

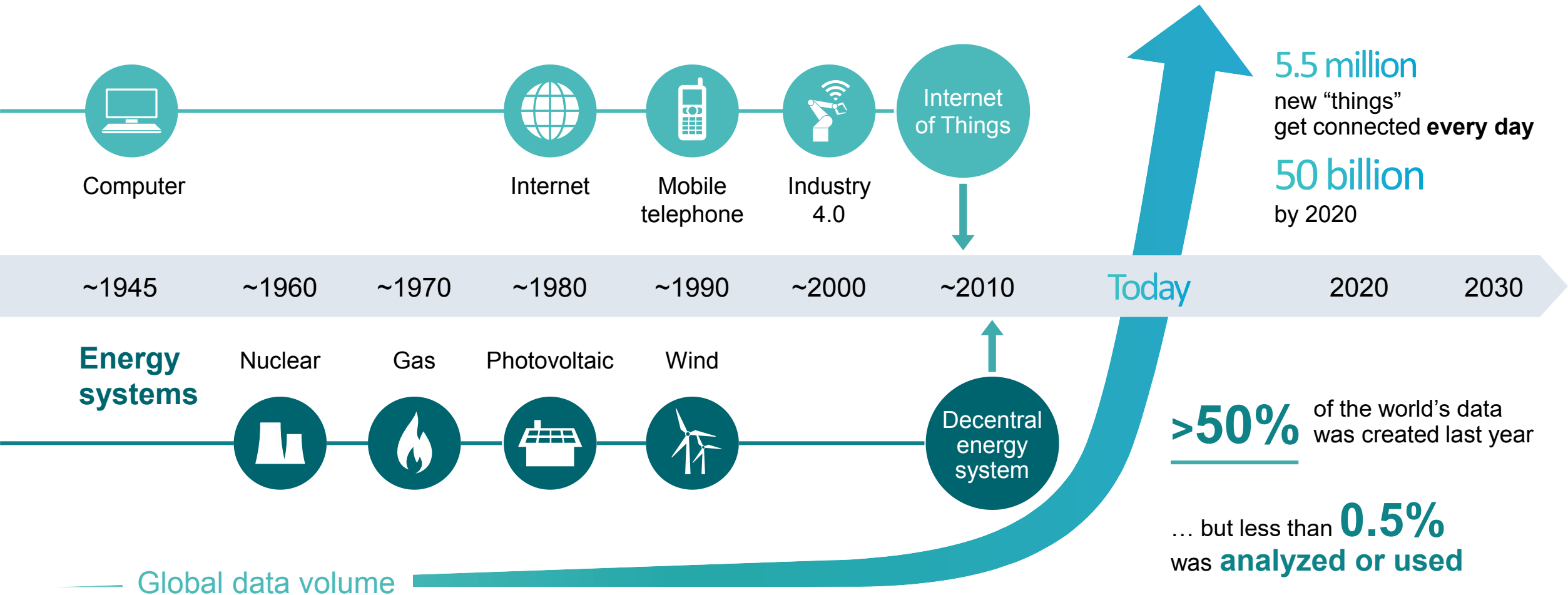
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# EnergyIP Energy Efficiency Analytics

Optimizing energy with cloud based big data analytics

# Data management and energy systems – In the age of digitalization they merge and change the world

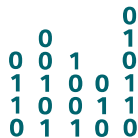
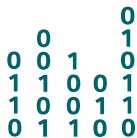
**SIEMENS**  
*Ingenuity for life*



# IoT and widespread sensor technology lead to increasing connectivity in energy distribution



Millions of data in near real-time



Smart objects/devices/sensors – “Things”  
SIPROTEC, SICAM, SENTRON, ...

Automation and protection | Field area networks | Sensors, meters, controls, concentrators



Digitalization  
changes  
everything



# EnergyIP Energy Efficiency Analytics is designed to create sustainable value in various industrial areas



Example vertical?

Automotive



Production processes

15

15 plants **online**

Status of this customer example?

Proven benefits for this customer example?

