



K-2 fish farm

Innovative trout farming

Marcin Juchniewicz
Gdynia, 29.03.2017



Agenda

1. Why to invest money in innovative RAS system?
2. Technology implemented at farm
3. Automatic feeding system
4. Online monitoring program
5. Expectations for the future

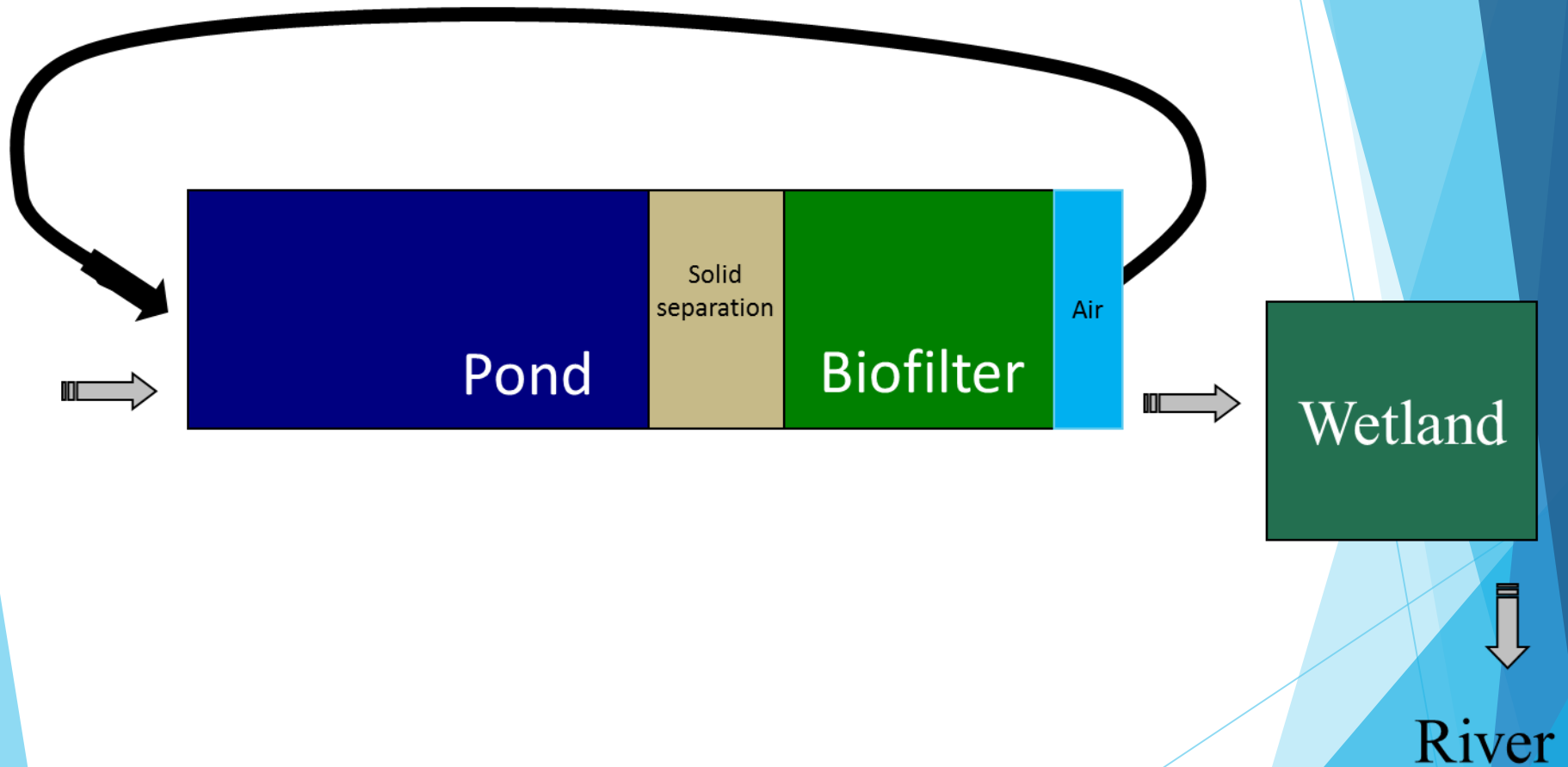
Why to invest money in innovative RAS?

1. Limits in water use
2. Environmental protection issues
3. EU funds
4. Economy

Limits in water use – Why not to reuse it?

- Stricter effluent regulations
- Competition for water resources
- Disease and bio-security issues
- Minimize water use
 - Conserve heat, reduce discharge and water source needs

Environmental protection issues



EU funds



Cost effectiveness:

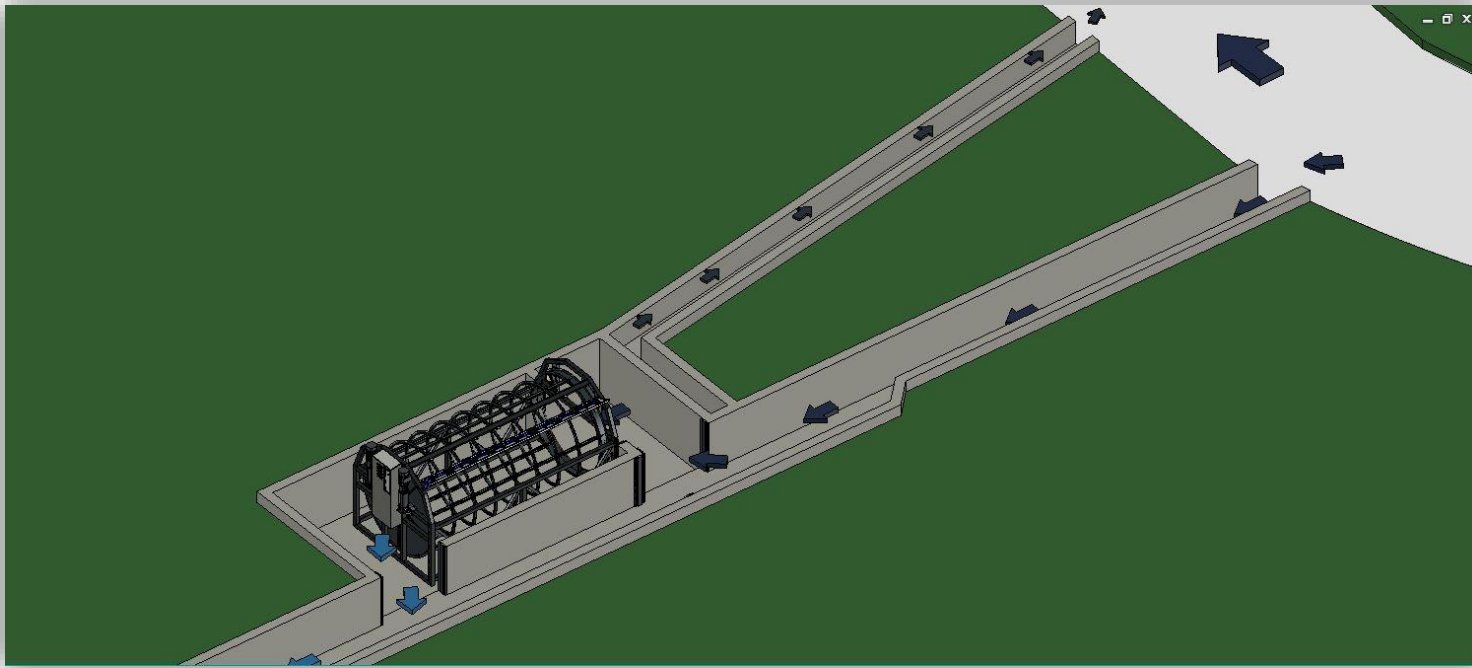
- Optimized feeding;
- Stocking density over 100 kg/m^3
- Energy unit cost reduction
- Labor unit cost reduction







