

Tetra Pak® WFS - Water Filtering Station

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Product Manager Upgrades





OUR VISION

We commit to making food safe and available, everywhere





Tetra Pak® - Who we are

End-to-End Solutions

As leading innovator in the food processing and packaging industry, Tetra Pak® provides end-to-end solutions that deliver products of outstanding quality and consumer appeal, while maintaining the highest standards of food safety, operational performance and sustainability



Consultancy

Food Protection

Processing

Automation

Services

Packaging

Sustainability

Distribution

Marketing



Tetra Pak® Business 2017

65 years working alongside food producers

24,800
Employees

>160
Countries

>3% of turnover
Investment in R&D

€11.5 billion
Net sales



	Packaging	Processing	Downstream
Units delivered	368	2 266	1081
Units in operation	>8 800	>78 800	>20 600



Protecting Food, Protecting People, Protecting Futures

The pillars of our brand and the chapters of our sustainability story

FOOD



Employees, communities & society at large

Safeguarding, supporting and developing those whose lives we touch



PEOPLE

Safety, Quality & Availability

Protecting your products with our processing & packaging solutions

FUTURES



Materials, water, CO₂ & more

Pursuing environmental excellence along the entire supply chain

Innovative technologies & smart solutions

Understanding and supporting our customers' business growth ambitions



FUTURES

Key Customer Demands

Environment is a top priority for our Customers

Customer System Cost



Functionality/differentiation



Environment



Food Safety





Major food manufacturers have water targets

Because water is an ethical and economical matter



- ▶ Environmental issues are becoming increasingly important for food industry, driven by public awareness and demands from retailers and governmental authorities.
- ▶ Many of our customers have ambitious environmental programmes and targets to reduce their impact on climate change and fresh water resources.
- ▶ By providing solutions that reduce water consumption, and limit product losses, Tetra Pak can help its customers achieve their environmental objectives and reduce their operational cost at the same time.





Major food manufacturers have water targets

Water Reduction Strategy Towards 2020



All newly-built factories will aim to abstract less than half the water of those in 2008 baseline



60% reduction of water consumption in factories by 2020



Improve water efficiency in manufacturing operations by 25% by 2020



A reduction of 2% per year is wanted



Help protect and conserve global water supplies, especially in water-stressed areas



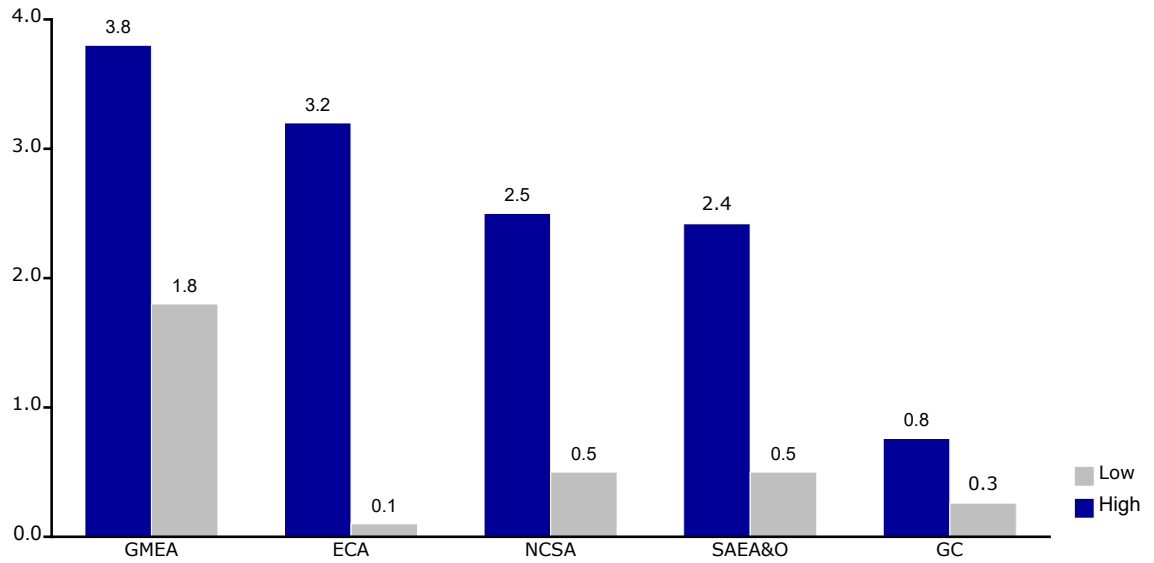
Achieve an overall reduction of 35% in 2020



