Standardization of production reporting on the NCS

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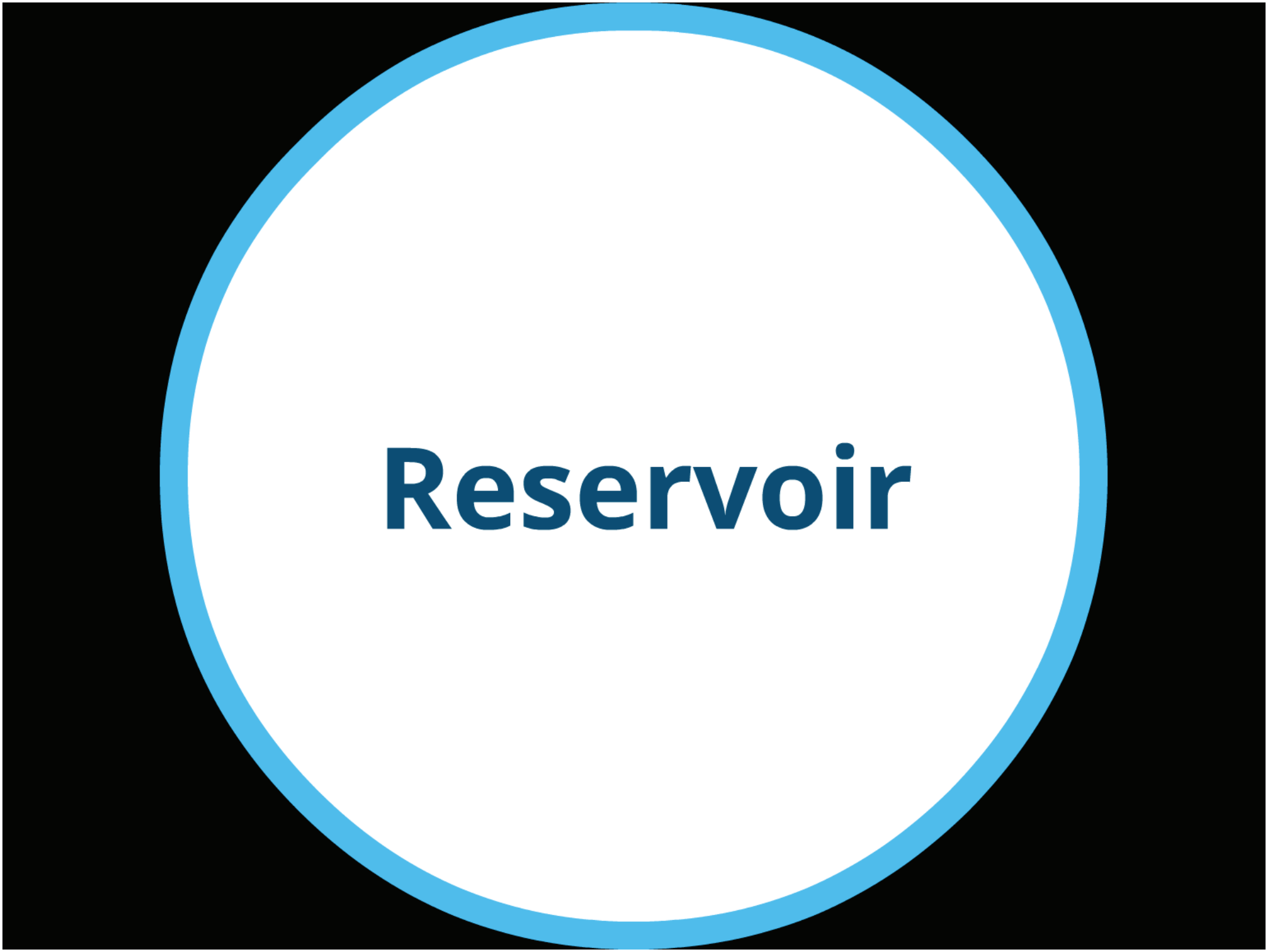
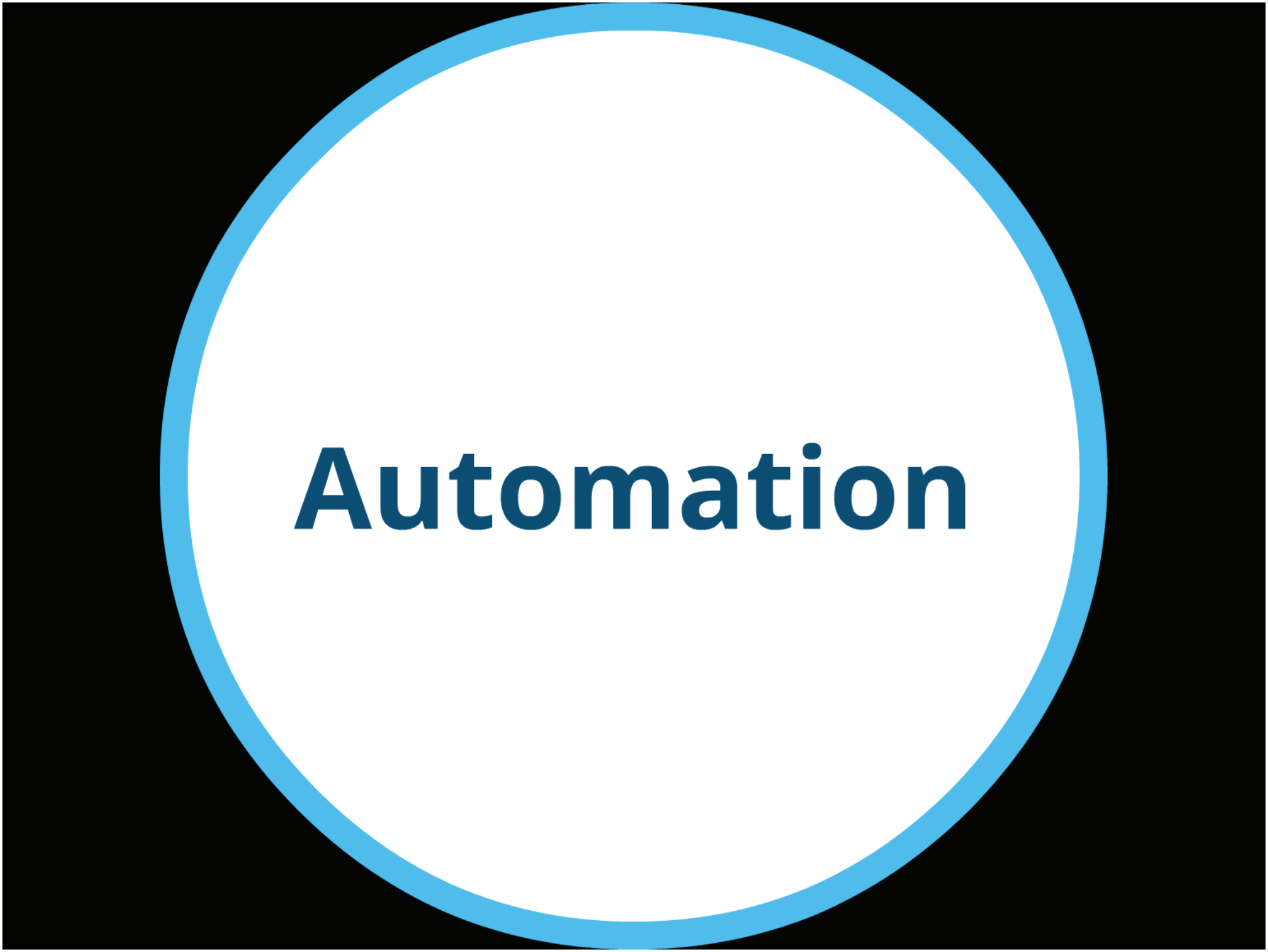
DONG energy EPIM


