



GGSR Glove & Gown Sampling Robot

RAYA 2023 Finalist Event

Michael Kjølner Hansen &

Asbjørn Kjær Eliassen



Introduction

<https://youtu.be/KO7eW5V6pTk>

Drivers

Human to Robot collaboration



Drivers

Human to Robot collaboration

Operator performs.
Observantly.



Drivers

Human to Robot collaboration

Operator performs.
Observantly.

Robot collects.
Uniformly.



Drivers

Higher sample quality



Drivers

Higher sample quality

No variance in sampling



Drivers

Higher sample quality



No variance in sampling

No human sample registration

Drivers

Supports Annex 1 increased requirements for samples.



Drivers

Supports Annex 1 increased requirements for samples.

Decrease the need for
additional
trained **personnel**



Drivers

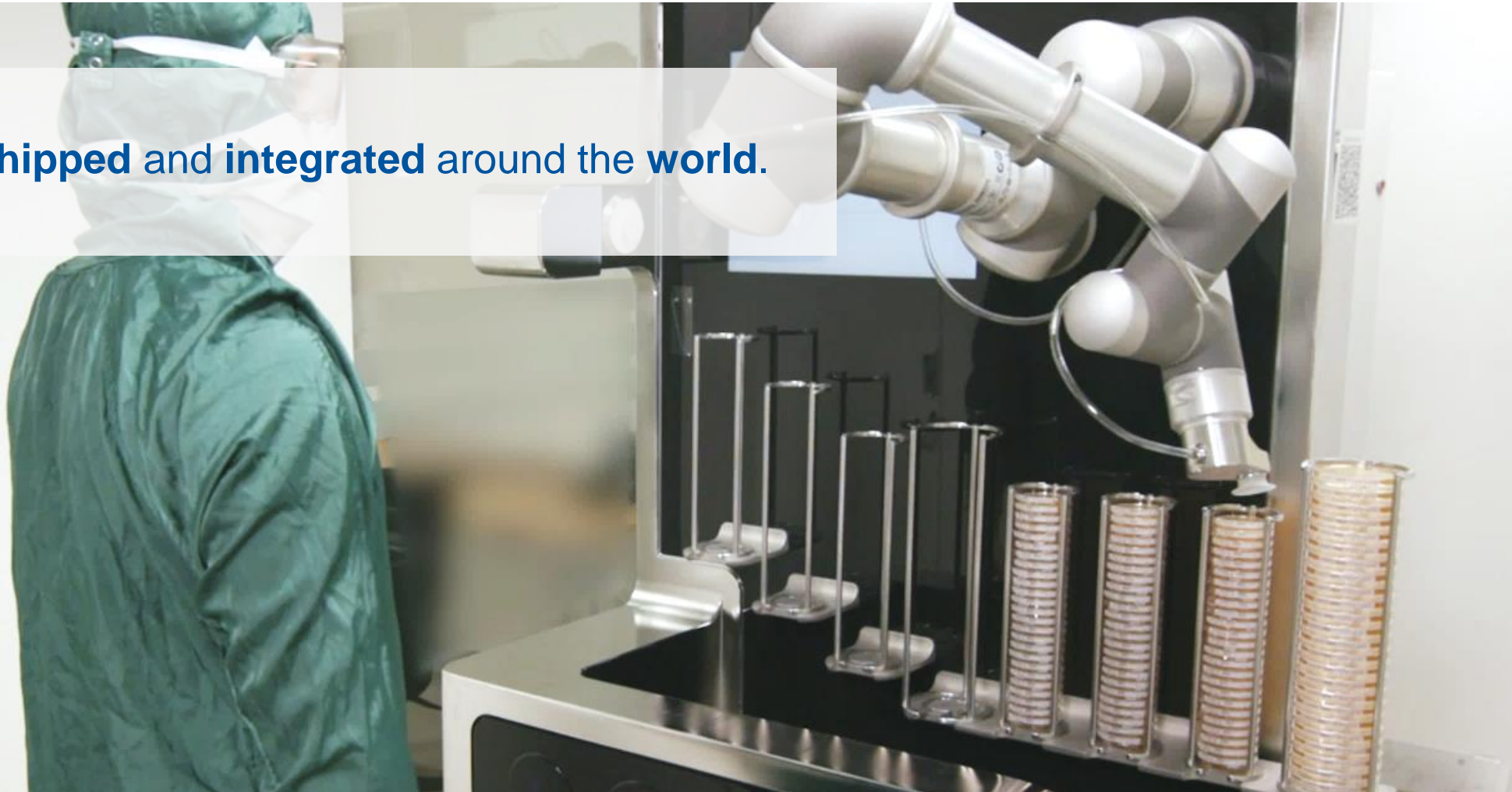
Standard solution



Drivers

Standard solution

Can be **shipped** and **integrated** around the **world**.



