



Capturing A Digital Asset For Effective Decision Support

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Solution Strategy Manager – Owner Operator Market

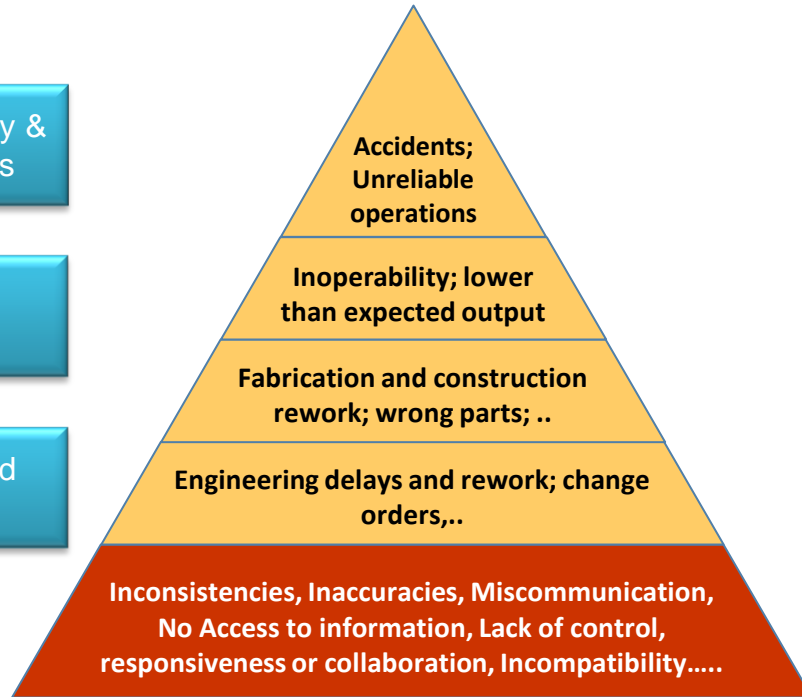


www.aveva.com

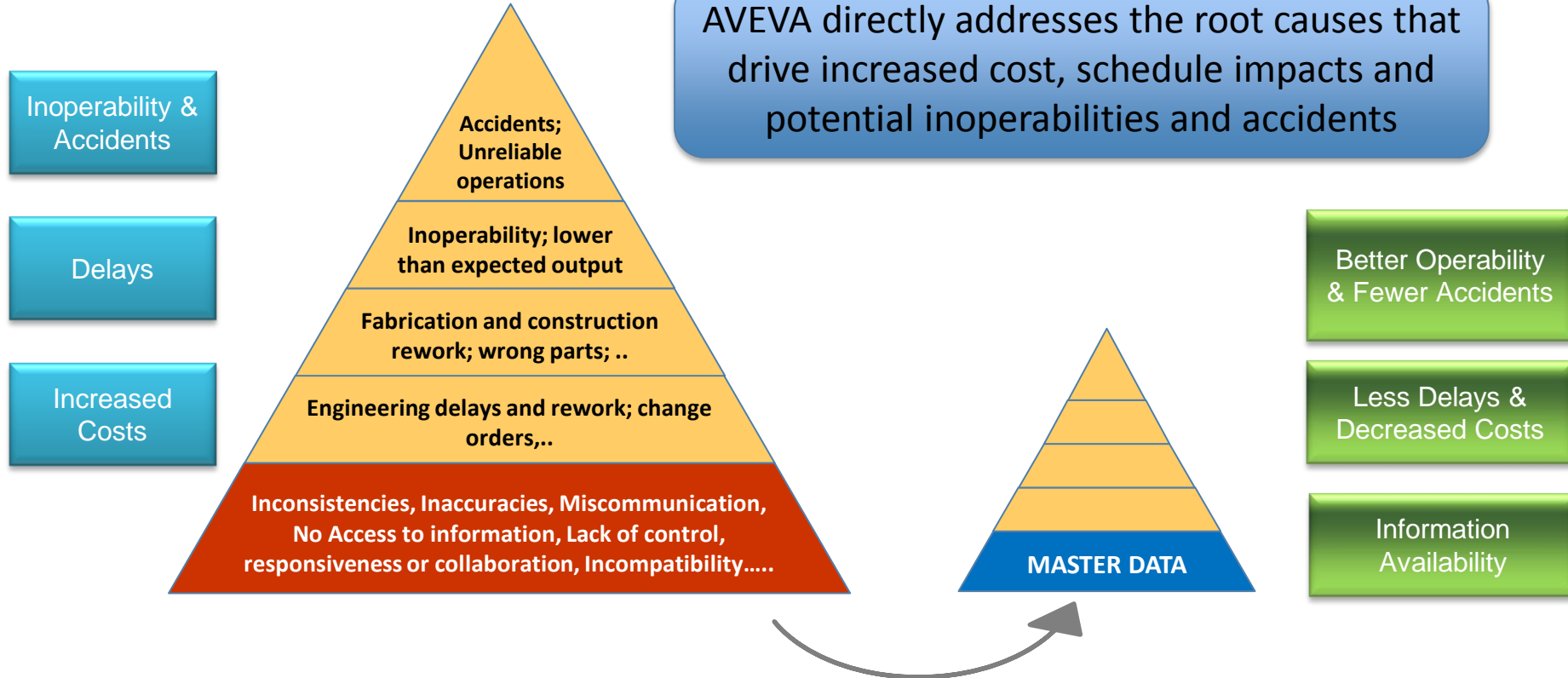
Inoperability &
Accidents

Delays

Increased
Costs



AVEVA directly addresses the root causes that drive increased cost, schedule impacts and potential inoperabilities and accidents





Information Challenges

“TAR Overruns”

“Know what you have”

“Assess Condition”

“Monitor Trends”

“Intercede & Prevent”

“Too Much Data Not Enough Insight”

“Decision Support Centre”

“Connecting Experts to Problems”



DIGITAL
ASSET

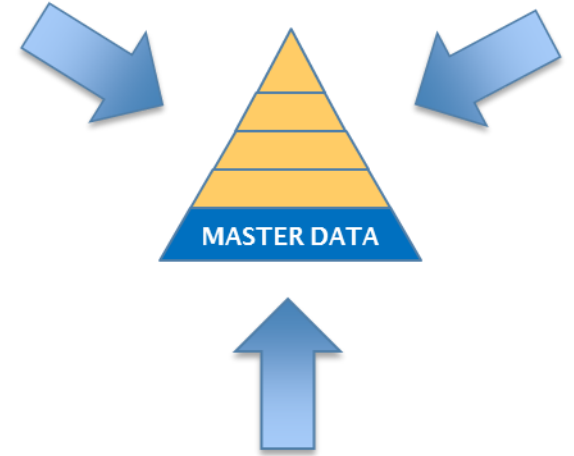
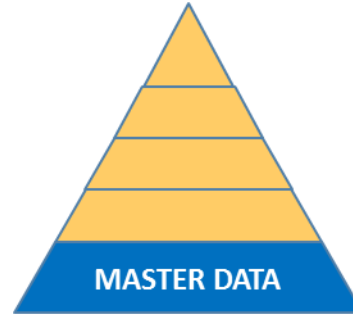
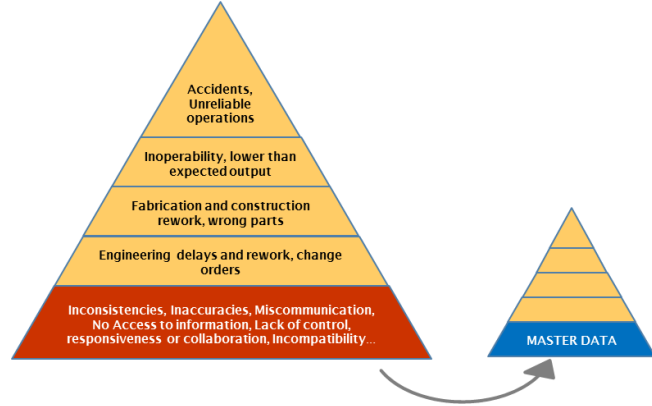
“Trending”

