# Anaerobic Digester Projects
# Flexachem support

Flexachem.com

Supporting Manufacturing & Process Industries since 1982

**Summary**

- Privately owned Cork based company founded in 1982
- The company portfolio delivers expertise for our customers across all business sectors
- Product focus of **Safety** through **Reliability** of performance – Giving our customers improved Uptime
- Focussed portfolio support via dedicated teams in Process Equipment, Valves, Pumps & Mechanical Seals

Flexachem.com
Supporting Manufacturing & Process Industries since 1982

- Chemical
- Pharmaceutical
- Biotechnology
- General Process Industries
- Refinery plants
- Energy generation
- Paint
- Cosmetics
- Food and Beverage
- Meat Processing
- Water & Waste Water treatment
- Steam  & Utility Applications
- Contractors & Process Skid Builders

Partnership approach with our clients to deliver engineered solutions to meet your application & performance needs – from component to project turnkey

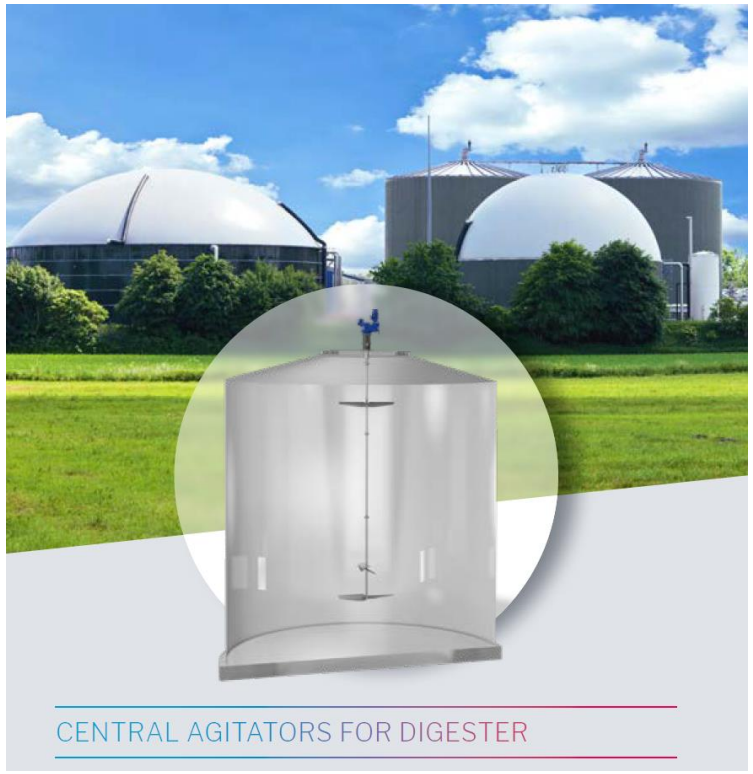
# General summary

## Primary offerings

- Tank agitators [Vertical, Side entry & Submersible]
- Transfer pumps & Macerators
- Centrifugal & Vacuum pumps
- Isolation, Divert & Shut-off Valves
- Tank Cleaning & CIP delivery
- Aeration systems
- Vapour control & safety
- Corrosion Resistant / Low friction pipework
- Pipeline components
- Water Treatment
- Heat Exchangers & Cooling Towers

## Secondary offerings

- Project management
- Process / Chemical engineering
- Flow meters
- Tank OEMs localised in Ireland



# Tank Agitators – Centrally or Side mounted

Progressive Cavity

Rotary Lobe

Macerator

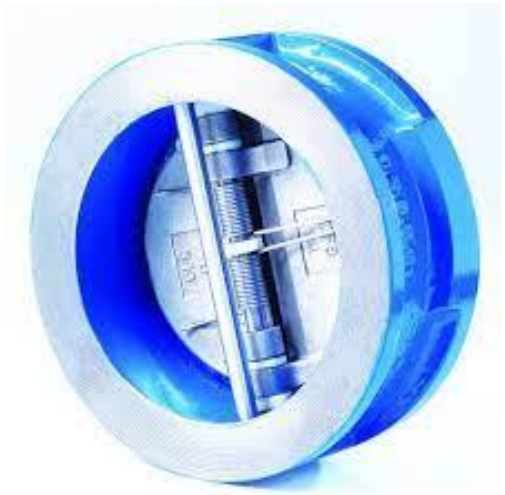
NETZSCH

# Transfer pumps + Macerators

FLOWSERVE

# Vacuum + Centrifugal pumps

ABO valve



# Isolation, check & Shut off Valves

FLOWSERVE®

# Isolation / Divert & Control Valves

Up to 9 metres

Up to 14 metres

Up to 24 metres

# Tank Cleaning & Delivery of CIP

Note – Lechler have Cone nozzles to facilitate the wetting of dried goods if needed

