

The role and benefits of Digital Twins

Kenwer, Hexagon



Application software partner

The role and benefits of Digital Twins

How to Quickly Reduce Risk, Increase Efficiency and Meet Compliance



Hexagon Company Overview

Adrian Park, VP Pre-Sales EMIA
Hexagon PPM

Hexagon at a Glance



Technology Solutions Provider

- Established leader in **information technologies**
- Solutions drive **productivity** and **quality** improvements



R&D Focused

- **10-12%** of net sales invested in R&D
- **3,800+** employees in R&D
- **3,700+** active patents



Global Reach

- Broad range of **vital industries** served
- More than **20,000** employees in **60** countries



Strong Financials

- **3.8 bn EUR** in sales
- **25% operating** margin





The Digital Twin concept



Visualization & Analytics

Facility
Configuration

Transactional
Data

Realtime data

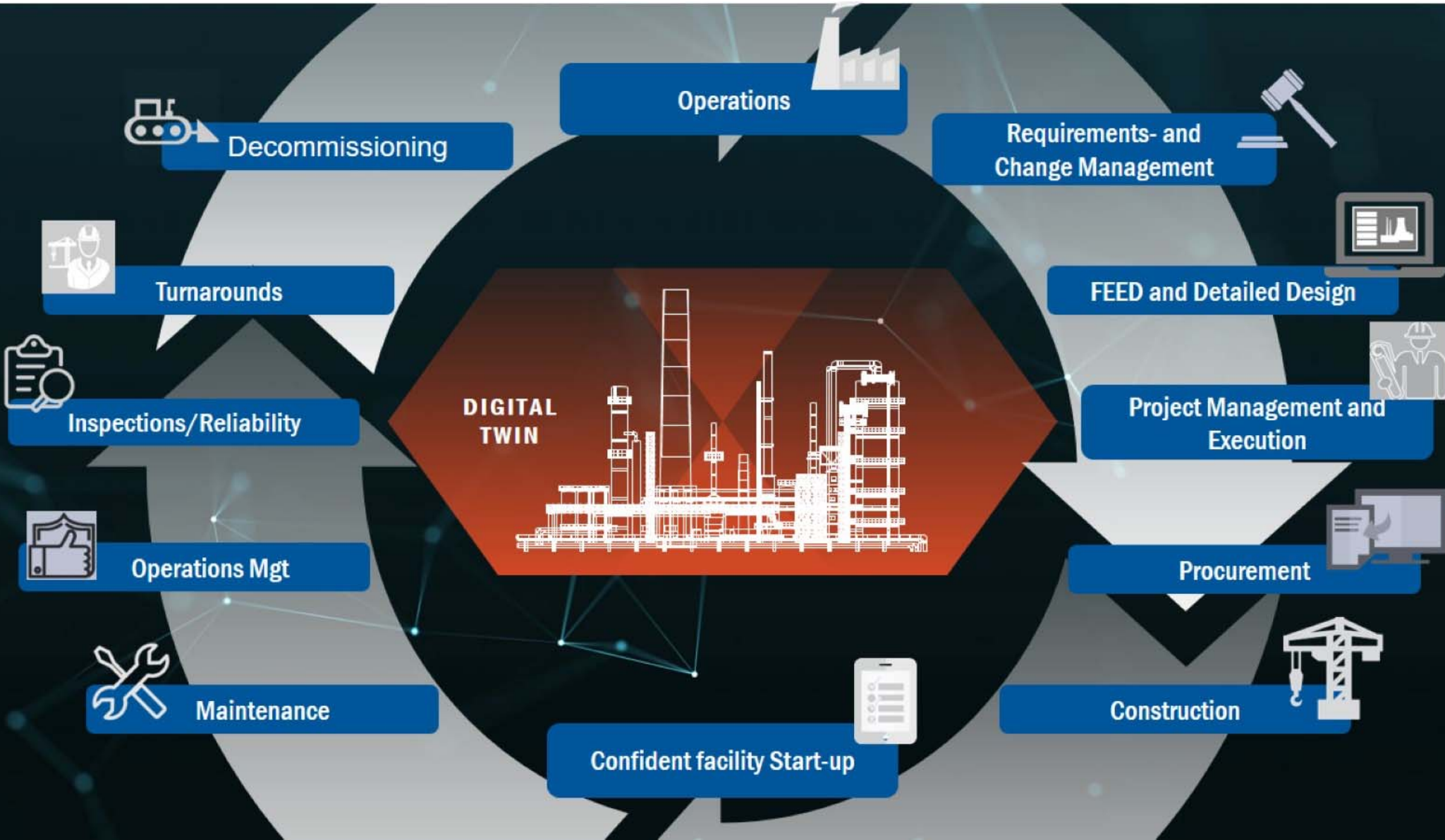
Process
Simulation

Geospatial data

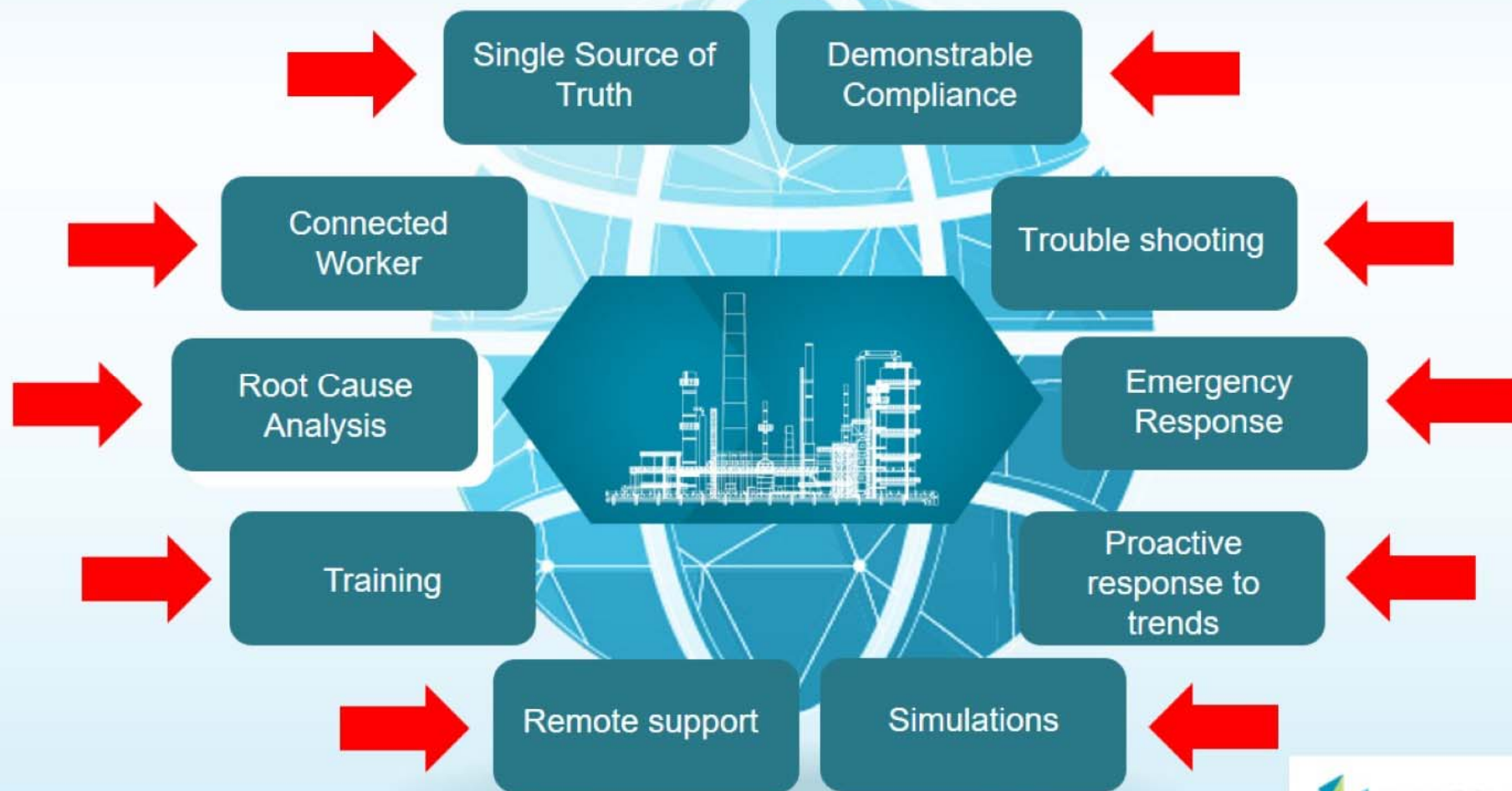
Time series data



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So, Why do you need a Digital Twin?





