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Assisting our customers make informed choices improving their business

Specialist Process Services

Software Development

Digital Operator Support System

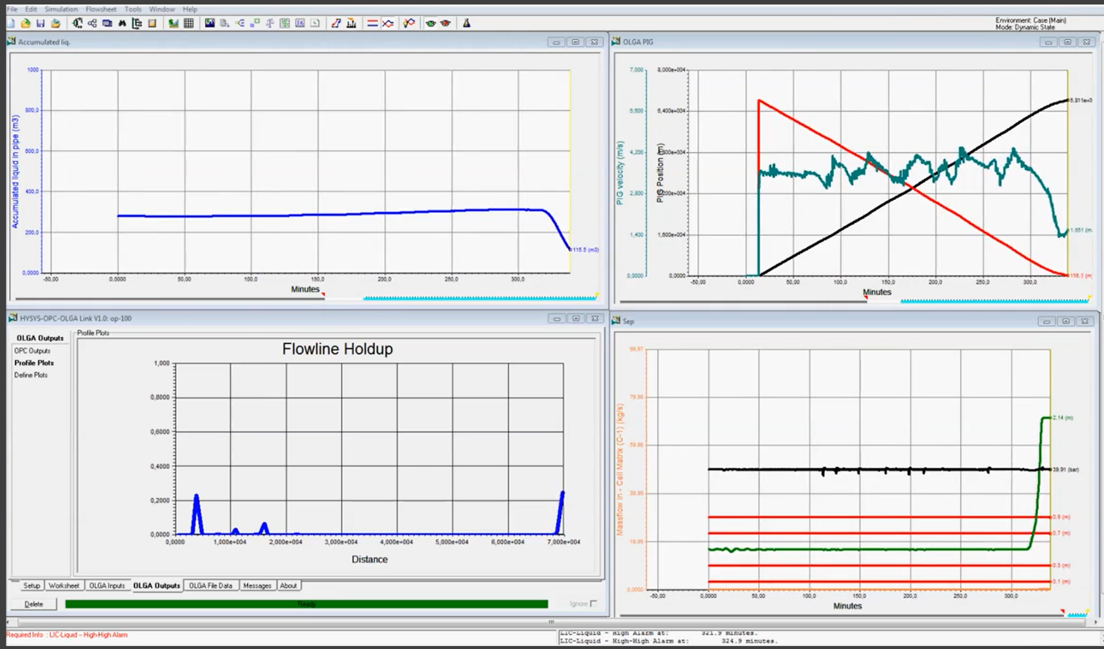
Value Creation by efficient linking of transient OLGA to process simulators

Typical use of linked simulations

Asset operability studies

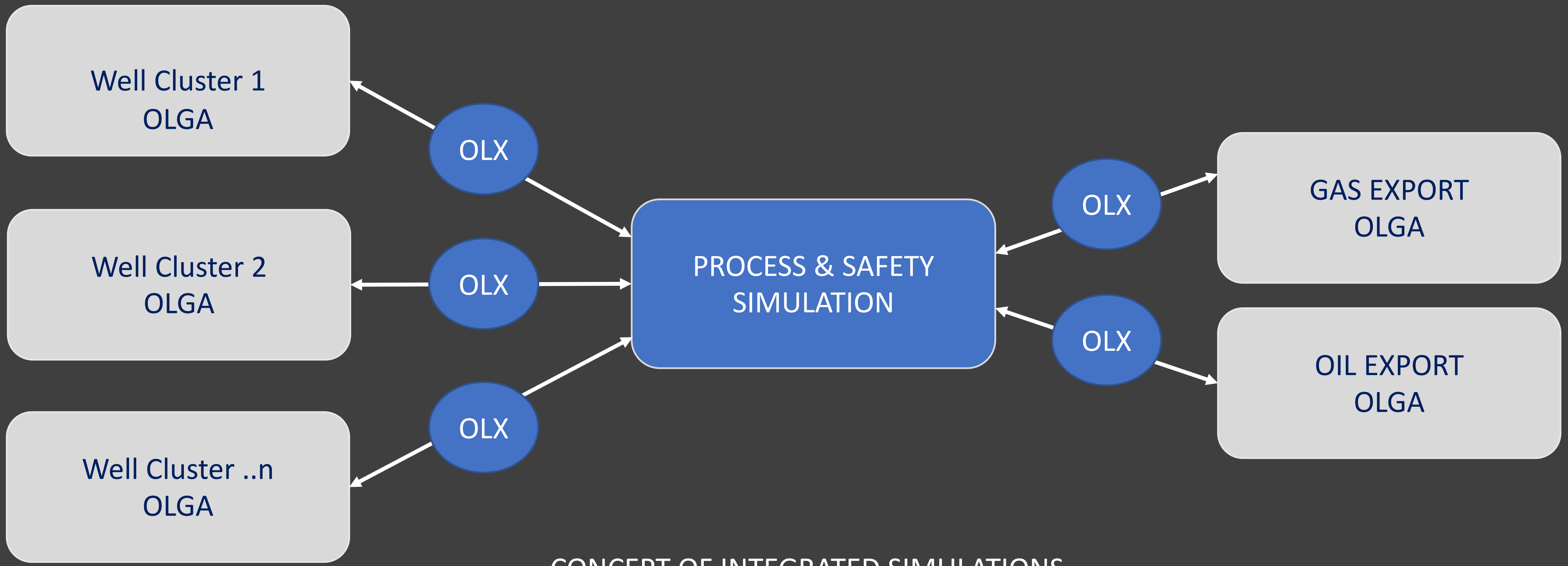
Operator Training Systems

Transient Digital Twins



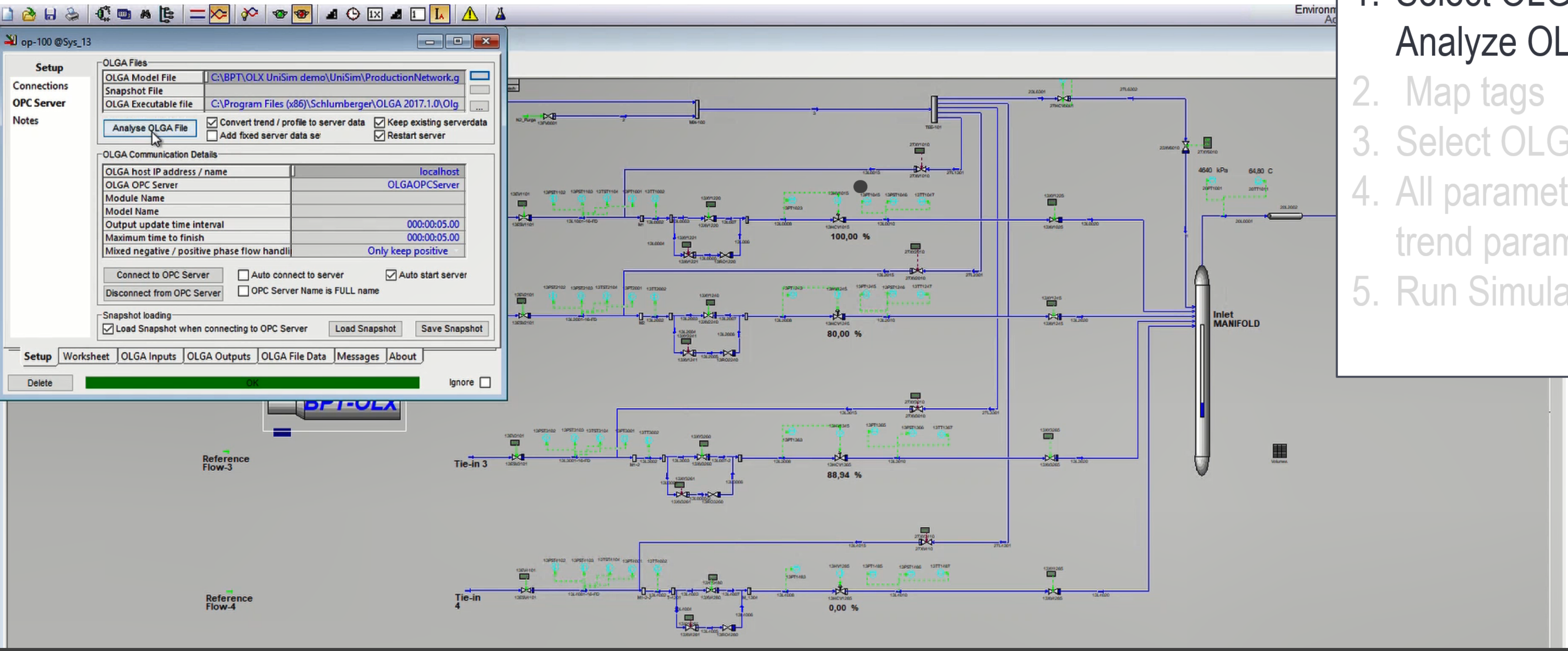
Maximizing asset utilization – Subsea Tie-backs

