

# *Solutions for (waste)water treatment*



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# *Content of presentation*



- **Company profile & divisions**
- **Products & services**
- **Review traditional WWTP (waste water treatment plant)**
- **Review innovative WWTP (MBR)**

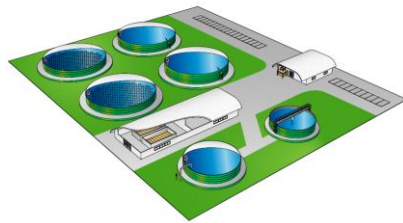


*INVESTeau*  
*Invests in Water*

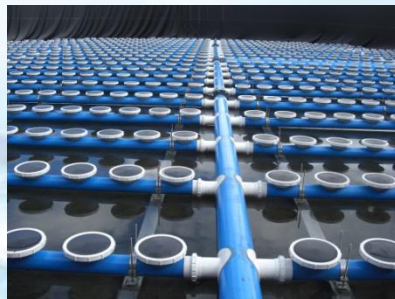
# *INVESTeau BV*

<i>INVESTeau Consultancy</i>	<i>INVESTeau Components</i>	<i>INVESTeau Treatment Systems</i>
<ul style="list-style-type: none"> <li>▪ Reuse of (waste) water</li> <li>▪ Usage of secondary water</li> <li>▪ Prevention calamity streams</li> <li>▪ Financial feasibility water related investments</li> <li>▪ Request of water permits</li> <li>▪ Erosion prevention control / infiltration</li> <li>▪ Selection of (waste) water treatment systems and sewer projects</li> <li>▪ Strategic water projects</li> </ul>	<ul style="list-style-type: none"> <li>▪ Separation units (Rotoscreen)</li> <li>▪ Membrane diffusers</li> <li>▪ Lamella plates</li> <li>▪ SORBags - absorbent</li> <li>▪ Corrugated steel silo's</li> <li>▪ Liners</li> <li>▪ Silo roofs</li> <li>▪ Non return valves, overflow weirs, tilting gates and other water levelling systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rain water treatment systems</li> <li>▪ Water reuse systems</li> <li>▪ Physical/chemical treatment</li> <li>▪ Rainwater disconnecting systems</li> <li>▪ Separating systems (sludge/manure)</li> <li>▪ Fresh water storage and treatment</li> <li>▪ Biological (waste) water treatment</li> </ul> <p>We mainly use corrugated steel silos, because of: rest value, flexible design and expansion, simple/fast installation, high resistance against earth quakes, temperatures and affordable prices.</p>

## Concepts for Communal & Industrial WWTP



## Water Tanks (Storage and treatment)



## Diffusers for Aeration



## RotoScreen Separator

## Rain water purification

# Design of the Conventional WWTP



Type of design: Conventional WWTP

Components:

- Valve pit
- Anaerobic tank
- Anoxic tank
- Control container
- Aeration tank
- Pump pit
- Clarifier
- Effluent pit
- UV Filter
- Sludge beds

The design is based on corrugated steel tanks, which has the following advantages over concrete tanks: fast building activities, lower price, easy repair and maintenance, lightweight and strong design, easy transport around the globe.

# Pros and cons of conventional WWTP

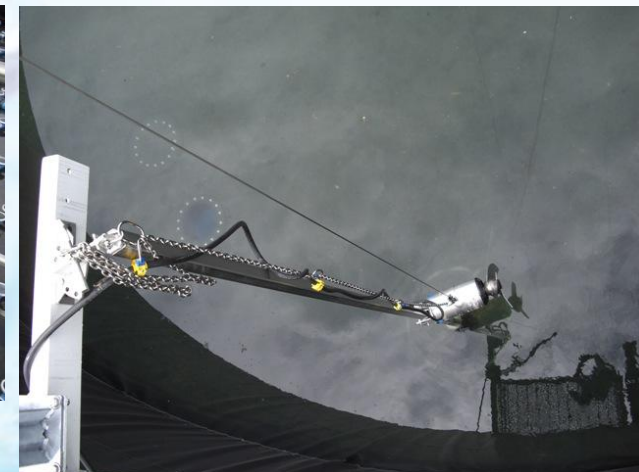


## Pros:

- Good quality of effluent
- Fast/easy installation
- Easy expansion of treatment
- Easy and cheap maintenance
- Good price/quality

## Cons:

- Always after treatment with UV-filtration (virus/bacterias)
- More area needed because of more treatment compartments
- Fluctuation in effluent quality (light and heavy sludge)
- More excess sludge

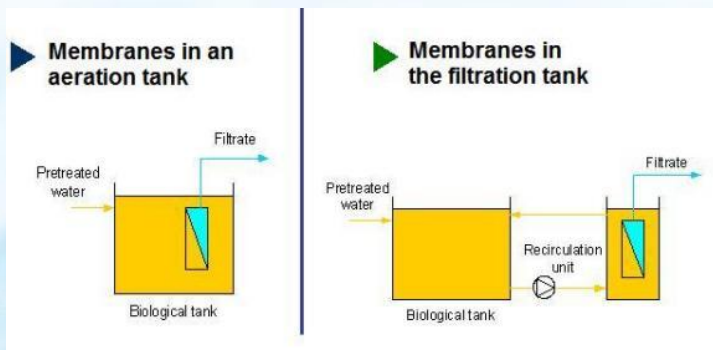


# MBR - Membrane Bioreactor



## Advantages of the system:

- Reliable water treatment
- Small foot print
- Low energy consumption
- Excellent effluent quality
- Reduced excess sludge
- Effective treatment of high COD's
- Almost all bacterias/viruses filtered out of effluent
- Long membrane lifetime



 MITSUBISHI RAYON ENGINEERING CO., LTD.

# MBR - Membrane Bioreactor

