



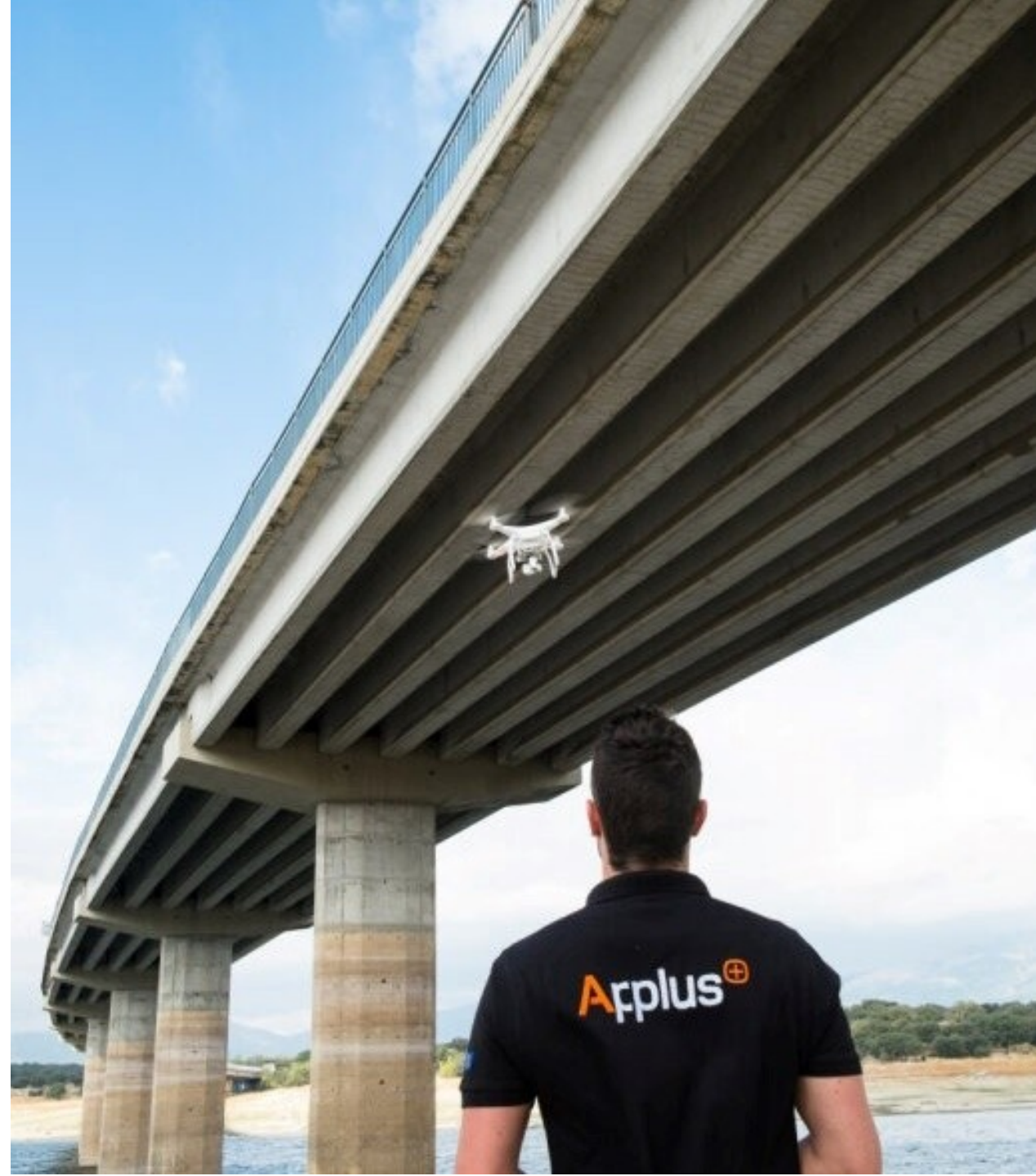
# Spatial Intelligence for Resilient Utilities

*From Asset Digitization to Digital Twins*

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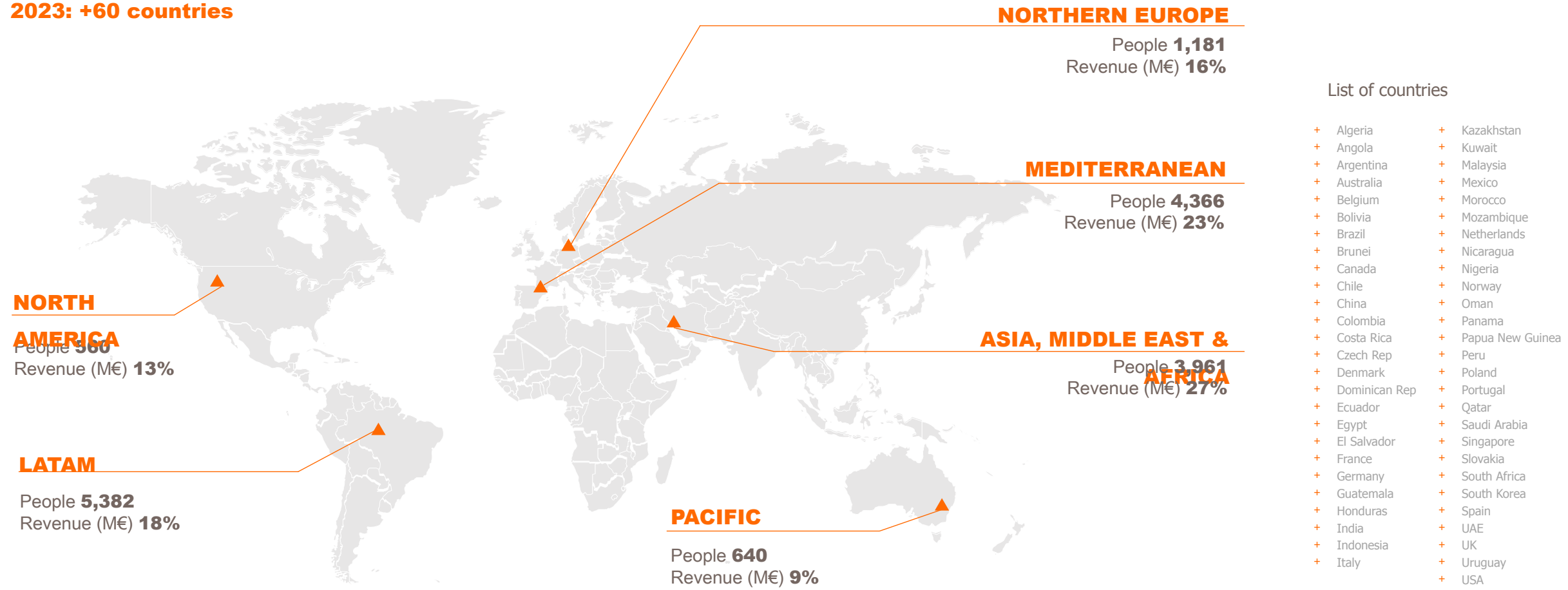
## Geospatial World Forum 2026

