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JARV_IS

(Journal of Assets and Resources View for Industrial Services)

Maximizing the effectiveness of industrial services resource
usage and operations

Danilo de Faria – Nestlé Corporate Engineering

AVEVA

Nestlé at a glance in 2020:

Providing
safe, quality
nutrition for
155 years

2 000 +
brands
worldwide

Around
273 000
employees

Number of
countries we sell in
186

376
factories
in 81 countries

CHF 84.3
billion
Group sales
in 2020

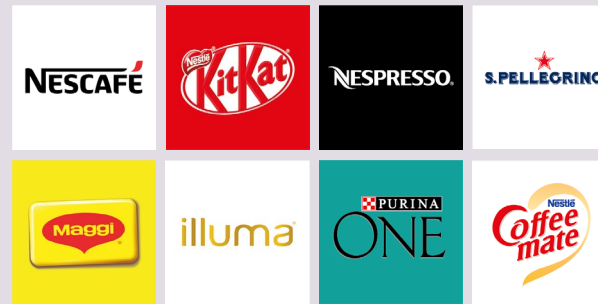
**1 billion Nestlé
products sold
every day**

The Nestlé Strengths

Wide product portfolio



Powerful, trusted brands: 34 billionaire brands



Industry-leading R&D: largest network in Food & Beverage



Global reach: products sold in 186 countries



Talented, inclusive culture



Digitally driven



Danilo de Faria

Global Digital Manufacturing Leader



Brazilian, 46, married, 2 children

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**Master in Electrical Engineering
and Process Control**

26 years

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Good food, Good life

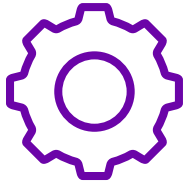


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Maximizing the effectiveness of industrial services resource usage and operations



Good food, Good life



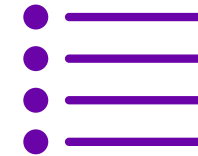
Challenge

- Create a **world-wide solution** that provides **real time visibility** of our Industrial Services assets operations with the **precision of seconds**, to support our goals of benchmarking good practices, **monitoring and alerting** our experts, and ultimately improve the overall operations efficiency.



Solution

- Developed **replicable Industrial Services templates** (dashboards and alerts) that are deployed into **AVEVA Insight**, leveraging existing on-premises solutions as **AVEVA Historian** and **AVEVA System Platform** for ease of implementation.

