OSIsoft IIOT summitt

*Advanced Analytics, and Big Data Summit*

JW Marriott – Galleria

# «Delivering Business Value with IIOT and Advanced Analytics with MAX™»

Hege Kverneland, Corporate VP & CTO

Houston, 12th of October 2016

# We are a **global family**

We are thousands of individuals, working as one team to create lasting impact for our customers, ourselves and the communities where we live and work. We take responsibility for each other and our company's future, knowing that personal ownership leads to broader success.

# We believe in **purposeful innovation**

We see where our customers' needs are not being met and we act. Through business innovation, product creation and service delivery, we are driven to power the industry that powers the world better.

# We believe in **service above all**

We are the backbone of the oil and gas industry with a singular focus to deliver the finest products and services, on time and on budget, to push our customers' business forward.

# *What do we do?*

# *Closed loop control system…*

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# *What do we do?*

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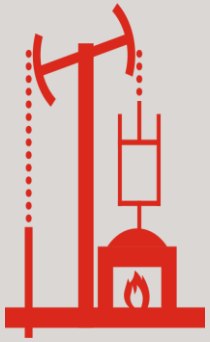
# 4th Industrial Revolution



## 1st

Mechanization, water power, steam power

## 2nd

Mass production, assembly line, electricity

## 3rd

Computer and automation

## 4th

Cyber Physical Systems

Source: www.allaboutlean.com, Christoph Roser

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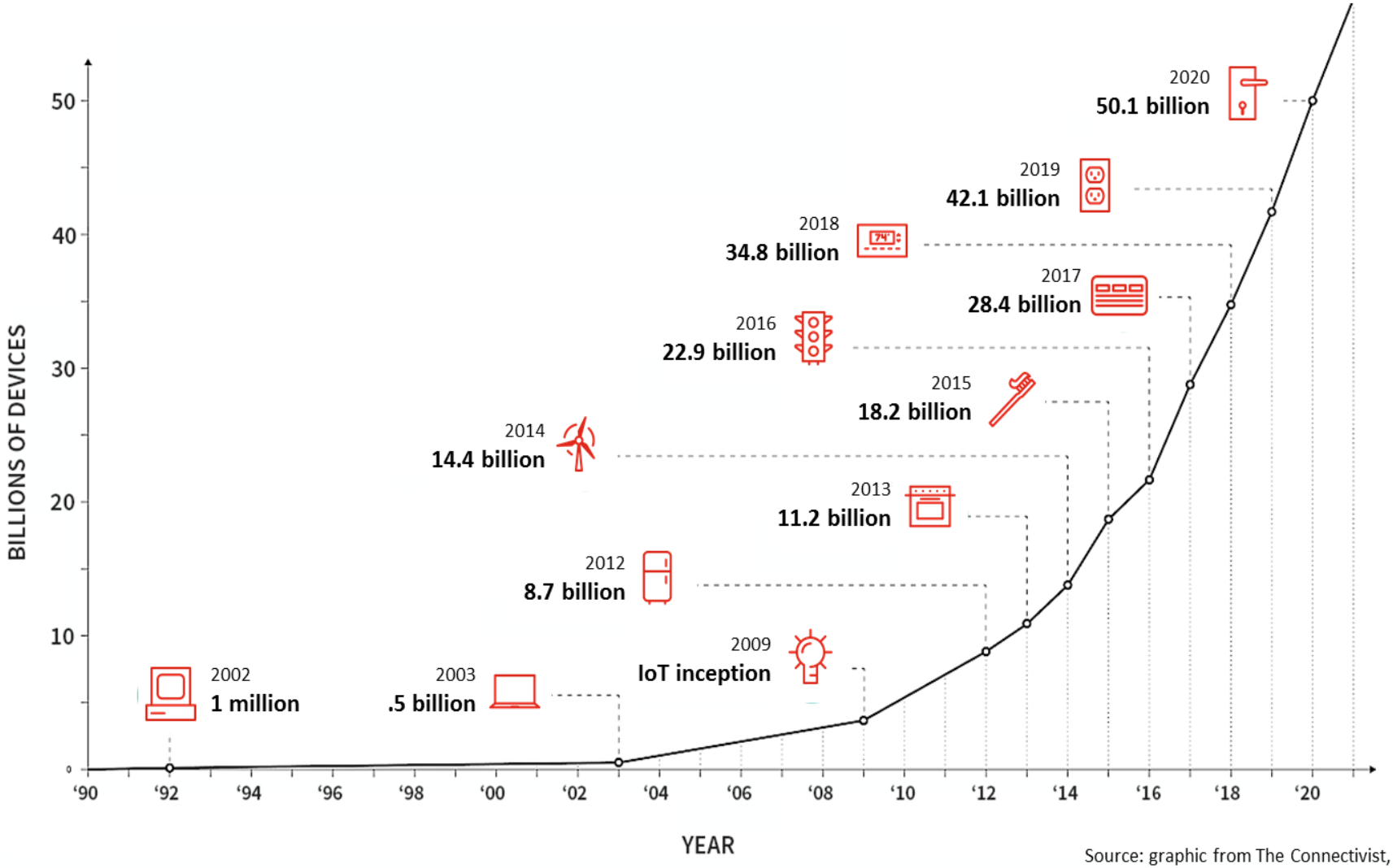
# Internet of Things (IoT)




