



SMART WATER RECOVERY

WATERLEAU

CLOSING THE WATER LOOP IN IBHAYI

IN THE NELSON MANDELA BAY, WATER SCARCITY HAS HAD MAJOR SOCIO-ECONOMIC EFFECTS, IMPACTING AN IMPOVERISHED RURAL POPULATION AS WELL AS JEOPARDIZING BUSINESS CONTINUITY



WATERLEAU

PROJECT SCOPE:

WATERLEAU CO FINANCED, DESIGNED AND BUILT
A CONTAINERIZED ULTRAFILTRATION UNIT
WHICH CAN RECOVER 240 m³/DAY OF
BIOLOGICAL EFFLUENT FOR WATER RE-USE
(UTILITIES) IN THE FACTORY

PROCESS:

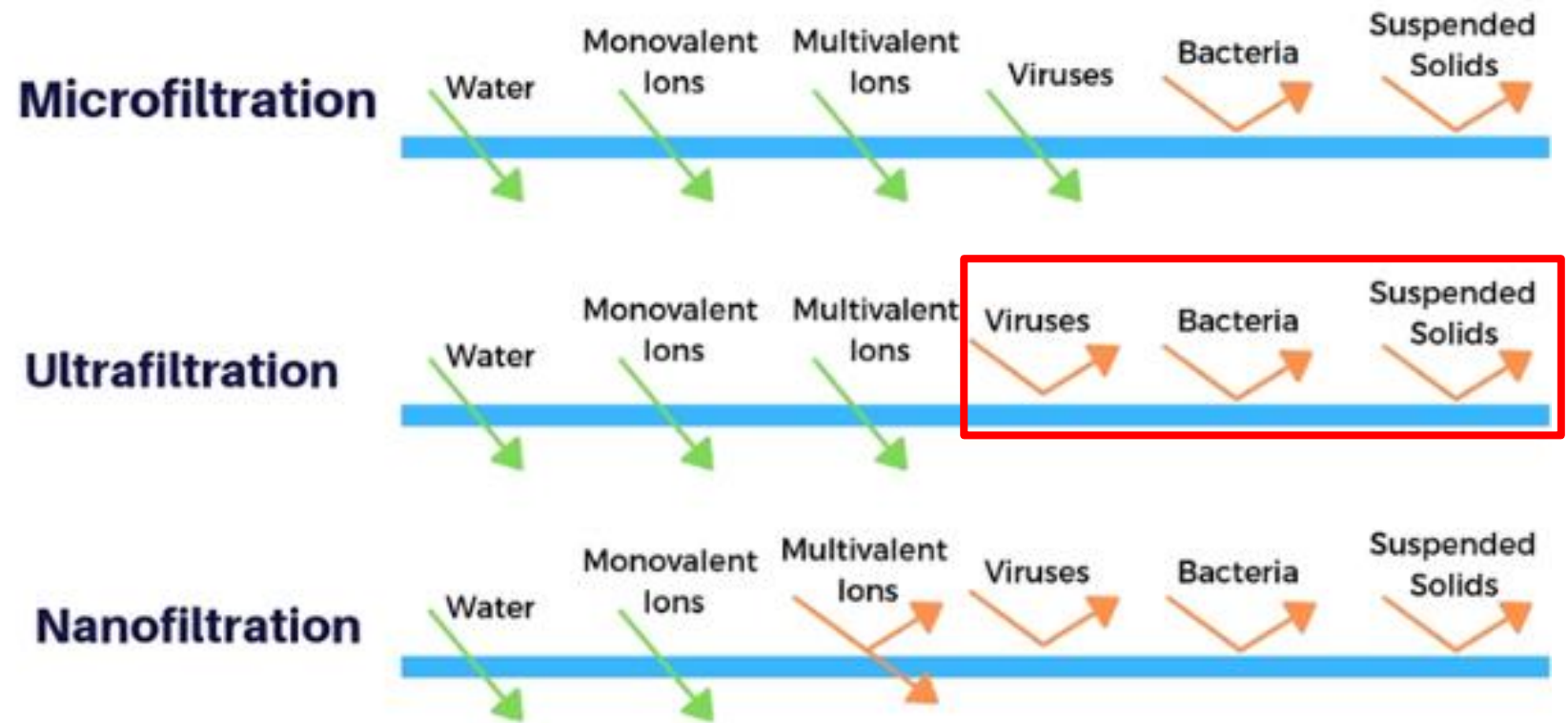
- Bio-effluent from the anaerobic wastewater treatment is used for crop-farming
- Each month up to 2,000 kg of spinach is harvested
- This creates employment opportunities, as well as provides fresh food for the local community
- In a new additional treatment step, the crop-farming effluent is recovered and treated
- Treated water is re-injected into the brewery instead of being discharged and wasted