Why?


Optimize


Tracking


Reservoir


Automation

Quality

Legal

Reserves

Why?

Reservoir

Automation

Quality

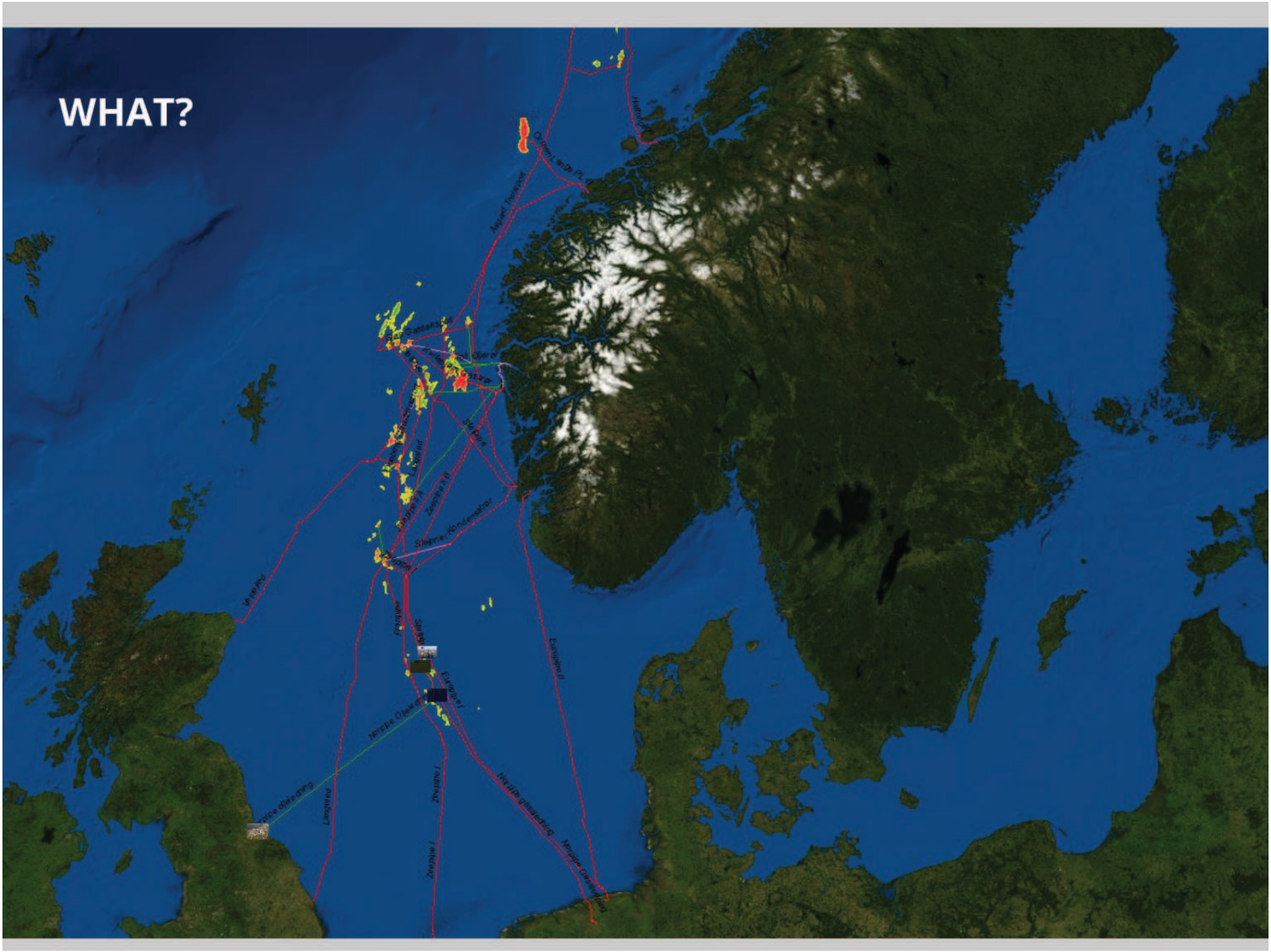
Tracking

Legal

Optimize

Reserves


WHAT?

