

Fortum City Solutions

# Transforming old business and service models to new digital business

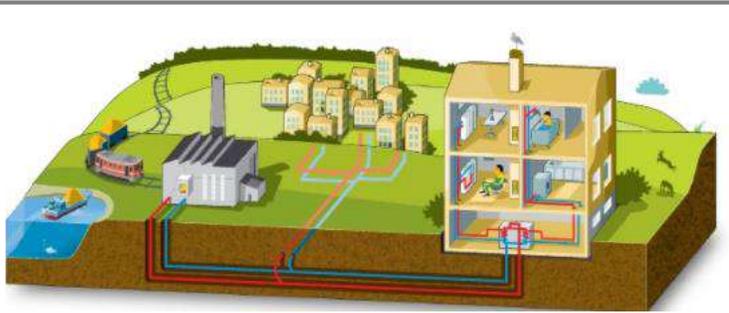
Ville Koivumäki / Head of City Solutions IT / 18.9.2018



# This is Fortum



# City Solutions snapshot



## Heating and Cooling

- 2017 netsales: EUR 689m (incl. Oslo)
- District heating and cooling; production and networks
- Finland, Poland, Baltics



## Recycling and Waste Solutions

- 2017 net sales: EUR 293m
- Detoxification, Recycling & energy, Environmental construction
- Finland, Sweden, Denmark (Norway)



## Fortum Oslo Varme

- 2017 net sales: NOK 1216m
- Oslo area; district heating and cooling (WtE and other sources)
- 50/50 with the City of Oslo, Board actively involved in steering



## Power Solutions

- 2017 sales: EUR 40m
- Nordics and global
- International O&M, Performance Solutions, TGS (IT)

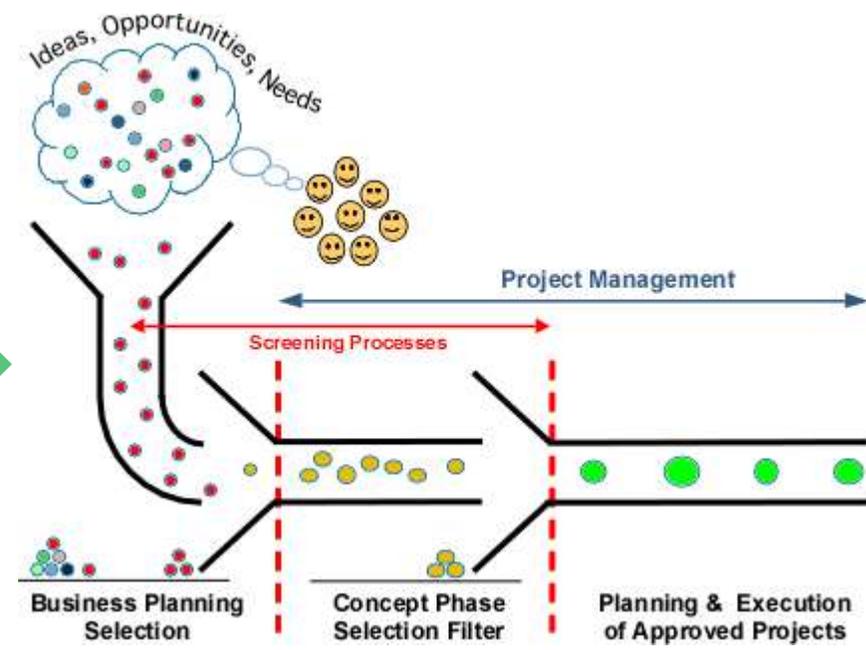
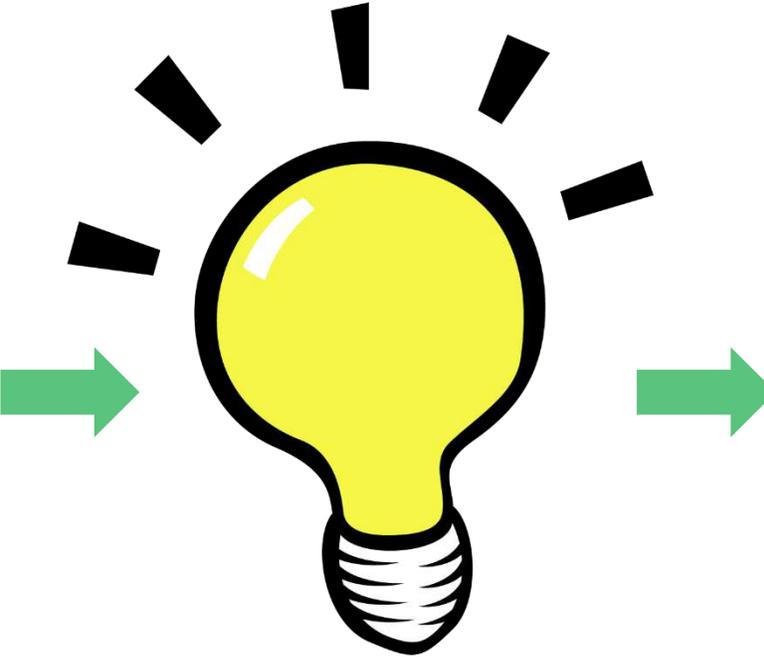
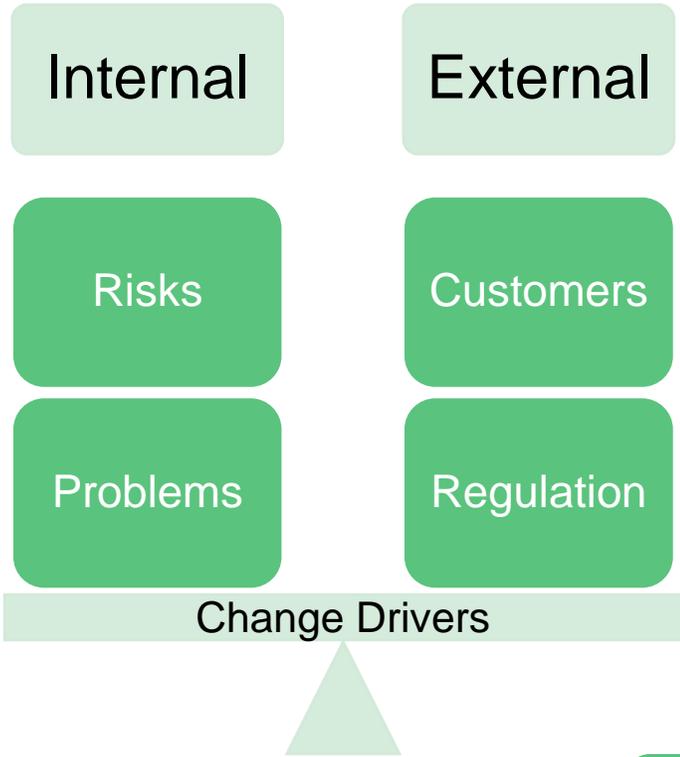
Fortum Värme