OLX® Configurations – One or multiple OLGA Servers



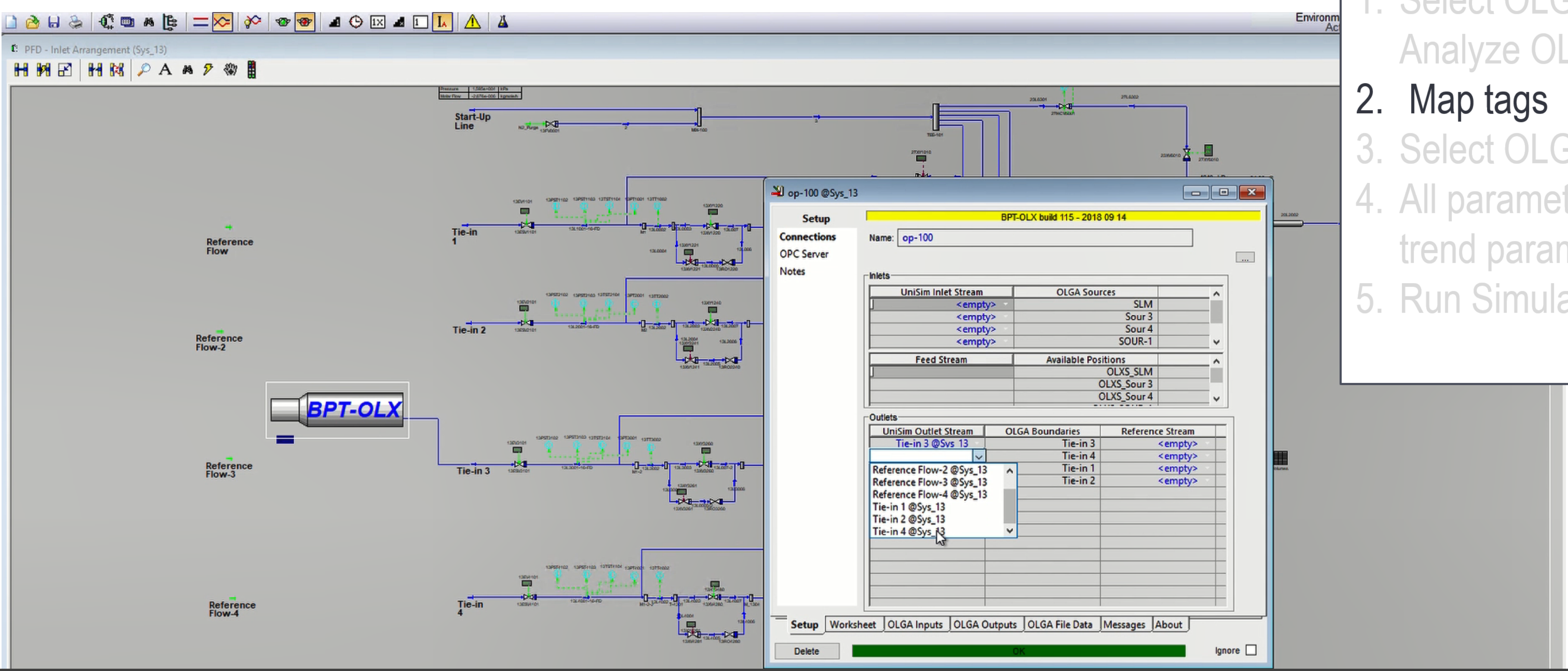
CONCEPT OF INTEGRATED SIMULATIONS

OLX® Linking made simple



1. Select OLGA model file & exe, Analyze OLGA file
2. Map tags
3. Select OLGA parameters to control
4. All parameters available, select trend parameters
5. Run Simulations

OLX® Linking made simple



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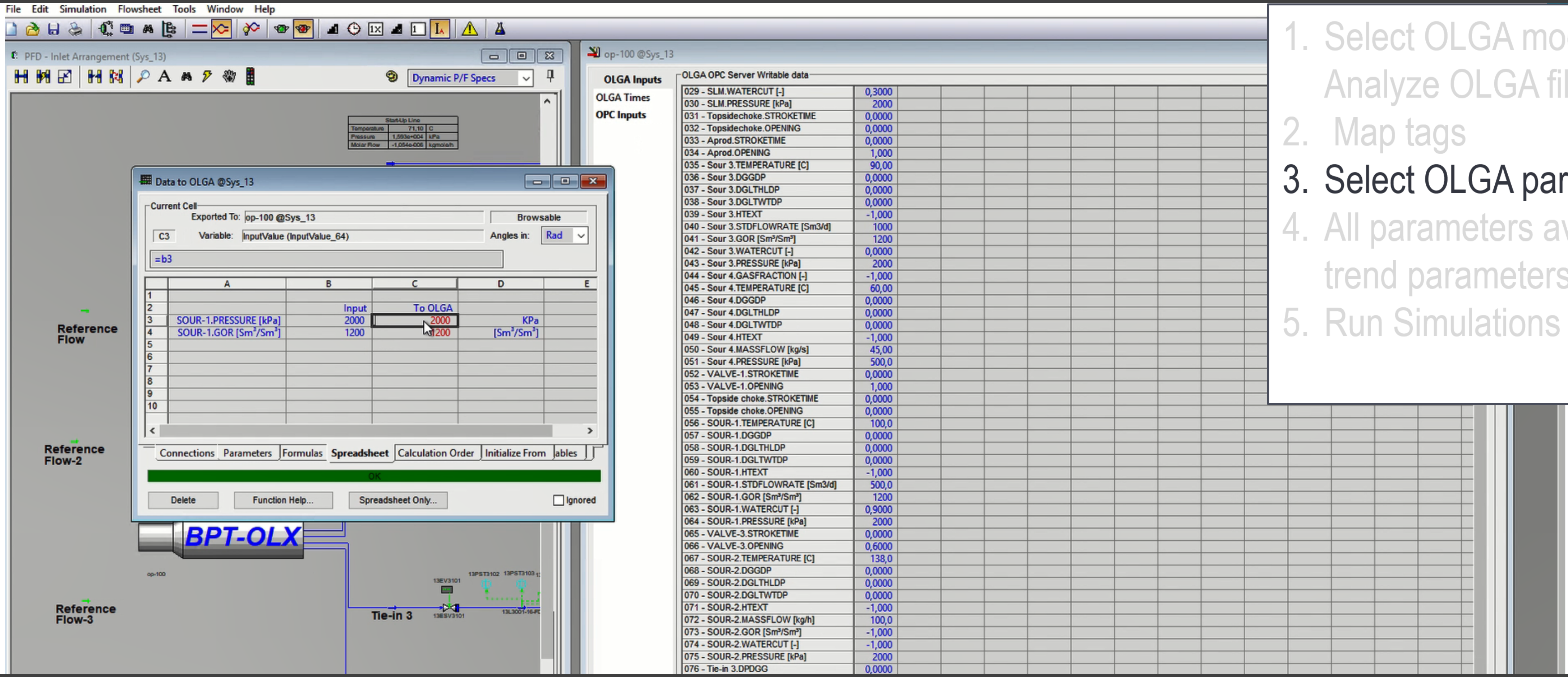