- ▶ 30 April 2026
- ▶ **Abdourahmane Tahir – Head of Digital Services, Applus**



# Global Energy & Industry Division presence

2023: +60 countries



### List of countries

- + Algeria
- + Angola
- + Argentina
- + Australia
- + Belgium
- + Bolivia
- + Brazil
- + Brunei
- + Canada
- + Chile
- + China
- + Colombia
- + Costa Rica
- + Czech Rep
- + Denmark
- + Dominican Rep
- + Ecuador
- + Egypt
- + El Salvador
- + France
- + Germany
- + Guatemala
- + Honduras
- + India
- + Indonesia
- + Italy
- + Kazakhstan
- + Kuwait
- + Malaysia
- + Mexico
- + Morocco
- + Mozambique
- + Netherlands
- + Nicaragua
- + Nigeria
- + Norway
- + Oman
- + Panama
- + Papua New Guinea
- + Peru
- + Poland
- + Portugal
- + Qatar
- + Saudi Arabia
- + Singapore
- + Slovakia
- + South Africa
- + South Korea
- + Spain
- + UAE
- + UK
- + Uruguay
- + USA

# Digital Services

Applus+ is an expert in developing and implementing digital solutions for various industry sectors in which we operate. With a highly qualified and multidisciplinary team, we implement digitalization in all business areas as a core strategy for the Group's innovation and technological development. [Read more.](#)

## Applus at a glance



**10+  
M**  
Sqm of Asset  
Digitization  
Experience



**3+M**  
Sqm managed in  
deployed Asset  
Digitization



**20+M**  
Tags has been  
Digitized



**30+**  
Years of proven  
experience

## MAIN SERVICES



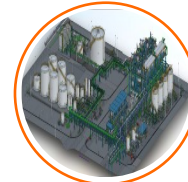
Digital  
Consultancy



BIM  
Consultancy



Reality Capture



3D Modelling



Digital Twin



Digital Solutions



Technical  
Staffing



Virtual  
Inspection / TDD



## Topographic Survey & Reality Capture

## Surveying & Reality Capture (Lidar Scanning & Drone Scanning)

Applus+ has surveyors and geospatial engineers utilizing the latest technologies to deliver industry leading 3D Scanning and Drone Scanning technologies for our clients.

We select  
the right  
tool based  
on client  
requirement  
s,  
environment  
, and use  
case



Lumicopter



DJI Matrice 300 RTK



RTC360



FiFish Expert



DJI Matrice M4T



MX50



Voliro T



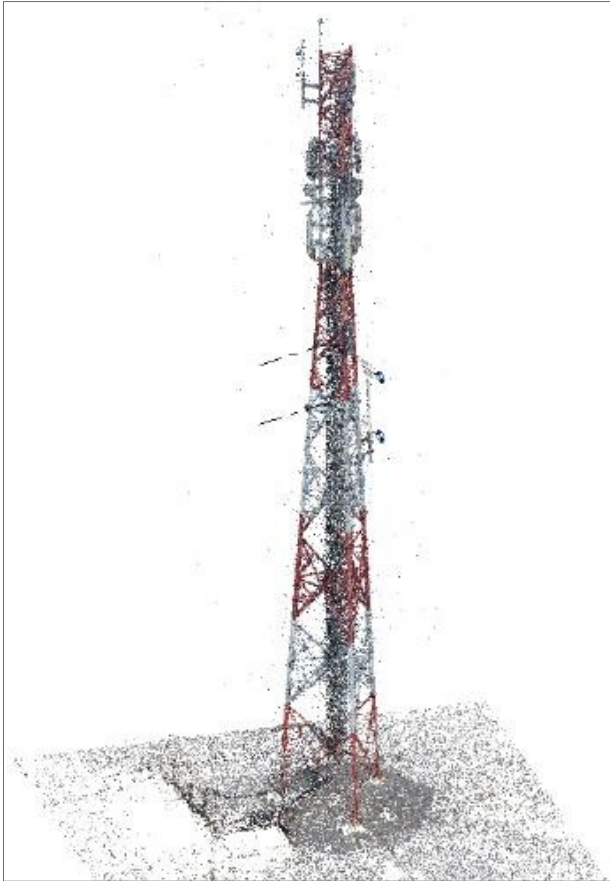
Scout 137 V2



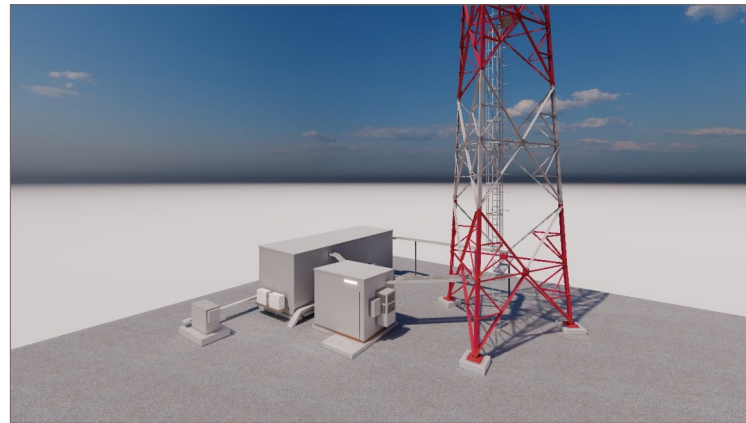
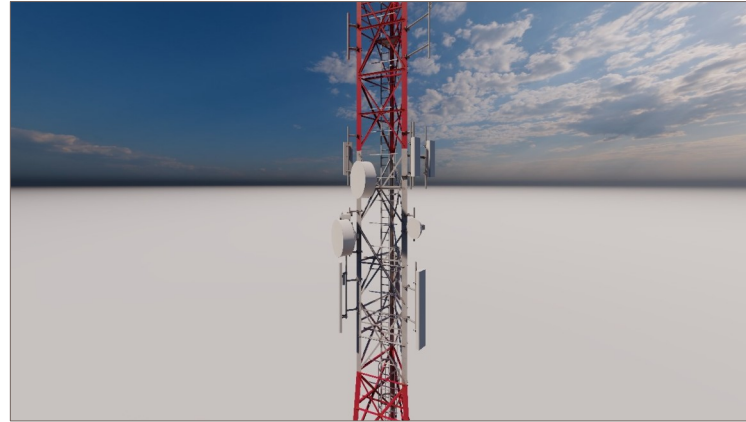
Navis VLX3



## Scan to BIM – Success Stories



Point Cloud (Drone)