Source: graphic from The Connectivist, data from CISCO

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# Our software capabilities…

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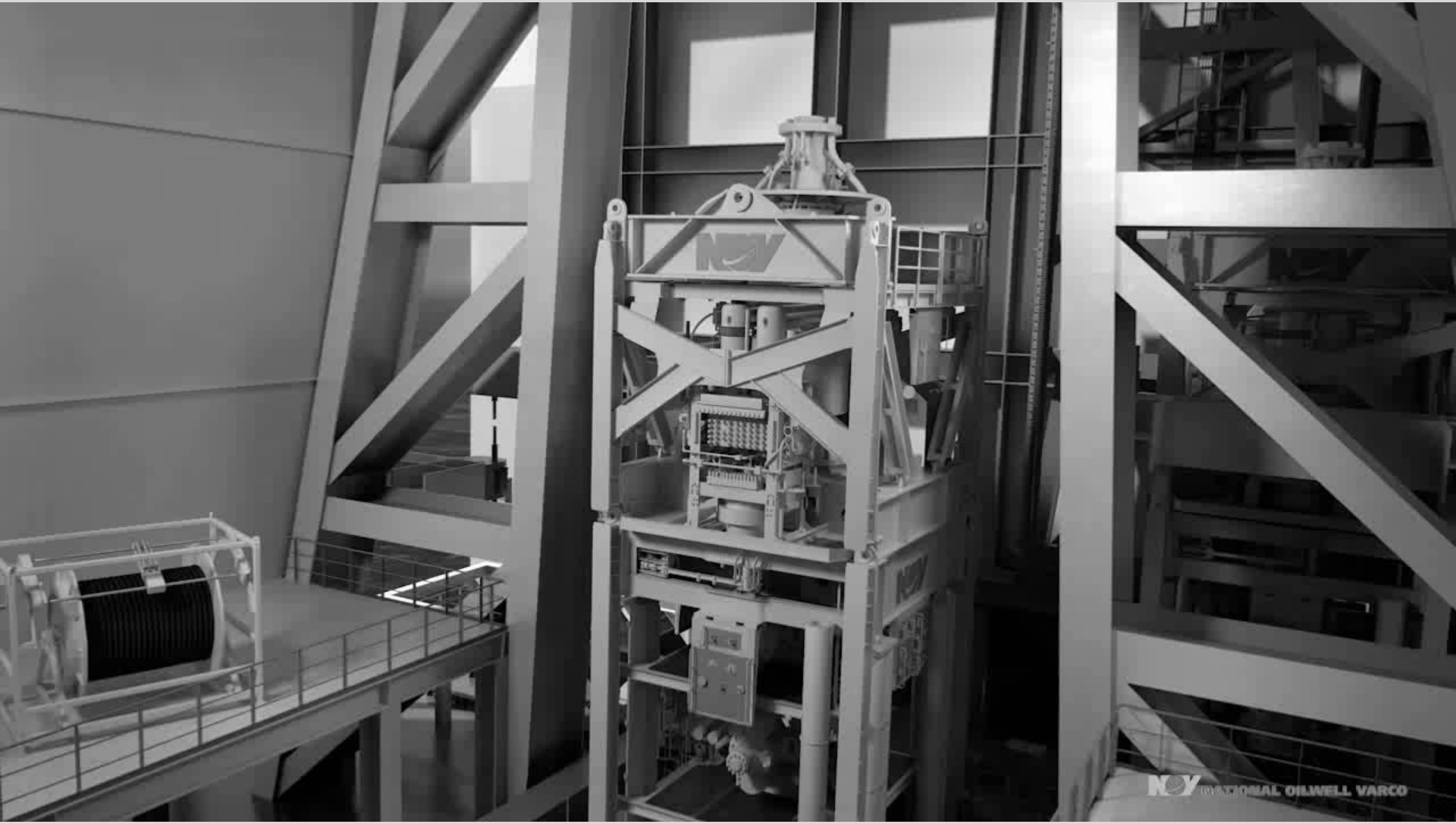
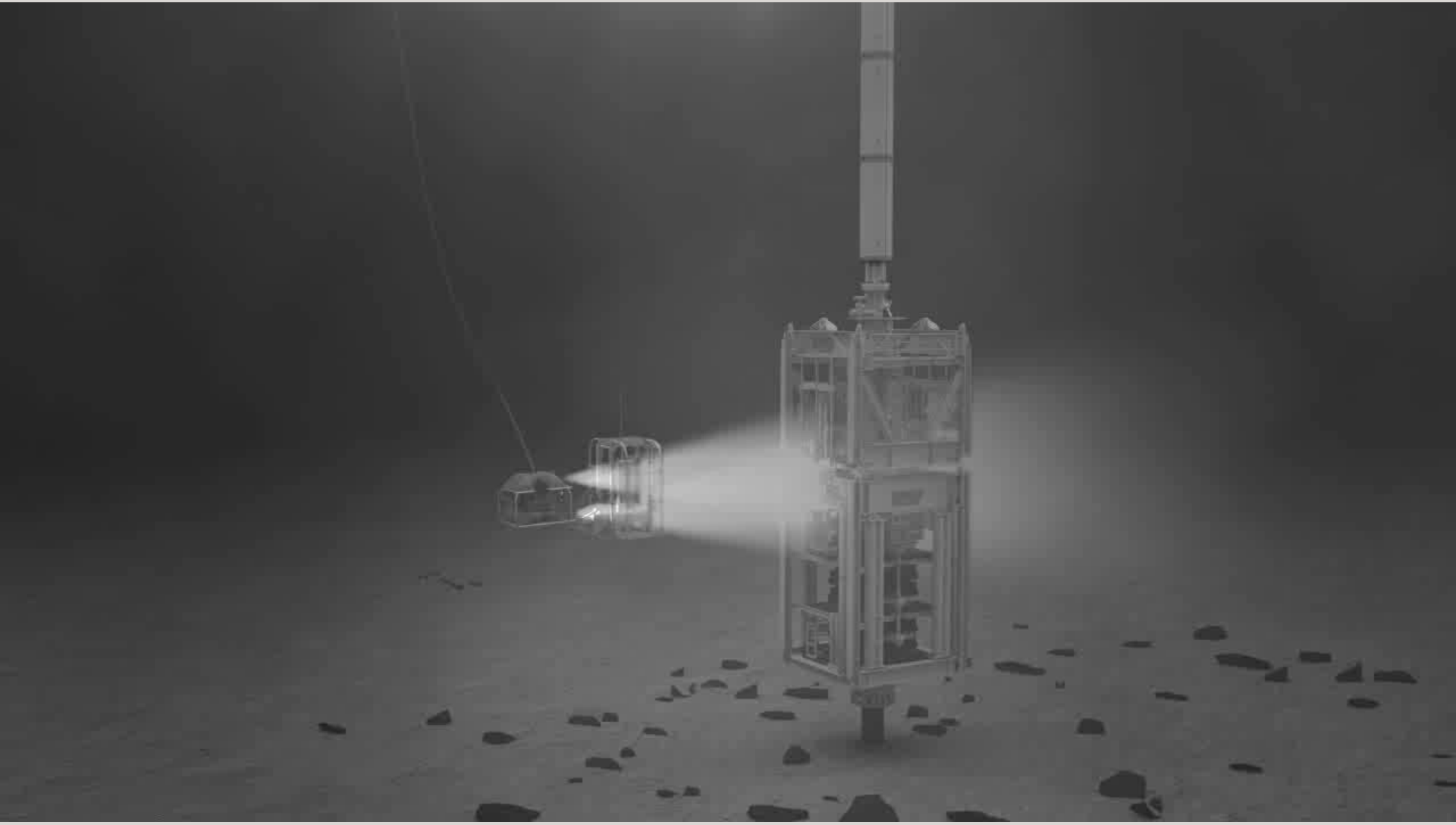
# Blow Out Preventer (BOP)