## Fortum Värme

- 2017 net sales: EUR 689m
- Stockholm; district heating and cooling
- 50/50 with the city of Stockholm, governed through the Board
- Co-operation on "market terms"

# Development

# How Development Happens?

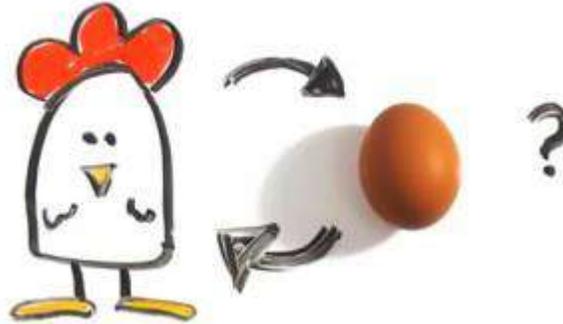


What is the common success ratio?

# Prerequisites for Successful Development

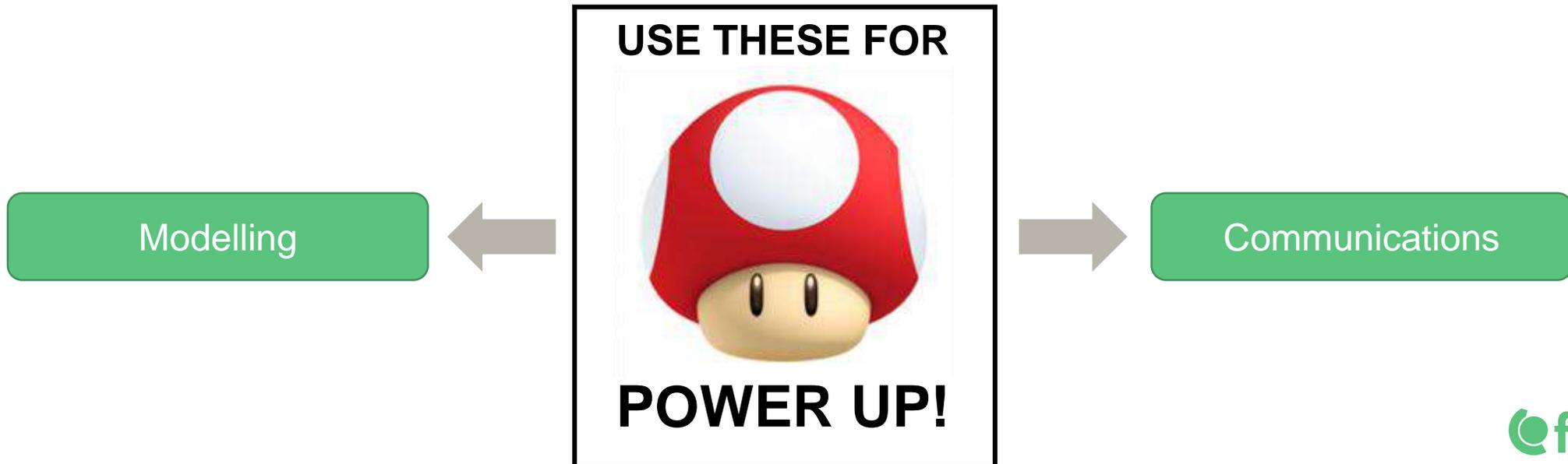
## UNDERSTANDING

through thinking  
(and testing...)



## COMMITMENT

through understanding  
(or strong believe...)



# Understanding

# Digitalization is more than *technology*

”Deliver me this!”

