

# Welcome to Fiskeby Board



Norrköping 2018  
Anaerobic Treatment of  
Pulp and Paper Wastewater



# Fiskeby mill visit November 7<sup>th</sup> 2018

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- History, mission and core business
- Environmental improvements and challenges
- Lunch
- Transfer to Fiskeby
- Mill and biogas plant tour

*MSc. Chem. Eng. Magnus Johanson  
Mgr Quality Management*





# Fiskeby's history

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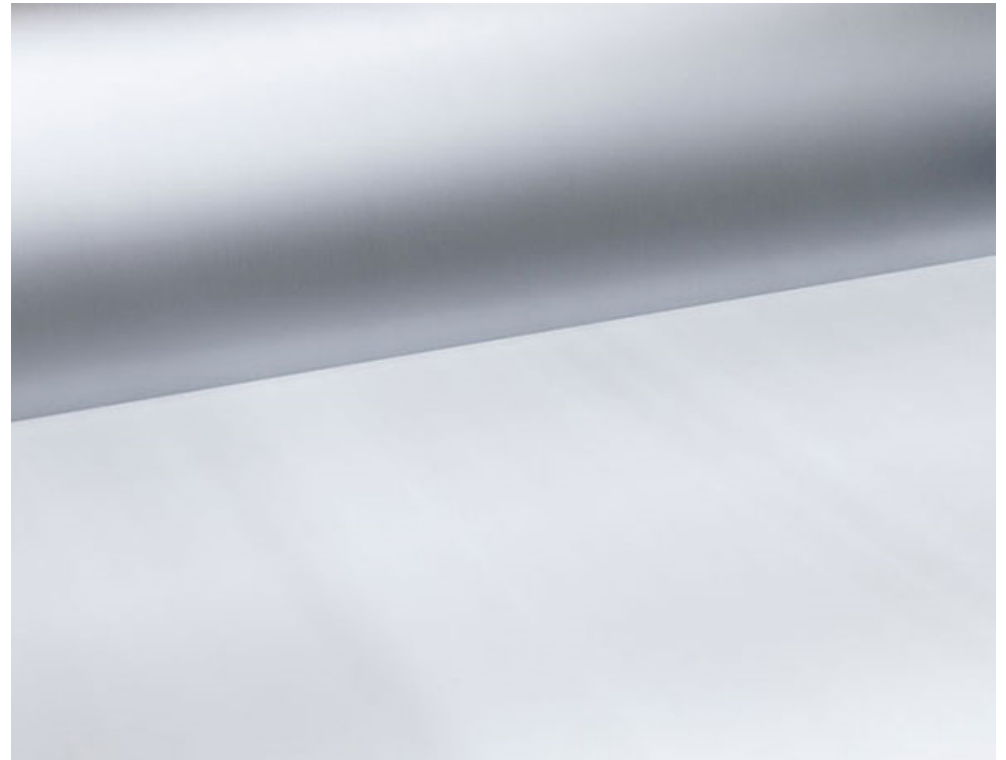
- 1637** Royal Charter from Queen Kristina
- 1872** Machine Mill
- 1953** Board machine using recycled fiber
- 1969** Extruder
- 1987** Rebuild of board machine
- 1990** American ownership
- 2007** Privately-owned
- 2010** Waste to energy facility
- 2013** Packaging line
- 2015** Biogas plant & introduction of Multiboard Premium



# Facts 2017

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- **Employees** 290
- **Net turnover** 728 MSEK
- **Board production** 170 000 tonnes
- **Sheeted production** 129 000 tonnes
- **Extruded production** 13 000 tonnes
- **Electricity produced** 31,7 GWh
- **Steam produced** 272 GWh
- **Owner** Fiskeby Holdings LLC USA