How Hexagon supports Digital Twin concepts

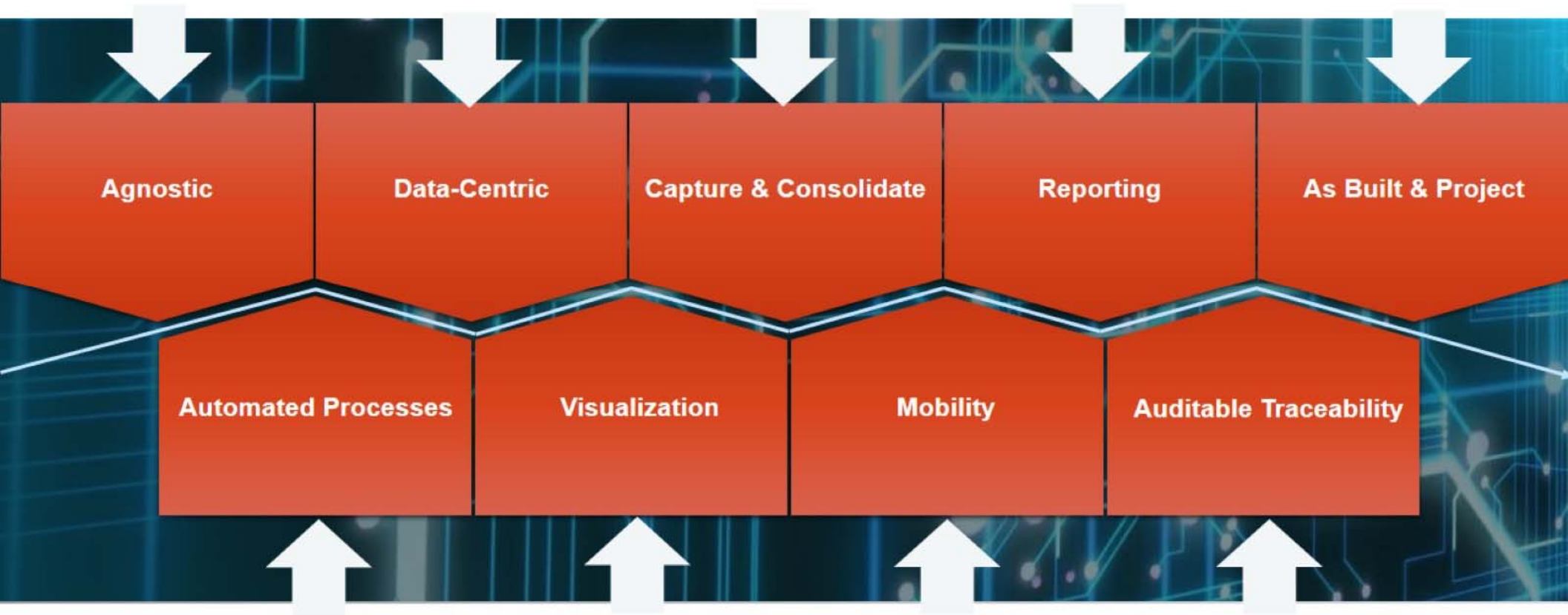
Hans Kouwer, Director Industry Consulting EMIA
Hexagon PPM



A Digital Twin to Manage the entire Asset Lifecycle



Hexagon's Digital Twin Solution



sdxdemoemia - Overview - Micr... | Intergraph Authorization Server | SDx Web Client

sdxma.devdemo.hexagonppm.com/sdx/#/infomap-viewer;obid=6FTC000A;config=%5B%5C%22PL_PDA-PO%5D

Apper | Importert fra Intern... | Innstillinger | Hexagon PPM Price... | SDx | My Dashboard | Sal...