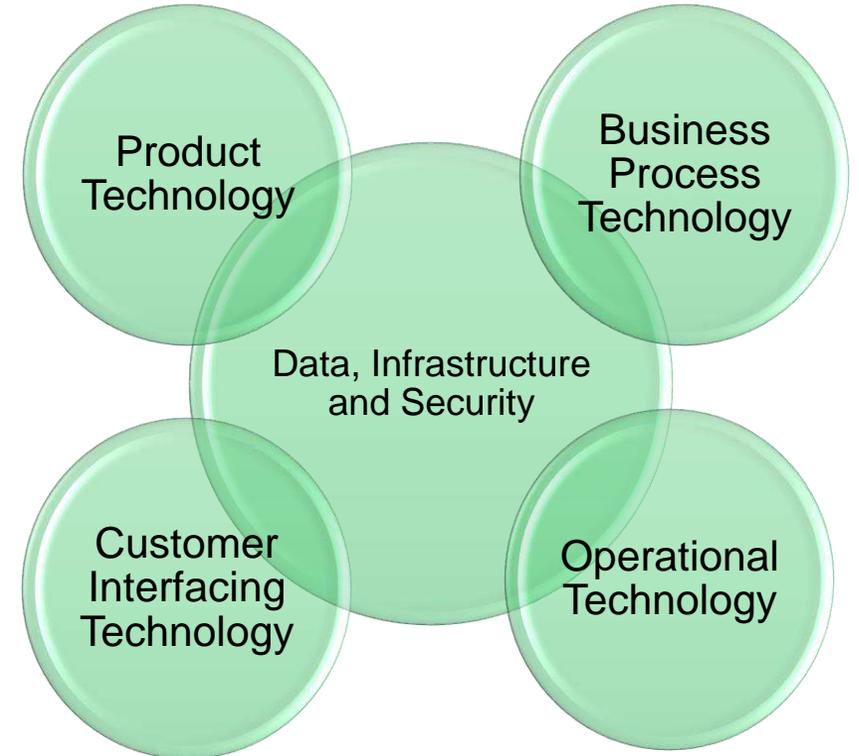


”How you are you going to use it?”

# Business Technology concept / framework

(by Sofigate)

- Understood well by the business as it is simple enough
- Explains the technology use cases in common language
- Explains why things might get complicated!



**Business process technology** | Systems that support day-to-day business processes

**Operational technology** | Systems to manage and operate automation

**Product technology** | Information technology in products

**Customer interfacing technology** | Digitalization of customer interfacing processes and services

# Development areas in Heating & Cooling

## Smart City heating system

### Customer offerings

#### Smart building solutions



Smart Living (premium)



Building optimization (basic)



Heating control (lite)

#### Main products



Heating & cooling products

#### Other solutions and services



Other building related services



Maintenance services



Monitoring service



Leasing services



Customer interfaces



Other value added products



Energy efficiency services



Individual settlements



Customer service

### Heat System

#### Operational efficiency



Predictive maintenance



Autonomous heat systems



Demand side response (DSR)



System Optimization



Centralized control rooms



Logistics



Fuel hubs

#### Flexible supply of H&C



Open district heating



Waste heat



Power to heat



Data centers



Ground heating



Smart grid



CHP (security of supply)



HOB (bio, waste, multi)



