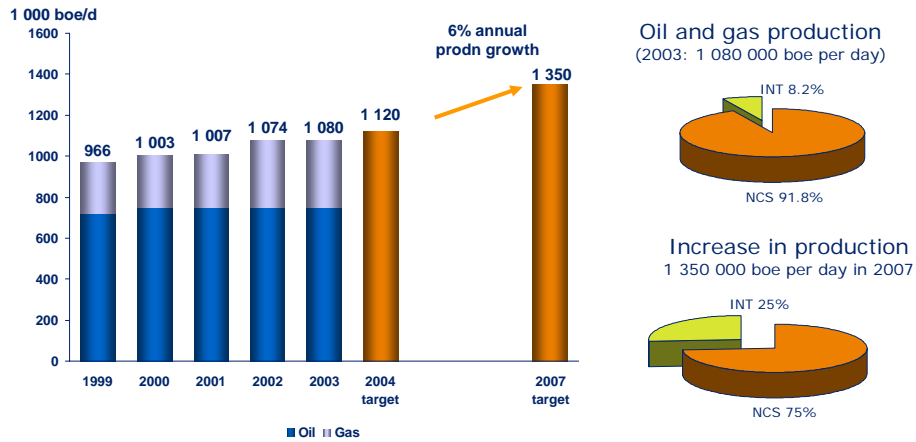
- A major oil producer: one million barrels per day
- World's third largest crude oil seller
- Markets two-thirds of all Norwegian gas to European customers
- Largest retailer of oil products in Scandinavia
- A group with clear growth targets



Operations in 28 countries



Production of oil and gas is rising



The value of Information

What is the value of data and information?

Questions and answers

- Typical question
 - Shall I acquire a 2D or 3D survey in this area?
 - Should I shoot seismic or just drill another well?
 - Shall I acquire a core in this well?
 - Should I by another study?
- Typical answers from your Manager
 - What is the cost
 - What is it worth
 - What is the return on this investment?

Value of Information

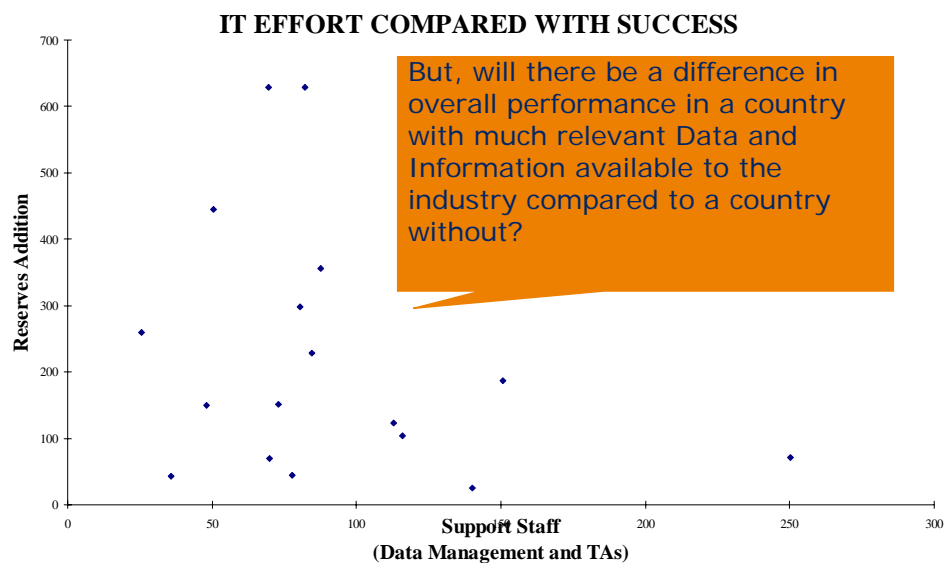
- It's the difference between the project value with the information and the project value without the information, minus the cost of acquiring the information
- These implies that:
 - there must be alternative outcome, otherwise no information could add value, which again is the same as to say that there must be uncertainty
- If there is uncertainty
 - there must be choices, if there is no choices – there is no decisions to be made, and information is in fact worthless

Information

- According to the Information Theory:
 - Information is defined as - “reduction of uncertainty”

