







**AG** **ARGINTA**  
GROUP



**ARGINTA  
ENGINEERING**

**ARGINTA**

**ARGINTA  
INVESTMENT**



**BUKRITA**

**ARGINTA  
BEL**

## Brief History of Arginta in water management field

1991 – UAB Arginta is established

1995 – Arginta participates in Vilnius WWTP reconstruction

2001 – Small WWTP installation team is assembled

2002 – Arginta started performing consulting in water management field

2004 – Arginta is employed as contractor for equipment installation on municipal WWTP

2005 – Arginta started performing WWTP equipment maintenance services.

2010 – First sludge treatment project are being developed.

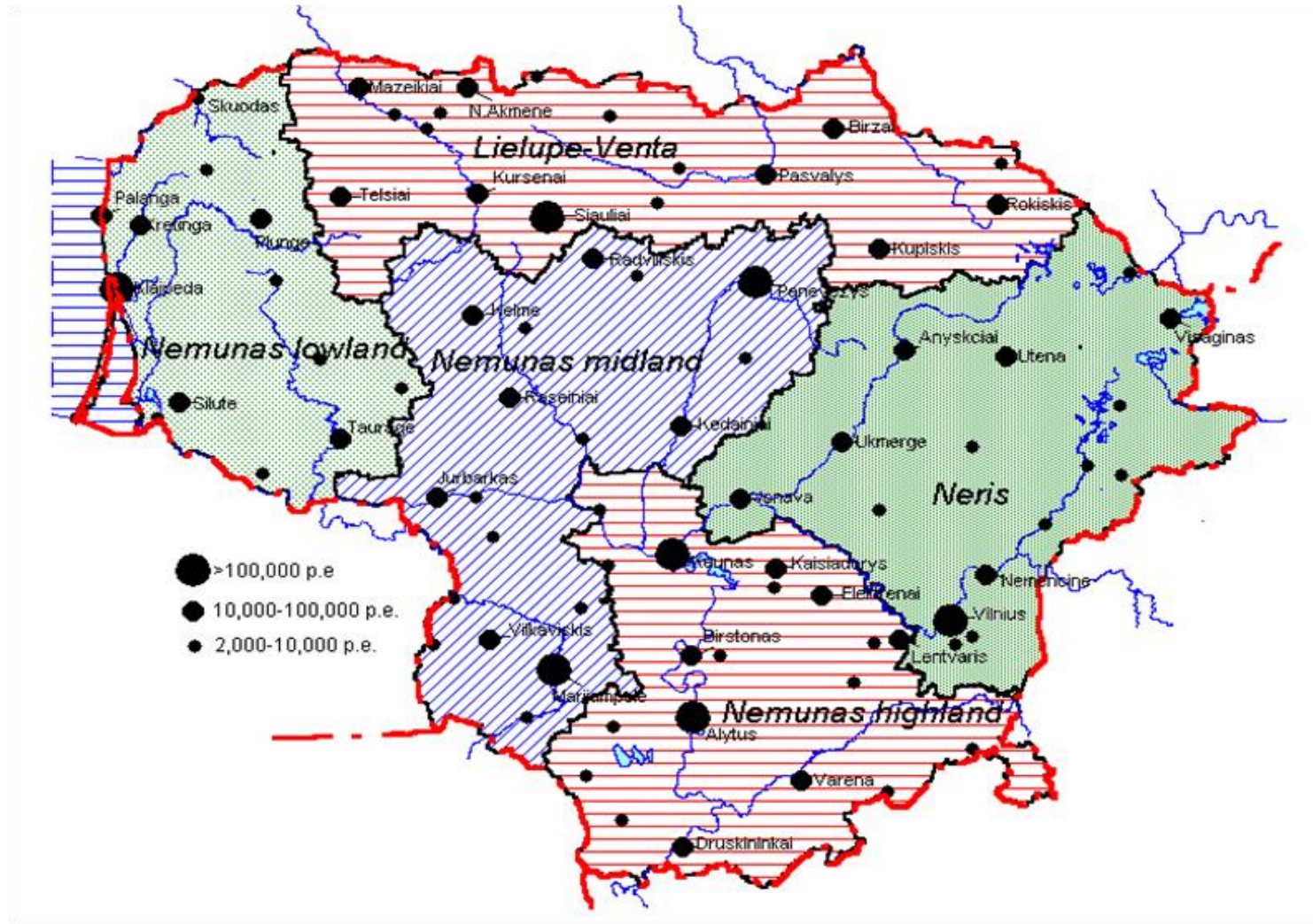
2012 – Arginta opens foreign offices and started performance of Construction and Consulting projects in CIS countries.





