



MIS|TI™ PRESENTS

# InfoSecWorld

Conference & Expo 2018

## CONNECTED? PROTECT IT. DEVELOPING A CONNECTED ASSET SECURITY PROGRAM

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# Joe Zacharias – Deputy CISO, Information Security



- Caterpillar Employee since 2012
  - Incident Response
  - Security Architecture & Operations
- Prior to joining Caterpillar...
  - 12 years in various Information Security related roles in Financial Services Industry
- Personal – Married...4 kids, ages 17 to 7.... which means lots of running!



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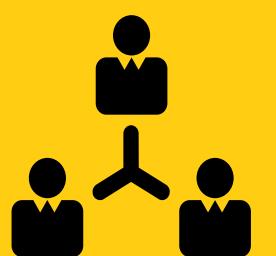


# Agenda

What are the IoT and Connected Assets?



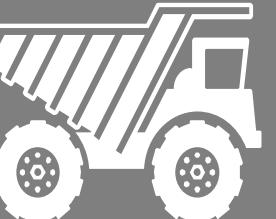
When the Internet of Things goes wrong



Our call to action



The future of Connected Asset Security



# The Internet of Things (IoT)

“A rapidly growing network of connected objects able to collect and exchange data using embedded sensors.”





Smart Homes



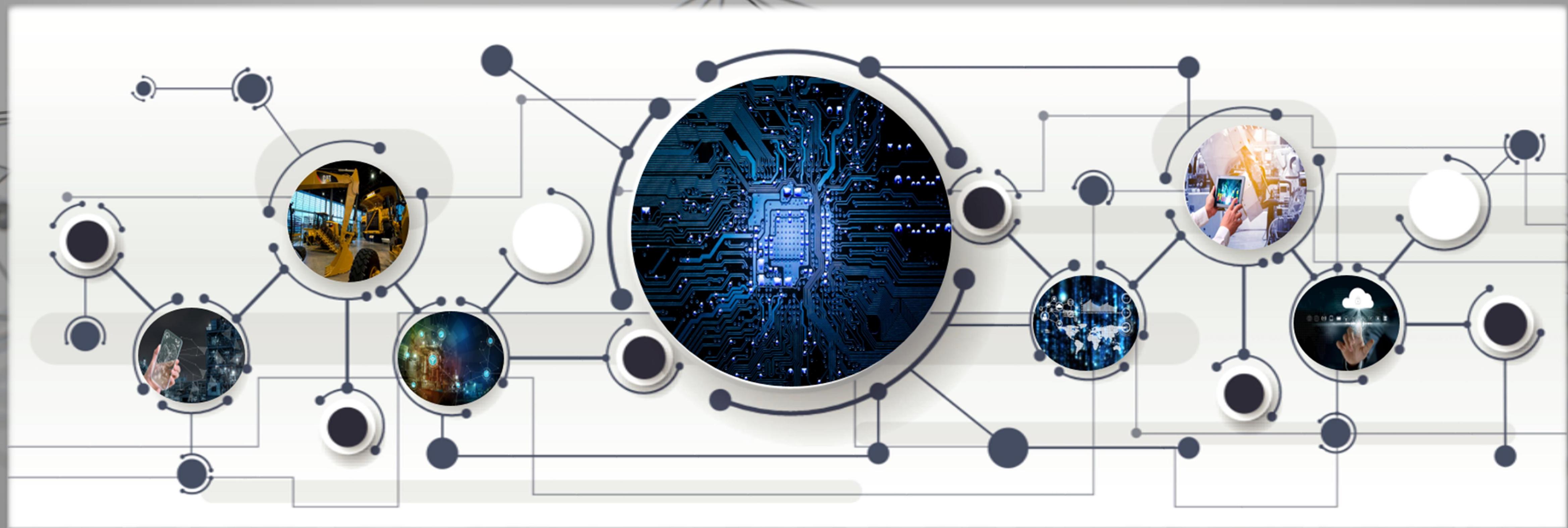
Wearables



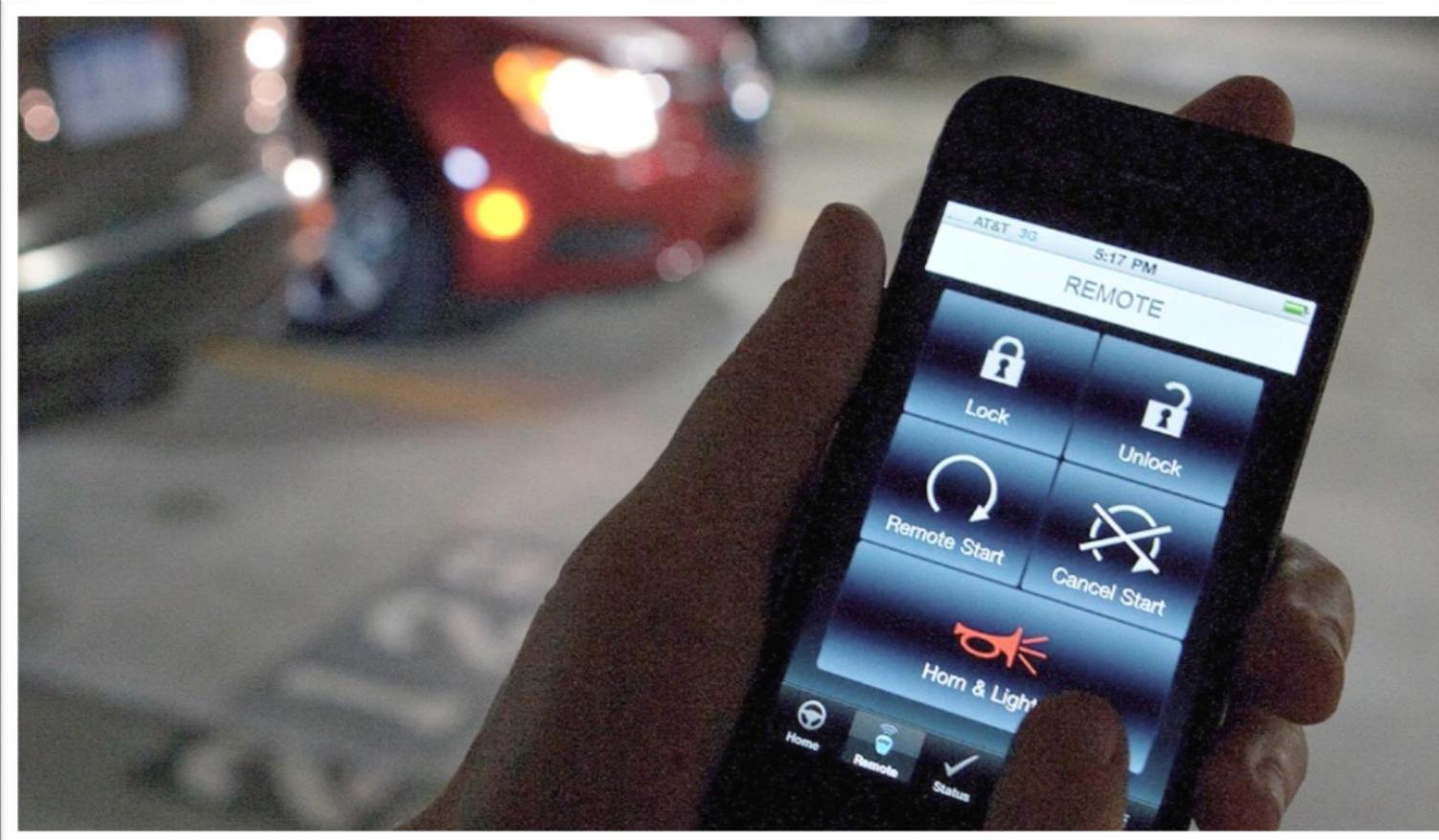
Connected Cars

# What is a Connected Asset?

“Smart” solutions embedded with processors, sensors, software and other connectivity, capturing and exchanging data or providing control capabilities between the asset, its environment, the operator and other systems.



