

thread

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AUTONOMOUS INSPECTION



"What amounts to 'reasonable inspections' is a question of fact for a jury to decide."

Couch v Pacific Gas & Electric Company



As an industry why don't we inspect more frequently?...

INSPECTION DILEMMA

- Manual Today
- Requires Highly Skilled Operators
- Too Difficult for Customers to Perform
- Losing Control of their Infrastructure

"We have successfully deployed the Airtonomy solution across all of our wind farms enabling wind technicians to complete on-demand UAS inspections, providing our organization with the ability to complete inspections at scale alongside ongoing routine maintenance cycles."

- Xcel Energy



WHAT IF **WE COULD...** ENABLE AUTONOMOUS INSPECTION

TAKE CONTROL OF INSPECTIONS

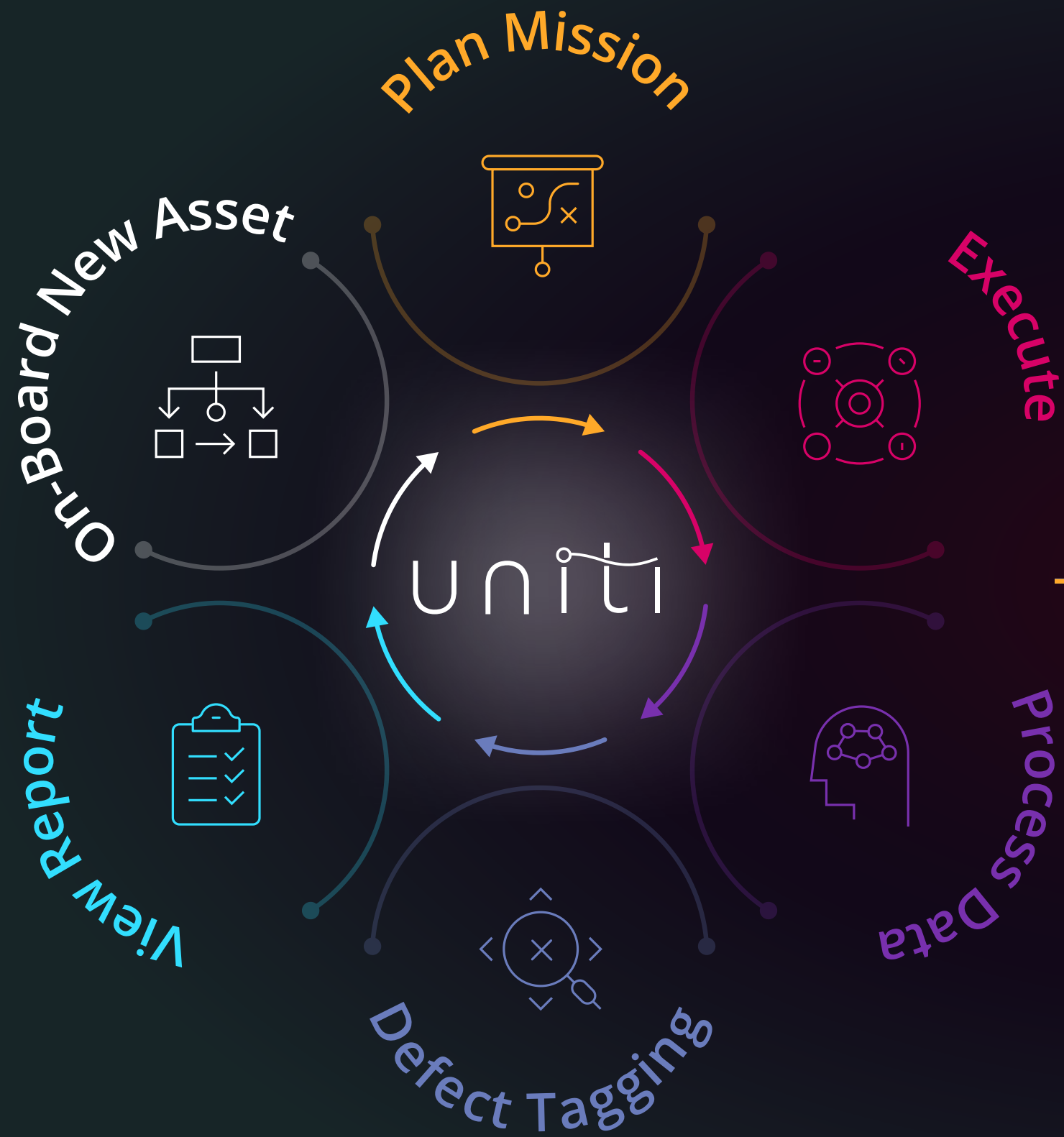
- In-House On-Demand Inspection
- Defect Alerting
- Faster Return to Service
- Time Based Analysis
 - Defect Growing
 - Severity Rating
 - Trigger Workflow

