

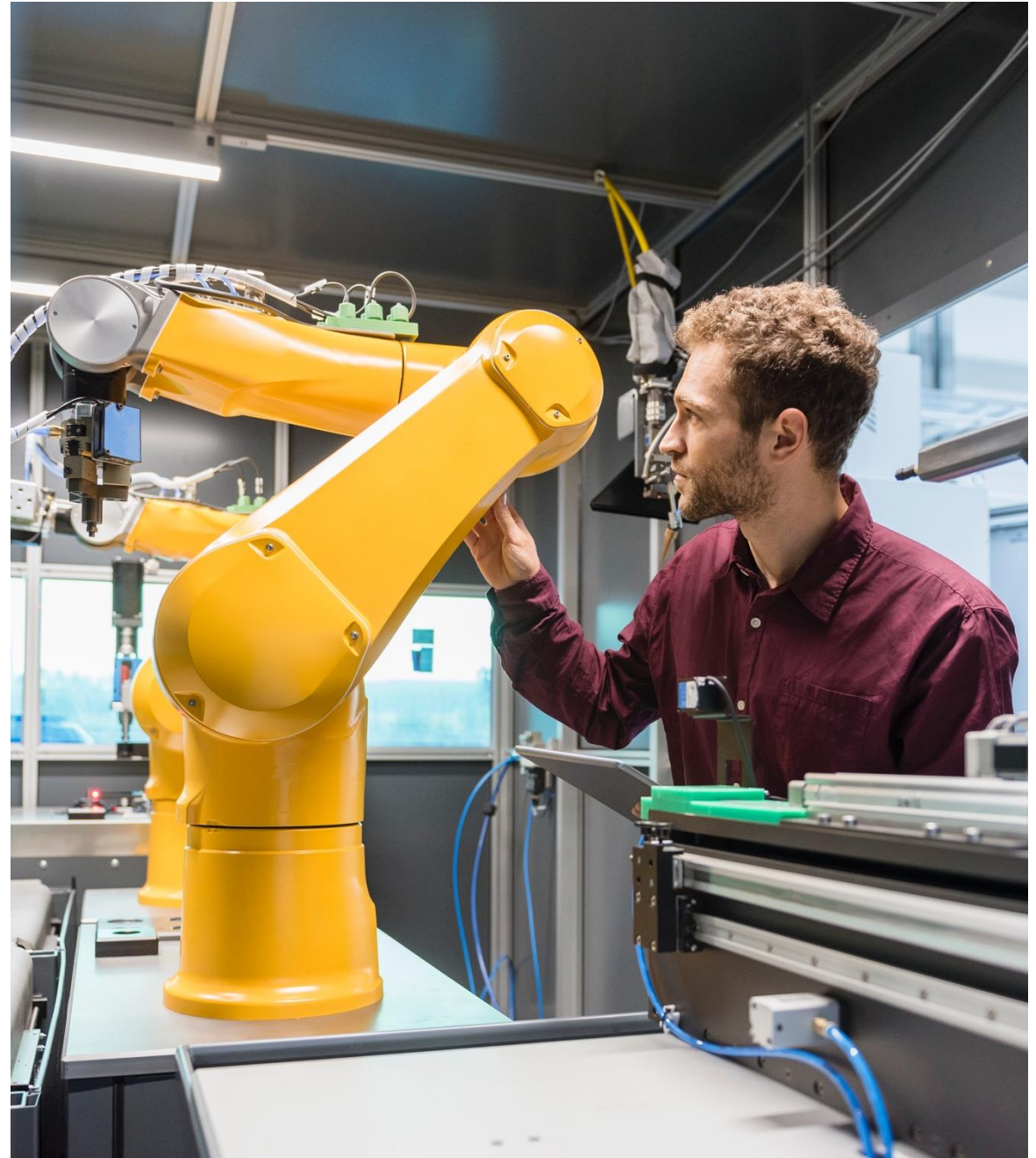
PragmaEdge

Maximo Visual Inspection: *Things to Consider*

Lynn Sweetwood
VP & CRO



Industry 4.0
transformation
is being
accelerated by AI



Inspection use cases are across every Industry

Energy & Utilities

- Power generation / renewables
- Power transmission & distribution
- Water and waste management
- Oil & Gas

Manufacturing

- Auto
- Pharma / Life Sciences
- Industrial
- CPG

Transportation & Fleet Management

- Rail rolling stock
- Railroads & infrastructure
- Public transportation & cities
- Airports & Port Authorities

Facilities

- Office
- Campus
- Retail Outlets
- Distribution
- Manufacturing
- Research Centers
- Data Centers

Visual inspection
errors typically
range from
20% to 30%

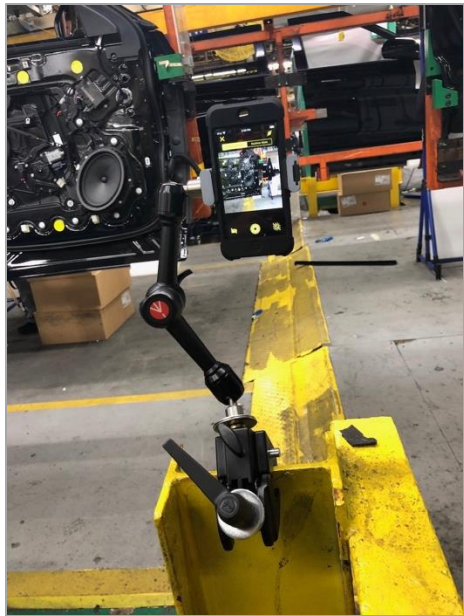


IBM Maximo Visual Inspection: Game Changing Capability



Quick response to process issues using off the shelf Visual Inspection technology