## Feasibility studies

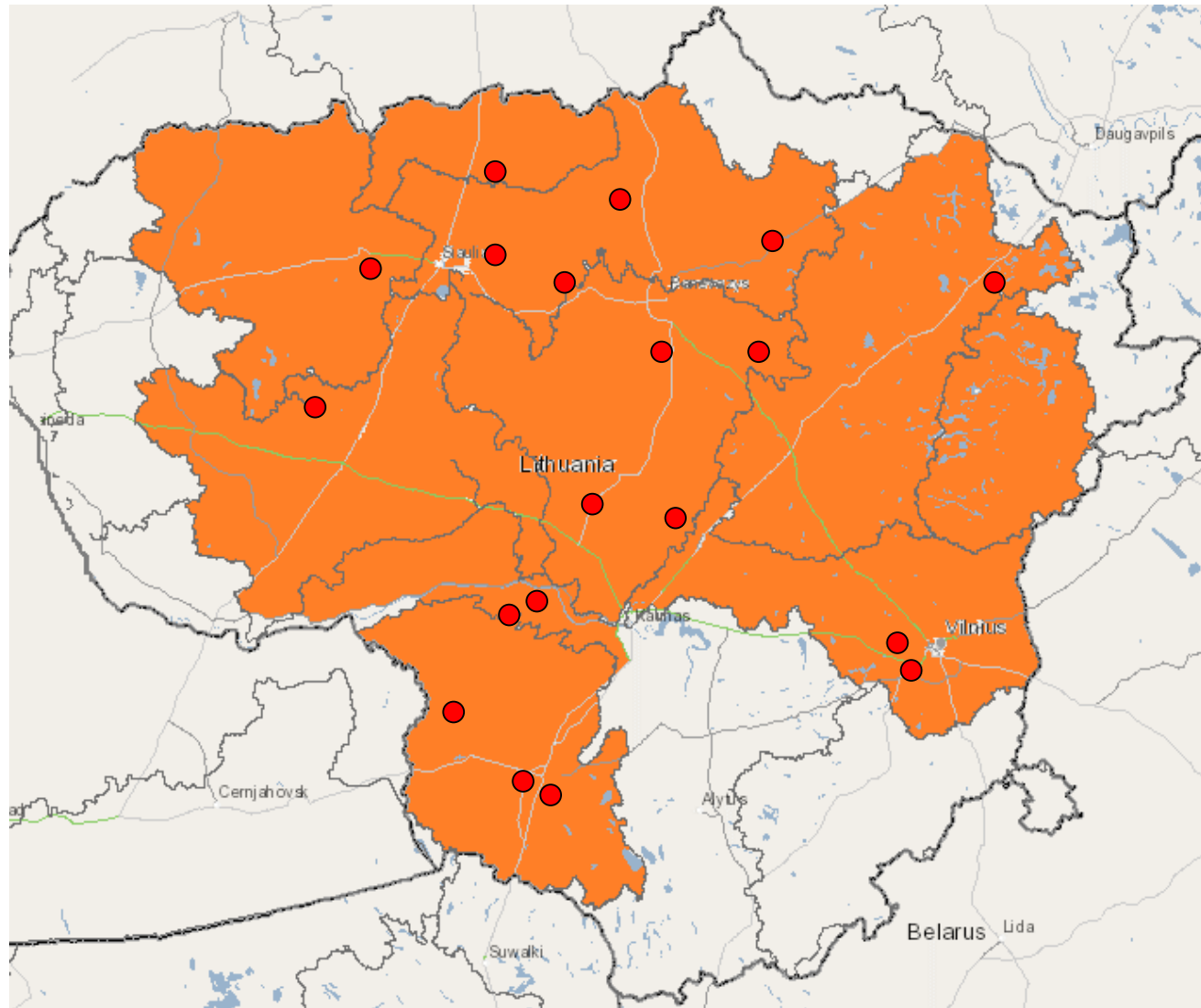
- We completed more than 40% of Feasibility studies for river basins in Lithuania



# Design documentation expertise and Technical evaluation

- We completed more than 60% of Tender and Design documentation expertise in Lithuania

During 2012- 2014 we  
have completed design  
documentation  
expertise and technical  
evaluation  
Of 36 cities in  
Kazakhstan





## Construction and reconstruction of water management objects

- Construction of WWTP
- Sludge treatment plant construction
- Water treatment plant construction
- Construction of pumping stations

