



# Bioburden Robot Automation

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RAYA 2023 Finalist Event



# The Challenge – fully automated Bioburden water testing

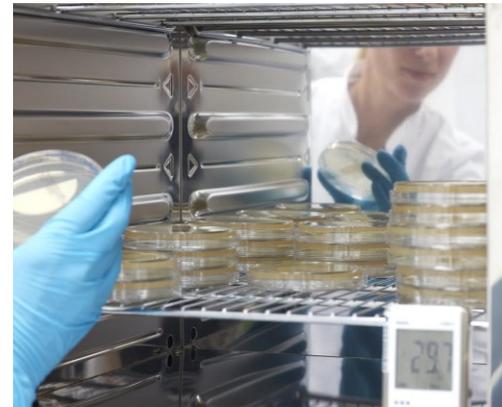
**Samples & Labware**  
handling and storage



**Filtration process** with  
funnels, membranes  
and agar plates in a  
Safety Workbench



**Incubation** at 2  
different temperatures  
over 5 days

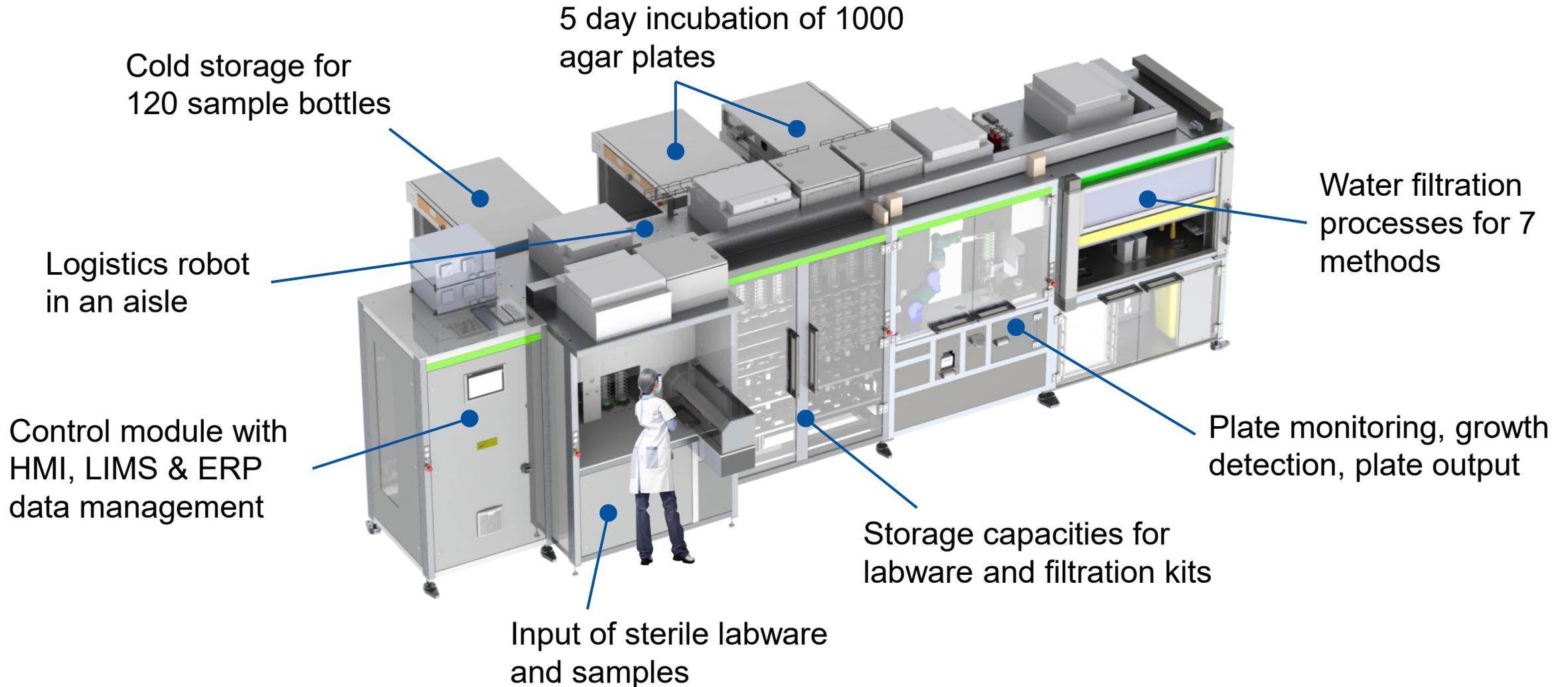


**Continuous plate**  
**monitoring** checking  
daily for bacteria or fungi  
growth



**Whole process carried out under controlled conditions.**

# The modular automation concept with 3 robots



# VIDEO



# Features of the Bioburden Robot Automation

## ❑ **Attractivity and drivers**

Mandatory test for biologics manufacturers – thousands of samples – mostly manual – repetitive process steps

## ❑ **Cost effectiveness**

~ 30.000 samples per year – cost avoidance of min. 8 FTEs – calculated ROI ~ 3 years

## ❑ **Area of Application**

QC-Microbiology laboratory to support monitoring for environment, process, cleaning, product/drug release according GMP regulations in cleanroom environment

## ❑ **Flexibility**

Modular, scalable design – various bottles, plates, labware, filtrations kits processible – adaptable robot workflows and methods – easy access via 10 doors and windows for cleaning and maintenance

## ❑ **Easiness to integrate**

Compact mechanical design, single function units and modules available – optional customization regarding labware, methods, volumes, liquids, LIMS/ERP data interface

# FINAL MESSAGE



The project and the solution demonstrate the right path, not only for the two partners Goldfuß and Lonza, but also for our society.

We must work together to make industries and products future-proof in the DACH region and secure the company locations.

This robotic automation is just a beginning !