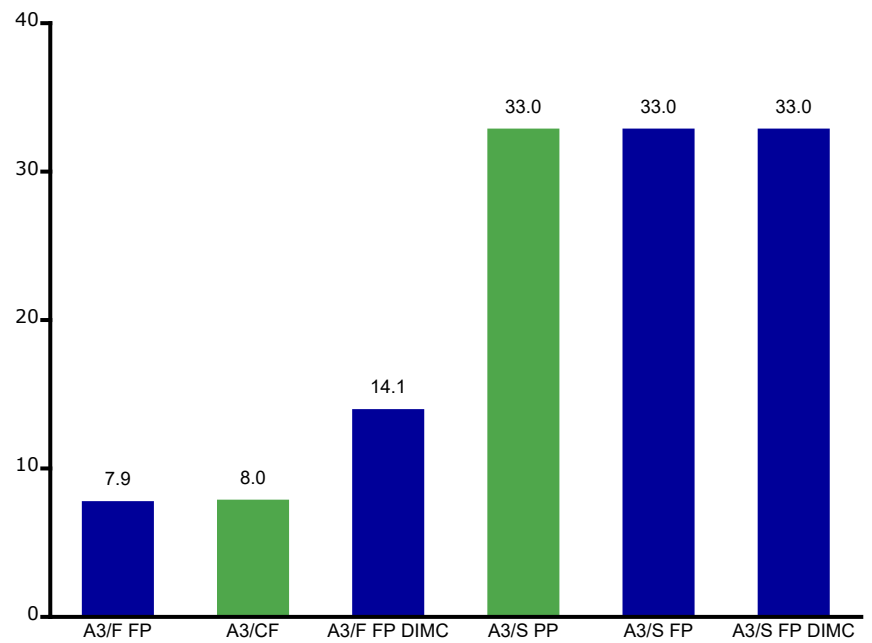
Water price for industrial use Vs FMs water consumption

Re-use discharged water is an increasing demand

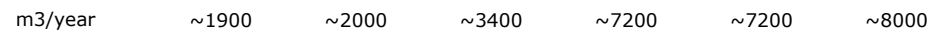
Average water price for industrial use (in €/m³)



Filling Machine Average Water Consumption in Production (l/min)