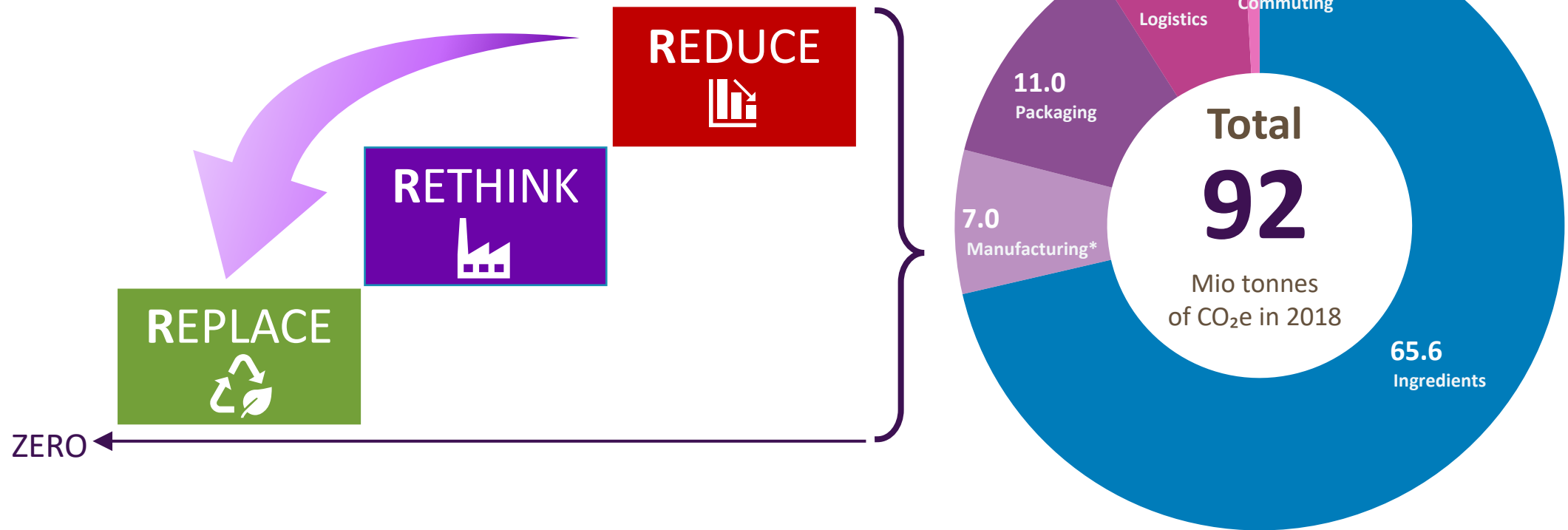


Benefits

- Increased industrial services **operational efficiency** with the **reduction of energy consumption** and consequent **reduction of CO2 emissions**. Allow identification of **improvement opportunities** in key assets.

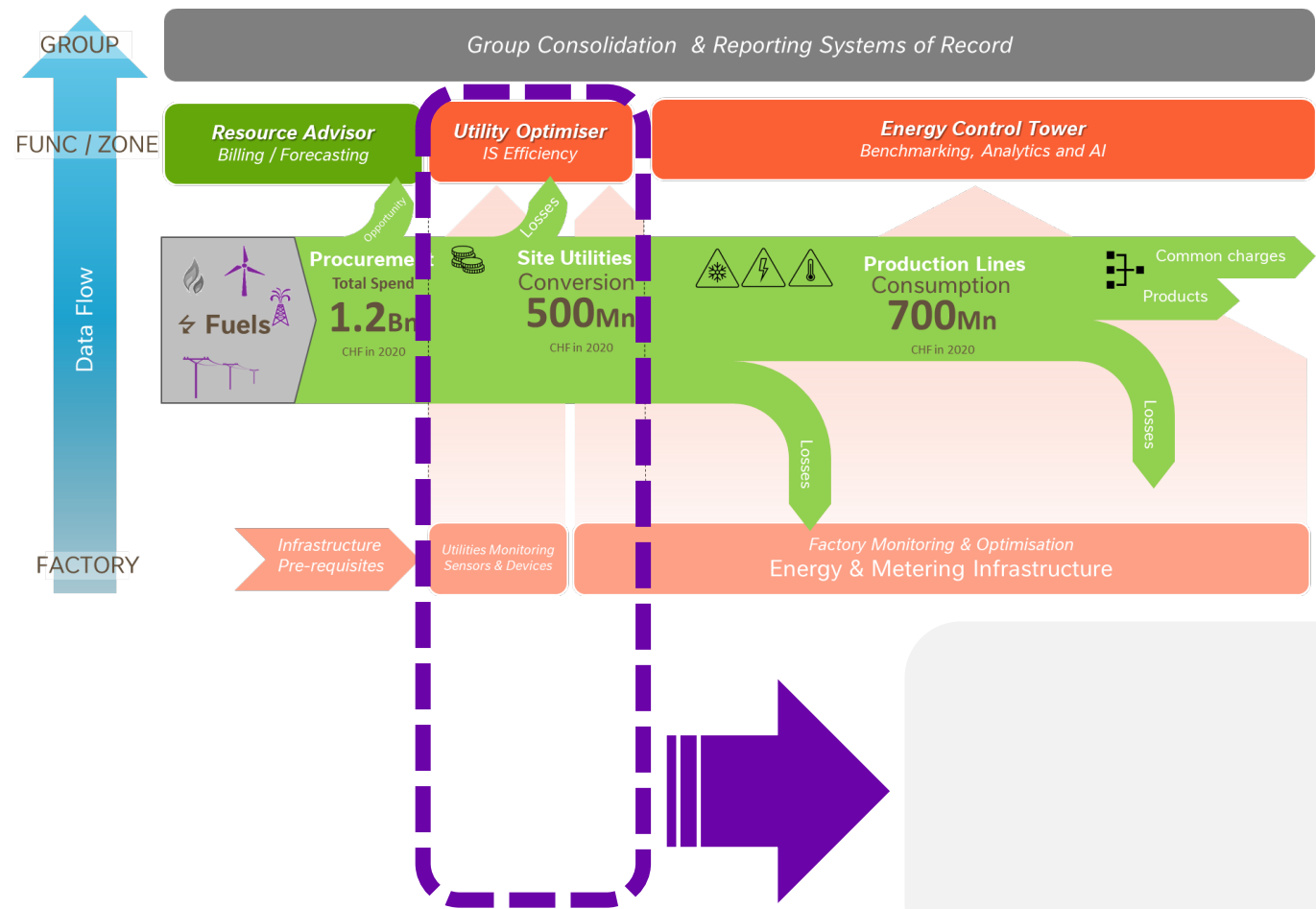
How we contribute to the Zero Carbon journey

