

 JUL 2019

**Writing the digital future takes ability.**

---

# Apresentação Pessoal

## Informações pessoais

### Raphael Haddad

---



- Engenheiro Eletricista com especialização em automação
- Pós graduação em administração com ênfase em estratégia de negócios
- Gerente de produtos de automação na ABB desde 2011
- Vice-diretor da área de Automação da ABINEE
- Responsável pela área Hybrid Industries
- <https://www.linkedin.com/in/raphaelrh/>

# Digital technologies are driving new innovation in industrial markets

Media is focused on B2C but the “killer app” is in B2B

Virtual/augmented reality



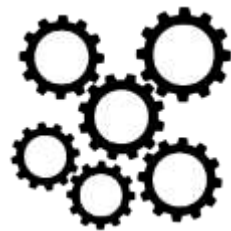
Software-defined machines



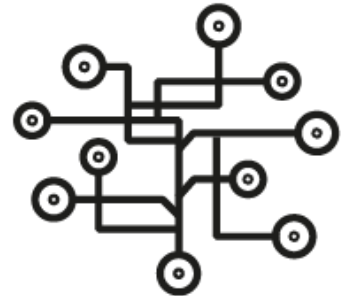
Machine learning



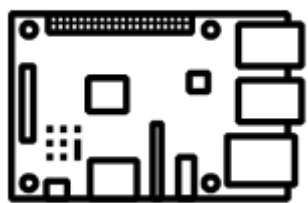
Time-sensitive networking



Big data



Inexpensive computing



Cloud computing



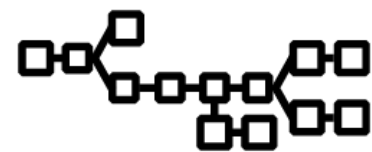
Cybersecurity



Connectivity



Blockchain

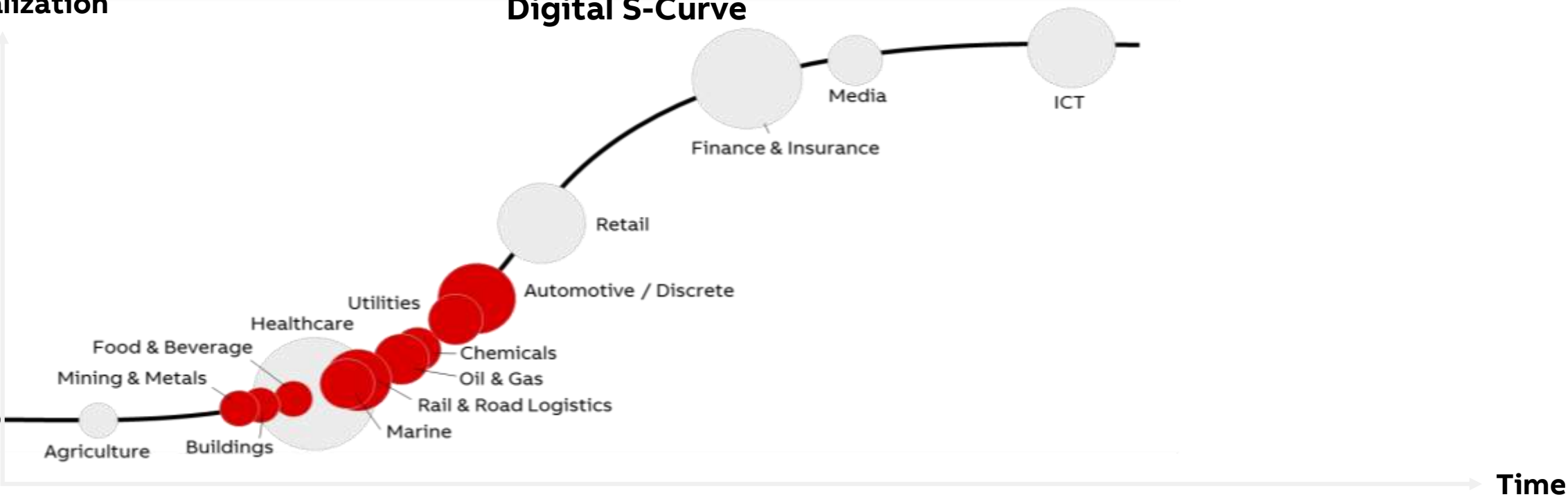


# Industrial markets primed to adopt digital technologies

Computing + connectivity + cloud + analytics set to unlock value

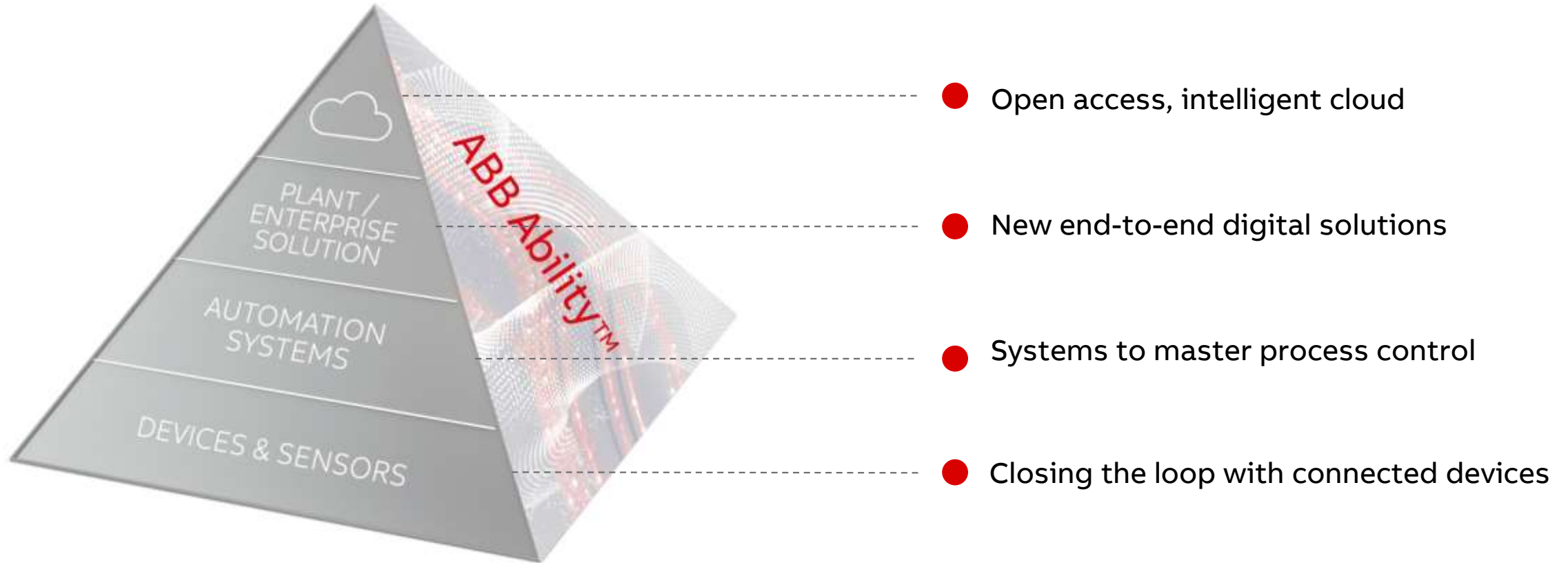
Level of digitalization

### Digital S-Curve



# Unlocking the ABB potential in digital

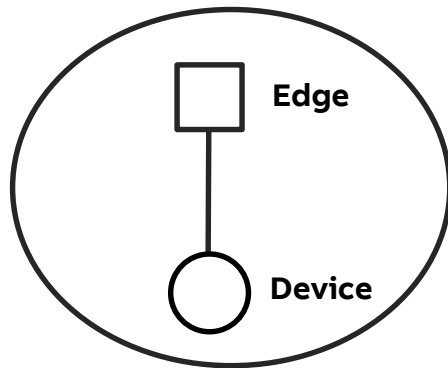
ABB Ability™: industry-leading digital solutions built on a common set of standard technologies