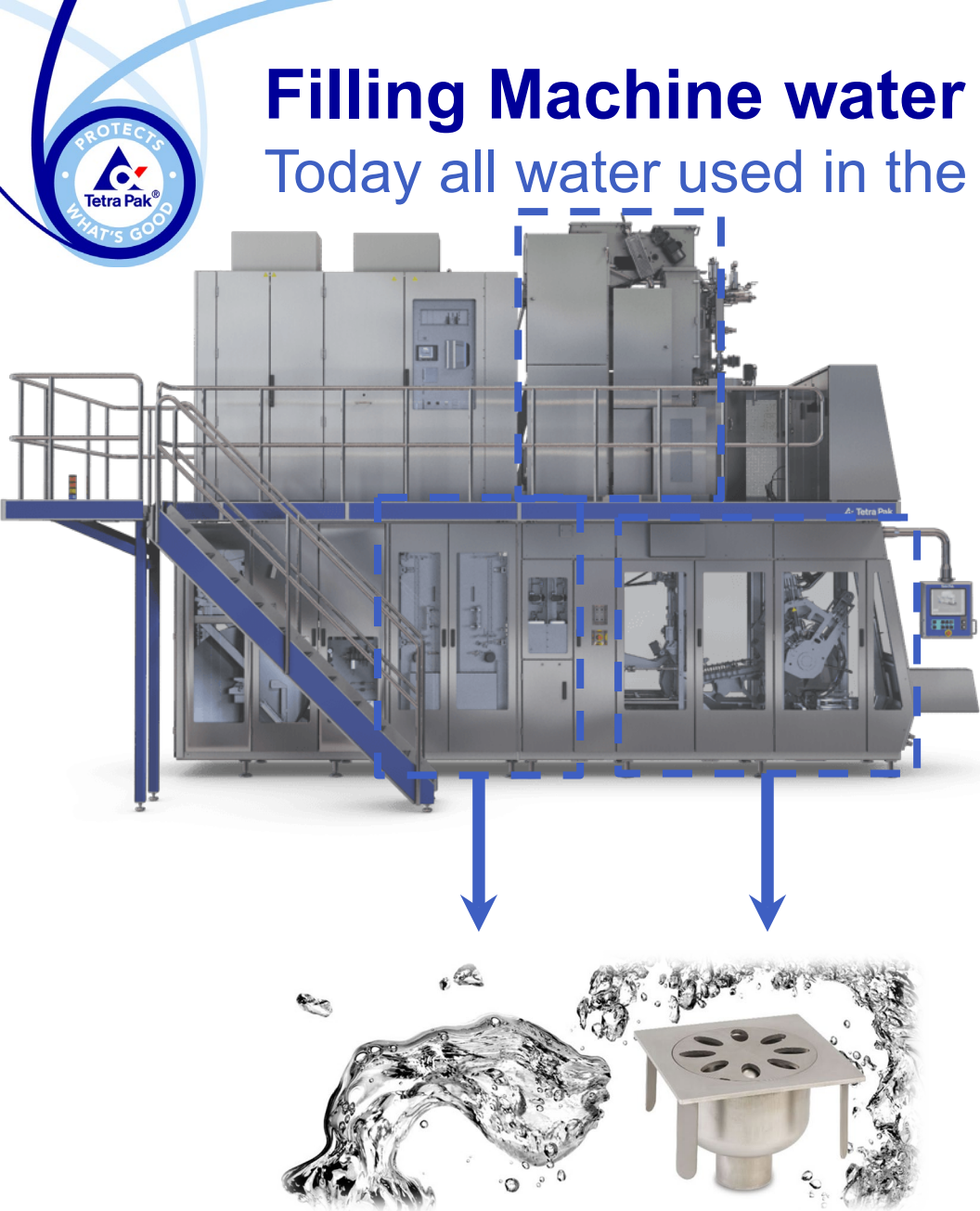


Filling Machine Yearly Water Consumption in Production (in m³/year) - 4000h/year



