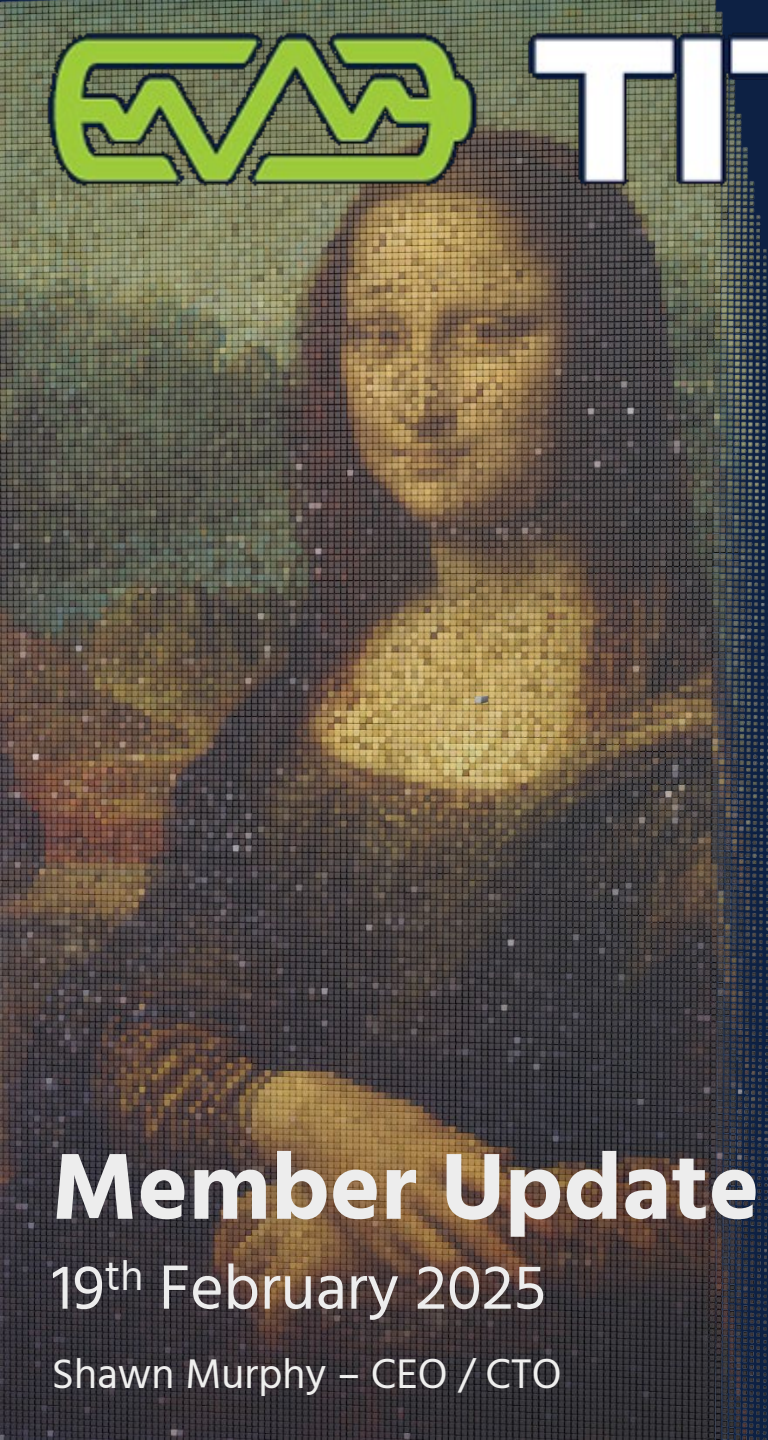




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