Heat storages



Two way communication



Data storage

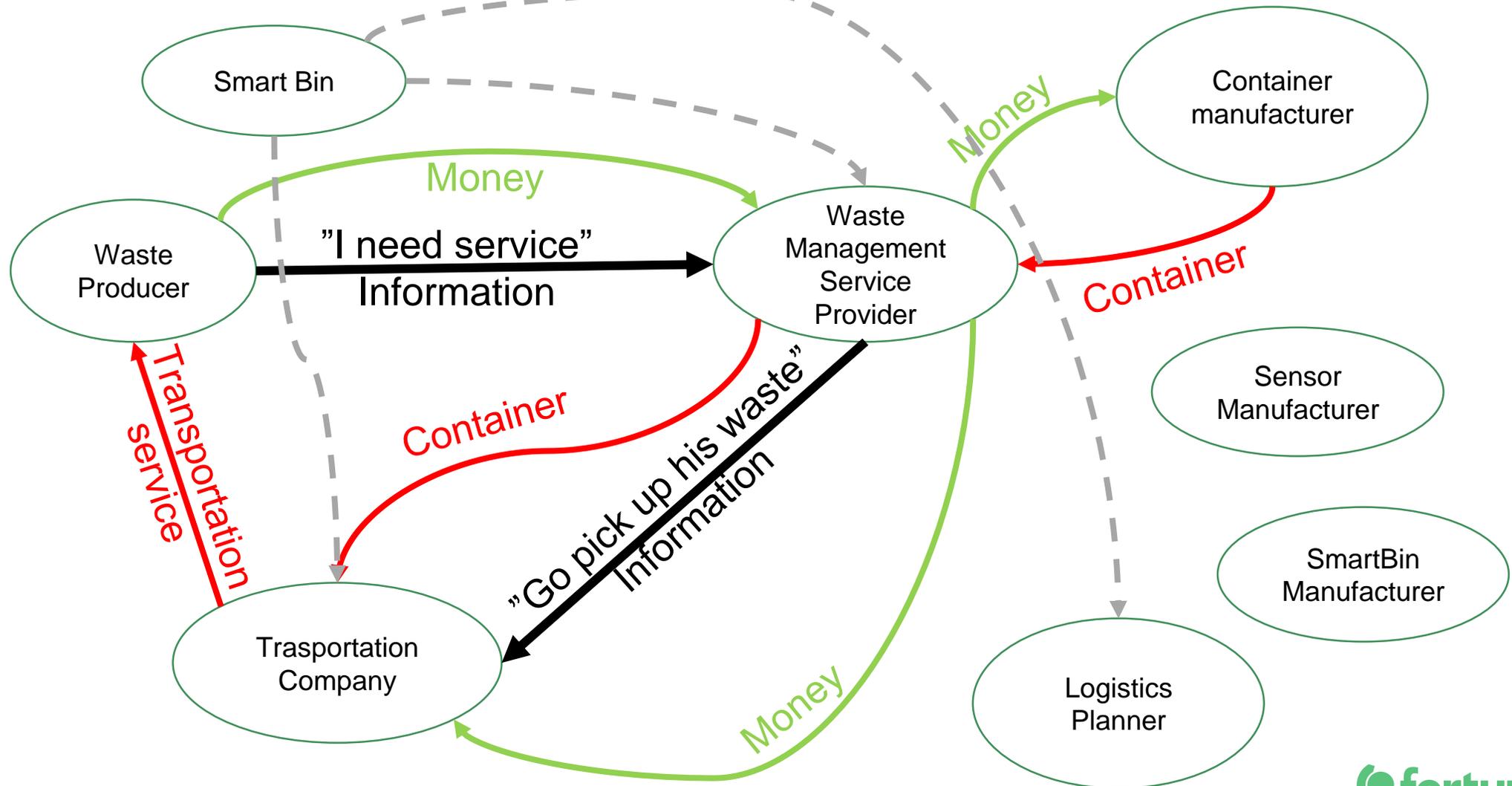


Settlement & invoicing



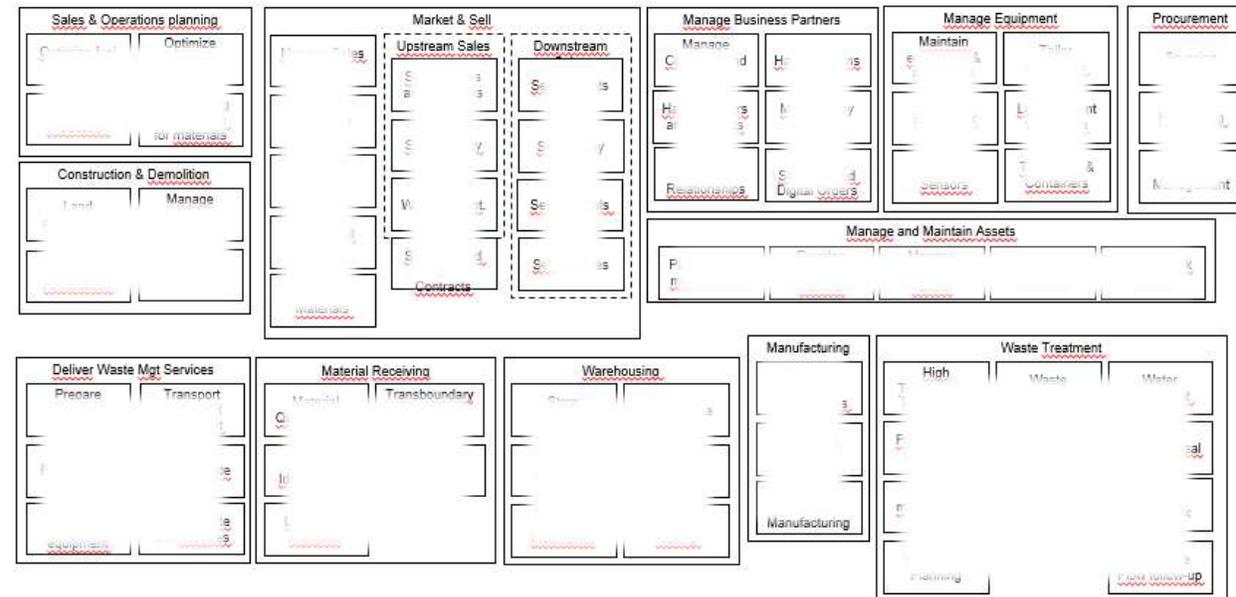
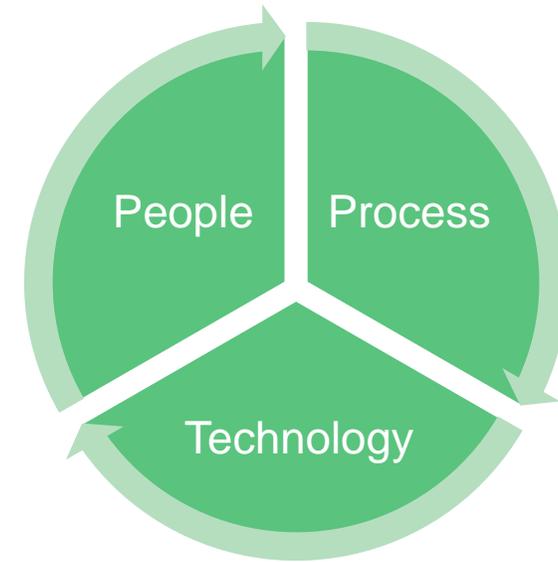
CRM

# Business Ecosystem Modelling



# Business Capability Mapping

- *What* instead of *How*
- Business language
- Many Use Cases
  - Business Development
  - Competence Development
  - Investments
  - Pace-Layering (Gartner)
  - Etc...
- The journey is almost as important as the destination
- Gets interesting when developing new Business Capabilities 😊



# Select the tools that you need

- Business Capabilities / Processes
- Business Capabilities / Applications
- Processes / Roles
- Processes / Applications
- Data Entities / Business Capabilities
- Etc...
  