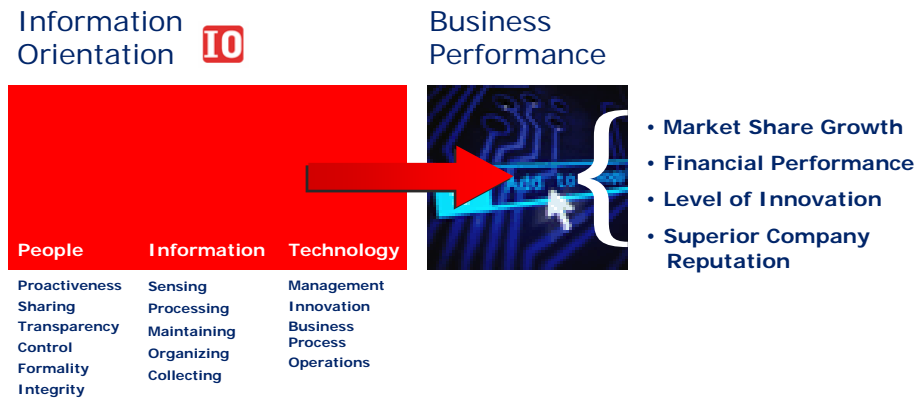
Data and Information will reduce uncertainty in projects...!

- ✓ A NDR should provide Data and Information to Government and Industry and thereby contribute to project risk mitigation and hence increased value creation!



Paras 1999

Breakthrough: The Information Orientation of an organization is linked to performance



Source: Dr. Donald A. Marchand

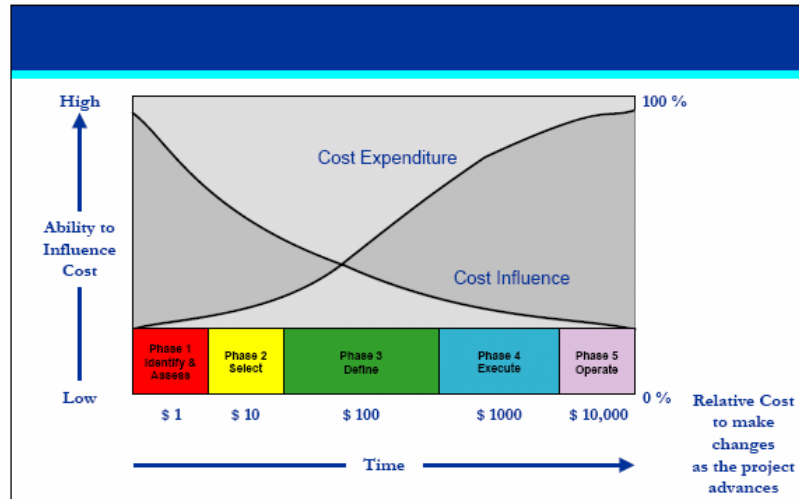
Information Orientation: People, Technology and the Bottom Line

Donald A. Marchand • William J. Kettinger • John D. Rollins



Information technology improves business performance only if combined with competent information management and the right behaviors and values. Learn how high performers put these into practice.

Information “Front end loading”: **Cost**

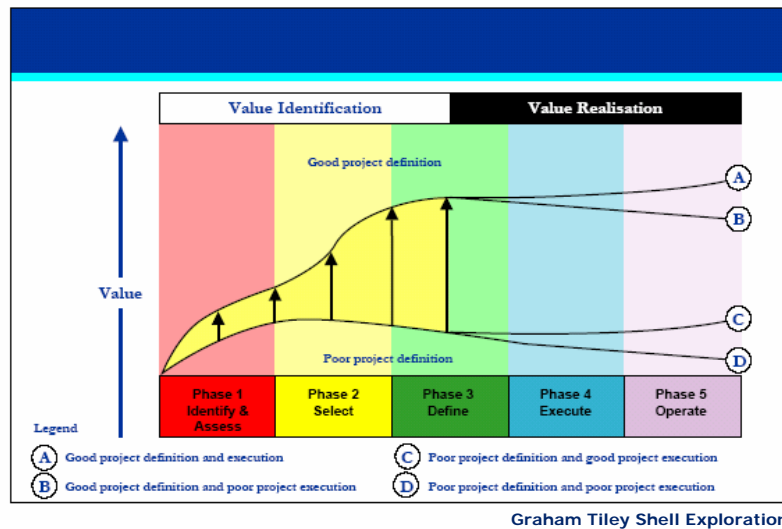


Graham Tiley Shell Exploration

The Whale – “from ambition to action”



Information “Front end loading”: Value



Uncertainty – Choice – Information - value

- It is important to focus investments towards information and information systems that support decisions at the value generation “front-end” of the project life cycle
- Governments should make all relevant Data and Information available as front-end loading to projects to mitigate risk and thereby maximise revenues from all investments
- Data and Information not in use has absolute no value to nobody..!
- A NDR will contribute to risk mitigation and value creation by making important Data and Information available to government and industry

The Norwegian NDR

A success story

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The Diskos project

Main objectives as they were formulated in 1993!