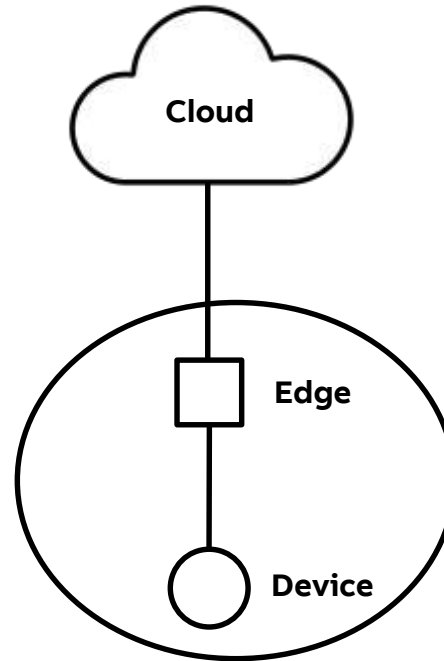
# Leveraging the ABB Ability™ platform

Secure digital solutions on-premise, in the cloud, and in an ecosystem

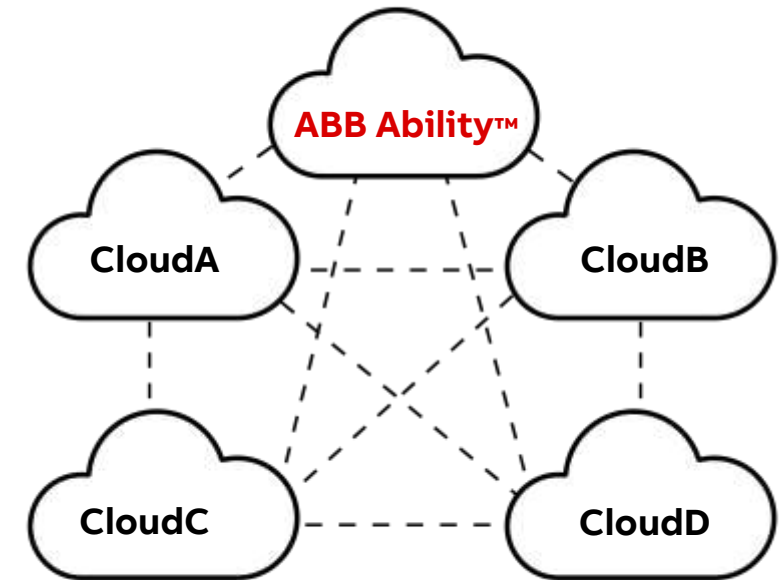
## Fog



## Cloud



## Intercloud





---

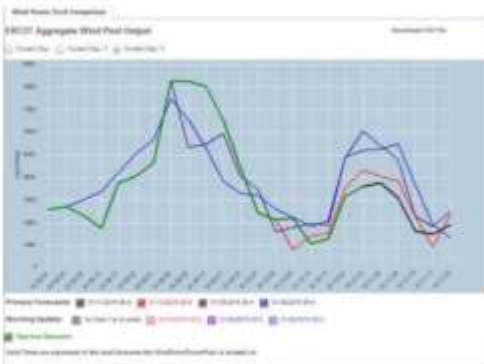
# Edvard Munch

Vocês acham que são o mesmo artista?



# Increase yield & efficiency in operations

## Improved Wind Production Forecast using Machine Learning



**What has been done:** Historic data from the client where ABB is operating the wind farms were combined with IBM's Weather Company data and other meteorological models to develop a best in class prediction model for different time horizons

**Opportunity:** Weather dependence of renewable power production causes production volatility, operational challenges and extra costs to generating companies, grid operators and traders.

**Approach:** The Solution enables improved wind production forecast using machine learning from IBM's Watson and generation and grid insights and data from ABB • ABB provides industry insights and data related to power production, localized weather information, plant operations, curtailments and control setpoints • IBM provides forecasting models and real time weather data based on machine learning technology which uses ABB industry insights & data

**Benefits:** Cost and risks reduction for Wind Power Producers and TSO • Integration of renewable in the power systems due to contribution to operational and planning procedures • Support of the sector transition towards renewable energy



# Caso Target



- Pai de uma adolescente vai em uma loja da Target reclamar que a Target está oferecendo cupons de produtos para grávidas e bebe para uma adolescente. A Target está estimulando ela ficar grávida?
- Com base no número do cliente, e perfil de compra na Target de 25 produtos, é possível estabelecer com um bom nível de acerto se a mulher está grávida e quando o bebe irá nascer.

<https://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did/#2cc682466668>

# Ética na Ciência

## Fritz Haber



- Descoberta da síntese da amônia (Nobel de 1918)
- Responsável pelo gás cloro e mostarda (5.000 mortos)

## Werner Heisenberg



- Sabotou e postergou o desenvolvimento da bomba atômica alemã (controvérsia)

## He Jiankui



- Alterou a genética de 2 gêmeas que são resistente ao HIV

WITH GREAT POWER THERE MUST ALSO COME GREAT RESPONSIBILITY! (Spiderman, Stan Lee 1962)

**ABB**