New opportunities by digitalization in the Engineering Life Cycle
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2. Digitalization
3. Smart Asset life cycle
4. XSIGHT vision
1. Xsight - new division of SAIPEM

- X - our ability to have a multi-dimensional and multi-faceted view, which looks at the context and broader confines.
- SIGHT – insight, our intuition, our ability to see beyond, our vision.

NEW DIVISION MODEL

- Autonomous Business entities
- The “Project” as a cornerstone
- Closer to the CUSTOMER’s needs
1. XSIGHT - areas of business

**Asset Life Cycle**

- **CONCEIVE**
  - Technology Screening
  - Field Development Plan
  - Concept Definition
  - Consultancy Services

- **ARCHITECT**
  - Project Definition
  - Basic Design
  - Licensing

- **DEVELOP**
  - Front End
  - Eng. Services

- **ENHANCE**
  - Life cycle extension
  - Upgrade
  - Brownfileld modifications
  - Decommissioning
  - Environmental Remediation

**Innovative and digitalized technological solutions**
1. XSIGHT - new division of SAIPEM
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3. Smart Asset life cycle
4. XSIGHT vision
2. Digitalization - Context: crisis since 2014

INCREASING CAPITAL INTENSITY

INCREASING LABOUR INTENSITY

ANNUAL DEMAND GROWTH BY SOURCE

Source: BP 2017
*Included biofuels
2. - Digitalization - Transformative innovation

**Short period**
driven by PROJECTS
Cost reductions

**Med/Long period**
driven by MACRO-SCENARIOS
Create new business models

**WHAT WE DID?**

- **Organization**
- **Processes**
- **People**

**DIGITAL TRANSFORMATION**
- increase *productivity*
- offer new *value* propositions
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3. Digital asset life cycle

Smart Asset Life Cycle

- Project Definition
  - Collaborative Ecosystem
  - Integrated Design
- Advanced Analytics
  - Predictive Maintenance
  - Cognitive Computing
3. Smart Asset life cycle – Project Definition

- Smart Supply Chain
- SMART Objects
- Common Data Environment
- Requirements Management
- Integrated Design
- Data Quality Management

PROJECT DEFINITION
Then, let’s change the angle of perspective.

From **documental centric** to **data centric** design approach

Deliverables are obtained as print-outs of engineered smart objects, **data models**.
Engineers move the right book (attributes) in the right shelf (data model) for each smart object to cover each individual step of the project lifecycle.
3. Digital asset life cycle - Smart Object in Integrated design

Contract Requirements

Simulation A03

H&MB

SmartObjects Requirements

Stream A01 Stream A02

Overall Properties
Phase
Temperature
Pressure
Component
Nitrogen
CO2
H2S
Methane

Vessel Separator 700-V-111-ABC

Stream A03

Overall Properties
Phase
Temperature
Pressure
Component
Nitrogen
CO2
H2S
Methane

SMART OBJECT

Data orchestration & reporting view

Plant Stream A01 A02

Equipment Instrument Cabinet

2D Draft

XSIGHT Object Physical Library
Heat Exchanger

Plate HE Attr.Group Characteristics

VESSEL Attr.Group Characteristics (CFIHOS)

MARKET

Program Plant PLANT

Vessel Separator 3D definition

Meccanization

Spec. definition

Carbon Vessel

CAD

AUTOMATION INSTRUMENTATION SUMMIT 2018

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4. XSIIGHT vision – Why many failed?

Only less 10% of the Companies which have undertaken a digital transformation report to have eventually obtained the expected results. (source: McKinsey’s Digital Global Survey, December 2016).
4. XSIGHT vision – How to make it?

For good ideas and true innovation, you need human, interaction, conflict, argument, debate and…
4. XSIGHT vision - Conclusions

“In the new world, it is not the big fish which eats the small fish, it’s the fast fish which eats the slow fish.”

*Klaus Schwab, Founder and Executive Chairman of the World Economic Forum*
Thank you

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Simplicity is complexity resolved