“Pragmatism & Simplicity of IT”

**AGEING
OFFSHORE
INSTALLATIONS
AND KP4.**

Institution of
**MECHANICAL
ENGINEERS**

“Easy access to a dependable information source, essential for safe, reliable operations and high quality decision making”



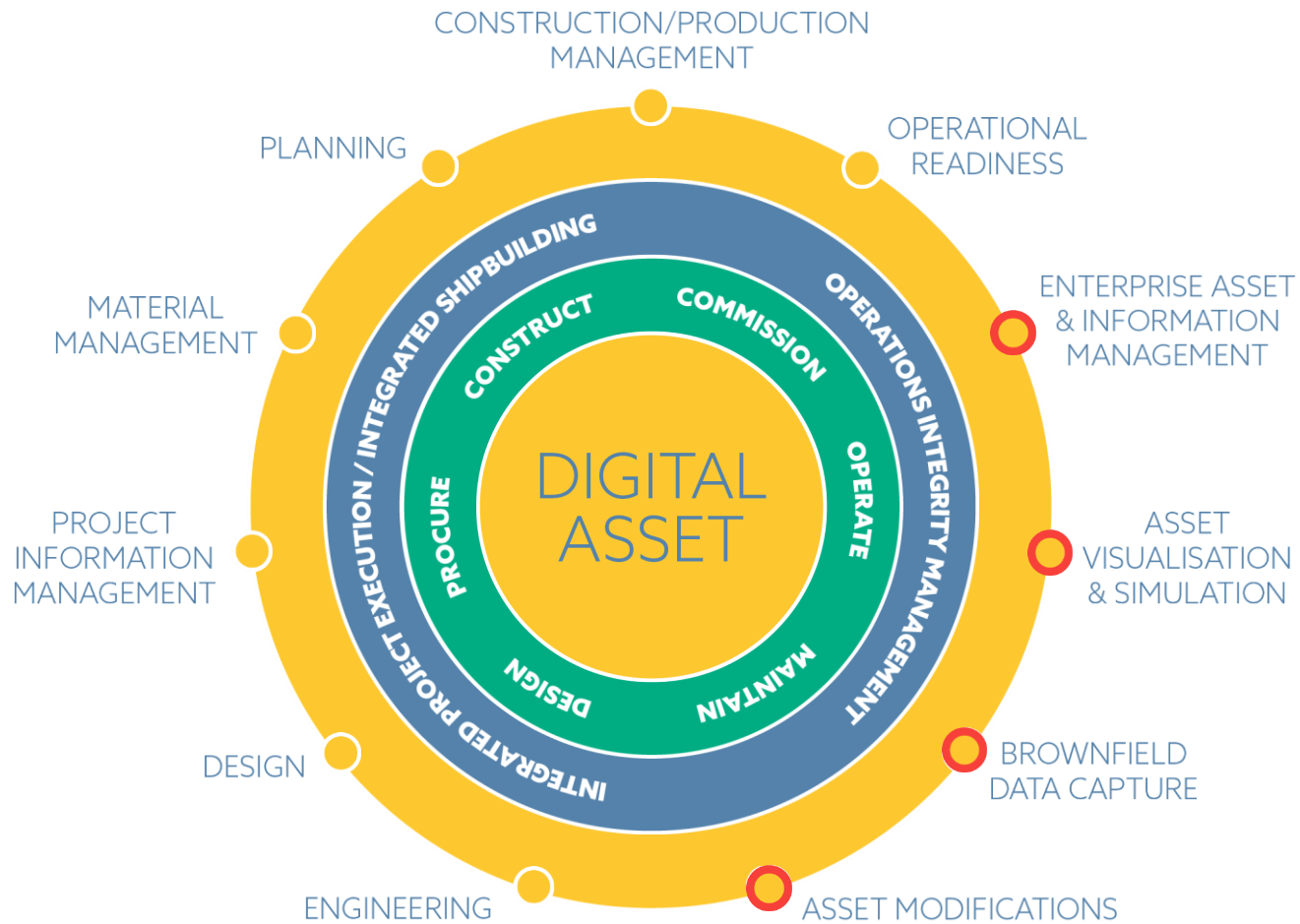
AVEVA™





DIGITAL
ASSET

“Understanding the quality, completeness and accuracy of process safety and asset integrity information”

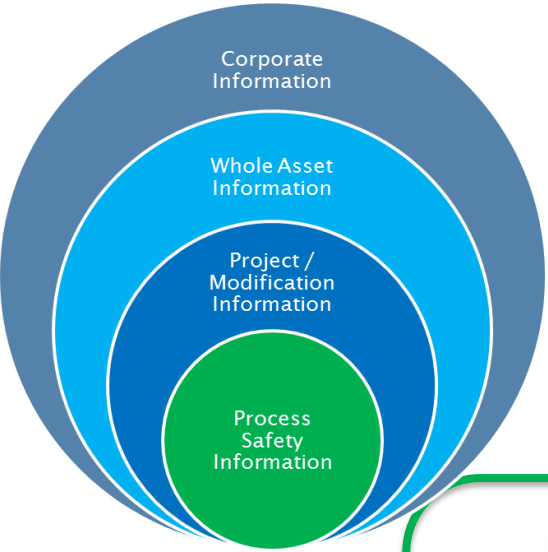




The Challenge

Regaining control of the digital asset.....

“Pragmatic, non-intrusive process, delivered within OPEX budgets, demonstrating value at each stage”



4 Exploit

- Linked search
- Application integration
- Decision Support

3 Standardise & Validate

- Information Standards
- Gatekeeping
- Minimum Requirement for Capital Project / Mod

2 Gain control of the information

- Store in a system of record
- Validate
- Repurpose
- Redefine

1 Establish the data to be managed

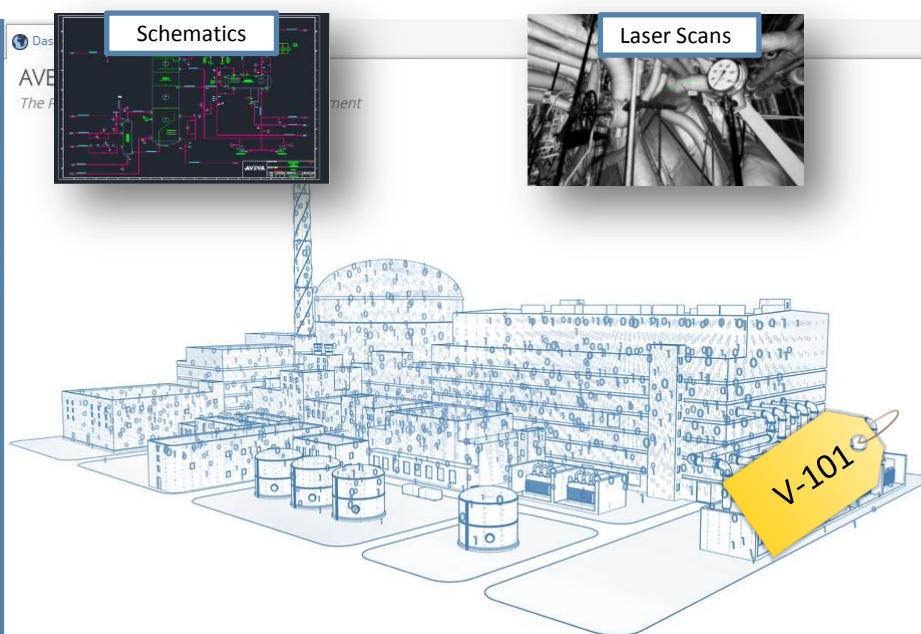
- Where the data is stored?
- Is the data unique?
- Is the data accurate?

