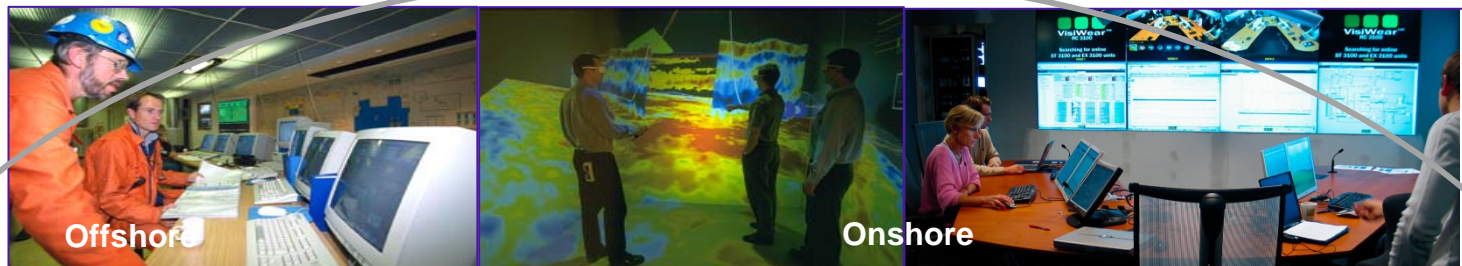# Integrated Operations and IT perspectives
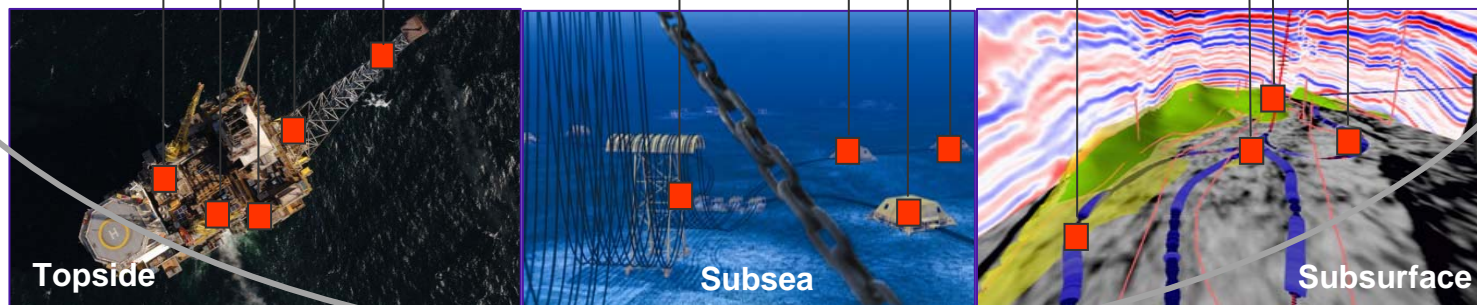
Oskar Fredagsvik, Leading Advisor IO
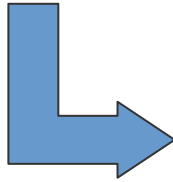
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Integrated operations: Collaboration across all boundaries

Offshore

Onshore

Onshore/offshore integrated information system
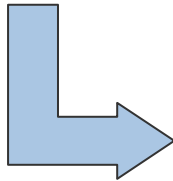
Topside

Subsea

Subsurface

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Supporting the New Operating Model

New Operating Model Requires:

- Common, standardized work processes
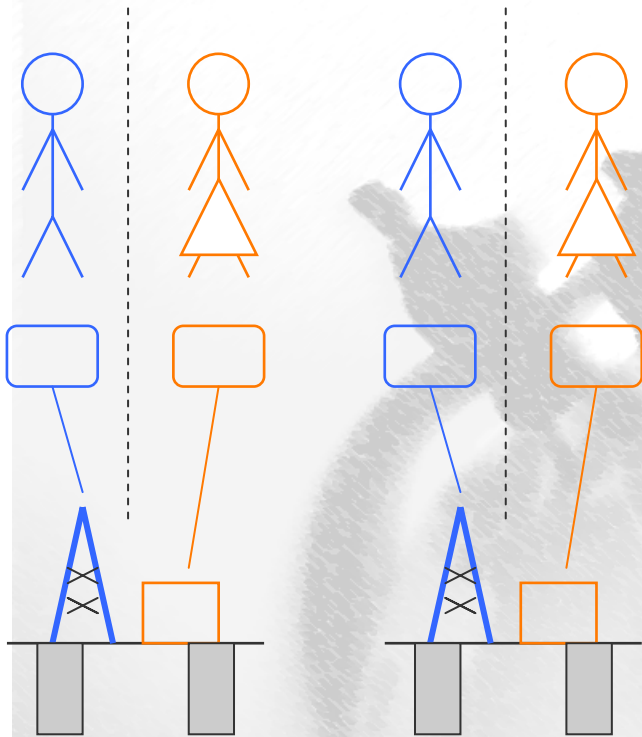- Across assets, and across disciplines