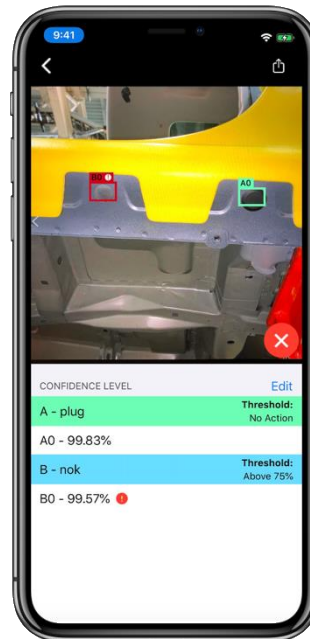
Install



Collect



Inspect



Alert

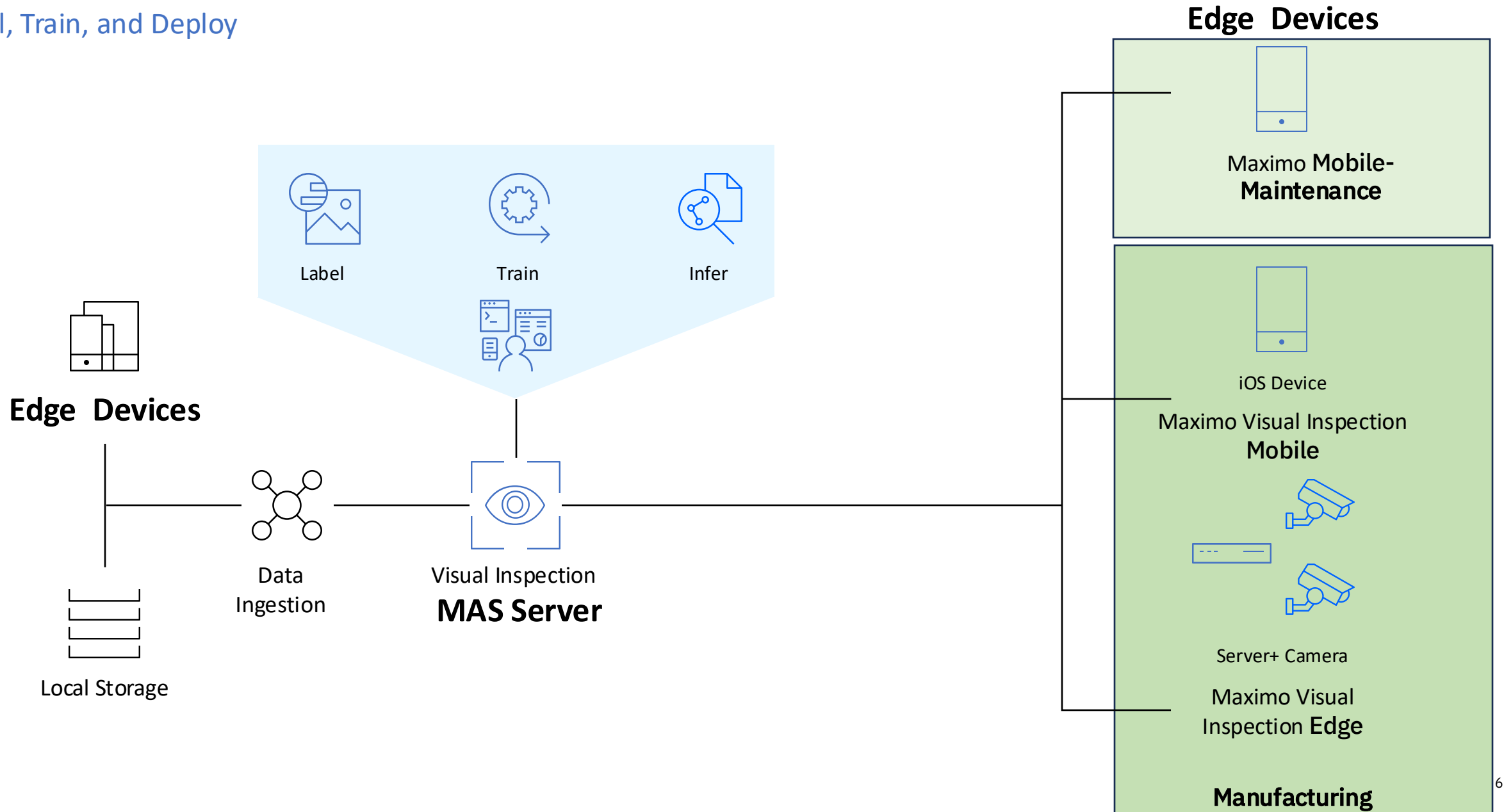


Hours

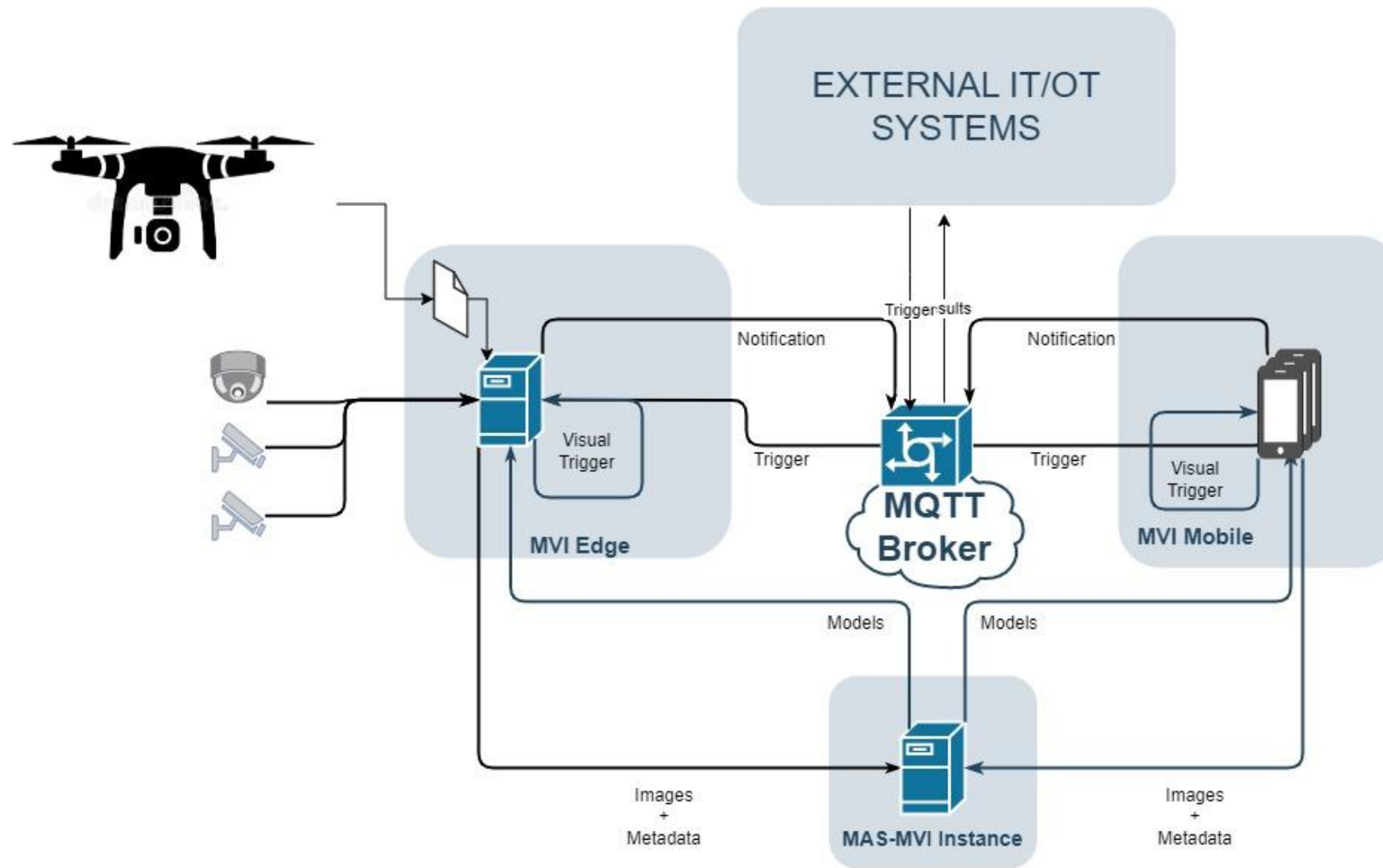
- Improves **inspection, failure detection and error-proofing processes** with machine learning, acoustic modeling, and visual recognition.
- To be used in **handheld devices or fixed mounts**.
- **Instant diagnosis** – object detection and defect detection & classification.
- **Automotive specific triggers** – timestamp, VIN, broadcast codes.