ASSET VISUALISATION

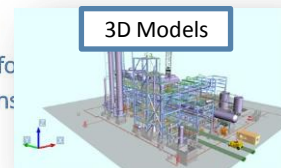


Facilitate Access To Structured Sources

DIGITAL
ASSET



Powerful and effective
Information Management for
Engineering and Operations



Collect

AVEVA NET brings together information in multiple formats and from multiple source systems, creating a complete cross reference index with links to, and associations between, all items in the digital asset.

Locate

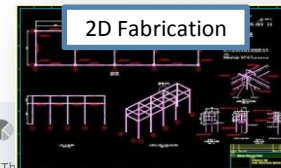
AVEVA NET provides fast and powerful search capabilities which, combined with its knowledge of tag and document associations, delivers efficient and effective location of project information.

Discover

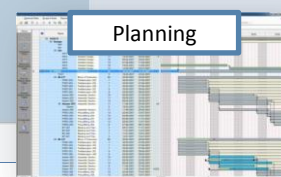
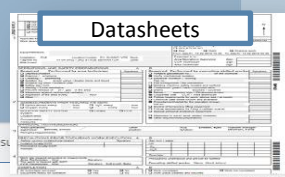
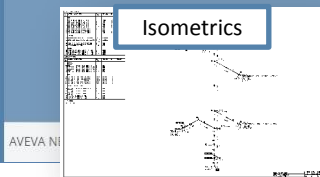
AVEVA NET automatically extracts and maintains tag to tag, tag to document and document to document relationships; exploiting this interconnectivity to provide efficient navigation of the digital asset and aid information discovery.

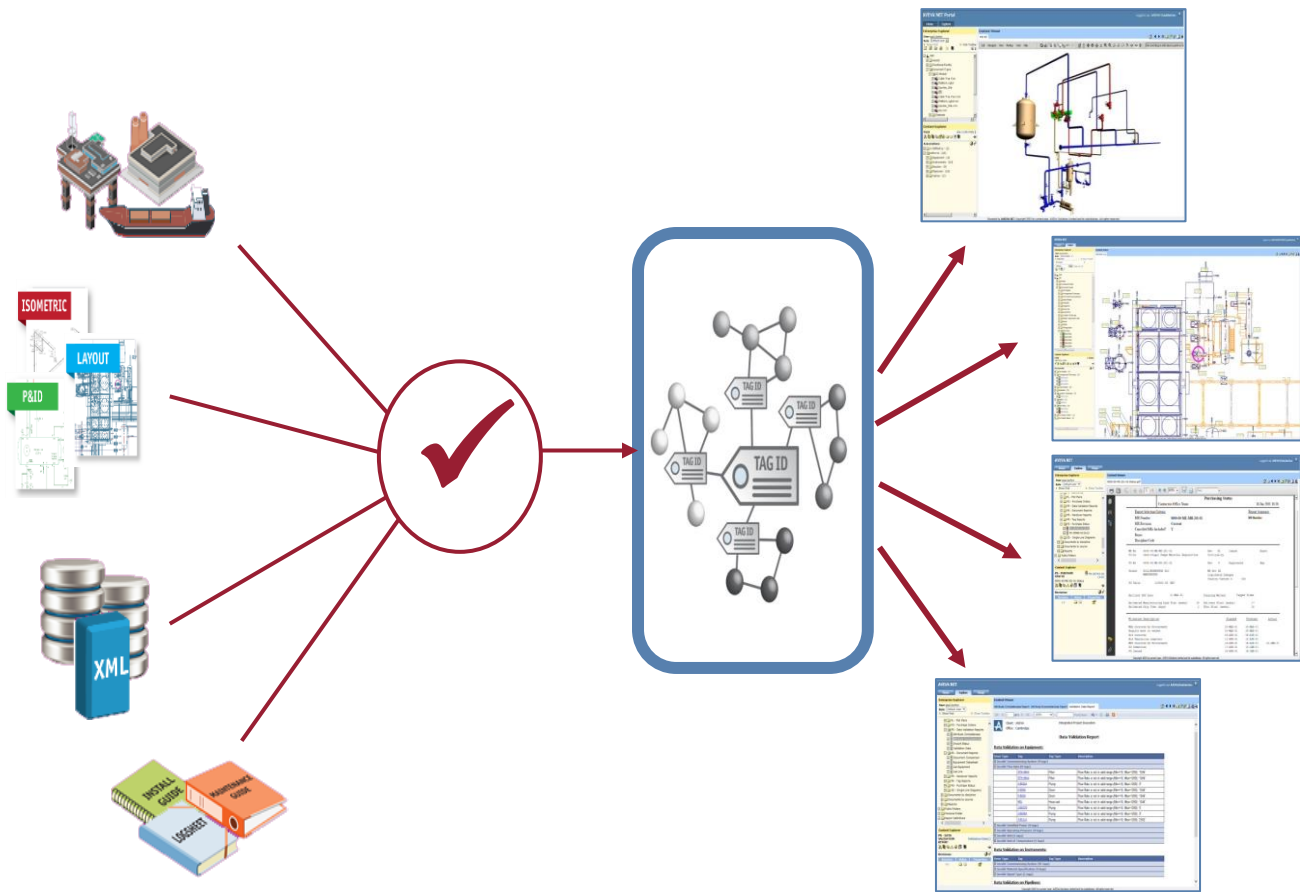
View

AVEVA NET delivers high quality web-based visualisation of tag data, documents, drawings, 3D models and laser scans. Automatic creation of hotspots and hyperlinks provide additional intelligence for the easy identification and navigation of tags.



THE AVEVA NET is uniquely placed to report on the quality, consistency and completeness of project data; Improving project compliance and enabling efficient handover to operations.





Complete Project (3D MODEL) ▾

Add To.. View..

Details Properties Related Items Renditions Revisions Contents

- Areas - (111)
- Electricals - (4)
- Equipment - (105)
 - Columns and Towers - (6)
 - Drums - (18)
 - Filters - (20)
 - Fire Monitors - (3)
 - Heat Transfer - (13)
 - C-8002
 - C-8003
 - C-8501
 - C-8506
 - C-9001
 - C-9005A/B
 - C-9005C/D
 - C-9006
 - C-9007
 - C-9008
 - R-9002
 - R-9003
 - R-9004
 - Hose Reels - (3)
 - Mixers - (8)
 - Pumps - (27)
 - Strainers - (1)
 - CRANE(300T)
 - SOLID 150 PLAT

Actions...