Common, Standardized work processes requires:

- Common, Standardized data and data-access
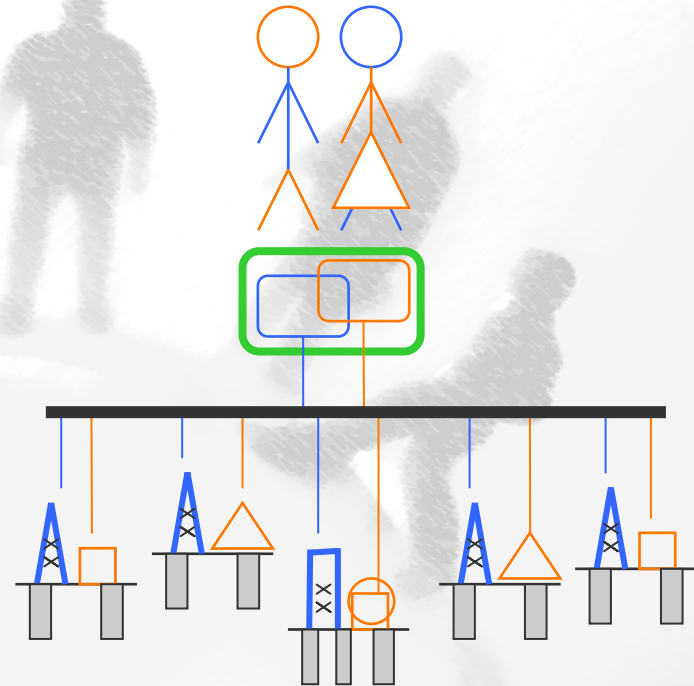- Common, Standardized applications

- Examples from other areas:
  - SAP (BRA project)
  - SCORE project
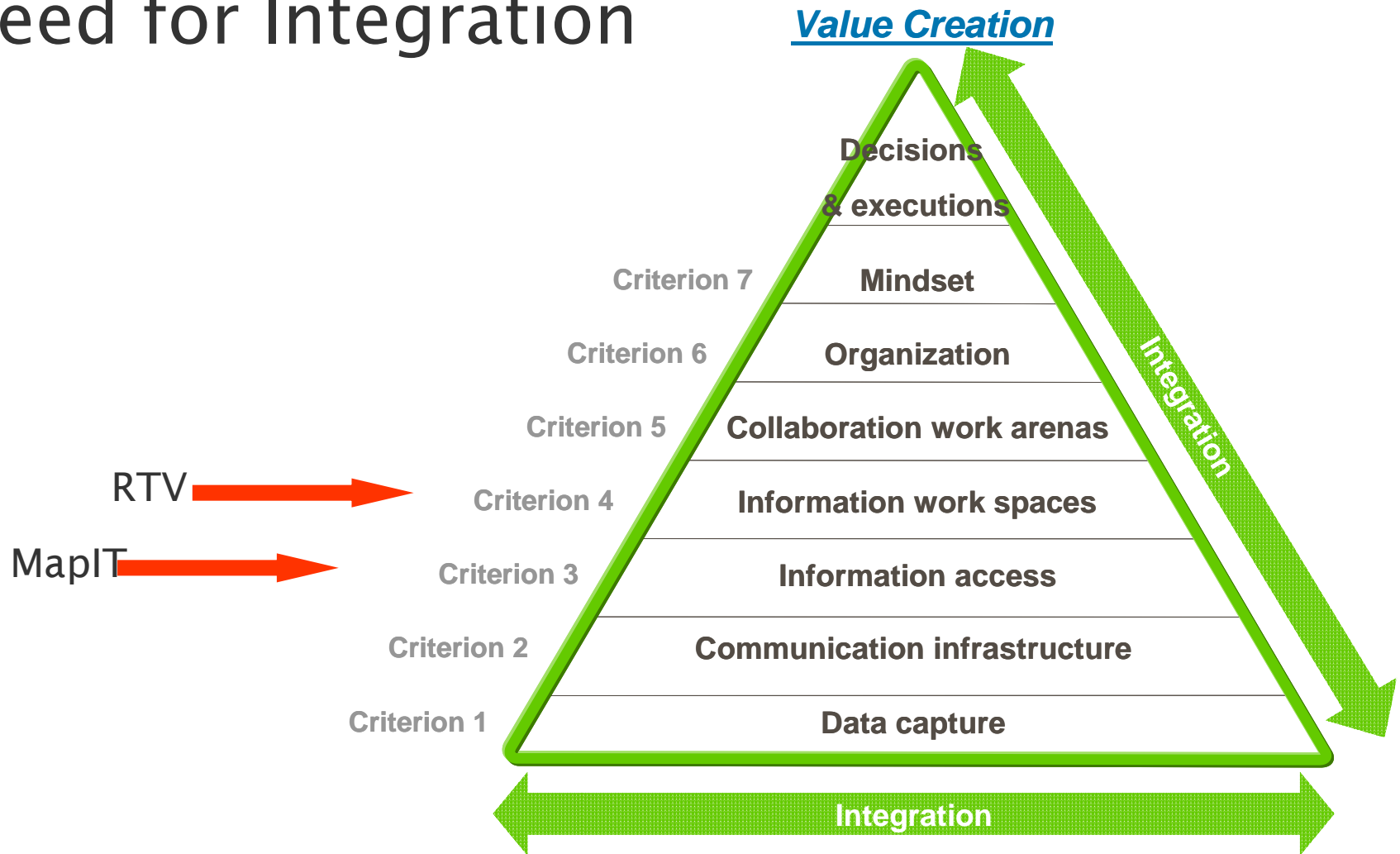
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New operating model