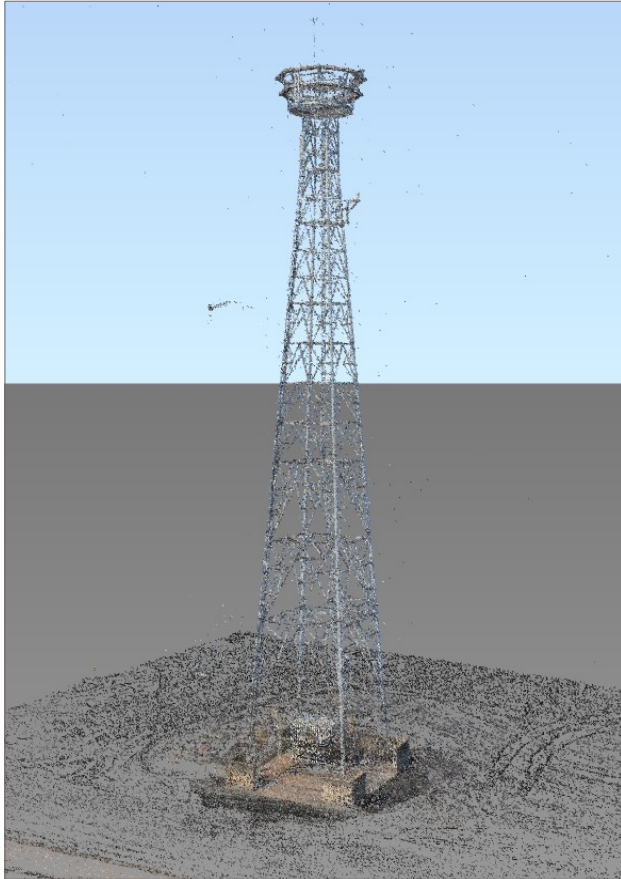


3D BIM Model

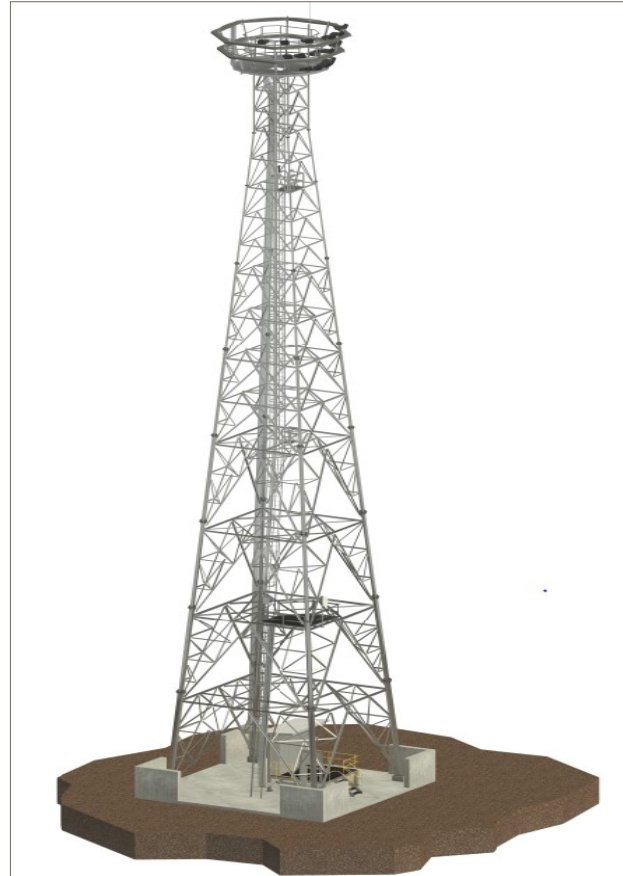


Photogrammetry for Drone-based Inspection

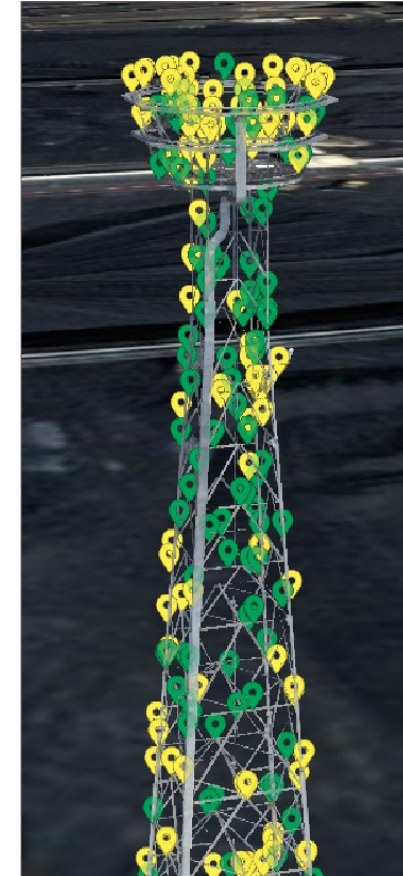
## Scan to BIM – Success Stories



Point Cloud (Drone)

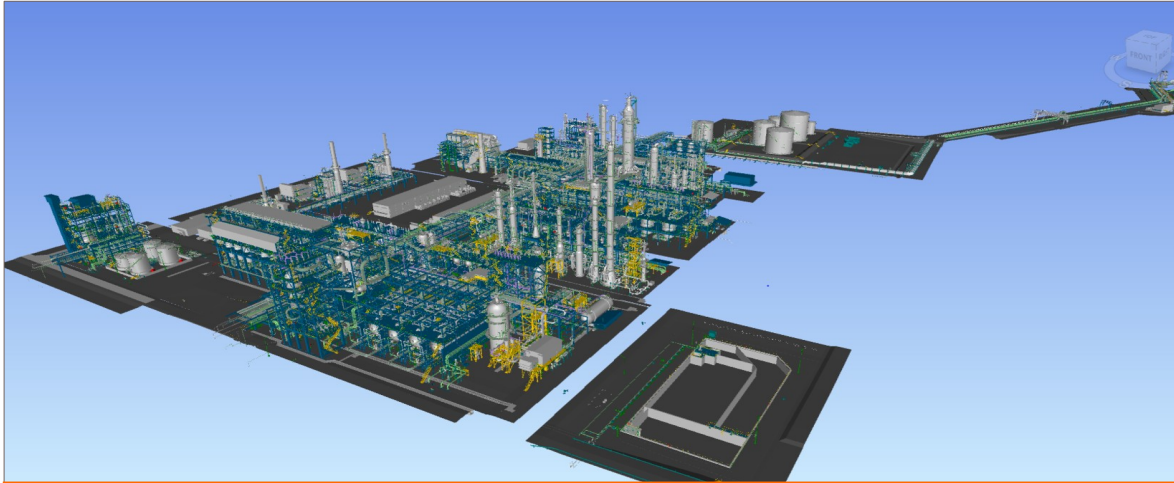


3D BIM Model



Photogrammetry for Drone-based Inspection

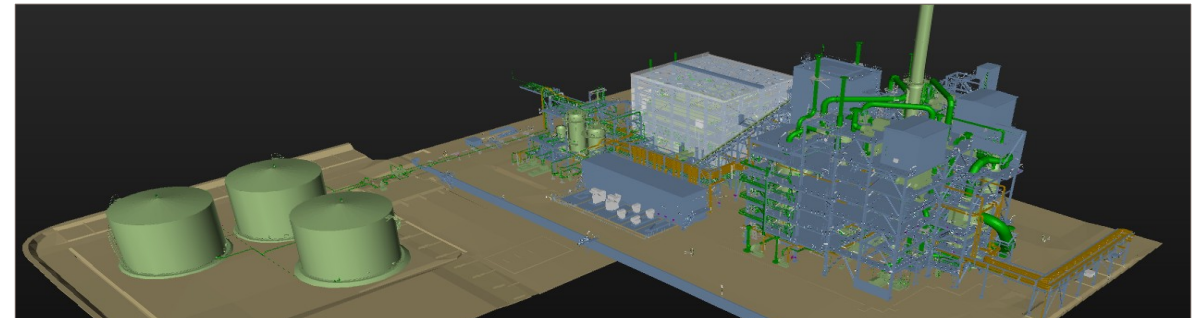
# Scan to BIM – Success Stories in Energy & Industrial