- Easy to deploy by using **everyday technology**.
- Dashboard with **trending analytics**.
- **Respond to process issues in hours**, not days or weeks

Maximo Visual Inspection- Create and Run AI Vision Workloads

Label, Train, and Deploy

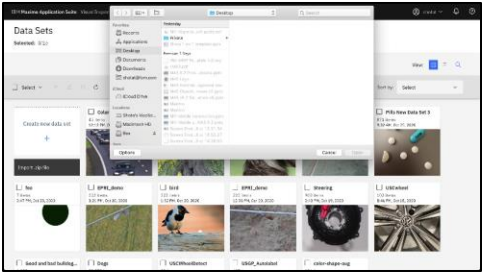


Component level architecture

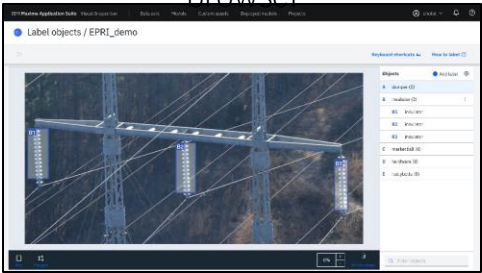


Maximo Visual Inspection – training on hybrid cloud

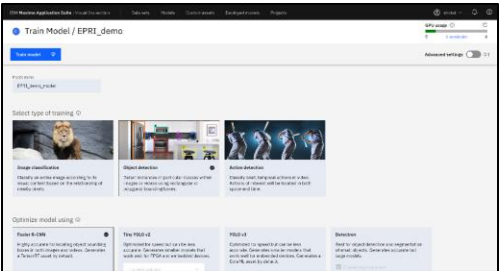
Streamlines the process for deep learning



