2xEP
Doubling Australia's Energy Productivity

A2EP – 2xEP Energy Productivity Summit
04-05 April, 2017
Australian National Maritime Museum
Darling Harbour, Sydney

Session 10
The next wave: 2xEP
ICT: Enabling innovation
Lee Stewart
Renald Gallis
Neil Salisbury
Denis Vilfort > presentation follows
Chair: Tony Cooper

AUSTRALIAN ALLIANCE FOR ENERGY PRODUCTIVITY
Doing more. Using less.

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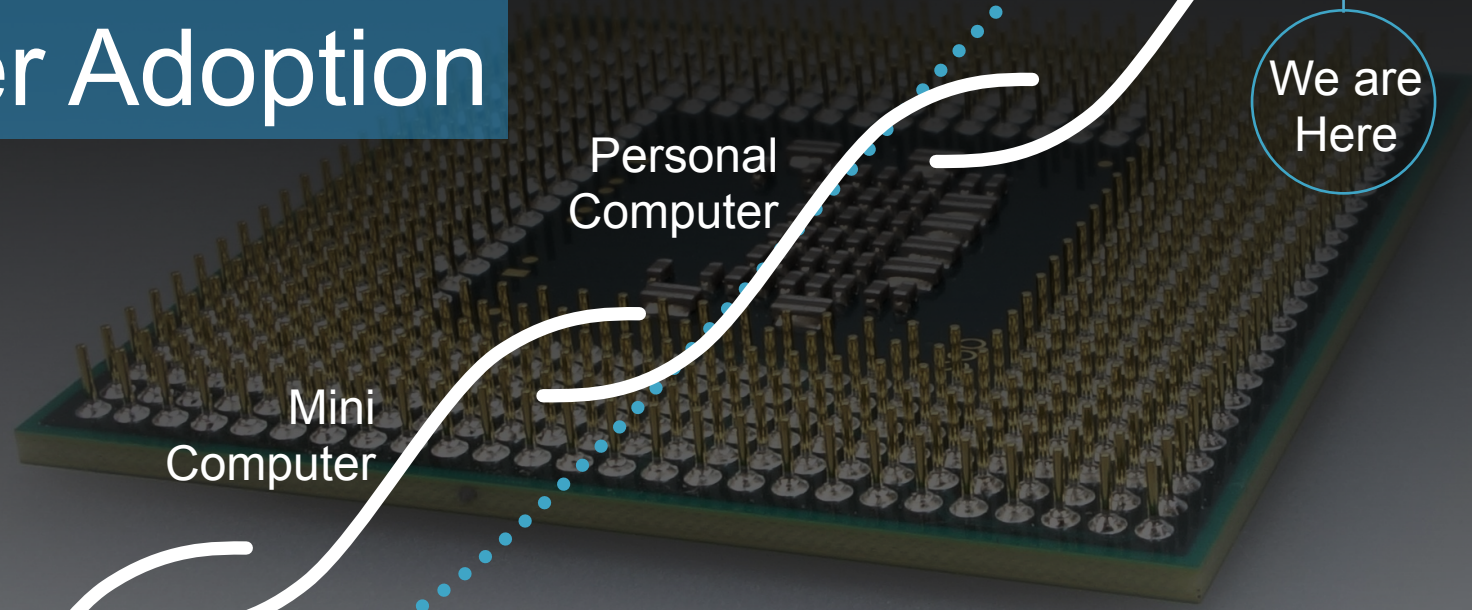
MAKING HVAC-R SMART

Denis Vilfort
CMO
OptumSoft Inc.

