

PHMSA R&D Forum, February 2020

Automations and Improvements in Data Collection

Shannon Katcher
R&D Manager

WWW.OTD-CO.ORG



Operations Technology Development (OTD)



Stand-alone, not-for-profit, member-controlled company where gas utilities work together to develop technology solutions to common issues (est. 2003)



27 Members serving 50 million gas consumers in the US and Canada



OTD Smart Utilities Program Area

> Key initiatives include:

- GNSS Testing & Evaluation
- Enhanced/Digital Data Collection
- Tracking & Traceability (Steel Materials)
- GIS Analysis & Mapping
- Process-Based Business Analysis & Intelligence
- Excavation Encroachment Notification System
- Emerging Technologies

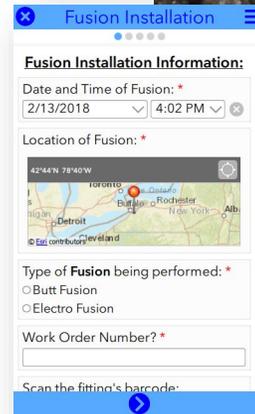


OTD Smart Utilities Program Area

Samples prior to corrosion test



Samples after corrosion test



Model Predictions:

black pipe 0.9999788

plastic 0.9998192

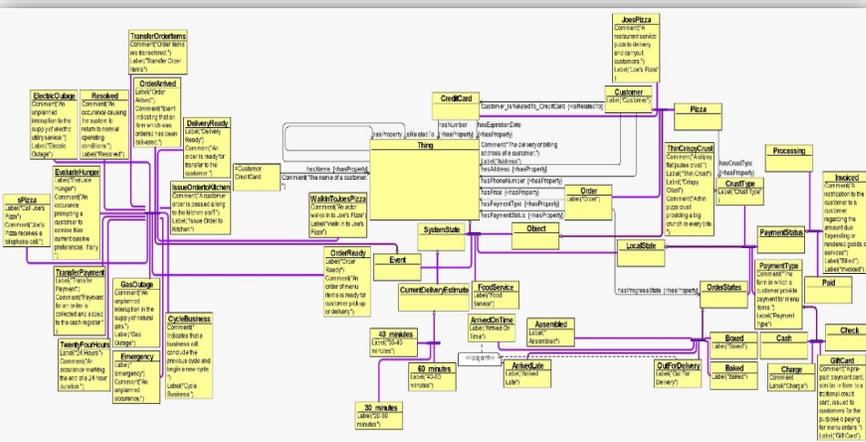
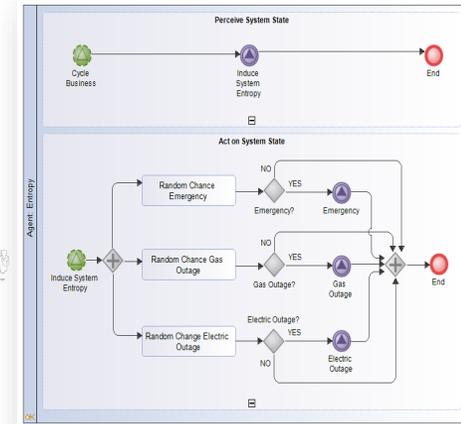
ef coupling 0.99801564

electrofusion 0.99801564

bar code 0.9839631

mud 0.8343955

yellow pipe 0.4571895



More than 12 Satellites (configurable)