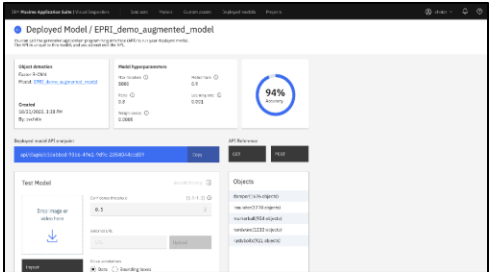
Drag-and-drop datasets on a browser



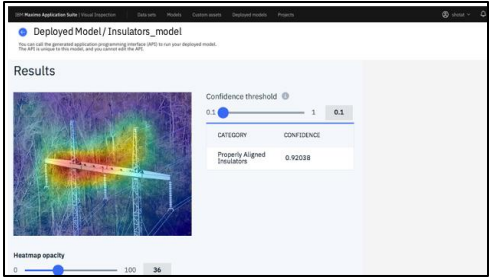
Label objects across images and videos



Train models



Deploy models



Infer results with confidence



Maximo Visual Inspection

Easily create advanced AI models

Data preparation automation

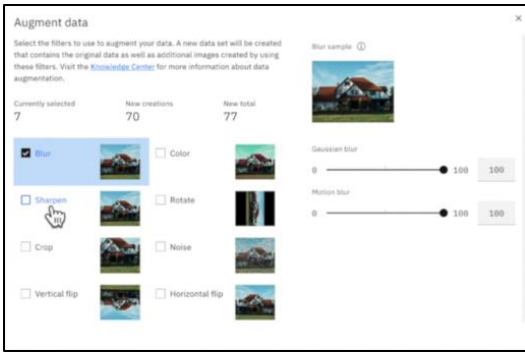


Image augmentation

Model types

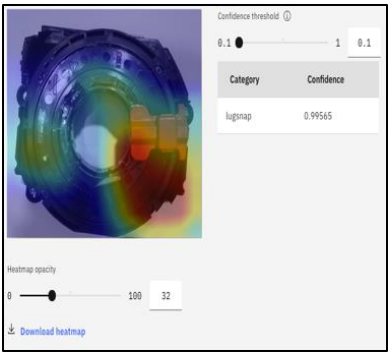


Image classification



Object detection

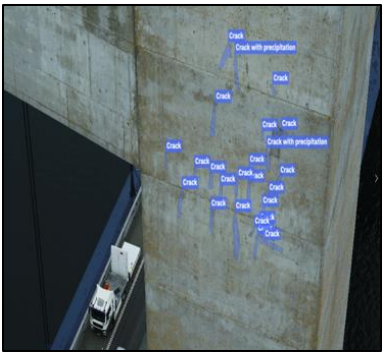
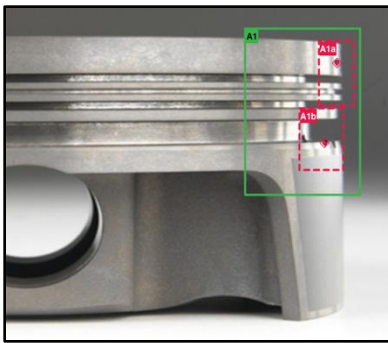
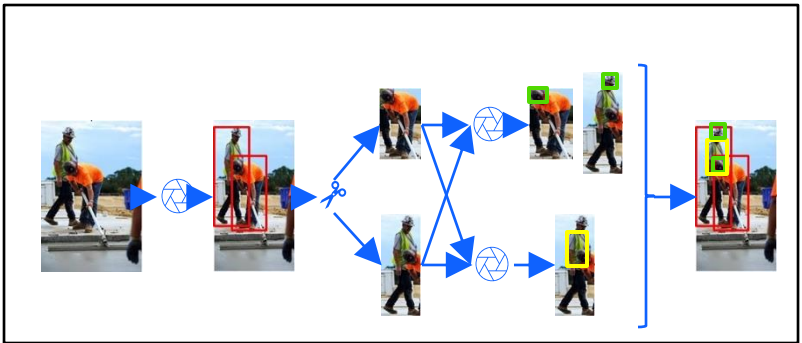