Submersible pumps

Diffusers

Submersible aerators

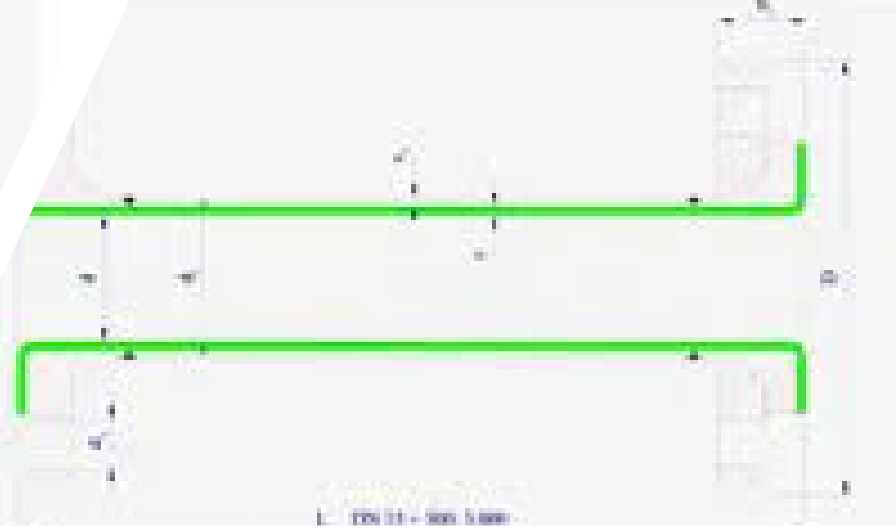
# Aeration systems

Flame Arrester

Venting

Bursting discs

# Vapour control



# Corrosion resistant and low friction pipework

Filters + Strainers

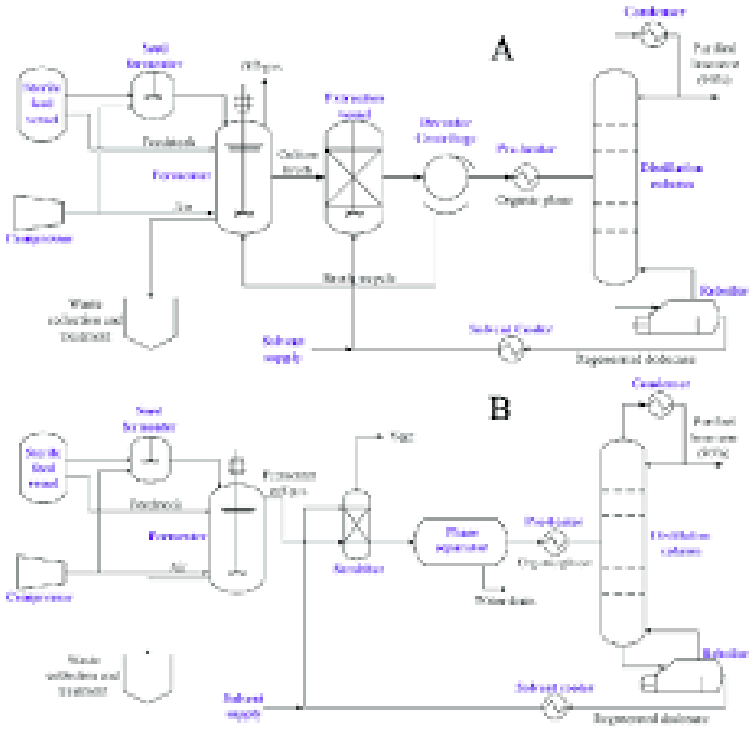
Tank Level Gauges

Expansion Bellows

# Pipeline & Tank components

# Water Treatment

Tank agitators, static mixers, valves, pumps, submersible pumps, submersible agitators, surface & immersed aeration + diffusers




## Gantt Chart

| Task Name | Q1 2019 | | | Q2 2019 | | Q3 2019 |
|---|---|---|---|---|---|---|
| | Jan 19 | Feb 19 | Mar 19 | Apr 19 | Jun 19 | Jul 19 |
| Planning | | | | | | |
| Research | | | | | | |
| Design | | | | | | |
| Implementation | | | | | | |
| Follow up | | | | | | |