**€26 mio.** savings in elec. **2014 – 2018**  
**15%** reduction in consumption



Energy



Thermosolar plant operation

3

1 50 MW plant **online**

**€200 k** savings in self-consumption per year



Water and waste



Water waste and sludge drying processes

8

1 plant **online + 1** plant in **pilot phase**

*Currently being assessed*

*Target: >5% in energy consumption*



Building



Elevator usage, transformers and heating

3

1 facility in **pilot phase**

*Currently being assessed*

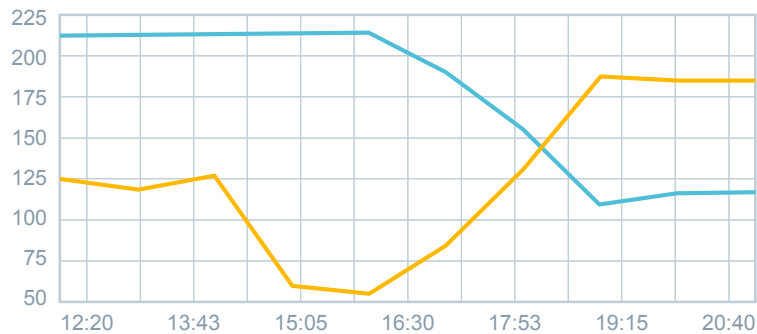
*Target: >5% in energy consumption*



# Why Big Data?

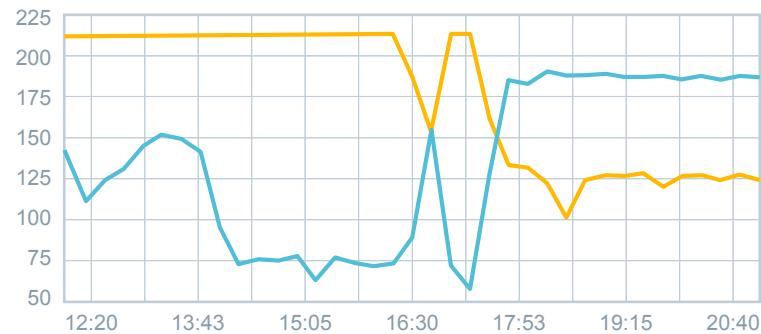
## Because resolution matters!

### 15 min resolution



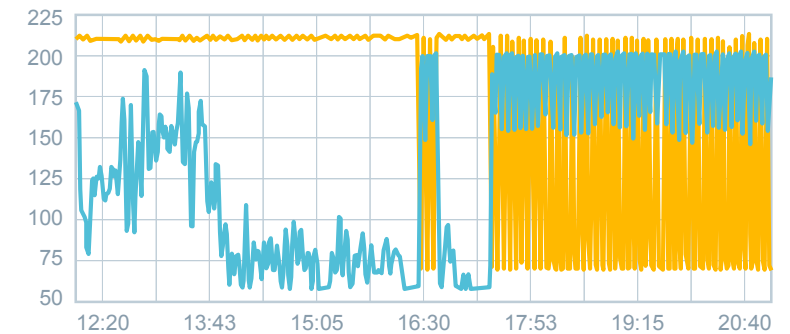
“Low” resolution – useful to know overall energy consumption.

### 1 min resolution



“High” resolution – useful to understand behavior patterns and to implement algorithms.

### Big Data



High volume of data gathered – detailed information retrieved by data analytics

**Create the ability to visualize the behavior patterns of the equipment**

Measure the energy performance  
of any business application in near real-time

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... even in multiple sites – no matter where





Only small hardware footprint needed...