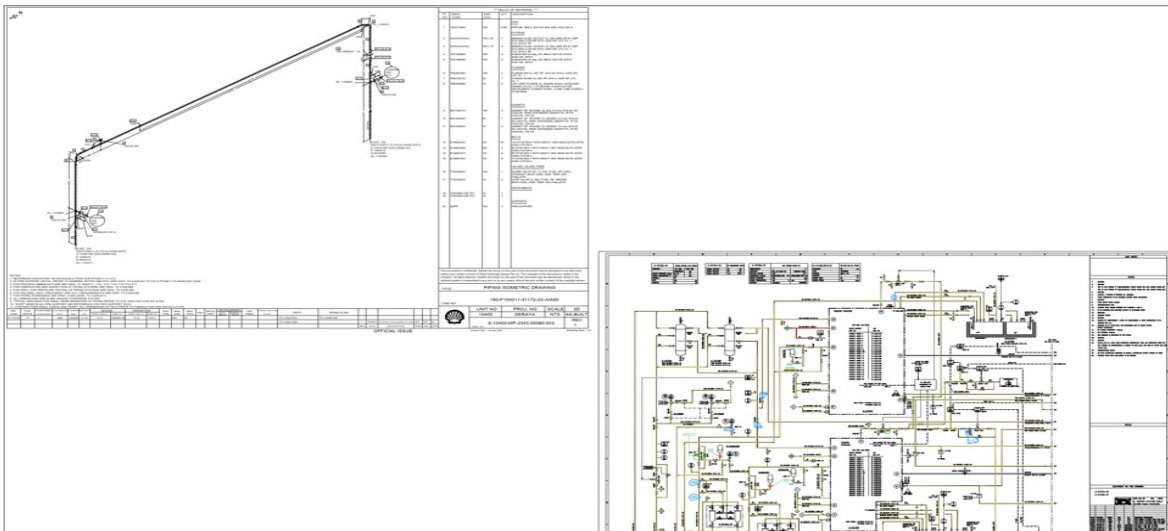
As-Built 3D Fully Intelligent Model



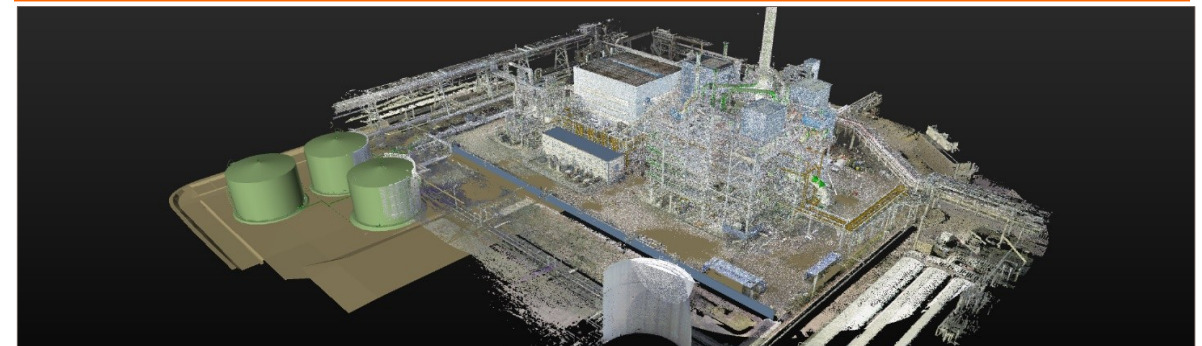
Point Cloud Data



As-built 3D Fully Intelligent Model



Isometric & P&ID Drawings Production



As-Built 3D Fully Intelligent Model overlaid with Point Cloud



## Drone-Based Inspection

## Why Our Clients Using Drone-Based Inspections

Achieve up to  
**90%**  
Faster inspection time

Provide  
**High-Quality  
Data**  
to support accurate  
planning



Reduce  
**Labor Cost**  
through streamlining  
crews needs

**Minimize  
downtime**  
by enabling better  
planning & coordination



Visually  
**Identify risks**  
and areas of concern



## Drone-Based Inspection Use Cases

### Visual Inspection

#### Sector Use Cases:

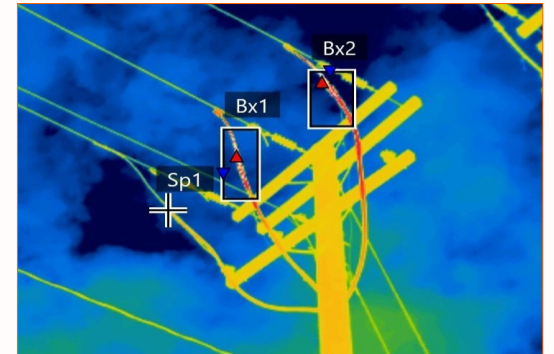
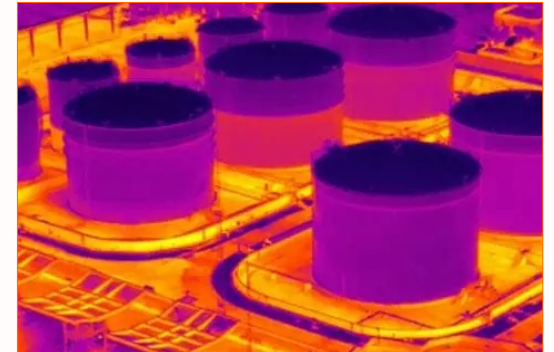
- **Power Lines & Towers:** insulators, conductors, structural condition.
- **Substations:** structural & equipment condition, corrosion, defects
- **Renewables:** Solar panels and wind turbine surface, site overview
- **Oil & Gas:** corrosion, coating failure, flare stack visual checks
- **Industrial:** roof defects, façades, structural elements
- **Water:** tank roofs, plant structural condition



### Thermal Inspection

#### Sector Use Cases:

- **Power:** Load imbalance, overheating components
- **Renewables:** Solar PV modules, heat loss detection
- **Oil & Gas:** flare efficiency
- **Industrial:** overheating motors, detect temperature changes
- **Water:** pipeline thermal leakage indicators