DELIVER BETTER INSPECTIONS

- Deliver Actionable Insights
- Defect Identification
- Enterprise Ready Reporting
- Integrations and Data Management to Increase Competitiveness

INSPECTION BASED DATA MANAGEMENT

- Creation of Inspection ERP
- The Robotic Inspection Standard
- Inspect Everything
 - Make Inspections "Push-Button"
 - Inspection Based Pricing
 - Single View all Assets



RULES-BASED MISSION

Asset based templates enable scaling to an enterprise scale



SIMULATION

Hardware in the loop simulation shortens development and saves cost



AUTOMATED MISSION

Sensors detect asset to generate asset specific autonomous missions



CONTEXT AWARE

Data associated to real world asset at the moment of capture



DATA MANAGEMENT

Organized data ready for consumption by machine vision tools

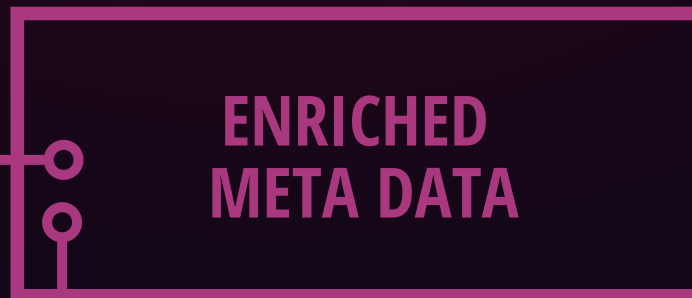
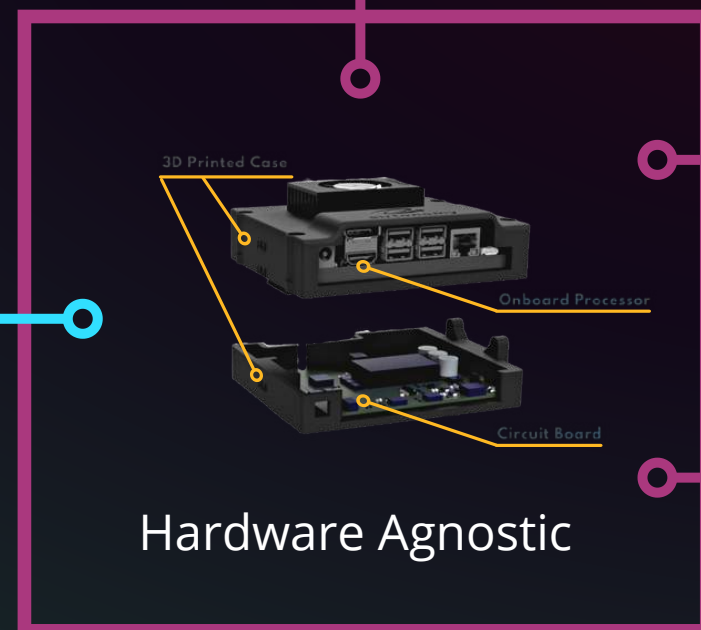
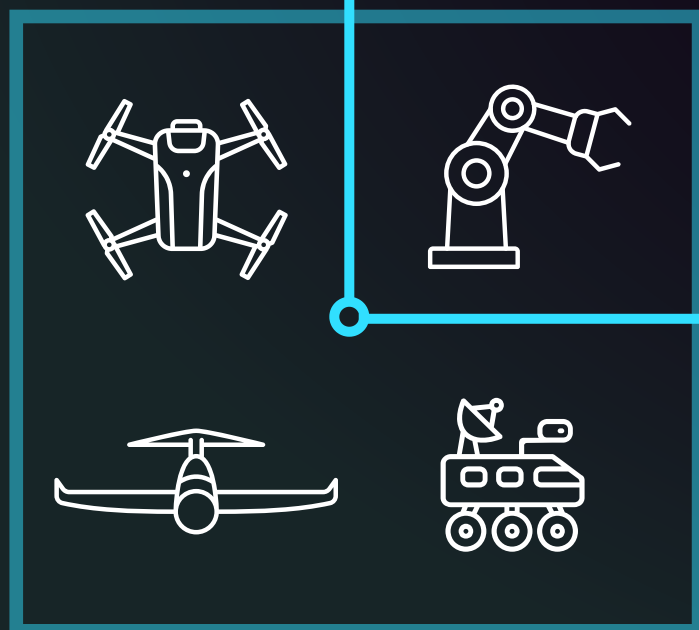
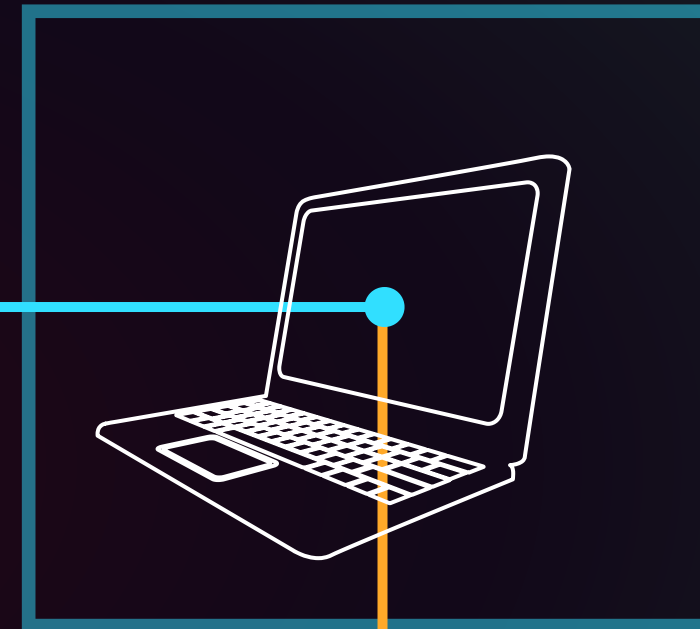
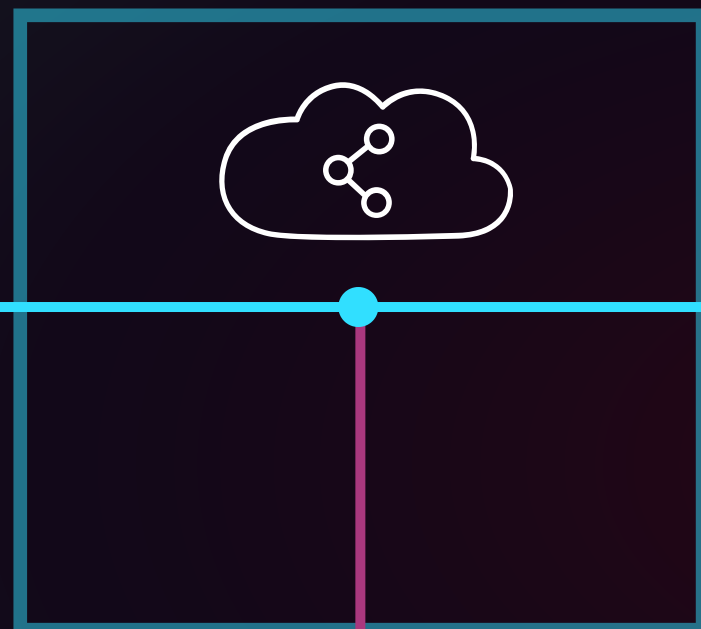
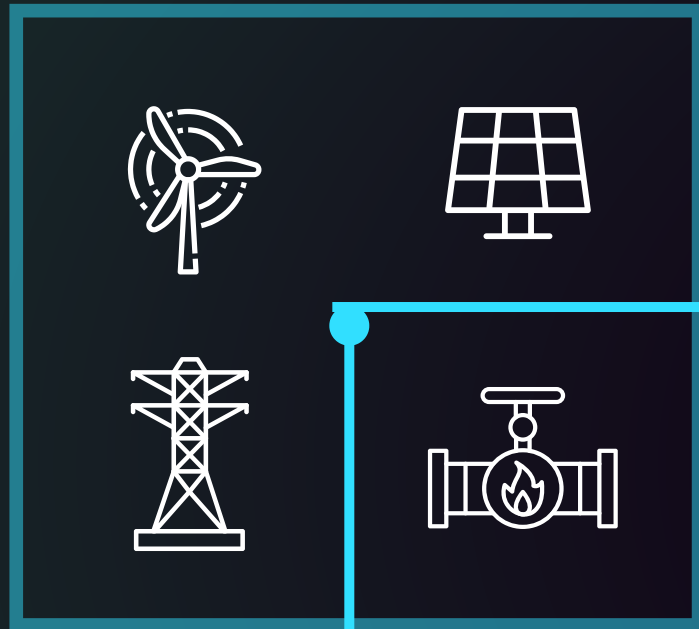
Unity ARCHITECTURE