Selected Tag C-9001

Add To.. ▾ X

Details Properties Related Items Documents

Document ID	C-9001
Description	OVERHEAD CONDENSER
Document Type Name	HEAT TRANSFER
Lifecycle Status	
Aliases	/C-9001 - IPE VPD

AVEVA NET Portal - Windows Internet Explorer

http://aupervmdev02:12000/AVEVANETPages/Portal.aspx

Google

Favorites AVEVA NET Portal

WELCOME AUP EKV HDEV02 (administrator)

AVEVA

AVEVA NET Portal

NET Home Explore Portal Admin

SWS Project Advanced Search

Enterprise Explorer

User administrator
Role Administrator

Show Find Show Toolbars

- Reports
 - Attribute Mismatch
 - Document Register
 - Document Status
 - Dynamic Equipment List
 - Equipment Data Completeness
 - Equipment Handover

Content Explorer

Sour Water Feed Pump A

Documents:

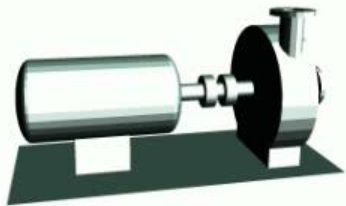
- 3D Model - (1)
- Datasets - (2)
- Design Document - (5)
 - COSHH Assessment - (1)
 - Equipment List - (1)
 - Line List - (1)
- Pump Specification - (1)
 - SWS-PUS-0001
- Simulation Data - (1)

Content Viewer

ID-0002.svg 100pcent.zgl SWS-PUS-0001 Link SWS-POR-0001_OCR Link SWS-IOM-0001 Link SAPLink02A Tag Summary

Tag Details

Tag Id	Description
P-0002A	Sour Water Feed Pump A
Class Name	Tag Type Name
PUMP	Pump
Area	System
P_EQUIP	SWS-EQUI



Documents

2D & 3D CAD

- 3D Models
 - 100pcent
- P&IDs
 - SWS-PID-0002 Sour Water Stripper P&ID

Attributes

Miscellaneous

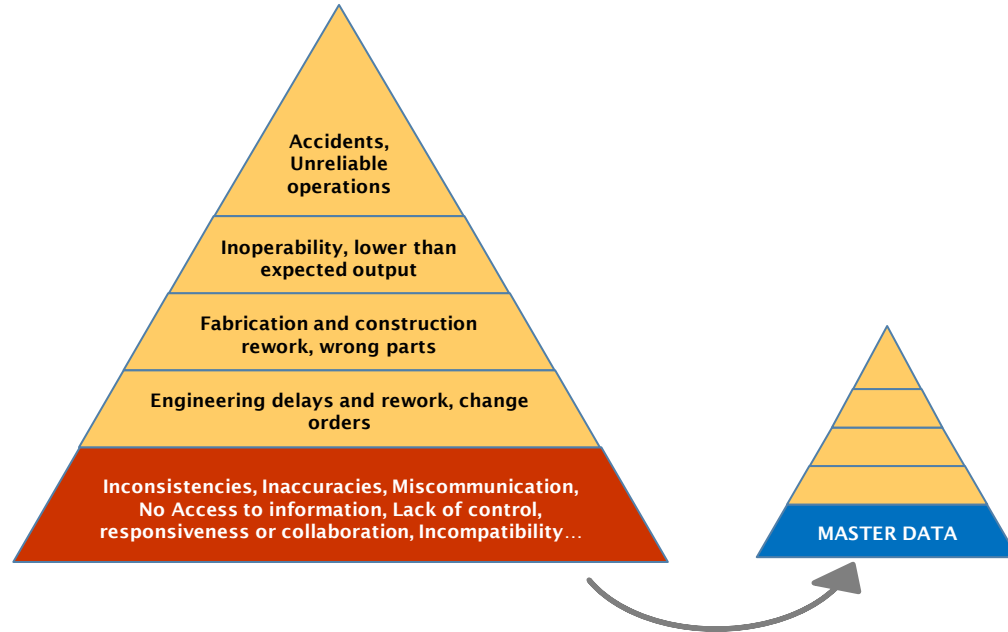
Properties	Value	Unit
Quantity Spare	3	
Design Press. (barg)	5.0	
Design Temp. (deg)	130	
Design Press. (bara)	3.5	



