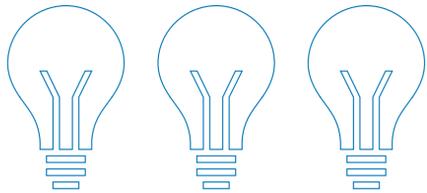




AUTOMATED, HYPERSCALE, SECURE:
The industrialized data center is here.

HOW WILL DATA CENTER MANAGERS MOST EFFECTIVELY BALANCE COST VS. AVAILABILITY, SPEED AND RISK?

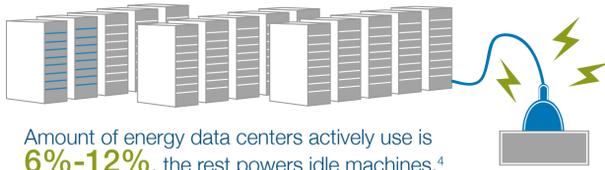
PERFORMANCE: ACHIEVING MORE WITH LESS



In 2013, data centers consumed **30 Billion Watts** globally.¹
Average cost of data center downtime is **\$474,000/hour**.²

\$13,000,000,000

Data centers will cost \$13 billion to run annually by 2020.³



Amount of energy data centers actively use is **6%-12%**, the rest powers idle machines.⁴

A MOVEMENT TOWARD BIGGER DATA CENTERS AND CLOUD

90% of all **DATA** in the world was created in the last 2 years.⁵



| 2016 | 2017 | 2018 | 2019 | 2020 |
|------|------|------|------|------|
| 9% | 18% | 27% | 36% | 45% |

Industry analysts expect data energy consumption to continue to **GROW AT A RATE** of more than **9%** per year through 2020.⁶



Over **35%** of enterprises are moving to application deployments in the cloud.⁷



2,000,000,000 sq. ft. or nearly **72 square miles**

By 2018: data centers will occupy 2 billion **SQUARE FEET** worldwide.⁸

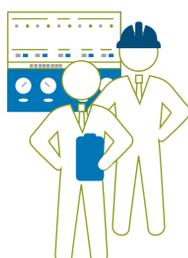
Mega data centers will eventually account for **72.6%** of all service provider data center construction worldwide.⁸



HOW HAVE DATA CENTERS BEEN EVOLVING?



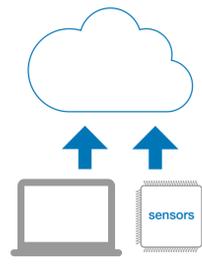
Managed Chaos



Basic Visibility



Integrated Controls



Dynamic Data Center

THE ANSWER: THE INDUSTRIALIZED DATA CENTER: AUTOMATED, HYPERSCALE, SECURE.

ABB's key indicators of DCIM success:



Cost



Capacity



Control

Predictive Maintenance:

Human error is the root cause of **60%-80%** of data center downtime, year after year.⁹



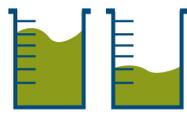
ABB Decathlon® for Data Centers provides intelligent, flexible, adaptable and ultimately autonomous control of the entire data center or fleet of data centers.

Data center automation means all physical and virtual infrastructure managed as a single system. ABB Decathlon for Data Centers merges industrial monitoring and control systems, facility operations, IT and connectivity to enable a fully automated data center.

By using monitoring, control technologies, BI, and full facility and IT systems integration, DCIM enables:



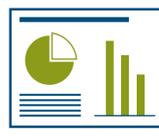
Resource forecasting & energy planning



Capacity planning & management



Troubleshooting & root cause analysis



System availability & performance



Facility & IT automation

Sources:
1. NRDC, 2013
2. Ponemon Institute, 2013
3. NRDC 2014
4. McKinsey & Company, at request of NYT, 2012
5. IBM, 2011
6. EPA, 2012
7. 451 Research, 2015
8. IDC, 2014
9. facilitiesnet.com, 2013