The 5 Stages of Computer Adoption



Main Frame

Mini Computer

Personal Computer

SMART Phone

Internet of Things

We are Here

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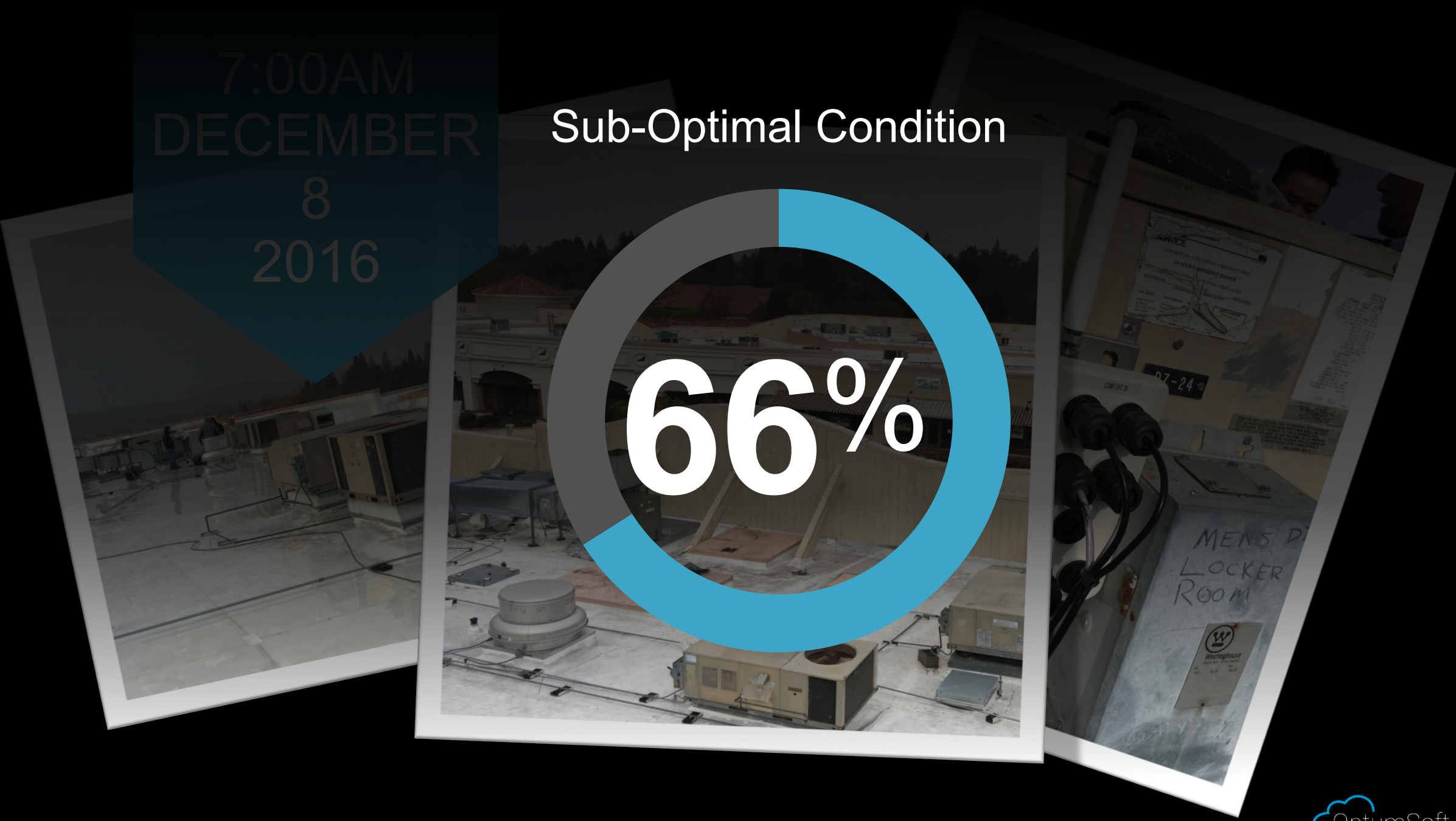
7:00AM
DECEMBER
8
2016