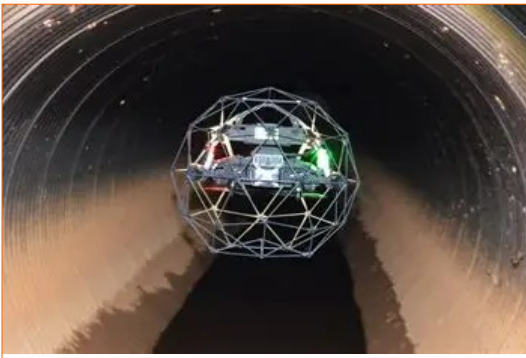


## Drone-Based Inspection Use Cases

### Confined Space Inspection

#### Sector Use Cases:

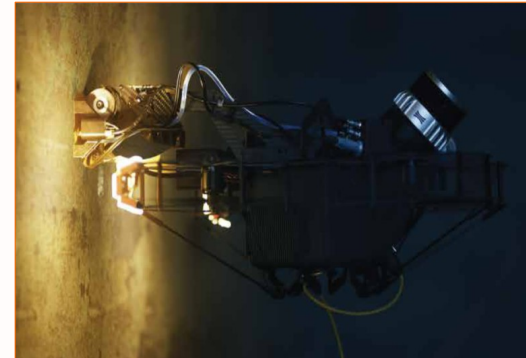
- **Oil & Gas:** internal tank and vessel inspection
- **Industrial:** boilers, furnaces, stacks, chimneys
- **Water:** Tanks, culverts, tunnels
- **Utilities:** cable vaults, ducts, inaccessible spaces



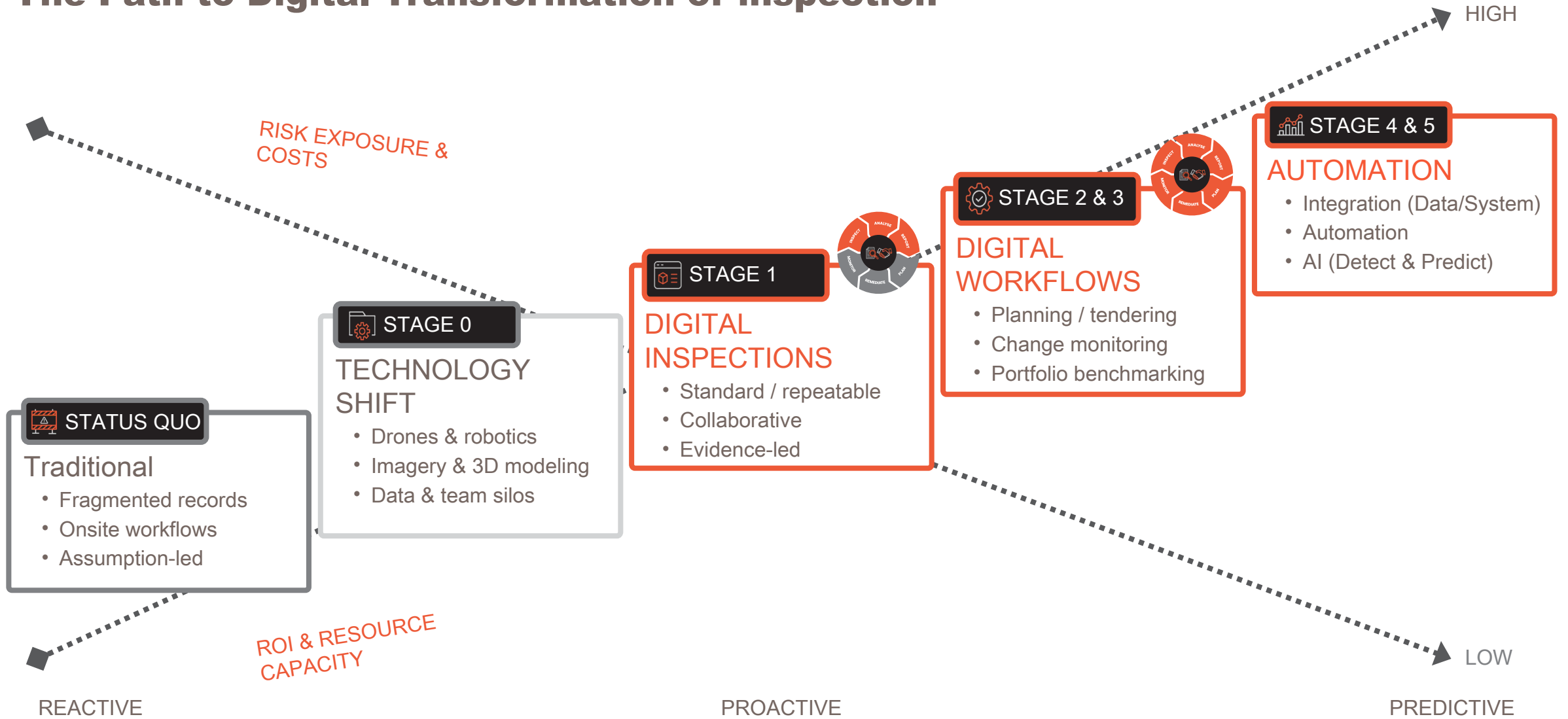
### NDT Drone Inspection (UT, PEC)

#### Sector Use Cases:

- **Pipelines:** wall thickness measurement and corrosion detection
- **Oil & Gas:** tank shell UT, piping thickness checks, live stacks.
- **Industrial:** steel structures and corrosion mapping









# The Path to Digital Transformation of inspection



## Digital Inspection



# Why the inspection transformation matters

	Current	Our Solution
 <b>Coverage of Structure</b>	<b>10-15%</b>	<b>&gt;95%</b>
 <b>Recorded Evidence</b>	<b>&lt;5%</b>	<b>&gt;95%</b>
 <b>Sets of Eyes</b>	<b>Inspector/s</b>	<b>Multiple</b>
 <b>Site Visits</b>	<b>Multiple</b>	<b>Online</b>
 <b>Safety</b>	<b>Working at heights</b>	<b>Zero touch</b>
 <b>Decision Confidence</b>	<b>4/10</b>	<b>8/10</b>

Check valve  
corrosion status

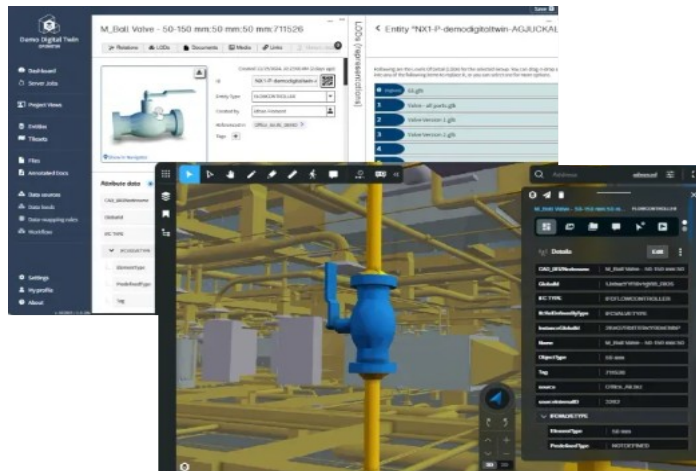
# Digital Twin

# Digital Twin

Applus+ has the ability to implement Digital Twin at large scale for clients including joining BIM, CAD, LiDAR, GIS data and performing integrations to Operational platforms and industry leading Electronic Document Management Systems, Building Management Systems, Enterprise Relationship Planning Systems and CAFM Systems.