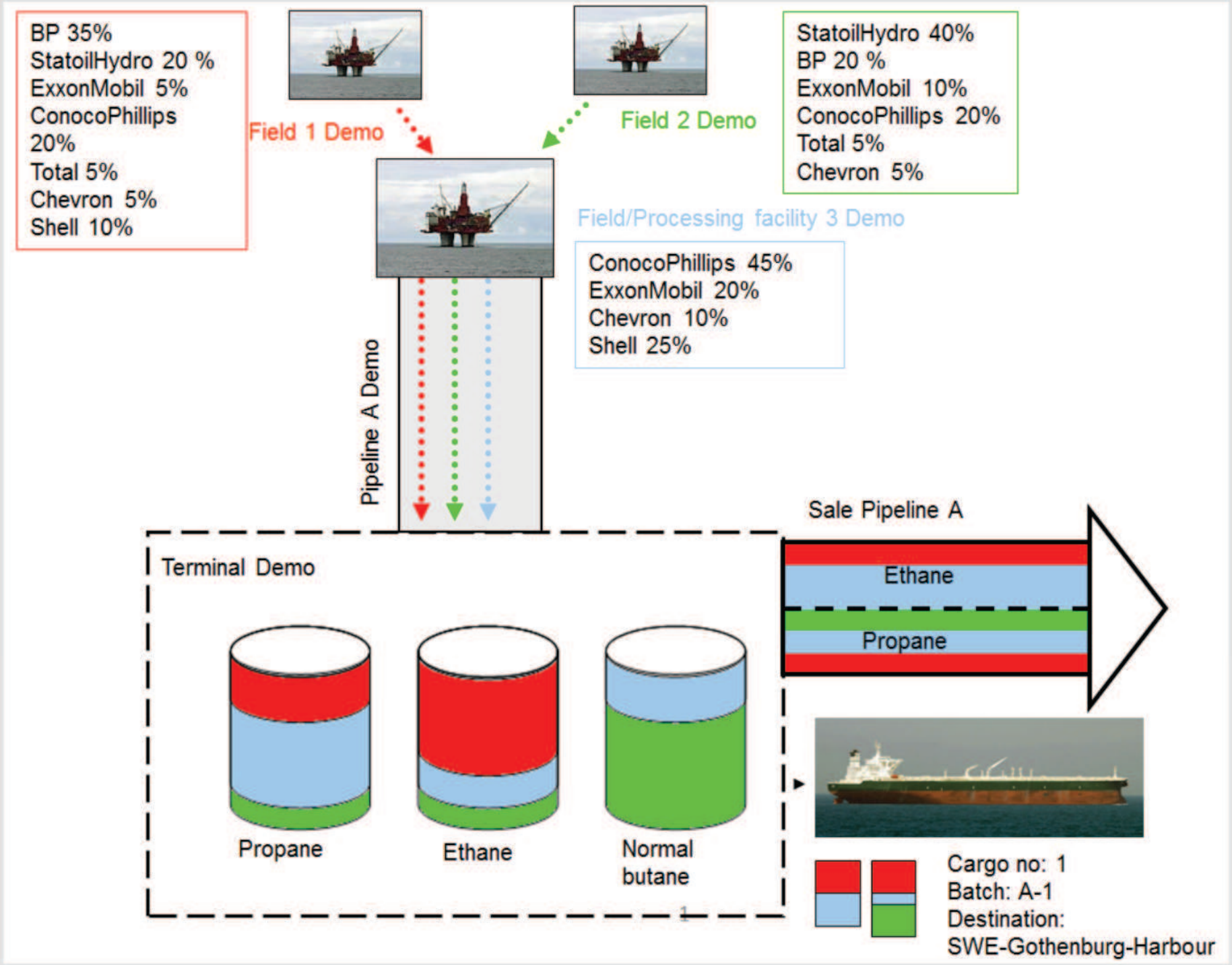

WHAT?

Oselvar

Ula

Ekofisk

Teesside


BP 35%
StatoilHydro 20 %
ExxonMobil 5%
ConocoPhillips 20%
Total 5%
Chevron 5%
Shell 10%
Field 1 Demo
Field 2 Demo
StatoilHydro 40%
BP 20 %
ExxonMobil 10%
ConocoPhillips 20%
Total 5%
Chevron 5%
Field/Processing facility 3 Demo
ConocoPhillips 45%
ExxonMobil 20%
Chevron 10%
Shell 25%
Pipeline A Demo
Sale Pipeline A
Terminal Demo
Ethane
Propane
Propane
Ethane
Normal butane
Cargo no: 1
Batch: A-1
Destination:
SWE-Gothenburg-Harbour

The history

2002

- IO Program NCS
- Standardize DPR
- Developed with Energistics
- Reference data ~ 1500 production terms ISO15926