Drivers

Standard solution



Can be **shipped** and **integrated** around the **world**.

20 GGSR's are **currently running** in
Brazil, USA, France and several Sites in Denmark.

Drivers

Aseptic conditions



Drivers

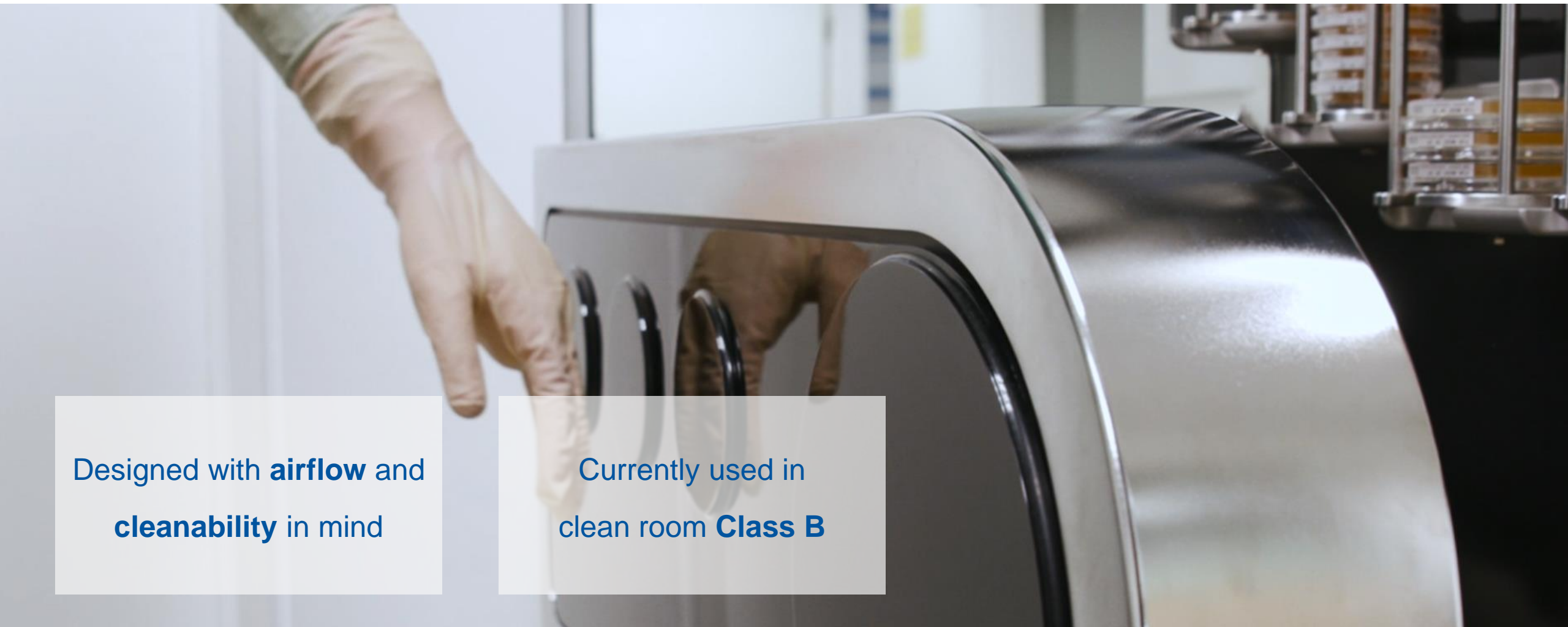
Aseptic conditions



Designed with **airflow** and **cleanability** in mind

Drivers

Aseptic conditions

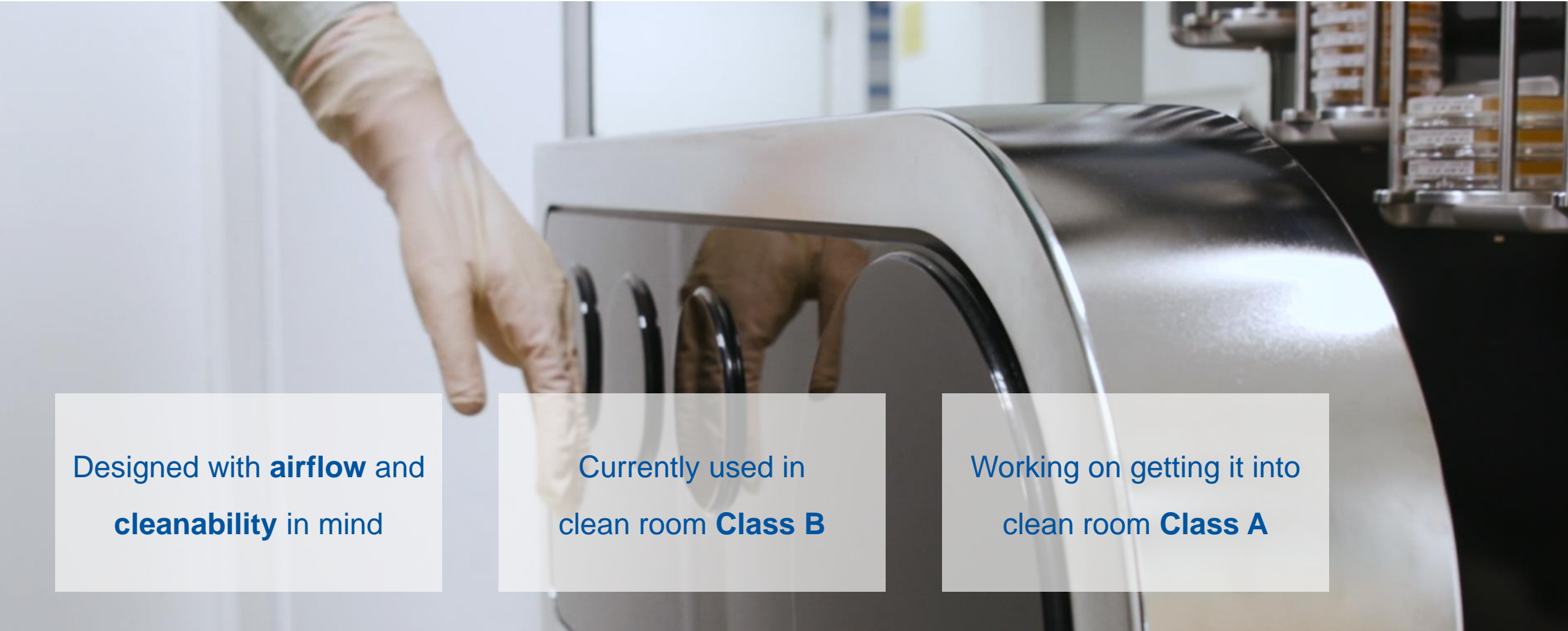


Designed with **airflow** and **cleanability** in mind

Currently used in clean room **Class B**

Drivers

Aseptic conditions



Designed with **airflow** and **cleanability** in mind

Currently used in clean room **Class B**

Working on getting it into clean room **Class A**

Cost Effectiveness

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Manual sampling is a **2-person** job with **3 processes**

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Processes:

1. Preparing samples EM assistant **writing** sample ID on **each** agarplate.

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Cost Effectiveness

Manual sampling is a **2-person** job with **3 processes**

Processes:

1. Preparing samples EM assistant **writing** sample ID on **each** agarplate.
2. Sampling Operator **and** EM assistant perform sampling.
3. Registration EM assistant creates **each** sample in IT system.

Cost Effectiveness

GGSR sampling is a **1-person** job with **1 process**

Cost Effectiveness

GGSR sampling is a **1-person** job with **1 process**

Process:

1. Sampling & registration

Operator completes **all three processes at once** **without** EM assistant.

Cost Effectiveness

ROI

2 labor intensive **processes** are **saved**.

Cost Effectiveness

ROI

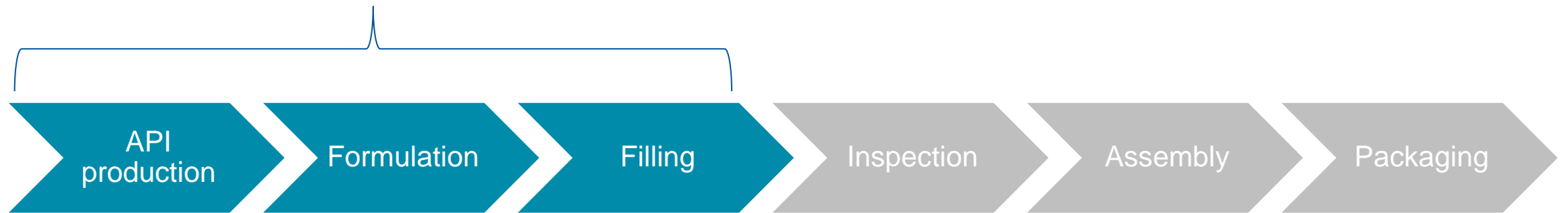
2 labor intensive processes are saved.

ROI between 1 and 2 years.