- Be agnostic and use only when needed!
  
- Use and forget?
  
- 20/80?



# Understanding Data

data is the new oil

we need to find it, extract it, refine it, distribute it and monetize it.

David Buckingham



### Data is the new oil.

We see in data the same transformative, wealth-creating power that 19th-century visionaries once sensed in the crude black ooze trapped underground.

If "crude" data can be extracted, refined, and piped to where it can impact decisions in real time, its value will soar. And if data can be properly shared across an entire ecosystem and made accessible in the places where analytics are most useful, then it will become a true game changer, altering the way we live, work, learn, and play.



Data is fuel for digitalization

FREE YOUR DATA



IF DATA IS THE NEW OIL WHY AREN'T WE THE NEW SHEIKHS?

WHO OWNS YOUR DATA? TIME FOR CHANGE! FREEYOURDATA.ORG

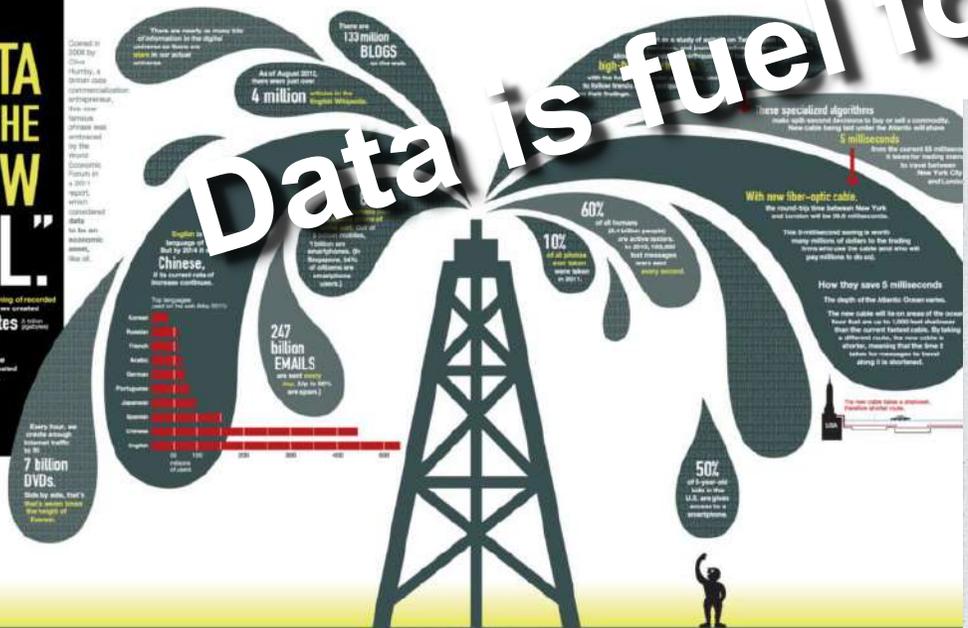
"DATA IS THE NEW OIL."

From the beginning of recorded time, we've created 5 exabytes of data.

In 2011, it's expected that the time will shrink to 10 minutes.

By 2013, it's expected that the time will shrink to 10 minutes.

7 billion DVDs.