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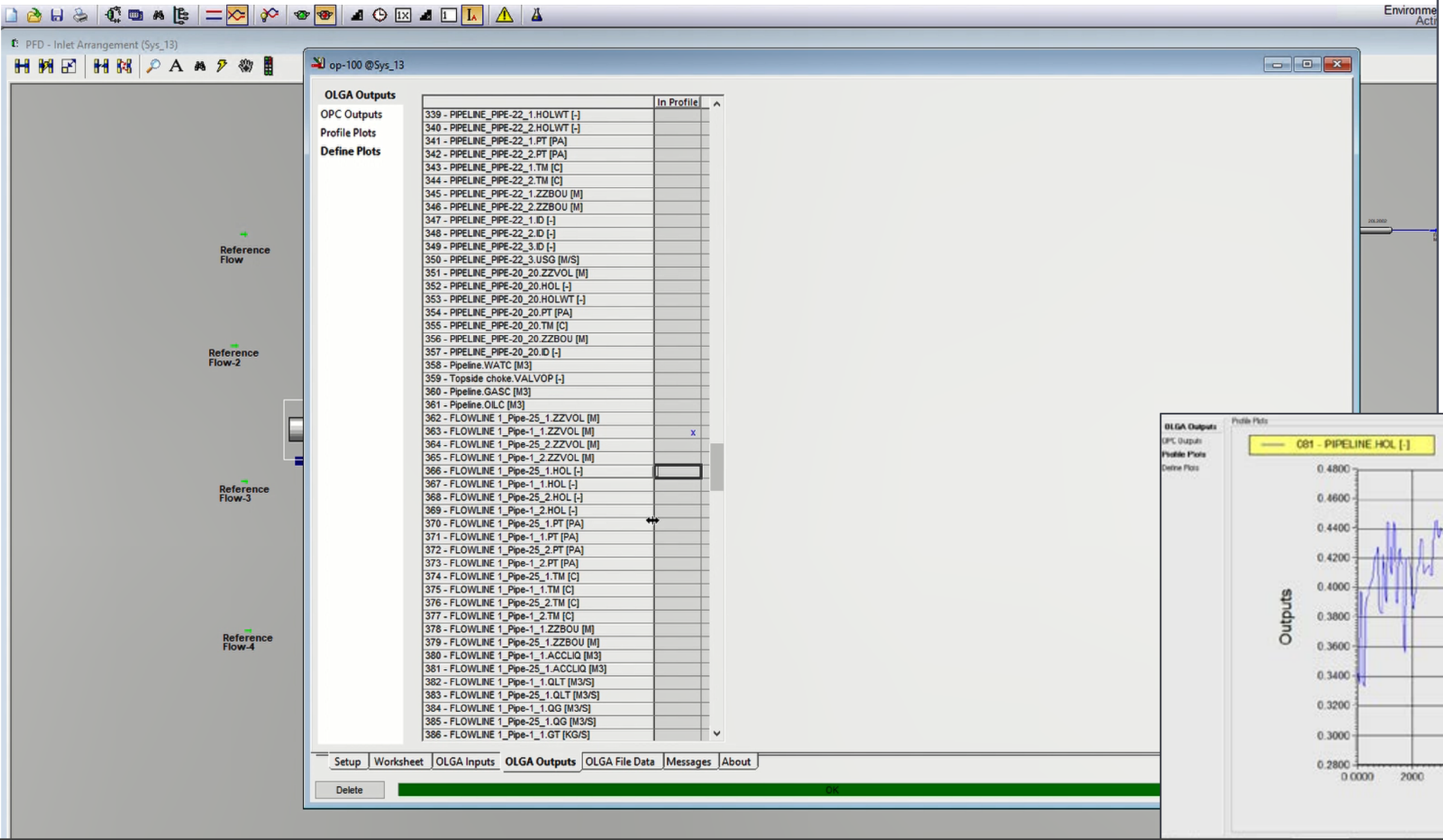

