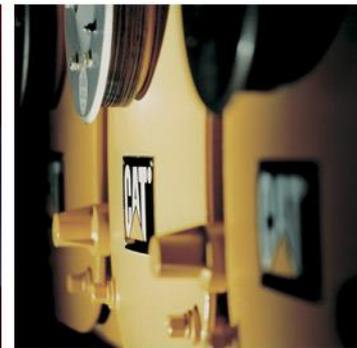




Innovation & Digital



Secretary of Defense Product Support Manager Workshop

April 5, 2016

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Division Manager, Exponential Technologies Portfolio

Innovation & Digital

Caterpillar Inc.





WHO WE ARE





Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives.



Caterpillar Product Support Network



Unmatched Competitive Advantage



140,000 lines shipped every day to **2,000** dealer stores – **38M** lines per year



Over **16M** sq. ft. of warehouse space – equivalent to **344** football fields



Over **8,500** Suppliers providing over **1M** active part numbers
Over **1M** purchase orders open every day



Over **950** trucks per week delivering to entry points
Over **11M** pieces per week



Over **60,000** dealer calls answered every year



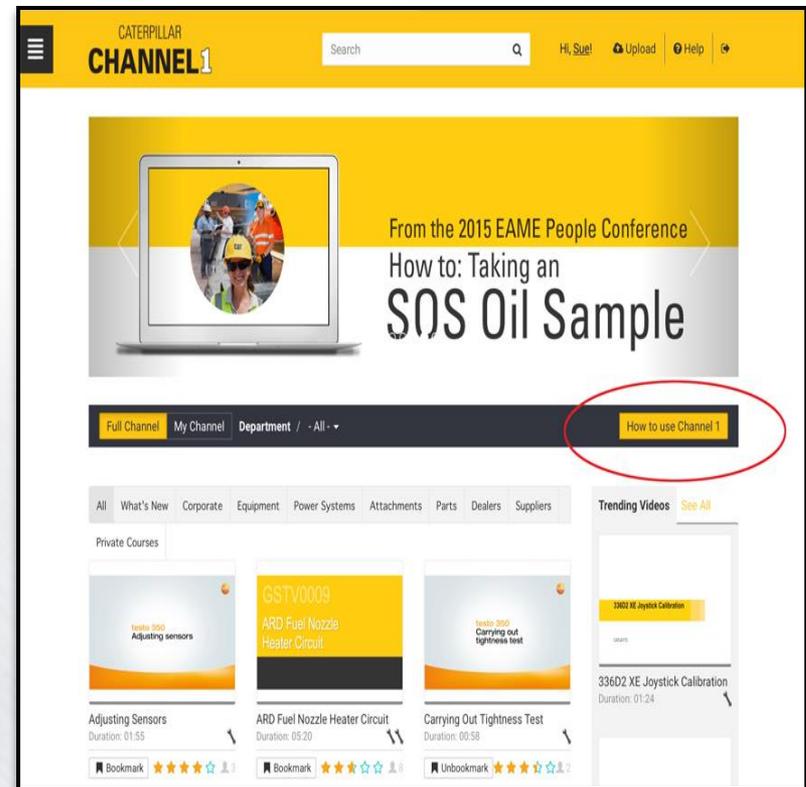
A FEW RECENT INNOVATIONS



Channel1

Launched in 2015, and true to the spirit of innovative learning. Channel1 is a cloud-based video training and service support tool which allows its subscribers to view, share and author Caterpillar training information from anywhere, at any time and in any language.

- Video tutorials
- Quick, short answers to work matters
- Personalized video library - “My Channel”
- Social sharing and interaction with other instructors and learners



Safety and Sustainability

WEARABLES, SENSORS & DATA



Wearables and site sensors provide real-time operational data and visibility to risks

- Site condition sensors and wearables for jobsite personnel
- Delivered as stand-alone, technology-enabled safety product/PPE
- Focus on protection, location, exposure, performance and identity
- Point solutions offer greater value and interaction when part of platform

PLATFORM



Jobsite Sustainability Solution to unify point technologies

- Integration platform for sensors
- Correlation of sensor data & predictive analytics using Caterpillar equipment and other external data
- Workflow engine using sensors and event triggers to identify, escalate, automate and track issues and resolution
- Common customer experience with unified front-end and integrated back-end using shared data across equipment, worker, and jobsite