# Subsea BOP – Retrivable Pods



# Cost of rig ownership

DAY RATE IN **2013**

$600K

DAY RATE IN **2016**

$280K

Annual Offshore Rig Maintenance Cost

$15M

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# Asset performance management

## BOP regulator valve

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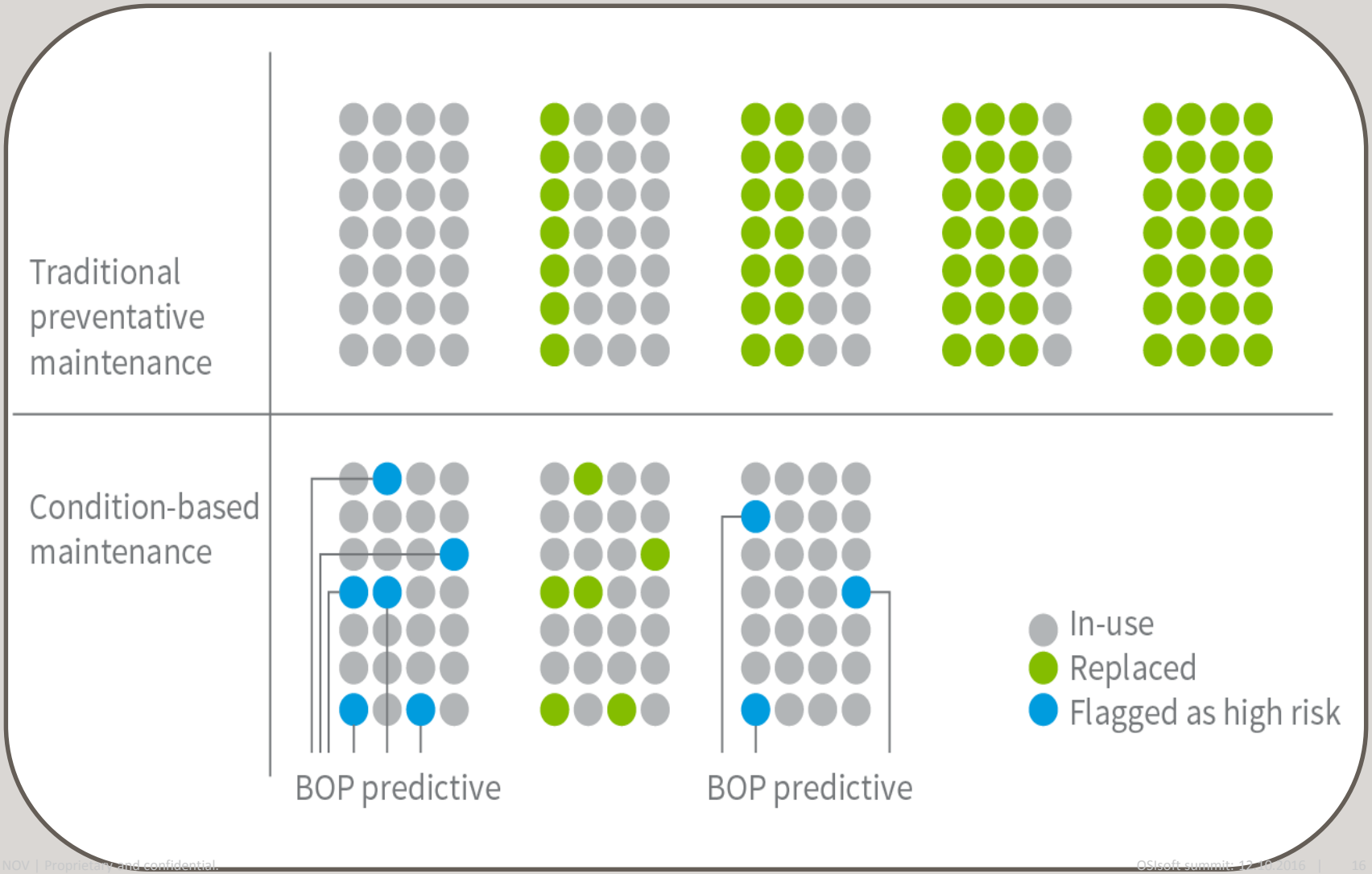
# Traditional v. condition-based maintenance