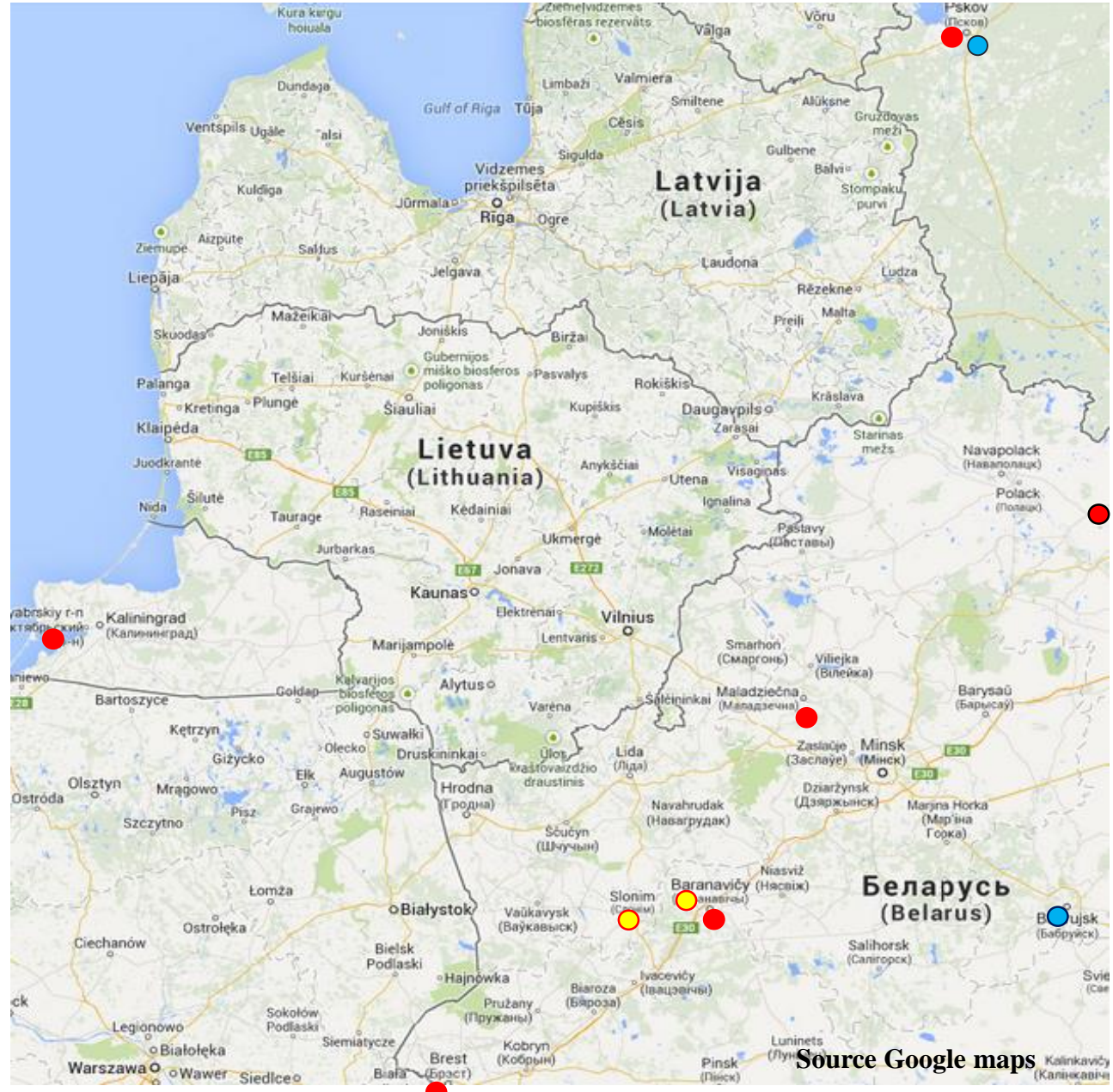


By 2012 Arginta successful reconstruction or constructed more than 30 object in Lithuania



## Construction and reconstruction of water management objects

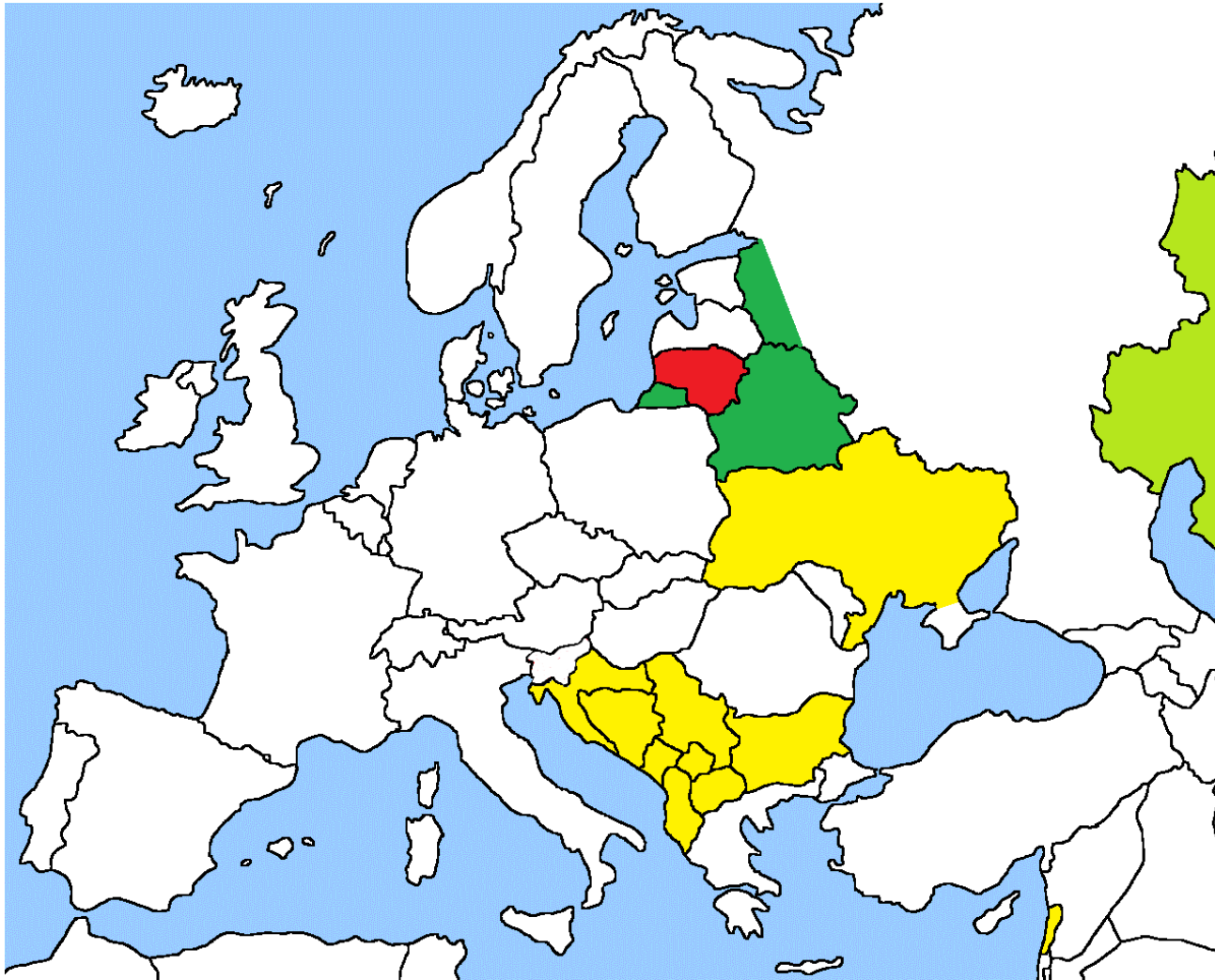
Overall 41 mEUR of investment in the region