Sub-Optimal Condition



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• A Sea of Opportunity •

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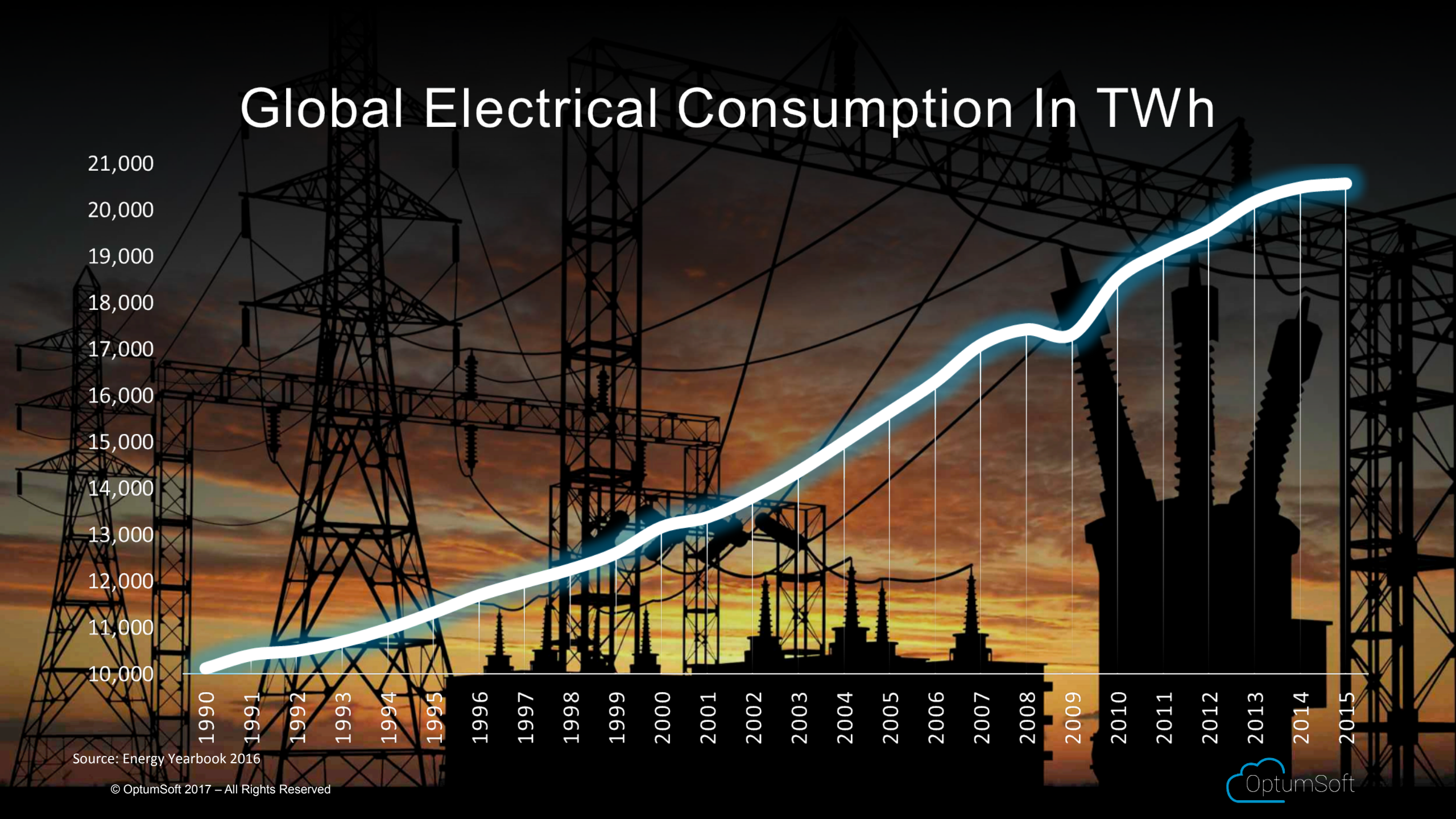
Global Electrical Consumption In TWh



Source: Energy Yearbook 2016

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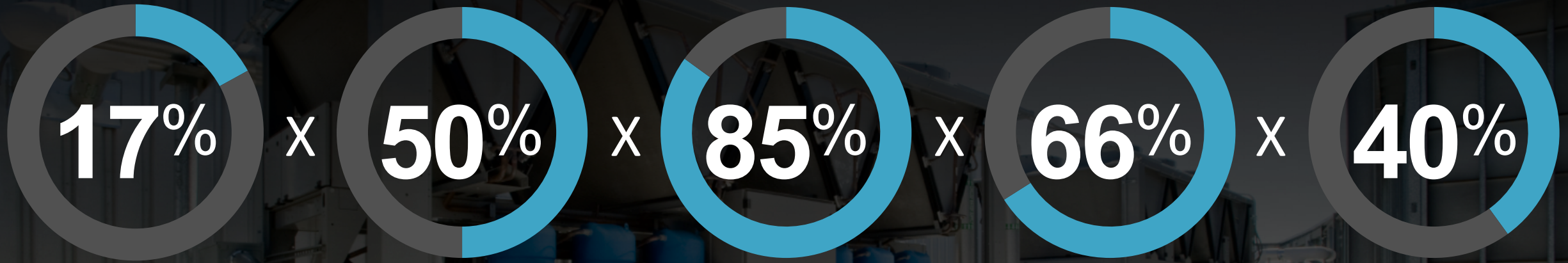
Building a Model…



