Blue Ocean Robotics

ReconCell - A reconfigurable workcell for fast setup of automated assembly process

BLUE OCEAN ROBOTICS
- for humans

We Create and Commercialize Robots

BLUE OCEAN ROBOTICS
- for humans

We Create and Commercialize Robots

- **10 Joint Ventures**
- **35 Sales Partners globally**

We Create and Commercialize Robots

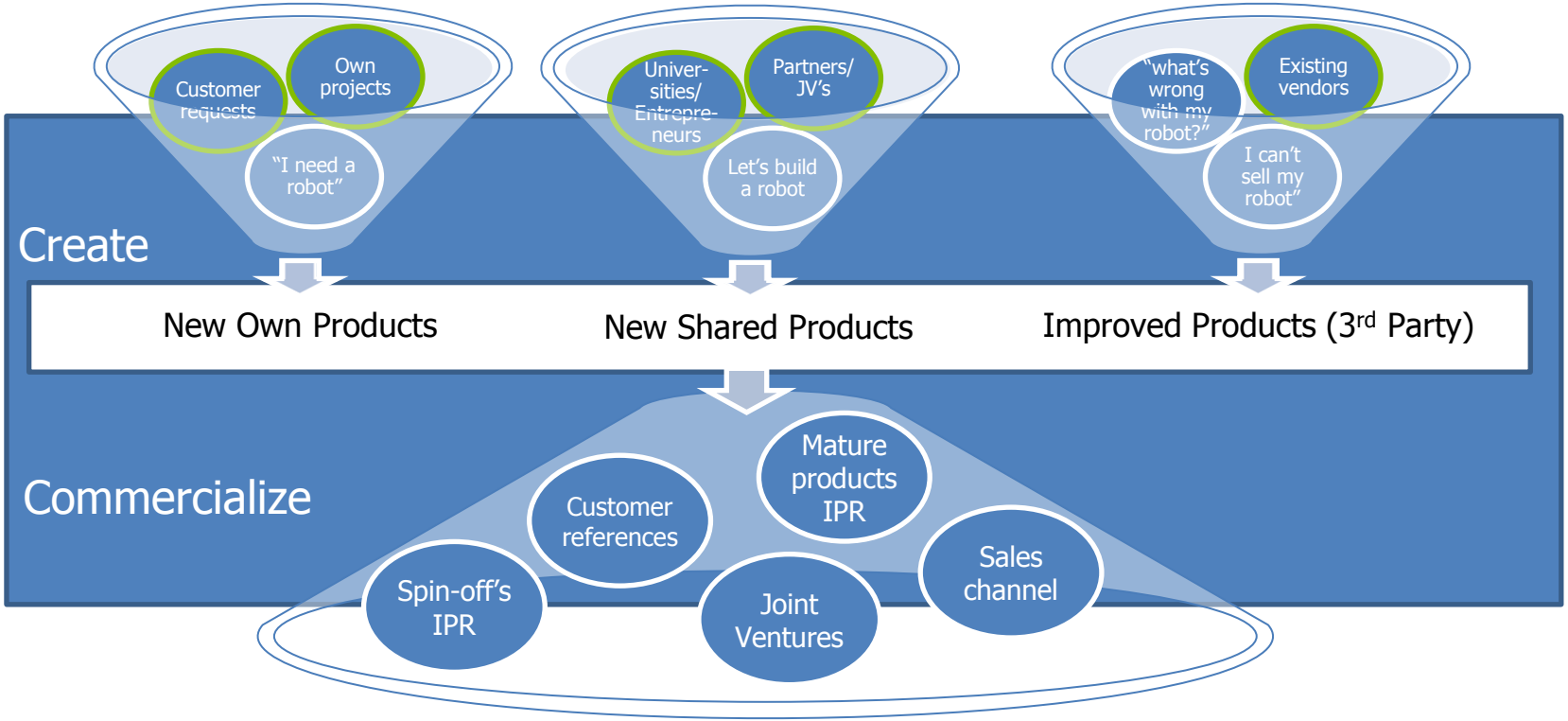
28 COMPANIES

112 EMPLOYEES

12 COUNTRIES

We Build and Sell Robots

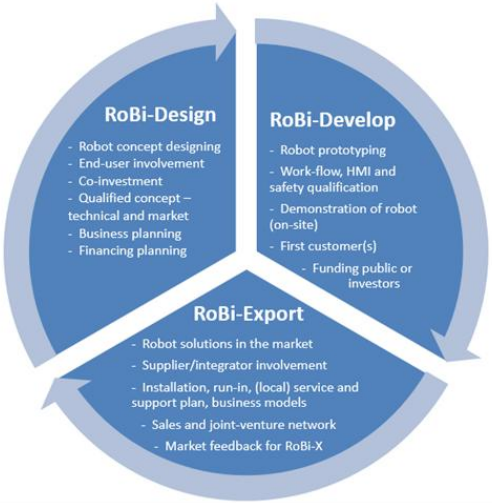
BLUE OCEAN ROBOTICS
- for humans



Blue Ocean Robotics is the leading collector of assets in Robotics.
Our business model makes us the preferred catalyst, creator and commercialization expert.

BLUE OCEAN ROBOTICS
- for humans

RoBi-X



BLUE OCEAN ROBOTICS
- for humans

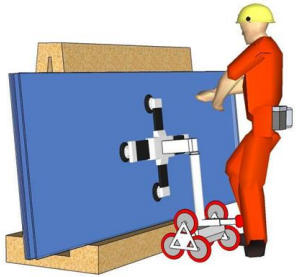
INDUSTRIES

- ❏ Manufacturing
- ❏ Healthcare
- ❏ Education
- ❏ Agriculture & Fishery
- ❏ Construction
- ❏ Security & Surveillance
- ❏ Off-shore

45+

ROBOT
PORTFOLIO

We Create and Commercialize Robots



Mini Picker.

Basic System

Mini-Picker Software Suite

Compact Tool Unit w/integrated 3D vision sensor system vacuum gripper,