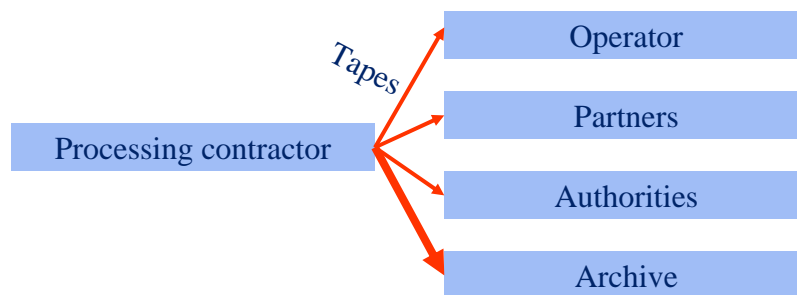
"establish a joint, central database for important quality assured geo-data and make them easily accessible for the user"

Requirement specification for Central Geo-Data Storage
NPD 11th June 1993

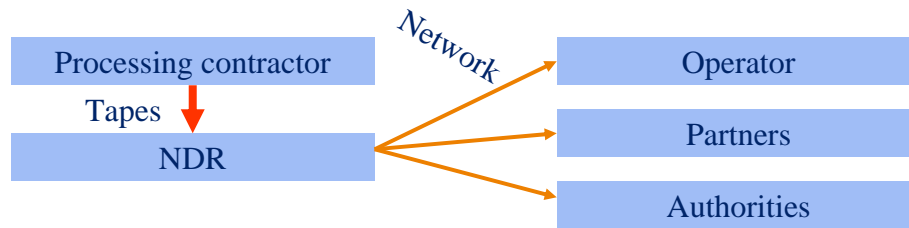
The Norwegian NDR Challenge

Build a bridge between the oil companies need to store, manage and access raw data, and the government need to build and maintain a national database

Post stack seismic without NDR



Post stack seismic with NDR



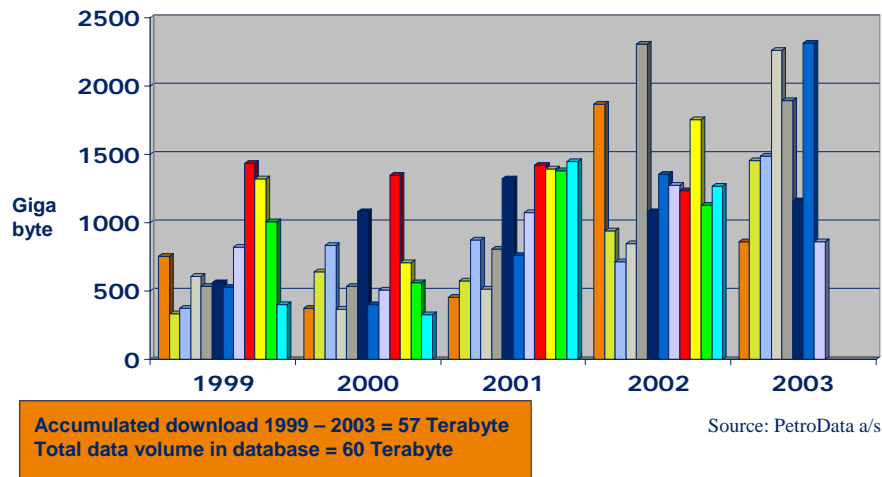
Evaluation of the DISKOS project, an example



Process	Time used in 1999	Time used in 1992
Logging in	2 min	
Selecting data	5-10 min	
Processing a request (1000km/3D survey)	10 min/2hours	
Network transfer (13-14 Gb/hour)	10 min/5hours (8bit data)	
Total	1 day	10 days