Source Google maps



# Construction and reconstruction of water management objects



Project management

Technological design

Plant maintenance and operation

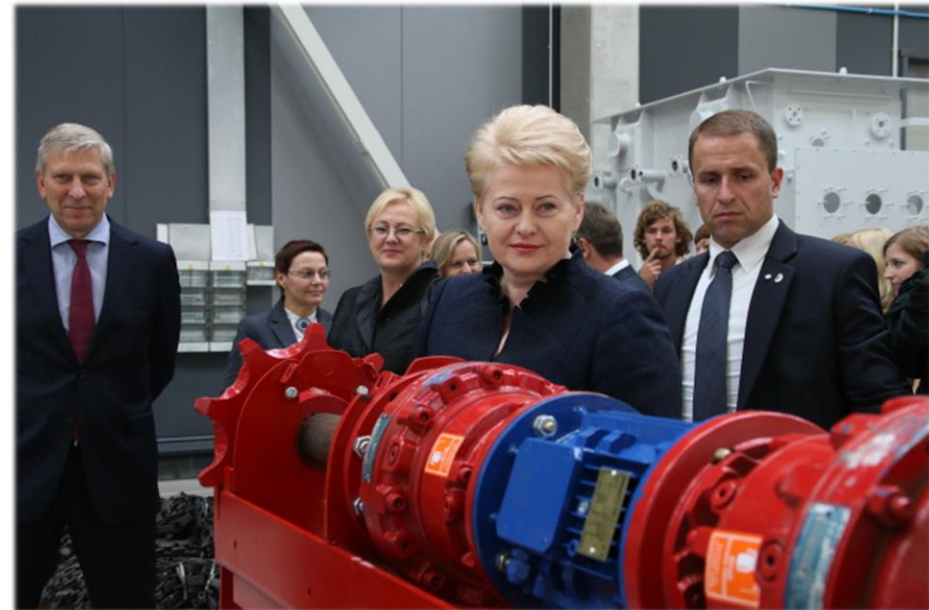
Pre-contract, consulting services

Equipment and automation manufacturing

Water treatment

Waste water treatment

Sludge treatment







## Complex mechanical treatment



*Combined mechanical treatment unit*



## PERFORATED Fine screens



*Mechanical treatment unit bu 6 mm perforated screens*

## STEP Fine screens



*3 mm step screen with hydraulic screen press with protective covers*



## Grit removal



*Aerated grit chamber*

## CLOSED GRIT TRAP





## Grit washers



# Primary treatment



*Reconstructed primary clarifier*



# Biological treatment

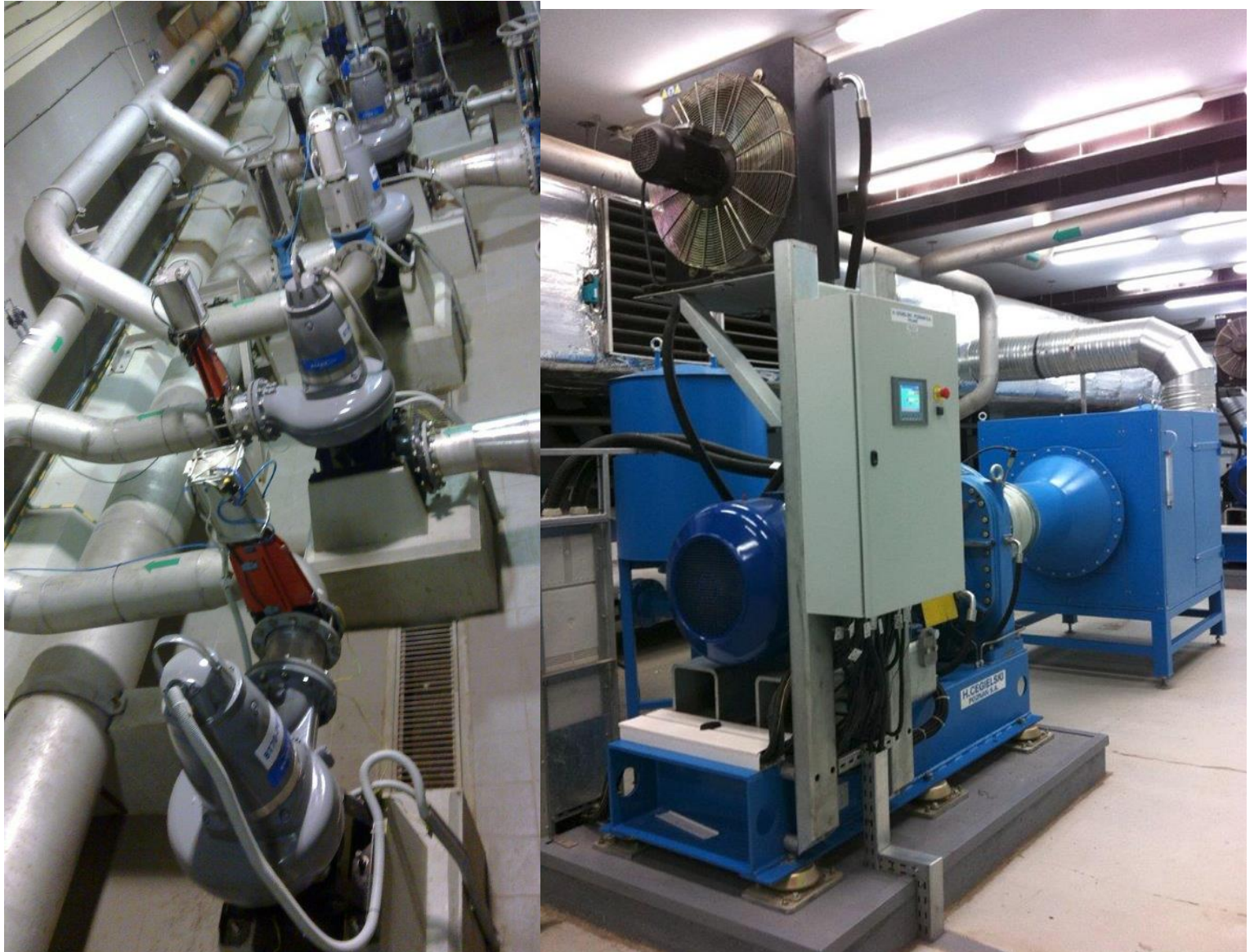


