

AFRY

ÅF PÖYRY

AFRY Smart Solutions

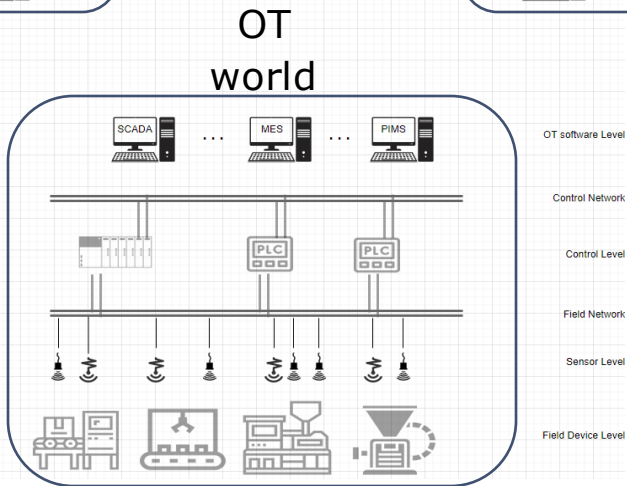
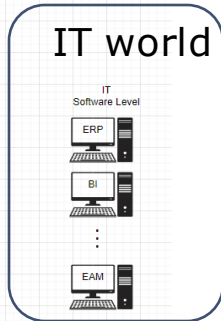
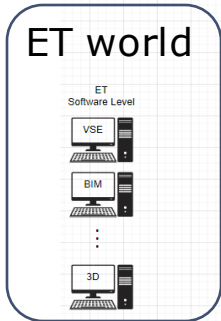
World-class technology experience delivered as digital engines

Looking into the future

What if...

...you could operate your factory...

...just like you do in your smartphone?

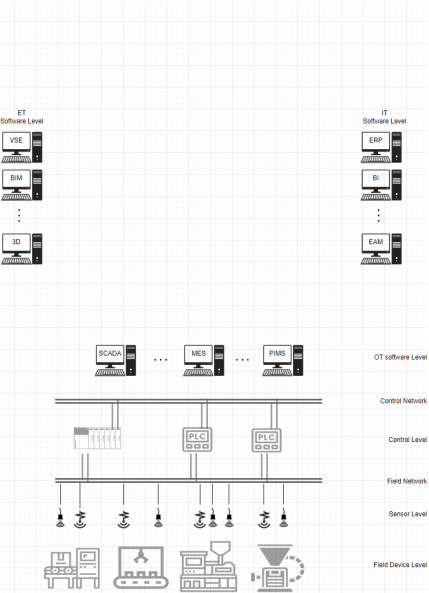


Technological silos

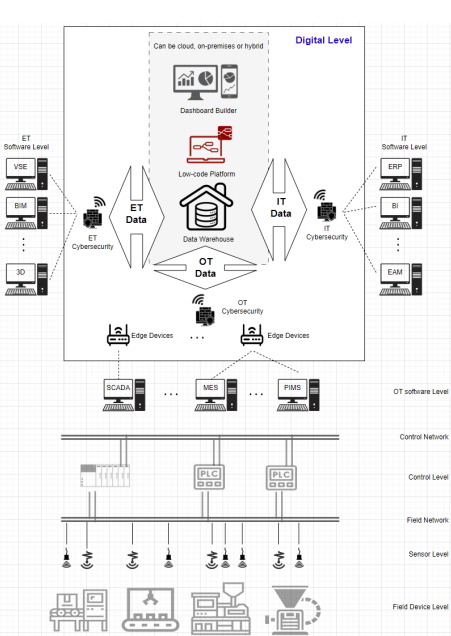
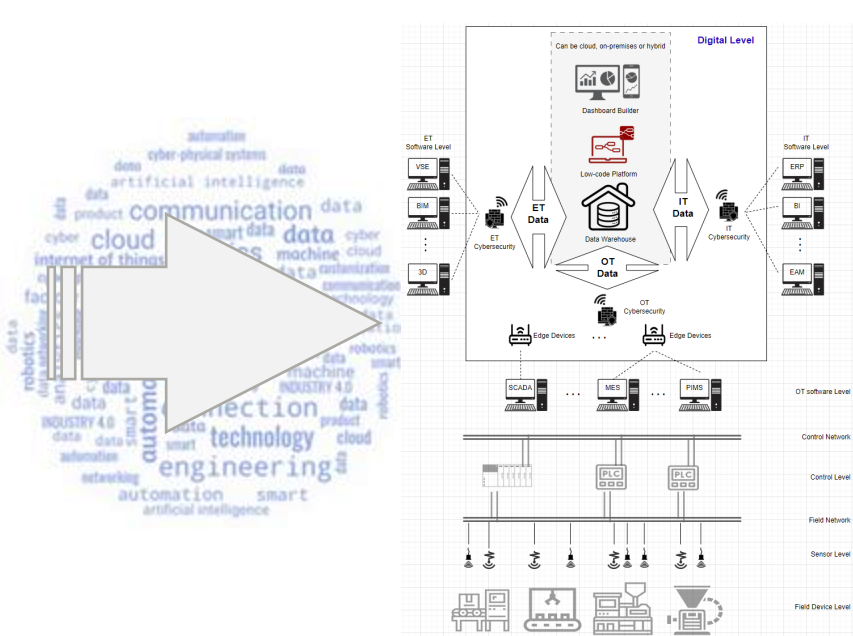
In conventional engineering, ET (engineering), OT (operational) and IT data and systems are separated, and these 3 worlds are not designed to communicate with each other. This makes digital development slow and expensive. This also results in poor decisions and inefficient processes.