·From:

·To:

- **Enable best practices sharing across assets**
- **Enable multidiscipline teams**
- **Consistent information**
  - **Everywhere**
  - **At any time**
  - **To any application**

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Need for Integration

Value Creation

Decisions & executions

Criterion	Level
Criterion 7	**Mindset**
Criterion 6	**Organization**
Criterion 5	**Collaboration work arenas**
Criterion 4	**Information work spaces**
Criterion 3	**Information access**
Criterion 2	**Communication infrastructure**
Criterion 1	**Data capture**

RTV →

MapIT →

Integration

Integration

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Data Integration – pathway to the full potential

Degree of

Functionality

Rich

Simple

00's

10's

90's

OS   80's

$

$

$

$

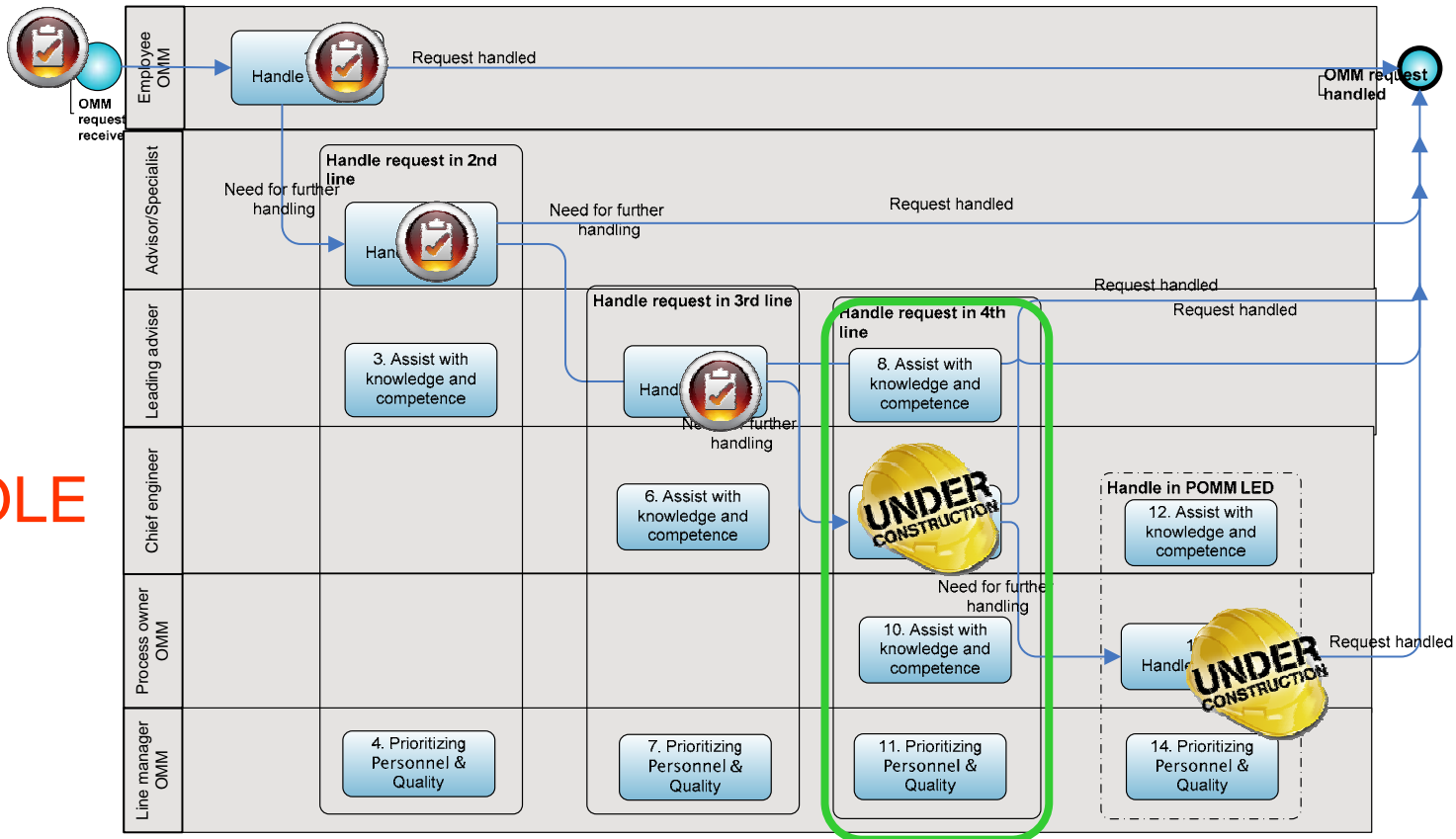1

3

20

Assets / Disciplines
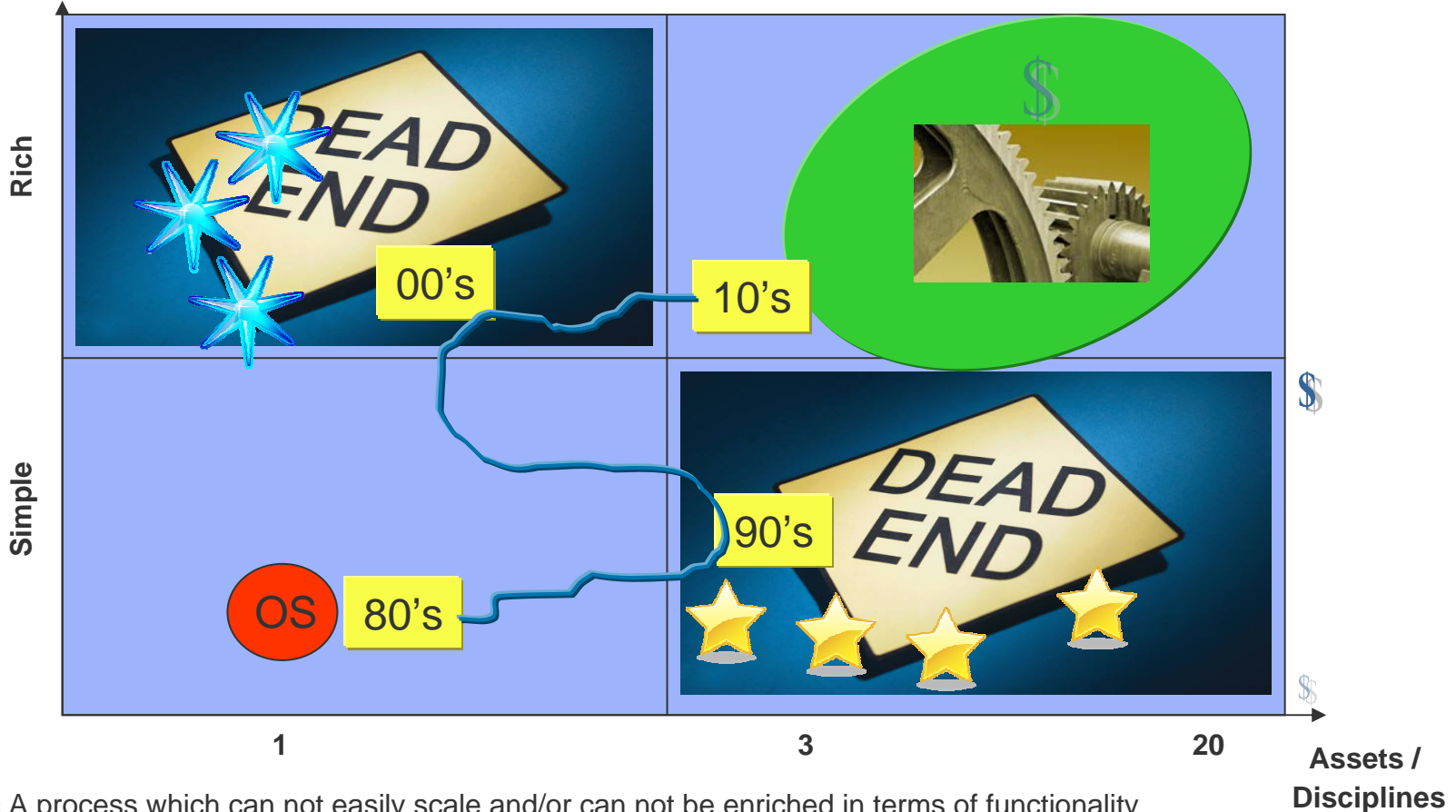
🔴 = A process which can not easily scale and/or can not be enriched in terms of functionality

🟢 = A new or modified process that has rich functionality AND can be scaled out – thus supporting IO
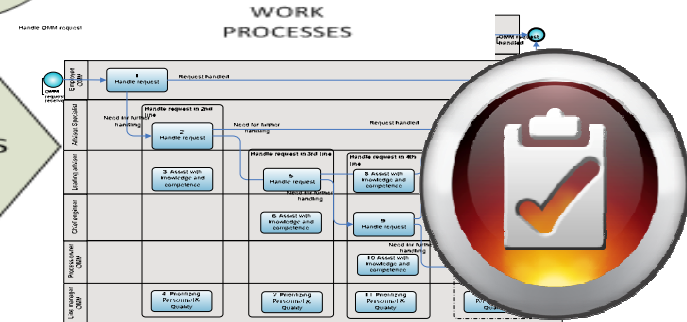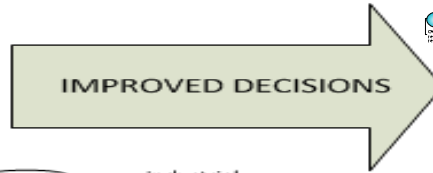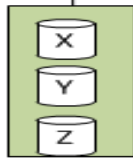
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Work Process

Handle OMM request

ROLE

TO-BE

Information Work Space

Support Centre

IMPROVED DECISIONS

WORK PROCESSES

GODI

Services

Reference Semantic Model

CDM

ENTERPRISE SERVICE BUS

ADAPTERS

Industrial standards
ISO 15926
ISA 95 / 88
Other....