# When the Internet of Things goes wrong...



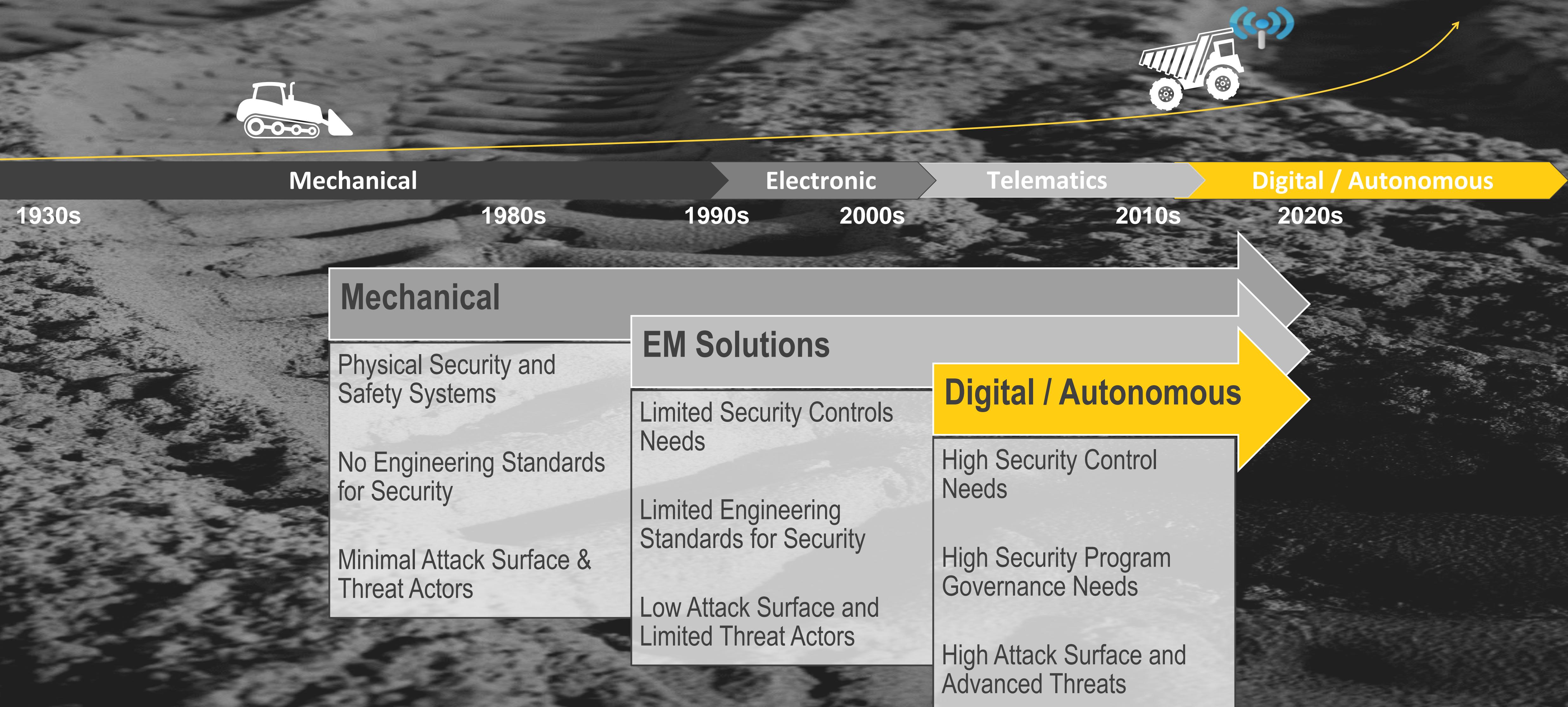
# What If Caterpillar Connected Assets are Attacked?