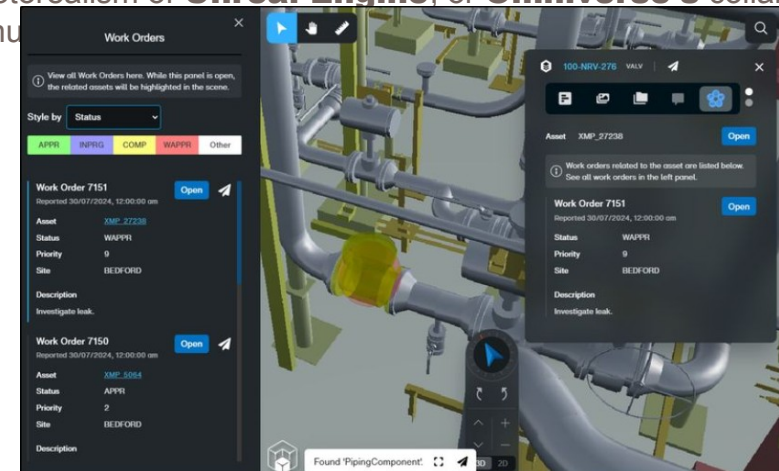
## Key Features:

- Cloud-based platform for easy **Digital Twin creation**
- **Unifies** 2D, 3D, GIS, Point Cloud, Photogrammetry data, documents, and asset information
- **Visualizes and analyzes** data in a browser with high performance.
- **Detailed 3D mapping** down to **nut-and-bolt level**.
- **Integrates & Connects** dynamic source data from Esri, Maximo, SAP, IoT devices



## Technical Capabilities

- **Data-centric approach** – Images are great, but data unlocks value
- **Creates a "single source of truth"** for enterprise decision-making
- **Organizes structured & unstructured data** into a connected framework
- **Improves data discovery, context, and global visibility** across organizations
- **Flexible Data Visualization** - Choose from the **web (browser)**, the photorealism of **Unreal Engine**, or **Omniverse's** collaborative tools and simulation



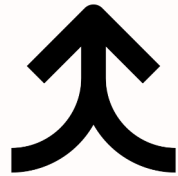
### Data silos



Key operational data siloed in disparate systems

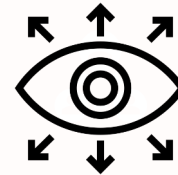
BIM, CAD, EAM, GIS, IoT, ERP, LIDAR, multimedia, tech docs, asset info, work orders

### Data unification



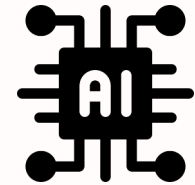
Once silos connect, how do you unify diverse data for a single view?