Area of Application



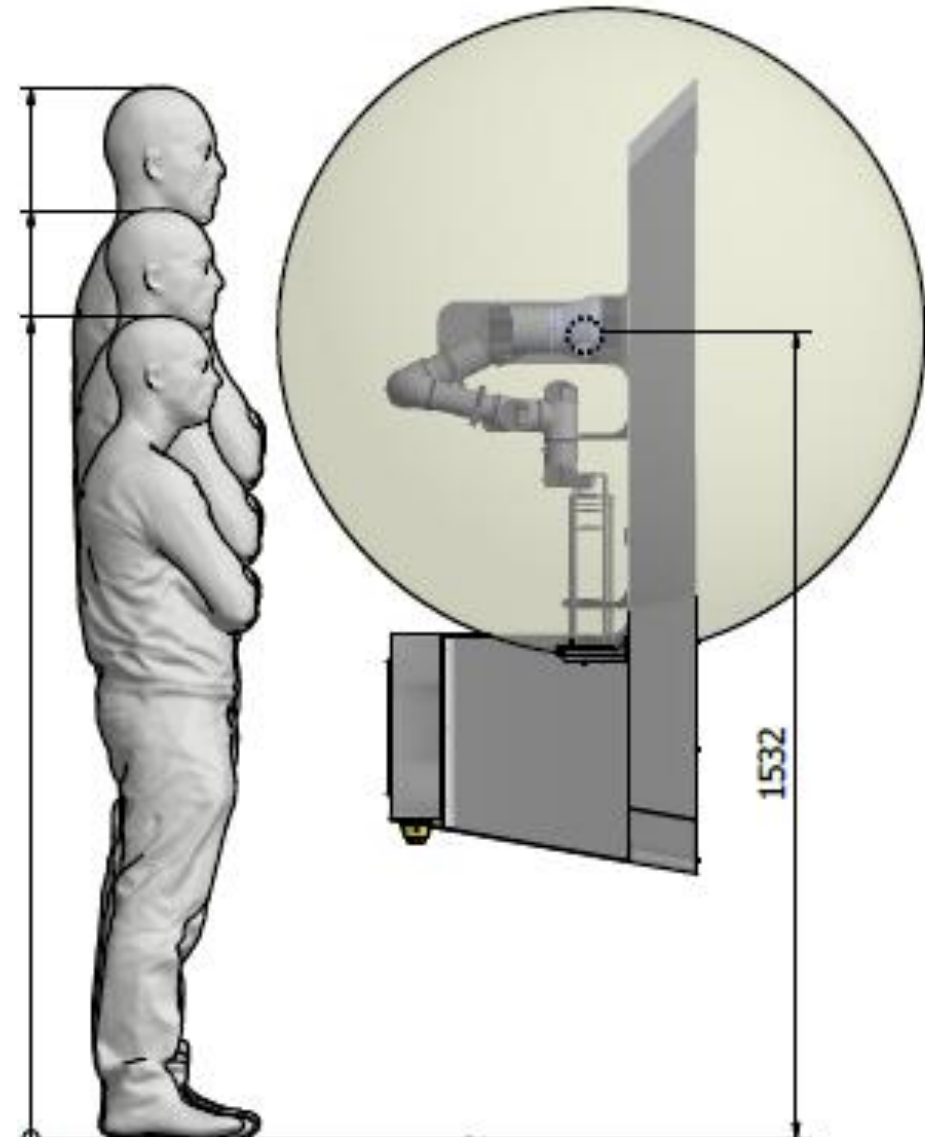
Area of Application



Flexibility

The Robot can sample

- Women and men
- High or low
- Large or small
- And everything in between



Flexibility



The Robot can handle multiple types of agarplates.

Flexibility

Different sample sequences.

Vælg prøvetype



Model: Technicon

Højde: 170

Klasse: A

Type:

Flexibility

Different sample sequences.

Vælg prøvetype



Model: Technicon Højde: 170



Klasse: A Type:



Integration

Real life example



Integration

Real life example



Integration of 2 GGSR's in Brazil.

1. The GGSR's was purchased as **standard solutions**.

Integration

Real life example

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Integration

Real life example

Integration of 2 GGSR's in Brazil.

1. The GGSR's was purchased as **standard solutions**.
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3. Installed by technicians on Site with Technicon supporting **remotely**.

Integration

Real life example

Integration of 2 GGSR's in Brazil.

1. The GGSR's was purchased as **standard solutions**.
2. Shipped by **plane**.
3. Installed by technicians on Site with Technicon supporting **remotely**.
4. **Qualification** completed **quickly** based on previous GGSR's qualification.

Final message



Final message

The GGSR should win
for bringing **human-robot collaboration**
to Pharma production.