3D Orientation Control

Mini-Picker Controller PC incl. Windows, screen, keyboard and mouse

Bin-picking teaching of 3 parts for recognition and gripping

Installation, documentation and basic operator training

Robot mounted on a standardized robot platform

BLUE OCEAN ROBOTICS
- for humans

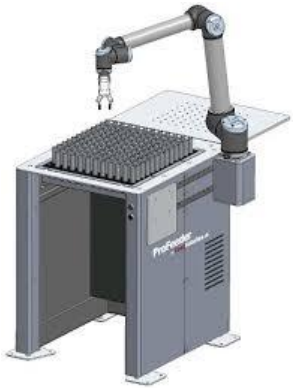
Profeeder.

Robot feeding cell.

- Collaborative robot
- Suitable for small batches
- Can be integrated with existing Production equipment ea. CNC machines.
- Can "grow" with the user. 3 different versions depending on need and capacity.

Case story

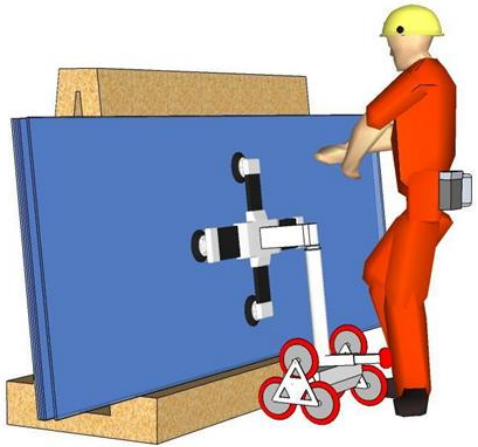
Implementation of the Profeeder has released 14 man hours for EME Hydraulic. EME Hydraulic is a SME-sized company in Southern Denmark with 15 employees. The company has been able to take the first step towards robotic automation of their production line. The easy setup of the Profeeder and its user-friendless in daily operations have made this possible. Before the implementation 16 man-hours hours were spent daily on operating a CNC machine. The number is now reduced to only 2 hours.