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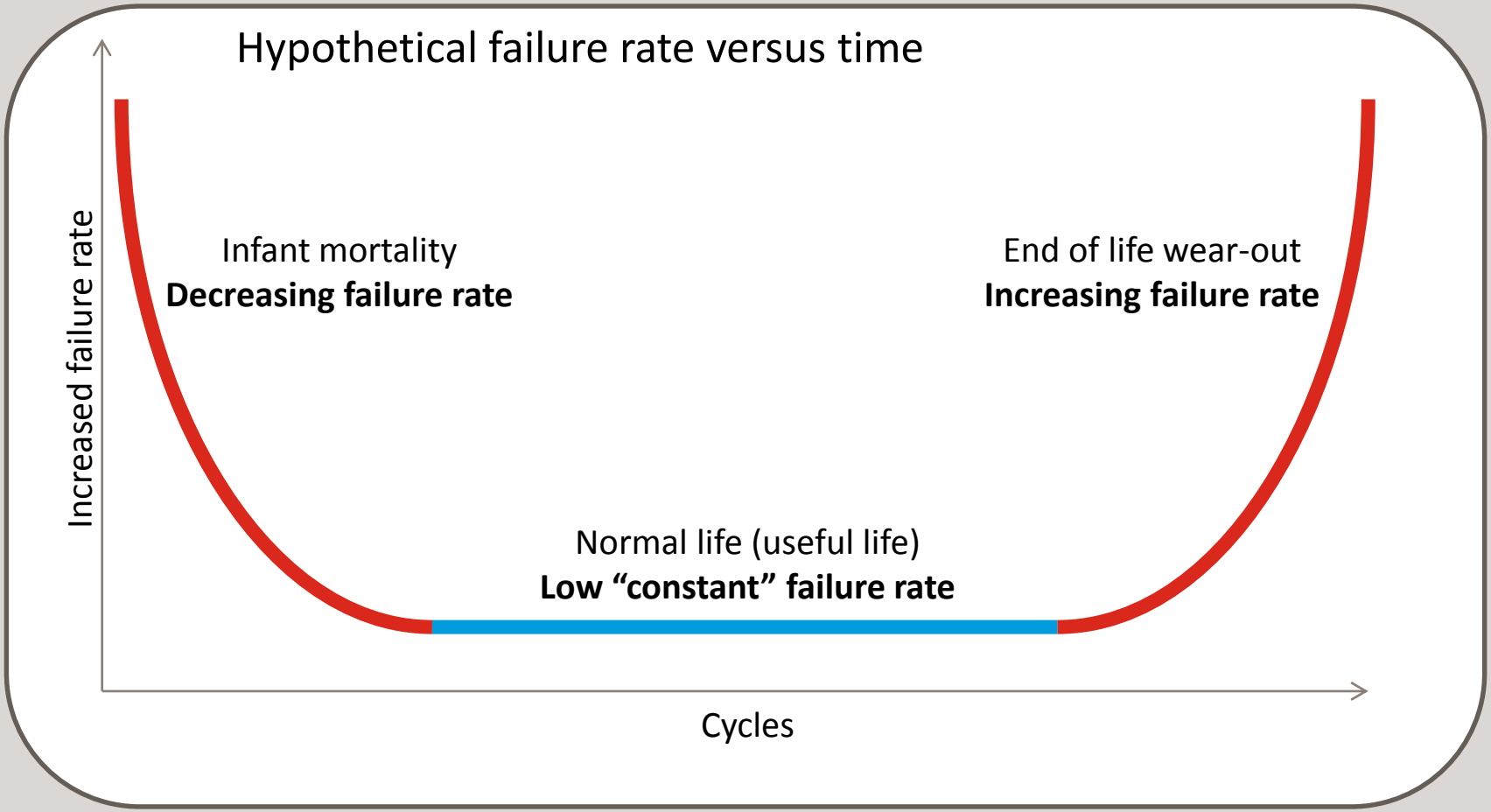
# Condition-based maintenance: The bathtub curve



