Smarter Natural Resources
help build a smarter planet

A Vision for Condition Based Maintenance Using 3D Models

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Objectives

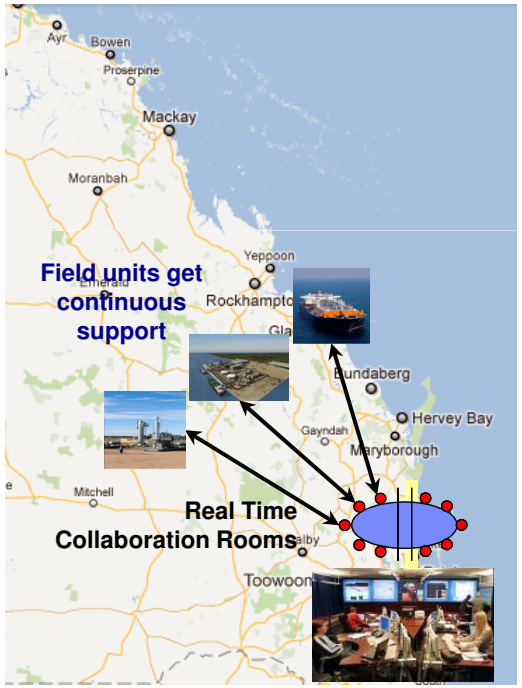
- A vision for Condition Based Maintenance
  - In an Integrated Operations framework
  - Leveraging engineering data management tools
  - Providing a benefit case for 3D models

Integrated Operations – Maturity Model

Traditional Practices:
Self-sustainable field units & limited communication

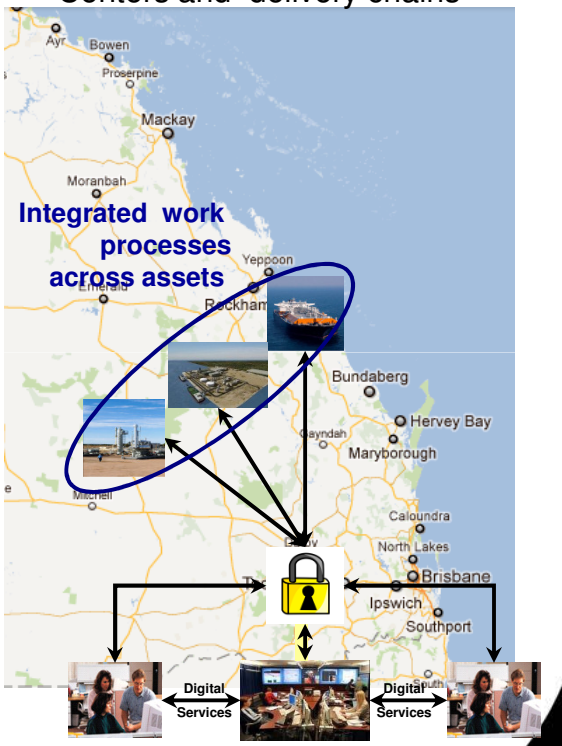
Many office support units with different goals

Generation 1:
Integrated Field & Office Operations Centers and Real Time Collaboration