Filling Machine water consumption

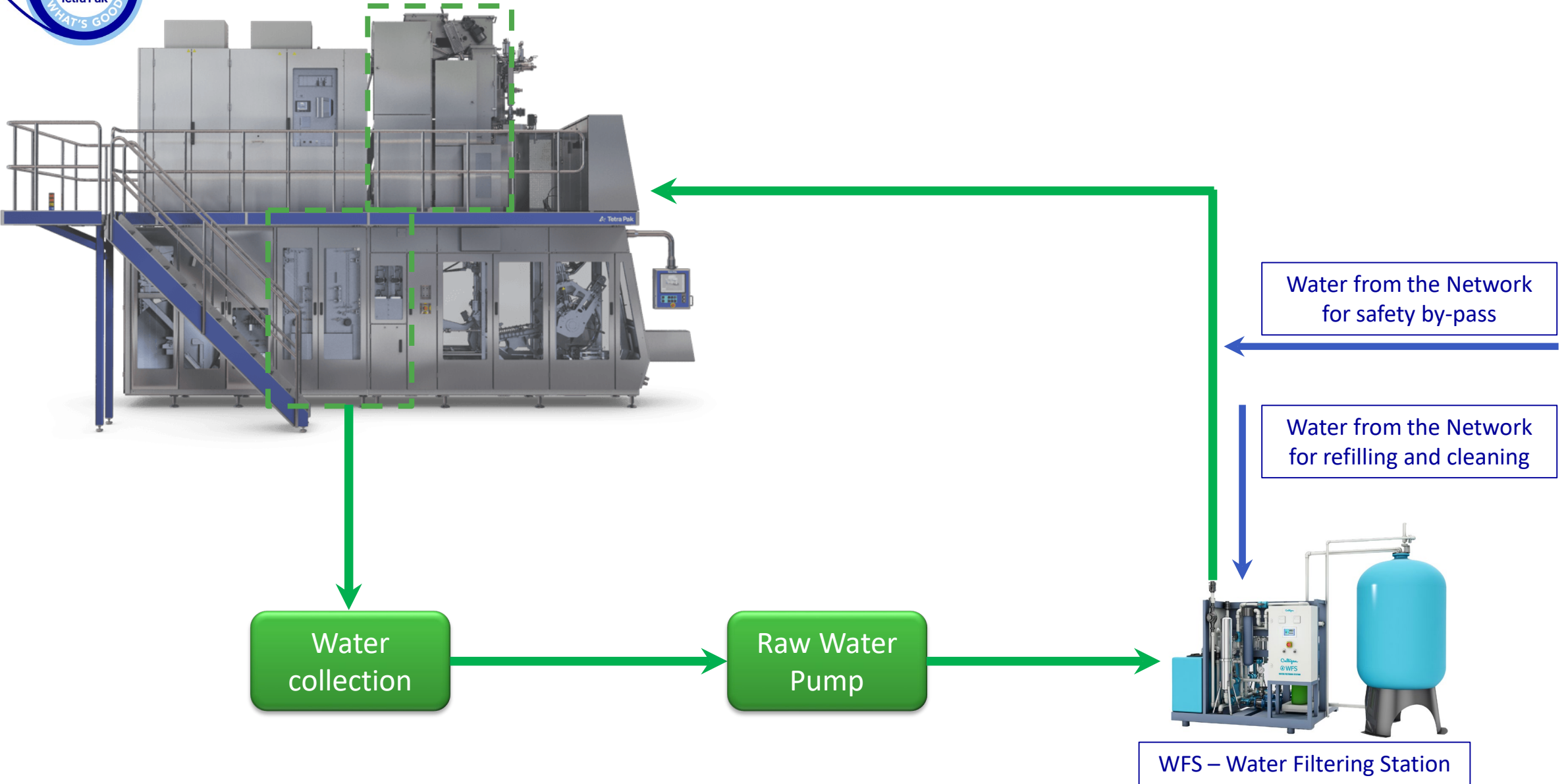
Today all water used in the FM is drained