Operate

Modify

Maintain

DATA FLOW

Plants and drilling and Well operated by Statoil

CANADA
PEREGRINO
KRISTIN
SNØHVIT
GULLFAKS
STATFJORD

SAP

IMS

STID

PROD

EnV

SYN

Workstation

Workstations

X

Y

Z
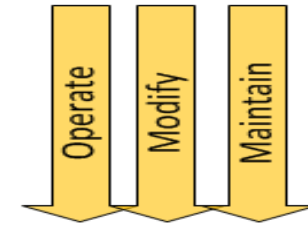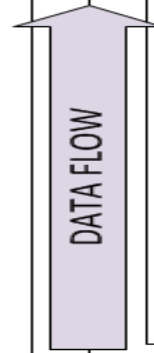
OTHER DATA SOURCES

Statoil
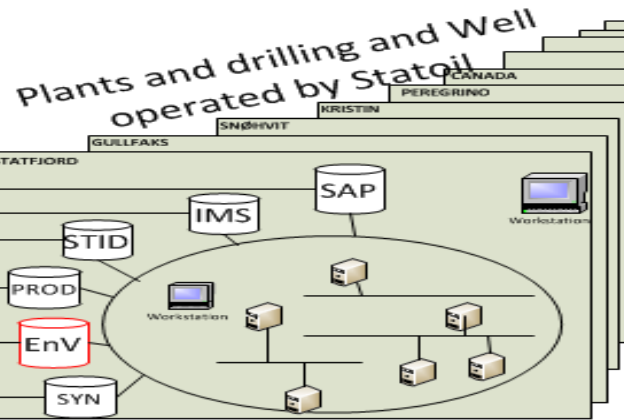
Why GODI?
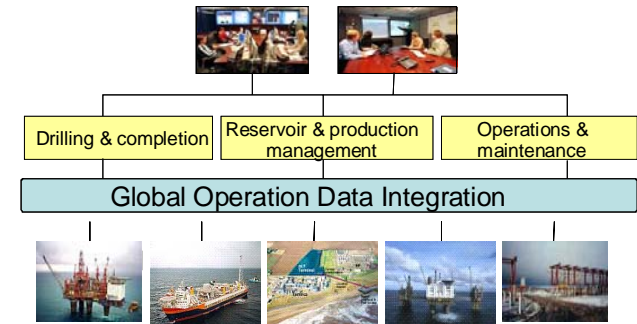
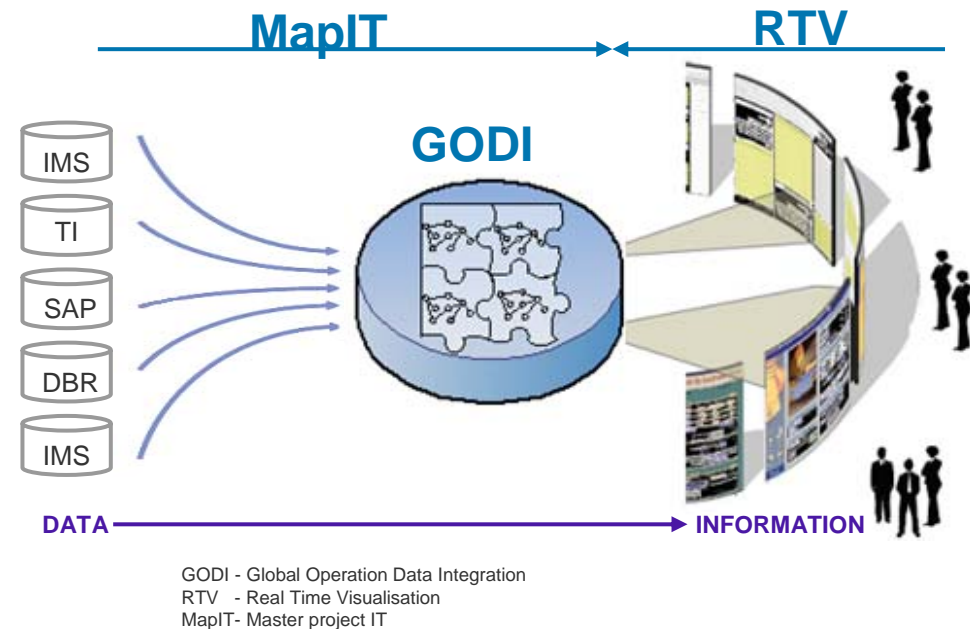**Provide enterprise-wide access to plant data, through standardised information models combining data from different sources, to end-user applications**
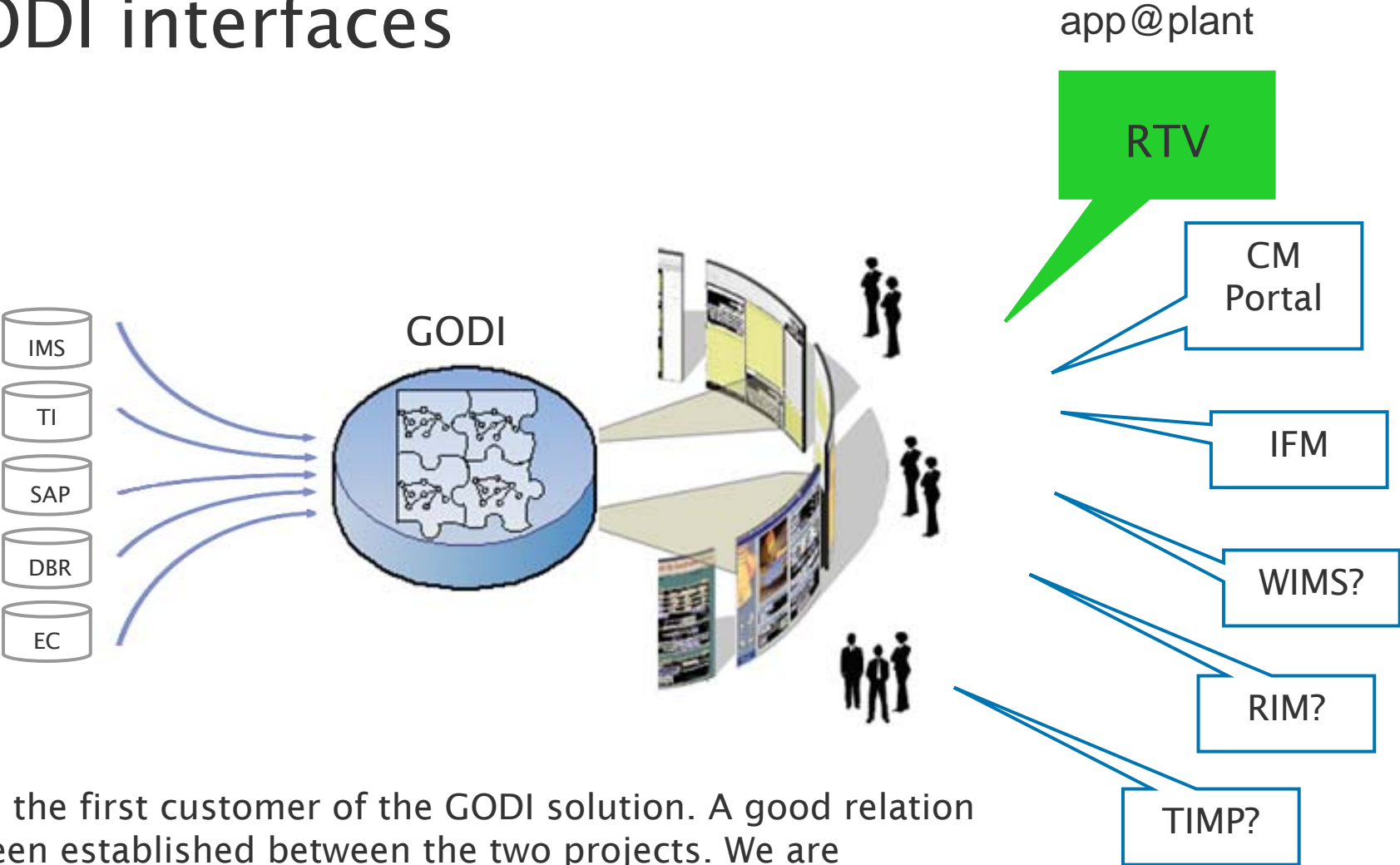
- Representing a **paradigm** shift in the way we support our assets
    - Data availability at a complete new level
    - Collaboration
        - offshore/onshore
        - Cross assets
        - Around the globe
        - New and more efficient work processes – supporting POG

RTV - MapIT

- The MapIT project will deliver standardised <u>data access</u> independent of data source technology to any data subscriber

- The RTV project will deliver <u>information work spaces</u> for data visualisation and collaboration to Petec and OMM domains

- The two projects will deliver:
  - Standardised information to support safer, better and faster decisions for work processes
  - Standard visualisation and collaboration across assets
  - A platform to enable continuous change
  - Support tools for to new operating model
  - Enablers for creative and innovative Industrial IT tools

GODI - Global Operation Data Integration
RTV - Real Time Visualisation
MapIT- Master project IT