In addition, as digitalisation advances, the number of applications, systems and platforms appears to have exploded.

To achieve results, the focus must be strictly on profitable initiatives.



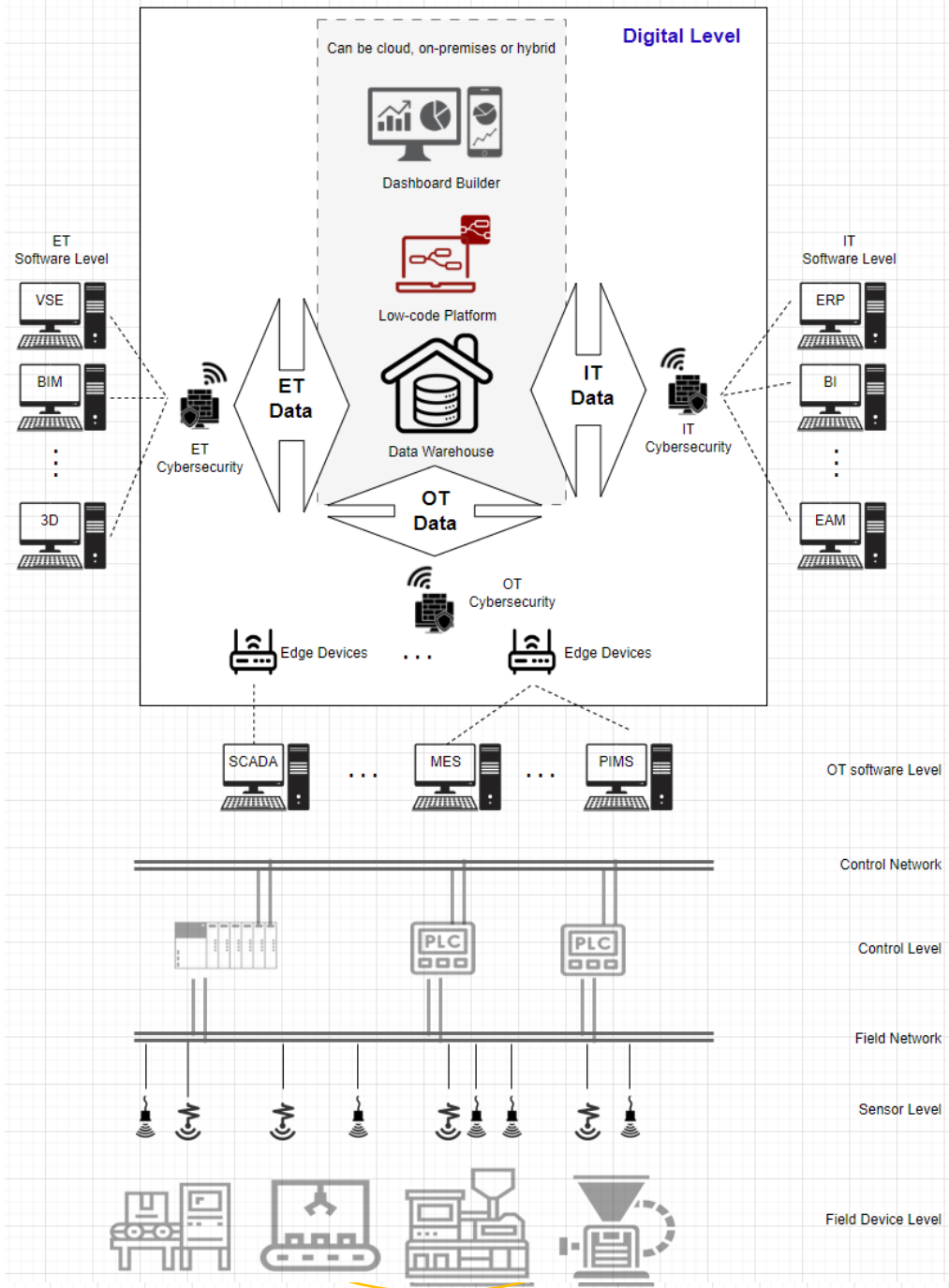
From technological silos