ASSETS

DATA EVENT

ANALYSIS

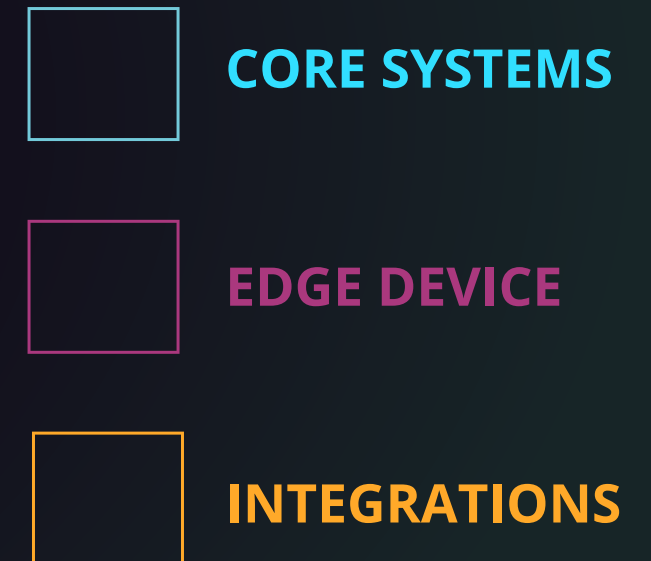
INSIGHTS



MISSIONS

ON-BOARD COMPUTE

ASSET MANAGEMENT



Uniti WIND



Built using standard tools available in UNITI

UNITI can support any number of other applications that you are doing today as it is a common toolset as opposed to a wind-specific application

Fly with the push of a button

Rules-based flight means the drone knows the attributes of the asset under inspection and uses onboard intelligence to detect the real-world asset and automatically updates flight plans