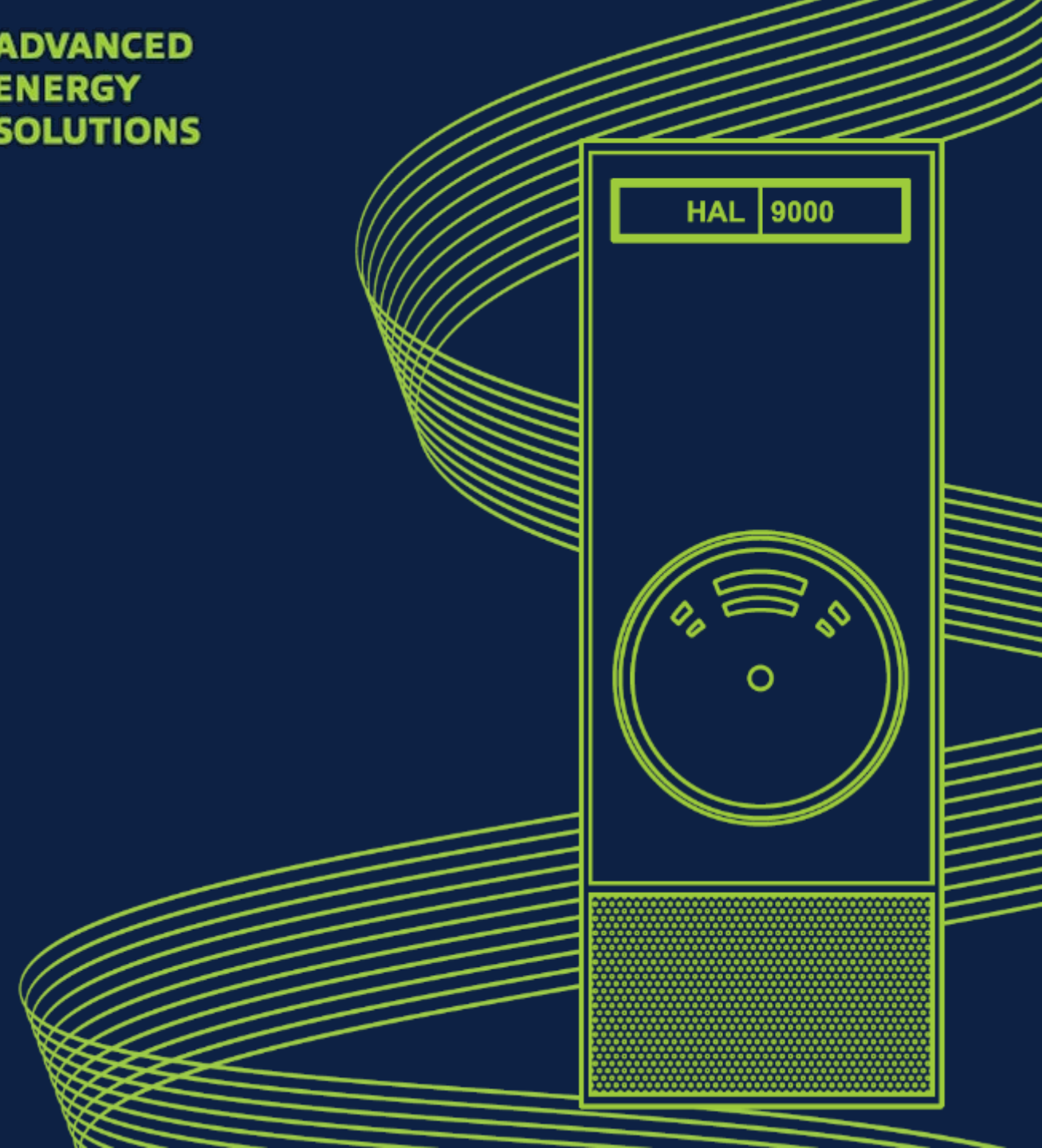
ADVANCED
ENERGY
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Member Update