HVACR

Commercial

Smaller Buildings

Sub-Optimal

Wasted Energy

Source: OptumSoft, Comfort Systems, Metis Monitoring

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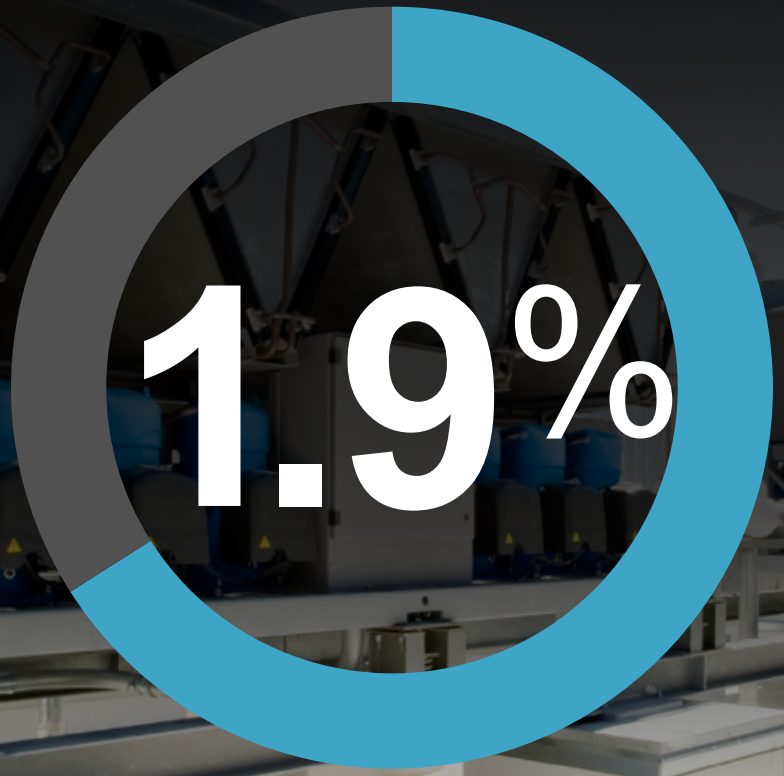
Building a Model…