DATA

is the

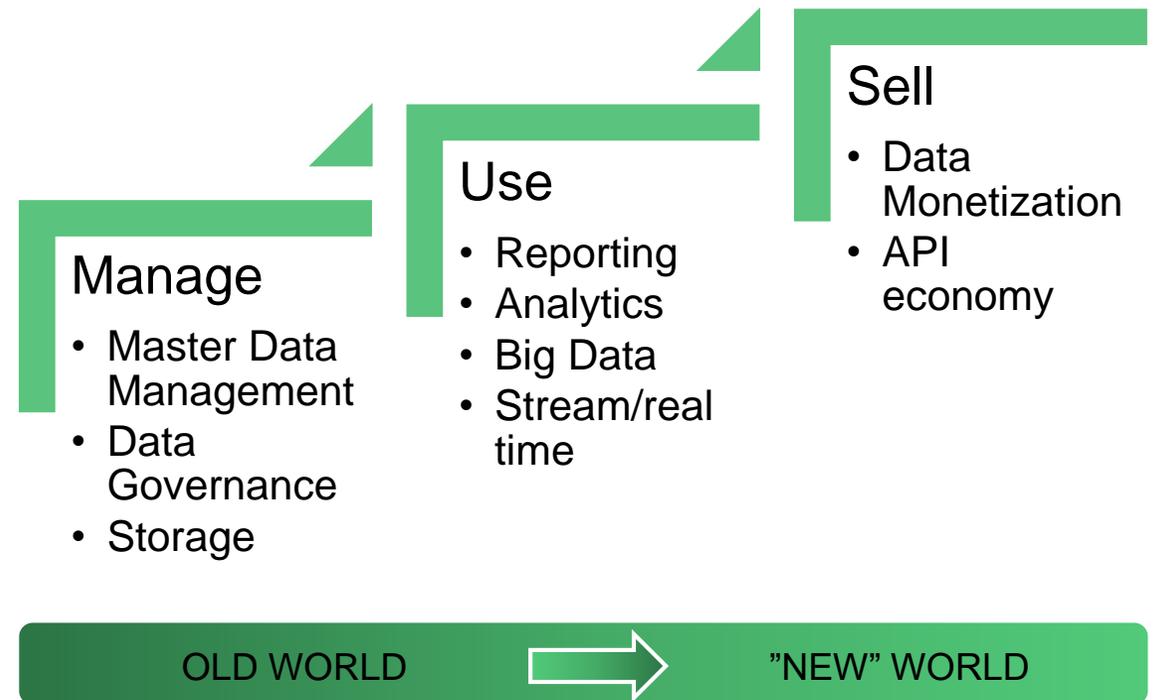
new

Oil



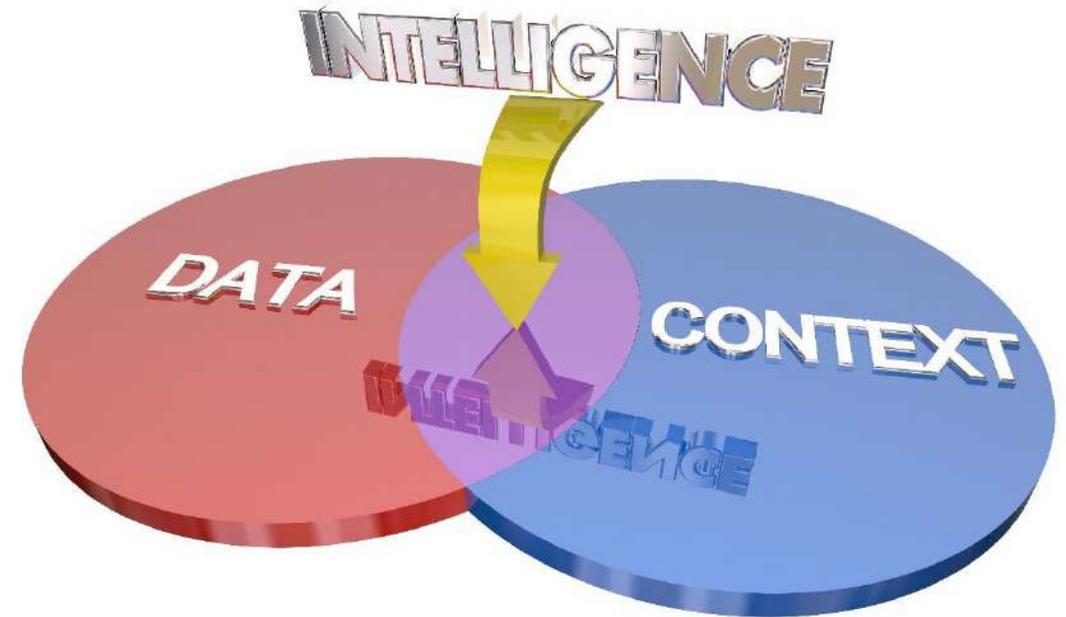
# Your Data is an Asset

- What is *your* Vision and Strategy over Data and/or Information Management?
  - How you are going to utilize Data and Technology in your Business Strategy?
- Understand your Data
  - Define and document
  - ER modelling!
  - Assess your data
- Care for your Data!
  - Makes your life easier in new world



# When speaking of data...

- Contextualize your data
  - "I need an customer profitability report"
  - "Our data quality is not good"
  - Pre-/postfix
- Have your definitions available
  - What/Who is a Customer?
- Use your common Business Vocabulary
  - Outside In vs. Inside Out?
  - Communications!
- Use examples from other companies/industries
  - How to put in your business context?



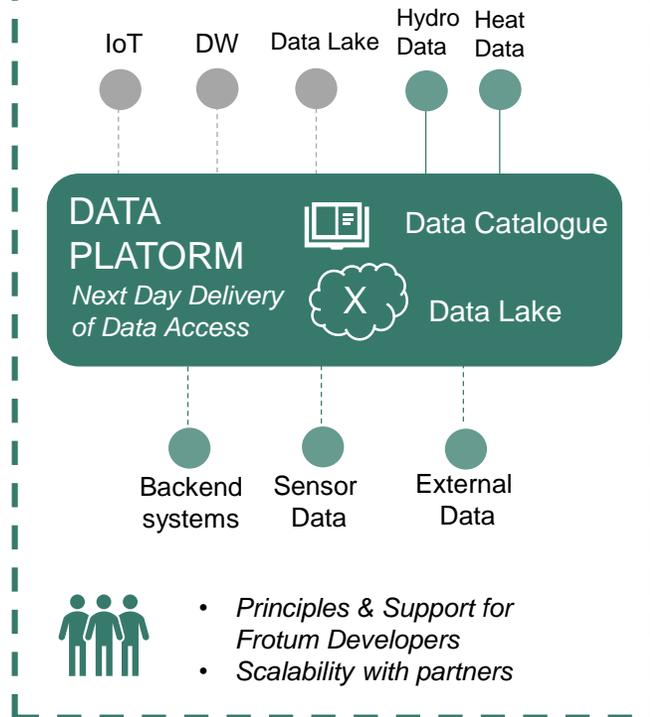
# Fortum Data Platform Technology Strategy