To a complete digital factory

From where to start?

There are a lot of practical challenges that need to be solved to turn an existing mill into a complete digital factory.



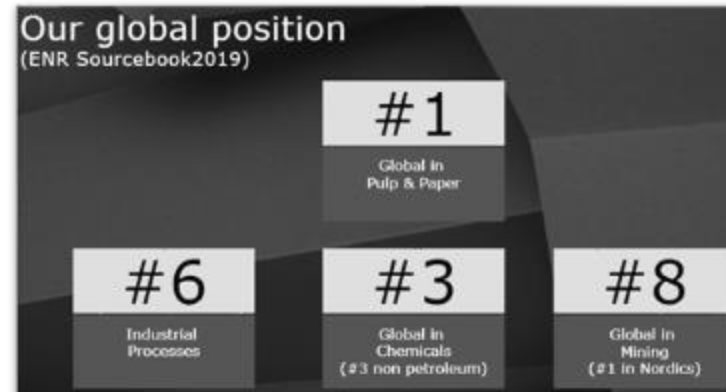
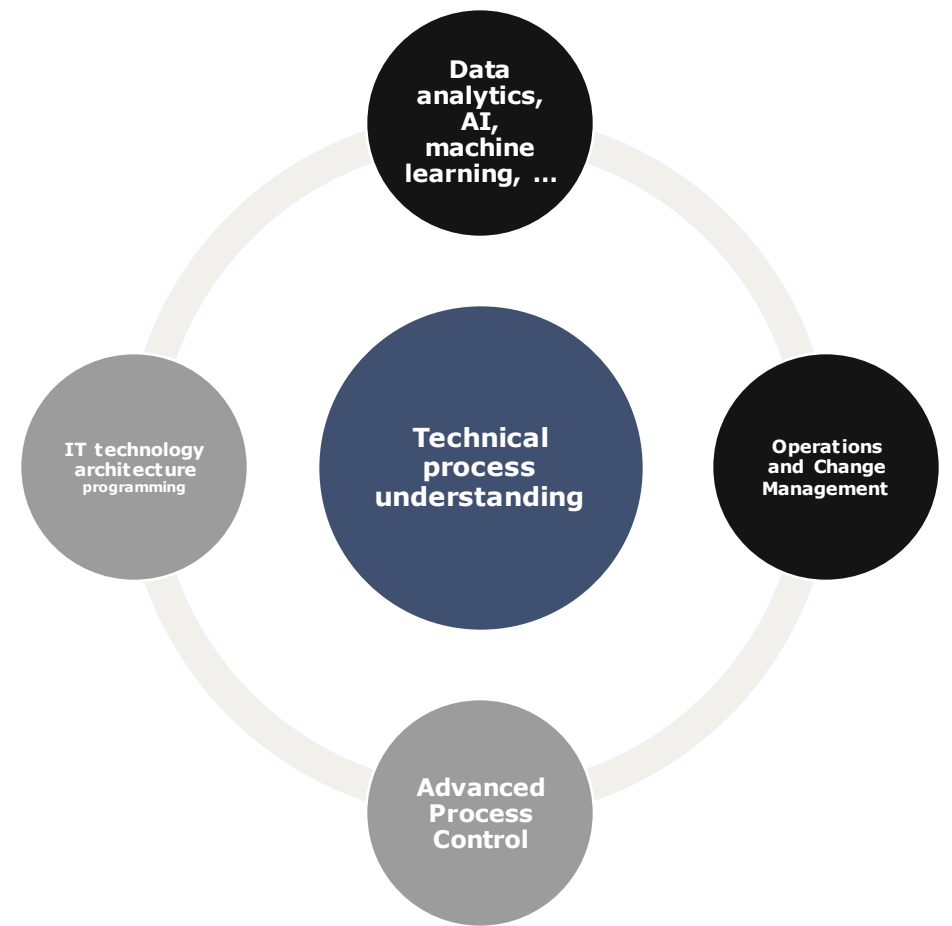
Bridging the digital gap