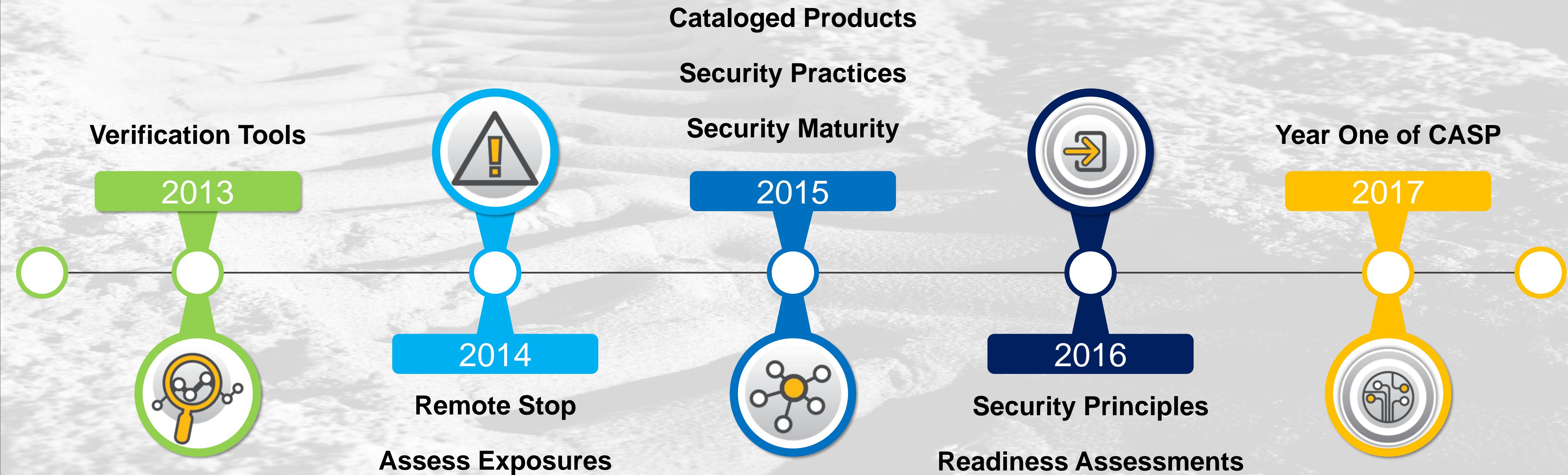


# Caterpillar's Connected Asset Journey

# Our Connected Product Journey... from Mechanical to DIGITAL

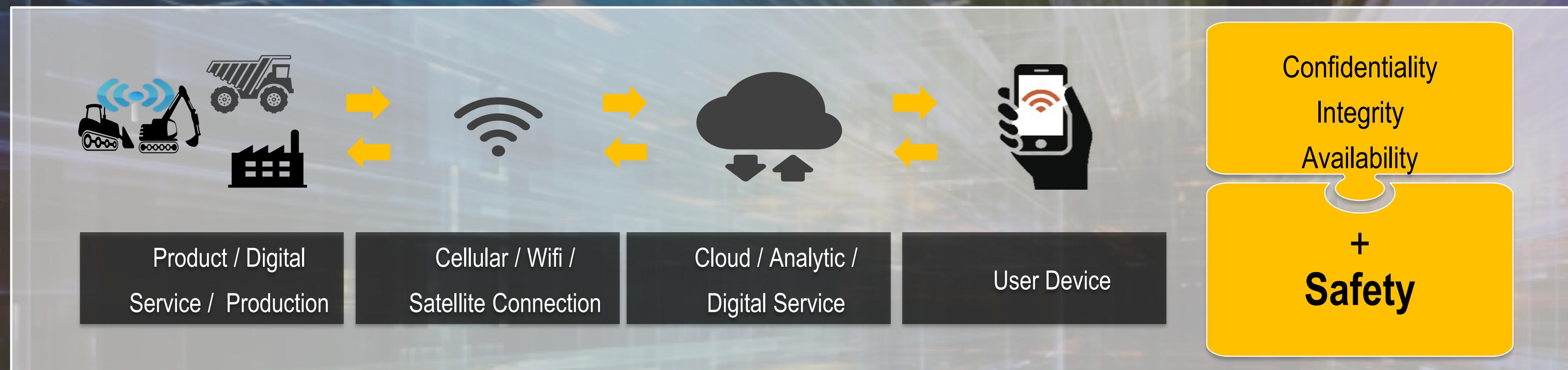


# Our Connected Product Journey... the Road to PROGRAM DEVELOPMENT



# Connected Asset Security Program

A collaborative business effort managing cybersecurity risks to Caterpillar's ecosystem of connected solutions