Image segmentation



Anomaly Detection



Composite models

Maximo Visual Inspection Mobile



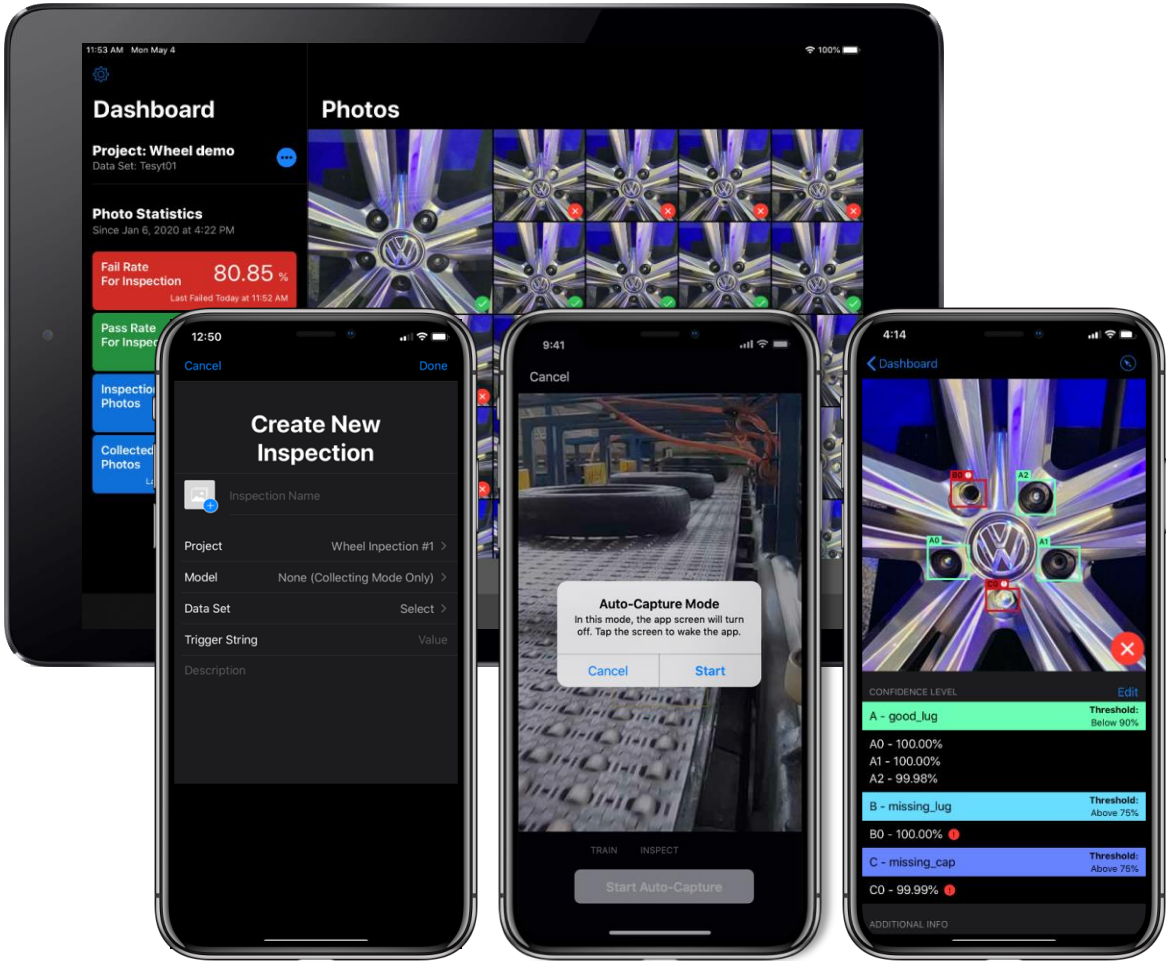
All-in-one:
compute, camera, 5G



Speed to value:
Capture, train, prove



Integration with model training platform; perform **inferencing at the edge**

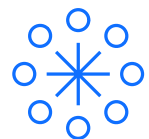


Maximo Visual Inspection **Edge**

Key benefits



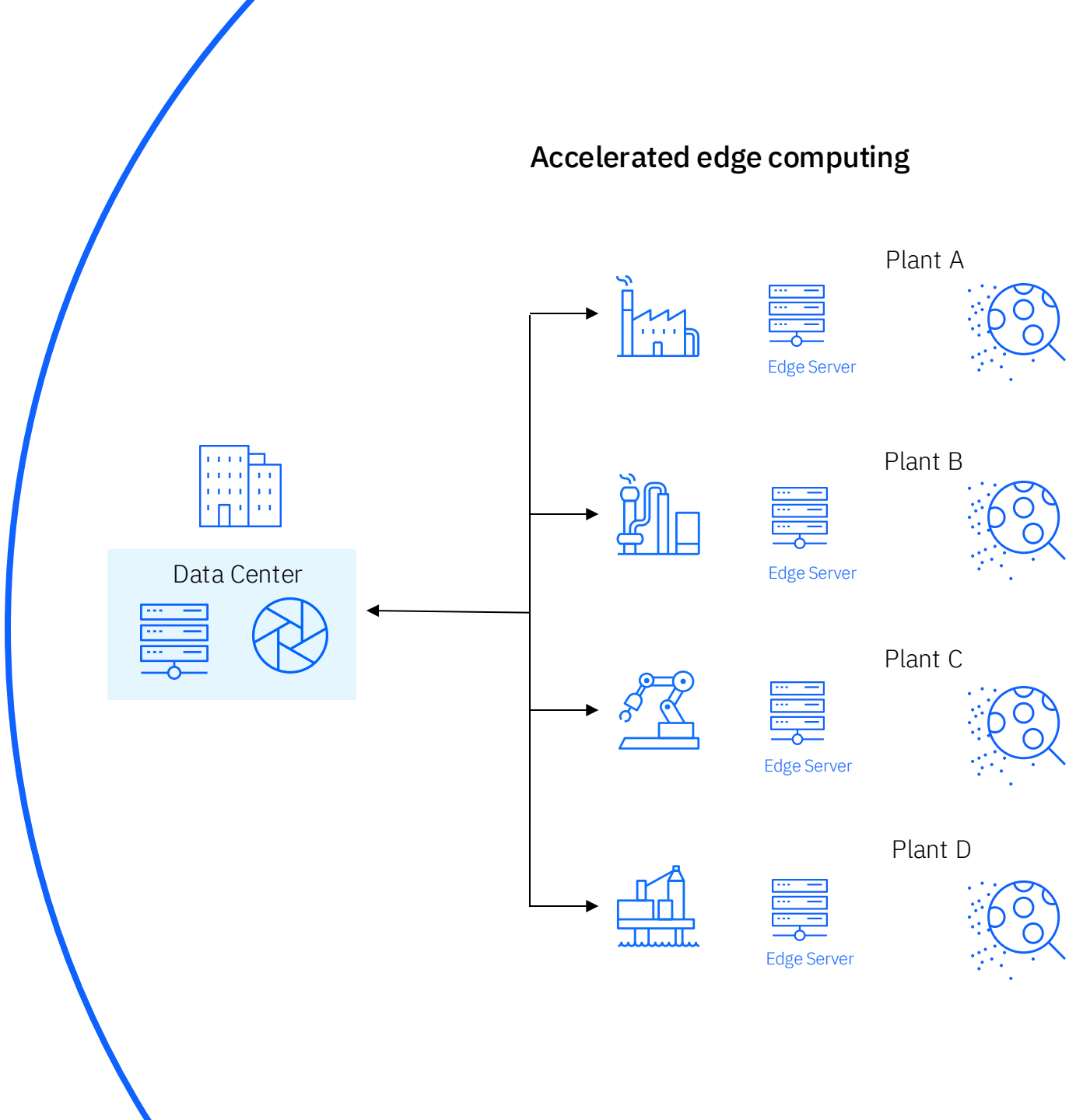
High performance inference service



Large scale implementation