# Our first breakthrough

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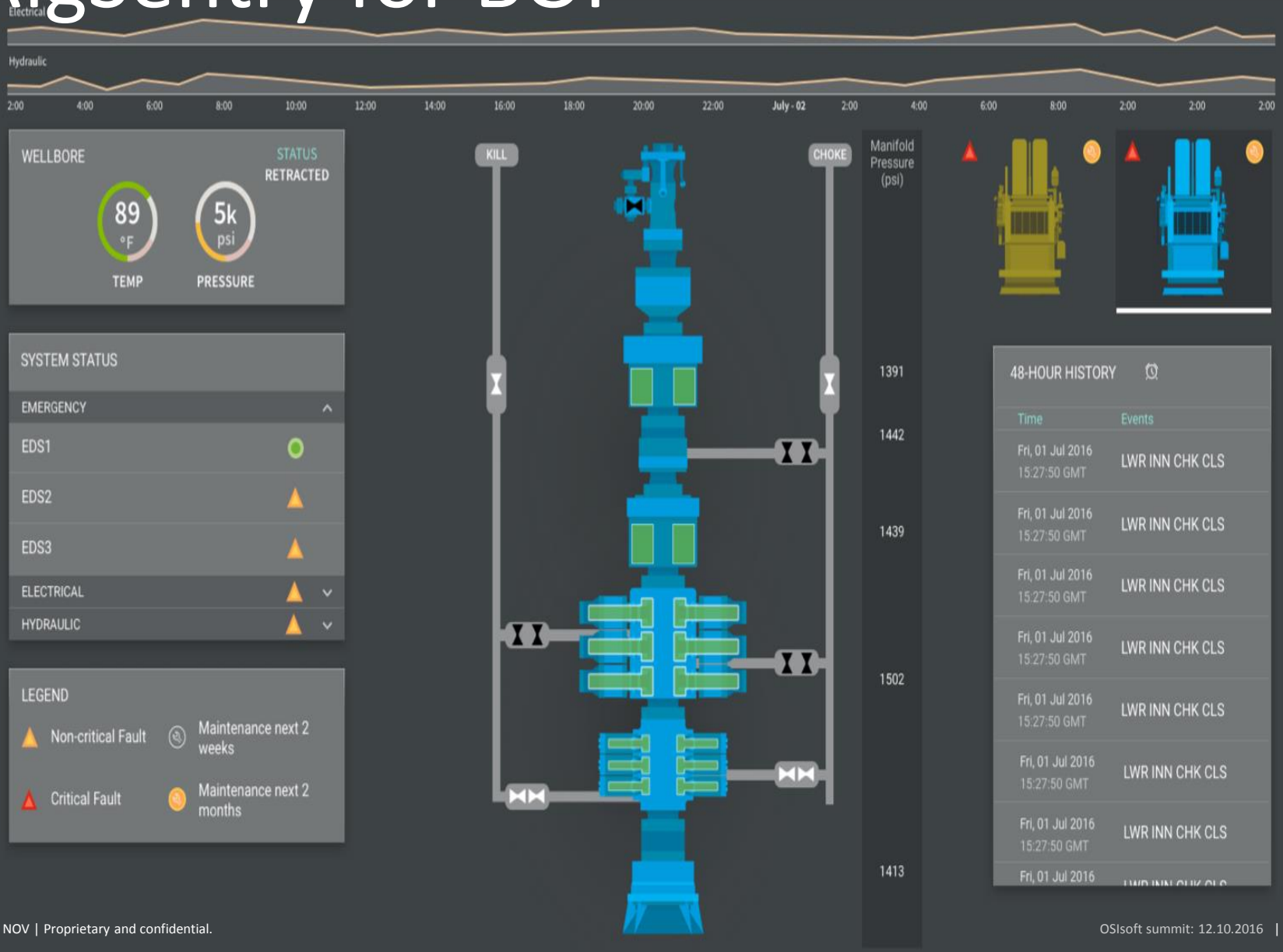
# RigSentry for BOP