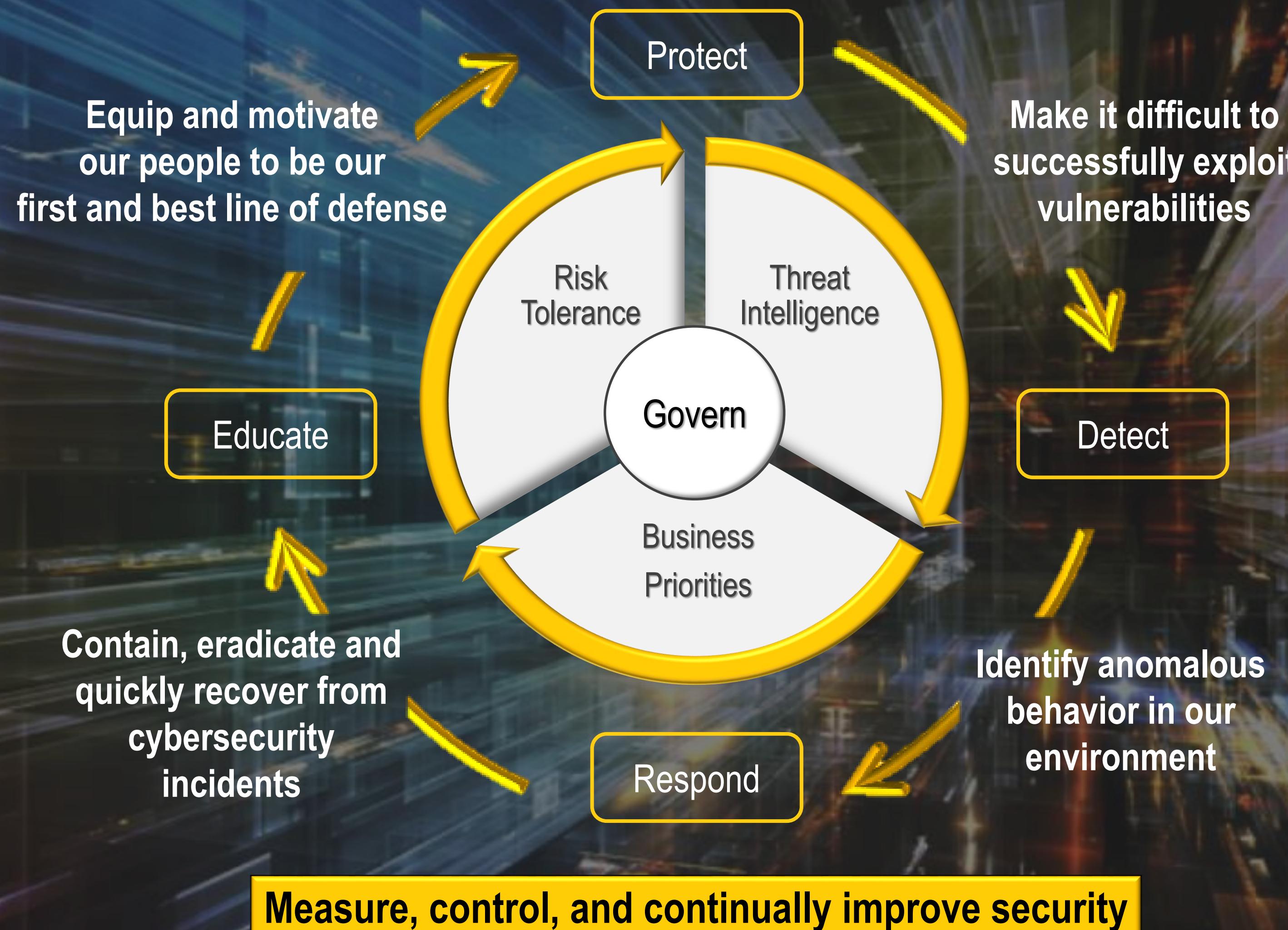
CONNECTED PRODUCTS

DIGITAL SERVICES

INDUSTRIAL IoT

We provide cybersecurity governance and leadership to help Caterpillar's businesses embed secure methods into the creation and support of connected products, digital services, and connected production devices.

# Our Connected Asset Journey... the FOUNDATION



# Our Connected Asset Journey... the OBJECTIVES

- Strengthen cybersecurity as a market differentiator for Connected Assets
- Identify and prioritize cybersecurity risks across the Connected Asset inventory
- Develop capabilities and align processes to effectively detect and respond to connected asset cybersecurity events
- Educate and engage people to be our first and best line of connected assets cybersecurity defense
- Establish and implement a measurement program to gauge adoption and maturity of the Connected Asset Security Program