Source: OptumSoft, Comfort Systems, Metis Monitoring

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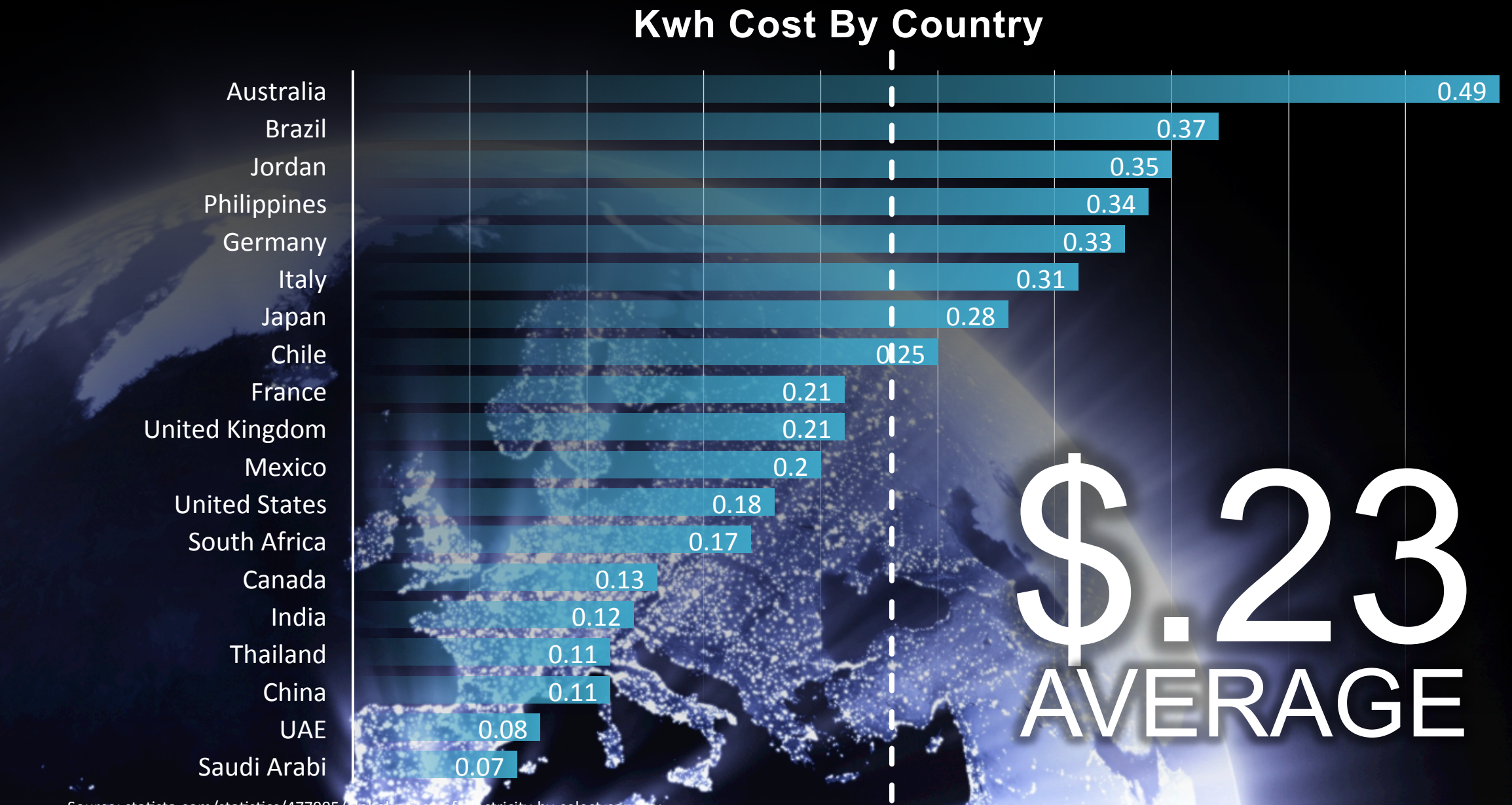
Kwh Cost By Country



$.23 AVERAGE

Source: statista.com/statistics/477995/global-prices-of-electricity-by-select-country

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Everyone on The Planet:
A Medium Latte

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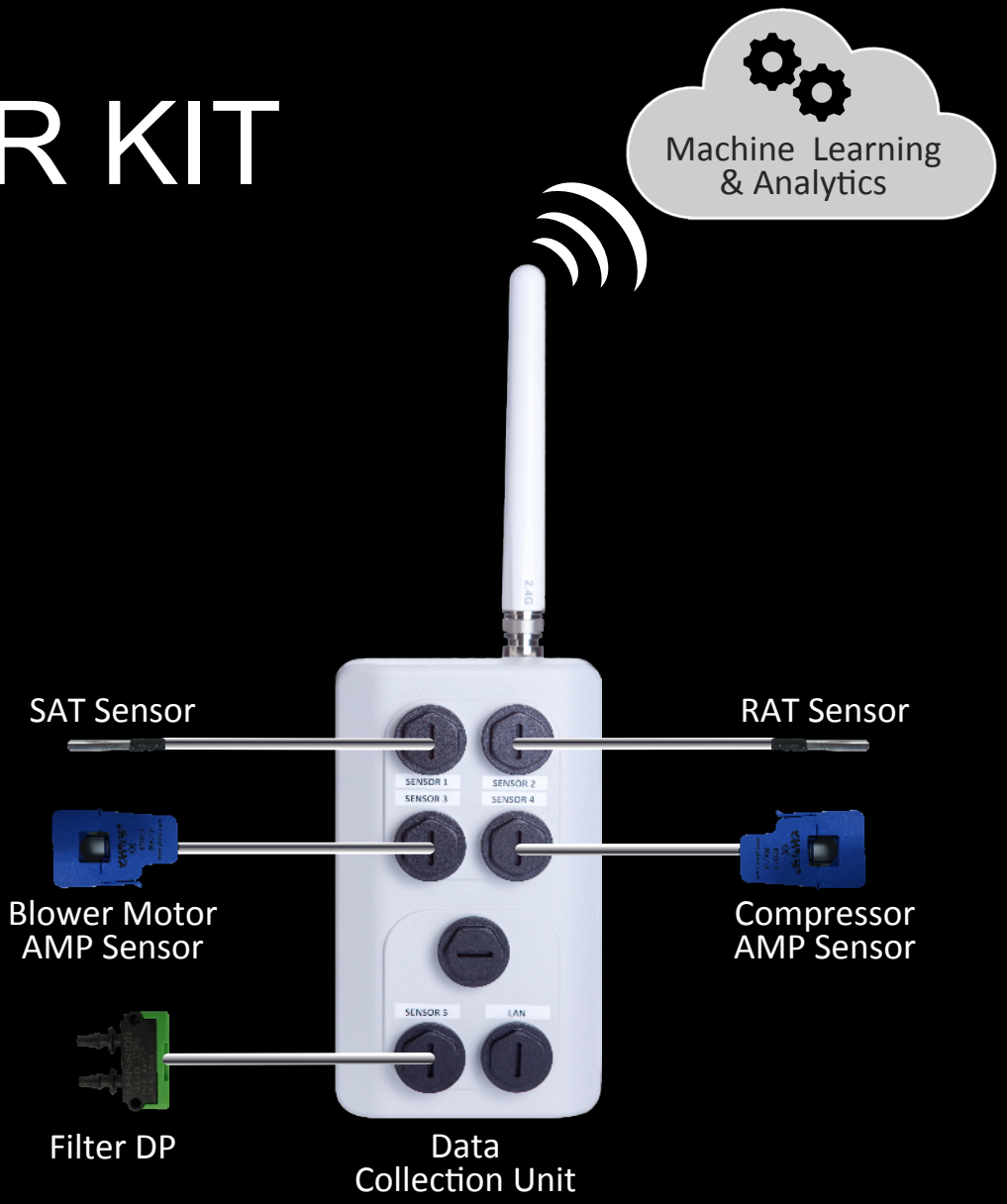
UNIVERSAL SENSOR KIT