Advances in technology have made it possible to connect these three worlds, ET, OT and IT, and all the systems together.

This establishes a "single source of truth" improving data and information quality and enables more intelligent solutions and incisive decisions.

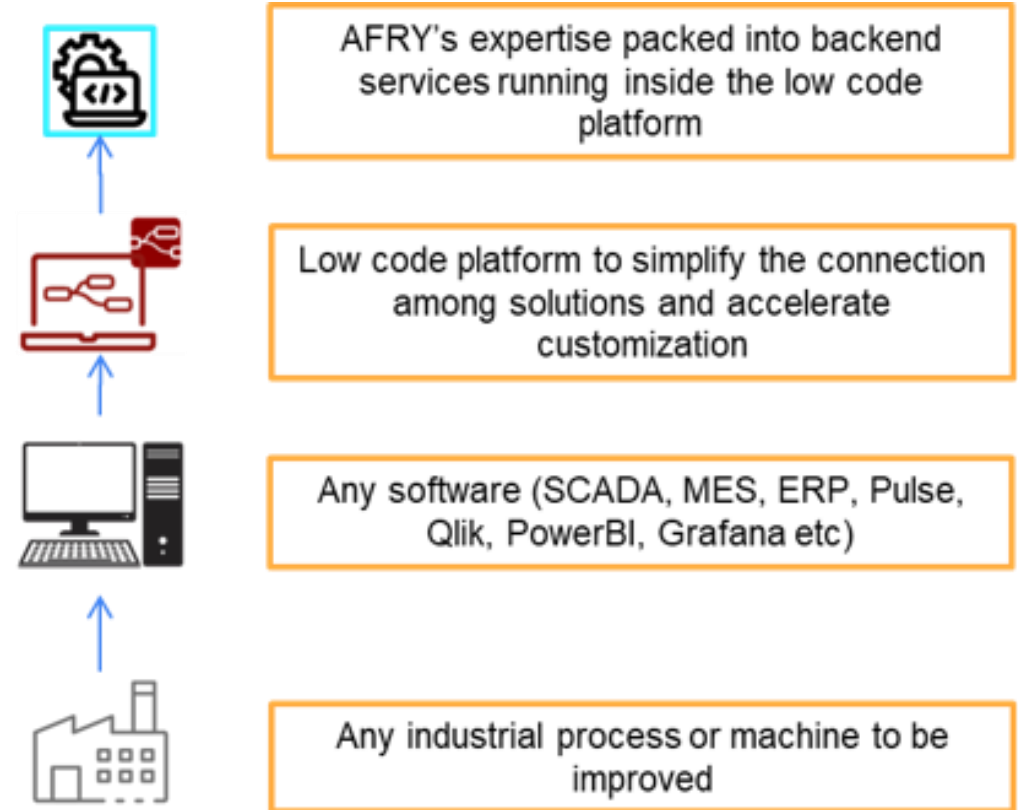
AFRY Smart Solutions

That's why AFRY, best-in-class company regarding industrial services, has created this strategy for your factory.



What is an "engine"?