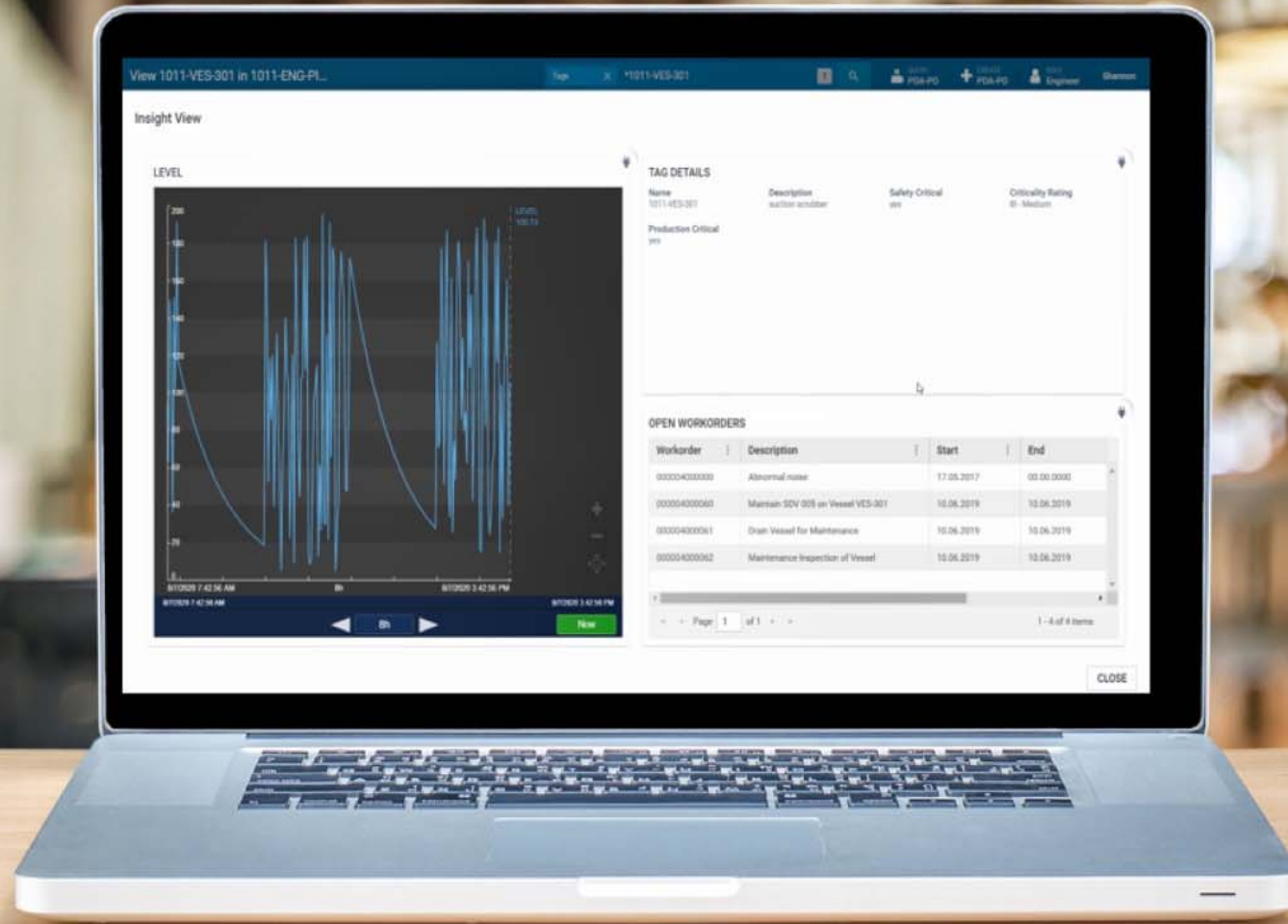
Info Map

Tags 1011-v* 16 QUERY PDA-PO CREATE