## 2018: Easy Data Access

### Data Lake based on technology X

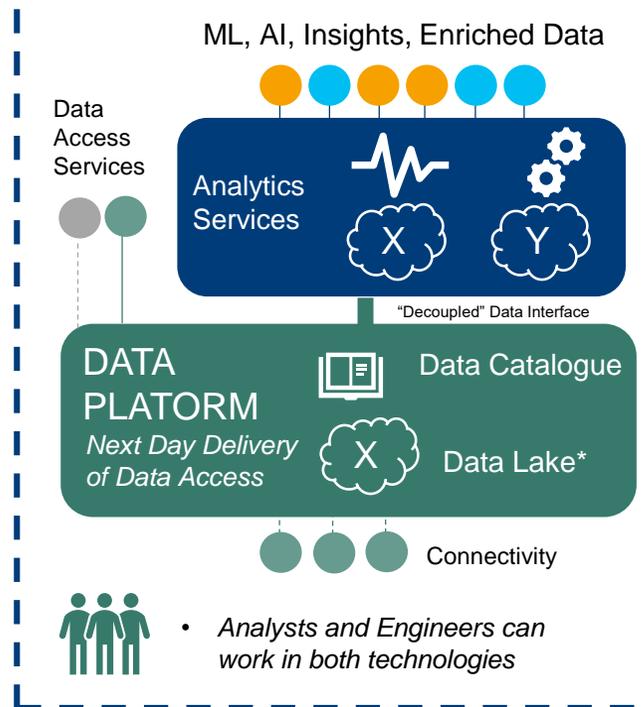
- Fast time to market for planned uses cases
- Gathered competence
- Non-X based business solutions OK.



## 2019: Modern Analytics

### Evolving Data Analytics Capabilities

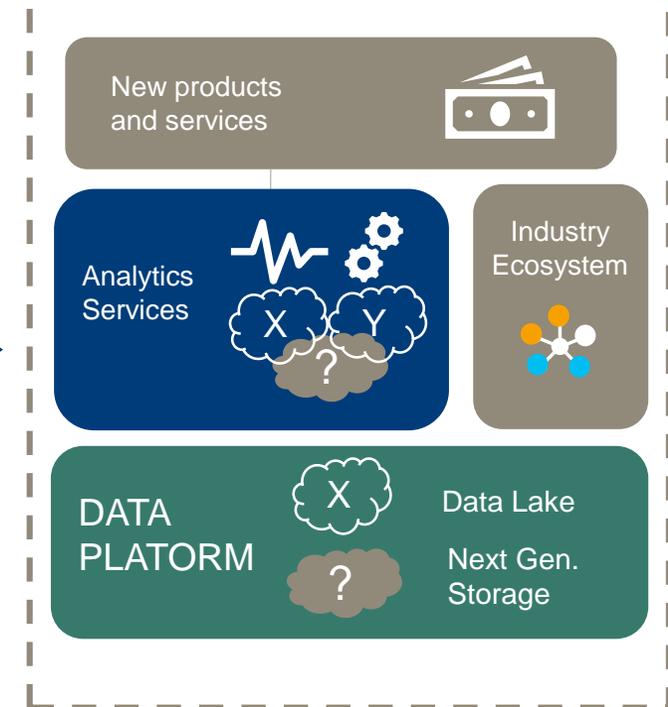
- Best of breed analytical capabilities for applications and analysts
- Best practices develop as technologies evolve
- May or may not develop into preferred technology



## 2020: On the Cutting Edge

### Following new trends in Data & Analytics

- Ability to adapt to new inventions and lead development on the market
- Fortum part of the global data eco-system with multiple technologies