### Visual collaboration

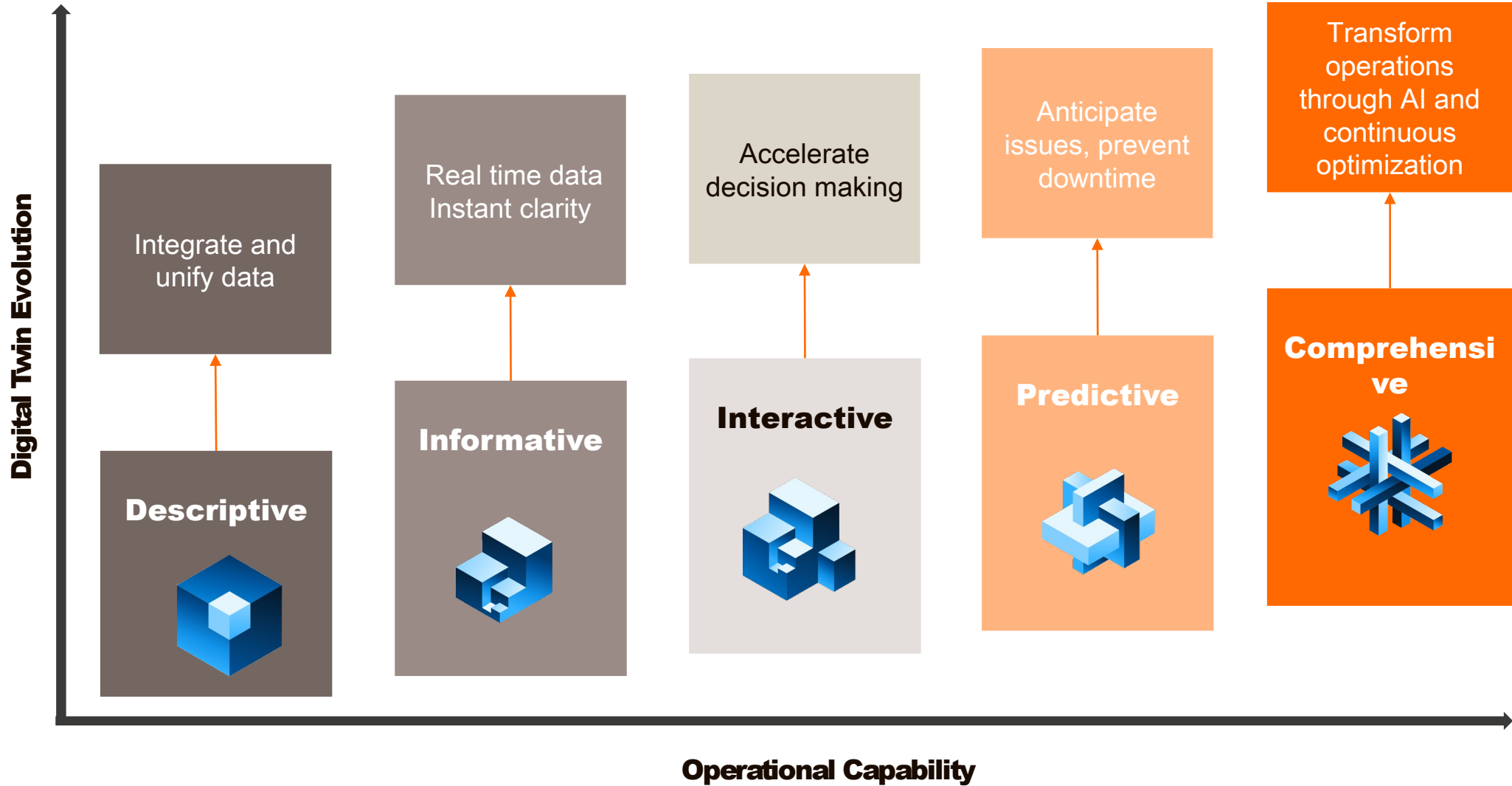


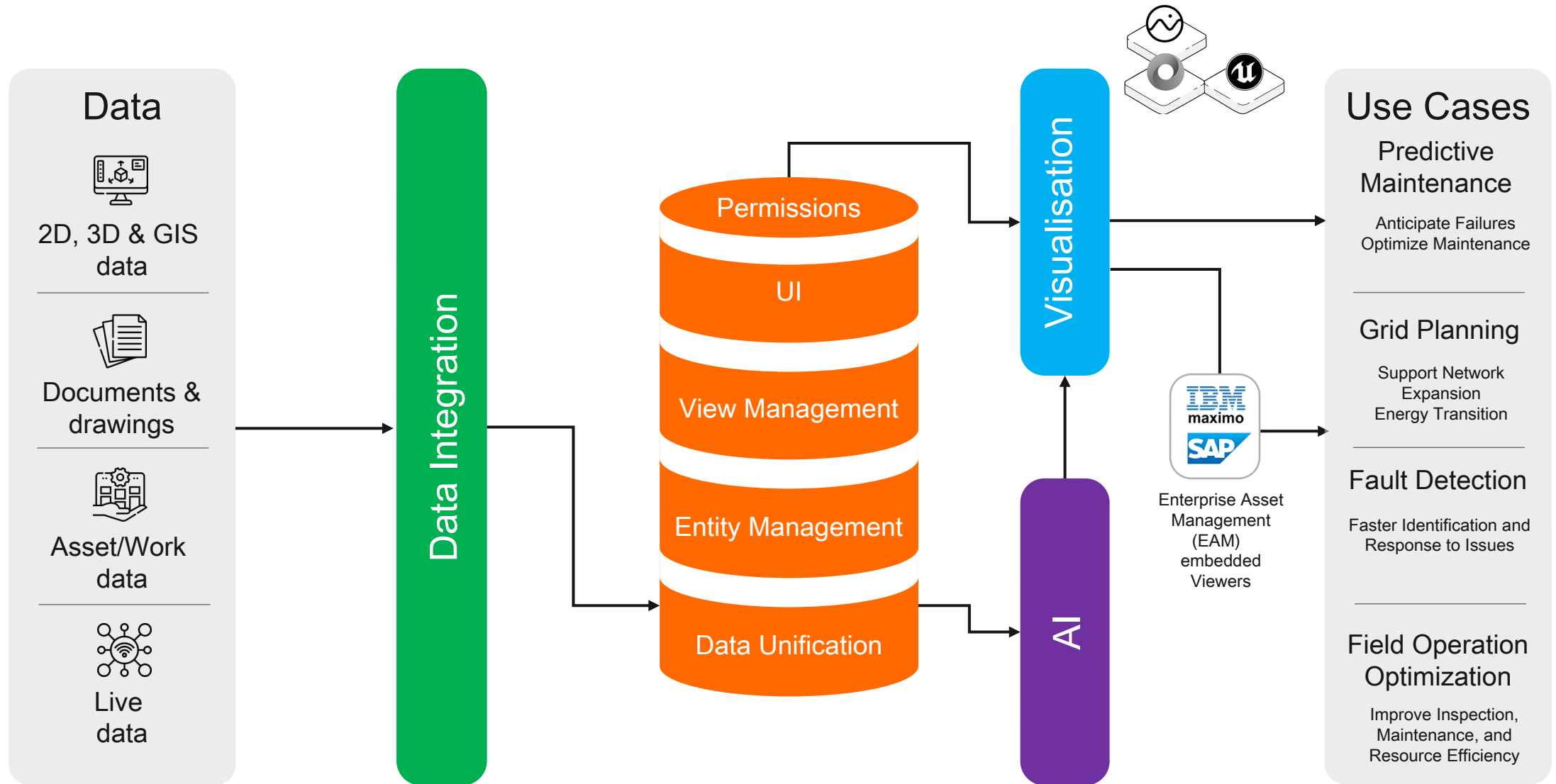
How to give teams a 360° view to drive operational excellence?

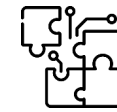
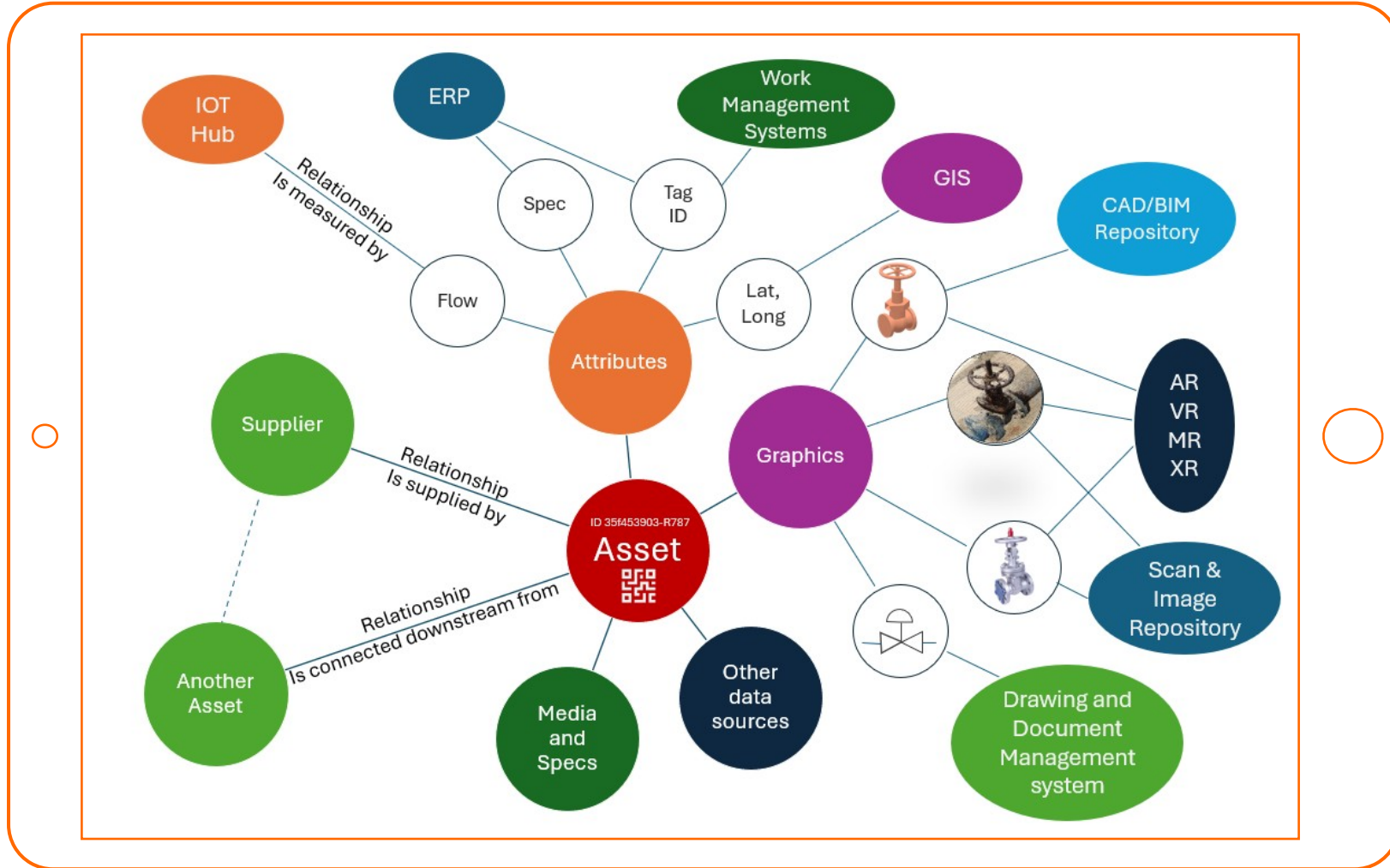
### Artificial intelligence



How to leverage AI and machine learning for transformational change?