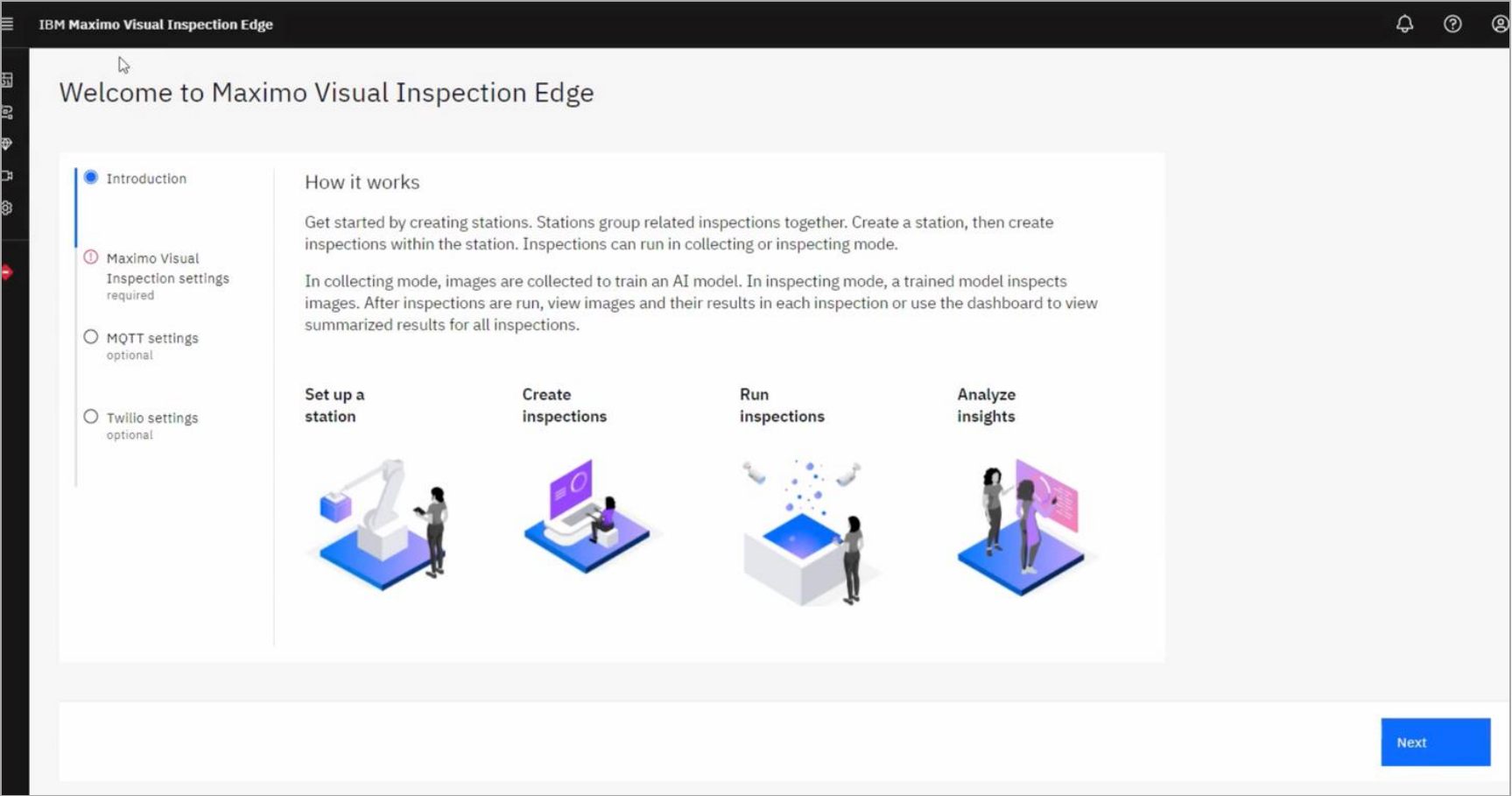


Integration with existing fixed cameras



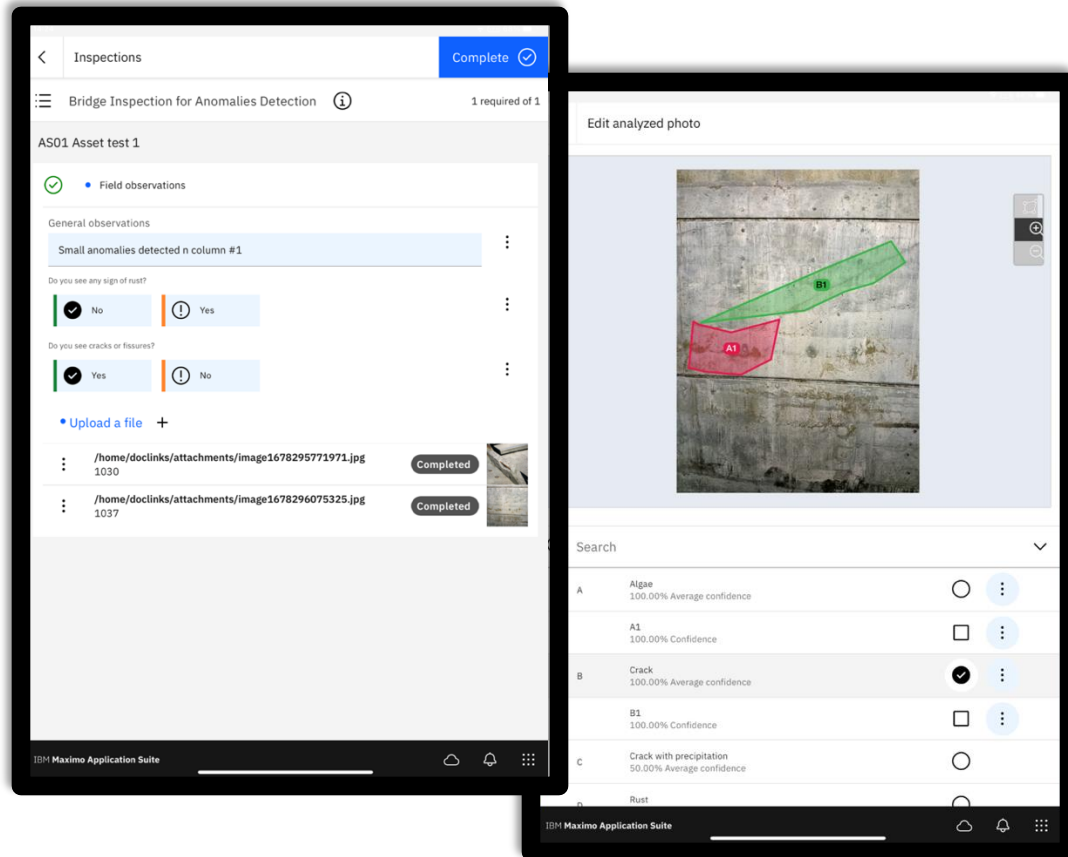
Maximo Visual Inspection Edge

Step by step set up
is quick and easy



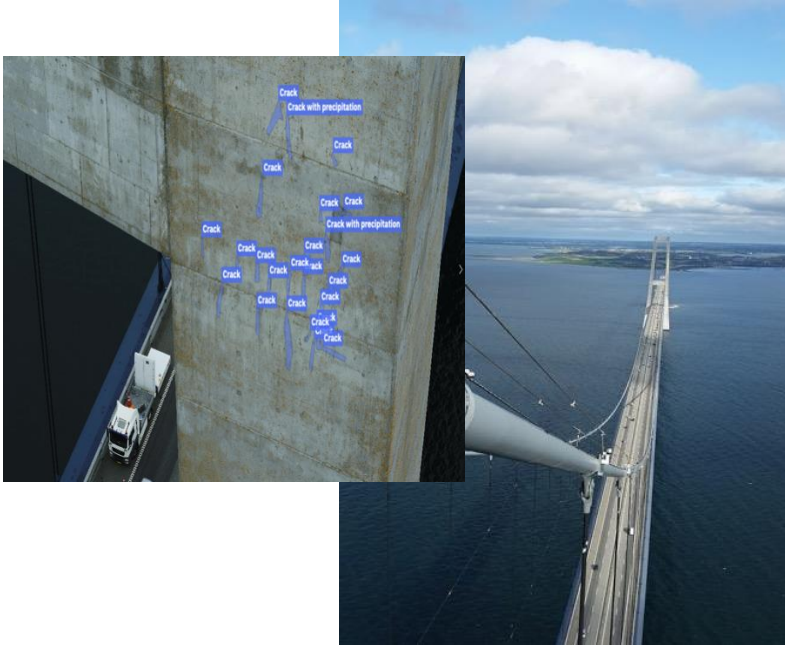
Easy to set up!

Enhance Maximo Mobile Inspections with AI vision



- Add automated visual inspection to asset inspection workflow
- Take a picture in the Inspection form and send to MVI to automatically analyze photo
- Modify and save result in the form