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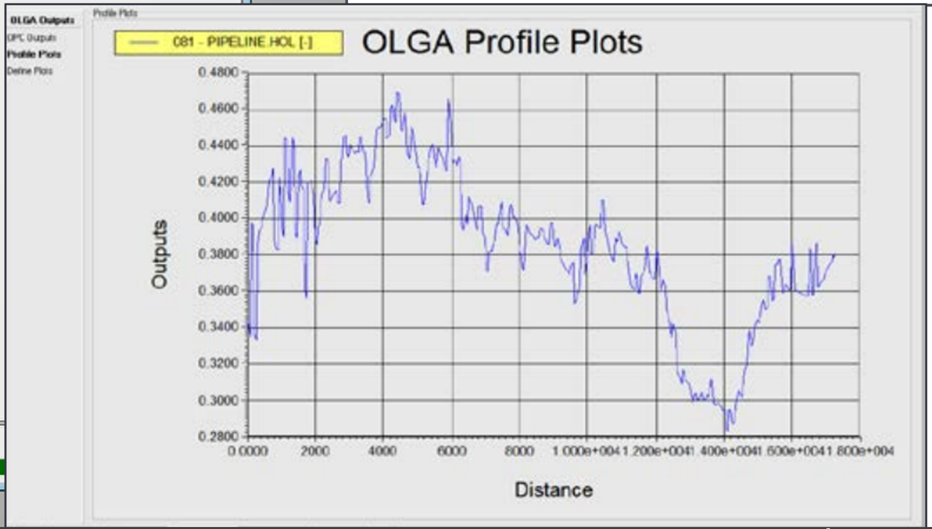
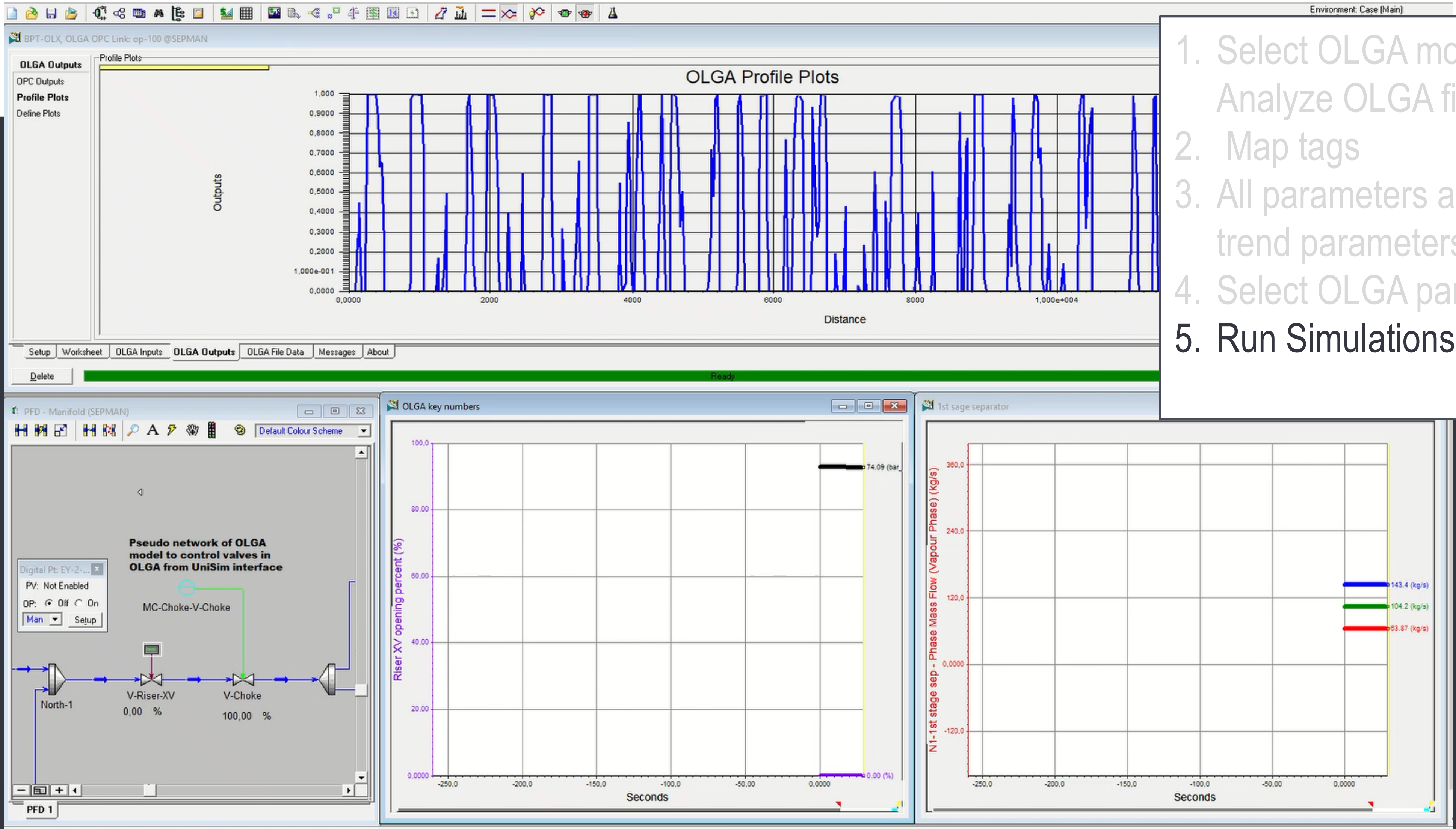


Controlling OLGA through Process Simulator



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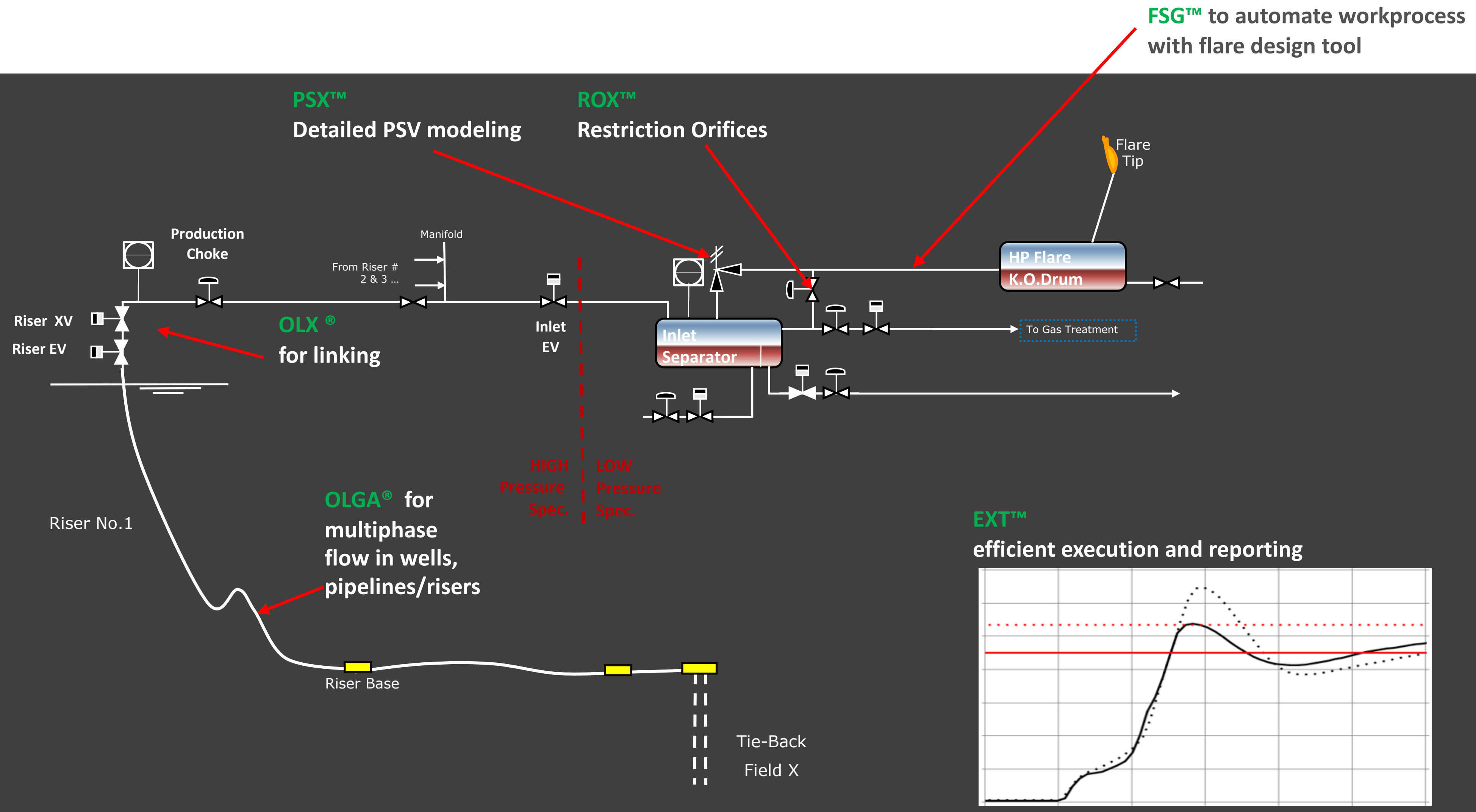
Schlumberger