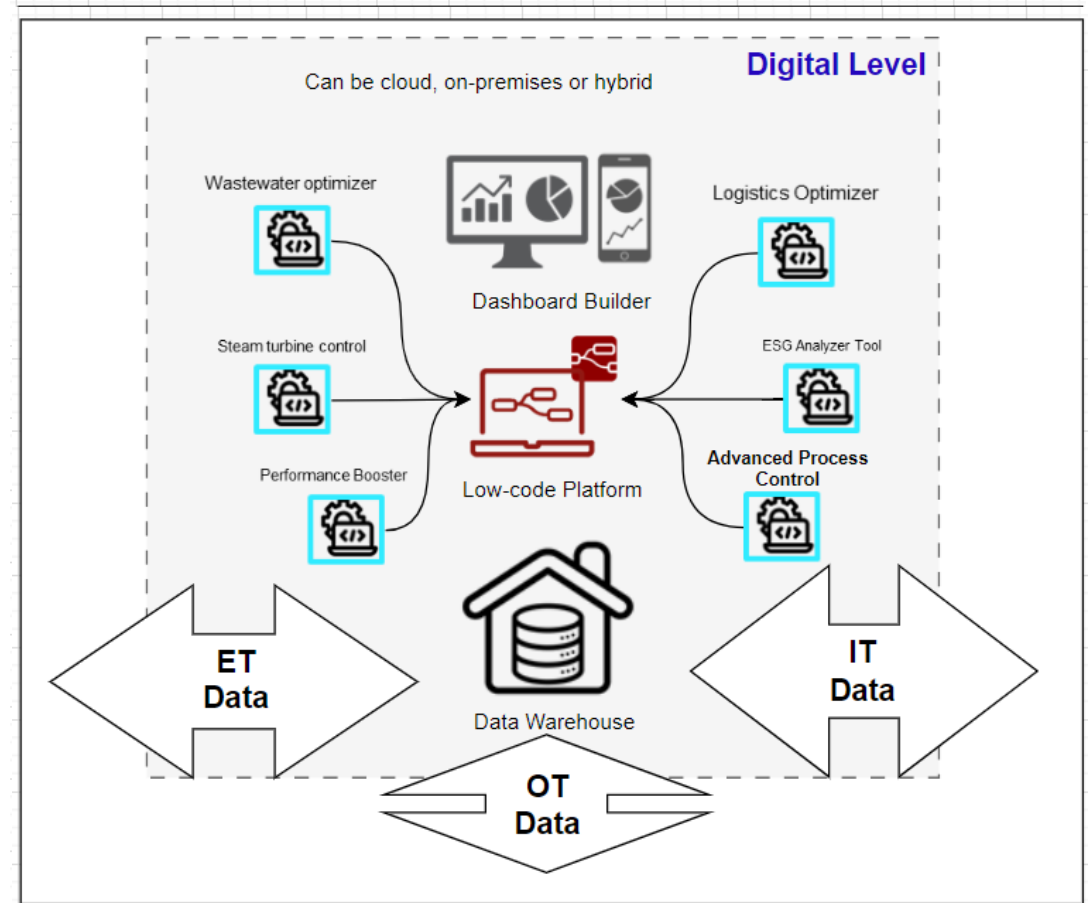
An engine is a service running into a backend. Through APIs or standard protocols (such as OPC) it can be delivered in many different software.



