



SOLVAY

asking more from chemistry®

Digitalisation in Solvay

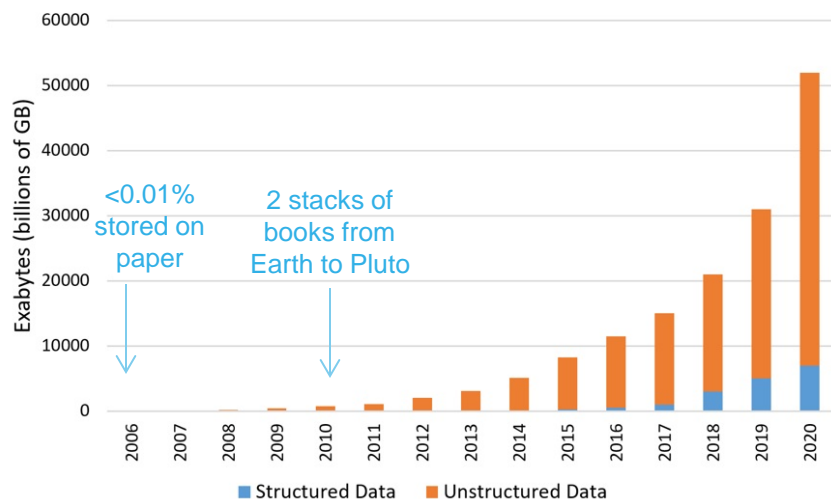
The Example of R&I

CONFIDENTIAL

J-Christophe Galland
RIC Seoul -

We Are In a World of Data Explosion....

The Cambrian Explosion...of Data



How Much Data is Produced Every Day?