WFS Recycling Efficiency

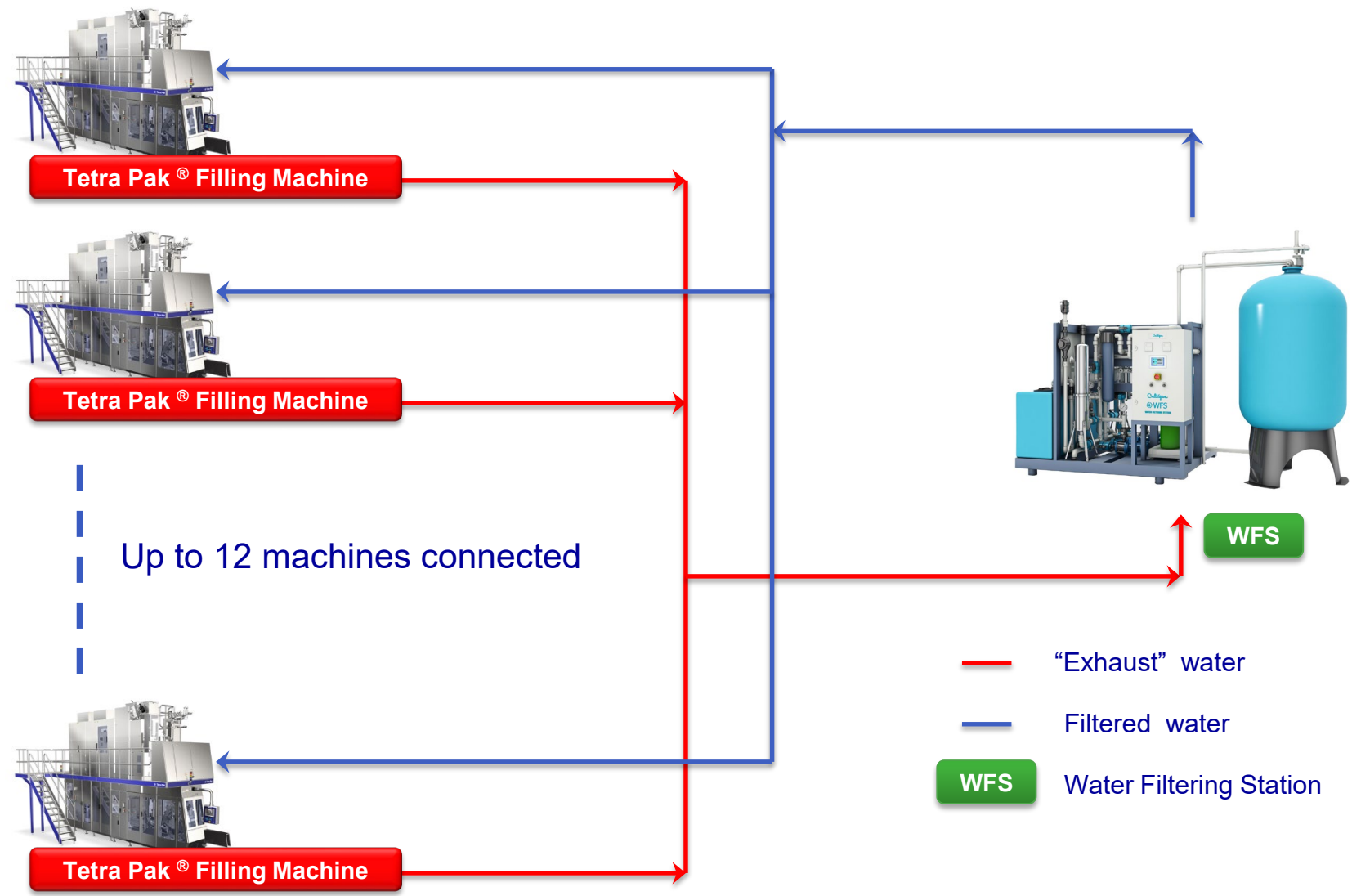
Majority of water collected is recycled through the WFS





WFS – The technical solution

Closed loop to achieve water savings





WFS – Water Filtering Station

Reduce water consumption

KEY BENEFITS

- Improve water-use efficiency
- Water cost reduction
- Improve environmental profile
- Reduce your environmental impact in water scarce areas
- Improve filling machine component lifetime by improving water quality
 - Filtered water is free from H_2O_2 , particles, oil, grease and other contaminants
 - Reduced maintenance time