**Establish Process Safety Registers
Includes Brownfield Data Capture**

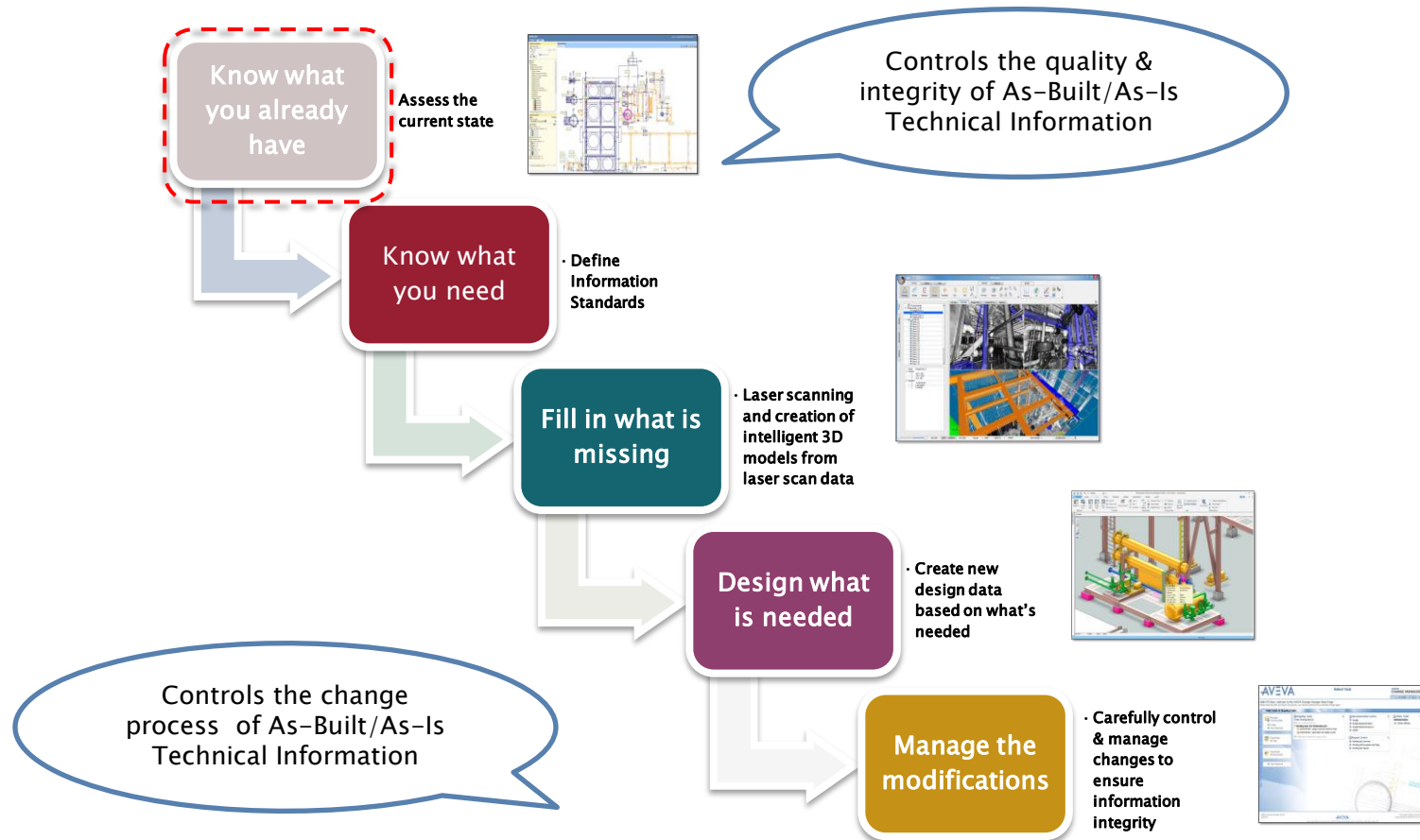
DIGITAL
ASSET

Asset Visualisation

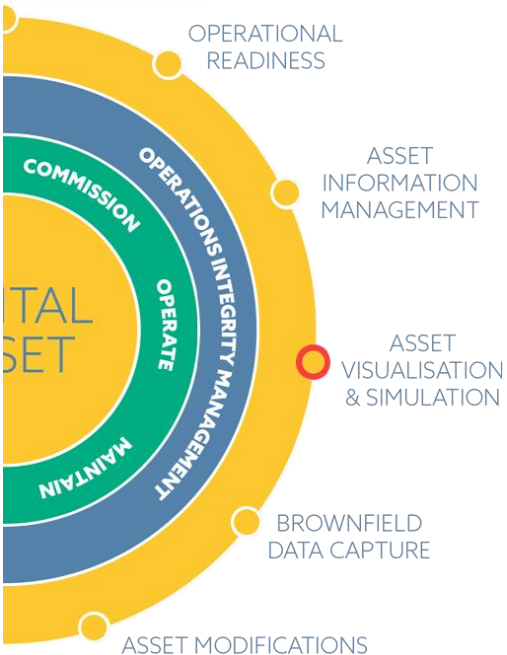


Assess what you have -> Re-purpose -> Store in a system of record

Key Capabilities in Brownfield Data Capture and Asset Modification

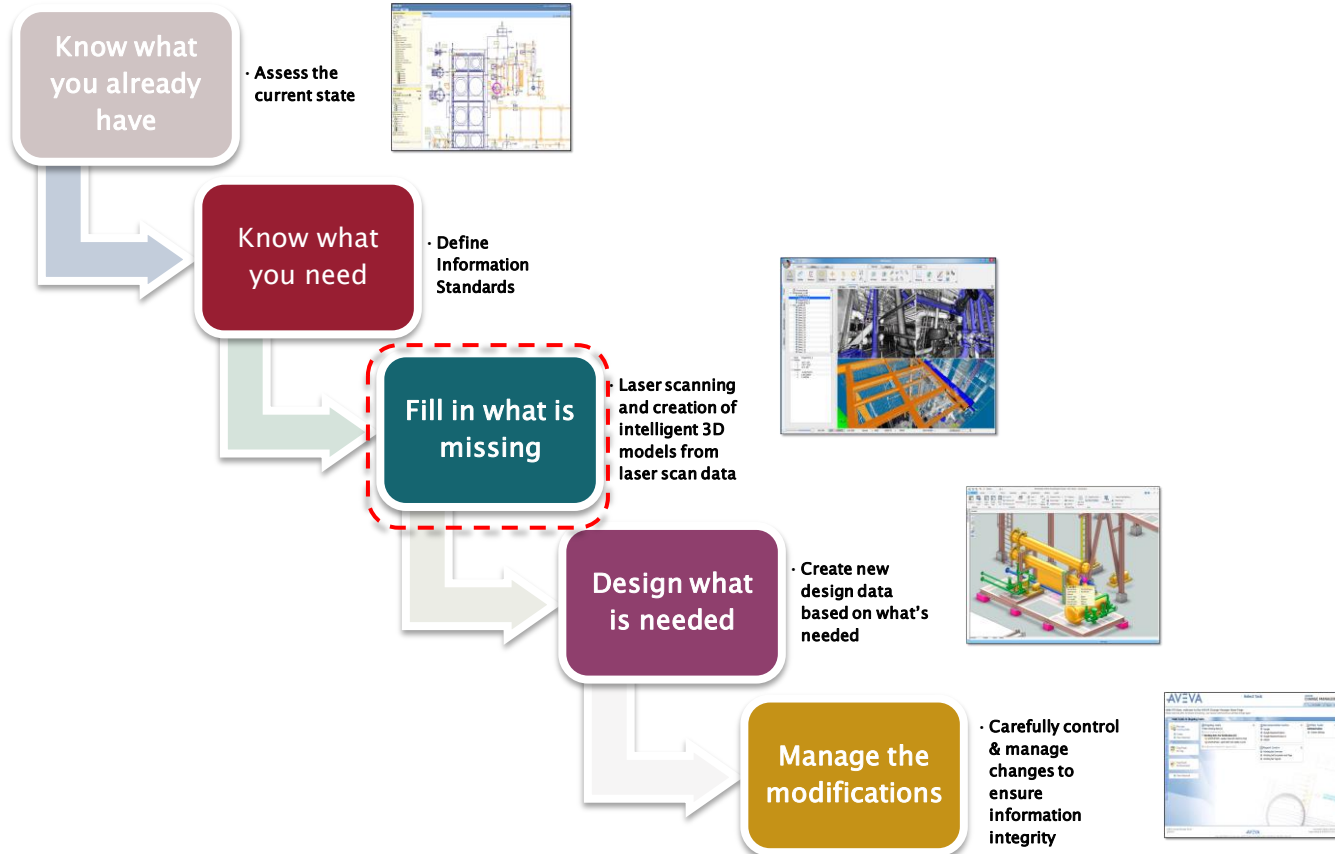


Asset Visualisation



- **A Portal for Operations**
 - Turning existing data into actionable information
 - Can co-exist with any existing system of record
- **Establish the Digital Asset**
 - Assess quality of existing information
 - Establish validity of 'As-Built' information
 - Establish the 'As-Operated' state
 - Establish a process safety register