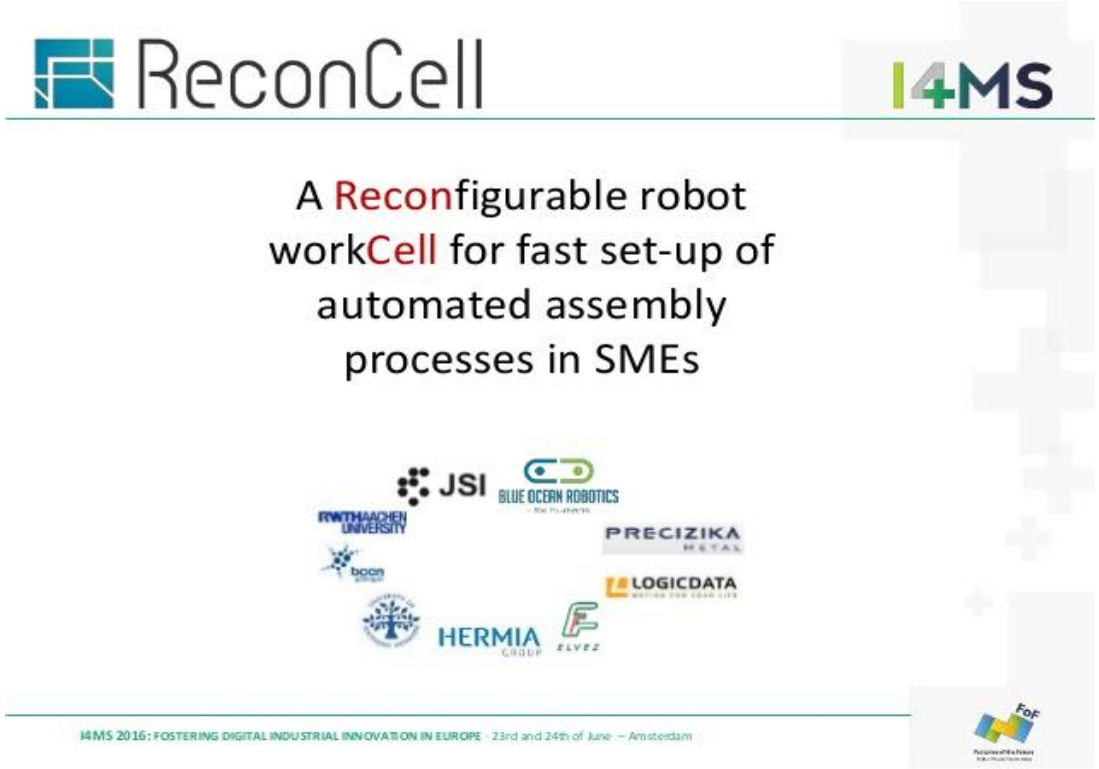


Wallmo

WallMo serves as a co-worker assistant to an operator in the indoor wall installation process. WallMo handles heavy lifts and difficult transportation of the walls and thus improves working conditions of construction workers. The robot can fit in a service wagon and operates in a limited workplace.

Data:
Handling: 60-120 kg
Items up to: 90x330 cm
Estimated payback time: 9-12 months





"*Blue Ocean Robotics contributes with its expertise and knowledge to the ReconCell project focusing on the transfer of the results of the project into industrially usable solutions thus on how to generate maximal commercial impact both on complete robot system level as well as on technological component level.*"

ReconCell

A Reconfigurable robot work-Cell for fast set-up of automated assembly processes in SMEs