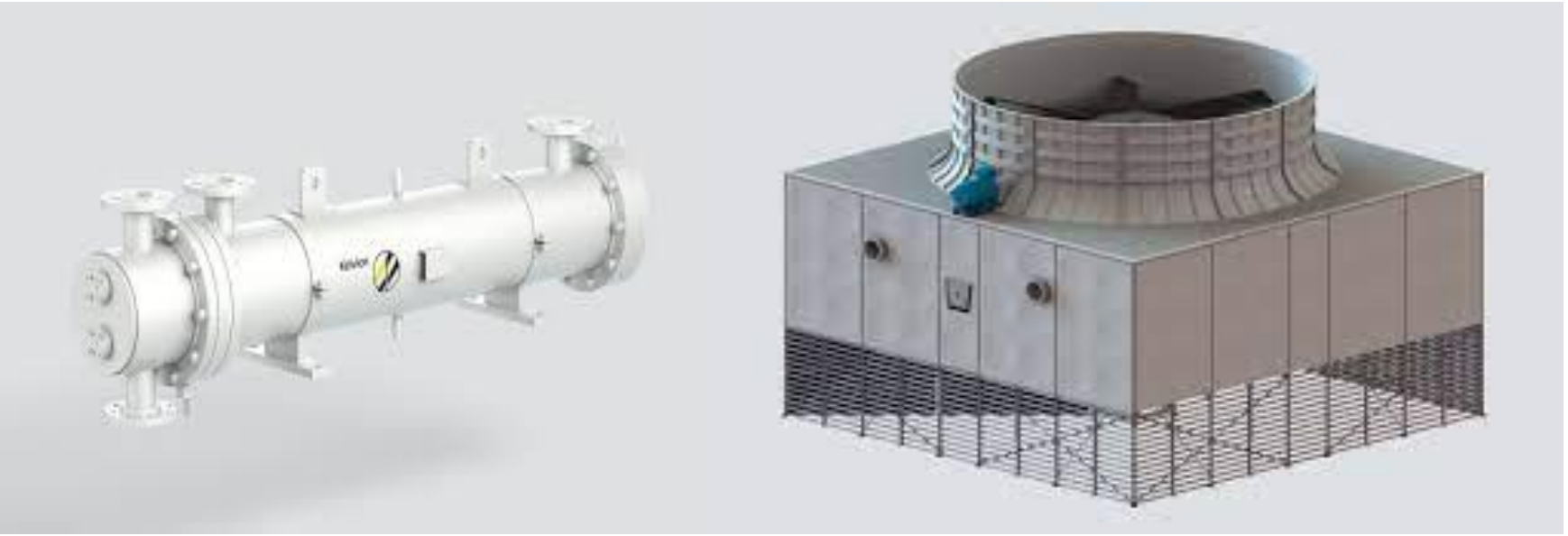
# Secondary offering – Via other existing partnerships

- Project management
- Process / Chemical engineering
- Flow meters
- Tank OEMs localised in Ireland for certain applications
- Automation support