- Cost Effective Configuration
  - Supply Air Temp (SAT)
  - Returning Air Temp (RAT)
  - Blower Motor AMPs
  - Compressor AMPs
  - Filter DP
- Mounts on Any System – regardless of make and age
- Fast Install – less than 30 minutes



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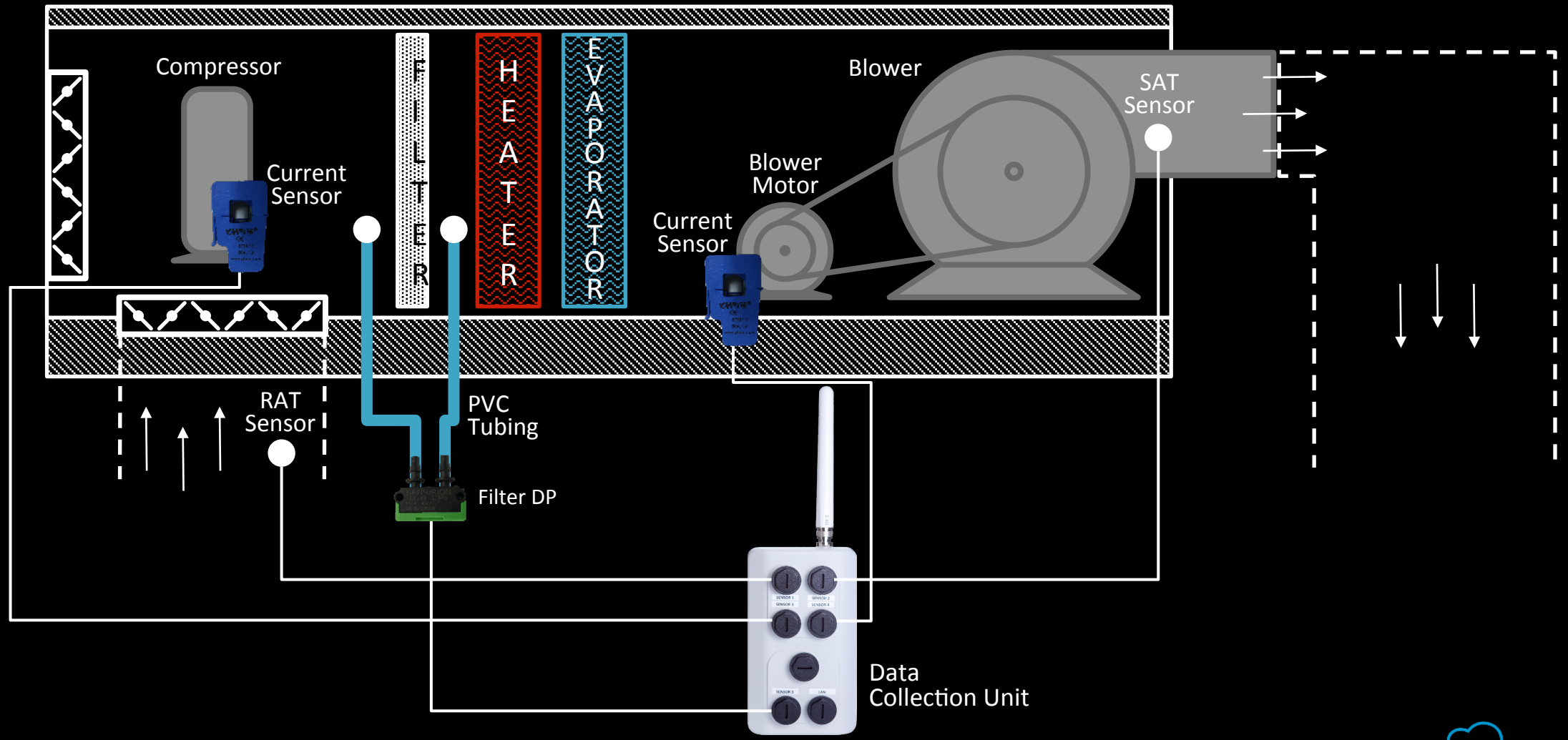
DEPLOYMENT EXAMPLE