- Performs inferencing remotely, allowing the flexibility to run on a wide variety of mobile devices
- Create a follow-up work order from the visual inspection results

Field inspection use cases



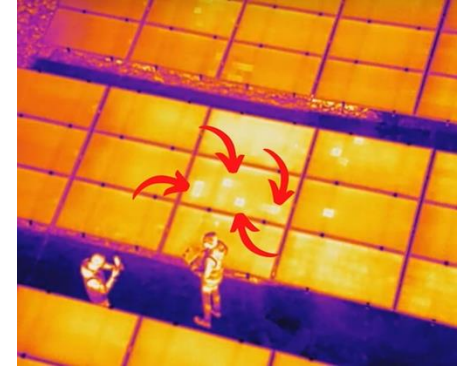
Civil infrastructure

- High resolution model to find defects
- Stitch together large drone images
- Locate and monitor defects across large assets



Energy & Utilities

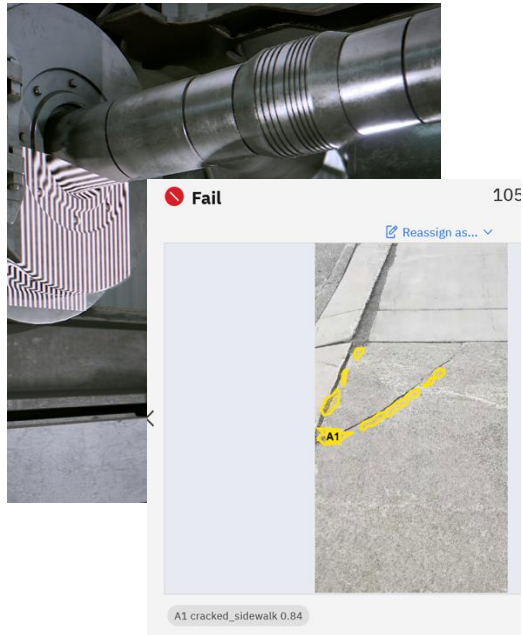
- Transmission line inspection
- Pole inspection
- Substation inspection and monitoring