# Heat Exchangers & Cooling Towers



Shell & Tube



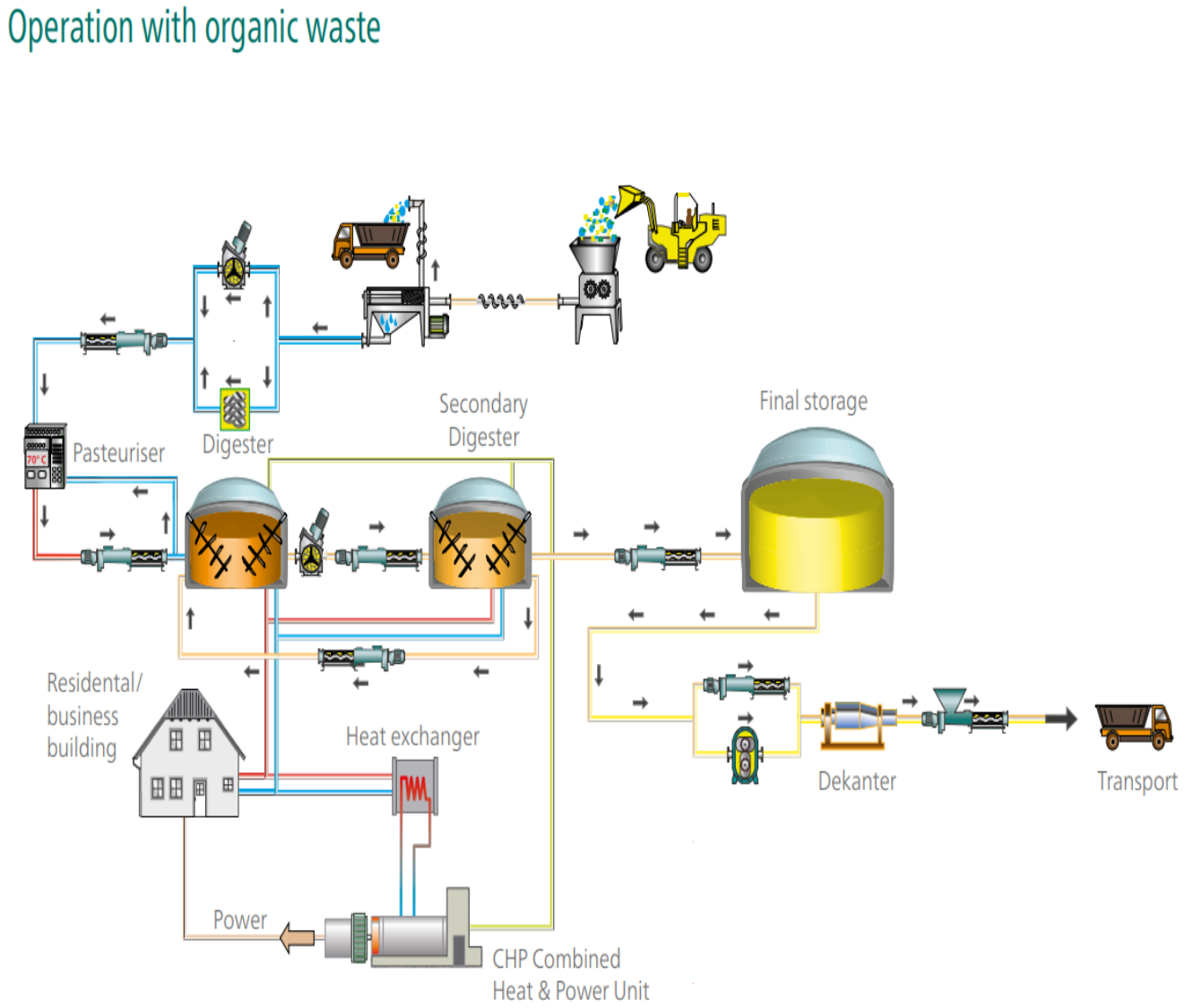
Cooling Towers

Plate + Frame

Kelvion

# General Overview – AD with Organic Waste

- Typical process flow with positioning of the pumps
- Produce intake ( Oils, Fats, Organic waste..etc)
- Separation and particle size reduction
- Settling tanks
- Digester feed
- Pasteuriser
- Outbound
- Heat Recovery



# Project Flow

| Basic Process Flow Diagram | Detailed Process Flow Diagram | Overlay P&ID | Specification for enquiry | Equipment schedule |
|---|---|---|---|---|
| • Define basic volumes, flow rates and pipeline sizes end to end | • Evolved specification and URS development<br>Mechanical specifications | • Inclusion of instrumentation, control and automation | • Bill of materials listing<br>• Partnership commentary and submission of costs<br>• PO discussion | • Delivery<br>• Install<br>• Close out |

# Technical Comment

We encourage discussion on options to maximise efficiency & optimise the budget

ATEX discussions will have a bearing on solutions offered

Lead times options will also be tabled

Site commissioning and sign off protocol to be agreed per product type in advance of purchase

Service engineers subject to our partners rate of site costs

# Lead times

- Very upper level – most items are deliverable within 24 working weeks
- Longer lead items are typically agitators, tanks, cooling towers, aeration systems, some pumps
- Most other items fall into the 6-16 weeks bracket for delivery once specifications are known & confirmed with the factory
- Lead times are dependent on specifications agreed for the duties, factory loading, materials availability, payment stages and client approval for any drawings relevant for manufacture

# Finance

- Once overall budget is worked out this can be discussed
- A value package will also be available for multiple equipment spend
- Typically for CAPEX spend, stage payments will be involved
- Formal Purchase Order required for ISO audit purposes

# Project Support

## Process

- Michael Bradley

## Pumps

– Phil Soltan

## Valves

– Brendan Merrigan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