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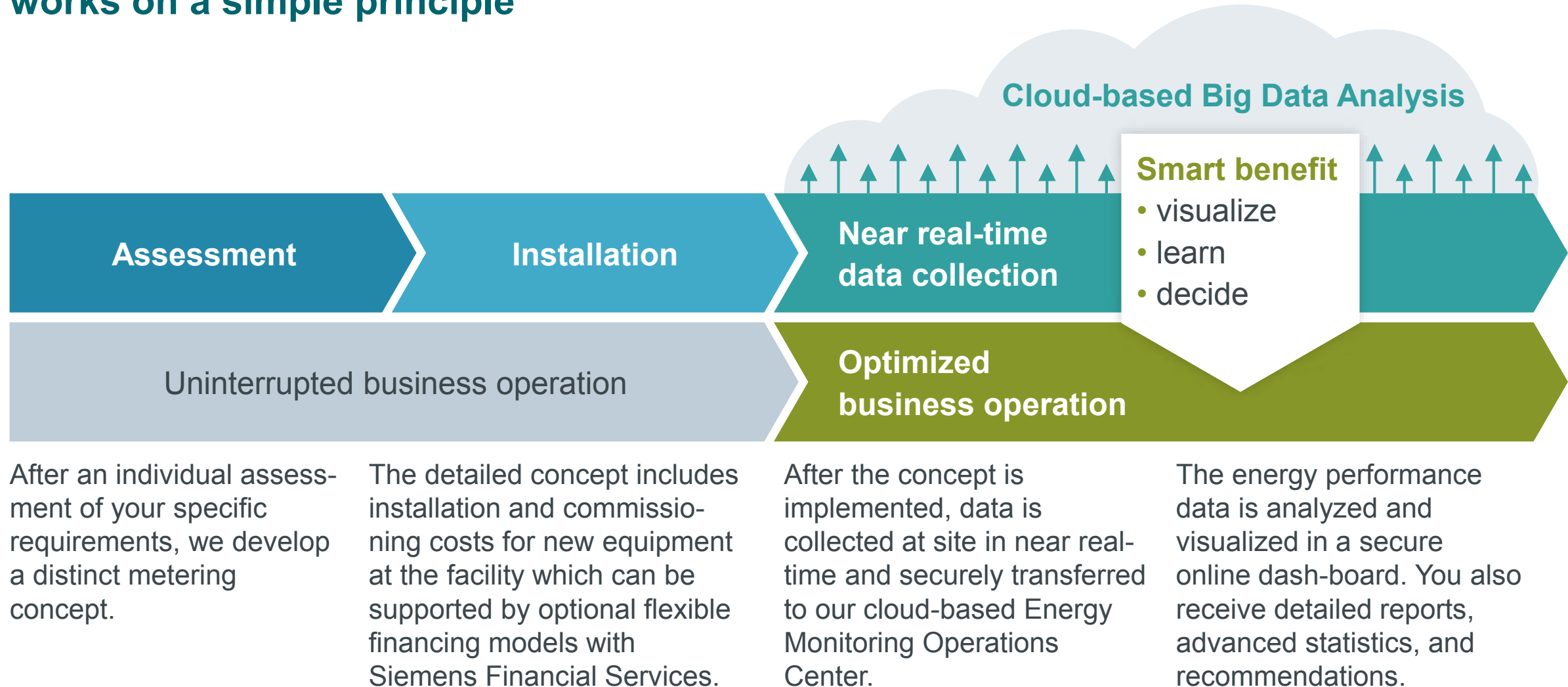
... and the application is easy to access and use



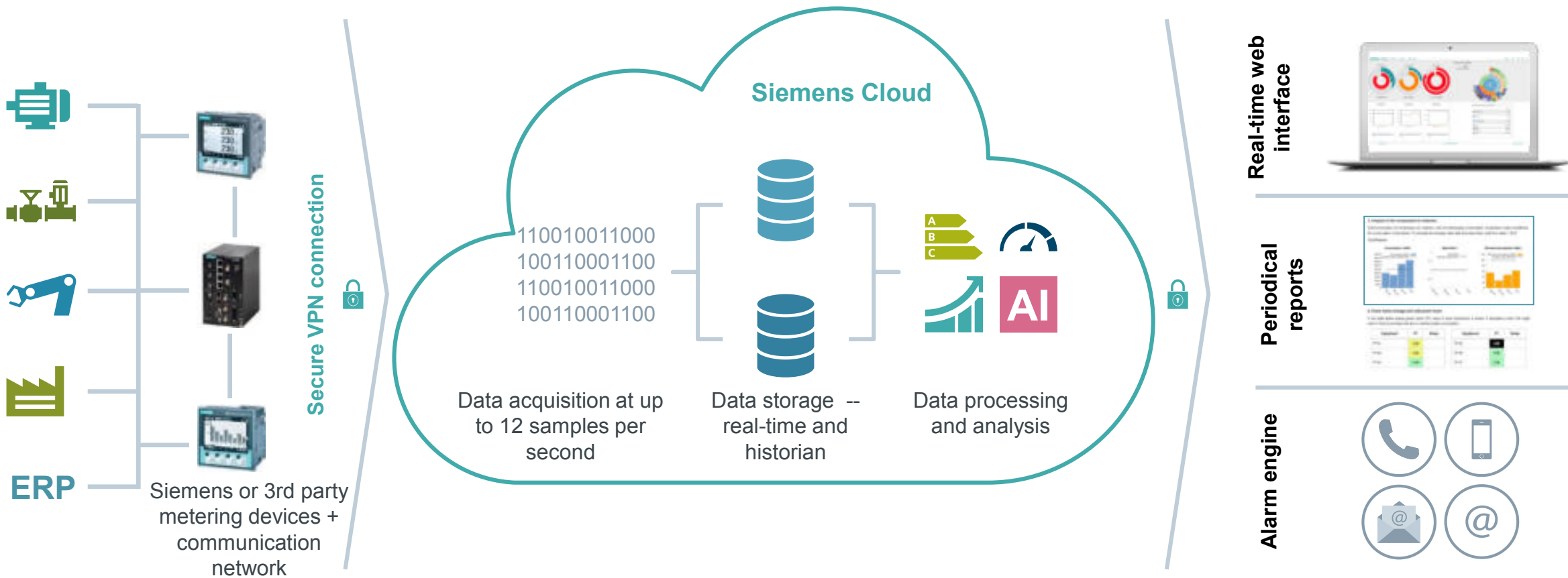
Just log in –  
it's all there



## EnergyIP Energy Efficiency Analytics works on a simple principle



# EnergyIP Energy Efficiency Analytics – Flexible cloud solution as a service to make use of the wealth of data hidden in your facility