PDA-PO ROLE 3 Selected Shannon

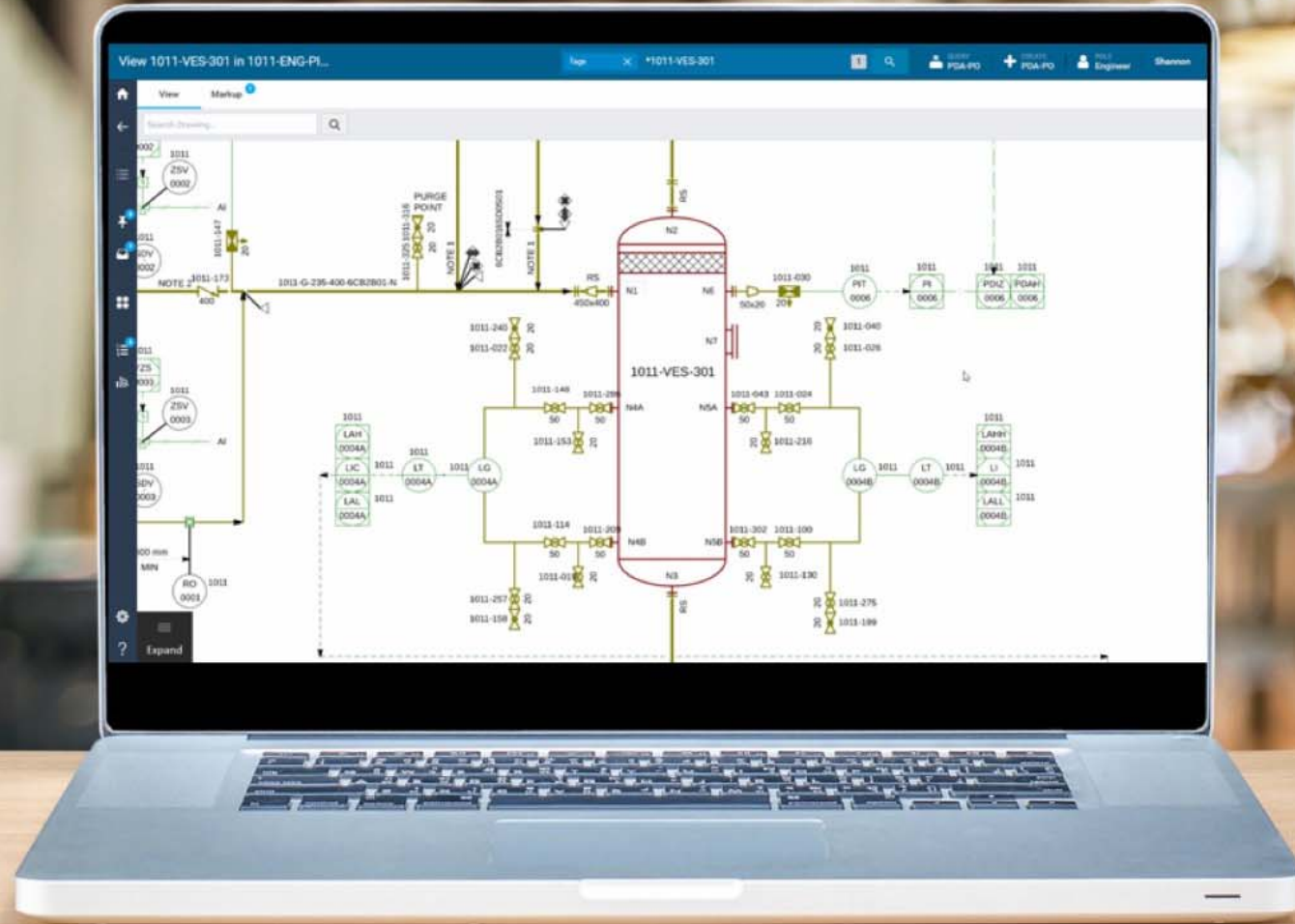