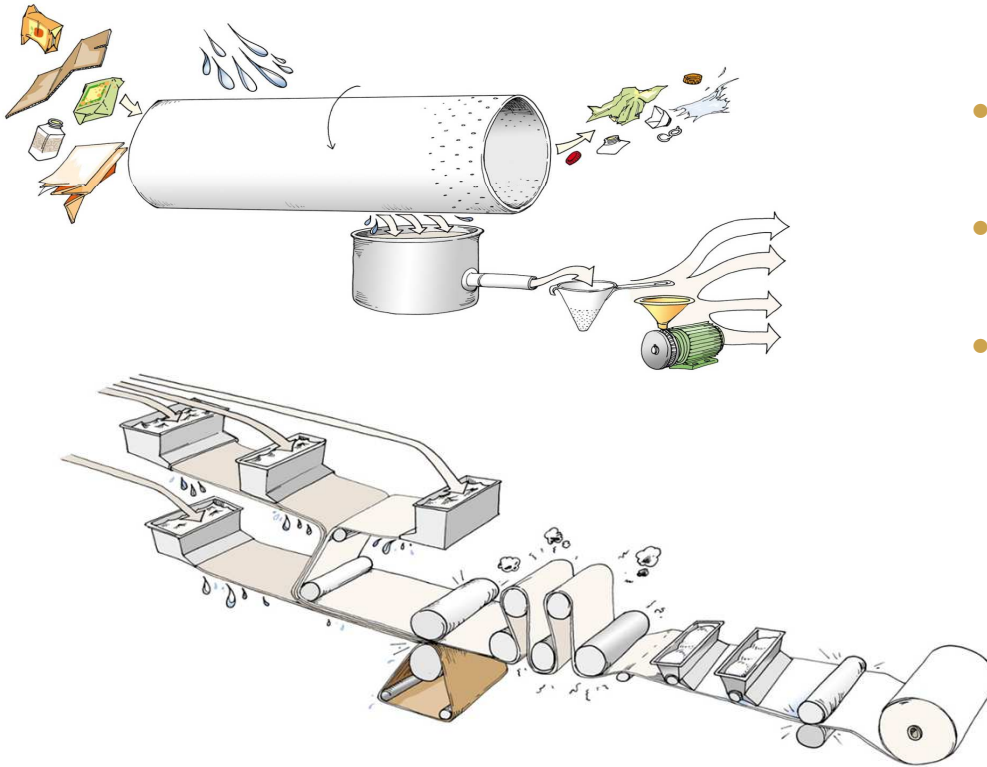
# Location

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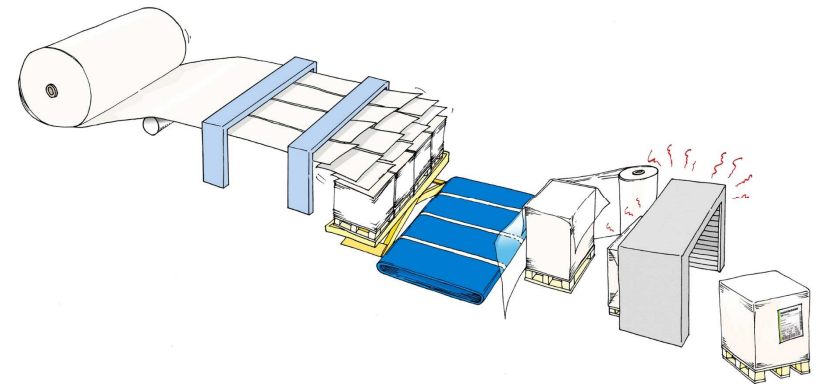
<b>Production Site</b>	Norrköping
<b>Sales</b>	Norrköping Leeds Ottobeuren
<b>Business partners</b>	Istanbul



# Production principle



- Recycled paper based material disintegrated and cleaned
- The pulp is turned into complex 4-ply WLC board
- In-line surface coating, off-line sheeting and protective packaging ends the manufacturing process



# Multiboard®

## Approved for all types of food

- BRC-IOP
- Meets all demand for direct food contact with dry food in compliance with BfR
- MULTIBOARD® Barrier is approved for direct contact with greasy and moist foodstuff in compliance with BfR and Swedish National Food Administration's food regulatory standard (SLVFS 2003:2)



# Multiboard®

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## For competitive packaging

Multiboard® is a range of strong, environment-friendly, value-for-money packaging boards that have been developed for creative, functional packaging solutions.