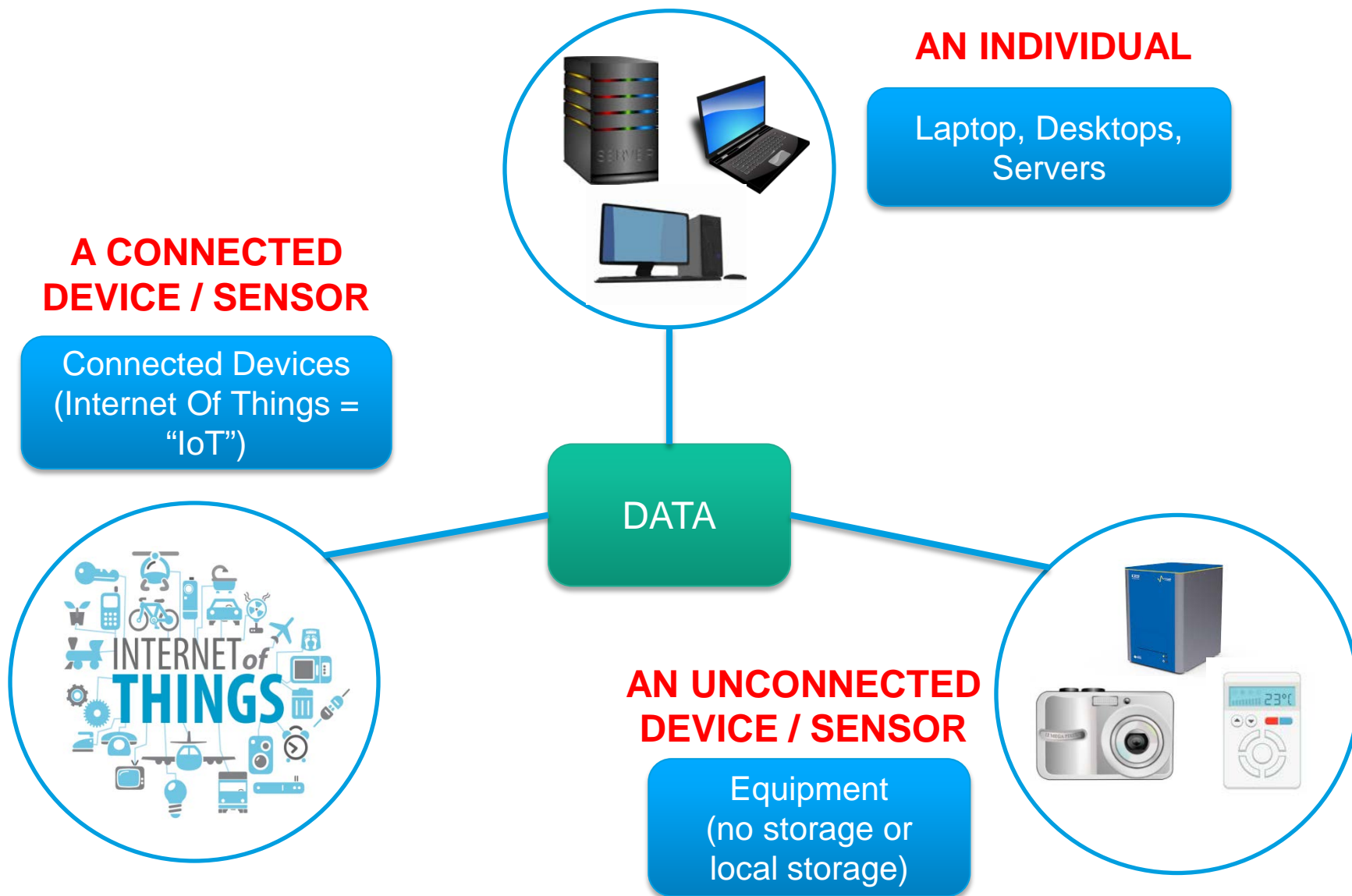
2.5 Exabytes are produced every day

Which is equivalent to:

- 530,000,000 millions songs
- 150,000,000 iPhones
- 5 million laptops
- 250,000 Libraries of Congress
- 90 years of HD Video

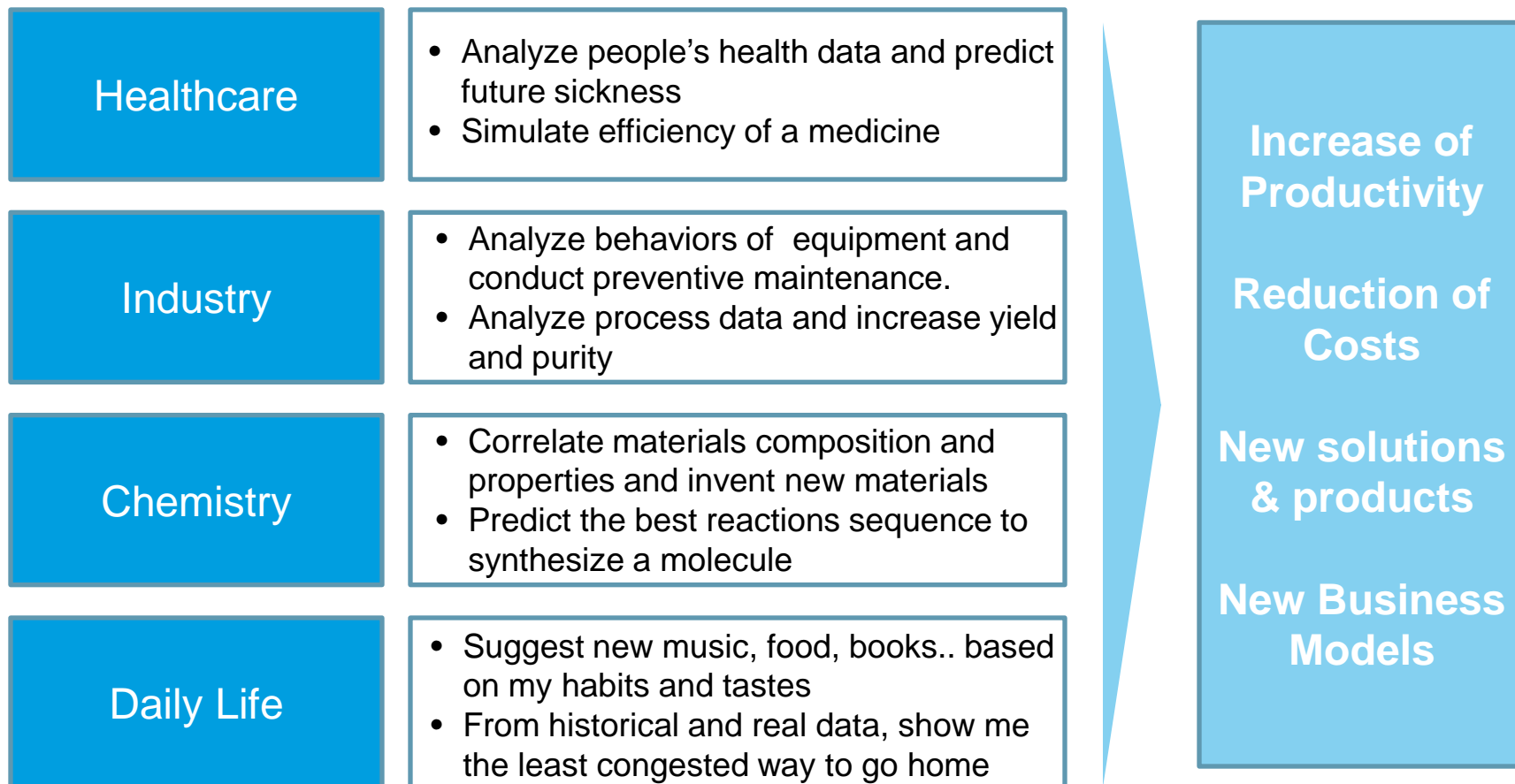
- Every 2 days we create as much information as we did from the beginning of the time until 2003.
- Over 90% of all the data available in the world has been created in the past 2 years alone.
- In 2018, the internet traffic should reach 50 000 GB per second.