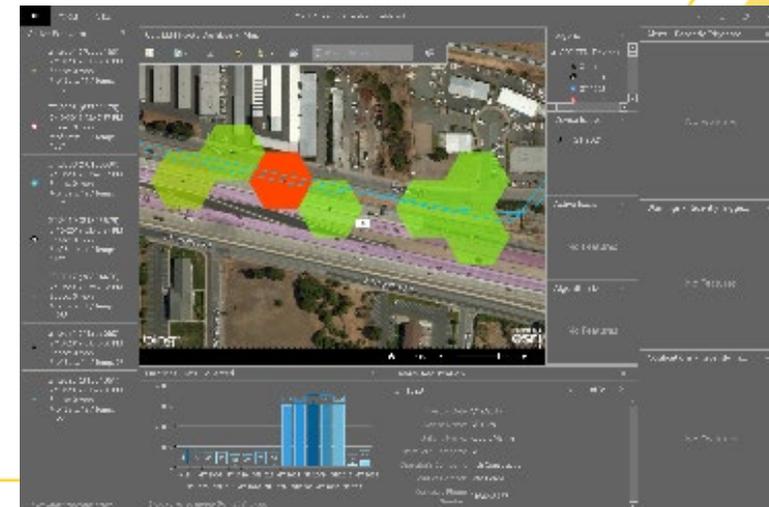
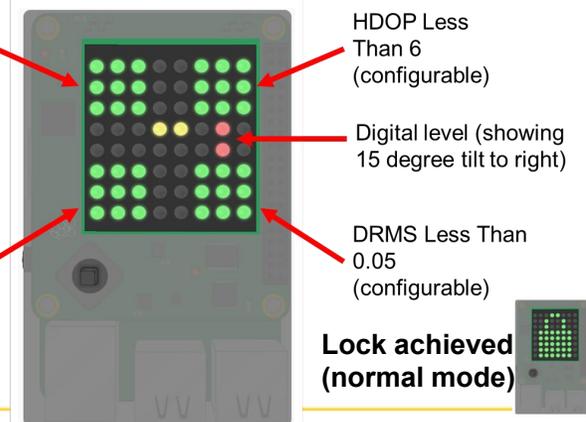
HDOP Less Than 6 (configurable)

Digital level (showing 15 degree tilt to right)