Typical Subsea Tie-back configuration



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Process Safety Modelling using linked simulations

Consistency between plant, report and prediction tools …"one-to-one" from wells to flare tip

Individual production pipelines modeled

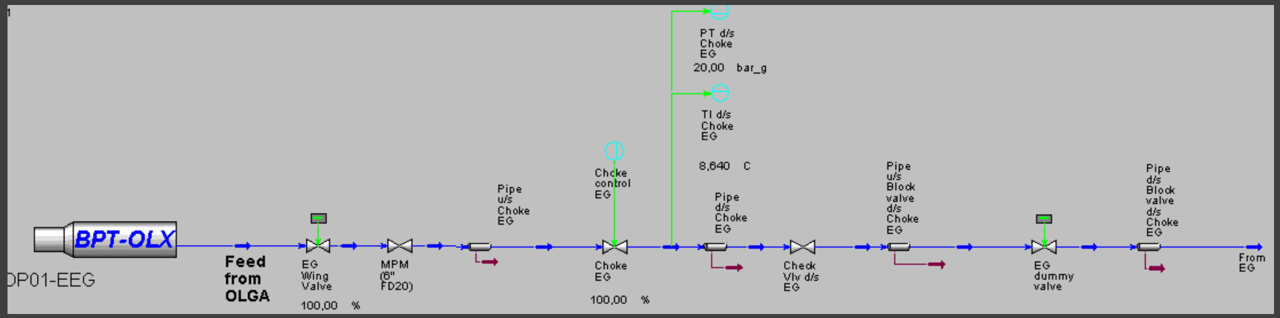
Detailed modeling of Inlet arrangement

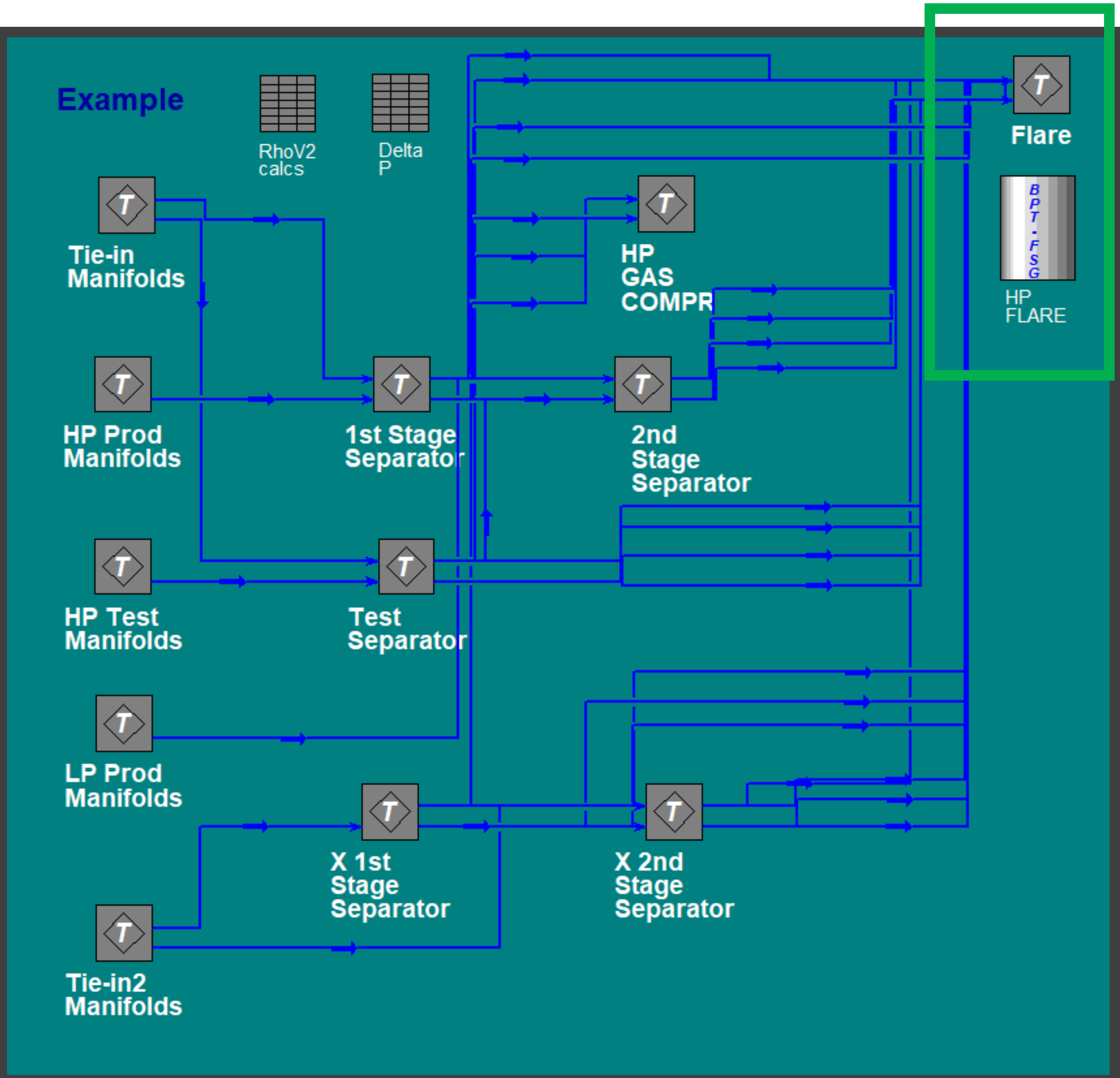
PSV's & RO's individually modeled

PSV tail piping individually modeled

All relevant sources to Flare modeled

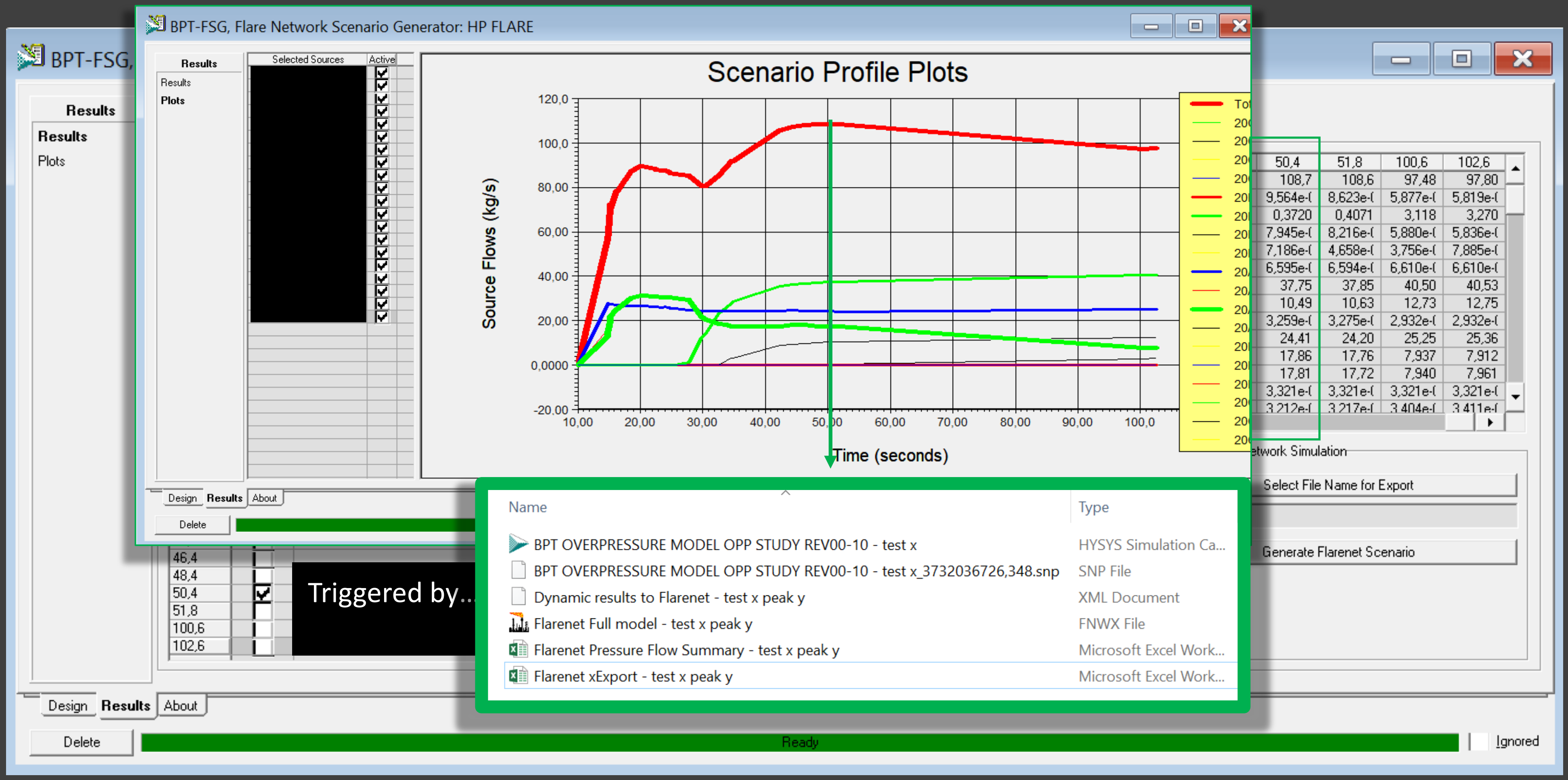
All relevant sources to Flare linked in BPT FSG™