Manufacturing journey to Zero Carbon comprises 3 'R's

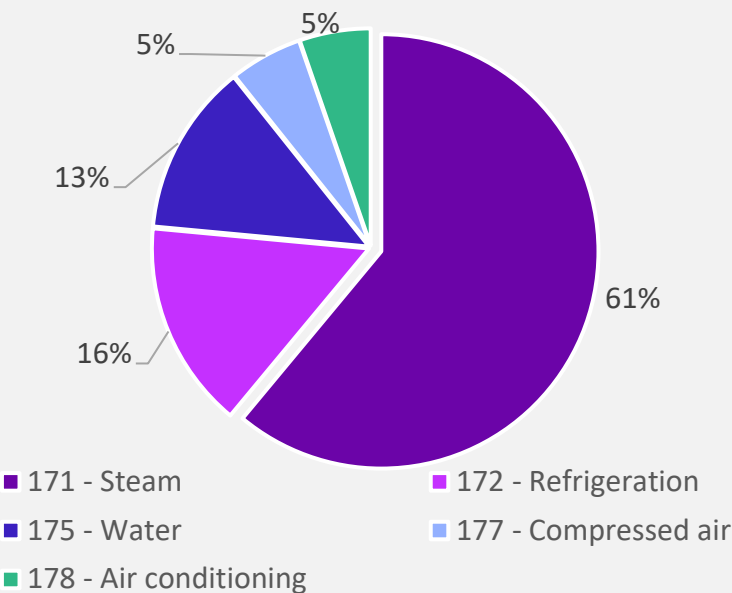


* Scopes 1, 2 & 3 (5.8 Mio T for Scope 1 & 2 only - 2018 baseline)

JARV_IS scope cuts across 500 MCHF of energy cost



Energy cost of our Industrial Services



JARV_IS Architecture

Expert platforms – Advanced Analysis



APIs



AVEVA
InSight

Templates – Dashboards & Alerts (E-Mail)