2005

- PRODML initiative
- Builds on work in Norway

2006

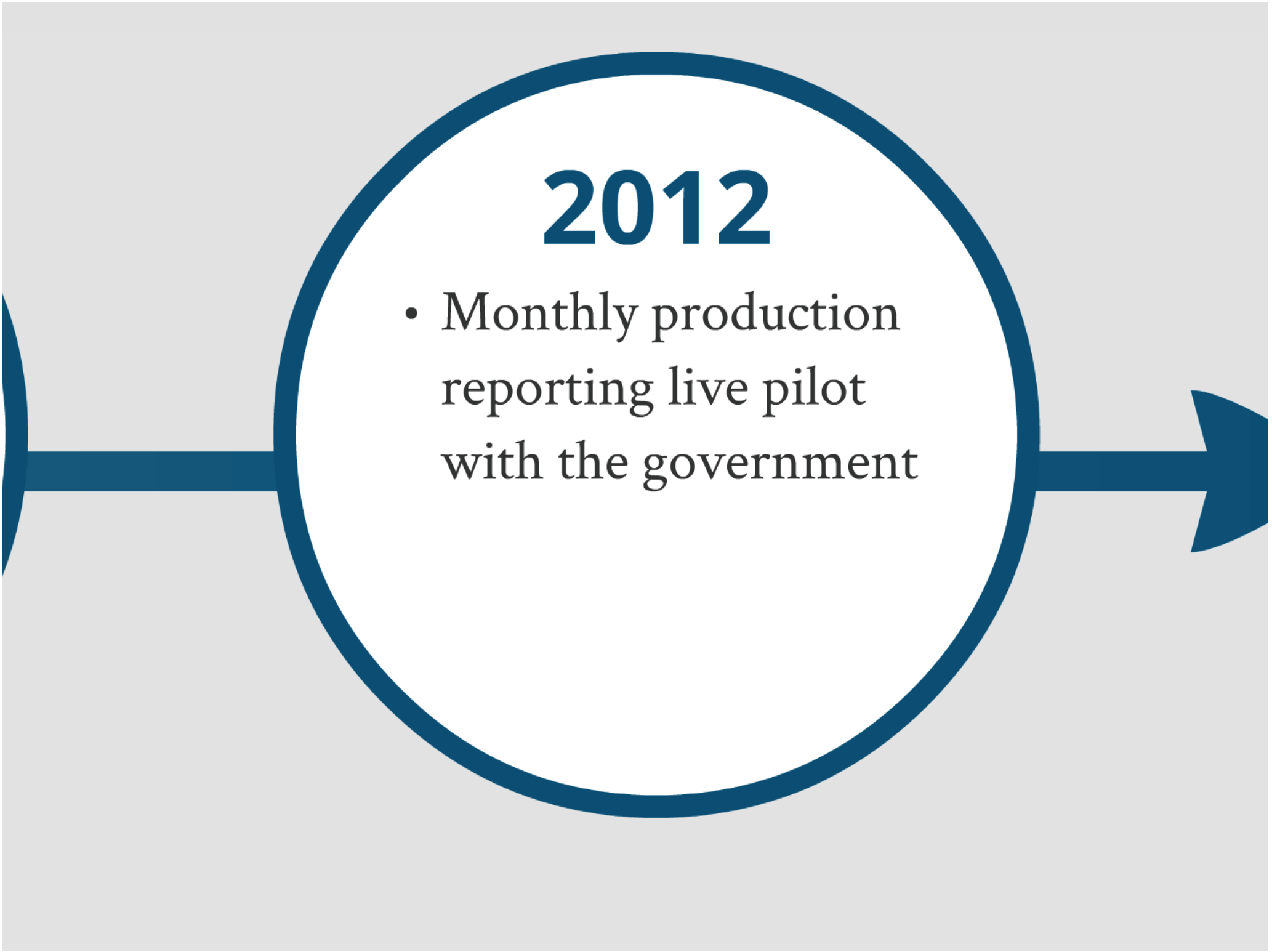
- DPR 1.0 in production
- XML Schema
- Start monthly production reporting Government/Partners

2008

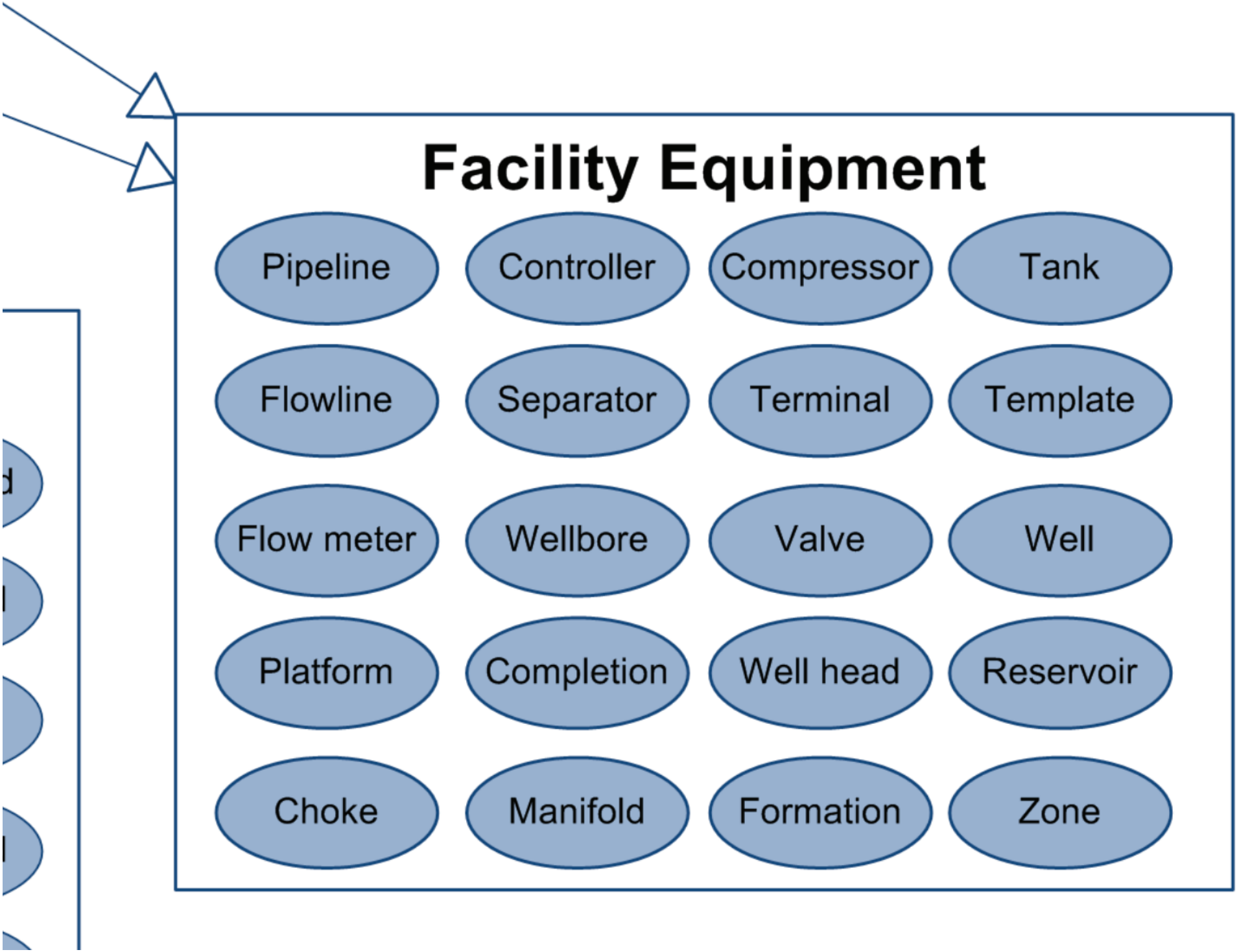
- Monthly production reporting to the government/partners accepted
- Additions mainly in the area of cargo and stock