# Our Connected Product Journey... the ROADMAP

 **Govern**

 **Protect**

 **Detect**

 **Respond**

 **Educate**

2017  
2018

2019

 42 Projects

 Hiring 90% Complete

 Connected Solutions Inventory

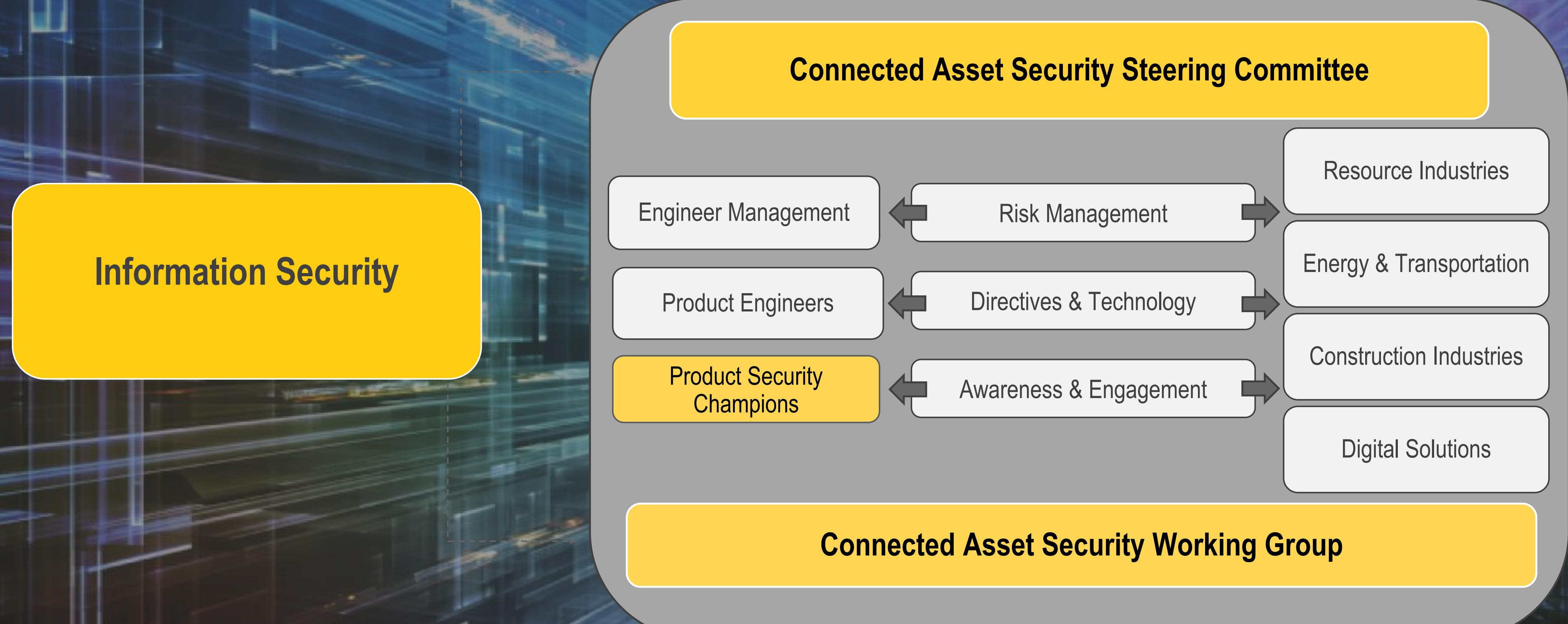
 Standard Procedures Framework

 Vulnerability Reporting Submission Site



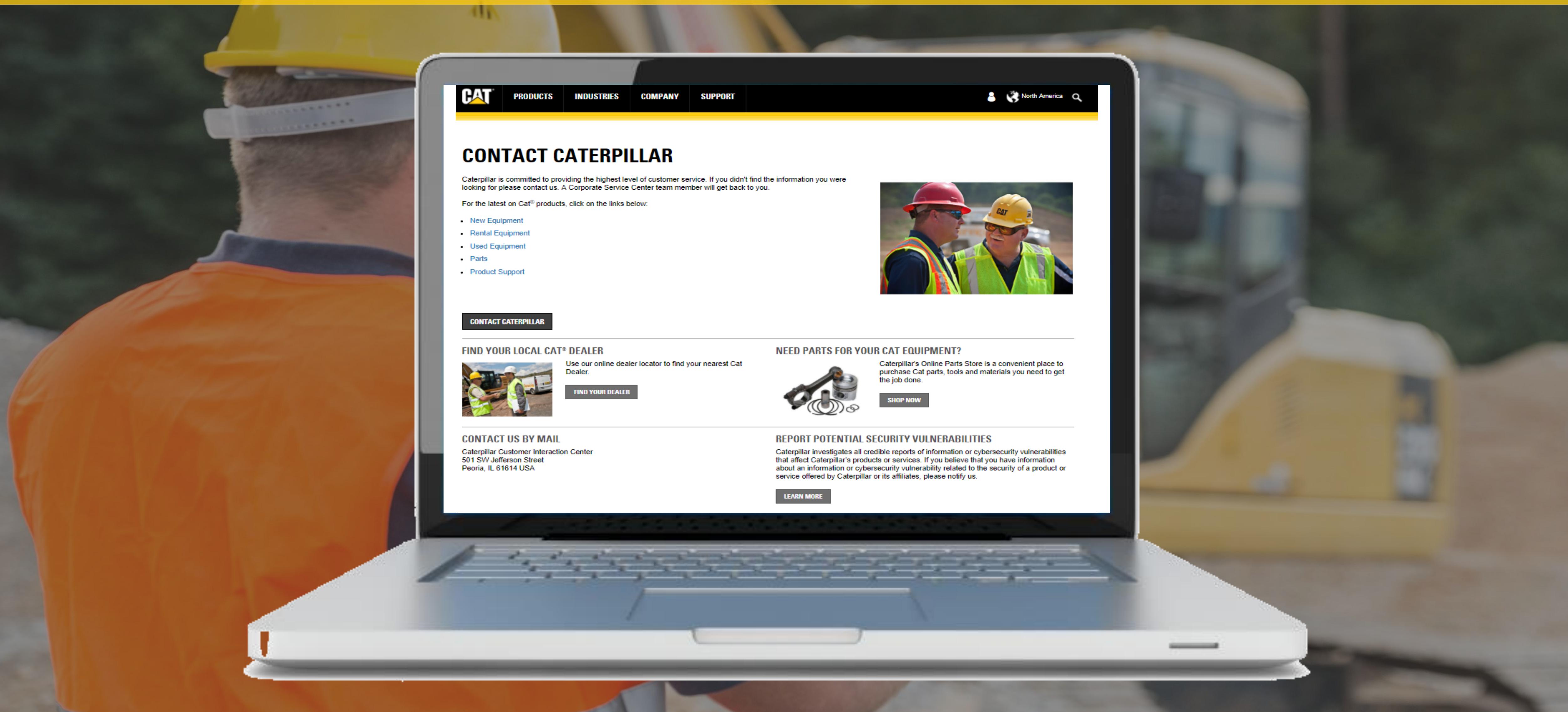
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# Our Connected Product Journey... BUSINESS INTEGRATION

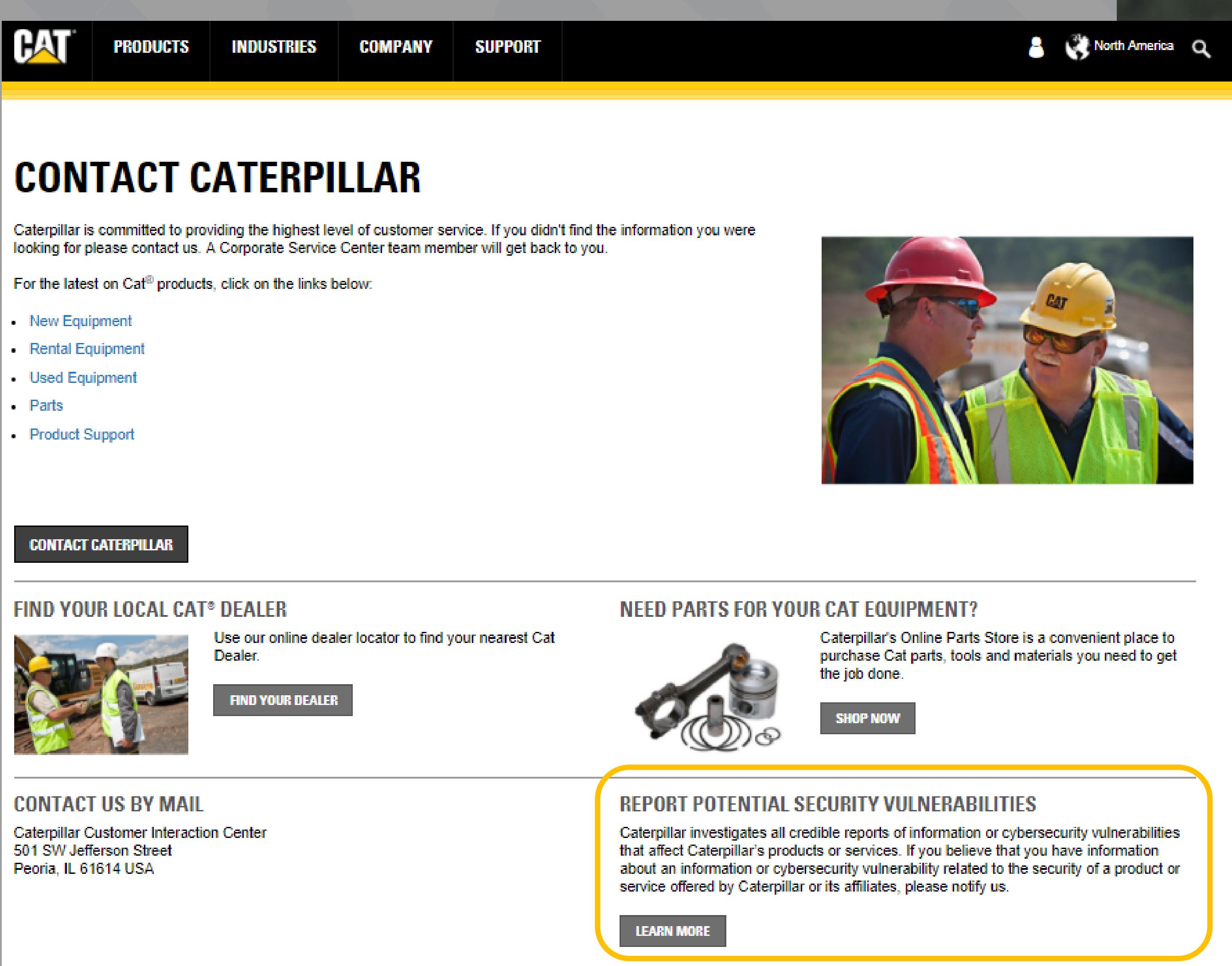


Indirect/ dotted line      Participation in  
reporting      committee/ group

# Our Connected Product Journey... Raising AWARENESS



# Our Connected Product Journey... Raising AWARENESS



The screenshot shows the Caterpillar website's contact page. At the top, there's a navigation bar with links for PRODUCTS, INDUSTRIES, COMPANY, and SUPPORT, along with social media icons for North America and a search bar. Below the navigation, the main heading is "CONTACT CATERPILLAR". A sub-section titled "Caterpillar is committed to providing the highest level of customer service. If you didn't find the information you were looking for please contact us. A Corporate Service Center team member will get back to you." follows. There's a list of links for "New Equipment", "Rental Equipment", "Used Equipment", "Parts", and "Product Support". To the right of this text is a photograph of two construction workers in hard hats and safety vests. Below this section is a "CONTACT CATERPILLAR" button. Further down, there's a "FIND YOUR LOCAL CAT® DEALER" section with a photo of two dealers and a "FIND YOUR DEALER" button. Another section titled "NEED PARTS FOR YOUR CAT EQUIPMENT?" features an image of mechanical parts and a "SHOP NOW" button. At the bottom, there's a callout box for reporting security vulnerabilities with a "LEARN MORE" button.

CATERPILLAR

Caterpillar is committed to providing the highest level of customer service. If you didn't find the information you were looking for please contact us. A Corporate Service Center team member will get back to you.

For the latest on Cat® products, click on the links below:

- New Equipment
- Rental Equipment
- Used Equipment
- Parts
- Product Support

**CONTACT CATERPILLAR**

**FIND YOUR LOCAL CAT® DEALER**

Use our online dealer locator to find your nearest Cat Dealer.

**NEED PARTS FOR YOUR CAT EQUIPMENT?**

Caterpillar's Online Parts Store is a convenient place to purchase Cat parts, tools and materials you need to get the job done.