# Air supply systems





# Air supply systems



*Sludge PS/turbo air blower*

# Tertial treatment



*Additional mechanical filters for polishing*



# Sludge treatment



*Sludge drum thickener*

# SLUDGE TREATMENT EQUIPMENT



*Automatic polymer production units (from powder polymer)*



# Sludge digestion



*Reconstructed digesters 1800 m<sup>3</sup> each*

# Digesters equipment



*Sludge heating and recirculation pumping station*



# Biogas treatment



*Reconstructed digester's equipment*

# Biogas collection



*Biogas holder*



# Energy production from biogas



*Microturbine CHP*

# Sludge drying



*Belt sludge dryer: 380 kg H<sub>2</sub>O/h*



# Dried sludge packaging



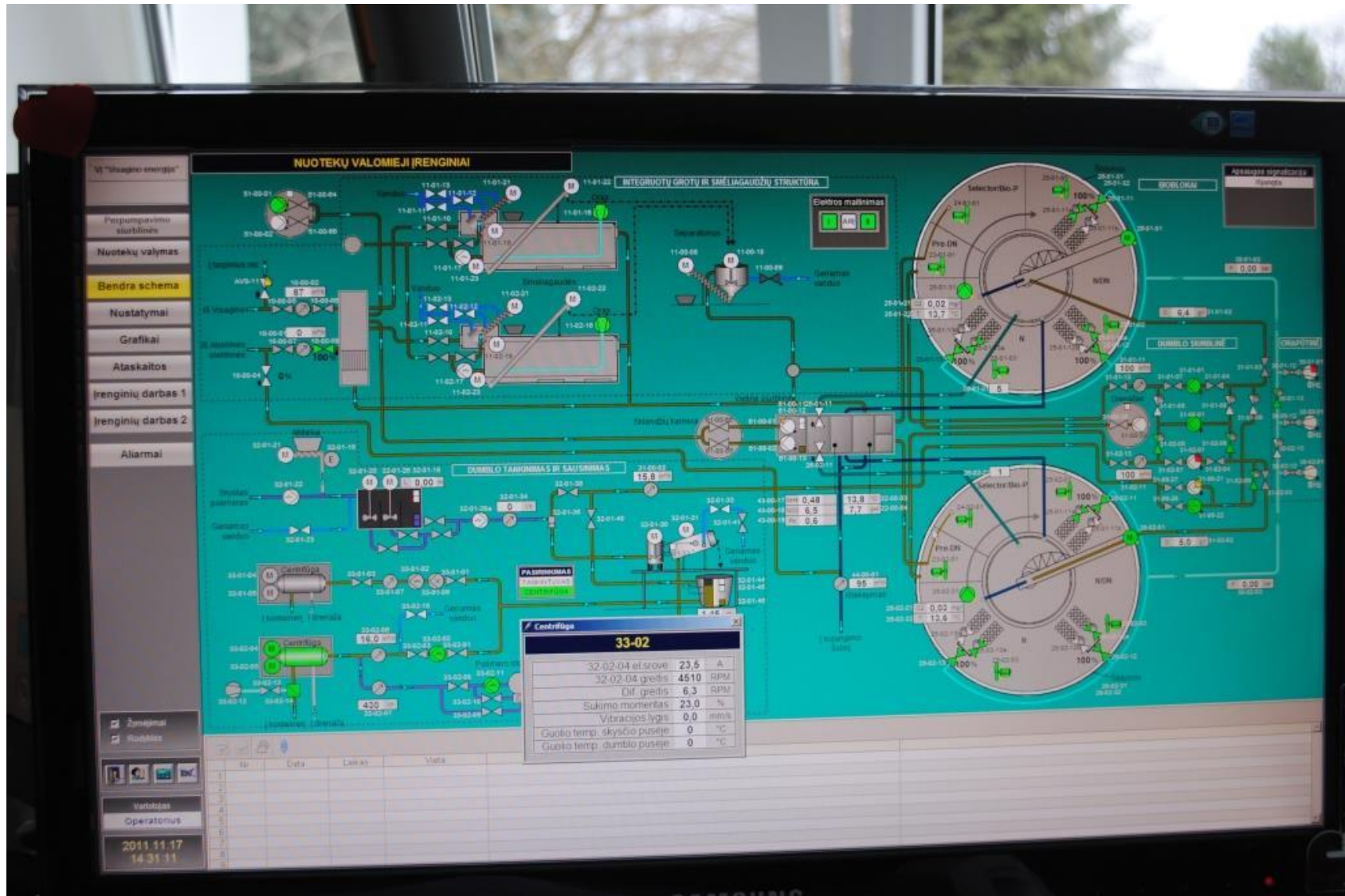
*Dewatered sludge silo and dried sludge silo&packing*