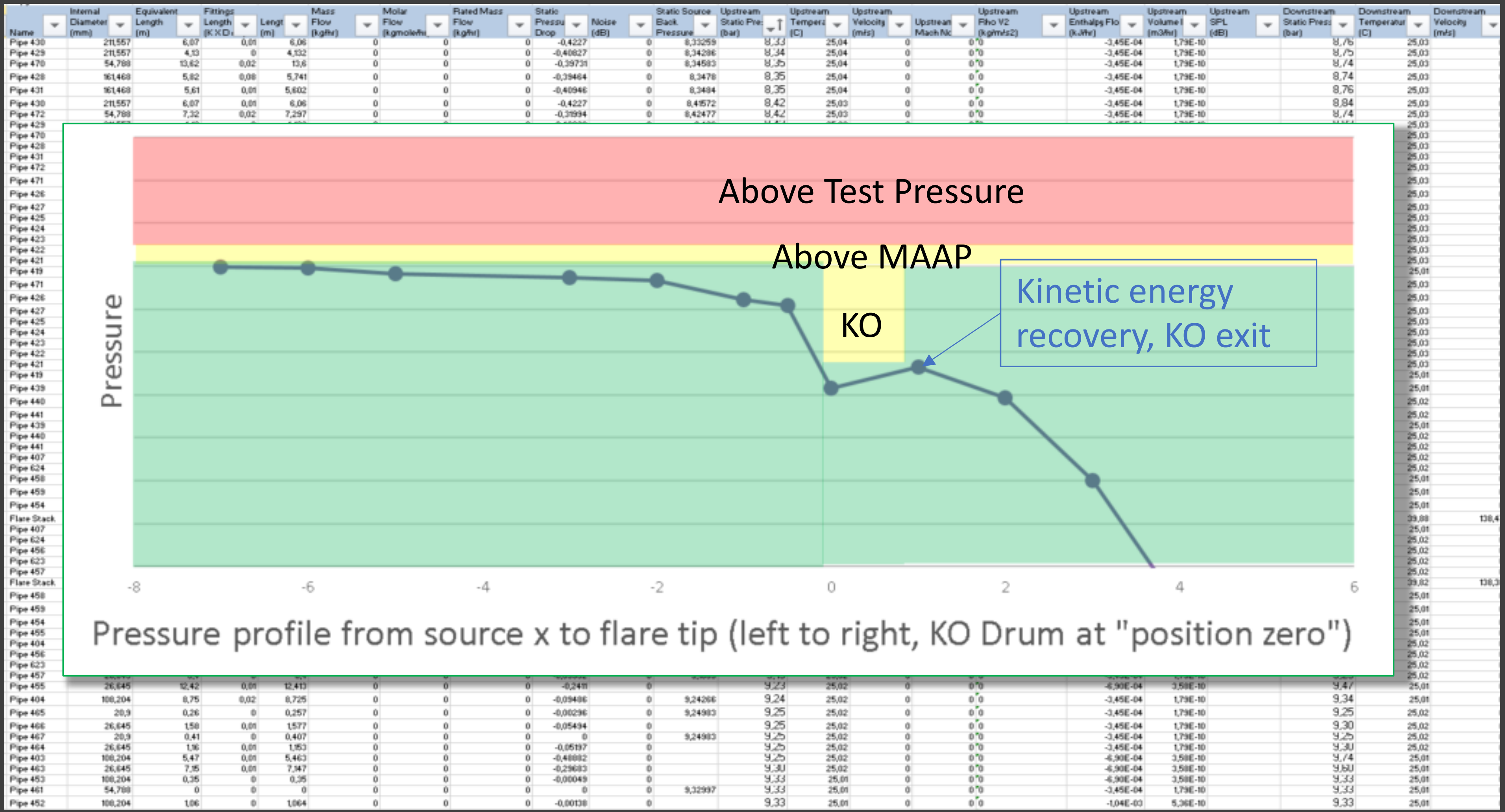


Automated workflow for flare design & verification

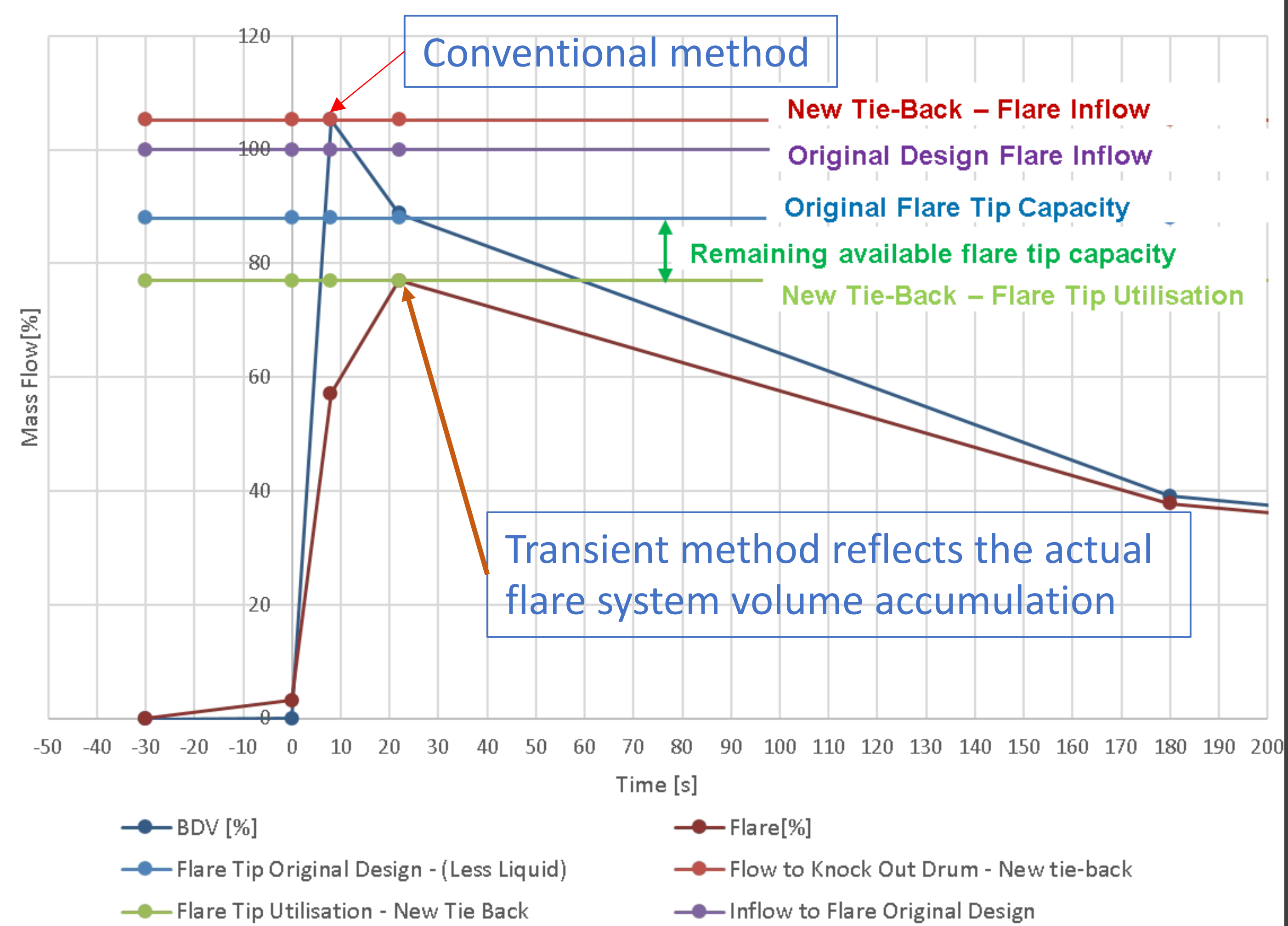
From transient analysis, results are captured and used in the flare design tool for final and verification