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GODI interfaces

app@plant

RTV

GODI

IMS

TI
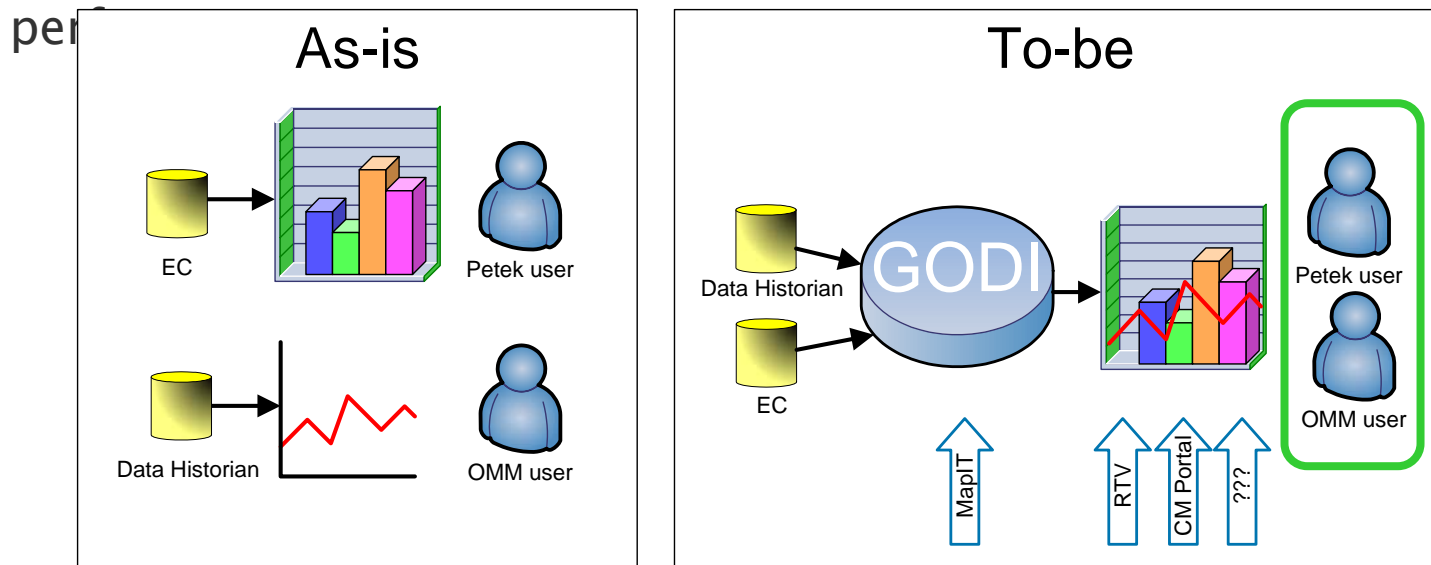
SAP

DBR

EC

CM Portal

IFM

WIMS?

RIM?

TIMP?

RTV is the first customer of the GODI solution. A good relation has been established between the two projects. We are collaborating on all common deliveries.
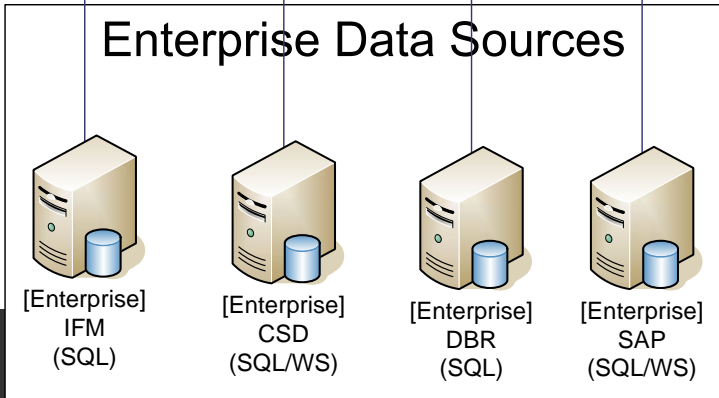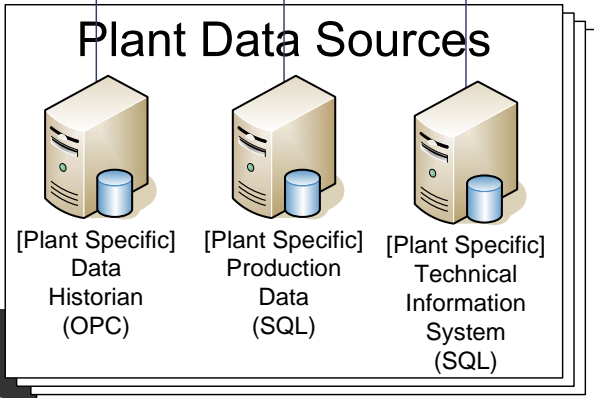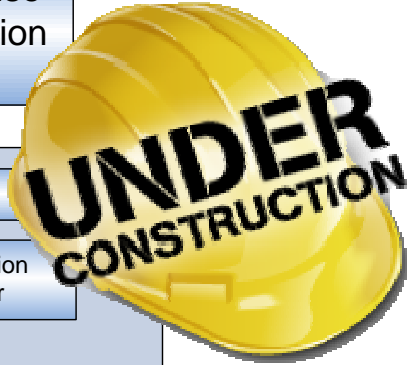
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GODI enablement example
Cross discipline data access capabilities

- Today's work processes, and even more so the work processes in the future, relies on seeing an asset as a whole and to not solely focus on each discipline area by itself.