How Do We Generate This Digital Data?....



This Data Could Generate a lot of Value....

Here are some examples:



But Are We Really Ready ???....

95% OF THE DATA IS NOT UTILIZED

Source

Data without treatment and analysis is just... data. Meaningless.

MISMATCH BETWEEN THE VOLUME OF DATA AND OUR CAPACITY TO ANALYSE IT GROWS ALARMINGLY FAST

By 2018, the US only will face a shortage of up to 190,000 data scientists as well as 1.5 Million managers and analysts with enough proficiency in statistics to use big data effectively.
McKinsey Global Institute 2013

How Solvay Defines Digital Transformation

The change happening – at Solvay and outside – due to the combination of the following new capabilities.

CONNECTED DEVICES

Constantly create large amounts of data that need to be managed effectively. Enable new ways of automated and personal interaction.

ONLINE / E-COMMERCE

Commercial transactions conducted electronically on the Internet, increasingly seamless with traditional bricks-and-mortar commerce

SOCIAL AND COLLABORATION

Enable new ways and drive expectations of interacting, personalizing and building relationships within and beyond the organization.

MOBILITY

Impacts all areas of business and personal life by transforming how people interact, consume information and services, collaborate, and work.

ANALYTICS

Enable generation of new insights and decision-rich information. Big Data approaches allow usage of increasing amount of data from multiple sources.