Flare design tool results for final verification



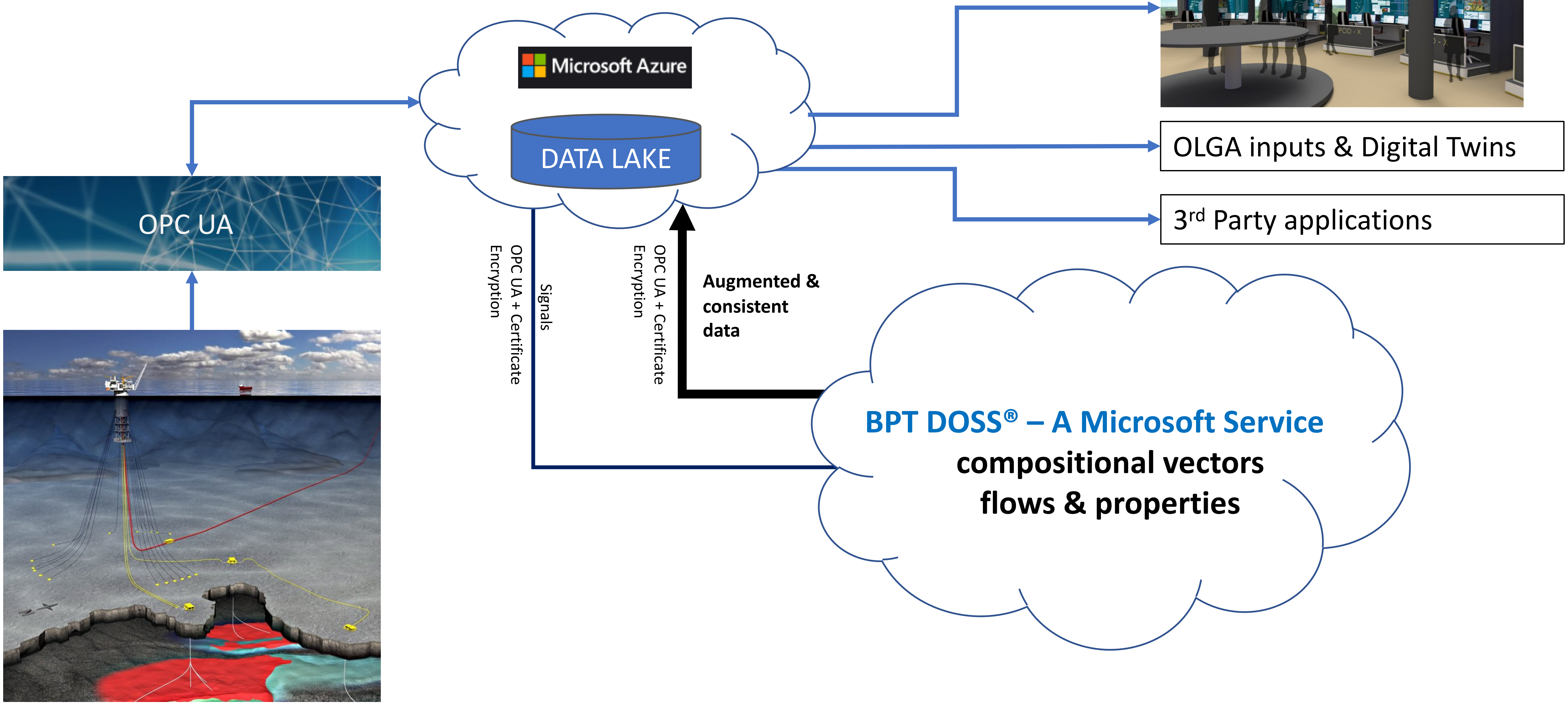
Emergency depressurisation
New tie-back to existing installation



Transient method identifies:

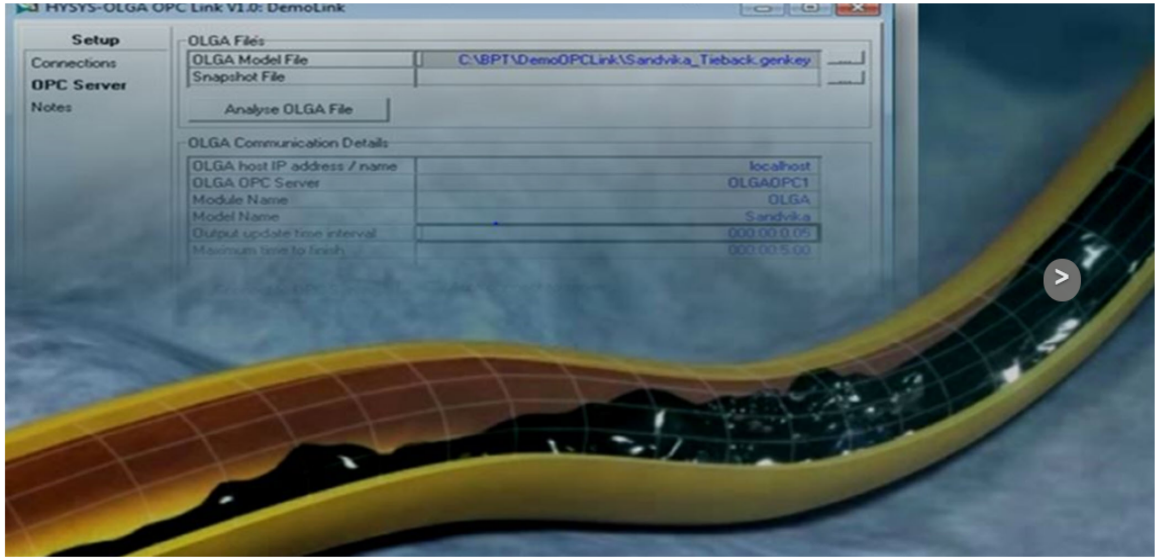
- **10 % remaining capacity in the original flare tip**
- **20 % remaining capacity in the flare system**
- **Peak heat flare radiation and heat release duration the scenario significantly less than installed design**

Interlinked Digital Twins using the Cloud



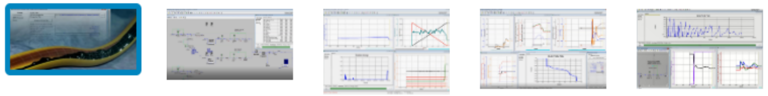
BPT OLX®

By Billington Process Technology AS



OLX

The OLX is developed to link OLGA to transient process simulators



Plug-in Attributes

Platform: OLGA

Domain: Process Safety | Development | Flow Assurance | Production

Challenges: Real-Time Operations | Enhanced Oil Recovery

ECCN: Norway, EAR99

Version

2017 | 2018 | 2019

14Days - Evaluation ▾ Quantity: 1

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Overview

OLX® is the only commercially available Extension Unit Operation that allows seamless integration between OLGA® - Version 7 and later, and dynamic simulations using all Hyprotech heritage simulators. (KBC AT Petro-SIM, Honeywell UniSim Design & Aspen HYSYS)

Specifications

OLX® reduces project risk by enabling evaluation of topside, well or flowline integration at the conceptual stage thus avoiding expensive FEED studies or later rework. OLX® reduces the interface work between flow assurance, process and process safety engineers required during the detailed design phase as the study has been concluded and design completed during FEED. By doing a rigorous integrated simulation the required modification scope can be optimised and a less expensive solution selected. This applies to both new tie-ins as well as modification projects.

Features

- Time saving in use - automatically analyses an OLGA file and suggests the connectivity.
- Provides a visualization of the OLGA, a new insight, during transient simulations.
- Supports automatically initiates snapshots to ensure that the simulator and OLGA® are in consistent states after reloading a model. In this way, various scenarios can be run starting from the identical initial conditions and can easily be compared.

Summary

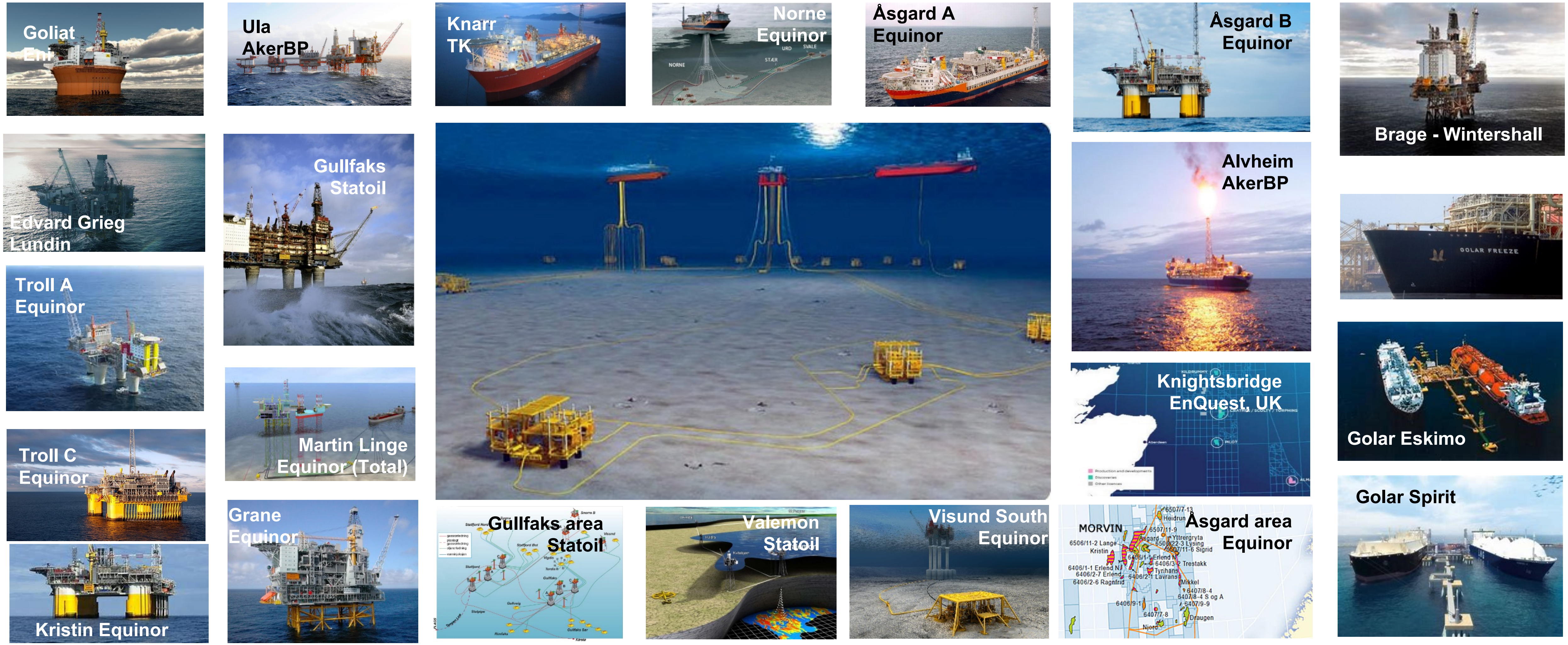
Linked transient simulation maximizes utilization of installed flare capacities

Increased Restriction Orifices may be installed to improve safety

Insulation for equipment protection from heat dissipation may be omitted

Improved Discipline Collaboration - Flow assurance, Process & Process Safety

BPT is building on 20+ Years of Process Optimization Experience on the NCS



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THANK YOU!