



The Norwegian continental shelf - a front runner for integrated operation?

Kjell Pedersen, Petoro
NPF Smart Fields and integrated operations, 13.- 14. September 2006

NCS Characteristics and trends

High oil price

Large resource base

Roll out of new technology is a challenge



Modern infrastructure

Competence access increasingly difficult

High cost regime

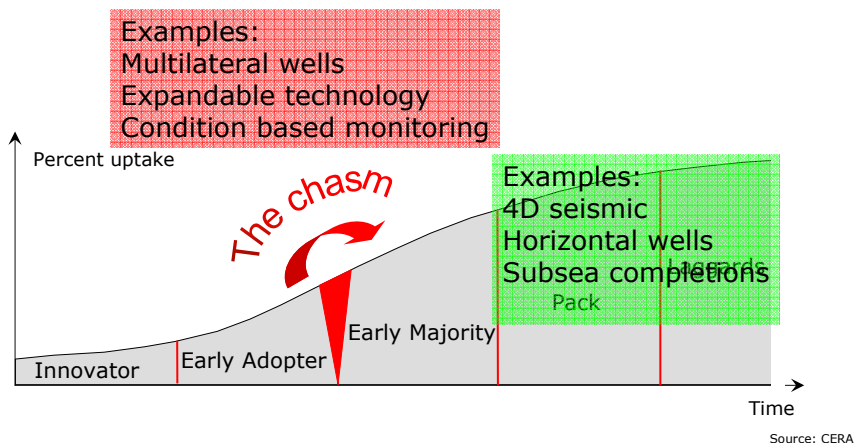
“The paradox of success....”

“What brought you where you are, will not keep you there, - or bring you where you want...”



The story of empires, countries, companies and individuals

Challenge is roll out of technology



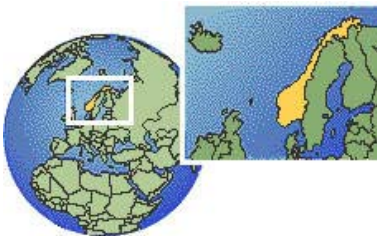
The big rewards are in massive application

IO – Maturity increasing and changes coming



- Increasing common perception of great value potential
 - Recovery, production, costs
 - HSE
 - Competence utilization
- Infrastructure improving
 - Fiber optic cable and common operating model
 - IT standards
- Positive feedback from field units, management and technical staff, with actual experience
- Terminology changing: From “surveillance and support” to “interdependence”, “movement of tasks”

Norway still in the lead



- An infrastructure envied by many
- International focus on “surveillance and support”, while NC have several examples of true integration and movement of tasks
- But international development and change processes are really picking up speed

Petoros observation on the asset arenas as per September 2006

- Good examples continuously collected
- The frontrunners are focusing on business improvement...
 - ... reflected in structured improvement programs
 - ... with IO as a tool, not an objective
- Clear and simple drivers speeds up the change processes
 - Old fields close to shut down
 - Lack of bed capacity
- Not yet fully realizing potential
- Visible operative management absolutely critical for success
 - Varying pull in the assets
 - Great dependence of individuals
 - Surprisingly poor excuses in assets with great improvement potential

NCS have all opportunities to continue as frontrunners in IO



- Norway in the lead, but the rest is catching up at high speed
- Focus should be on business improvement, - with IO as a tool, - not an objective
- The economic value is in broad application, - not in the pilots

... focus on HSE, cost- and income side, - simultaneously