"In short time (approximately 5 min) was the data overview established in the actual area (Nordland II)". Fra: Vurdering av PetroBank desember 96 av rådgiver Geir Støle, Statoil

Data downloaded from the Diskos data base from 1999 to mid 2003



Evaluation of the DISKOS project

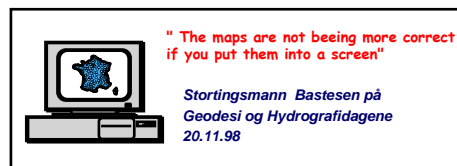
Benefits

● Tangible benefits

- reduced activity in G&G archive
- data version control
- reduced storage cost
- reformatting
- internal and external distribution
- workstation formatting
- reduced SW and HW investment
- reduced disk space needs
- data selection and overview
- spec data selection
- effective & safe data trade
- NPD updates (culture data)

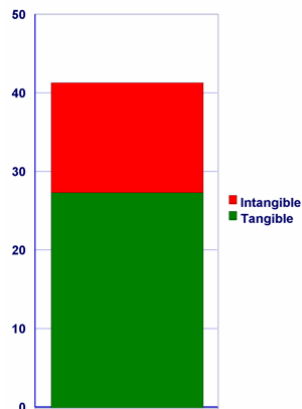
● Intangible benefits

- faster project cycle time
- more data accessible
- quality assured data (improved user confidence)
- more effective data flow from contractors to Statoil
- use of standards
- easy reporting to NPD
- easy reporting of data in license



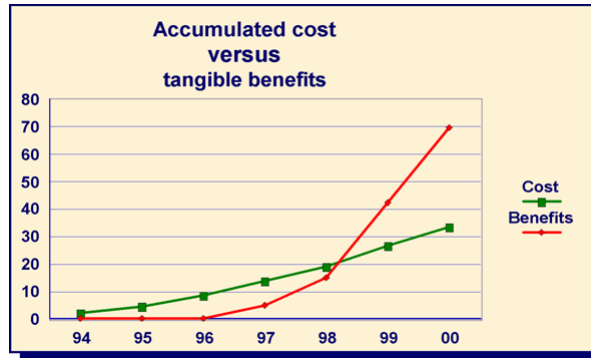
Evaluation of the DISKOS project

The tangible benefits exceeds the cost!



Cost reduction in 1999

	94	95	96	97	98	99	00
Cost ac	2,1	4,8	9,1	13,3	19,2	26,2	33,3
Benefit ac	0	0	0	5	15	42,4	69,8



1st, 2nd, 3rd and 4th levels of effects

- 1st level: Information “front-end loading” and risk mitigation
- 2nd level: Reporting and distribution of data to government and partners
- 3rd level: More efficient Statoil internal access to data
- 4th level: Overall cost reduction for Statoil in handling and maintaining huge seismic data volumes

Norwegian NDR – success factors

- A NDR is not a museum, nor an archive ...but it should be a living data base...
- A NDR and the government release policy are strongly connected
- High focus on getting data in, quality assure the data and getting the data out of the system and used by government and industry
- Data quality (next slide)
- Assure support/buy in from oil companies and contractor companies
- Government reporting should be in line with companies internal specs
- Government reporting from oil companies must be timely..
- Secure use (technical, operational, staff ...build in trust..)
- Operational business model ...the right incentives
- Clear on all legal and contractual aspects..predictable future..
- Organisational – all stakeholders should be included

Success factors - Data quality

- Reliable data quality is essential for success.
- Knowledge about the status of quality is more important than always having highest quality.
- Consistency in quality is important
 - example: **High Quality Log Data** in Norway, (not highest possible quality but consistent!)
- In the first phase of the Norwegian NDR a lot of effort was required to load seismic according to agreed standard to the NDR.
- Difficult balance between high quality and required effort.
 - Data quality will increase over time in case data is used frequently
 - But a feedback loop is strongly required

The balance between “Cooperation and Competition”

- In Norway it was decided to **cooperate** on DM and **compete** on interpretation.
- Good climate for cooperation in Norway.
 - cu
 - “a
- Norwe
 - Companies strive to create Information asymmetries in the marked to gain competitive advantages
 - willing to
- Trust is esse
- Make sure that the system is secure
 - but don't get “hysteric” about security.

Motivation

- What is the motivation for establishing a National Data Repository in your country ???

Information and the Multiplier Effect