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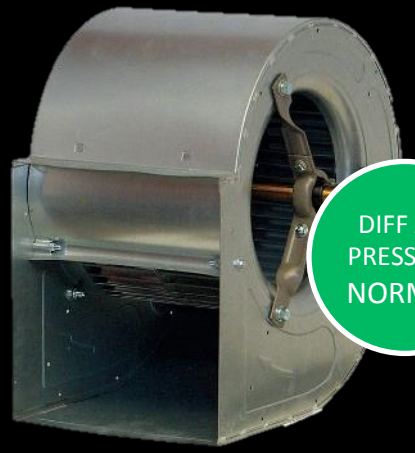
AUTO-DIAGNOSIS EXAMPLE

BLOWER MOTOR NORMAL

LOW CURRENT

AND

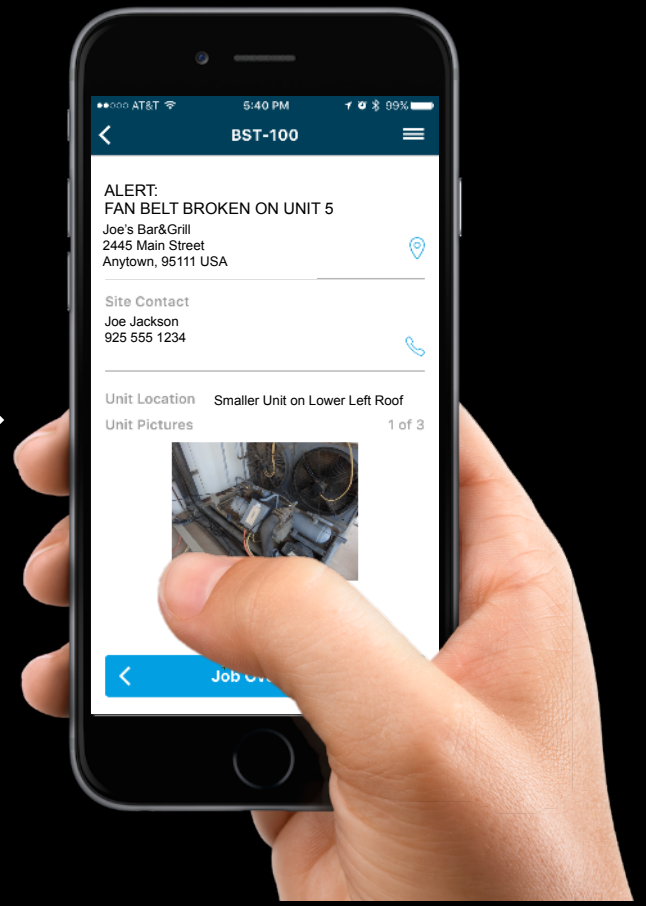


DIFF AIR PRESSURE NORMAL

DP = ZERO

BROKEN BELT !