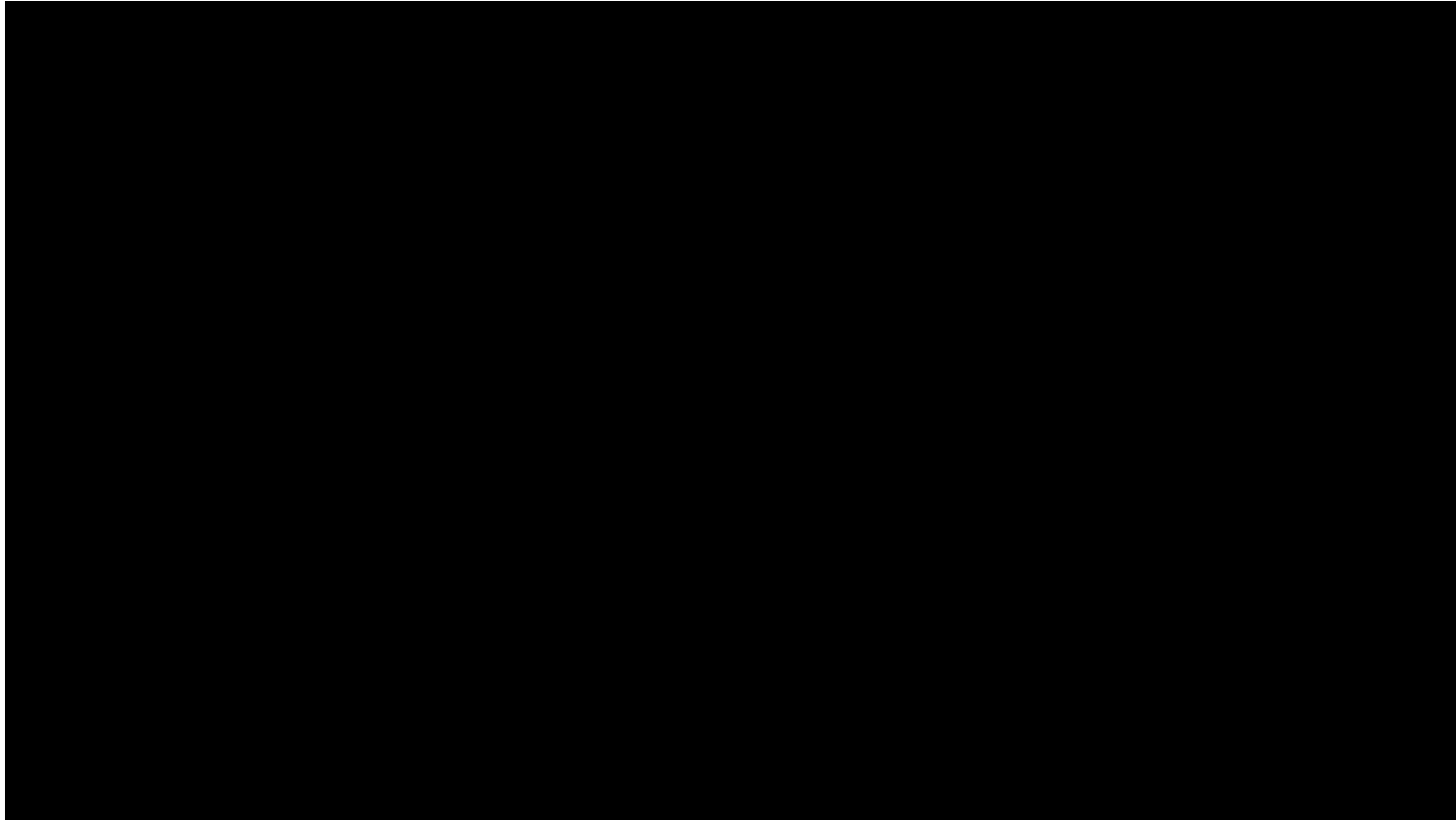


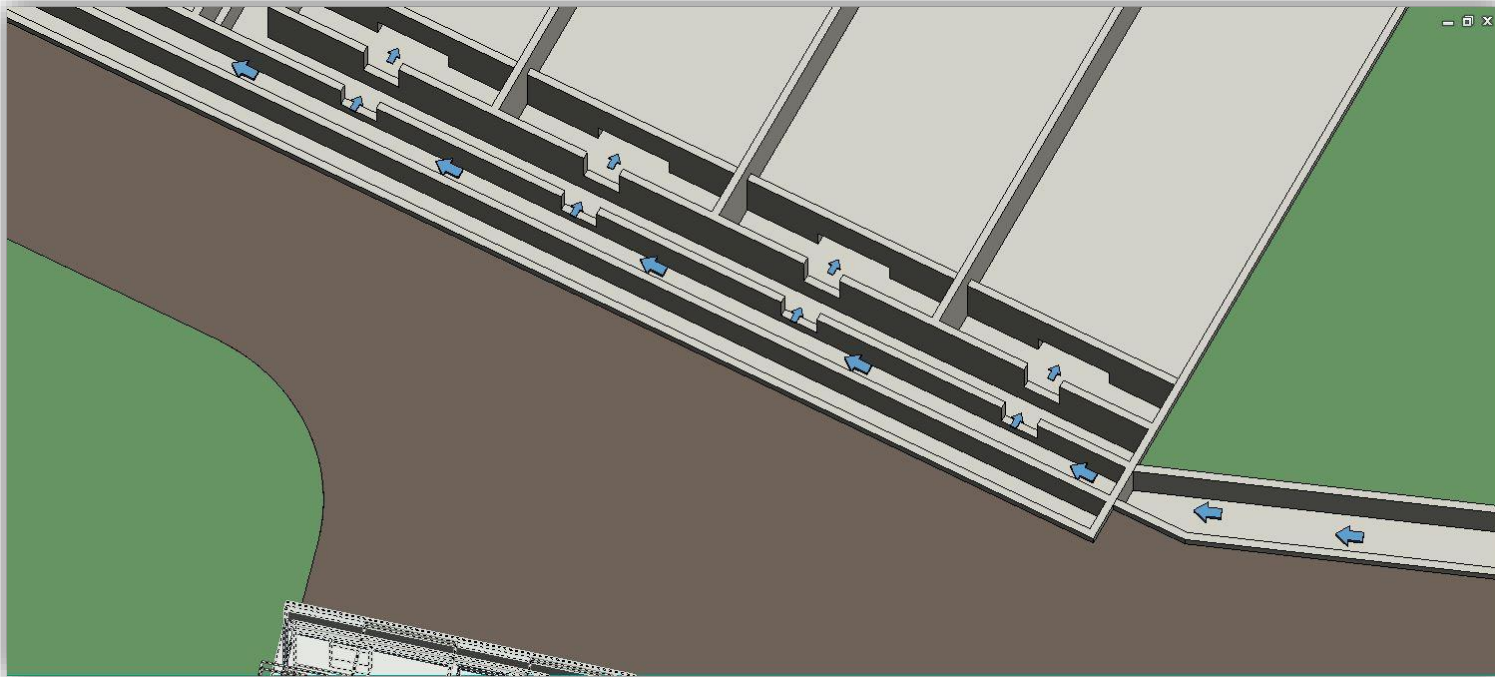


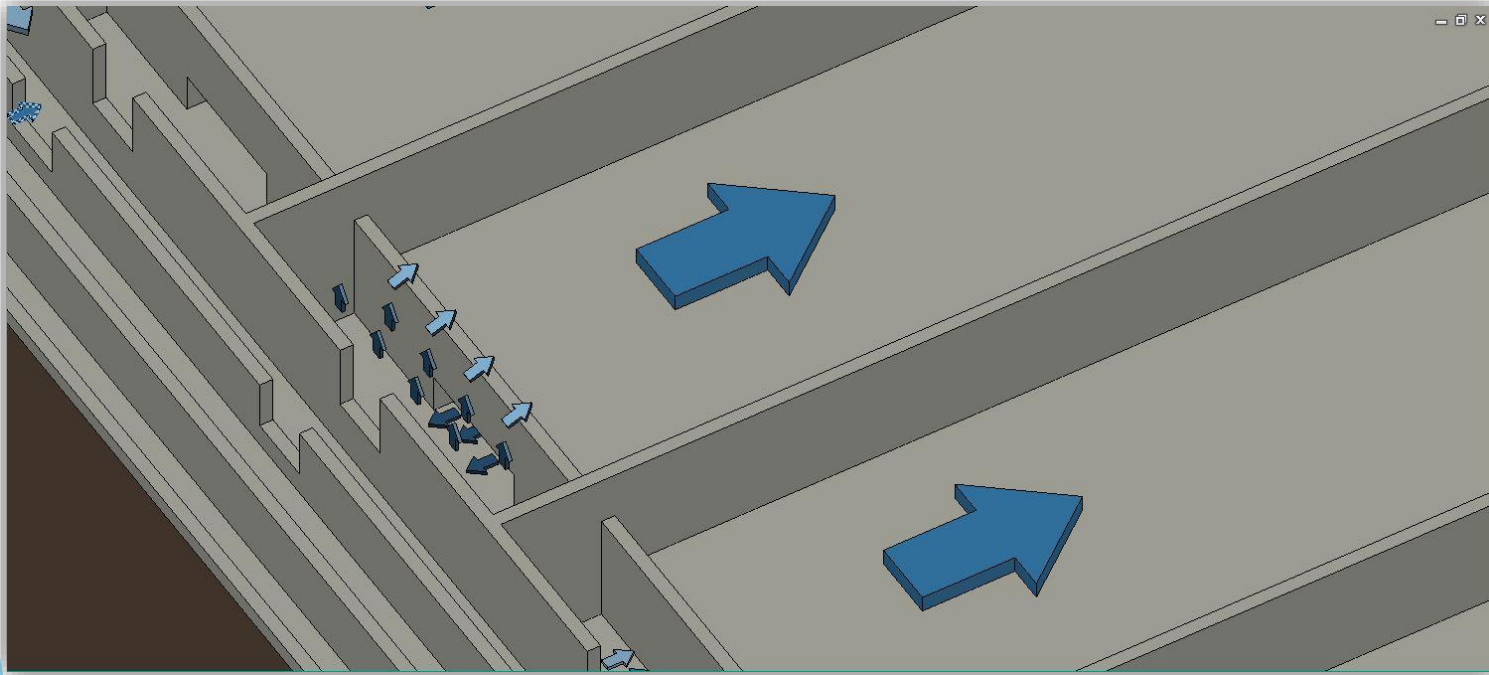


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Technology