Remote Operations Centers are established

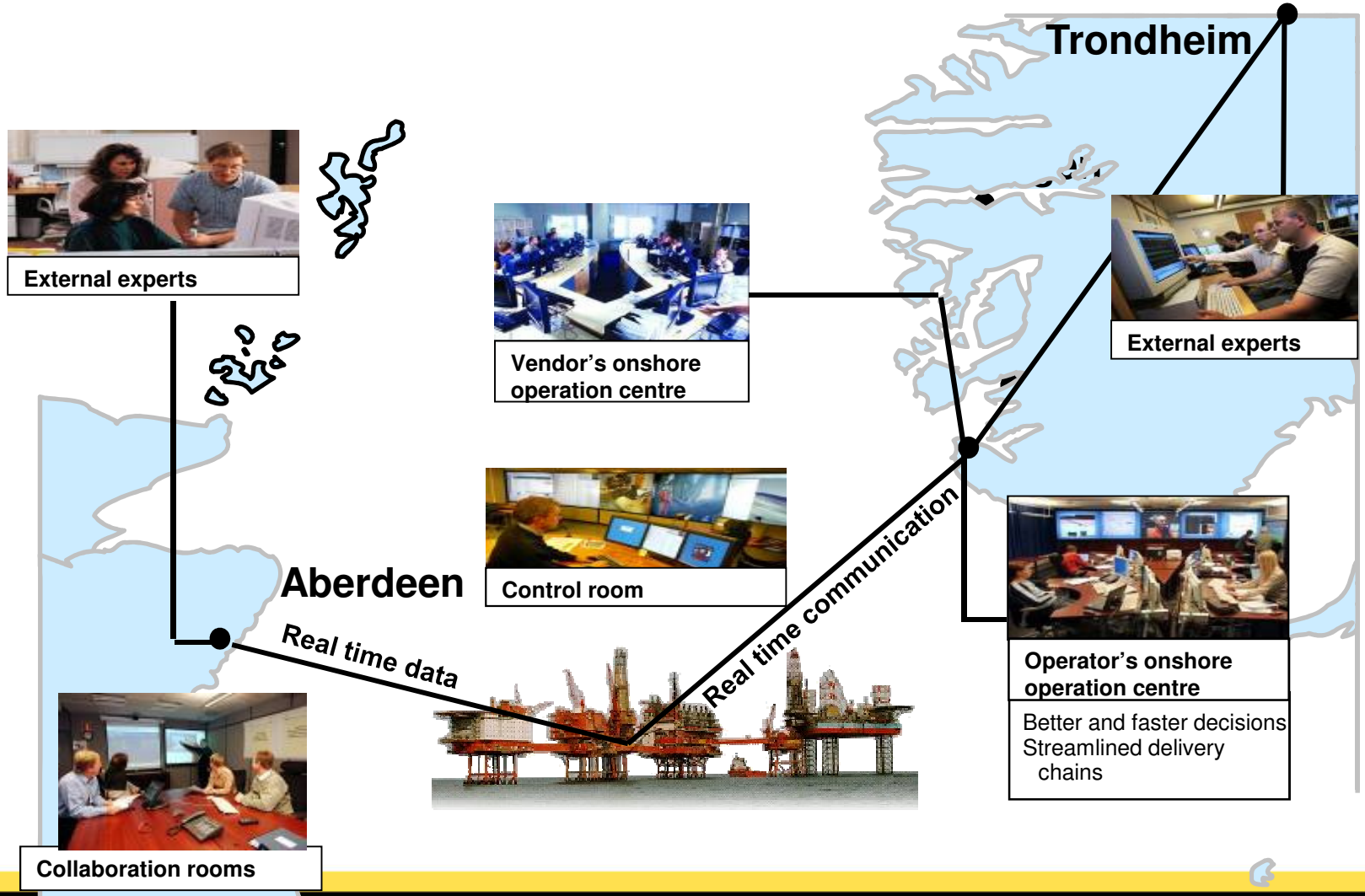
Generation 2:
Integrated Operators & Vendors Centers and delivery chains



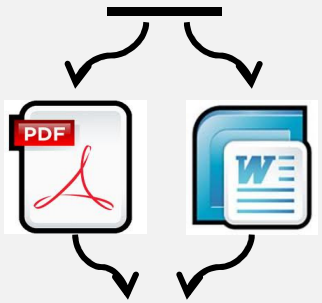
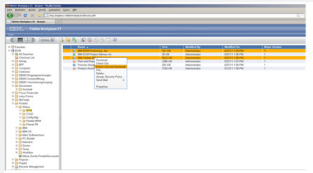
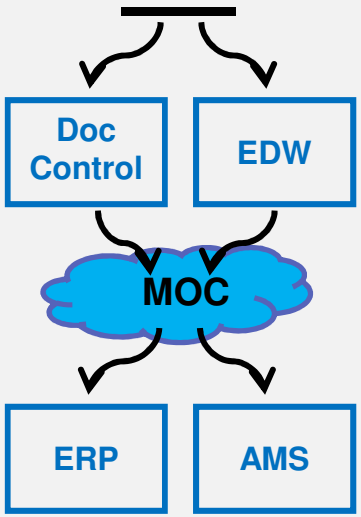
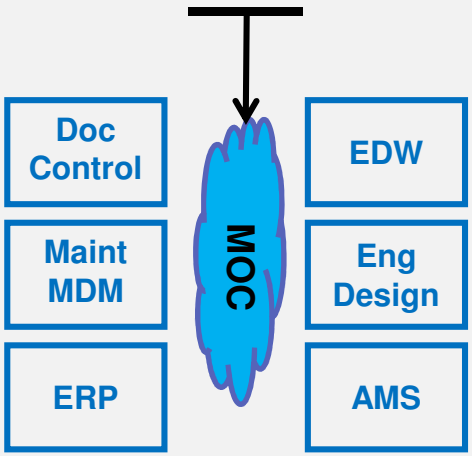
External Vendor's ROC

Operator's ROC

Integrated Operations – Current Capabilities



Engineering Data Management Capability Model

Document Control Only	Engineering Data Mgt	Integrated MCP-OPS
EPC  Document Management System 	EPC  	EPC 