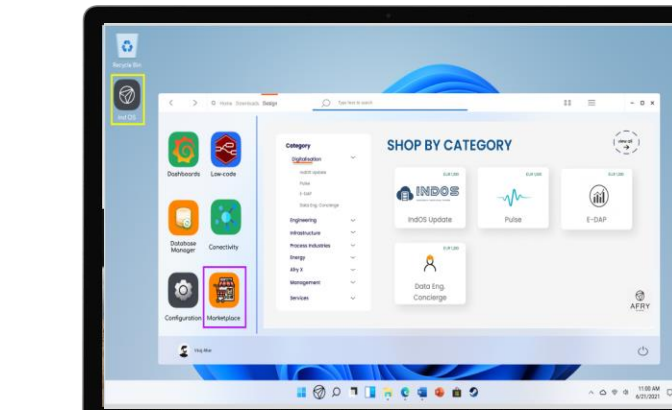
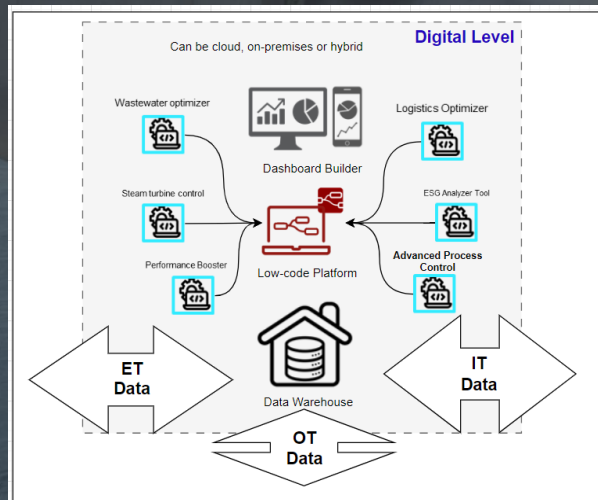
Start small and scale up fast

Our solutions evolve according to your digital infrastructure.

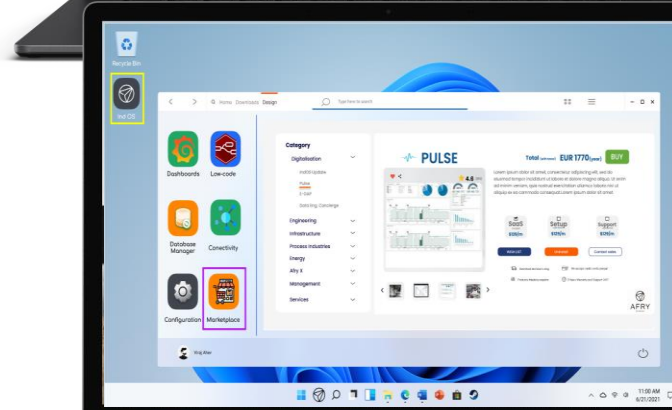
AFRY is able to guide you through the entire digitalisation journey.



With the correct digital infrastructure, you'll be able to turn the shopfloor software into a toolbox and connect them to create your own App Store.



Choose what applications you want in your factory



Customize the license to suit your needs



Start using your new applications in the same way as you do in your smartphone

Examples of Smart Solutions

Kappa Analyzer

Client benefits:

- Maximised material efficiency
- Minimised chemical consumption
- Improved product quality and cost-effectiveness
- Better quality control over the process in general

Wastewater Management tool

Client benefits:

- Improve the control of the wastewater treatment process
- Minimise the downtime and enhances the process performance
- Helps operator to react to the alerts and deviations

Performance Booster

Client benefits:

- AFRY Performance Booster provides the organisation an online feedback regarding energy is being wasted.
- Quantified information on monetary losses at all organisational levels

Balance+

Client benefits:

- Improved boiler and plant efficiency (<2%)
- 10% higher sustained production in maximum load
- 3% higher sustained production
- 40% lower NOx formation
- 50% lower minimum load
- 10% reduction in house load
- 4% ramp rates