WFS – Water Filtering Station

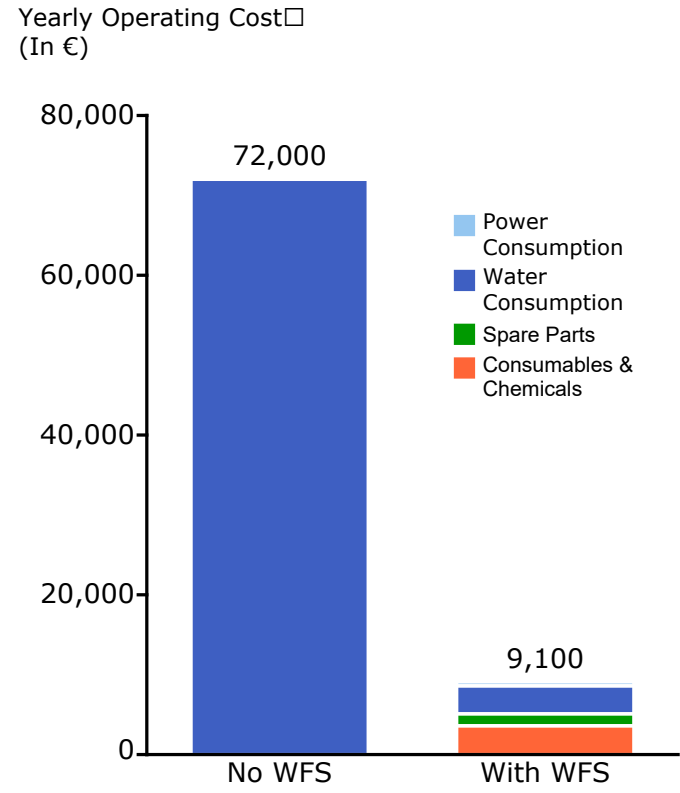
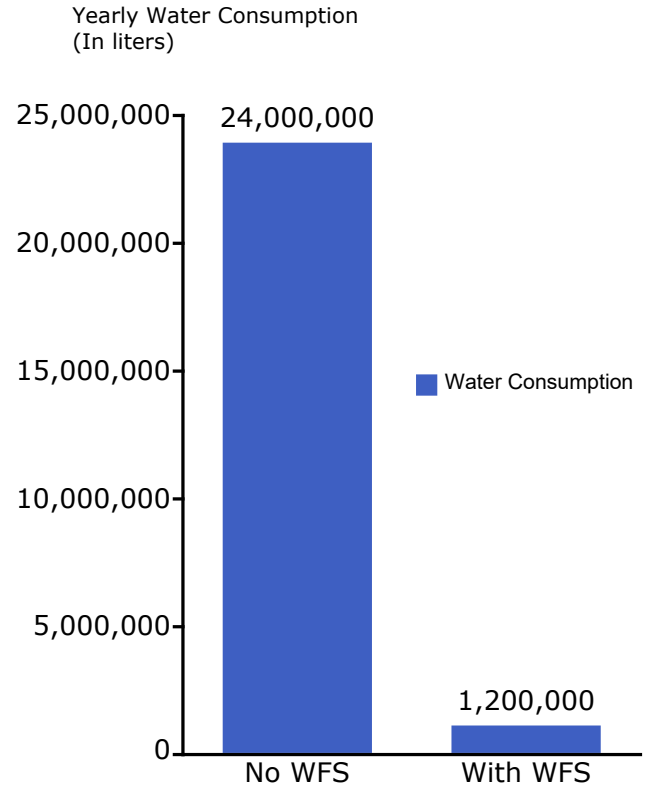
Case simulation



Savings on water costs ~95%

SAVED PER YEAR
22 million litres

RECYCLED WATER
95%



Assumptions:
 3 TP/A3 Speed 0400 portion TBA
 Water recycled: 100l/min
 FM yearly running hours: 4.000 h/year