TECHNOLOGY:

FILTER PORE
SIZE:

0.04 microns



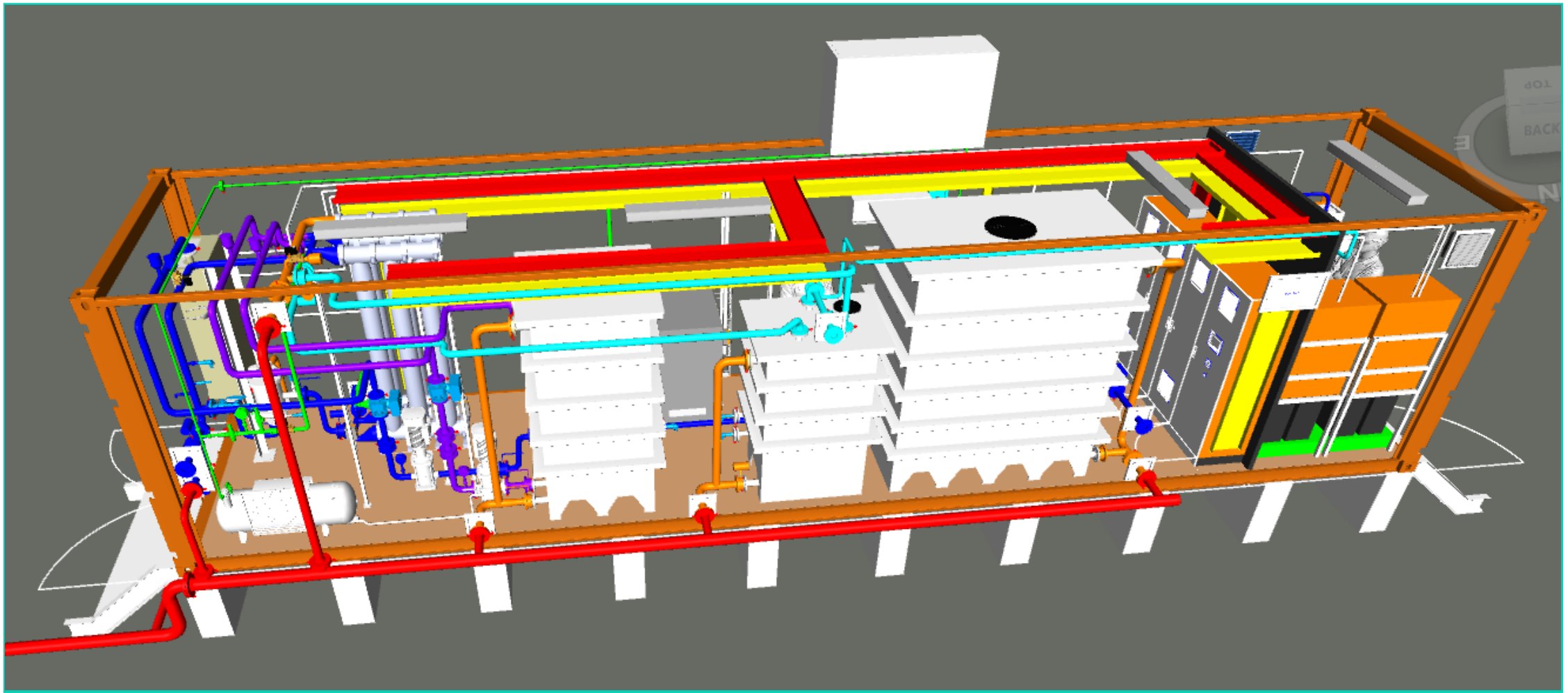
GOAL:

- DESIGN & BUILD A WATER TREATMENT PLANT THAT IS
- **FULLY AUTOMATED** / TURN-KEY
- **MODULAR** / SCALABLE
- CAN BE **INSTALLED ANYWHERE, QUICKLY**
- **SAFELY OPERATED & MAINTAINED BY ANYONE** WITH THE APPROPRIATE TRAINING

CHALLENGES:

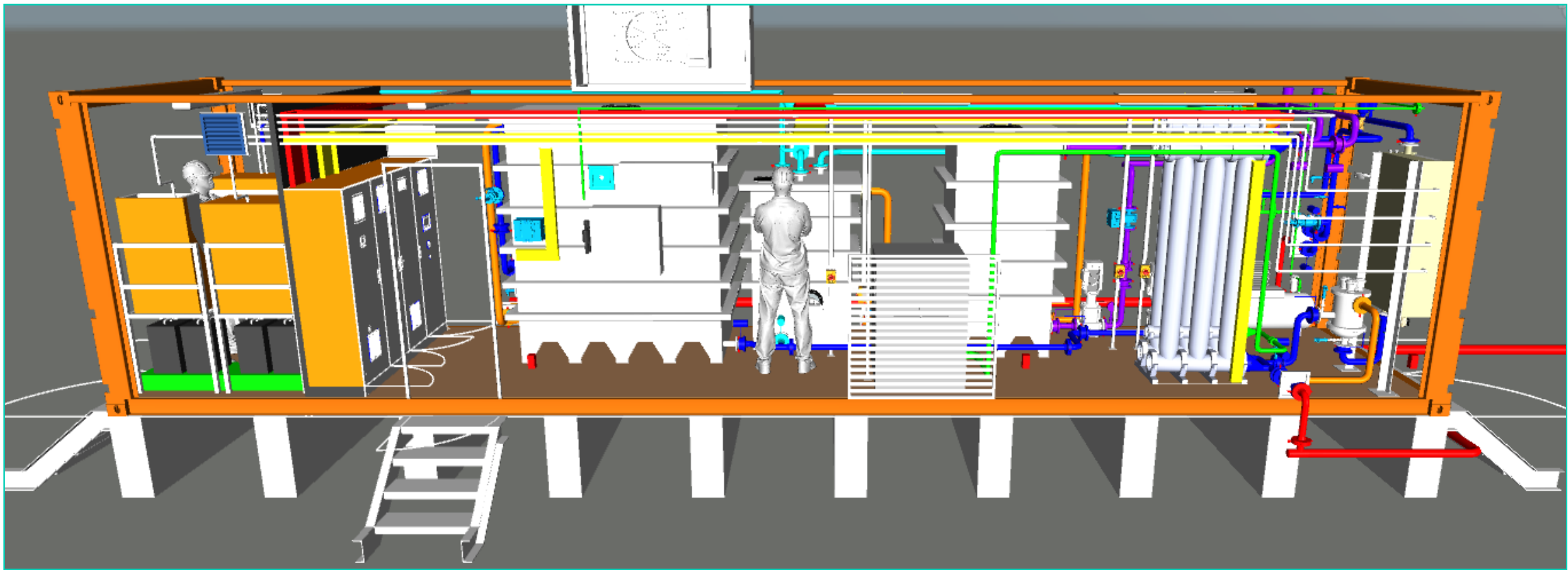
- CREATING A MOBILE SOLUTION, INCLUDING
 - TANKS
 - UTILITIES
 - CHEMICAL DOSINGWHILE STILL ALLOWING SPACE FOR MOVEMENT INSIDE
- MAKE OPERATIONS AS SAFE & EASY AS POSSIBLE
 - MINIMAL SUPERVISION
 - MINIMAL SAFETY HAZARDS

3D MODEL:



WATERLEAU

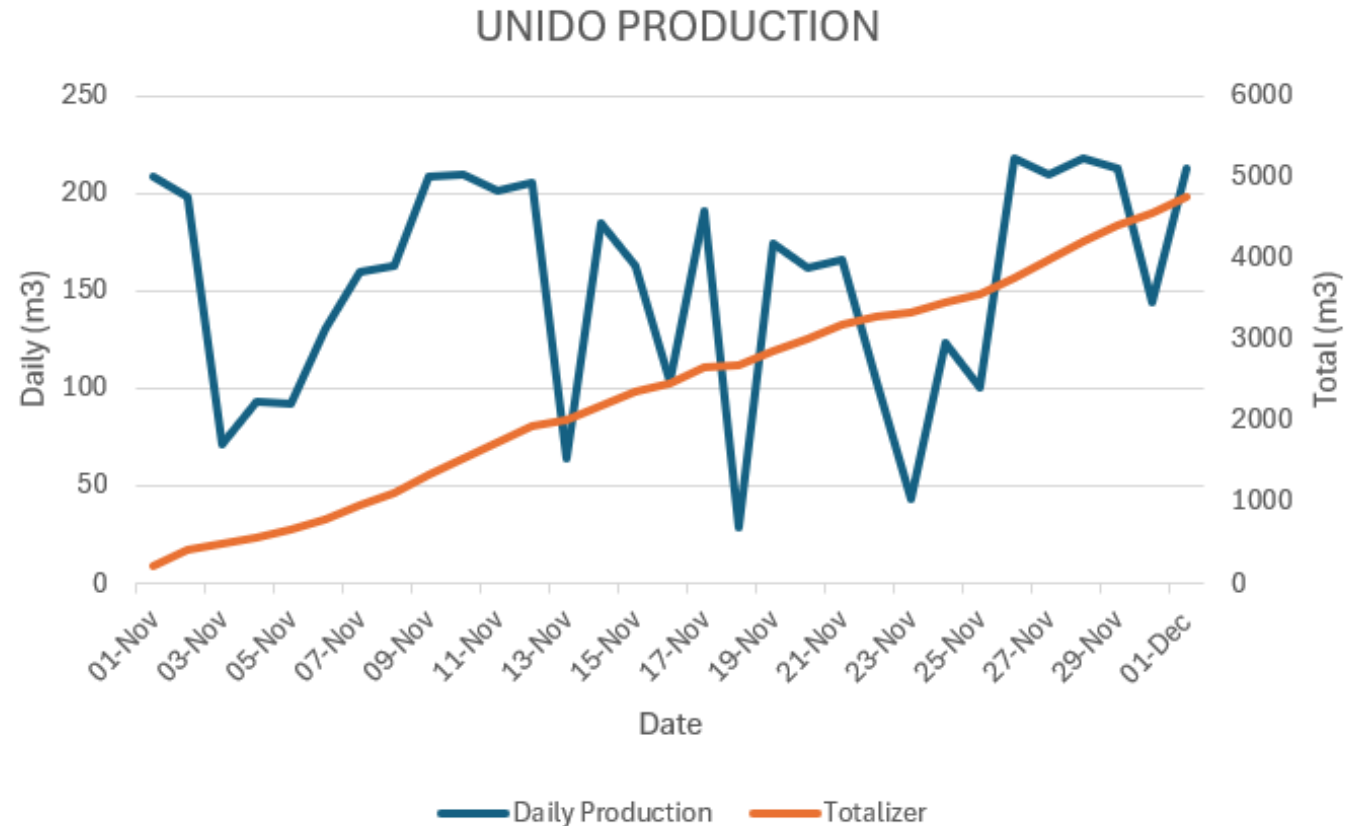
3D MODEL:



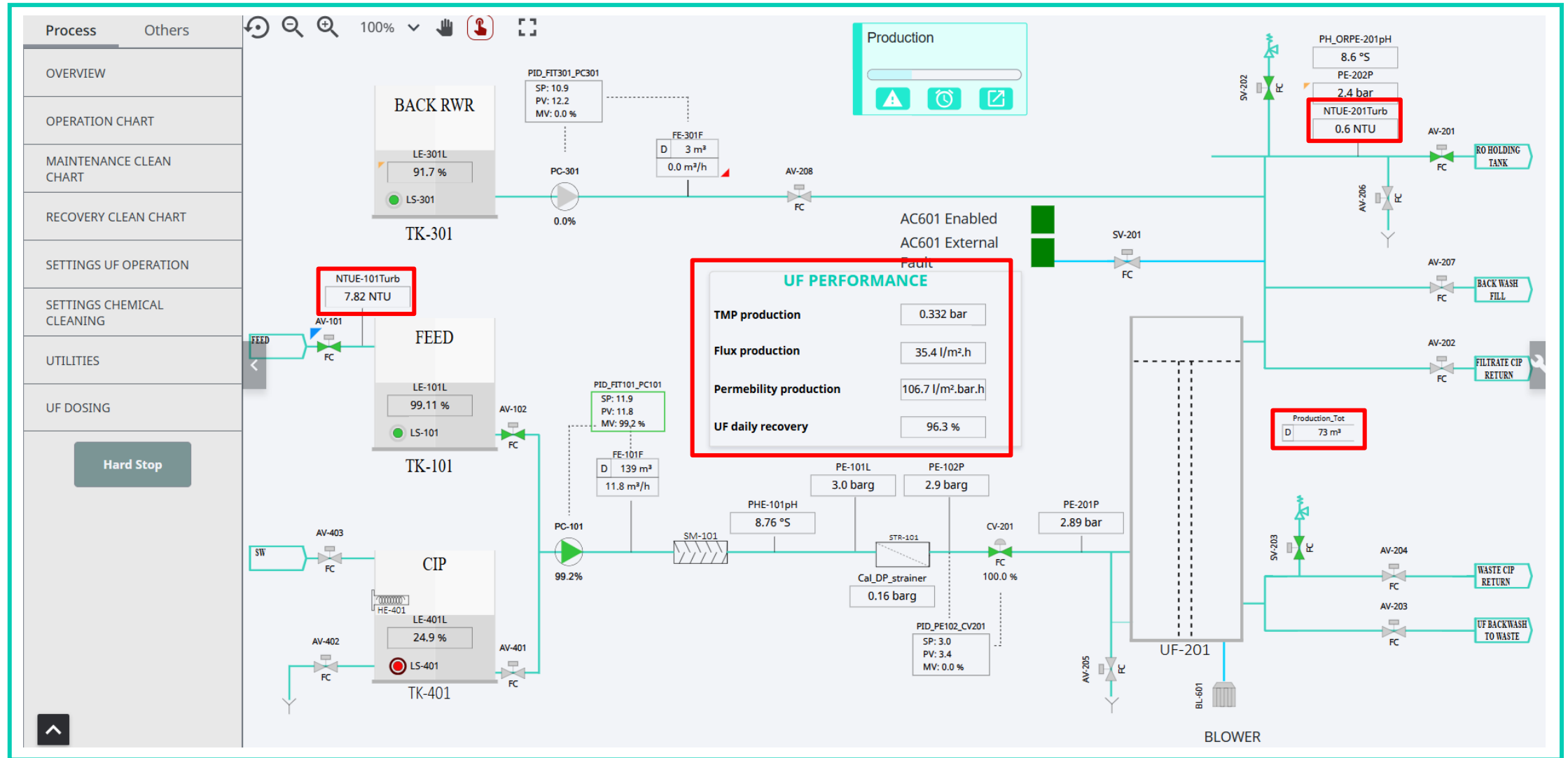
RESULT:

- MONTHLY PRODUCTION

- 4700+ M3
- 2x OLYMPIC SWIMMING POOLS

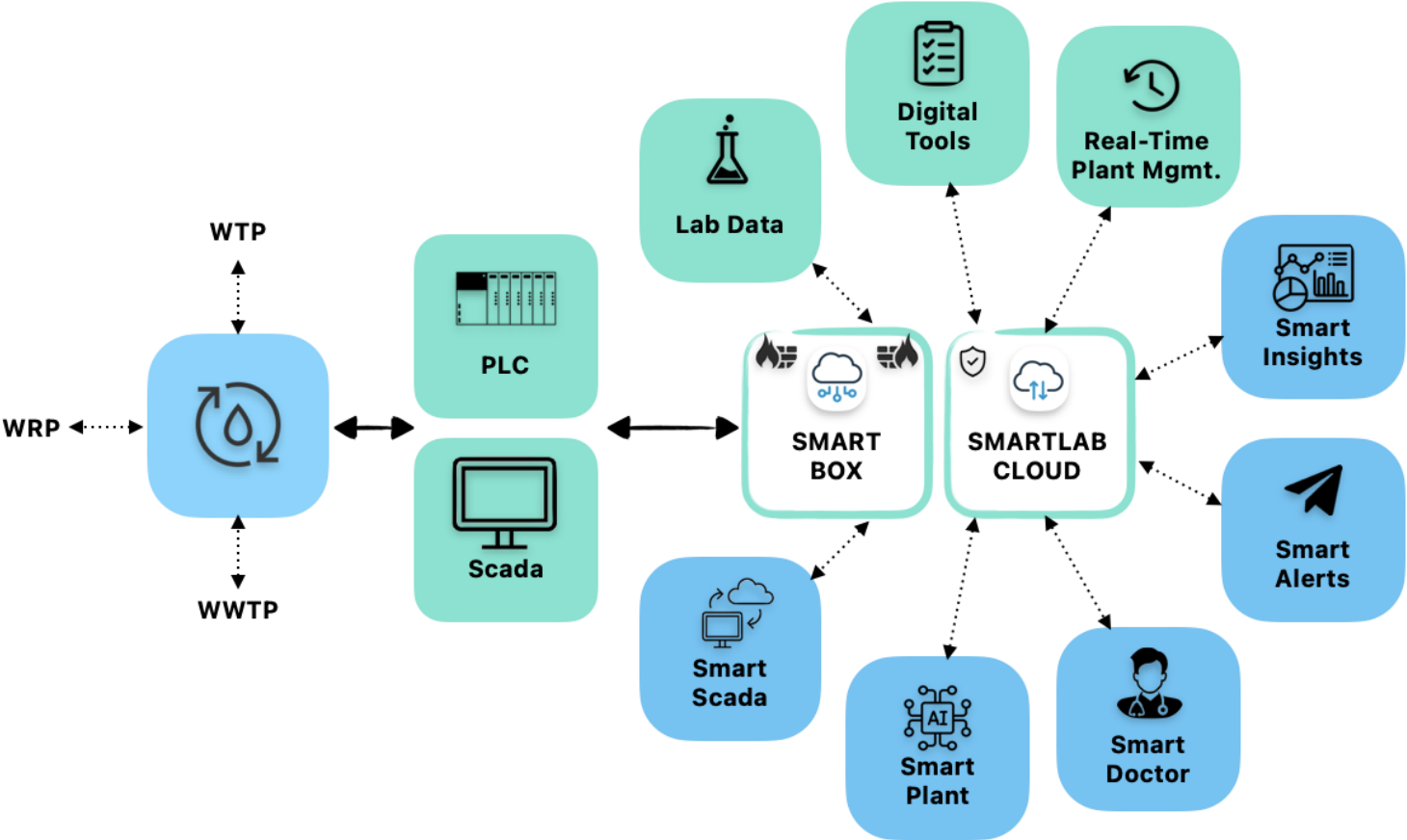


SCADA:



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THE BIG PICTURE

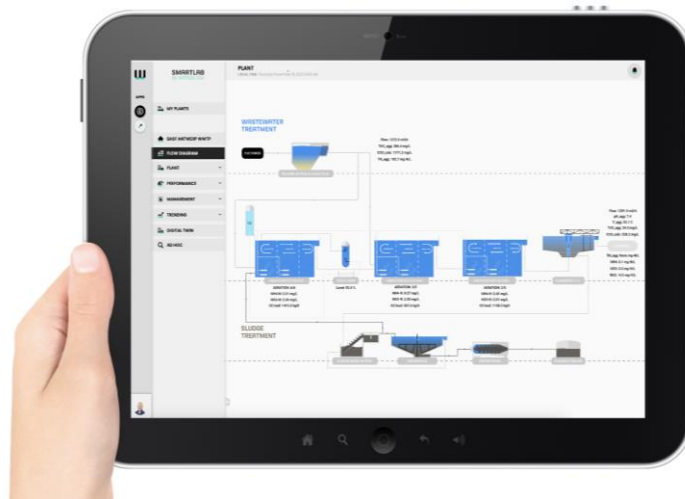


SMARTLAB[®] CONNECT

(Basic Features)



Flow Diagram



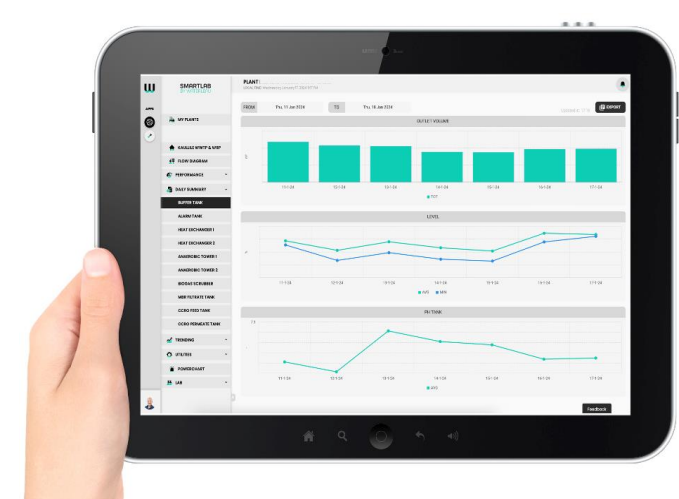
- Real-time plant performance
- One-page plant monitoring

Performance



- Performance details per technology
- Evaluate if performance in line with design

Daily Summary



- From data to information
- From Real-time to Daily Summary
- Daily, weekly, monthly reports

SMARTLAB®

Our KPI's, Your Operational Gains



Stable Operation



Quality Compliance



Chemical Savings



Energy Savings



Manpower Savings