Key Capabilities in Brownfield Data Capture and Asset Modification

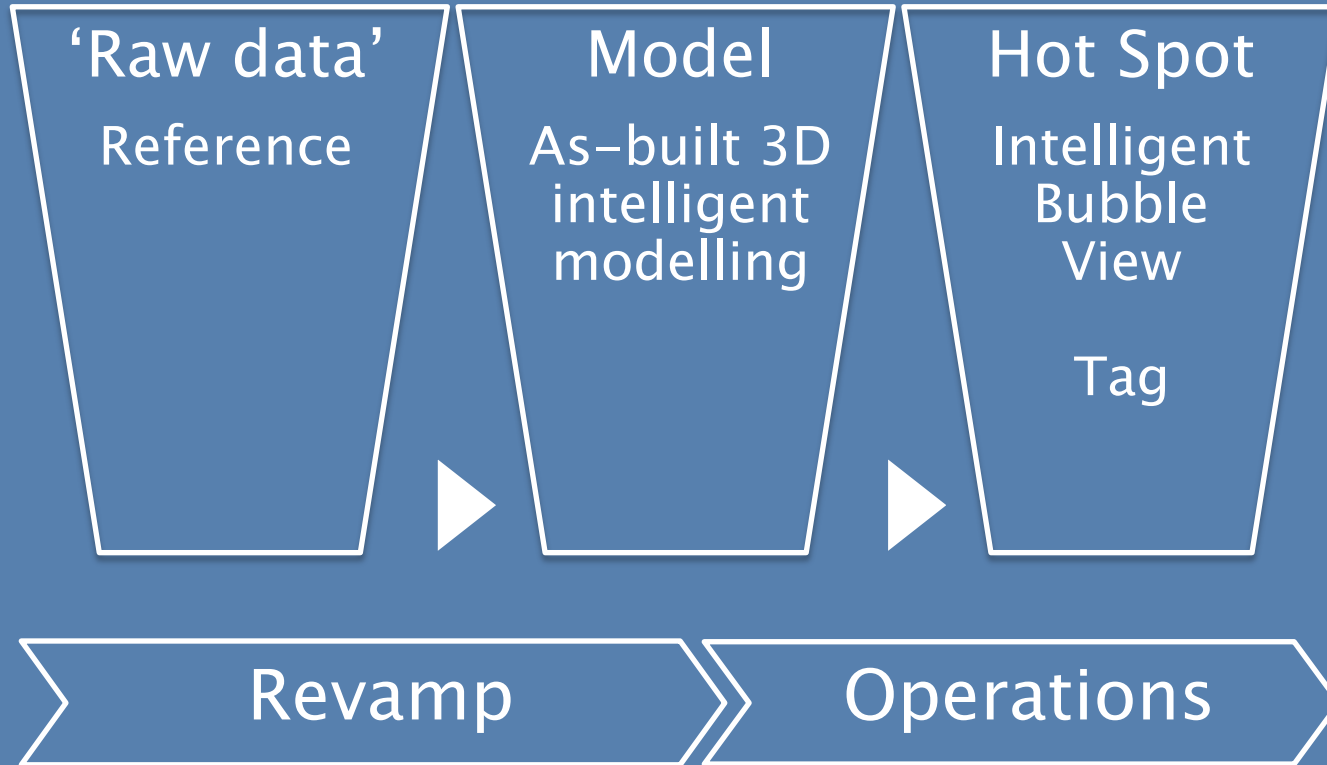


Visualising The Digital Asset

- Laser Scanning
 - Most efficient way to capture existing conditions
 - Most affordable