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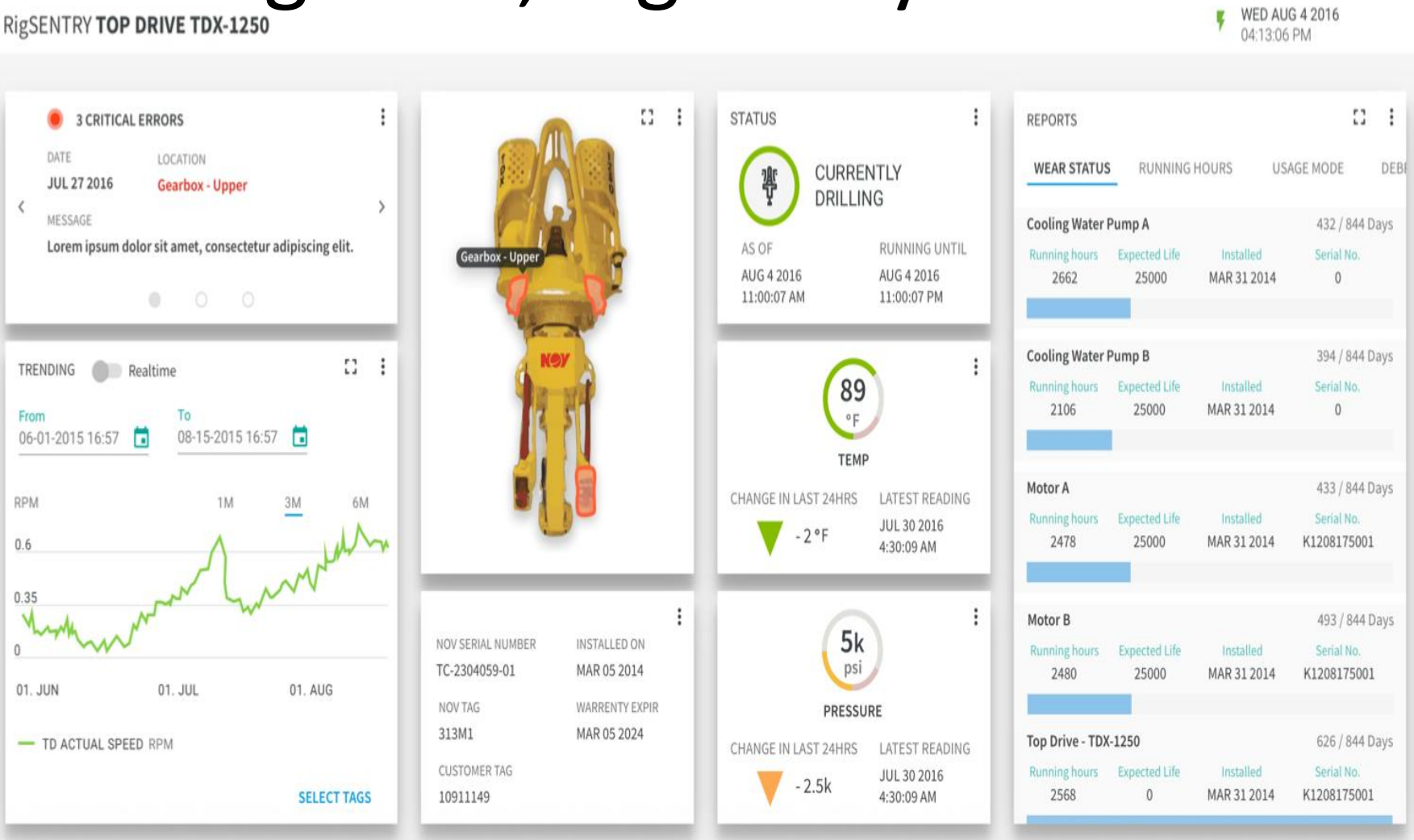
# Coming soon, RigSentry for…

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# *RigSentry™*

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