**REPORT POTENTIAL SECURITY VULNERABILITIES**

Caterpillar investigates all credible reports of information or cybersecurity vulnerabilities that affect Caterpillar's products or services. If you believe that you have information about an information or cybersecurity vulnerability related to the security of a product or service offered by Caterpillar or its affiliates, please notify us.

**LEARN MORE**

Customer Focused  
Consistent Intake and  
Treatment Method

Proactive Analysis,  
Research, and Response

[cat.com/contact](http://cat.com/contact)

# Our Connected Asset Journey... [security.cat.com/CASP](http://security.cat.com/CASP)

The screenshot shows the homepage of the security.cat.com/CASP website. At the top, there is a navigation bar with links to SECURITY.CAT.COM, INFORMATION SECURITY, TRAVEL SECURITY, CRISIS MANAGEMENT, INSIDER RISK, WORKPLACE VIOLENCE, CASP, and a search icon. Below the navigation bar, the main title "Connected Asset Security Program" is displayed in large yellow text, followed by the subtitle "Connected? Protect It." A horizontal row of five yellow buttons provides quick access to program details: "WHAT IS CASP?", "WHY DO WE NEED IT?", "WHAT IS THE IMPACT?", "WHEN IS IT HAPPENING?", and "WHO DO I CONTACT?". To the left of the main content area, a large image of a futuristic city skyline at night is overlaid with the text "It starts with YOU.". On the right side of the page, there is a circular logo with three arrows forming a triangle, labeled "CONNECTED ASSET SECURITY". Below the logo, two tabs are visible: "LATEST NEWS" and "ACHIEVEMENTS". A list of upcoming events follows:

- September 13- Connected Asset Security Program Enterprise Awareness Presentation
- October 23- 27 - Security Awareness Week Activities

**Latest Program News**

**Capability Updates**

**Key Program Contacts**



Questions?



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**THANK YOU  
PLEASE FILL OUT YOUR EVALUATIONS!**

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