19th February 2025

Shawn Murphy – CEO / CTO



System Deployments

Production-Scale Atlas is Fully Operational

- Integrated MES
- FN <1% FP 3%, translating: only one cell in a million will be False Negative (FN)
- >97% Production up-time
- Plant Integration was completed within 3 month
- Pouch/cylindrical systems in development

Services and Capabilities

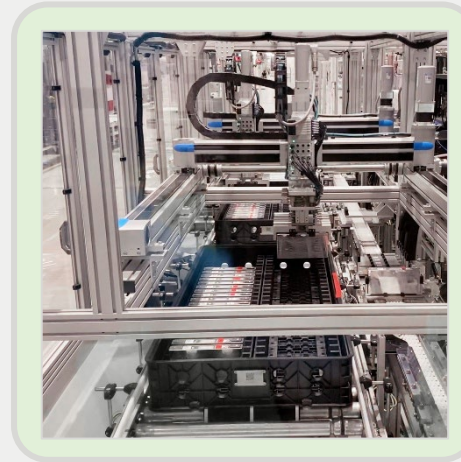
AI-enabled platform providing unprecedented visibility into battery health and production quality

- Scalable AI models enabling 99.999% accurate prediction
- Services:
 - Cell Conformity
 - Cathode Misalignment
 - Gas detection (surface, interlayer, inter-jelly roll)
 - Electrode Folds
 - Lithium Plating detection

Business & Strategy

Growing Number of Strategic Partnerships with Industrial Players

- Honeywell Partnership – MES integration, manufacturing, and strategic alignment.
- Siemens Partnership – MES integration, PLC, and strategic alignment.
- 4+ Pilots planned for 2025, expansion to Asia
- Multiple production-scale Atlas systems to be deployed H2 2025



**Defect Detection
for Gigafactories**
**Digital Teardown™
of Every Cell**

First 6K -10K high-resolution ultrasound inspection system for battery cell manufacturing



- Average 6K to 10K pixels per cell
- 45-60 ppm (parts per min) or 1s / scan
- Cell chemistry agnostic (NMC, LFP, Metal Li)
- Real-time data analysis
- MES integration (Siemens, Honeywell)
- Services Available:
 - Conformity index
 - Layer misalignment
 - Electrode Fold detection
 - Gas detection and identification
 - Wetting
 - Particle contamination
 - Moisture contamination
 - Lithium Plating / Delamination
 - CAPA Management (Digital Teardown)
 - Battery Passport (Birth certificate)

Five Global Pilot Deployments of IonSight 0.5 GWh

* Customers' names obfuscated for privacy

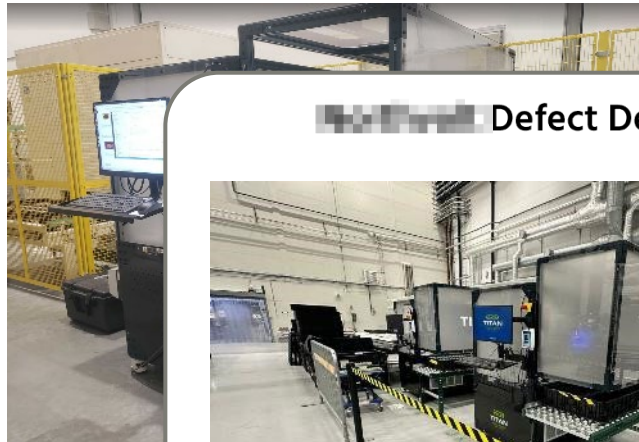
[Redacted] Defect Detection



Inhouse Pilot: [Redacted]