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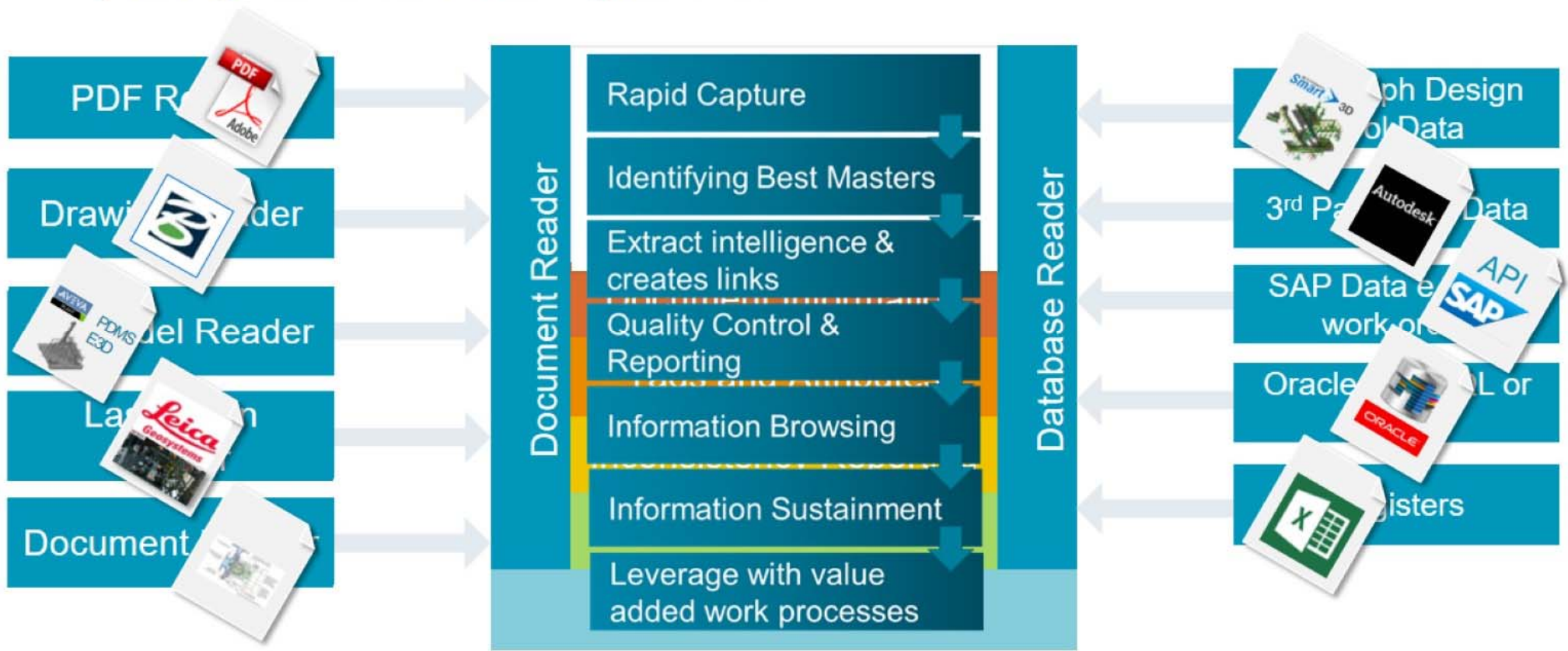
Dashboards