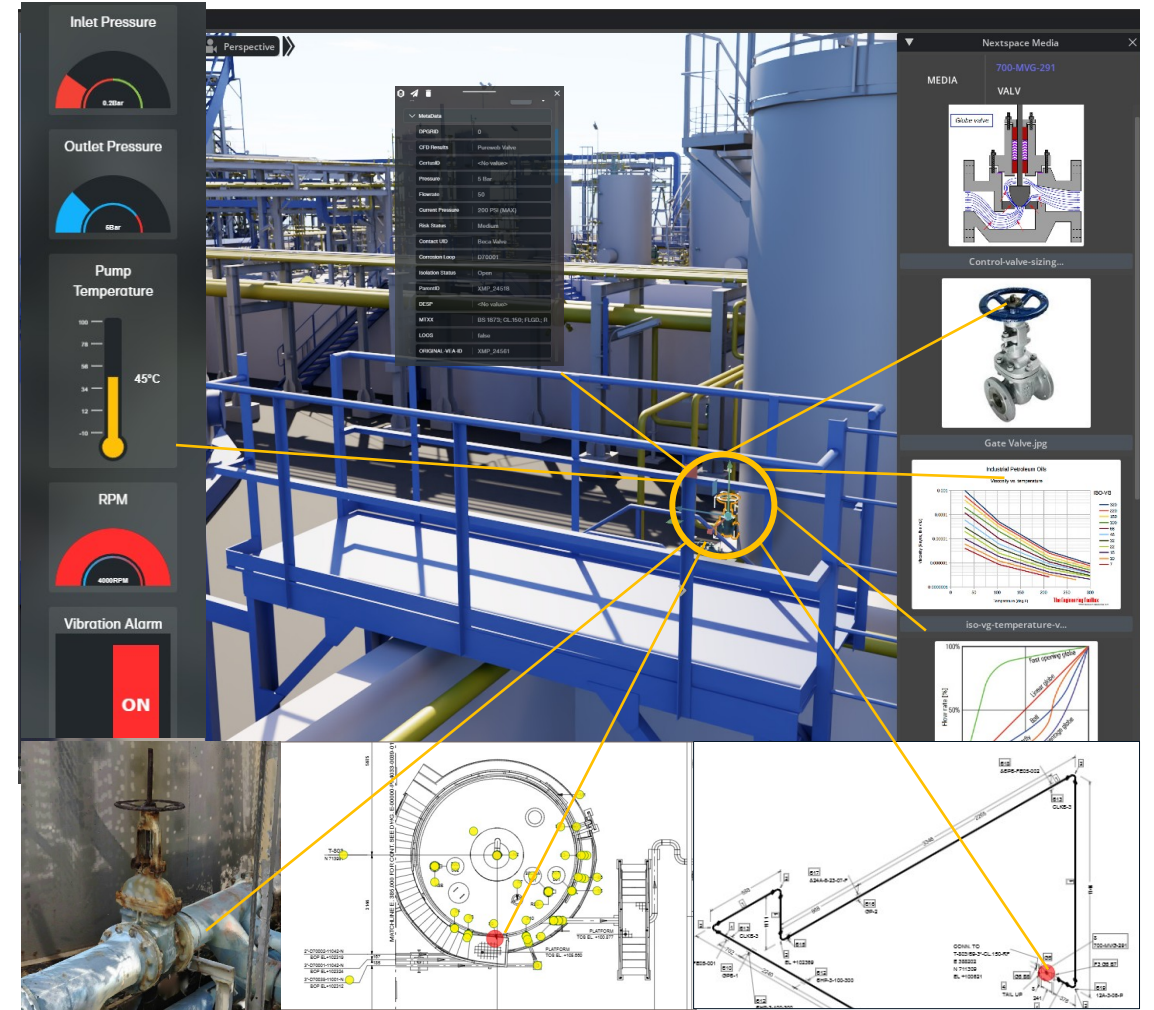
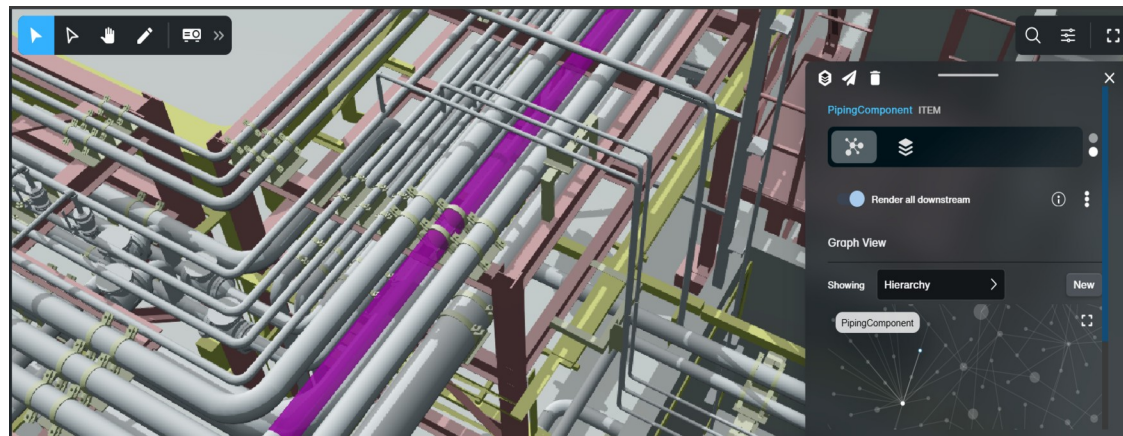
Easily unify seemingly incompatible data types using our data node-based conversion tools

## Organize and connect entities

Unify diverse data sources into a coherent model

Define graph relationships in Operator

Show contextual information in Navigator



The screenshot displays the IBM Maximo Application Suite interface. The top navigation bar includes the text "IBM Maximo Application Suite" and "Manage". The main content area is titled "Assets" and shows a table with columns: Asset, Description, Location, Loop Location, Parent, Rotating Item, Is M&TE?, and Linear?. The "Asset" column contains the value "XMP\_27238". A search dropdown menu is open, listing "XMP\_21808", "XMP\_27238", and "XMP\_85883". The "XMP\_27238" option is highlighted. A watermark for "Applus+ Together Beyond standards" is visible in the background. At the bottom, a dark blue box contains the text "Quickly locate assets".

Asset	Description	Location	Loop Location	Parent	Rotating Item	Is M&TE?	Linear?
XMP_27238							

Assets (0 - 0 of 0)

Common Actions:

- New Asset
- Change Status
- Move/Modify Assets
- Swap Assets
- Create KPI
- Create Report
- Unlink GIS Feature
- Delete linked GIS Feature

More Actions:

- Define Maintenance Schedule
- Define Operational Schedule
- Add Assets to Collections
- Create (Spatial)
- Open Drilldown
- Create
- Unit of Measure and Conver...
- Zero Asset Costs
- Attachment Library/Folders
- Associate Work Zone
- Associate Time Zone
- Roll Up Maintenance Costs

Nextspace

IBM MAXIMO

Quickly locate assets



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**Head of Digital Services**  
**Applus+ Asia, Middle East &**  
**Africa**

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LinkedIn:



Thanks!

Applus<sup>+</sup>

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<https://www.applus.com/global/en/>

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**www.applus.com**