Why SMEs do not use Robotic solutions

1. Financial Reasons
2. Technological Reasons

Financial Reasons

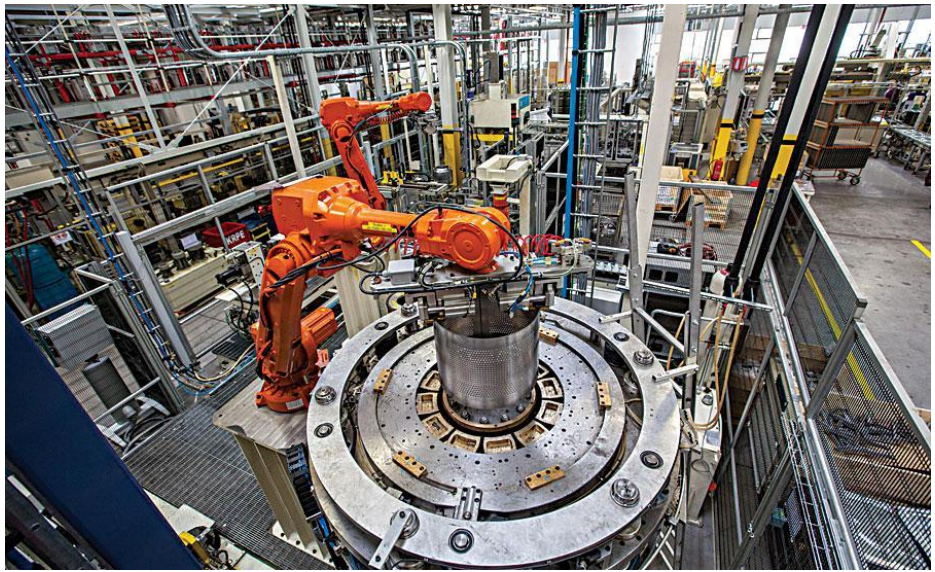
- Current Robot technology is designed for:
  - large batch sizes
  - One specific process

- SMEs usually have Small batch size
  - Few of a kind production
  - Multiple assembly processes

Technological Reasons

Too complicated technology for use of SMEs

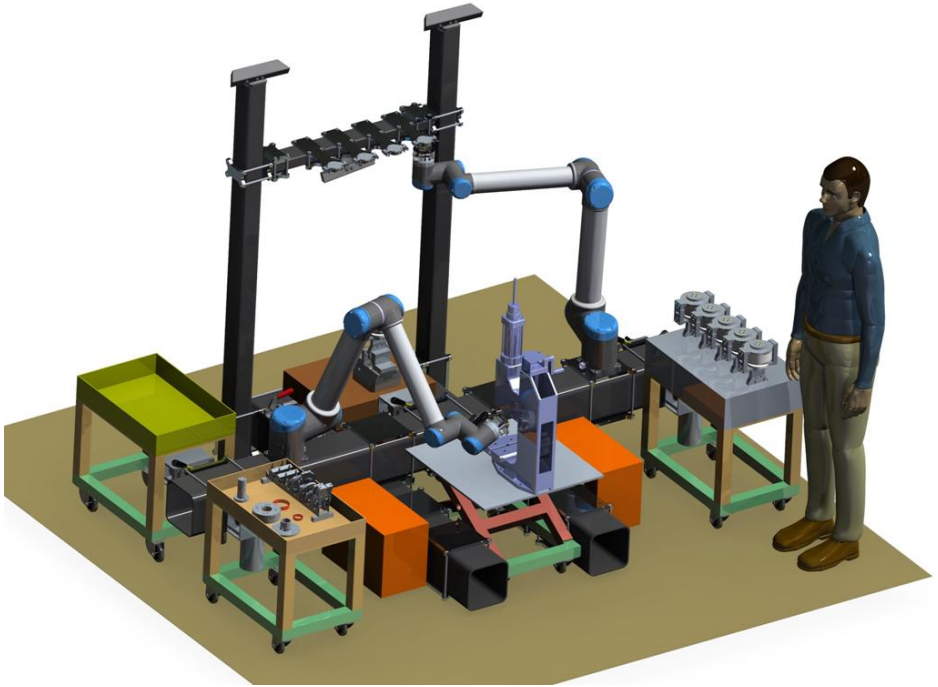
- Long complicated programming
- Very precise work cell calibration – time and money



Objectives

ReconCell aims at solving both of these problems to enable SMEs bring robotic solutions to their production plants

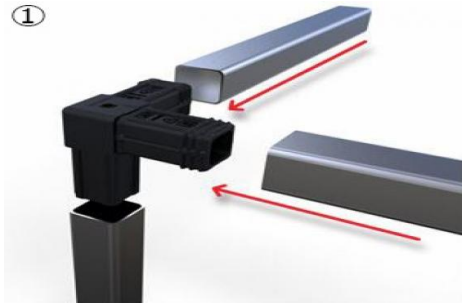
Easy to use technology, workcell can be nearly **automatically reconfigured** to execute new assembly tasks.