[Redacted] Pilot Program



[Redacted] Defect Detection

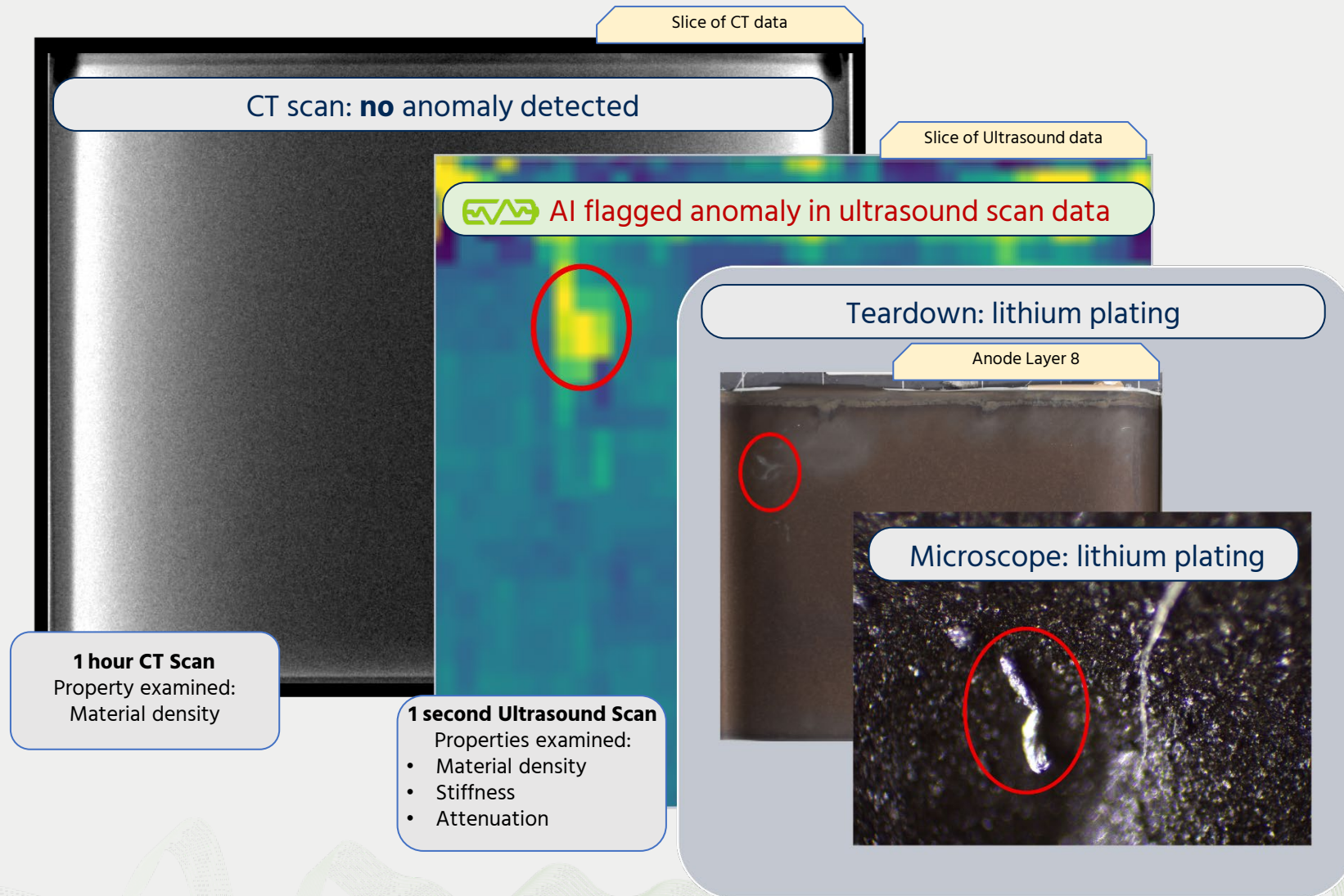


[Redacted] Defect Detection



[Redacted] Production





Titan's **IonSight** inspection platform detects a wide range of defects, including:

- Debris
- Delamination
- Dry & Inactive Zones
- Layer Misalignment
- **Lithium Plating**
- Residual Gas
- Separator Tears
- Wrinkles