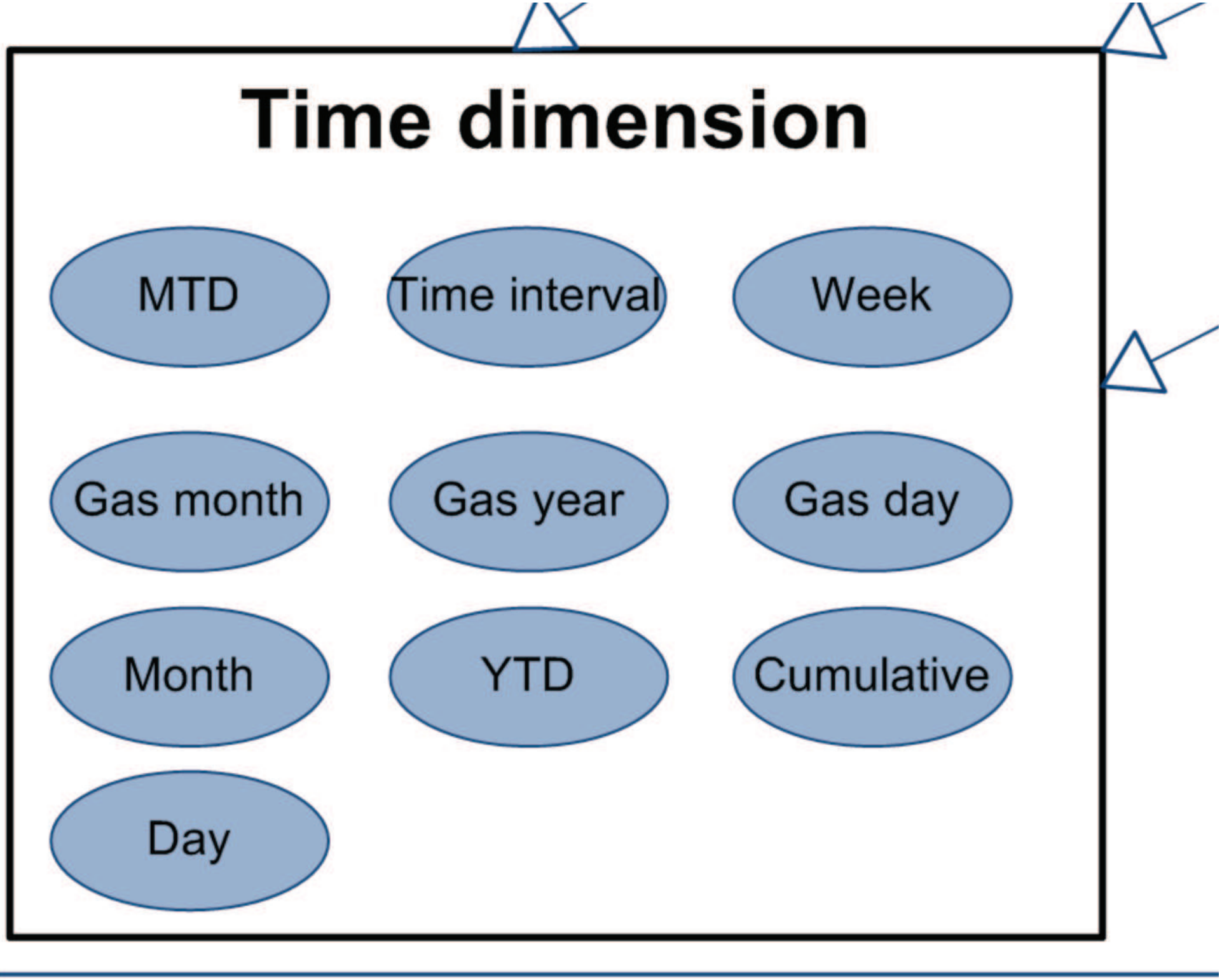
2011

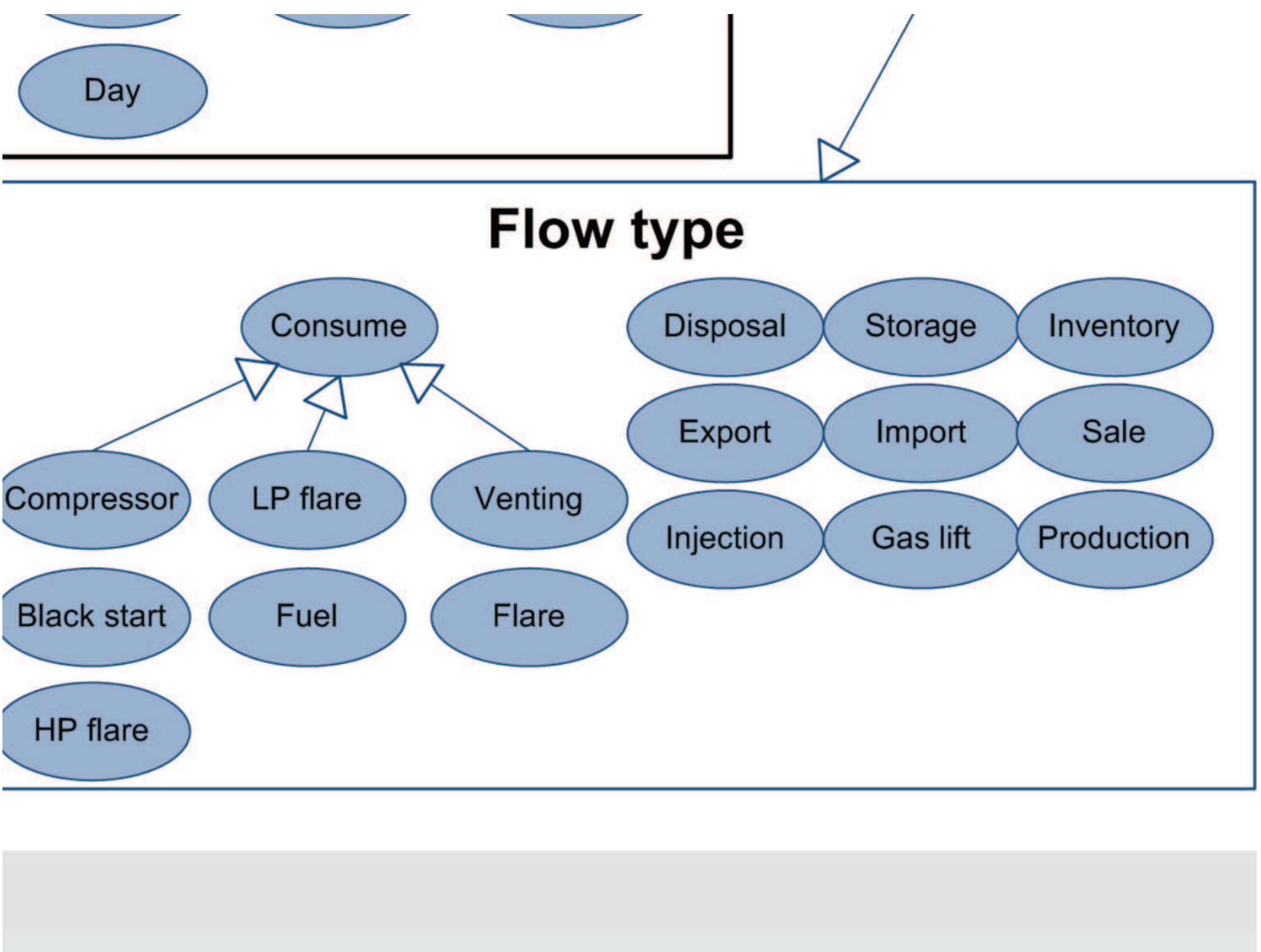
- EPIM ReportingHub initiative

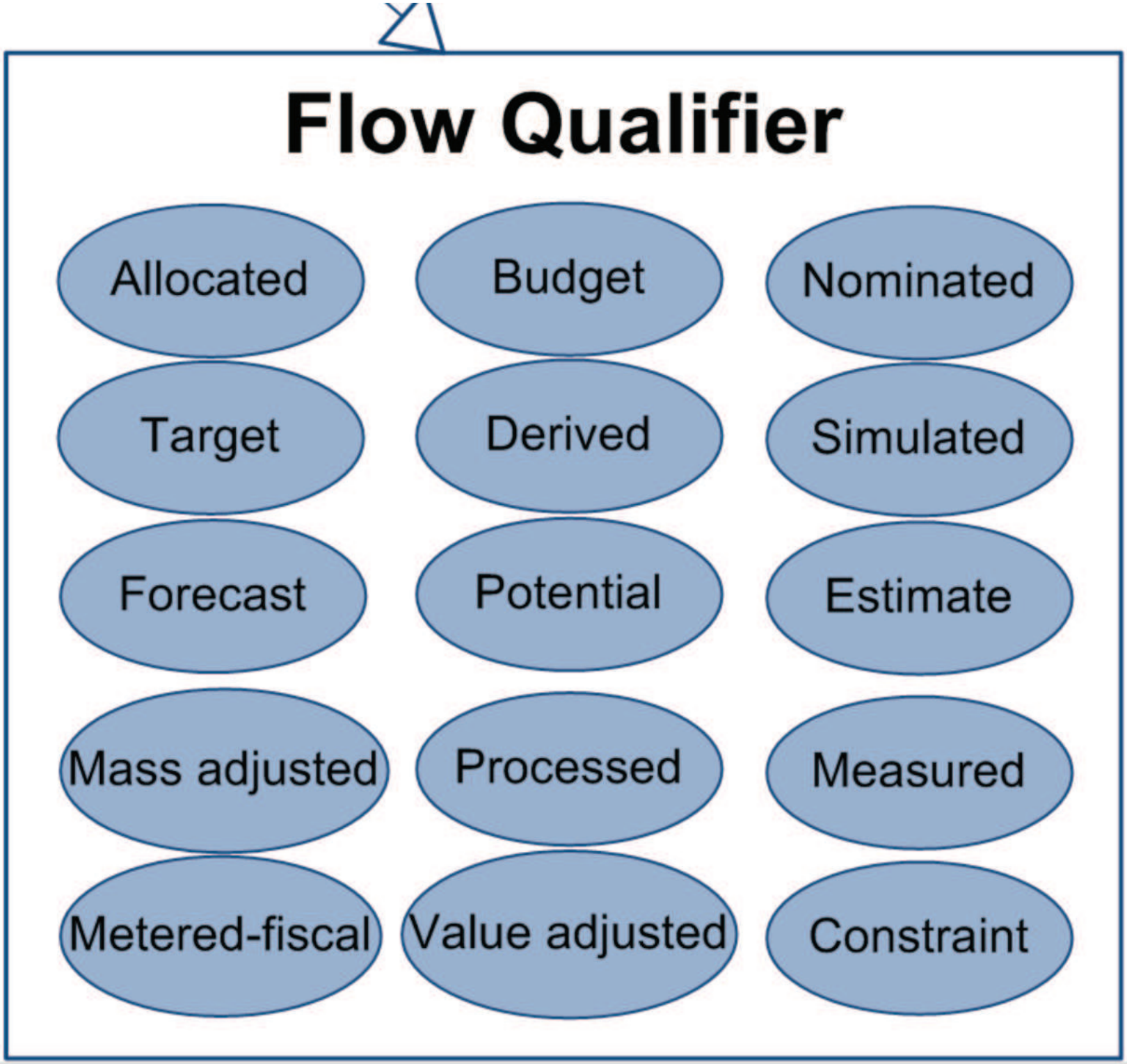

2012
• Monthly production reporting live pilot with the government

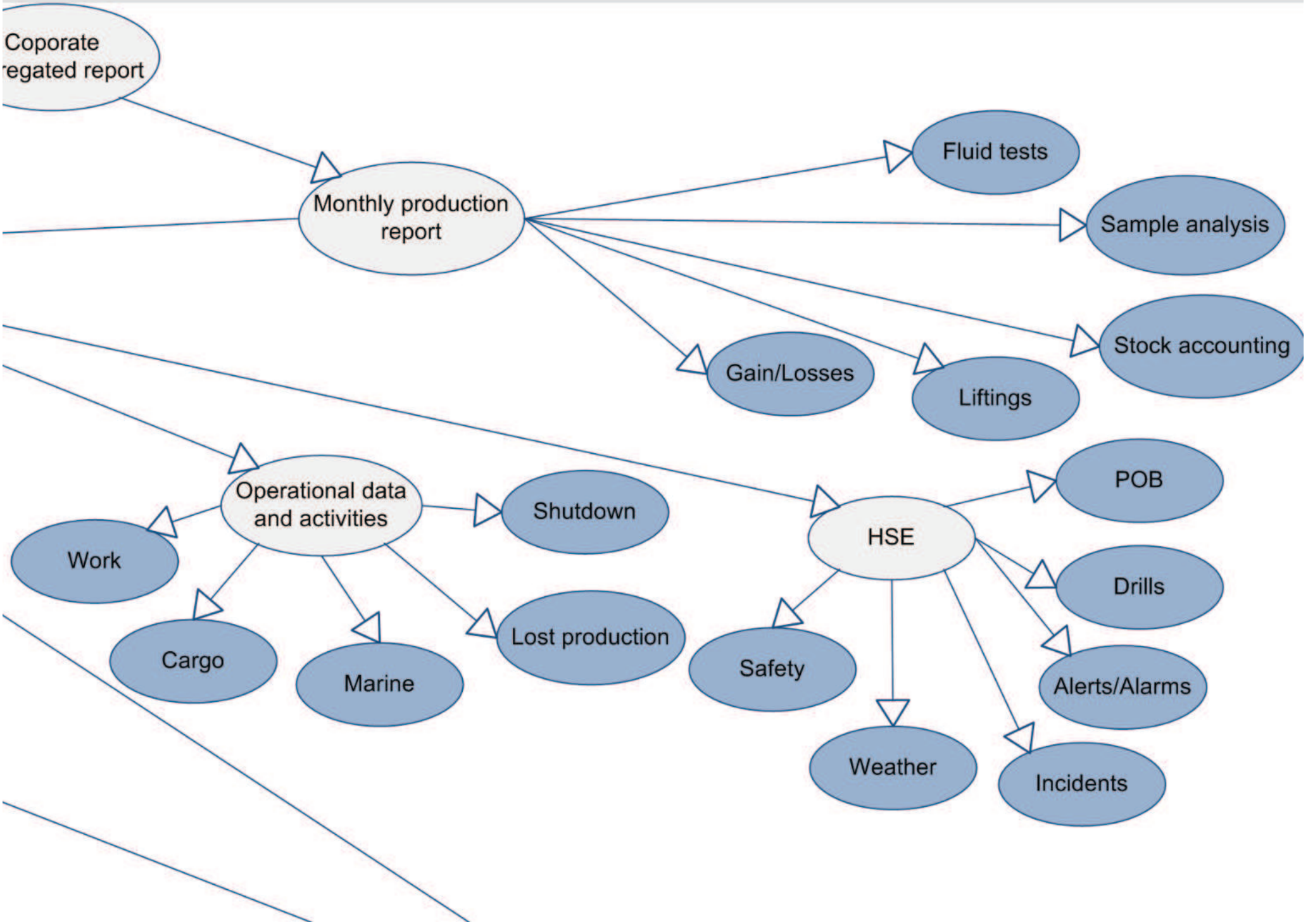
The result

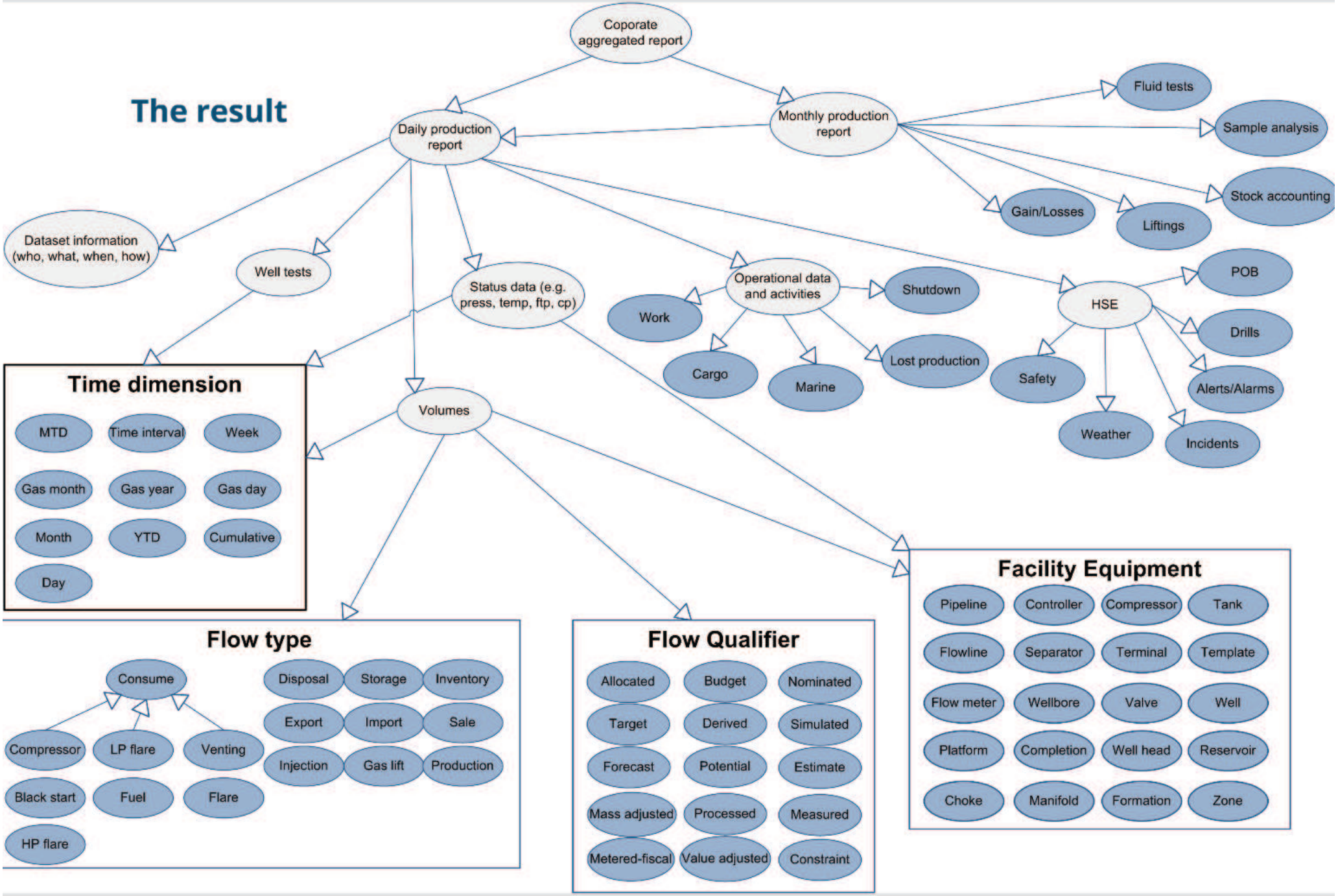

Facility Equipment
Pipeline
Controller
Compressor
Tank
Flowline
Separator
Terminal
Template
Flow meter
Wellbore
Valve
Well
Platform
Completion
Well head
Reservoir
Choke
Manifold
Formation
Zone


Time dimension
MTD
Time interval
Week
Gas month
Gas year
Gas day
Month
YTD
Cumulative
Day


Day
Flow type