CLOUD

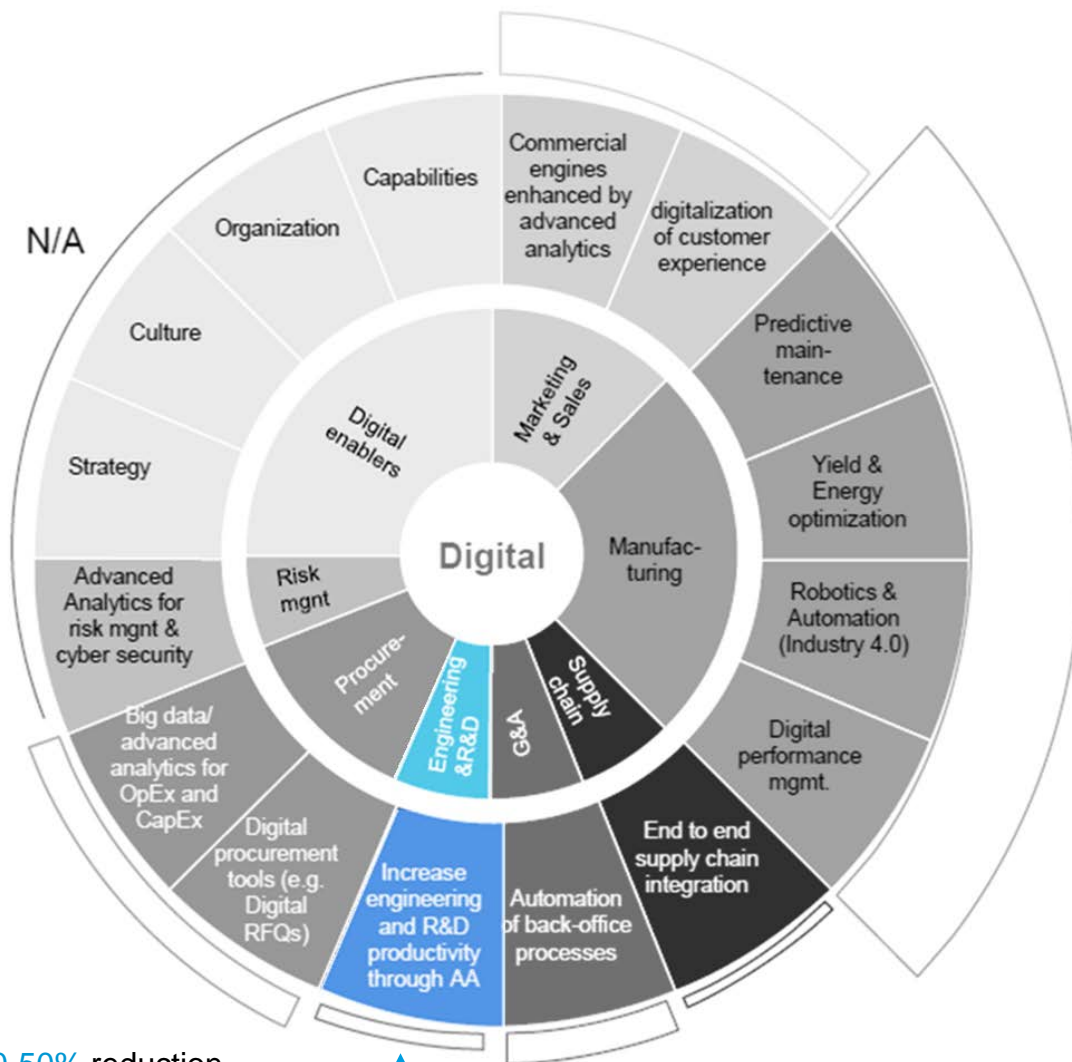
Possibility to virtualize and consume infrastructure, platforms and applications as a service enables new levels of scalability, flexibility and responsiveness.



Digital in R&I is expected to have a significant impact on time to market

Digitalization of R&I will enable 20-50% reduction in time to market* through the development of new tools and approaches:

- Use of simulation & modeling prior to lab experiments
- Extraction of previously unforeseen information from data analysis
- Building of prediction models
- Use of AI to access and extract more relevant information
- Robotisation of lab to increase data productivity from labs