Dashboards



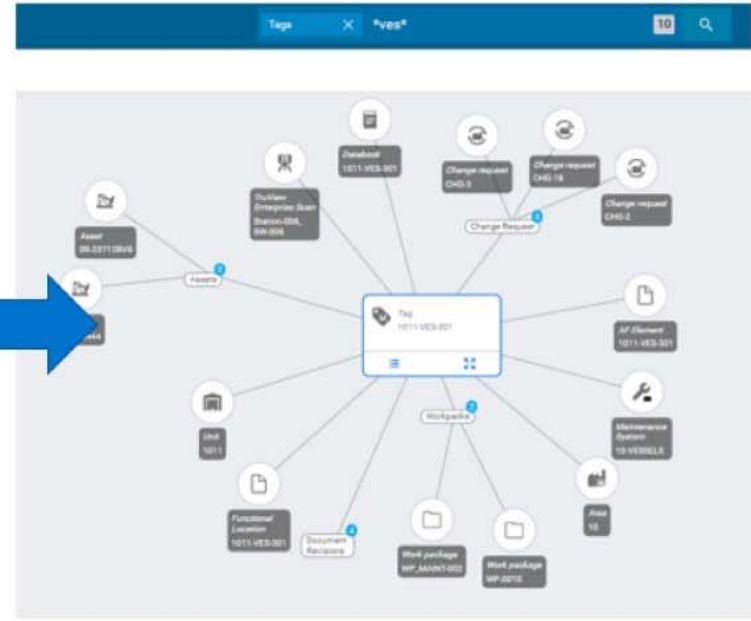
Capturing the Brownfield Digital Twin



Create the Digital Twin



- Rapid Capture
- Identifying Best Masters
- Extract intelligence & creates links
- Quality Control & Reporting
- Information Browsing
- Information Sustainment
- Leverage with value added work processes



Quality Control and reporting

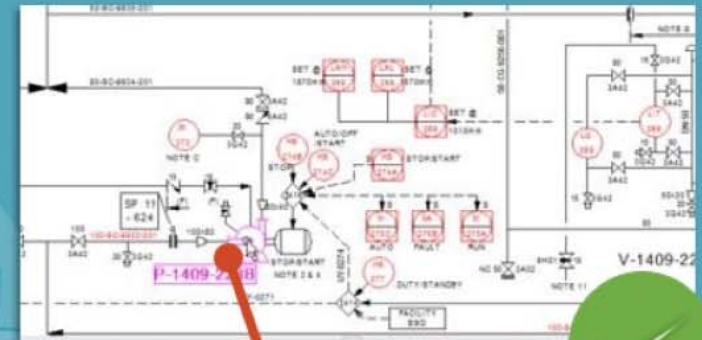
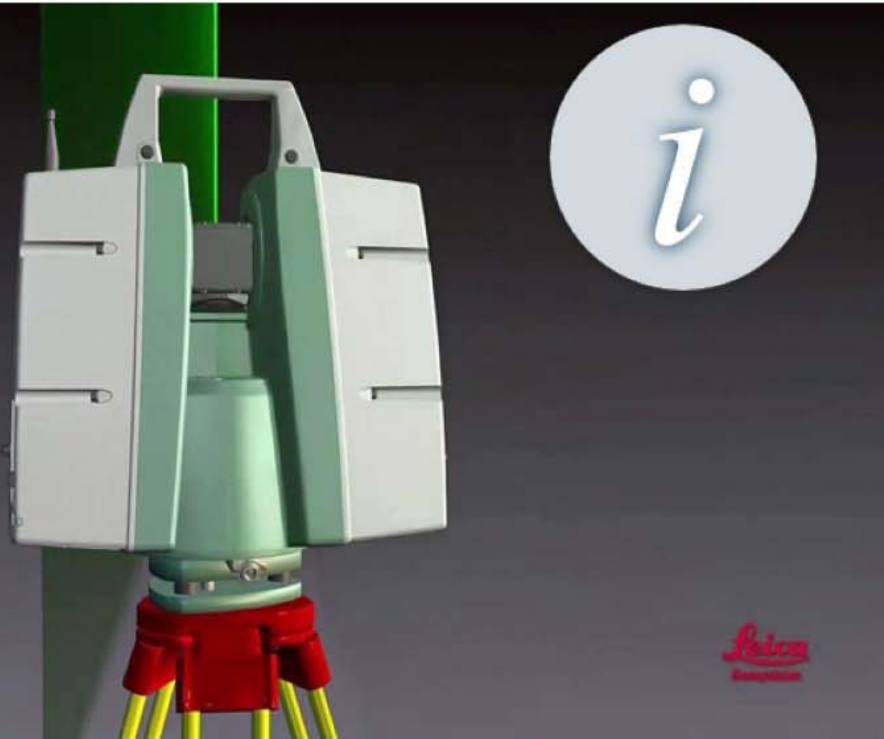