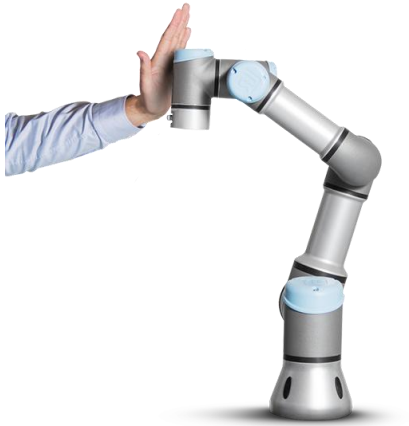


ReconCell technologies

BLUE OCEAN ROBOTICS
- for humans

- Box joint system
- Mobility of the whole cell
- Changeable gripper tool
- Hexapods
- Collaborative Robots

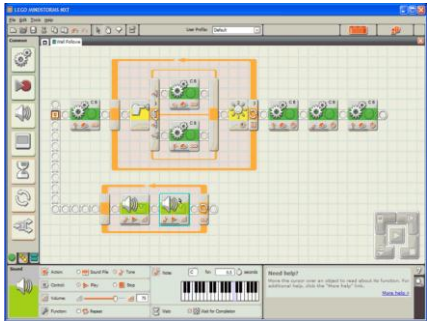




ReconCell technologies

BLUE OCEAN ROBOTICS
- for humans

- Visual programming
- 3D vision
- Simulation system – Verosim
- BAT – Business Assessment tool



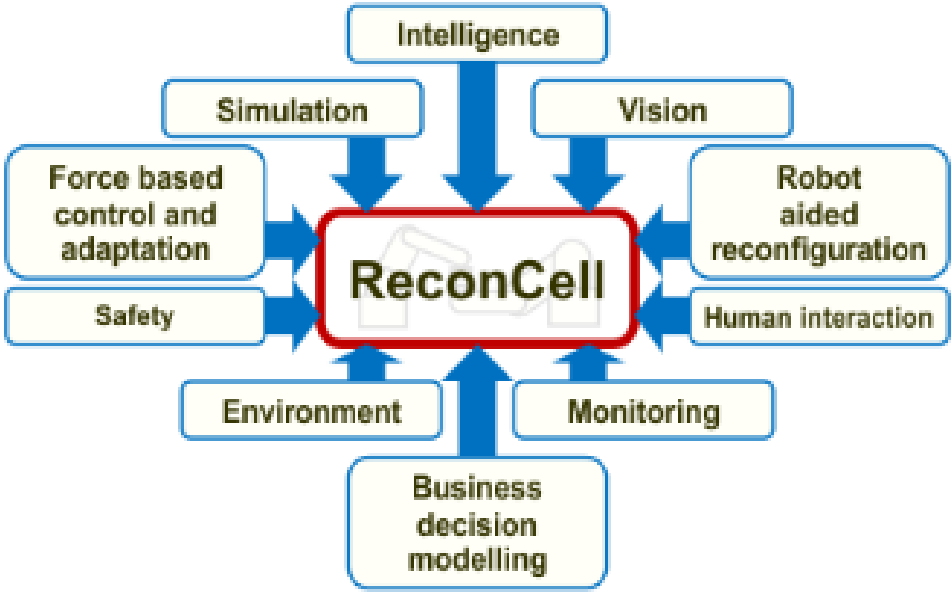
BAT

ReconCell in a nutshell

BLUE OCEAN ROBOTICS
- for humans

- Combining all the above mentioned ICT Technologies

- ReconCell will enable SMEs to utilize easy to use technology that will help them grow their business



System Operation

BLUE OCEAN ROBOTICS
- for humans

Initial Installation time	1-3 days
Operator training	3-5 days
Training of new assembly tasks	4 hours
Assembly task	
Production mode	Batch Production
Part dimensions	Min. 10*10*10 [mm] / Max. 300*300*300[mm]
Part material	Rigid metal, plastic or wood
Part weight	< 3 Kg