Three main uses



Laser Scanning in Operations

Point Cloud

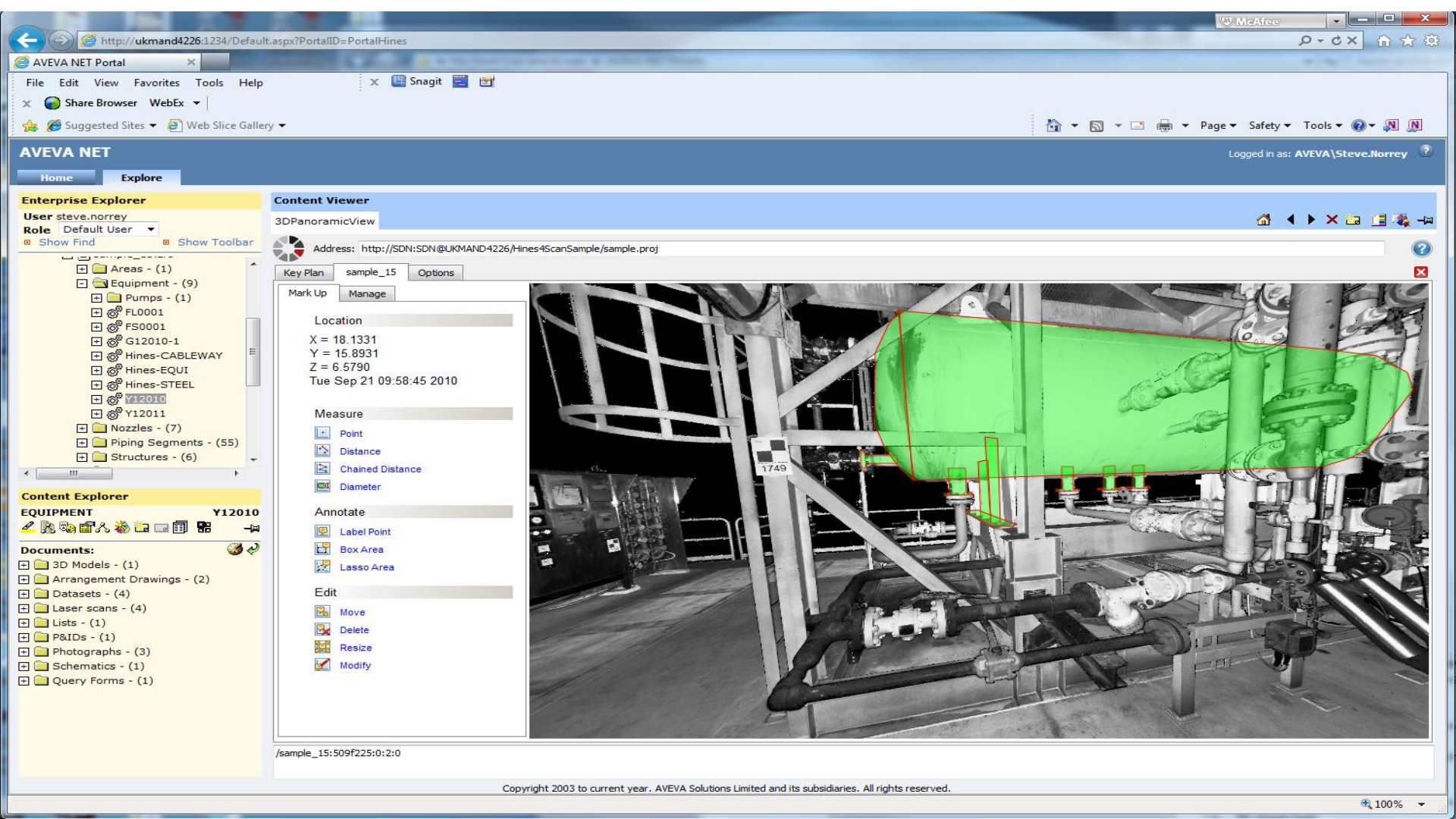


BubbleView™



$$1 + 1 = 3$$

Maintain laser data **as is**

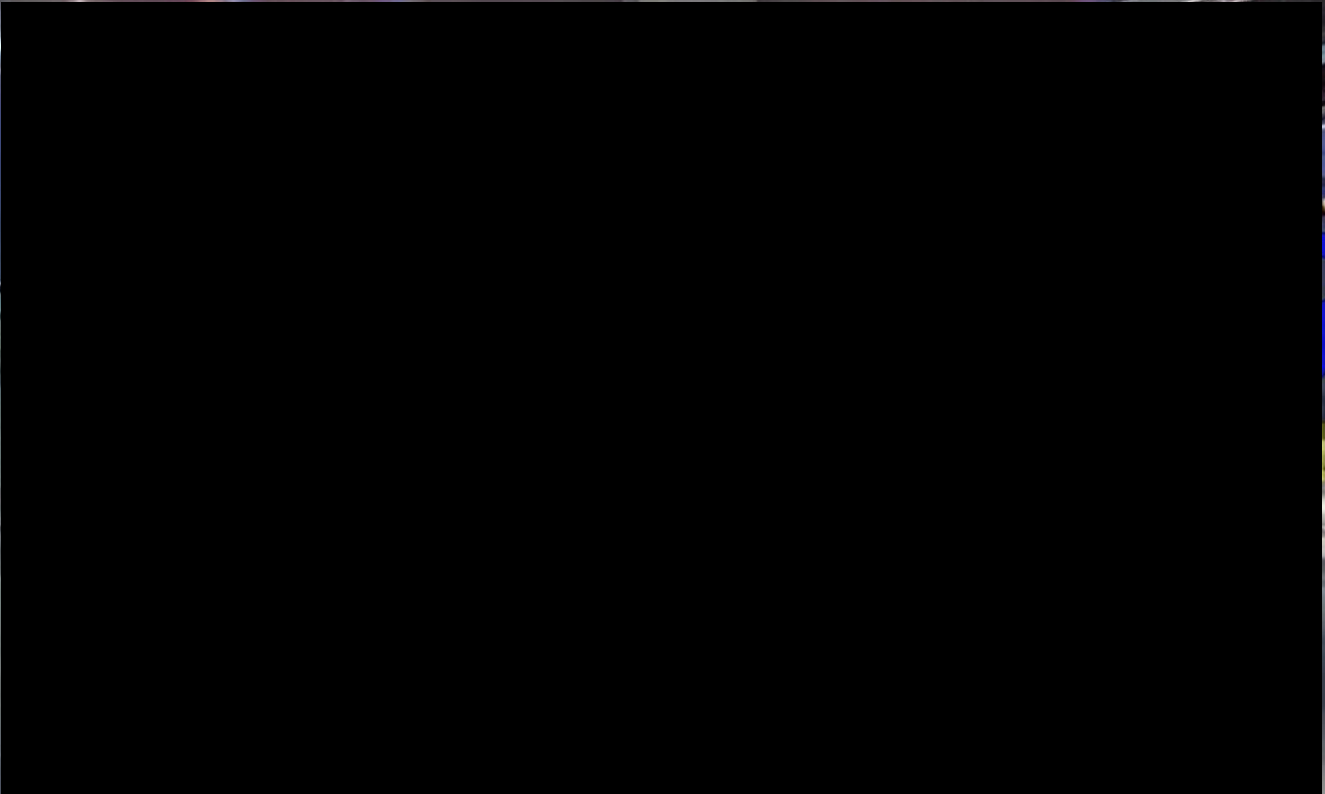


Adding Intelligence





Adding Intelligence



Everyone Loves the BubbleView™

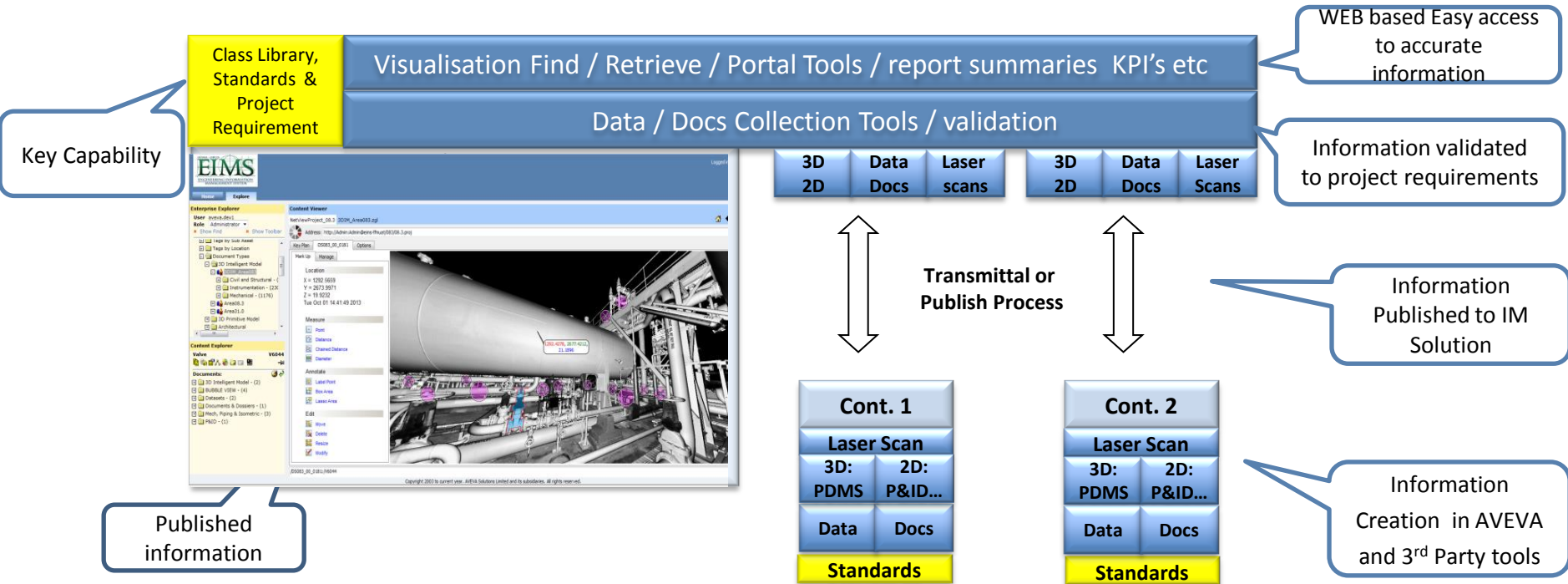
- But ...We are trapped
- We want the same visualisation
- But to be able to move anywhere
- Also we want BubbleViews for
 - Handheld
 - Mobile scanners



Introducing – 74121GB1



Scaleable? – Super complex > 20000 scans



“Easy access to a foundation of information, essential for safe, reliable operations and high quality decision making”

“Understanding the quality, completeness and accuracy of process safety and asset integrity information”

“Pragmatic, non-intrusive process, delivered within OPEX budgets, demonstrating value at each stage”

A brown cardboard box is shown from a slightly elevated front perspective. A red banner is positioned in the top left corner, partially overlapping the box. The box has a handle cutout on top and some flaps visible on the right side.