Assumptions:
 Cost of Energy: ~ 0.014 €/kWh
 Total Cost of Water: ~ 3 €/m³

WFS – Water Filtering Station

7 Olympic Pools Saved per Year



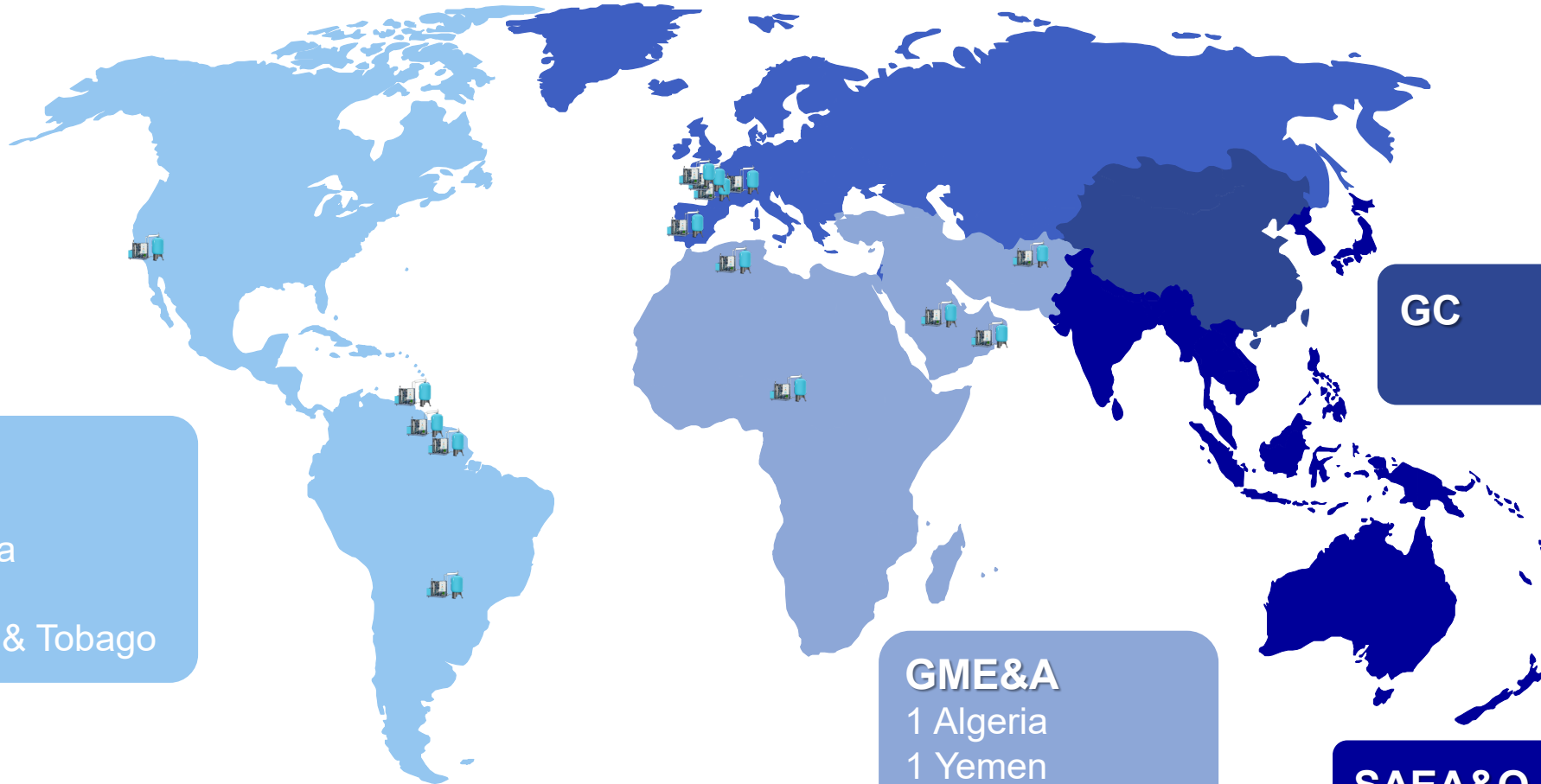
WFS Installed Base Worldwide

15 Units installed so far



E&CA

- 3 France
- 1 Germany
- 1 Spain



NC&SA

- 2 Brazil
- 1 Argentina
- 1 USA
- 1 Trinidad & Tobago

GC

GME&A

- 1 Algeria
- 1 Yemen
- 1 Saudi
- 1 Iran
- 1 Nigeria

SAEA&O



Questions?