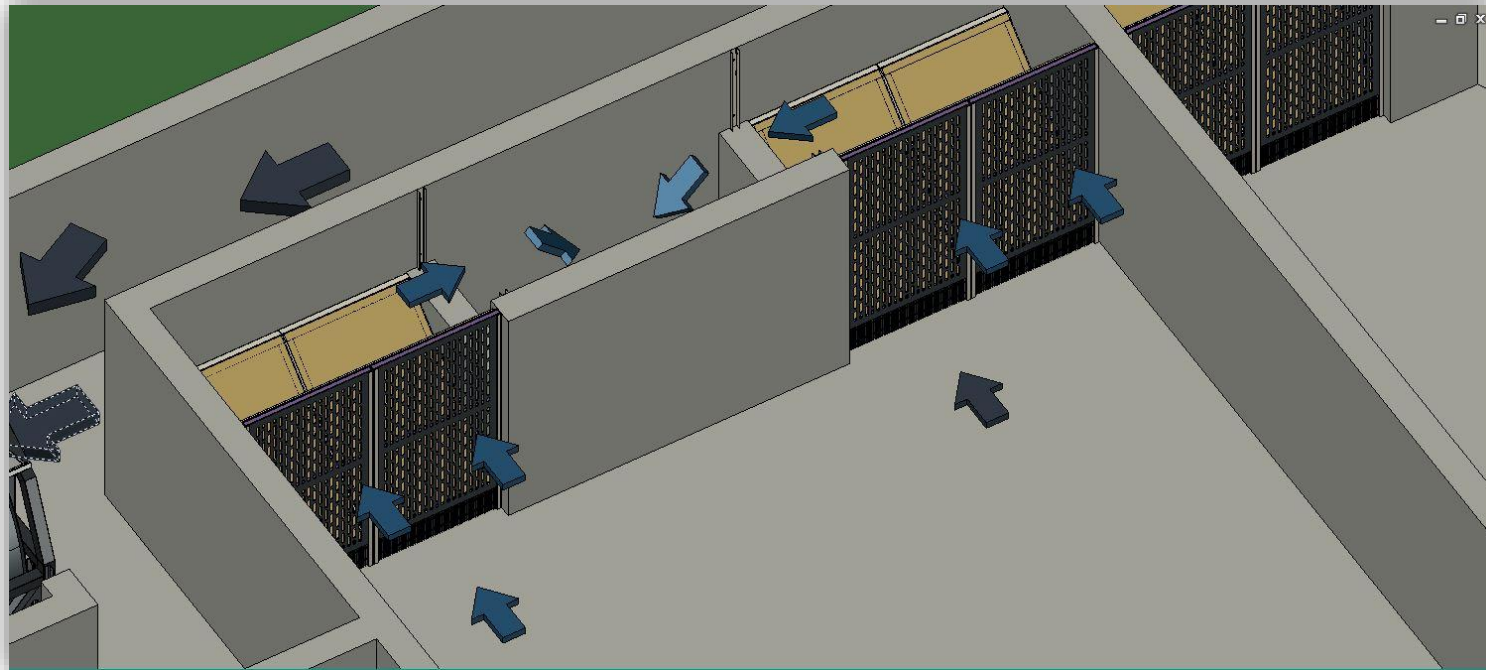


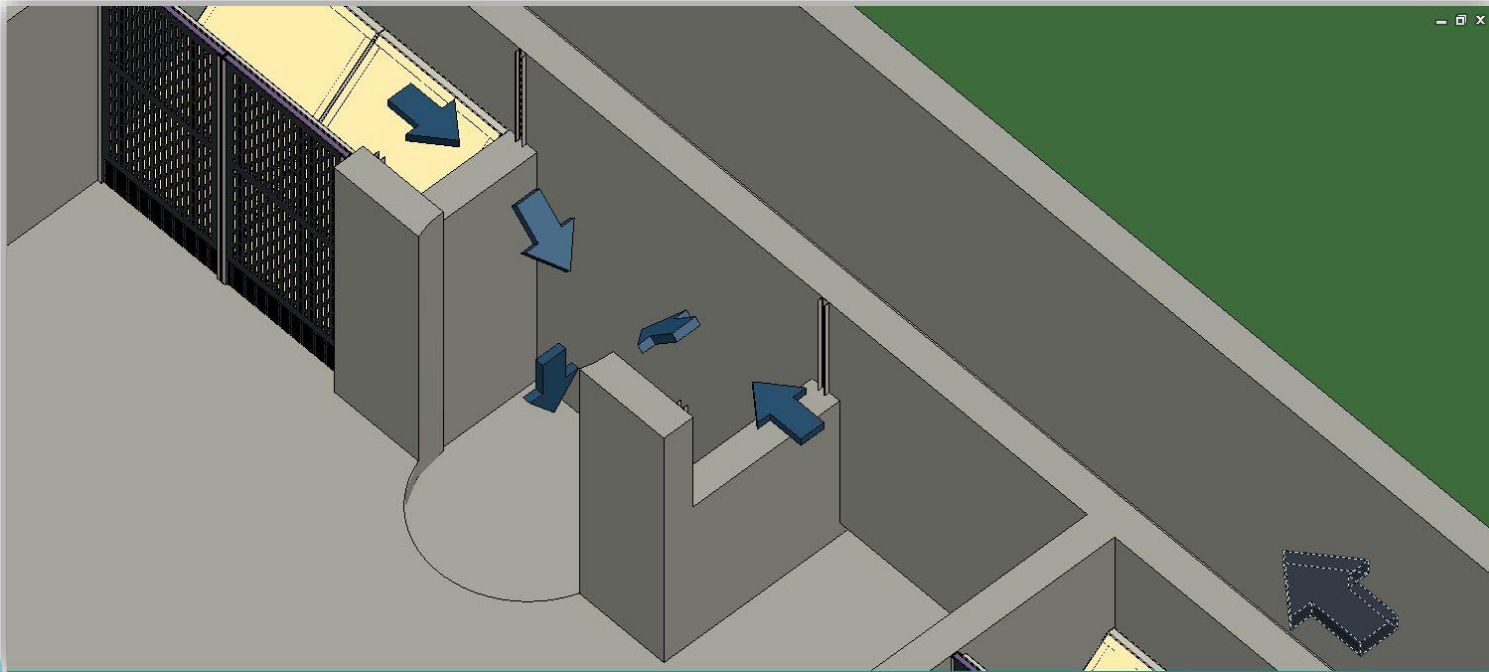


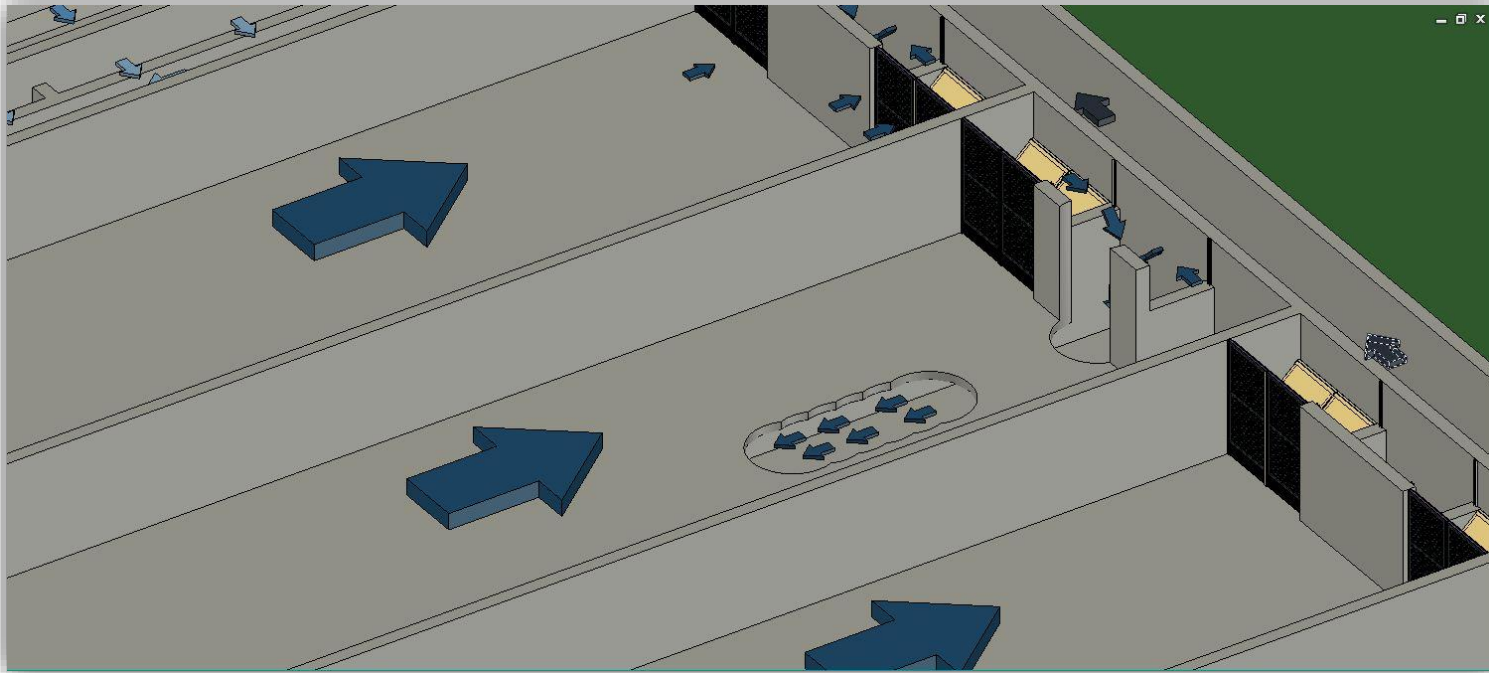


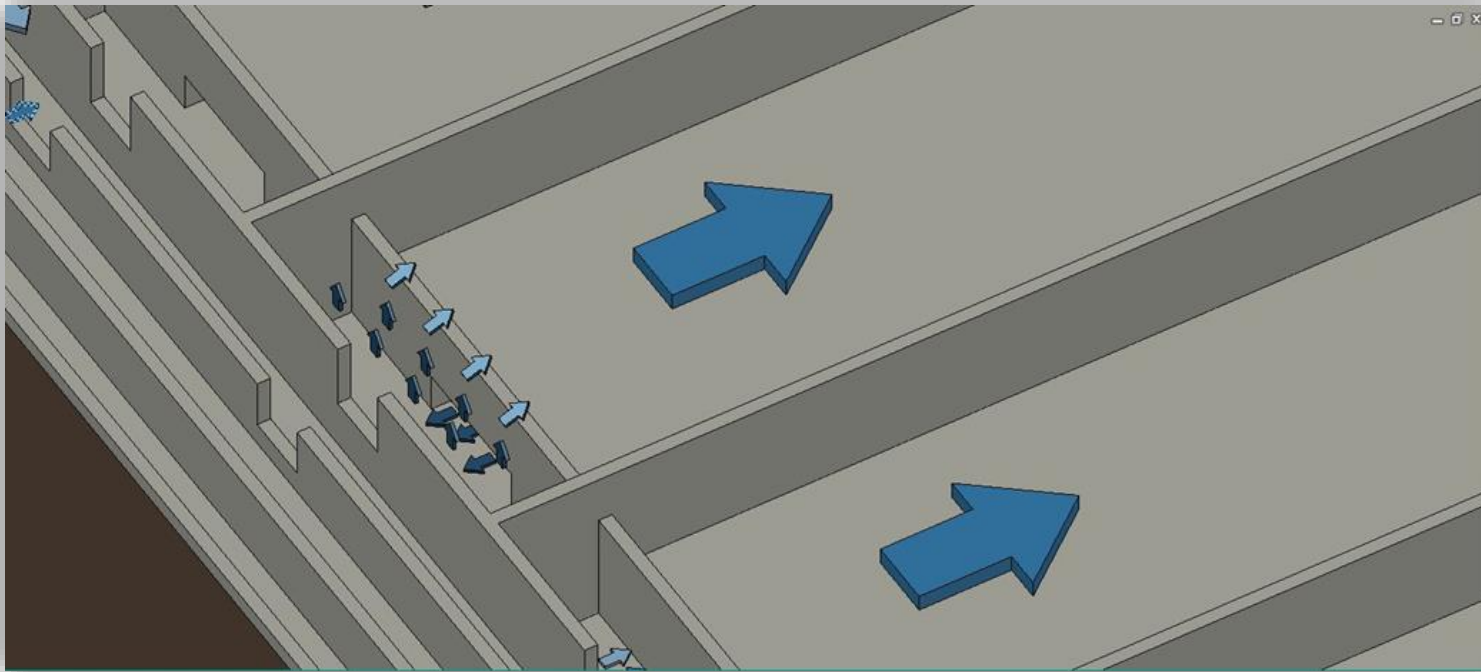