TAG COMPLETENESS REPORT

Tag Information							
Name	Description	XC	CFT	MA	DS	3D Model	CA
409-E-130B	Exchanger	✗	✗	✗	✗	✗	
409-P-221	WASH COLUMN PUM	✓	✗	✗	✗	✗	✗
409-E-224	Exchanger	✓	✓	✗	✗	✗	
409-F-445A	Furnace	✗	✗	✓	✗	✗	
409-E-227C	Exchanger	✓	✗	✗	✗	✗	
409-E-226A	Exchanger	✓	✗	✗	✗	✗	
409-P-227A	Pump	✓	✗	✗	✗	✗	✗
409-V-227	Vessel	✓	✓	✓	✗	✗	
409-P-222	WASH COLUMN PUM	✓	✗	✗	✗	✗	✗
409-P-801C	Pump	✓	✗	✗	✗	✗	✗
409-P-422	Pump	✓	✗	✗	✗	✗	✗
802-80-PV-003	Vertical Pump	✓	✗	✗	✗	✗	✗
409-P-426A	Pump	✓	✗	✓	✗	✗	✗
409-F-221	Furnace	✓	✗	✓	✓	✗	
07-25-PV-003	Vertical Pump	✓	✗	✗	✗	✗	✗
09-V-224	DEETHANISER COLUM	✓	✓	✓	✓	✗	



Reality Capture



Leica High Definition survey
Geosystems

HEXAGON + **OSIsoft.**
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Situational Awareness

Situational Awareness



Engineering Data
Real-time Data
Geospatial Data
Analysis



Insightful Construction and Operations



Efficient support +
Safer Workplace

Situational Awareness demonstration

Applying Situational Awareness in O&M

Plant Information, Geospatial, Scans, Real-Time Data Feeds, Live Cameras

Permitting

Operating Limits

Hazardous Materials

Abnormal Situations

Operator Rounds

Location Management

Outage Planning

Risk Management

Emergency Response

Routing and Mapping

Safety Devices

Auditing

Any Questions?

Thank you

謝謝
 DZIĘKUJĘ CI
 NGIYABONGA
 TEŞEKKÜR EDERİM
 DANKIE
 TERIMA KASIH
 СПАСИБО
 GRAZIE
 МАХАДСАНИД
 GO RAIBH MAITH AGAT
 БЛАГОДАРЯ
 GRACIAS
 ТИ БЛАГОДАРАМ
 TAK DANKE
 RAHMAT
 HATUR NUHUN
 PAXMAT САГА
 CÁM ƠN BẠN
 WAZVIITA
 TAPADH LEIBH
 KEA LEBOHA
 БАЯРЛАЛАА
 MISAOTRA ANAO
 WHAKAWHETAI KOE
 DANKON TANK TAPADH LEAT
 MATUR NUWUN
 ХВАЛА ВАМ
 MULŢUMESC
 GRAZIE
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 SHUKRA
 HVALA
 FAAFETAI
 ESKERRIK ASKO
 HVALA
 TEŞEKKÜR EDERİM
 OBRIGADO
 DANKJE
 EΥΧΑΡΙΣΤΩ
 GRATIAS TIBI
 AČIŪ
 SALAMAT
 MAHALO IĀ 'ŌE
 TAKK SKALDU HA
 ДЗЯКУЙ
 MERCI
 DI OU MÈSI
 ĎAKUJEM
 GRAZZI
 PAKKA PÉR
 ありがとうございます
 SIPAS JI WERE
 TERIMA KASIH
 UA TSAUG RAU KOJ
 ТИ БЛАГОДАРАМ
 СИПОС
 KÖSZÖNÖM
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 SALAMAT
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 HVALA
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 FALEMINDERIT