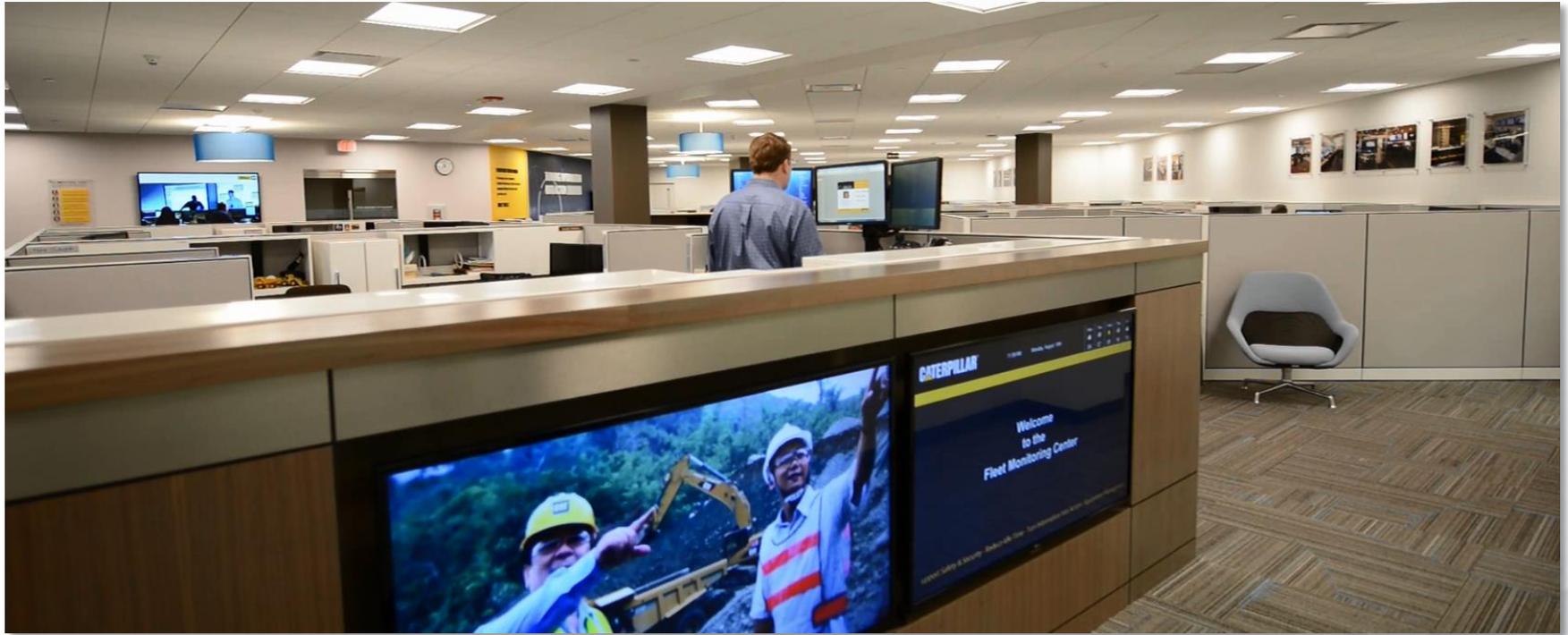
CONSULTING SERVICES



Consulting Services that extend value of point solutions and platform

- Sustainability (Safety and Environmental) Advisors provide active monitoring of equipment, people and worksite conditions
- Identify jobsite safety and environmental hotspots and provide training, technology and tools
- Comprehensive approach incorporating safety and sustainability culture and change management services

Caterpillar Fleet Monitoring Center



- High tech environment focused on collaboration & innovation
- Provide equipment management support and condition monitoring services
- S·O·SSM fluid analysis interpretations
- Advanced analytics, prognostic modeling & algorithms
- Safety Services - operator fatigue & distraction monitoring

A FEW ON THE HORIZON



Disrupt or be *Disrupted*

3D Printing /
Additive Manufacturing



Robotics

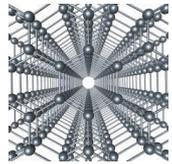
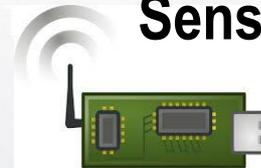
Autonomous Vehicles



Drones



Sensors



Materials Science

Augmented Reality/Virtual Reality



Safety &
Sustainability

Augmented and Virtual Reality at Caterpillar

In 2015 Caterpillar publically demonstrated a proof of concept project to aid Service / Maintenance personnel with machine inspection, and service procedures.