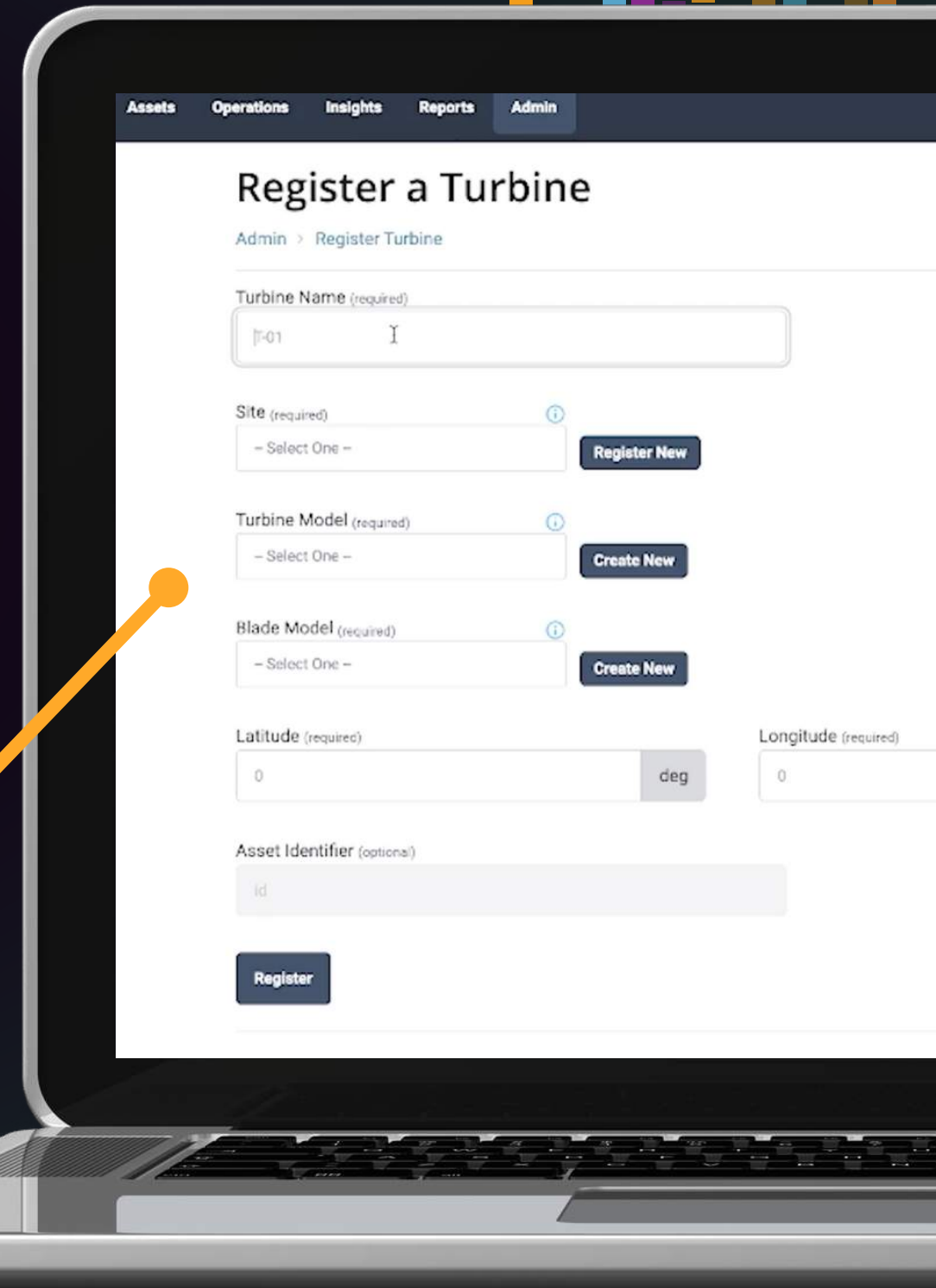
Rules-based flight allows for inspections to be templated