Energy Generation Optimiser

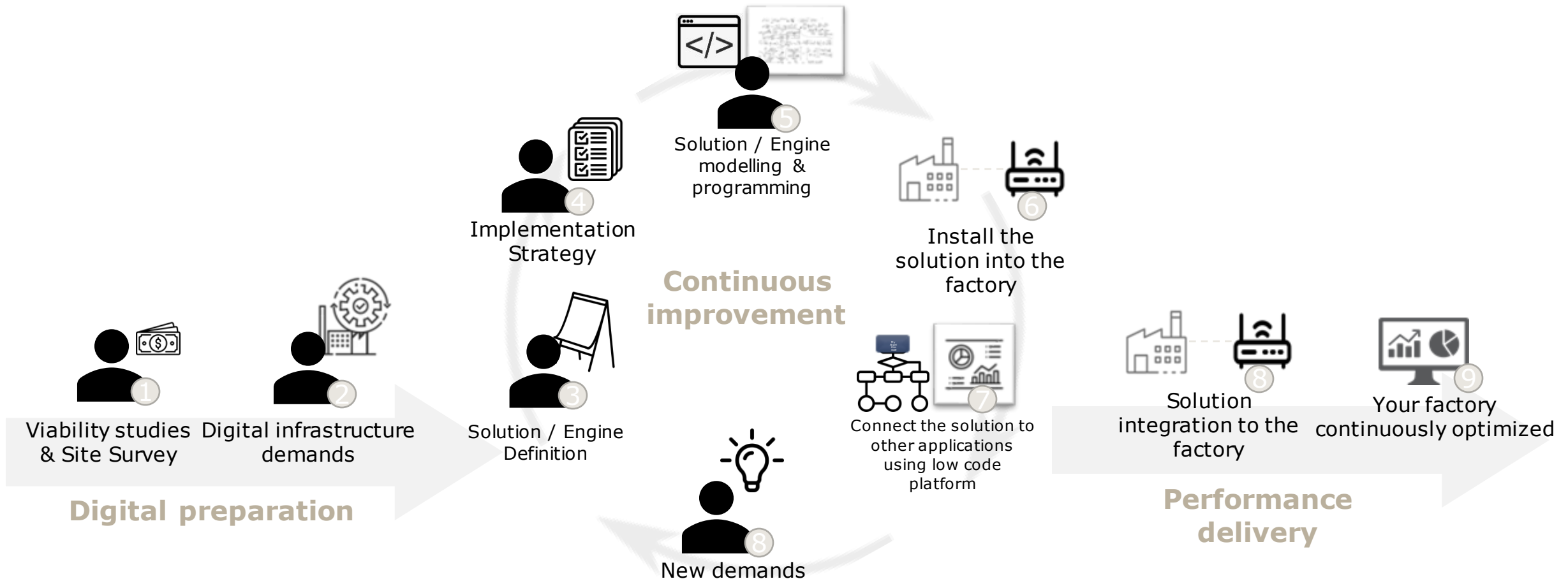
Client benefits:

- Energy Generation Optimiser automatically defines the optimum asset loading by using relevant data from various sources
- The optimised setpoints can be given for the operators or directly connected to the plant DCS

AFRY's expertise can be built into engines to address you specific digital needs

The smart Solutions journey

AFRY can deliver continuously end-to-end solution, based on more than 50 years of process expertise and thousands of multidisciplinary specialists working together. This way, you can keep your brownfield competitive.



From Results to Technology

And not the opposite way

Benefits

- 1) Investing in results, not just in digital tools
- 2) You will be the owner of your platform, your data and without vendor lock-ins
- 3) Respect your factory's budget and digitalization pace
- 4) From legacy systems to a complete digital infrastructure
- 5) See the return on your investments on the go
- 6) The same world-class services AFRY has provided for decades now in a digital format

A modern digital infrastructure to create applications by yourself or with any other vendor.

Starting your digitalization journey

Establishing where you are and how to achieve the digital transformation

A Digital

Transformation

Plan for you to
find the best way

to start

Step 1: Preparation

- Site Survey
- Viability studies
- Digital architecture
- Solutions specification
- Platform definition

Assessment package

AFRY can
support you in
all areas of the
digitalization
journey

A proper digital transformation demands many competences in order to create
a solid path to future implementations

AFRY has decades of expertise and many success cases to demonstrate how it
can be done in a secure and robust way.

That's how AFRY is
Making Future

CONTACT INFORMATION

Smart Performance Services

MIKAEL MAASALO
Vice President

P.O. Box 4, FI-01621 Vantaa | Finland
mikael.maasalo@afry.com
M: +358 50 412 2887

FLAVIO CARNEIRO MAEDA
Head of Digital

Av. Alfredo Egídio de Souza Aranha, 100 – Bloco
B - 4º andar São Paulo - SP, 04726-170 | Brazil
flavio.maeda@poyry.com.br
M: +55 119 949 09 456

DIEGO MARIANO DE OLIVEIRA
Digital Consulting Services

Av. Alfredo Egídio de Souza Aranha, 100 – Bloco
B - 4º andar São Paulo - SP, 04726-170 | Brazil
diego.oliveira@poyry.com.br
M: +55 15 9 9146 6536