Secure – performant – flexible – scalable



## Benefits you can achieve

Reduce energy  
expenses

Comply to energy  
efficiency  
regulations

Reduce CO<sub>2</sub>  
emissions

Benchmark  
energy  
performance

Identify power  
guzzling  
equipment

Detect inefficient  
processes

## The company



- Present in 21 countries
- 99 industrial plants
- 9 plants under construction
- 12 R&D centers
- More than 35,000 employees
- €7.5 bn revenue in 2016

Gestamp specializes in developing innovatively designed metal automotive components to achieve increasingly safer and lighter vehicles.



## The project results

**15**

Factories in  
6 countries

**8M**

€ saved in  
energy bills

**130**

measures  
implemented

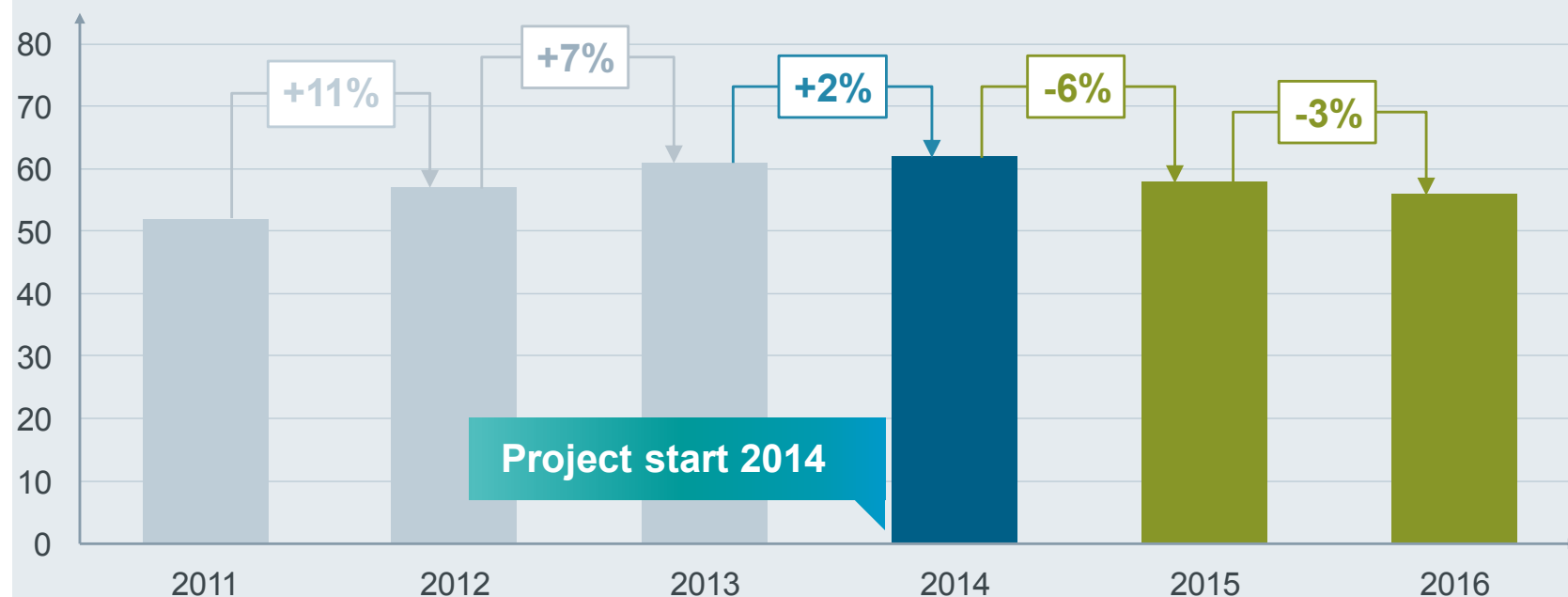
**14k**

tons of CO<sub>2</sub>  
saved

**15%**

energy consumption  
reduced (50 GWh)

## Gestamp's energy consumption dropped since Energy Efficiency Analytics is implemented



# What are benefits of our digital service offering in the view of a customer ?



“No licenses, no software, no CAPEX, no extra people in my factory, just a web address and a password to show how we perform”

René González,  
Manufacturing  
Director, Gestamp



## DAAC-Blueprint



Digital  
Service  
Offerings



Applications



Platform



Connectivity



Devices

# Thank you!