A new turbine inspection can be set up in minutes by adding 5 fields that define where the turbine is located. Competitors would need to set up a unique inspection plan per turbine requiring more time and user input, limiting scale

Data is contextualized at capture

Data can be fed into the cloud and consumed by MV algorithms automatically

Pilot skill becomes irrelevant, first time pilots will generate superior quality data to an experienced inspector





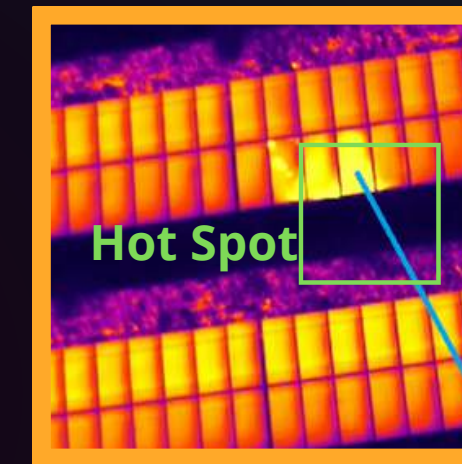
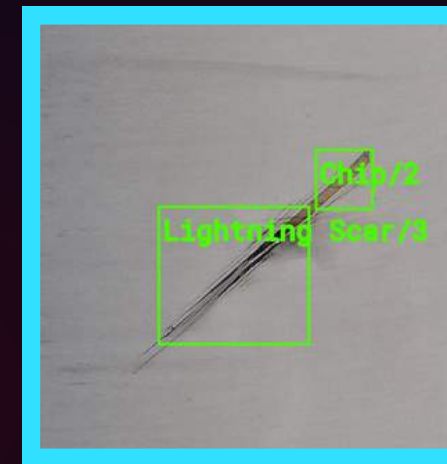
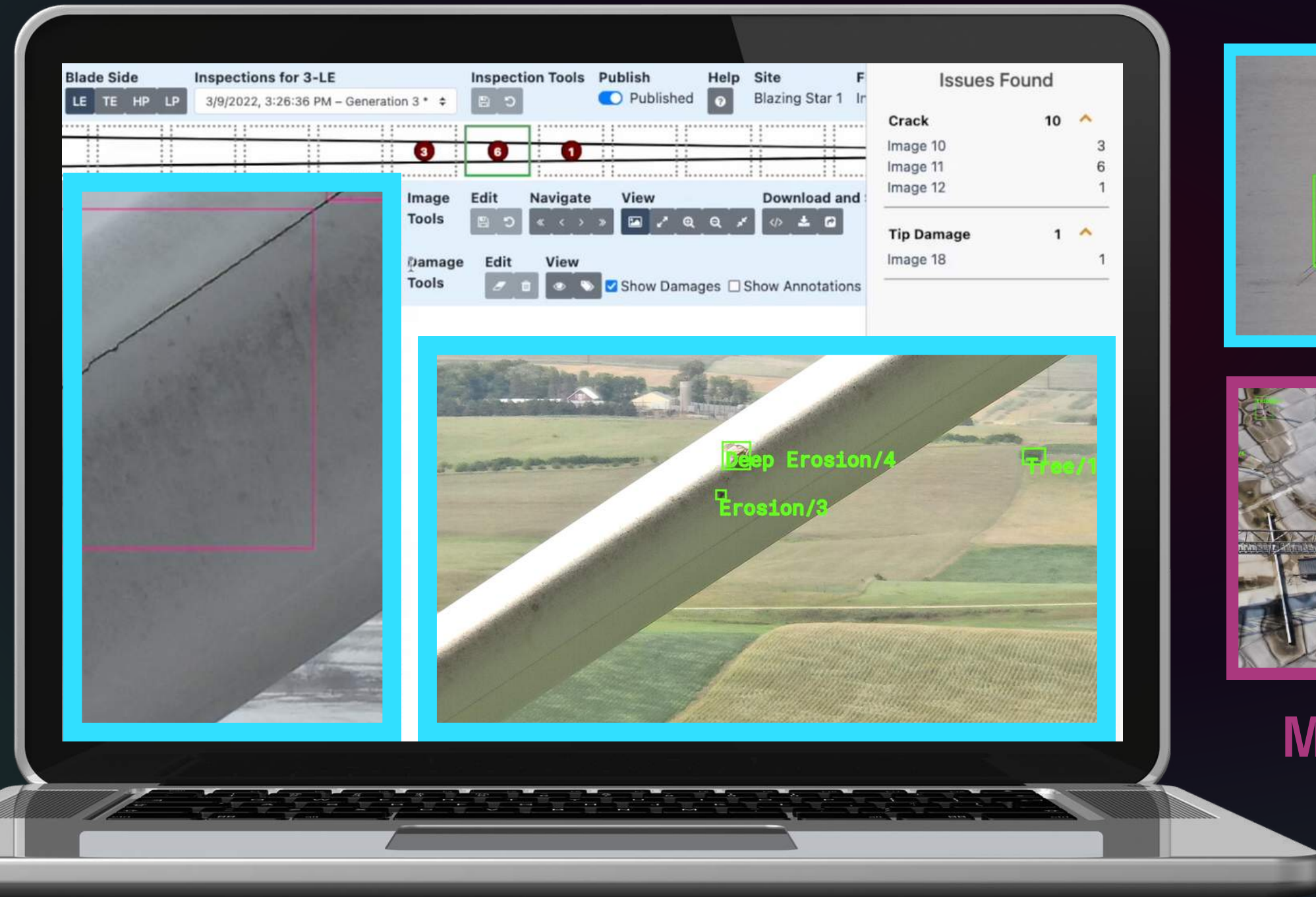
MV Overview / Defect Identification