Delivering Value

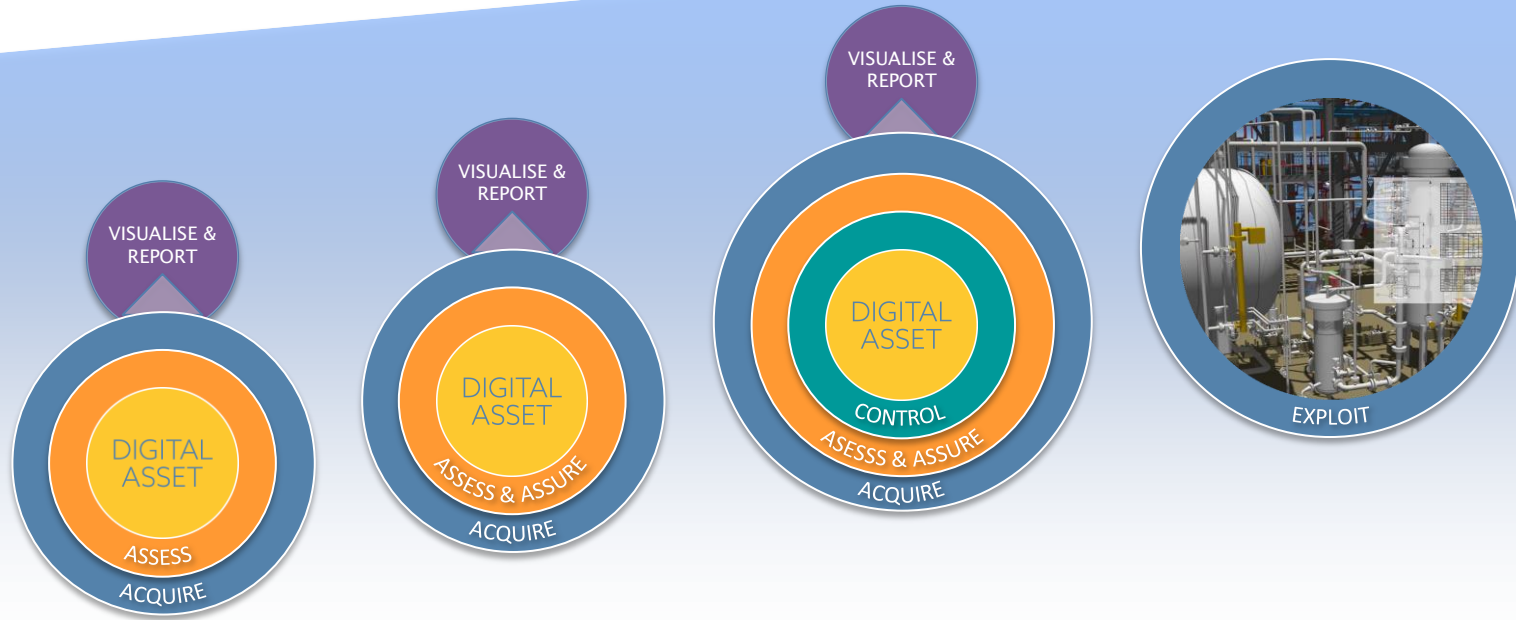
Easy access to trusted information

Fit for purpose registers

Stairway to information excellence

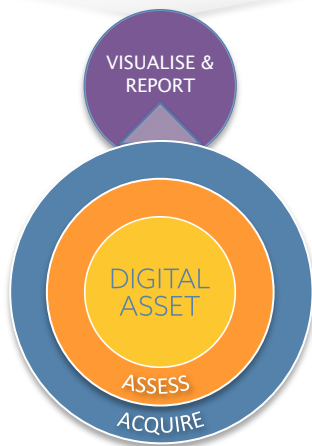
Digital Information Hubs

A tiered value proposition



Standards Management

Asset Visualisation



Asset Visualisation

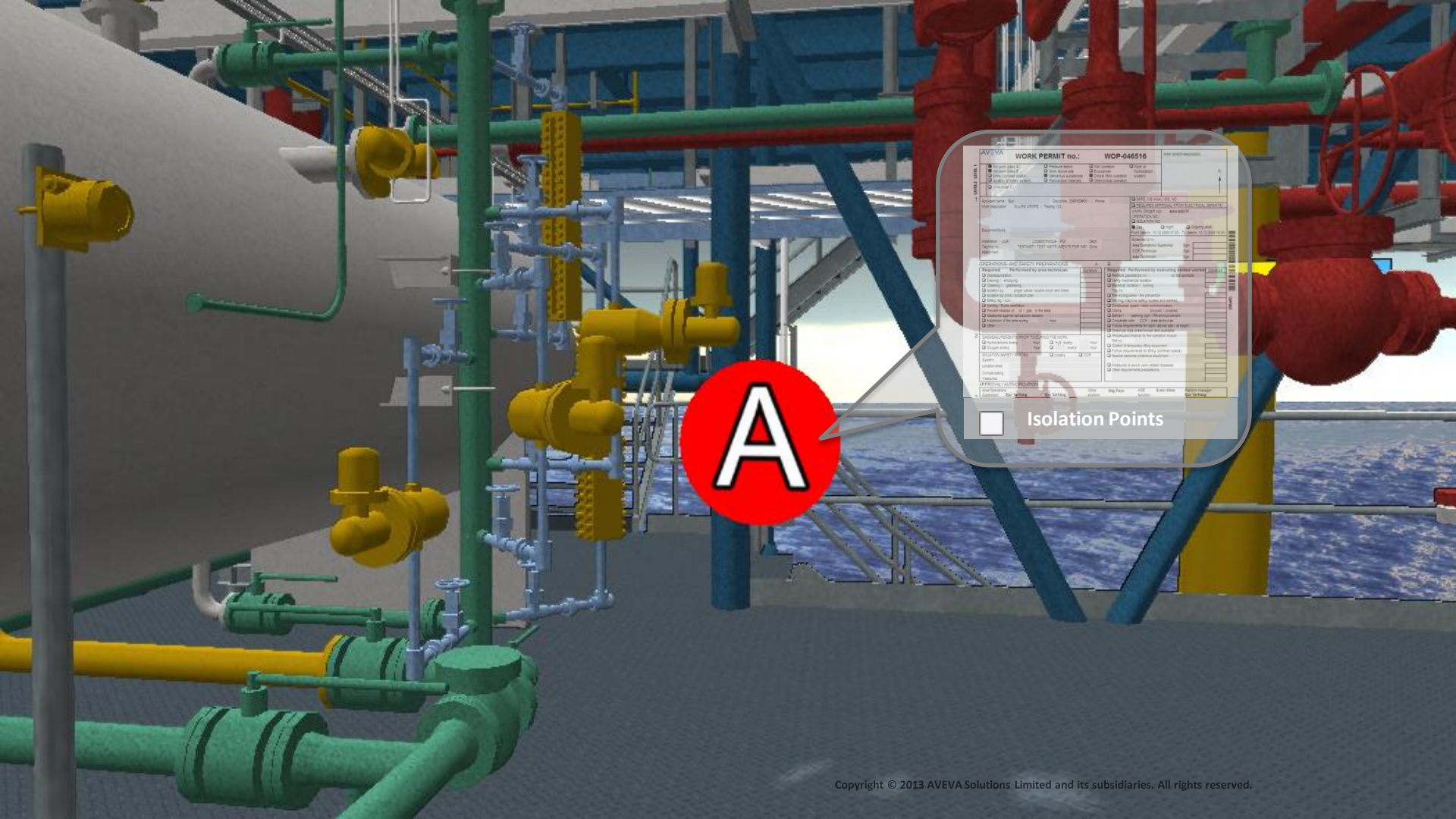


- Enables:
 - A portal for operations
 - Searching, Visualisation, Contextualisation
 - Information Source Integration
 - Data quality assessment
 - Access in Context to operations systems
- Delivers:
 - Through reporting *confidence* in :
 - Asset information quality
 - Deliverable Status
 - *Consolidated* asset deliverables
 - Known status of Operational Master Data
 - Access to many *information sources and content* (e.g. Process Safety Registers, P&ID, Instrumentation, laser scanning) irrespective of authoring application

Exploiting Operations Data: A Vision



Operator Training
Plant Optimisation
Instrument Calibration
Inspection Planning
DCS Alarm Response Control Of Work
Spare Parts Management
Maintenance Planning
Set Point Management
Turnaround Planning Asset Performance
Mechanical Integrity
Lock-Out Tag-Out



AVEVA WORK PERMIT no.1 WOP-046516

WORK PERMIT no.1 WOP-046516

Isolation Points

☐ Isolation Points

Must be underpinned with a trusted digital asset



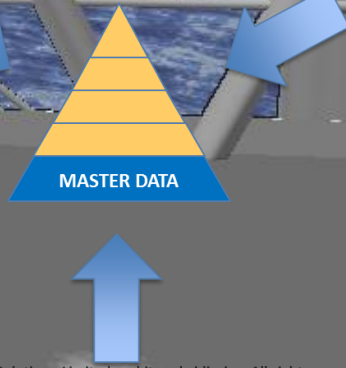
AVEVA WORK PERMIT no.1 WOP-046516

Submittal: SLP12070E / Temp ID

Operations and Safety Procedures

Isolation Points

Isolation Point	Isolation Method	Isolation Status
1. Isolation Point 1	Isolation Method 1	Isolation Status 1
2. Isolation Point 2	Isolation Method 2	Isolation Status 2
3. Isolation Point 3	Isolation Method 3	Isolation Status 3
4. Isolation Point 4	Isolation Method 4	Isolation Status 4
5. Isolation Point 5	Isolation Method 5	Isolation Status 5
6. Isolation Point 6	Isolation Method 6	Isolation Status 6
7. Isolation Point 7	Isolation Method 7	Isolation Status 7
8. Isolation Point 8	Isolation Method 8	Isolation Status 8
9. Isolation Point 9	Isolation Method 9	Isolation Status 9
10. Isolation Point 10	Isolation Method 10	Isolation Status 10





Dependable Solutions
Actionable Information
Operational Insight



Thank you