Augmented and Virtual Reality at Caterpillar

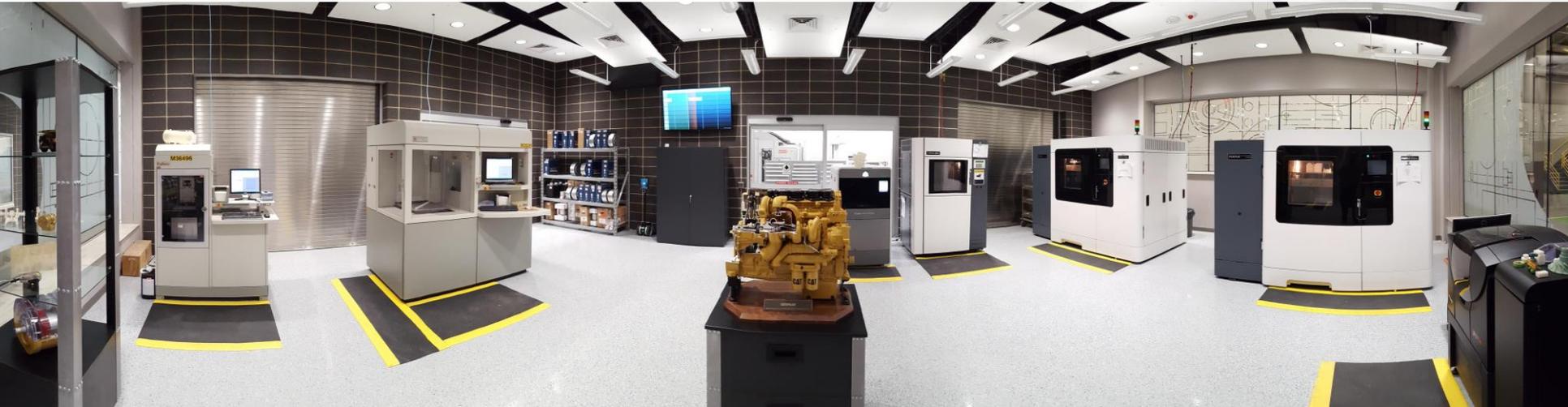
Caterpillar 3D Printing Capabilities

80+ 3D printers at Caterpillar

- ~ 30 commercial printers
- ~ 50 desktop printers

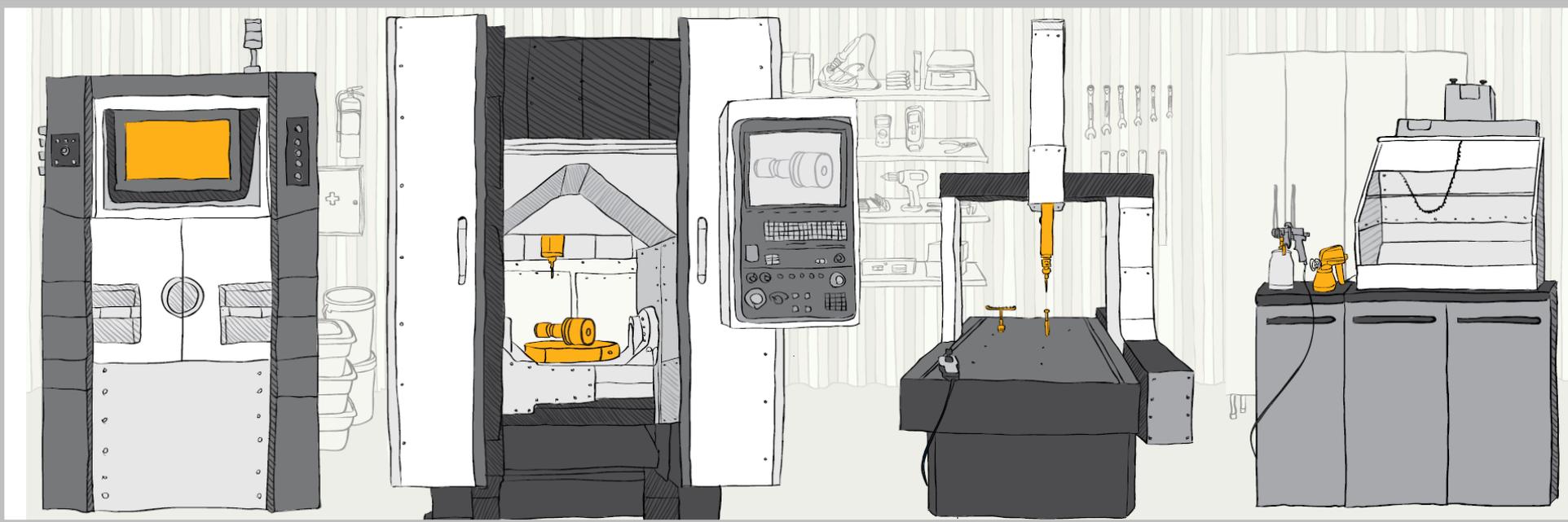
Additive Manufacturing Factory

- Located in Illinois
- 10 commercial printers
- Manage 5 nomadic printers



We have access to nearly any machine in the market through partnerships

Caterpillar Parts on Demand Factory



- Availability
- Performance
- Flexibility
- Delivery

CATERPILLAR®

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