DEEP EROSION

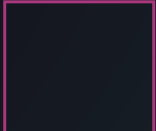
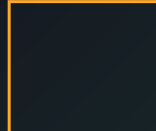
Deep Erosion. Laminate is damaged. Holes or Adhesive missing resulting in internal exposure.

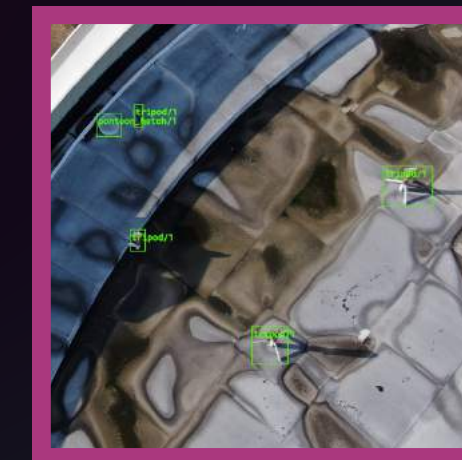
LIGHTNING SCAR

HOT SPOT



KEY:

-  WIND
-  OIL
-  SOLAR



MISSING SOCK

STANDING WATER

MEET THE TEAM

- Est. 2019 -

LEADERSHIP


- Midwest Based
- 2 Fortune 250 Customers
- 2021 1st Place Genius NY Pitch Winner
 - 600 Applicants Worldwide
 - \$1M Grand Prize
- First Mover for Inspection Automation
- Deep Industry Experience




Dr. Josh Riedy
Founder
CEO
Formerly:





Dr. Jim Higgins
Co-Founder
COO
Formerly:





Dr. Travis Desell
Co-Founder
Machine Learning Lead
Formerly:




Nick Zaccardi
Chief Technology Officer
Formerly:

Neil Mix
VP of Engineering
Formerly:




Aaron Roller
Integrations Lead
Formerly:




Gray Byers
Chief Business Officer
Formerly:




Adam Serblowski
VP of Product
Formerly:




Josh (JP) Pollock
VP of Sales & Marketing
Formerly:
