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# Driving Growth from the Internet of Things

## Case Studies

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Strategy | Consulting | Digital | Technology | Operations

# IoT's Top-Line Opportunity

Optimistic predictions of the value created by the Internet of Things range as high as \$15 trillion of global GDP by 2030.



## **Operational Efficiency**

Automation, more flexible production techniques and predictive maintenance

## **Top-Line Growth**

New digital products and services generate entirely new sources of revenue

# Four steps to exploit revenue-generating opportunities



**1. Innovate  
through  
Product-  
Service  
Hybrids**



**2. Become  
the most  
valuable  
information  
provider**



**3. Treat  
services  
as R&D**



**4. Create  
an IIoT  
workforce**

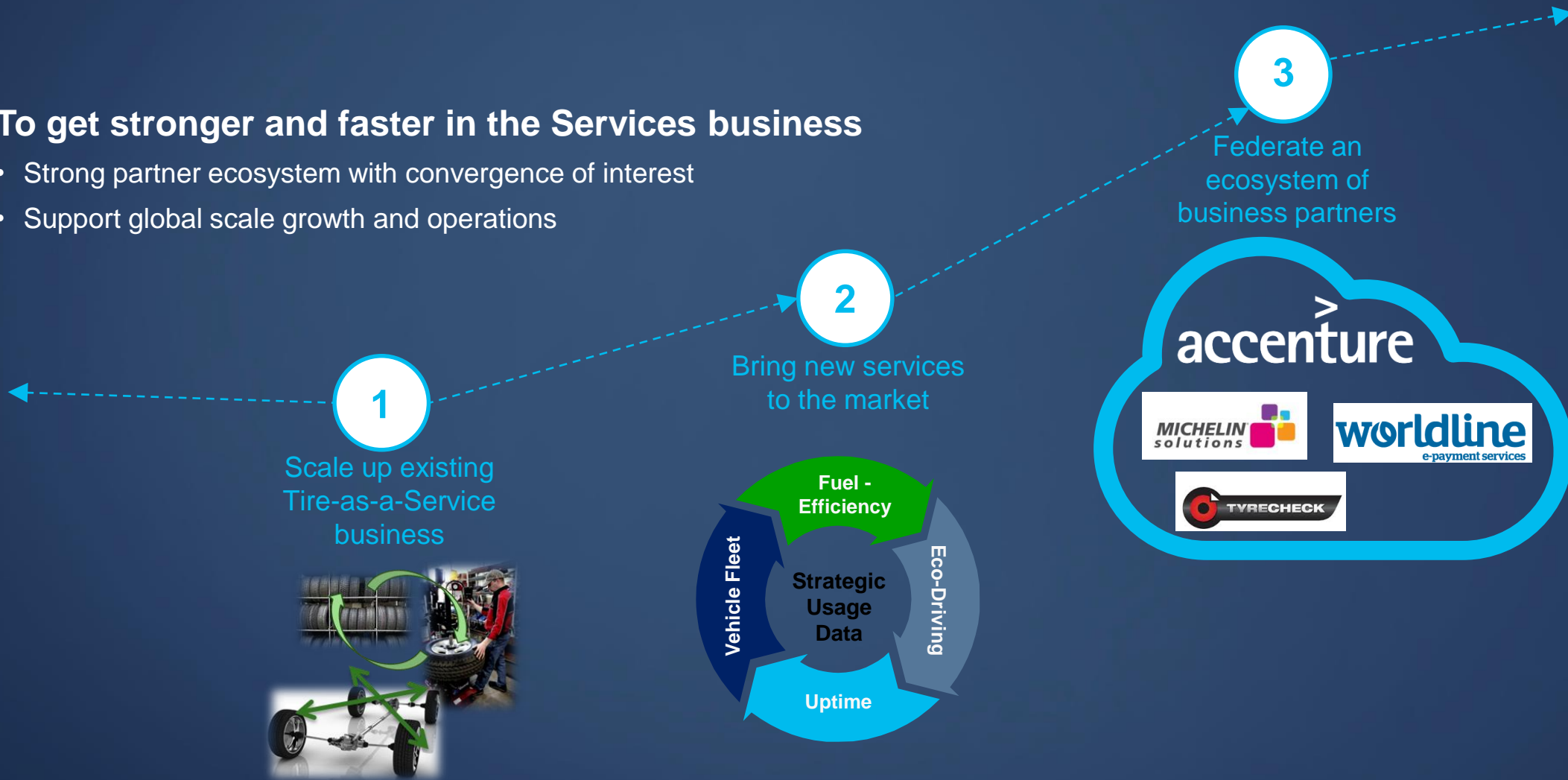
# 1. Innovate through product-service hybrids

Michelin move to Service vision

Tire Manufacturer Business-as-a-Service ecosystem

## To get stronger and faster in the Services business

- Strong partner ecosystem with convergence of interest
- Support global scale growth and operations



# 2. Be the VIP – Most Valuable Information Provider

Caterpillar is banking on information services for it's installed base to retain and attract customers