Consume
Compressor
LP flare
Venting
Black start
Fuel
Flare
HP flare
Disposal
Storage
Inventory
Export
Import
Sale
Injection
Gas lift
Production


Flow Qualifier
Allocated
Budget
Nominated
Target
Derived
Simulated
Forecast
Potential
Estimate
Mass adjusted
Processed
Measured
Metered-fiscal
Value adjusted
Constraint


Coporate
egated report
Monthly production report
Fluid tests
Sample analysis
Stock accounting
Gain/Losses
Liftings
Operational data and activities
Shutdown
Work
Cargo
Marine
Lost production
HSE
POB
Drills
Safety
Alerts/Alarms
Weather
Incidents


The result
Coporate aggregated report
Daily production report
Monthly production report
Fluid tests
Sample analysis
Stock accounting
Gain/Losses
Liftings
Dataset information (who, what, when, how)
Well tests
Status data (e.g. press, temp, ftp, cp)
Operational data and activities
Work
Shutdown
Cargo
Marine
Lost production
HSE
POB
Drills
Alerts/Alarms
Safety
Weather
Incidents
Time dimension
MTD
Time interval
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Gas month
Gas year
Gas day
Month
YTD
Cumulative
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Storage
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Venting
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Flow meter
Wellbore
Valve
Well
Platform
Completion
Well head
Reservoir
Choke
Manifold
Formation
Zone

Battletest

Battletest -> Challenges

- History - Brown vs green
- Data context
- Manual massaging of data
- Standardization vs new requirements
- I want the same data....
- Identification
- Time and propagation of standard relates to software upgrades
- Physical measurements vs calculated

Benefits

Benefits

- Automation - Integration
- Quality of data
- Timely distribution
- Tracking and control -> drop manual massaging of data
- Free up resources -> Quality people on quality work
- Follow-up -> early detection