Technology

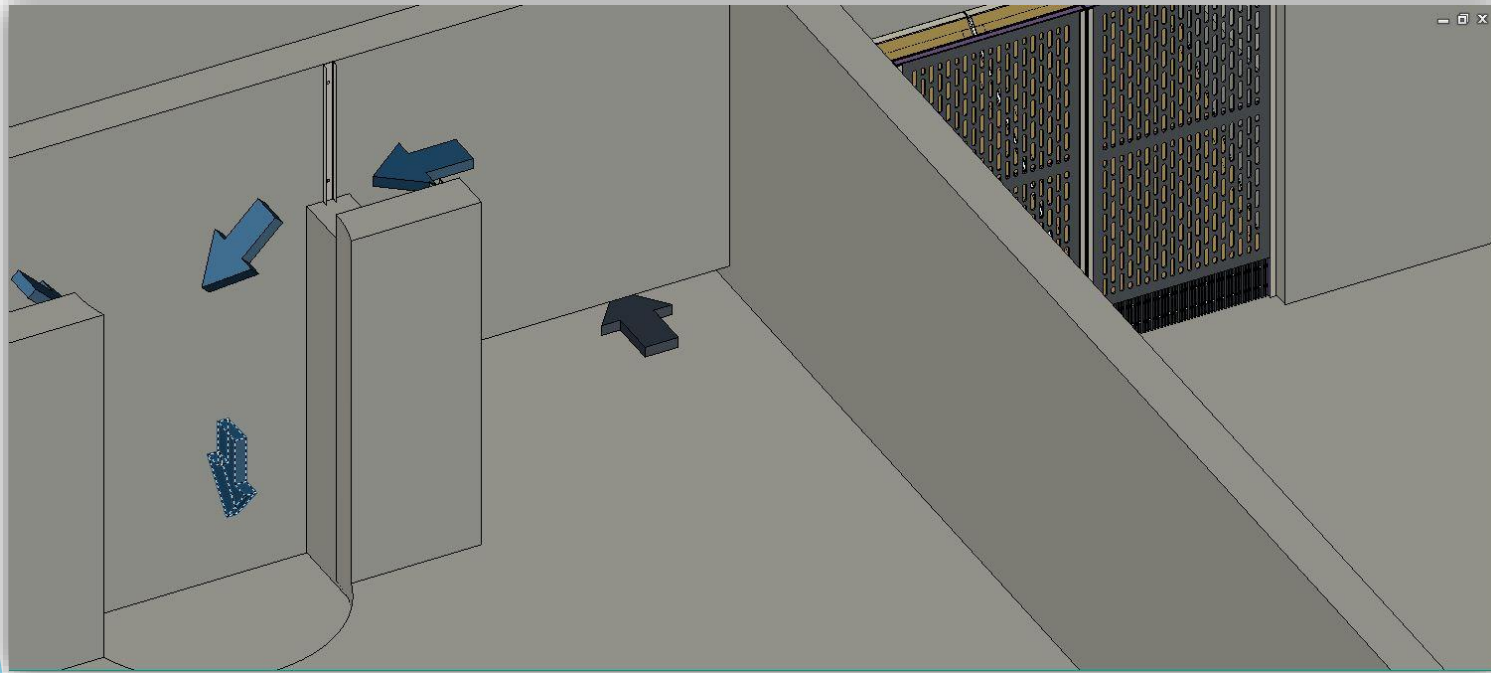


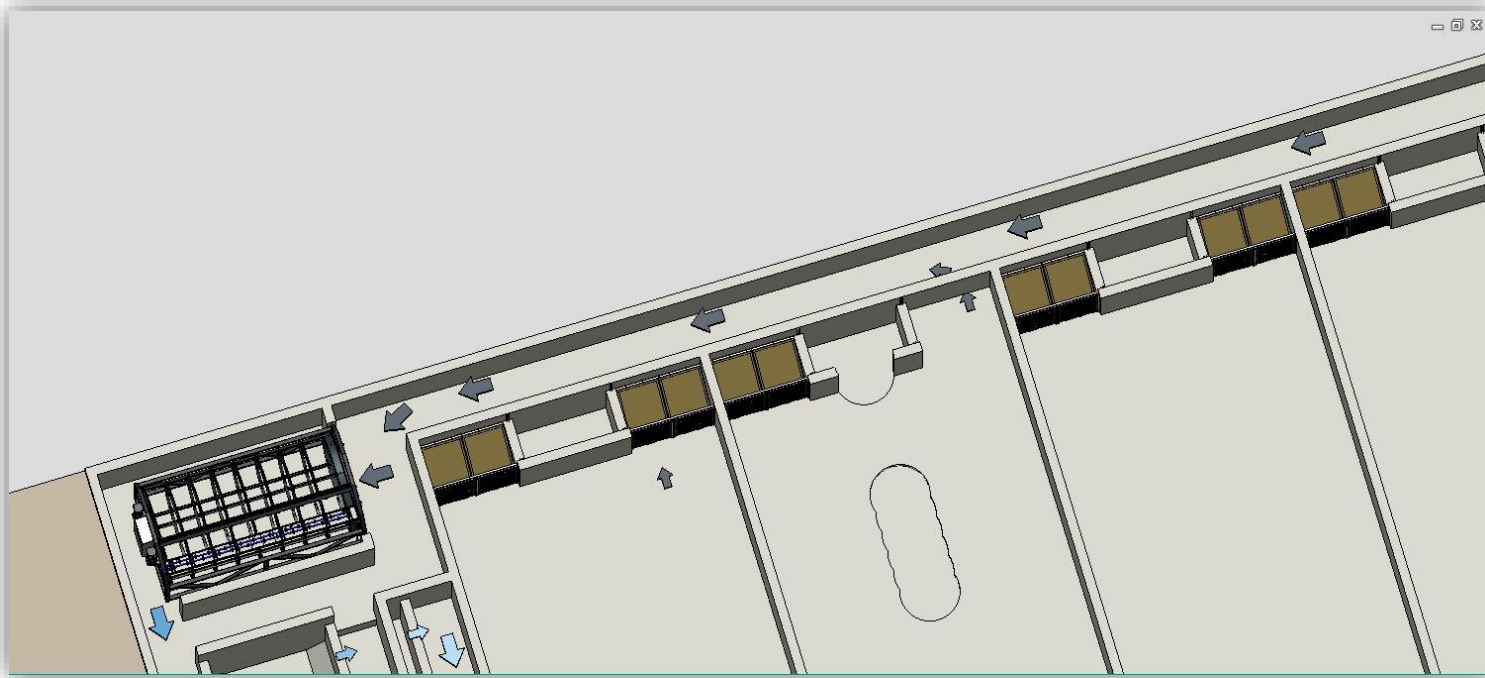




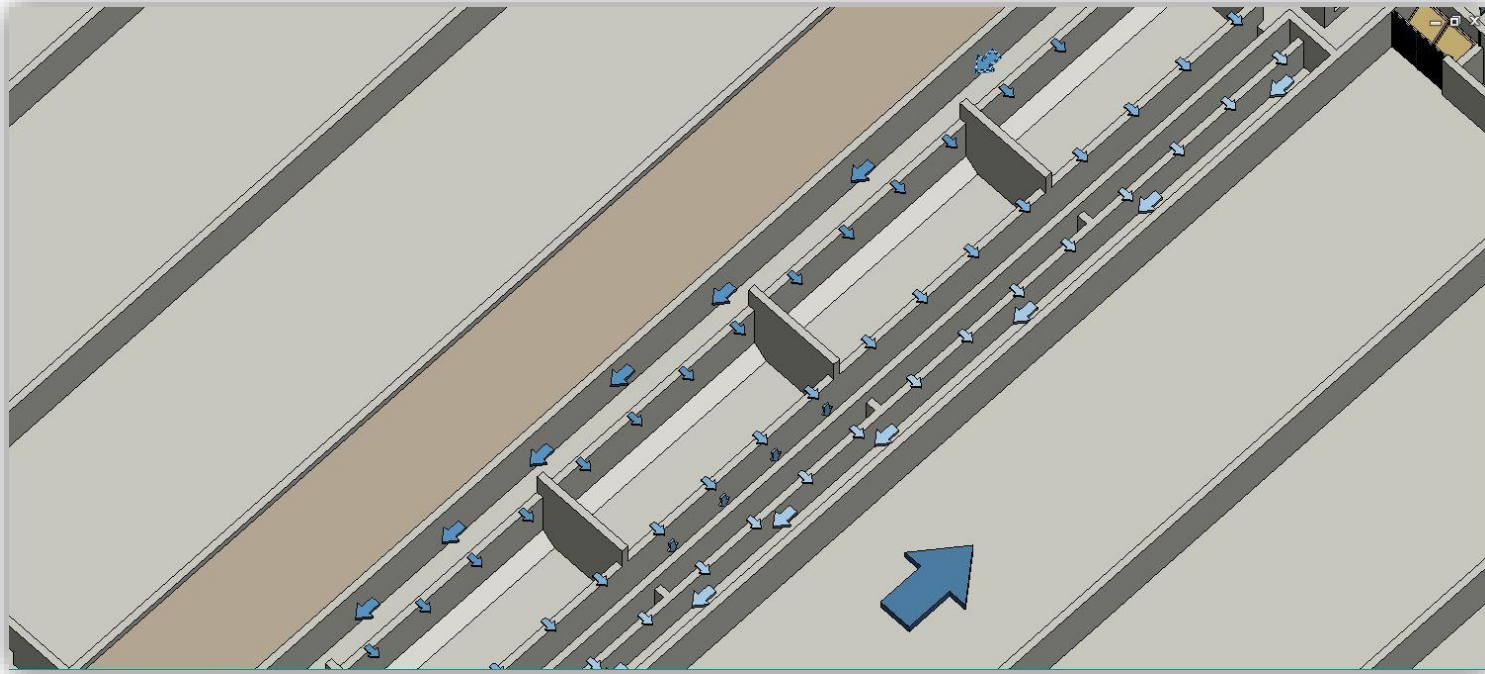




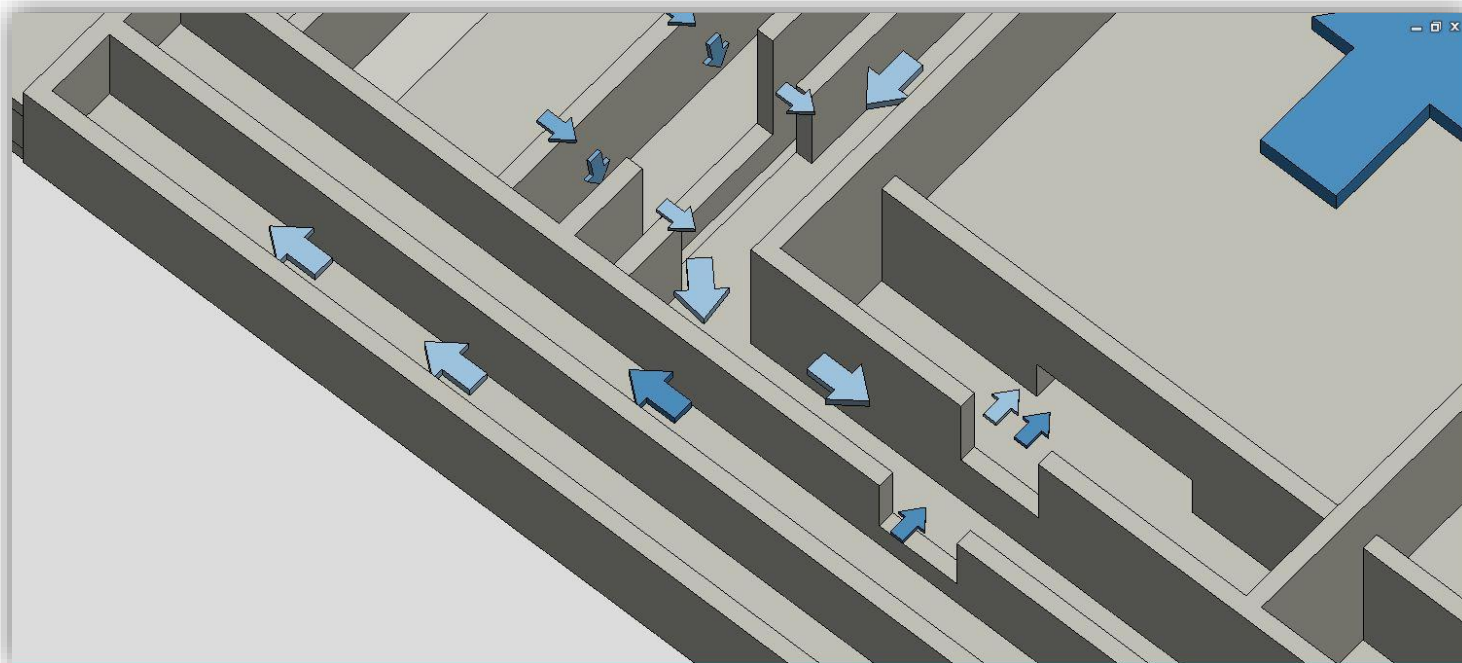