ReconCell Use case

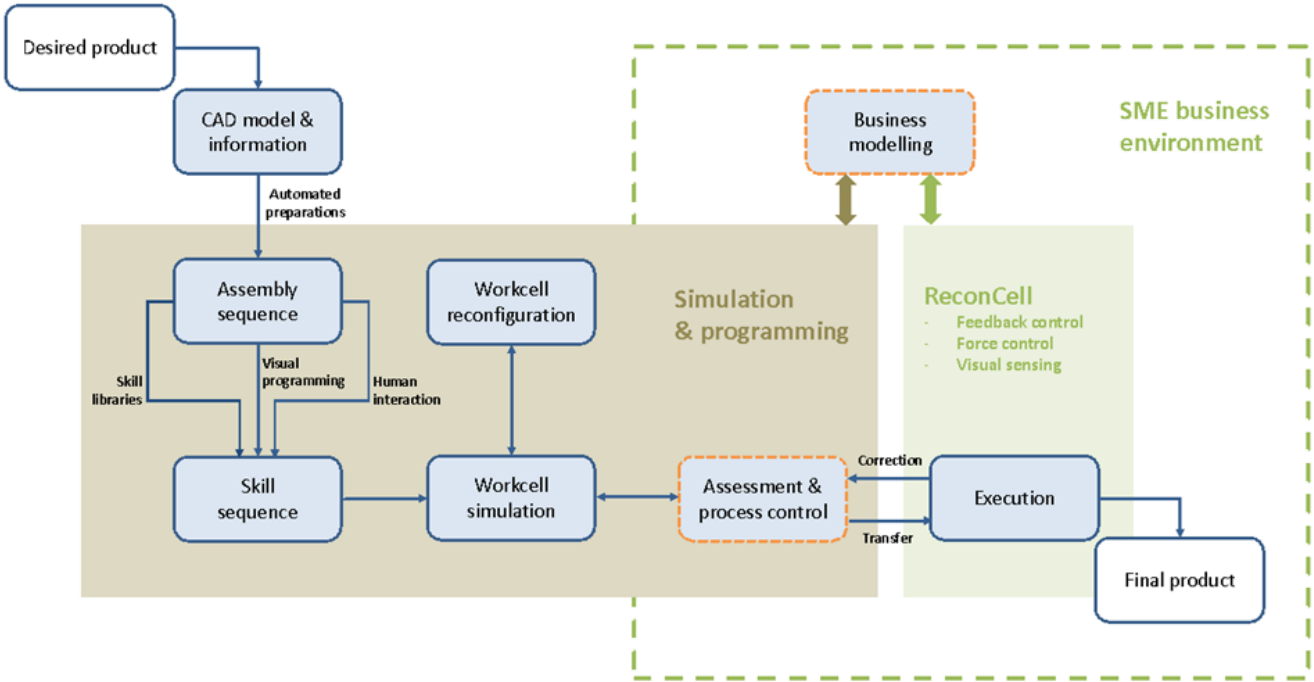
BLUE OCEAN ROBOTICS
- for humans

- Assembly of automotive lights -
  - Batch size of 100,000 - 300,000 per year
  - Assembly process need changes for new product every time
  - Currently Elvez order new parts for the assembly for every new order
- Assembly is needed later for spare parts production
  - 100s pieces per year
- ReconCell is a universal assembly machine that can be reconfigured according to the product changes

ELVEZ

ReconCell Workflow

BLUE OCEAN ROBOTICS
- for humans



ReconCell Project Roadmap

BLUE OCEAN ROBOTICS
- for humans

- **ReconCell Open Call**
  To be launched mid 2017

- **General Interest** in robots and Automation of your Production.
  See next slide…….

You can follow us at:

Twitter

Linkedin

Facebook

www.blue-ocean-robotics.com.com

www.reconcell.eu

Anders Bech
Business Developer
Blue Ocean Robotics, DK

Mobile: +45 31631357
E-mail: ab@blue-ocean-robotics.com
Skype: ab.blue-ocean-robotics.com
Web: www.blue-ocean-robotics.com

Majid Ali Khan
Robotics Developer
Blue Ocean Robotics, DK
E-mail: mak@blue-ocean-robotics.com

Jaap van Leeuwen
CEO
Blue Ocean Robotics Benelux B.V.

Mobile: +31 (0)622987268
E-mail: jvl@blue-ocean-robotics.com
Skype: jaapvanleeuwen2
Web: www.blue-ocean-robotics.com