# Commitment

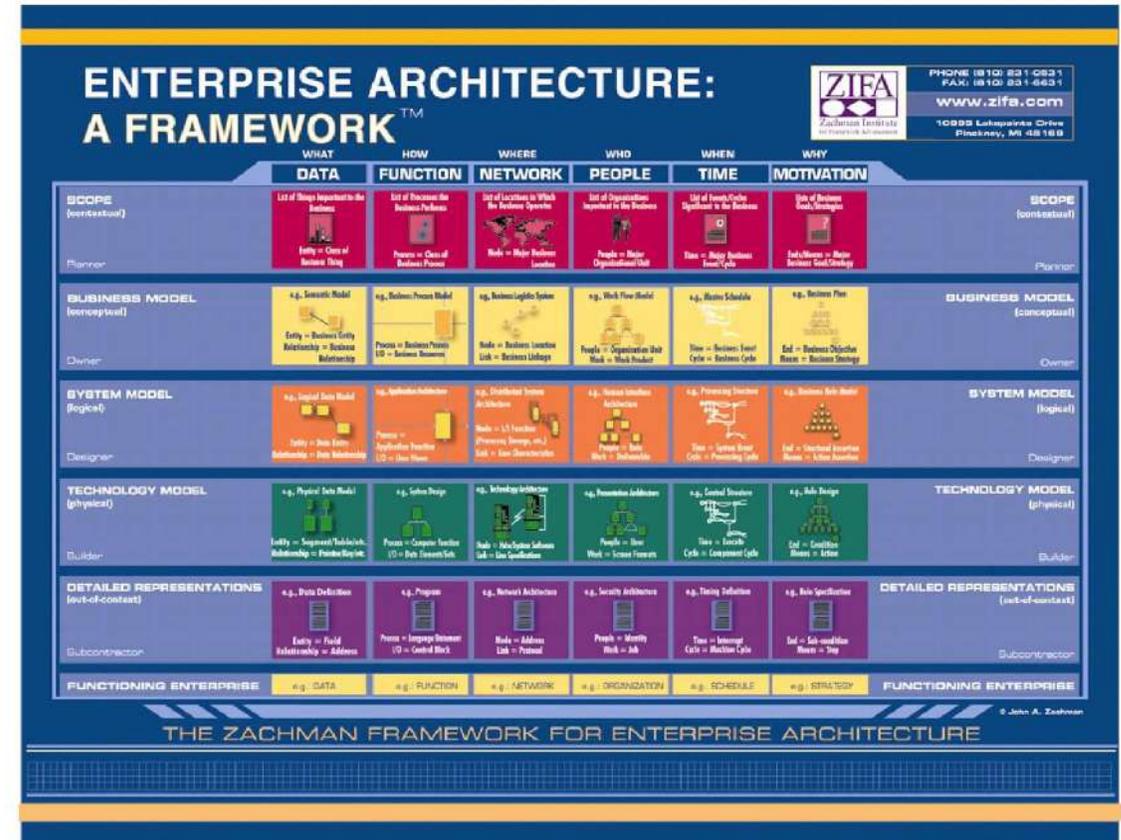
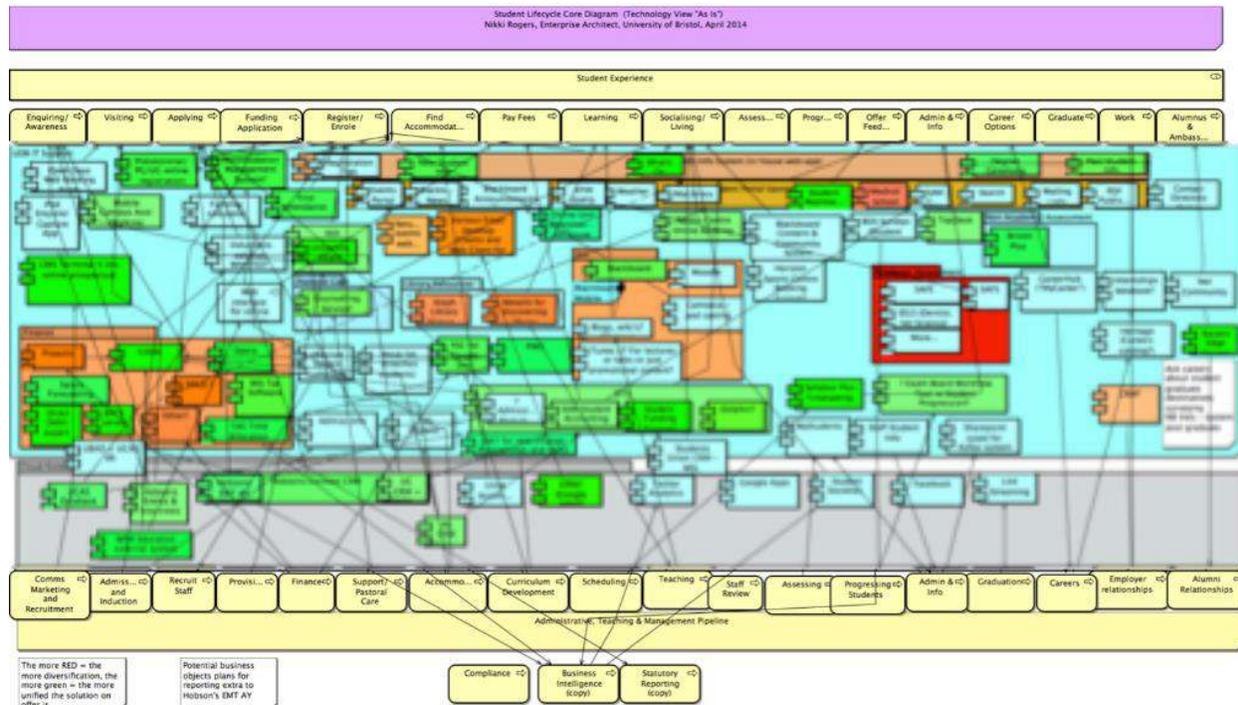
# Commitment is the key!

- Proper development cannot happen if there is no commitment
- Commitment cannot happen without understanding (or super strong believing)
- Commitment requires good *communications*
  - Works Top-Down & Bottom-up



**SIMPLICITY**  
IS THE ULTIMATE FORM OF  
**SOPHISTICATION**  
————— LEONARDO DA VINCI —————

# Don't explain how brilliant you are...



## ...but get the outcomes that you are after!

- What is your message?
  - Simplify, simplify, simplify!
  - Outcomes over actions!
- Who you are talking to?
  - Adjust your message to your audience
- Repetition is the mother of learning!



# Conclusions

# Conclusions

- Ownership, Commitment and Understanding
- Technology is just a tool
- Be curious
- Don't over-engineer
- Communications!

CONCLUSIONS



# Thank You!

## Questions & Answers

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