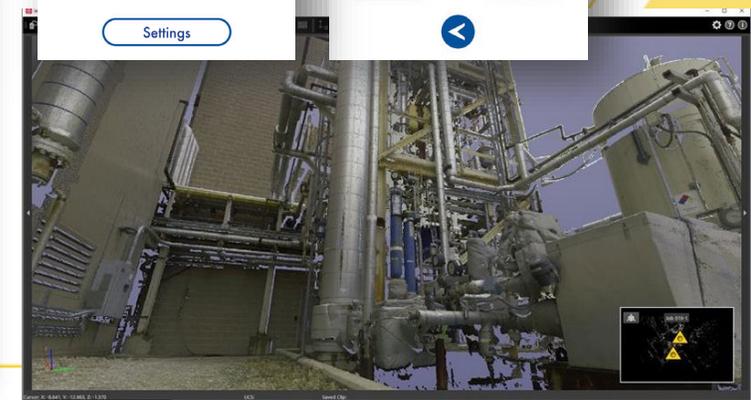
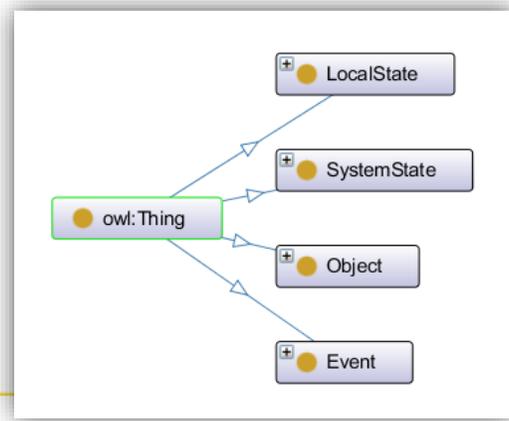
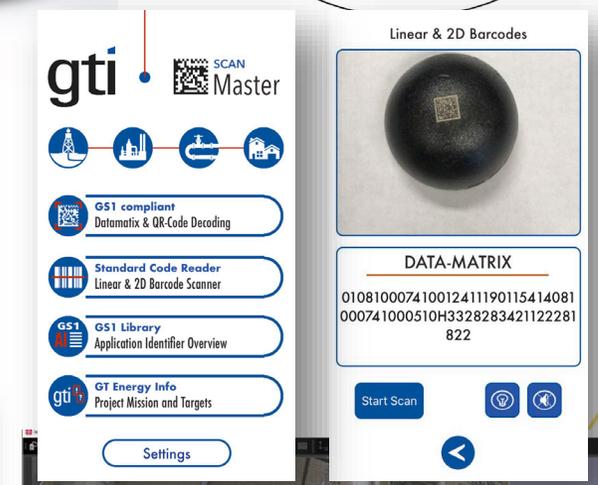
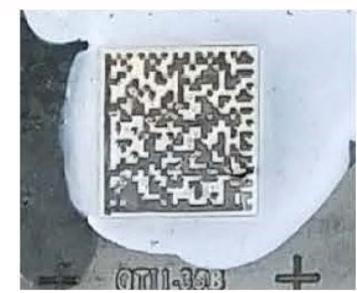
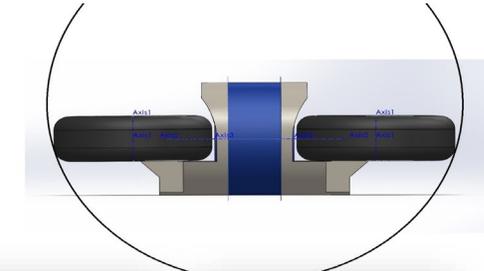
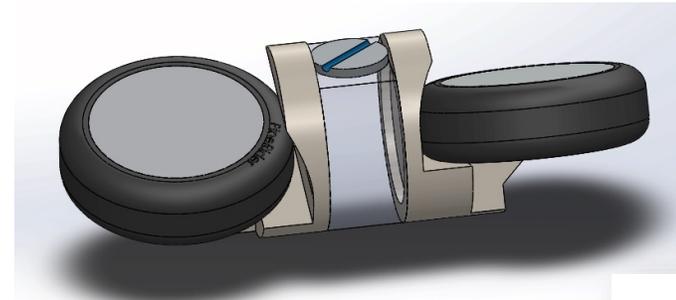
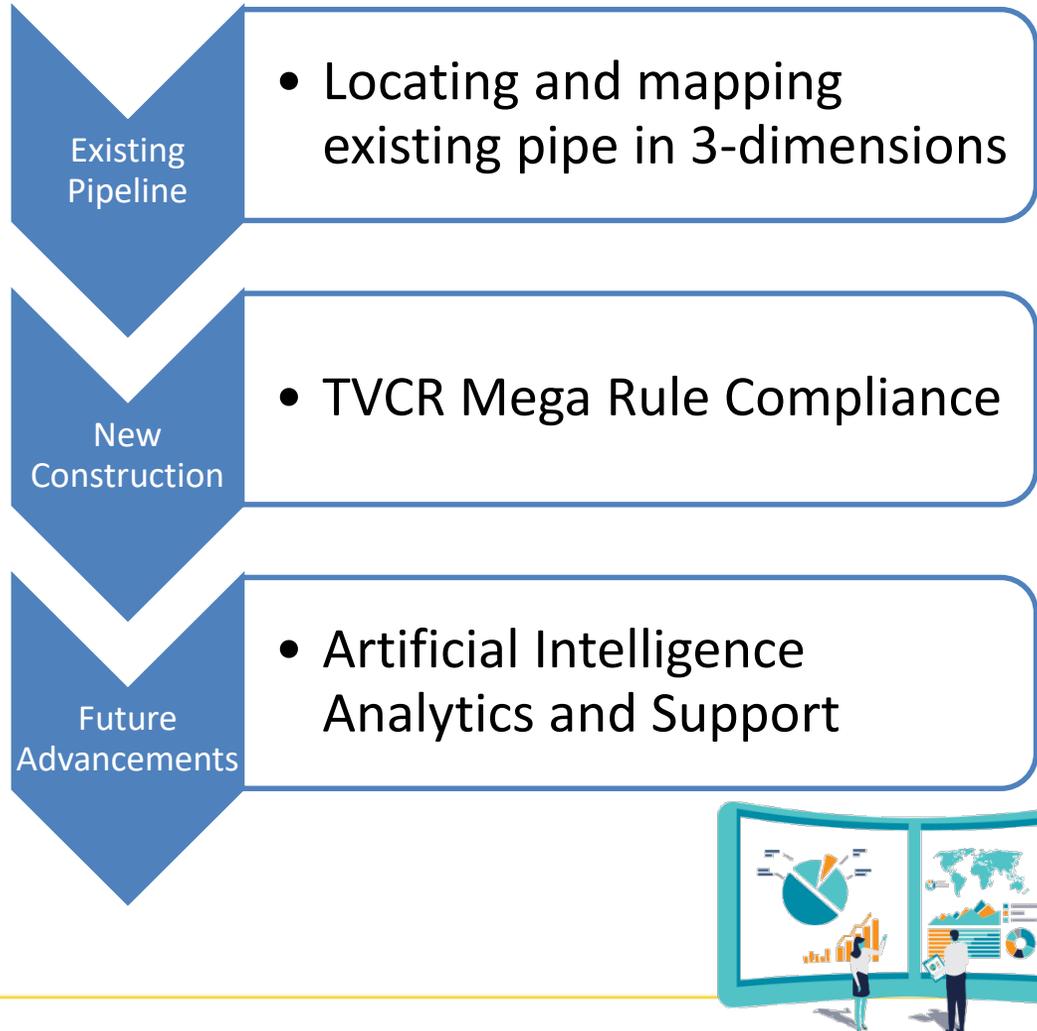
RTK Fix Quality (configurable)