Multiboard®  
Offset



Multiboard®  
EcoFrost



Multiboard®  
Kraft



Multiboard®  
EcoKraft



Multiboard®  
Barrier



Multiboard®  
Premium



# A retrospectiv glance

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## Positive

- Strong market position
- Fiskeby wwt was BAT
- 25 % less electricity use

## Negative

- Costs rising
- Bottle necks defined



# Strategy: Sustainability focus

- Energy management

Loops, electricity generation, non-cellulose recovered

- Increase paper recycling

Renewable resources, packaging planning

- Emissions management

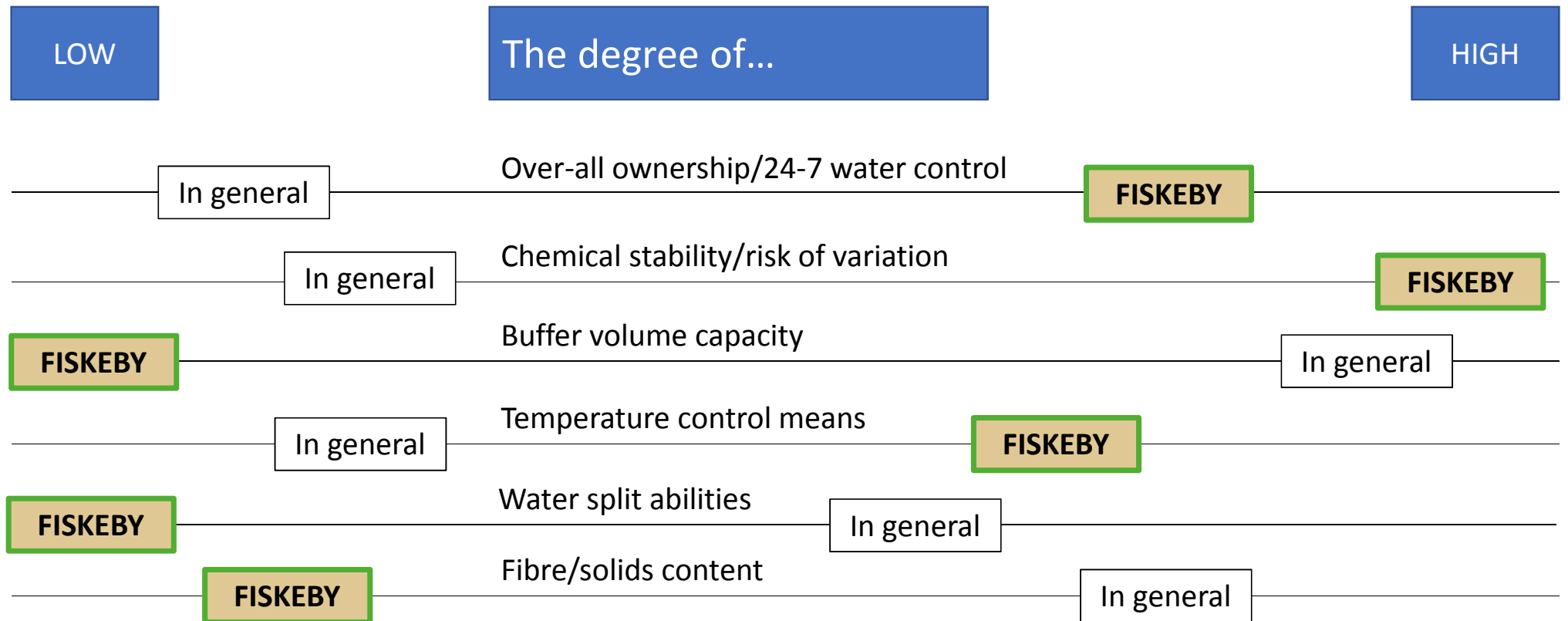
Low specific emissions, heat recovery, low chemical and energy use, biogas