We design and produce control panels





# And control SCADA systems



# We design and construct different type of plants

- Conventional WWTP
- Compact WWTP
- Special WWTP
- Sludge treatment plants
- Everything depends on request.





# Conventional technologies





# Brest WWTP, Belarus





# Compact solution





# Compact WWTP



*Kružni tip bioreaktora sa sekundarnim taložnikom u sredini*



# Compact WWTP



# SBR Širvintai WWTP, Lithuania





# Sludge treatment plant



*Kompaktno postrojenje za ugušćivanje, dezintegraciju, digestiju, obezvodnjavanje i sušenje mulja*



# Taurage sludge treatment plant, Lithuania



*Sludge digesters 750 m<sup>3</sup> each*



# DWTP plant, Russia



*Portable water 5,5 m Dynasand nonpressure sand filters, 41pcs*

# Bobruisk DWTP, Belarus

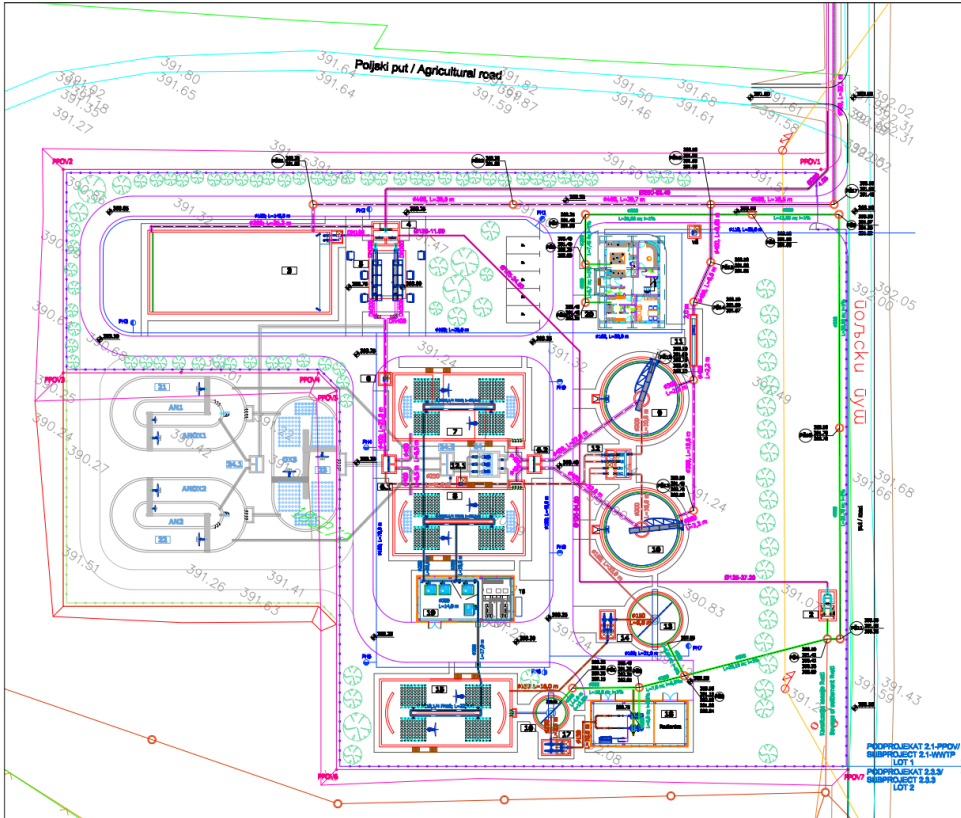


*Air injectors are used to supply oxygen*

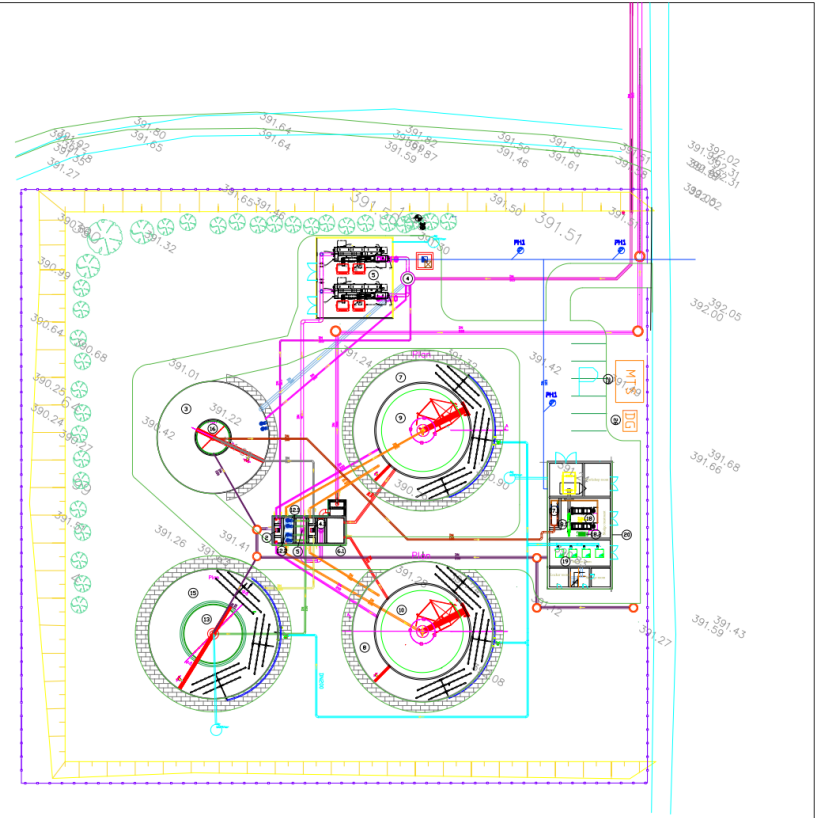