Thermal Drone imagery

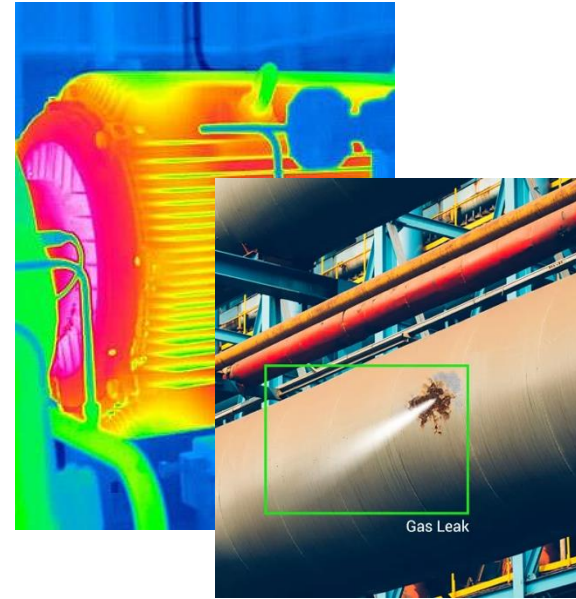
- Hot spots
- Cracks
- Offline strings

Asset inspection use cases



Simple Visual Inspections

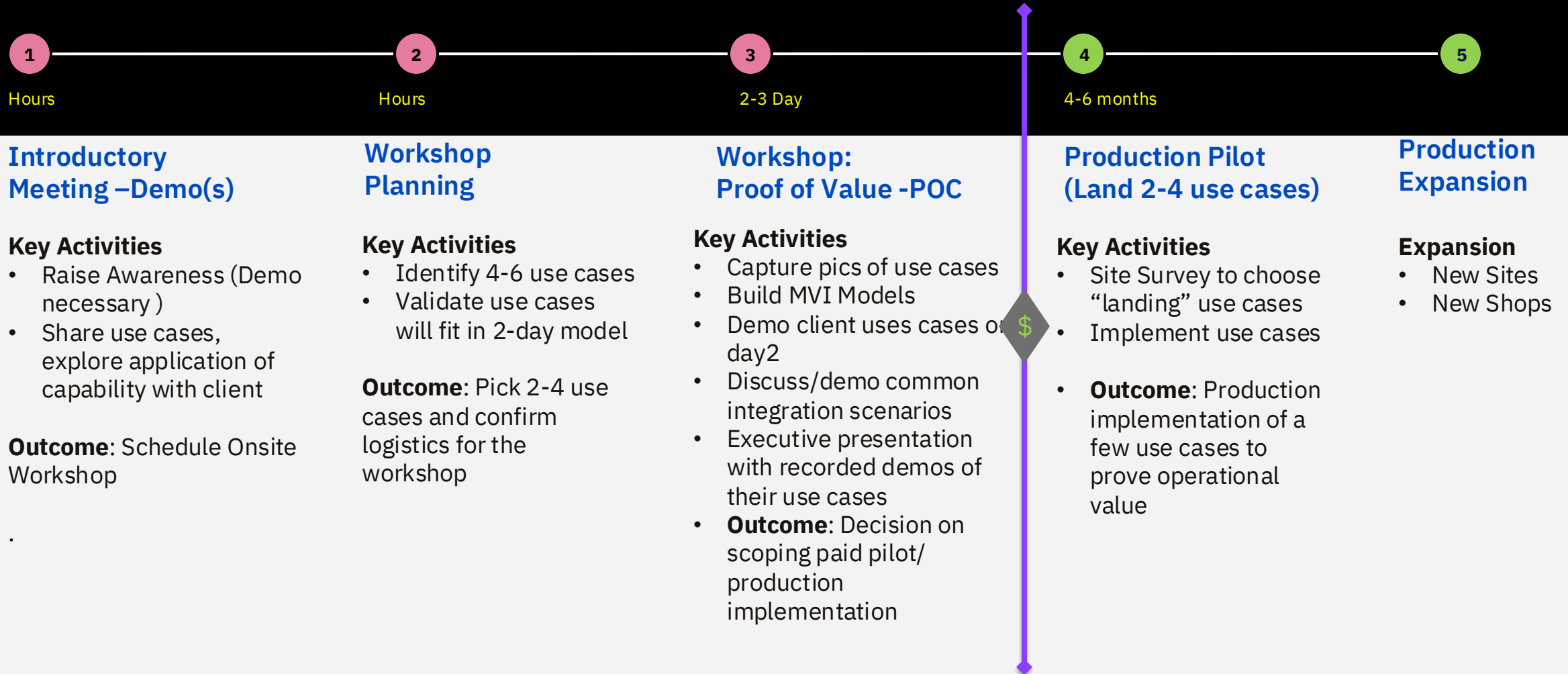
- Cracks
- Abrasions
- Bumps
- Wear and tear
- Corrosion



Thermography

- Damage to electrical insulation
- Moisture damage due to leaks
- Hot spots (due to bad connections or short circuits)
- Clogging of cooling systems

Engagement Model for Maximo Visual Inspection



Thank You!

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