- Other actions

Recycling, logistics solutions, costs awareness, competence building



# P&P Industry Process Water Conditions



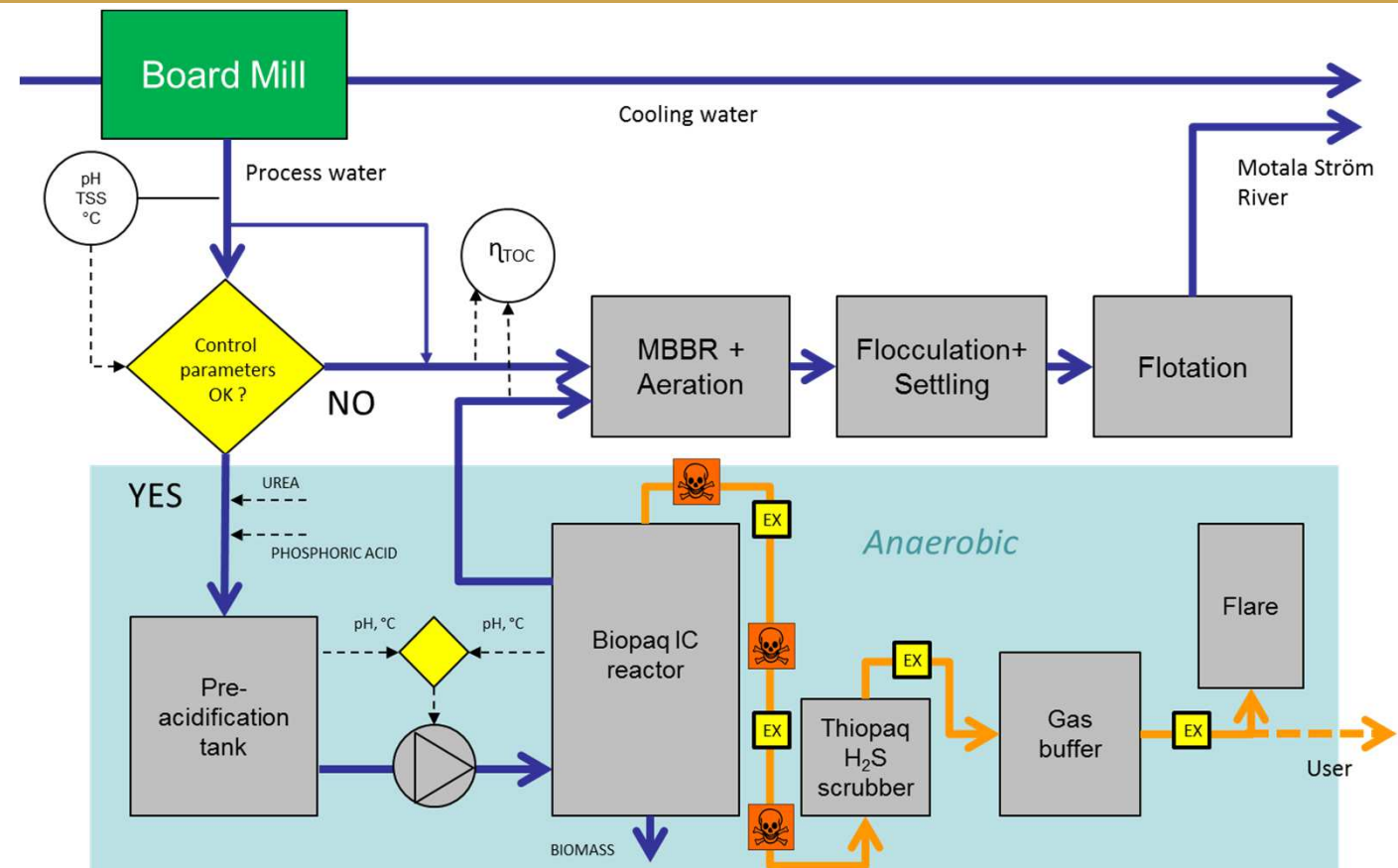
# Process Water Management

## Anaerobic pre-treatment

- Paques IC reactor
- Federal subsidy
- Start-up autumn 2015
- High level of security

## System control

- Violation by-passes the IC
- Nutrients dosed on demand
- Stops carefully planned





# IC/UASB Learnings

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- Control strategy success factor
- Quick response to load changes
- Project objectives fulfilled
  - (capacity, rate of efficiency, chemical usage, electricity savings)
- Biomass growth rate bonus
- No odour issues
- Emergency stop does not exist



[www.fiskeby.com](http://www.fiskeby.com)

**Fiskeby Board AB**  
Sweden

**Fiskeby Board Ltd**  
United Kingdom

**Fiskeby Board GmbH**  
Germany