SENSOR FUSION



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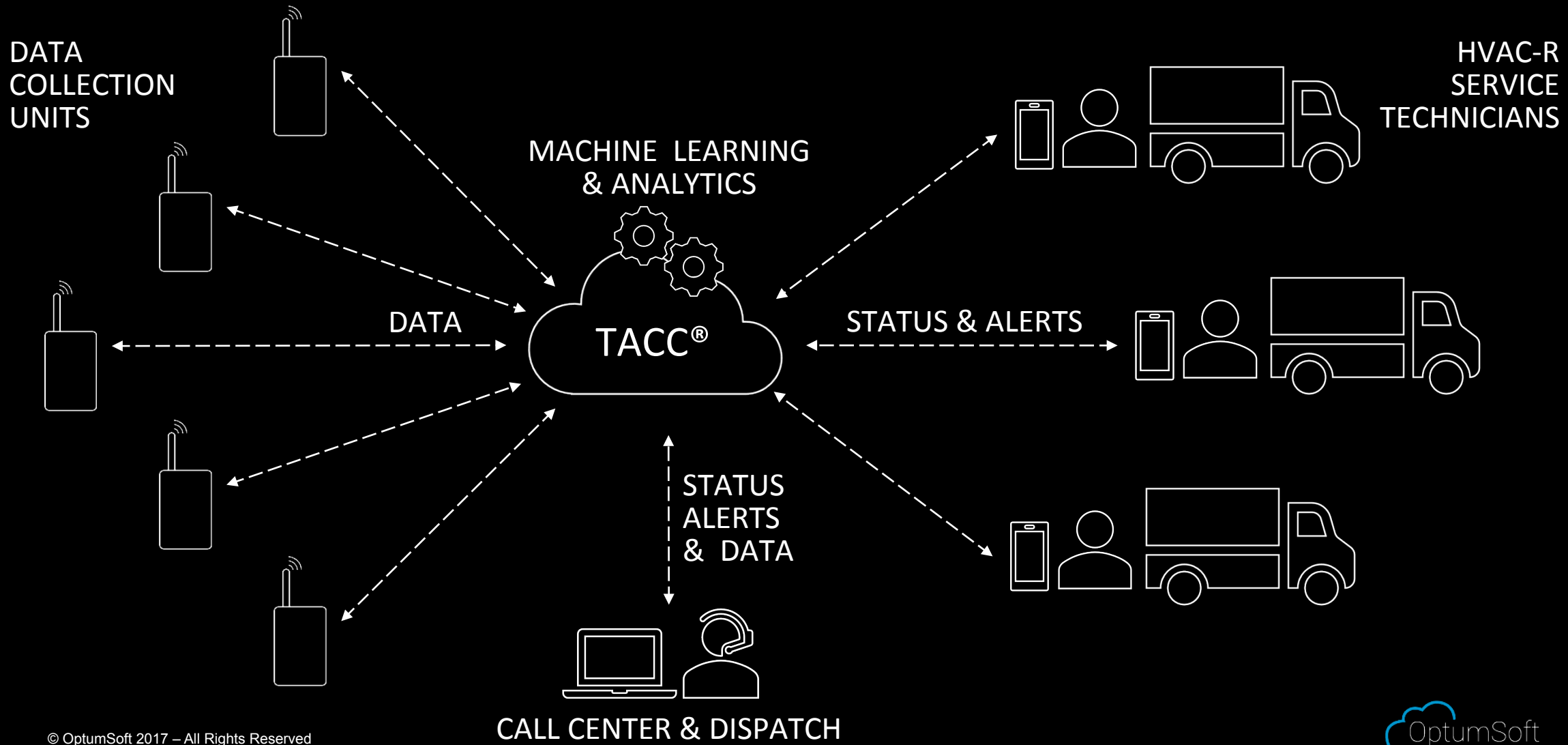
HVAC-R MADE SMART w/ IoT



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FROM:
4 PMs
PER YEAR

TO:
24X7
ALL YEAR

THANK YOU

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