DRMS Less Than 0.05 (configurable)

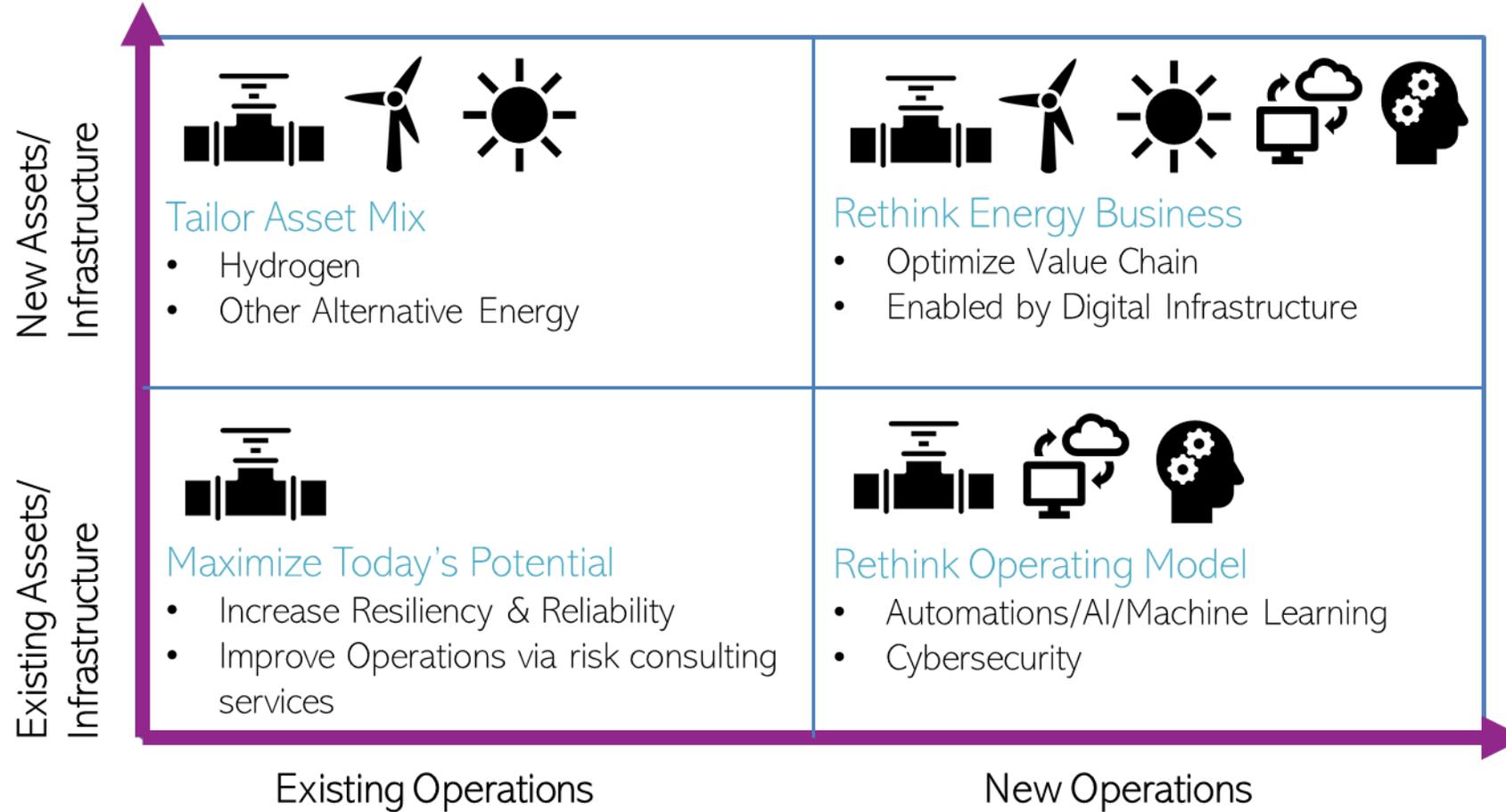
Lock achieved (normal mode)



Research Gaps & Proposed Solutions



Research Gaps & Proposed Solutions



GTI image reimaged from:
<https://www.energytoday.net/conventional-energy/the-energy-company-of-the-future-an-existential-crisis-for-oil-and-gas-companies/>



Shannon Katcher

R&D Manager

skatcher@gti.energy

847-544-3492