# Proposed compact technology

Typical 5000 m<sup>3</sup>/d WWTP displacement

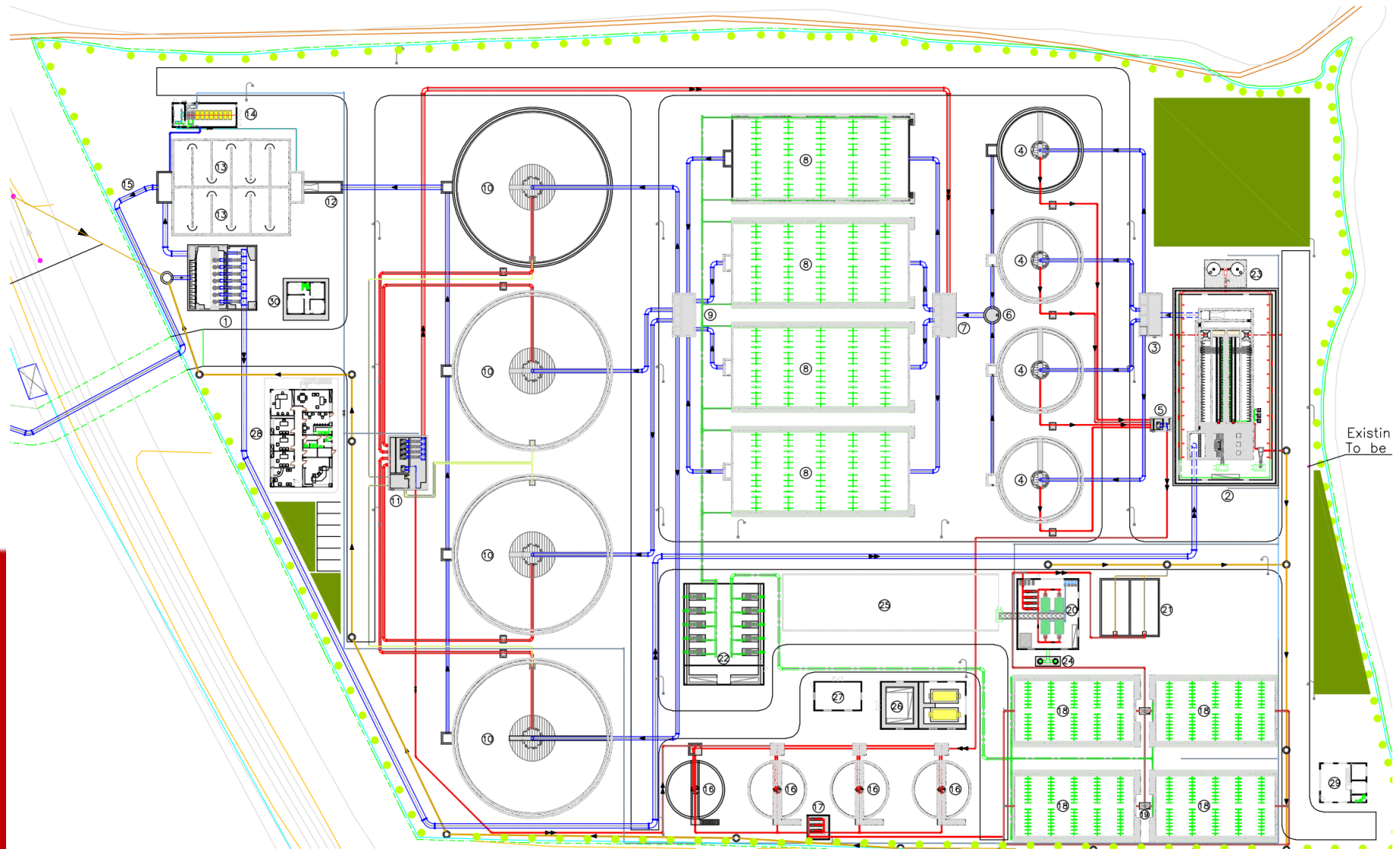


Arginta proposed compact WWTP displacement



# 40 000 m<sup>3</sup>/d WWTP layout, proposed by Employer

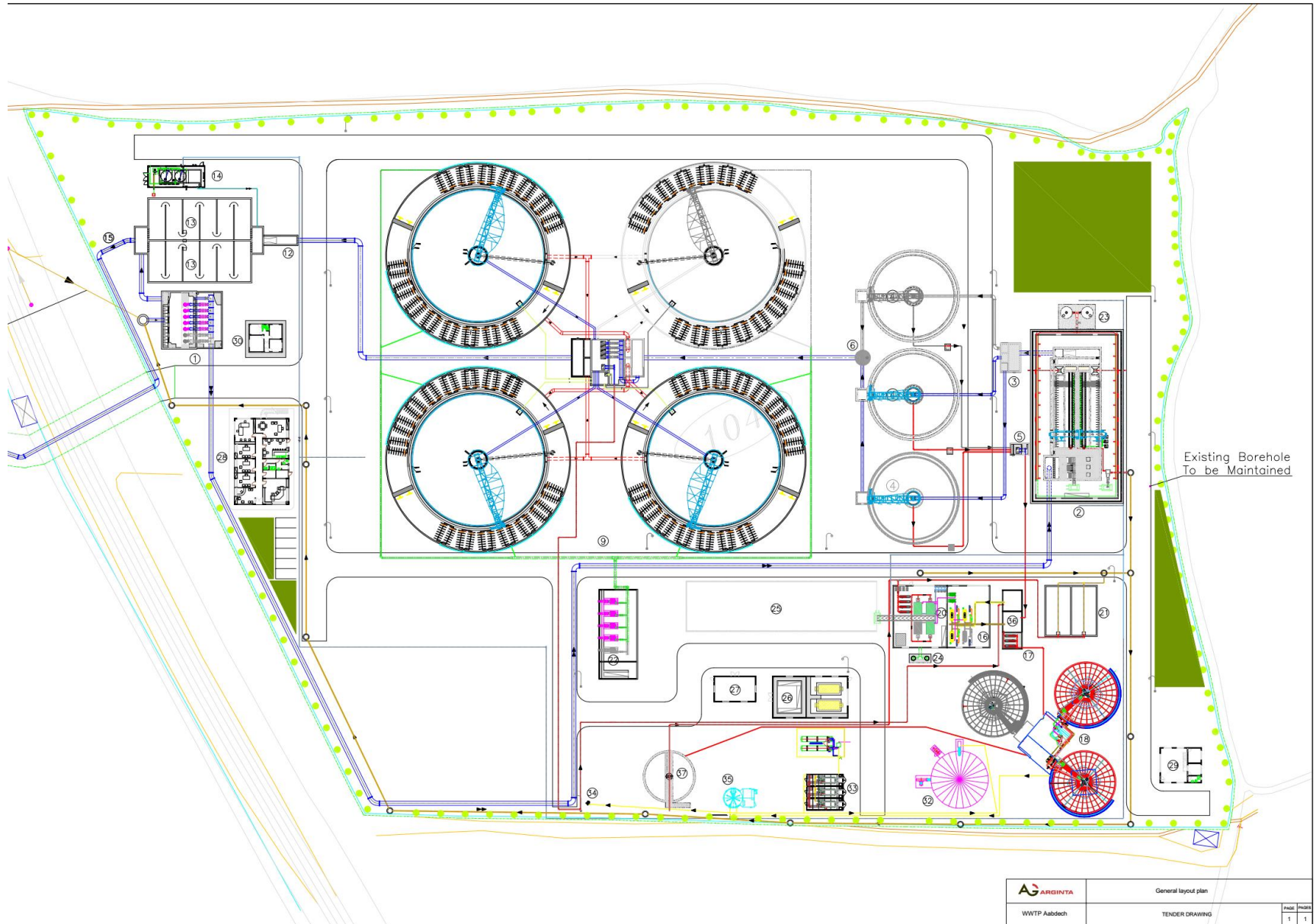
Total annual operational costs-2.681.250 €





# Alternative WWTP layout, proposed by Arginta

Total annual operational costs-1.875.000 €





Thank you for your attention!

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