Cloud

On-Premises

Data storage and
replication to cloud



AVEVA
Historian

Data collection, modeling
and computation



AVEVA
System
Platform



Biomass Boiler



Package Boiler



Chiller



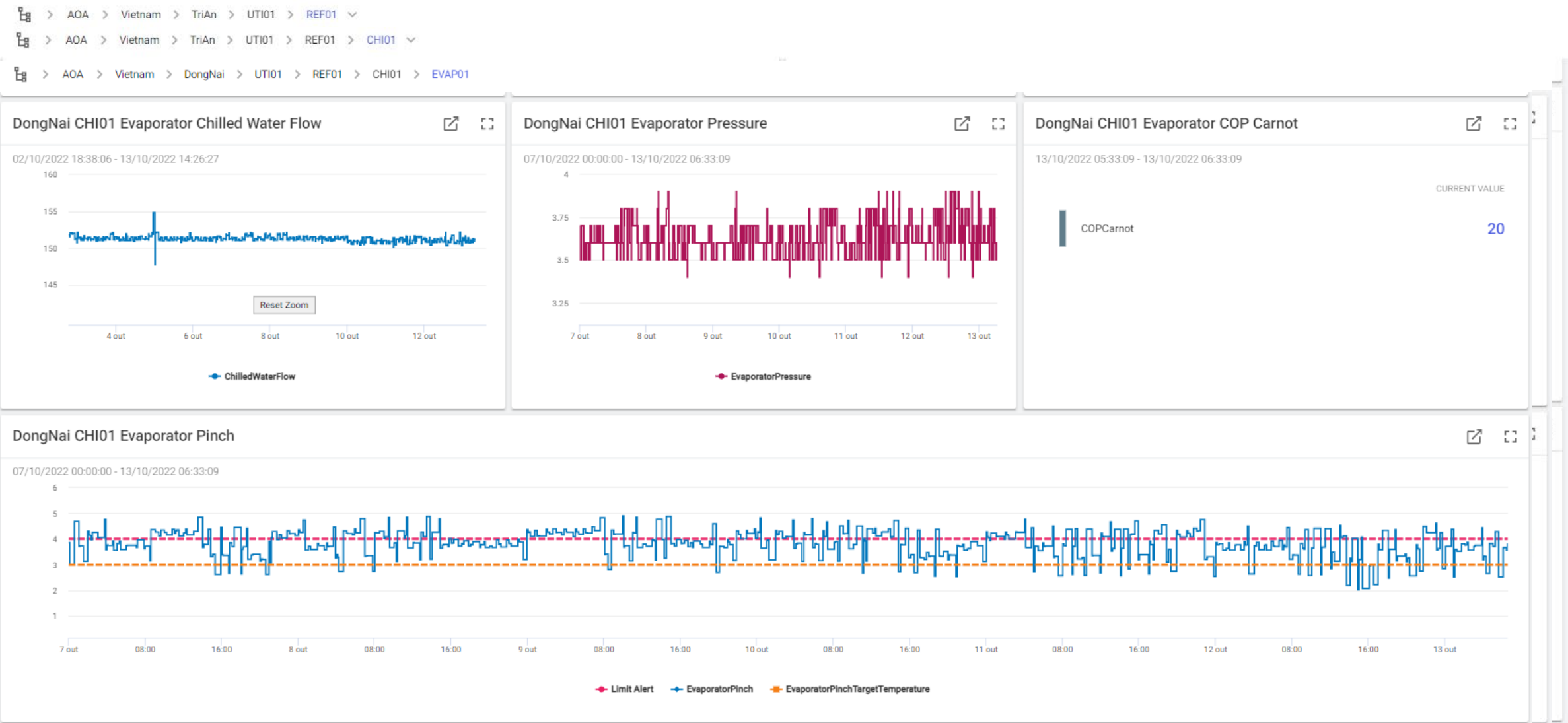
Air Compressors



WWTP

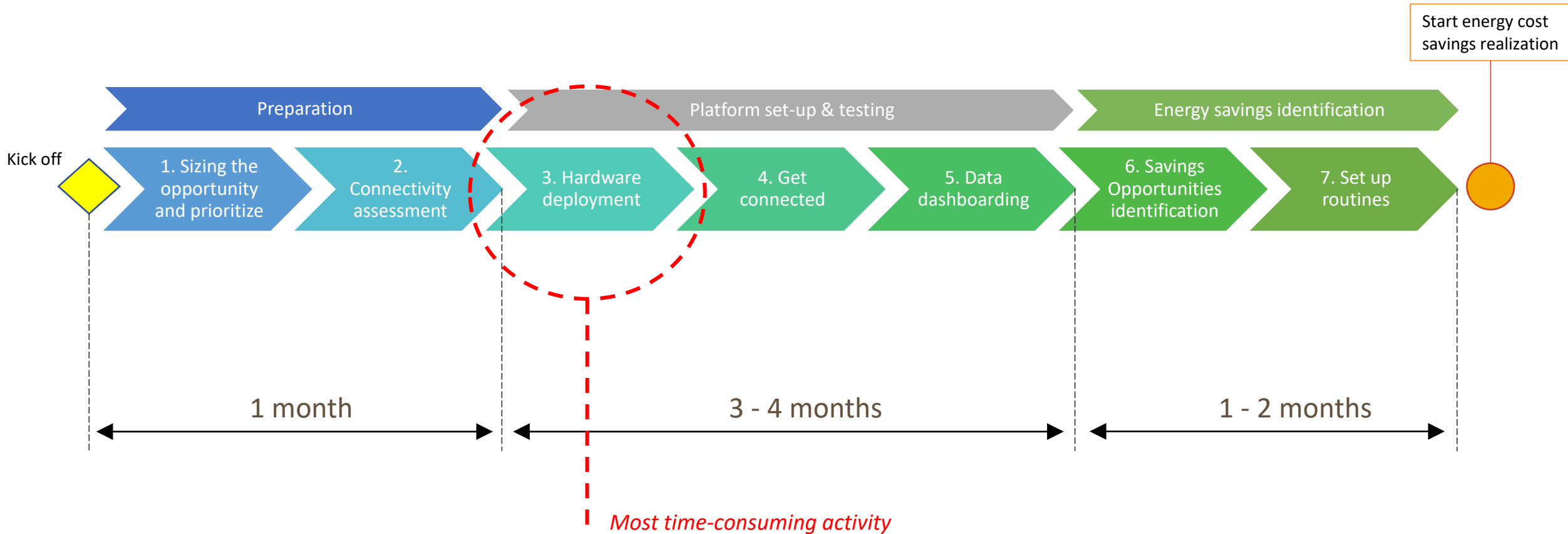
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Dashboard Examples



JARV-IS Deployment steps

Considering ~6 months from Kick off to start of initial energy costs realization



Pilot achievements

Scope

- 4 sites
- 8 Industrial Services modules
- **5.6 Mio CHF** Industrial Services Energy Cost (2020) in scope
- 892'060 GJ energy consumed in 2020

Investment – 165k CHF*

*in instrumentation only

Savings opportunities identified

- 7 + 1 opportunities identified

	Identified + Confirmed	[%] of total usage 2020
Water use reduction [m3]	12'772	1,9%
Thermal Energy reduction [GJ]	21'591	3%
Electricity use reduction [GJ]	5'783	
Cost savings [kCHF]	600	10.7%



Triggered a Biomass Boiler de-bottlenecking (14 to 18.5 tons/h) generating additional:

- **5'185 tons CO2e reduction**
- **600k CHF cost savings**

60% due to **biomass boiler combustion optimization** project

Closing remarks and key take aways

- JARV_IS contributes to our energy improvement targets and cost savings and to our zero-carbon journey towards 2050
- AVEVA Insight supported JARV_IS in our objective of delivering a world-wide solution, being capable to provide real-time data storage and exploration in seconds resolution
- The data is stored under Nestlé ownership and is used for internal dashboards and can be provided to external partners for advanced data analysis
- JARV_IS is just starting...and our goal is to extend its usage in all critical IS operations and for all asset type, creating energy savings opportunities along its journey.

Questions?

Please wait for the microphone.
State your name and company.



Please remember to...


Navigate to this session in the mobile app to complete the survey.



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AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. With operations around the globe, we are headquartered in Cambridge, UK and listed on the London Stock Exchange's FTSE 100.

Learn more at www.aveva.com