  - Increasingly, there is also a requirement to be able to monitor equipment of a particular kind used at multiple assets to improve per...

As-is / To-be diagram showing EC, Data Historian, Petek user, OMM user (As-is) and Data Historian, EC, GODI, Petek user, OMM user with MapIT, RTV, CM Portal, ??? (To-be)

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GODI – Concept Architecture

Enterprise Application 1 · Enterprise Application 2 · Enterprise Application 3 · Enterprise Application 4

UNDER CONSTRUCTION

GODI

Access and Security

OPC DA/HDA Adapter · Web Service Adapter · Freeform Query Adapter · Subscription Adapter

CDM

ESB

OPC Adapter · Oracle Adapter · MS SQL Adapter · MS SQL Adapter · WS Adapter · Oracle Adapter · SAP Adapter

Plant Data Sources

[Plant Specific] Data Historian (OPC)

[Plant Specific] Production Data (SQL)

[Plant Specific] Technical Information System (SQL)

Enterprise Data Sources

[Enterprise] IFM (SQL)

[Enterprise] CSD (SQL/WS)

[Enterprise] DBR (SQL)

[Enterprise] SAP (SQL/WS)

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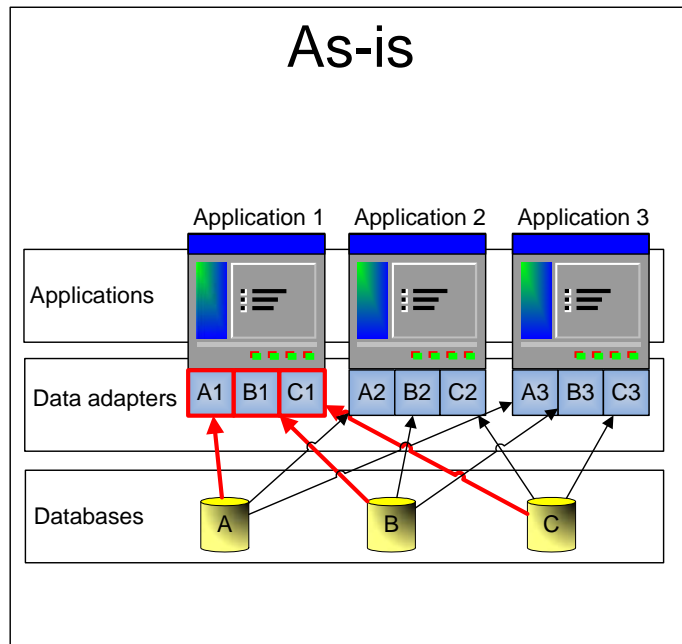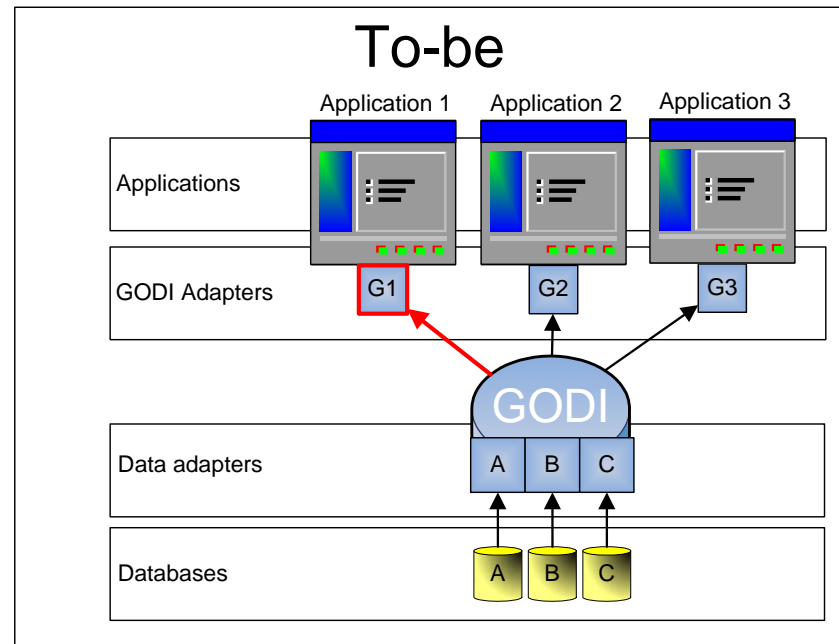# GODI Pilot Overview

Adding value

Thank you

IO and IT perspectives

Oskar Fredagsvik

Leading Advisor

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www.statoil.com

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