• Handover of drawings and documents only
• Managed as documents
• 'Managed' used loosely
  • No data ownership
  • No record management policy
  • No data definitions
	• Data standards for handover
	• Separation of Doc Control / EDW
	• EDW to manage data
	• Management of Change
	• Maintenance data management
		• Data standards for handover
		• Engineering data lifecycle management (handover -> Ops)
		• Maintenance MDM
		• Management of Change across
		• Integration with design tools

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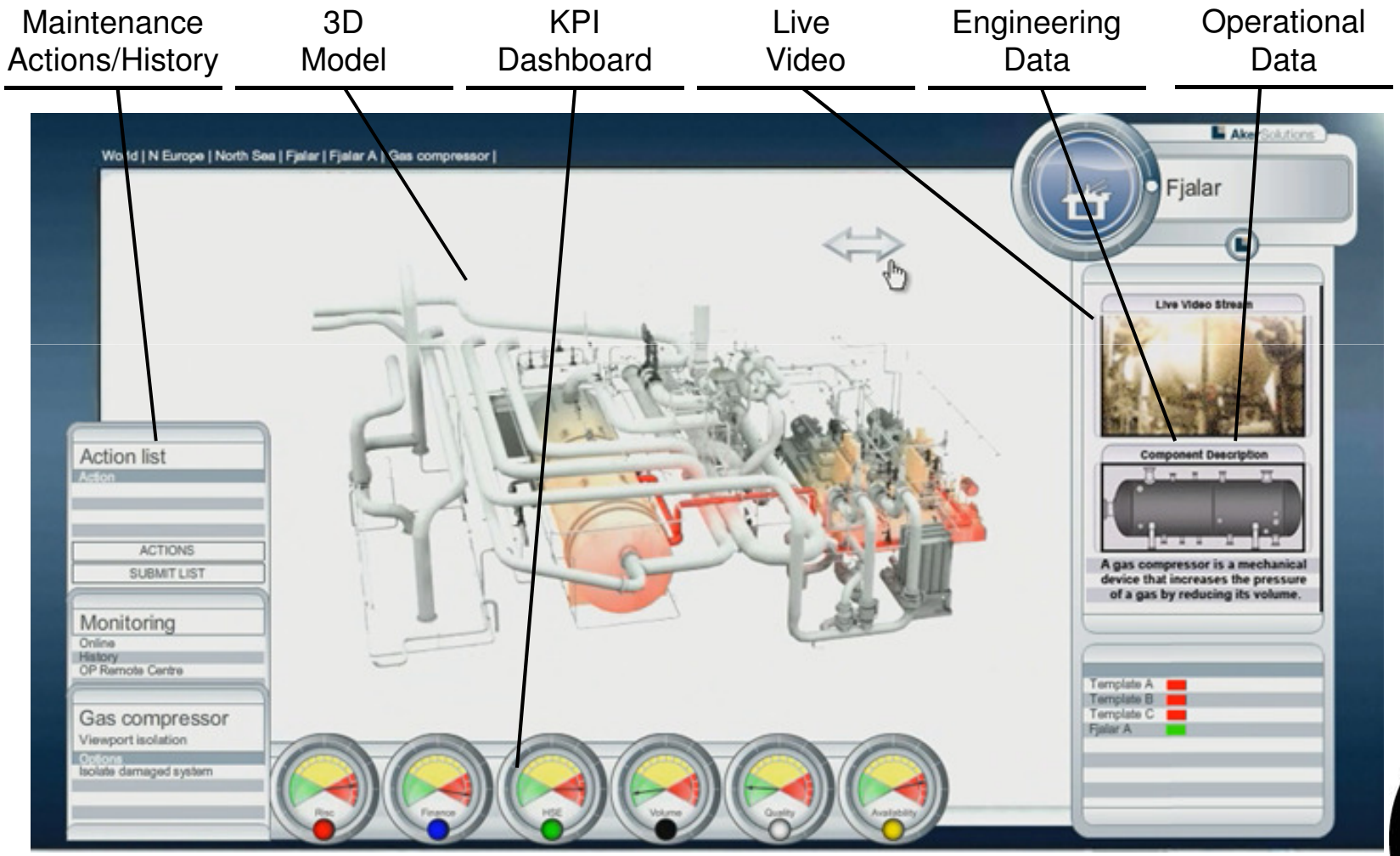


SKR – Acker Solutions – IBM Partnership

IBM

- Decision support/ (Role based portals)
- Information management
- Integration
- People & process

