Concurrent engineering
in Reinertsen infrastructure projects

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REINERTSEN is a family owned engineering and construction company
- Longitudinal strategies
- Little bureaucracy

More than
- 2 800 employees
- 16 locations
  - and growing

Reinertsen Oil and Gas
- Engineering
- Fabrication
- Installation
- Modification

Reinertsen Land
- Architecture
- Engineering
- Construction
Activities across the value chain

- Project initiation
- Project development
- Construction
- Operations
Challenge

- Take full advantage of our collaborative potential
  - Across disciplines
  - Across distance
  - Throughout project lifespan
Goal

• To develop smart work methods which enable:
  • Shorter project execution time
  • Better quality on decisions
  • Strong ownership and enthusiasm amongst project participants.
Situation in infrastructure

• Complex megaprojects.
  • multiple disciplines
  • multiple stakeholders
  • long timespan
  • R&D – tasks involved

• Large public interest
  • Political
  • Economical
  • Personal

• In the industry
  • Excessive exceeding of budgets is the norm rather than the exception.

• We have an obligation to create productive, efficient new ways of working

Our solution

- Project execution with
  - Less linearity and distributed dependencies
  - More concurrent methods of working
ConCurrent?

- simultaneous
- cooperative
- equal authority
- intersecting at the same point
- joint effort
- contributory
REINERTSEN’s Concurrent Rooms
What is Concurrent really?

Concurrent Interdisciplinary control

- Working meeting, not infotainment..
- 3D model as starting point
- Finding and solving problems
Research shows:

Traditional Clash Detection

Clash detection work day

http://www.chalmers.se/sv/institutioner/cee/forskning/constructionmanagement
What is the expectations towards the Concurrent participants?

- Accessibility and presence
  - Prioritization of project task
  - If vacant, work with other projects or tasks
- Willingness to discuss and change own design
  - Ability to act on flaws and make and test decisions
  - Visualize own contributions
- Don’t be afraid of asking «silly» question
Lessons learned

Advantages

- In project execution:
  - Faster and better decisions
  - Better quality in technical solutions
  - Fast and easy solution of misunderstandings
  - Less emails
- Project participant:
  - High level of commitment and engagement
  - Better project understanding – from all participants
  - More informal learning
  - Getting to know each other

Challenges

- Mature vs fast decisions
- Conflict of interest (time) between projects
- New and inexperienced project participants
- Perform concrete production task in concurrent meetings
Next step: Inviting clients into concurrent sessions.