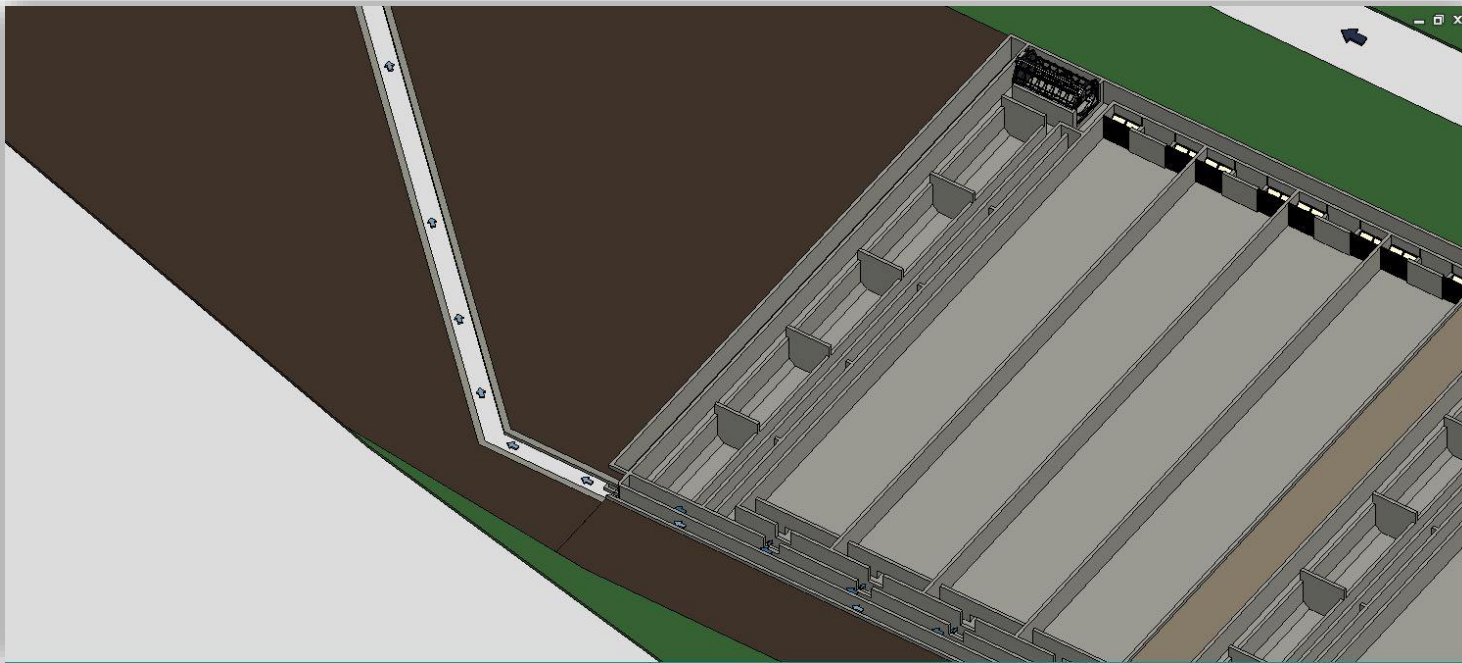


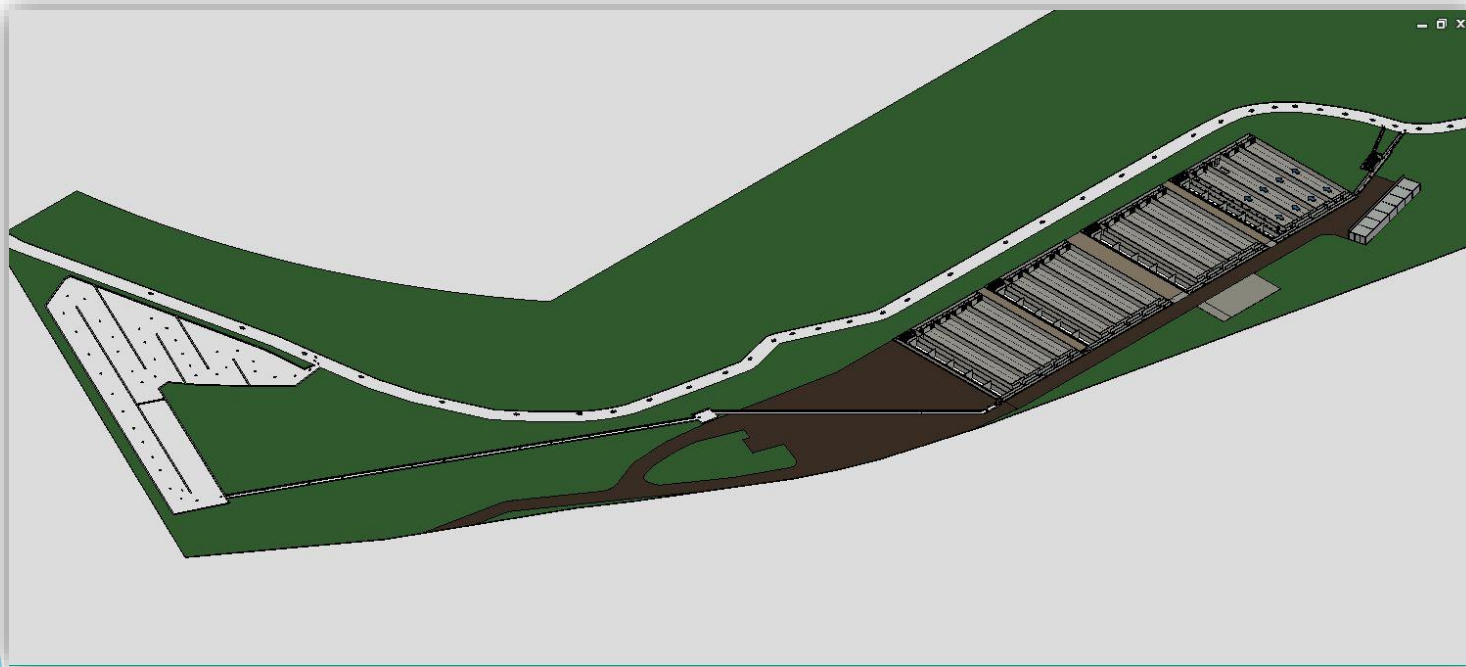


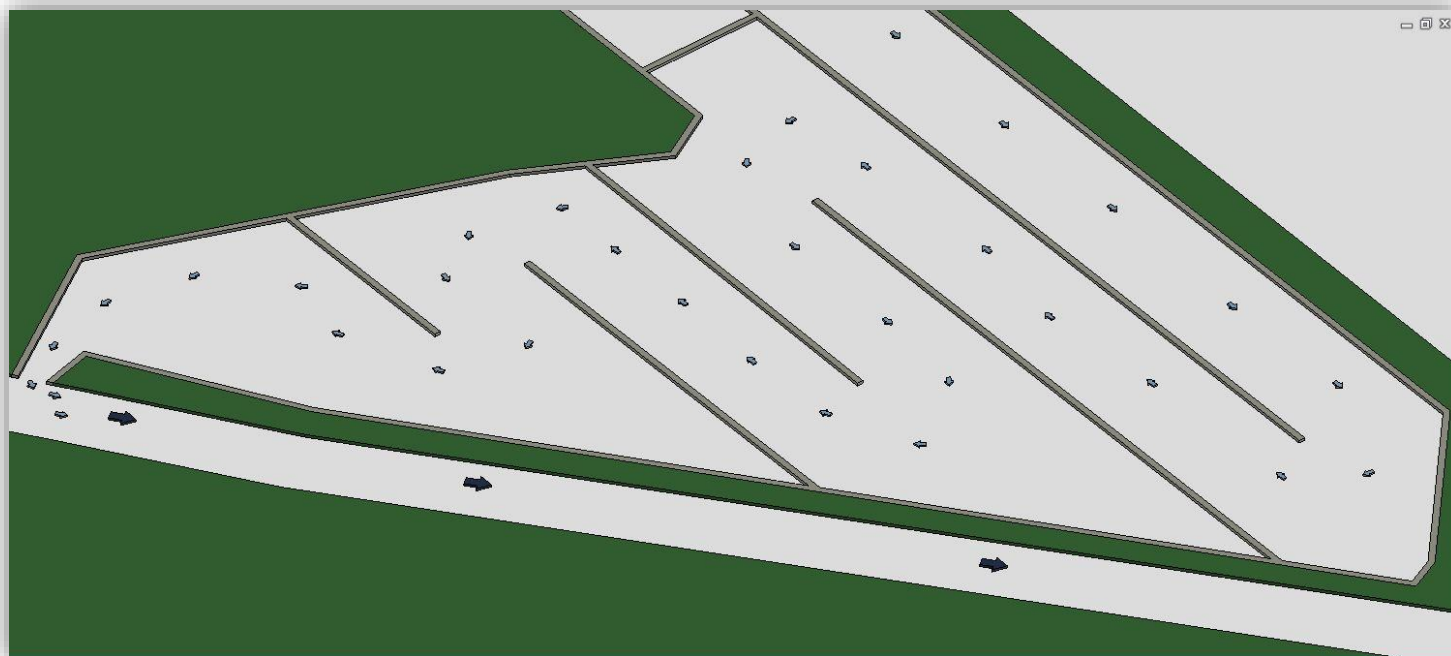




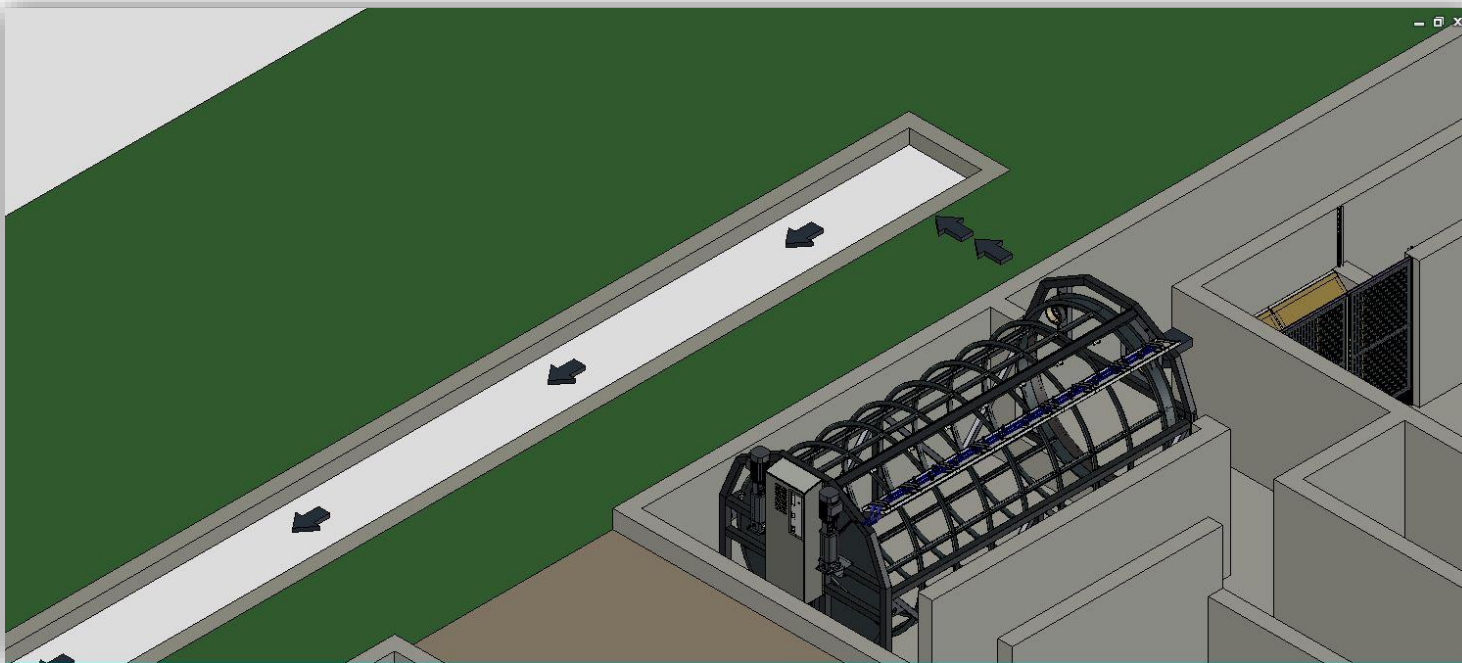
















Automatic feeding system





Monitoring program

- Control of ammonium and nitrites
 - Ammonium 0,0125 mg/l
 - Nitrites – 0,2 mg/l

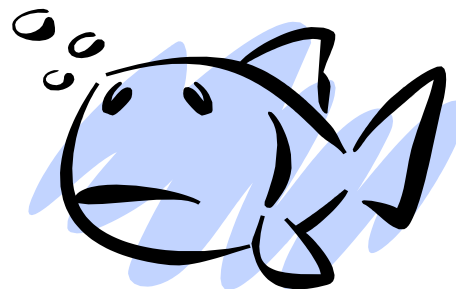


Online monitoring of water parameters and facility operations



Expectations for the future

- Improvement of biological cleaning within the entire system
- Searching underground water sources
- More efficient management of sludge ponds
- Result - happiness of fishes and farmer



Thank you for your attention

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