Client

- Operational philosophy
- Knowledge transfer

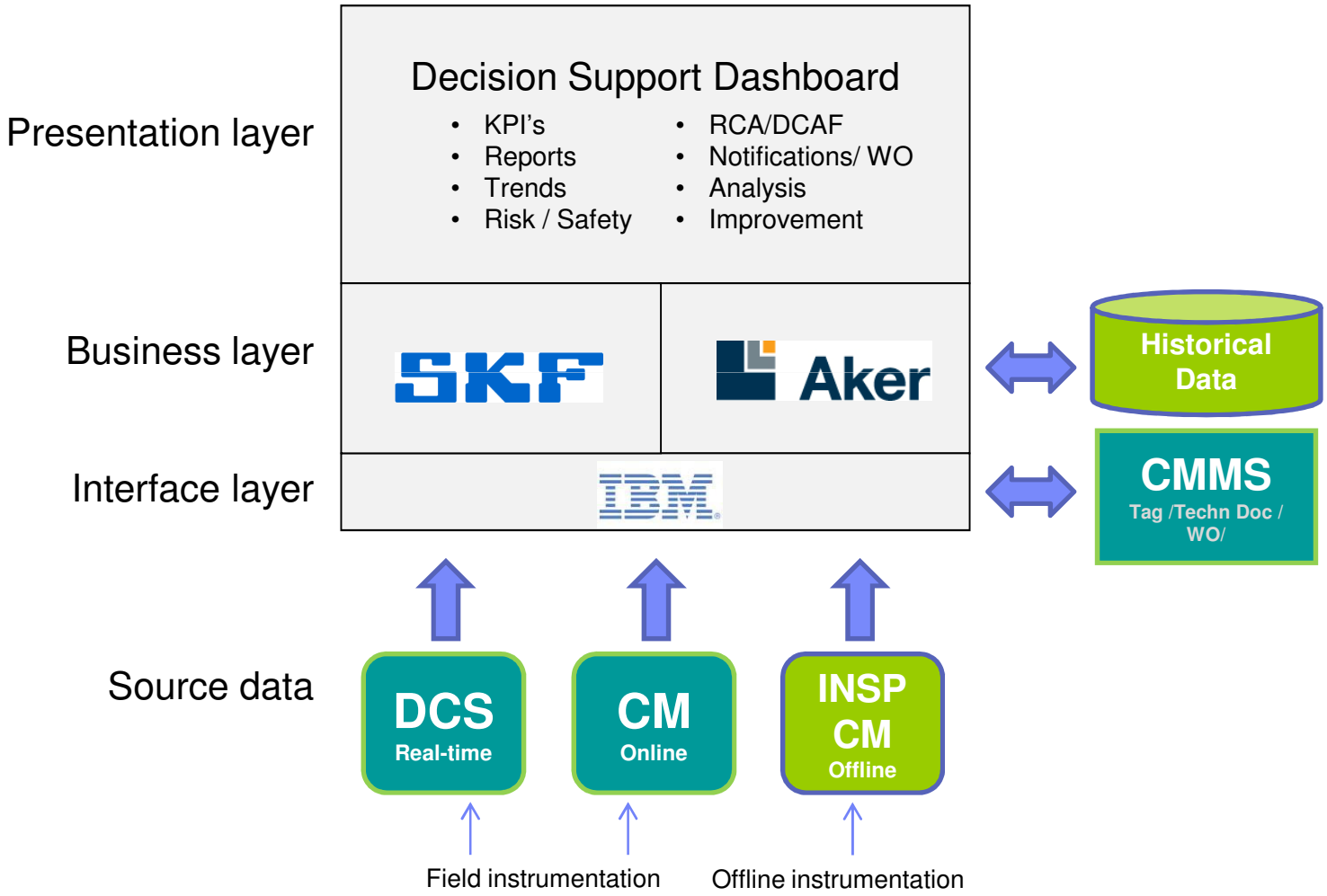
SKF

- Condition Monitoring of rotating equipment
- Diagnostics / Remote Center/ decision support
- Maintenance Strategy Review (RAM / RCM)
- Sensors / Wireless / Installation

AkerSolutions

- Technical Integrity
- Maintenance strategy and programs (CBM/RBI)
- Inspection static & structures
- Decision support

Structure of the Integrated Solution



Vision Video

AkerSolutions IBM SKF

TIMS

Technical Integrity Management services.

An Aker Solutions initiative within Integrity Management services.

Objectives / Vision

- An integrated, Condition Monitoring framework such as shown here
  - Leverages Integrated Operations technical framework investment
  - Leverages Engineering Data Management framework investment
  - Provides ROI in asset availability, reliability, safety
  - Is another step towards the ‘Digital Plant’

    Use of 3D model