# AIOTI Signature Event: Industry 4.0 and Digital Transformation – where OT meets IT

29<sup>th</sup> of September 2020

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# IoT Analytics

What Do We Need

**Data** without



has No Value!



# **IoT Analytics**

What Do We Need

**Analytics** without Data is Not Possible!

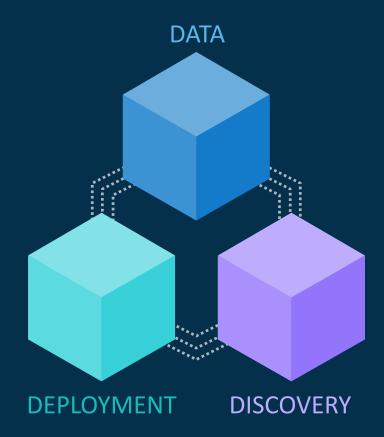


The amount of industrial data in the world will **quadruple** in the next five years - and so will the opportunities that come with it.

...

But the reality is that 80% of industrial data is still collected and never used. This is pure waste.

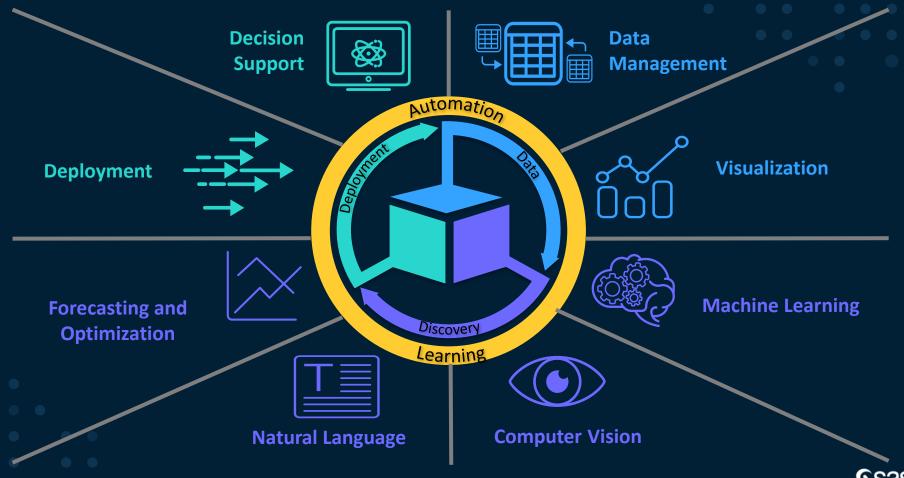
Ursula von der Leyen
16<sup>th</sup> of September 2020



# ACCELERATE

The Analytics Life Cycle





# Use Case – Solvay: manufacturing 4.0 Digital transformation



### Approach – from idea to scaled solution

Phase 1 Assess the potential Phase 2

Phase 3

Phase 4 Scale

Step 1 – workshop to determine most relevant use cases (optional) and their potential

#### Step 2 - Readiness assessment

- Data readiness check
- AA use case definition
- Approach
- **Timing**
- Team
- Governance

**Deliverable** – completed use case canvas and diagnostic plan

#### Objective - short term pilot

- Find fast / Fail fast
- Validate the potential
  - Data
  - Advanced analytics
- How to industrialize
- Joint customer SAS team
- Create insight into approach and potential of AA for engineers and operators

#### Objective - Industrialize diagnostic

- Industrialize data flows
- Iterate the model into operational AA model
- Create and embed user interfaces for operators
- Setup Industrialized AA flow
- Run AA model within operating window
- Capability building

Objective – Scale and deliver use cases across the organization

- Accelerate across similar installations
- Transfer learnings and best practices
- Leverage AA capabilities across sites, BU's and central
- Manage AA models as assets and manage their lifecycle

Deliverable - validation of use case and

**Deliverable** – generation sustainable impact on site 1

Deliverable – generate sustainable impact on site X



GO/NO-GO Diagnostic

potential



GO/NO-GO Industrialization



## Our mission: Asking more from Chemistry by Leveraging Advanced Analytics

### Context Solvay - SAS joint mission so far...



1. Spinetta – Case 1

2. Spinetta – Case 2

- ✓ First Collaboration SAS-Solvay (teaming with McKinsey)
- Case 1 Applying machine learning models to determine key variability drivers and optimize them to provide optimal setpoints to maximize yield
- Case 2 Applying AA models to determine process drivers and optimize production schedule in order to maximize margins (link commercial)

Continuous process

**Results Delivered** 



3. Tayaux – Case 1

4 Tayaux – Case 2

- Case 1 and 2 Determine key process drivers and settings for golden batch production, optimize batch sequencing and predict variability and clashes.
- ✓ Insights available in Control Room Dashboard, largest SAS dashboard in the world.

Batch process

**Results Delivered** 



5. Torrelavega – Case 1

- ✓ First collaboration SAS Soda Ash
- ✓ Yield optimization to increase OEE
- Apply Advanced Analytics models to explain process variability and optimize process drivers
- Insights available in continuously refreshed Control Room
   Dashboard



Accellerate and Scale Digital Roll-out



- ✓ Scaled Global Delivery
- ✓ Implementation Partner led roll-out

Continuous process

**Results Delivered** 



# Thank You! Joline.jammaers@sas.com

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