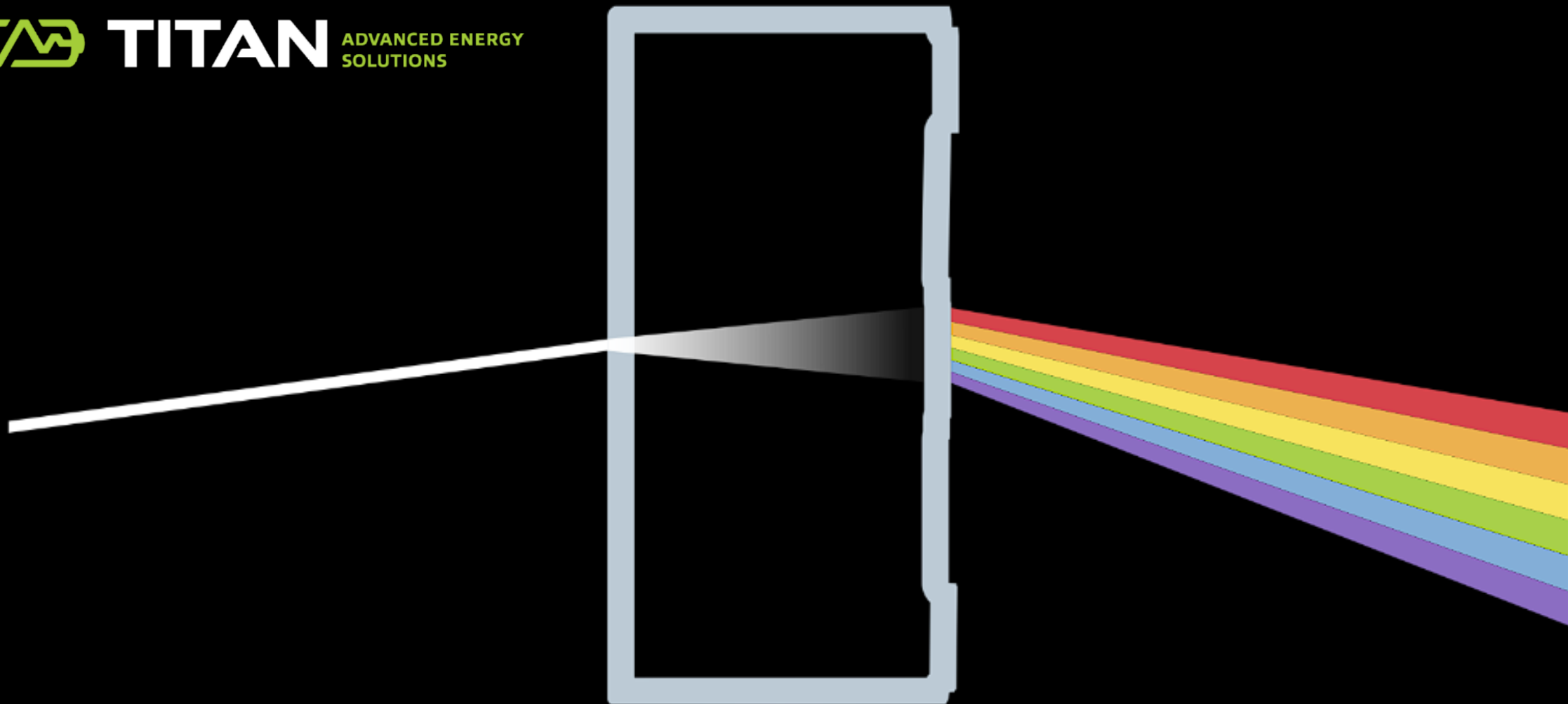
Ultrasound outperforms CT in both the quality and volume of data collection, enabling defect detection at production speed.

Defect in a prismatic cell as seen by different methods of quality control



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**DARK SIDE
OF THE SCAN**