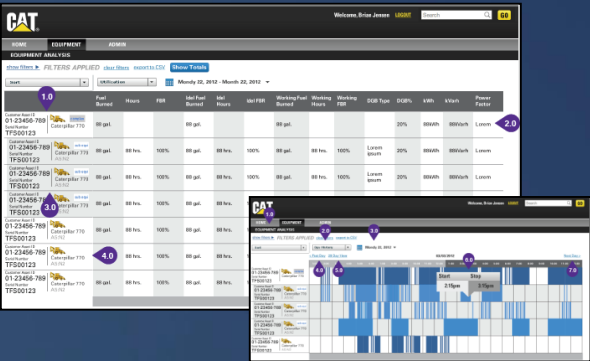
CAT Telematics Landing Page



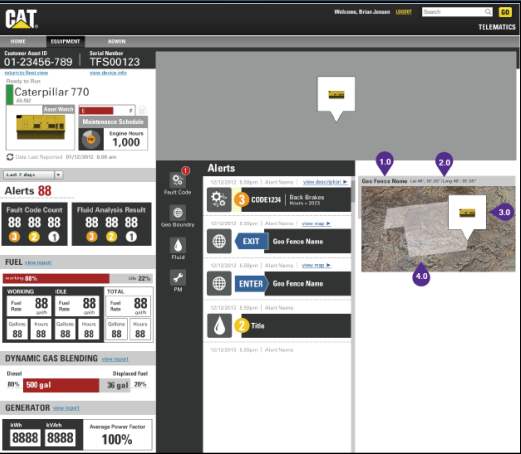
Equipment List with Complex Assets

Asset ID	Asset Name	Asset Type	Asset Status	Asset Location	Asset Description
0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770
0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770
0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770
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0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770
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0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770
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0123456-789	Caterpillar 770	Excavator	Reporting	10.000000 10.000000	Excavator 770

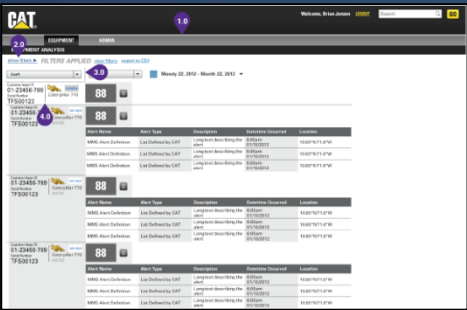
Hours, Location, Fuel Consumption



Machine Detail with Geo and Time-Fence



Machine Alerts, Fault Codes

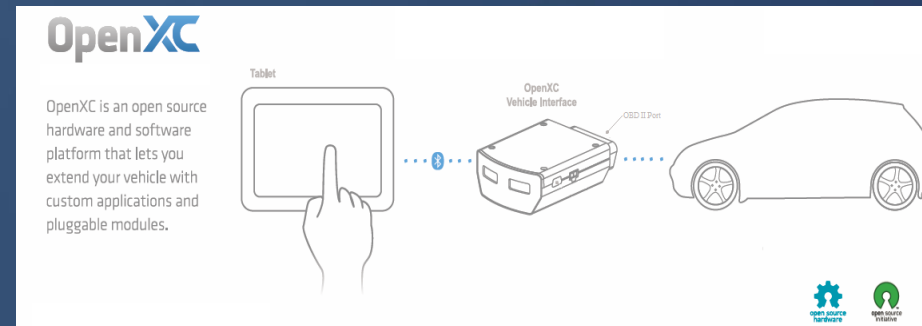




### 3. Treat Services as R&D

Ford is using information services as a strategy to win over customers using superior customer experiences

Ford once said “make the best quality goods possible at the lowest cost possible, paying the highest wages possible.” That was a good rule in the early 20<sup>th</sup> century, but it’s insufficient for the 21<sup>st</sup>.



OpenXC™ is a data-focused API for your car and by installing a small hardware module, the vehicle data becomes accessible to Android or other desktop applications using the OpenXC library.

## 4. Integrate Digital and Human Labor

While the adoption of the Industrial Internet will accelerate and expand the use of digital labor (in the form of automation using intelligent software and robots), greater returns and productivity gains will come from augmentation, which seamlessly blends digital and human labor in task-specific environments

### Examples

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Self-driving cars create an entirely different kind of commute and driving experience



Adaptive robots working side-by-side with people on the factory floor



Remote operation of mining equipment from the Command Center

# Next Steps on Your IoT Journey

There are a number of initial steps that companies should be considering now to help them take advantage of the growth potential of the Internet of Things including:



Think boldly about value potential from product-service hybrids.



Cultivate tomorrow's partner ecosystem.



Start now to design and develop Industrial Internet platform.



Closely study Industrial Internet financials.



Prepare marketing/sales/service to promote new digital products and services.



Clarify legal rights, obligations and secure access to data generated from machines to deliver new digital services.



Think about how to augment workforce with smart machines.