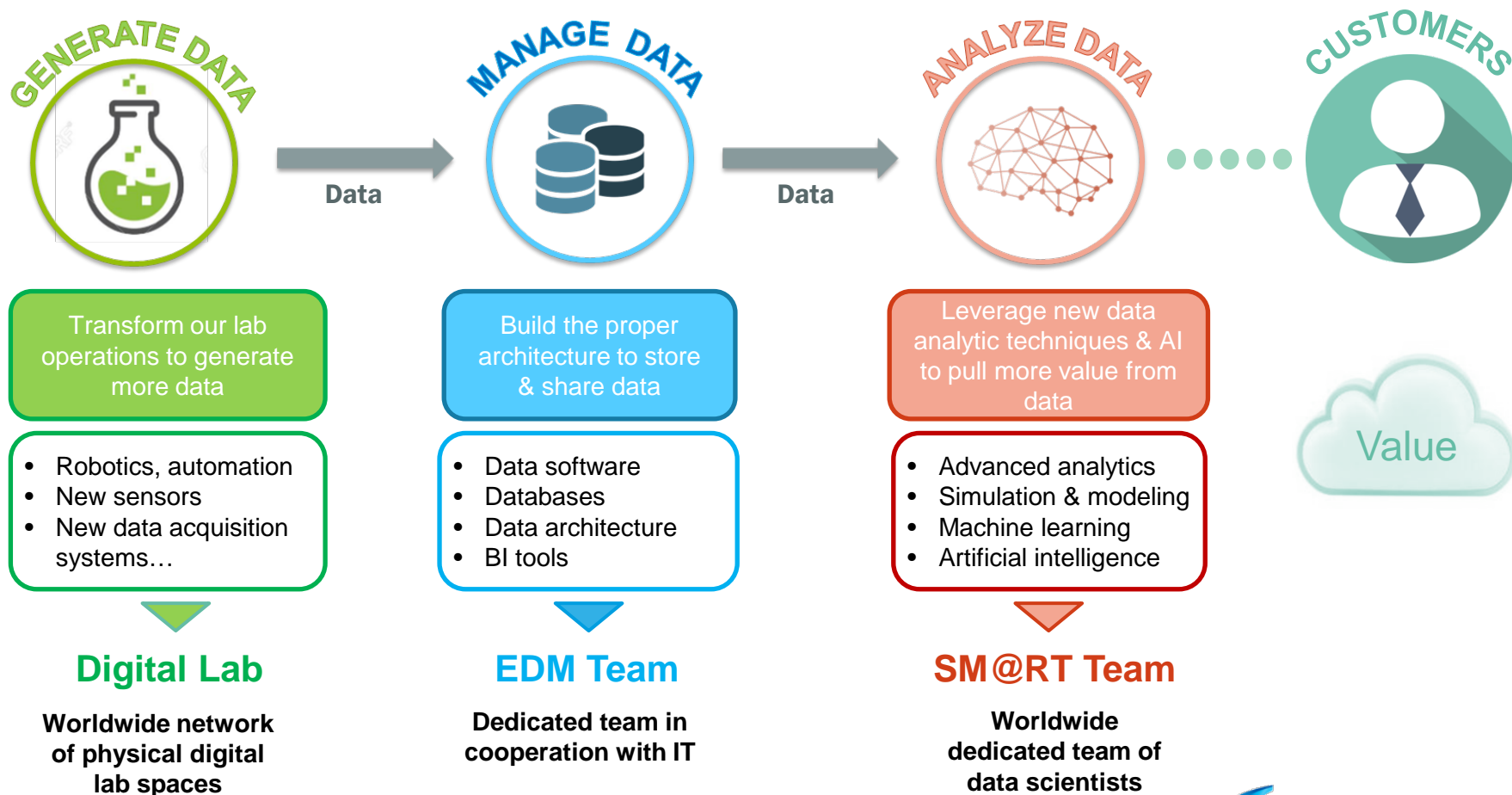


20-50% reduction in time to market*

*Source = McKinsey research

Digital in Solvay R&I – Approach & Organisation

- Digital will transform the way Solvay will drive its innovation in a near future.
- This transformation is fast and pertains to all chemical companies.
- Our R&I digital transformation model is **Data-Centric**:



CONFIDENTIAL