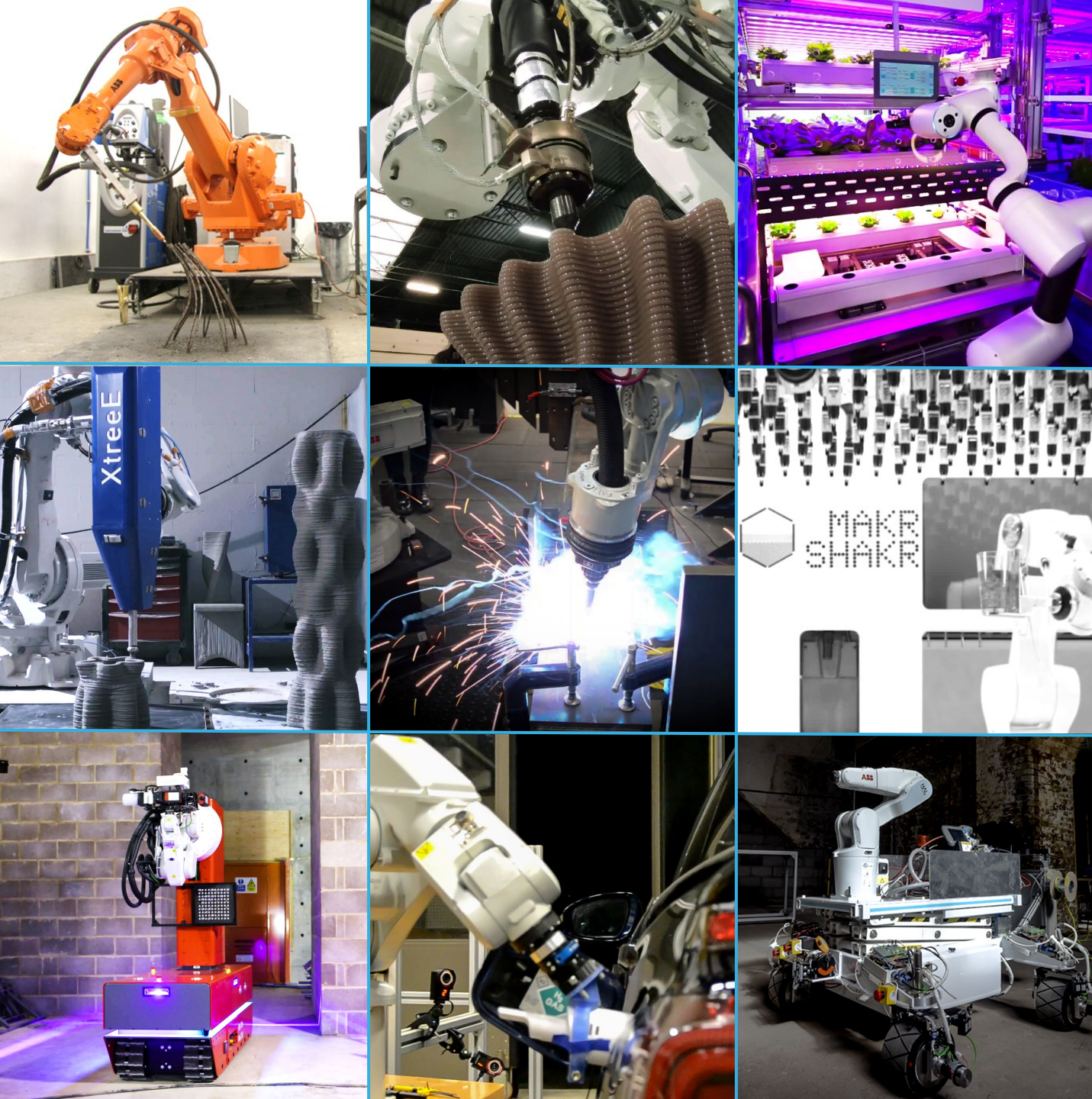


UNIQUE AUTOMATION · SIMPLIFIED
BESPOKE SOFTWARE FOR ANY **PROCESS, ROBOT OR PART**

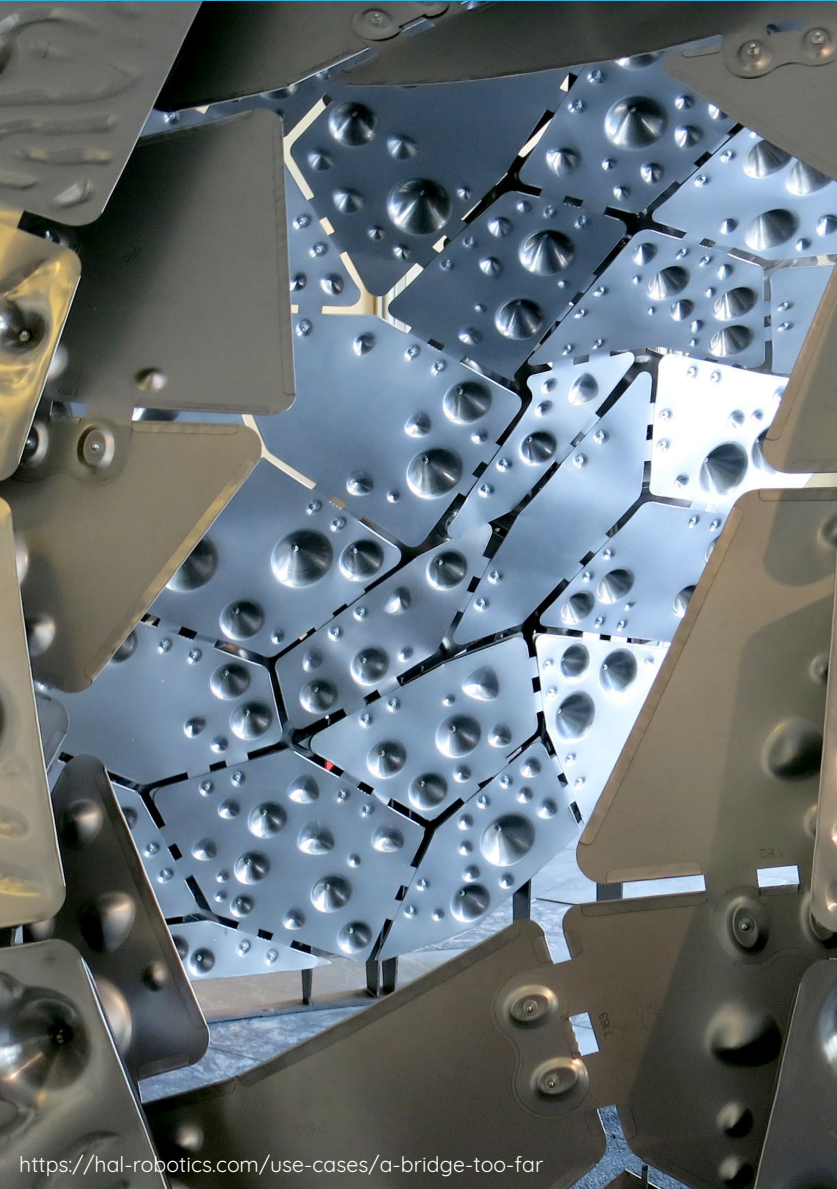


we **program** industrial robots
to execute **variable**, **complex**
and **uncommon** tasks

Since 2014 we have been helping our clients in
the UK, Europe, North America and Australasia
innovate and get to market faster, by providing
them with **robust and highly flexible solutions**
to **program**, **simulate**, **control** and **monitor**
processes involving industrial machinery.

unique automation simplified > enabling mass customisation in construction

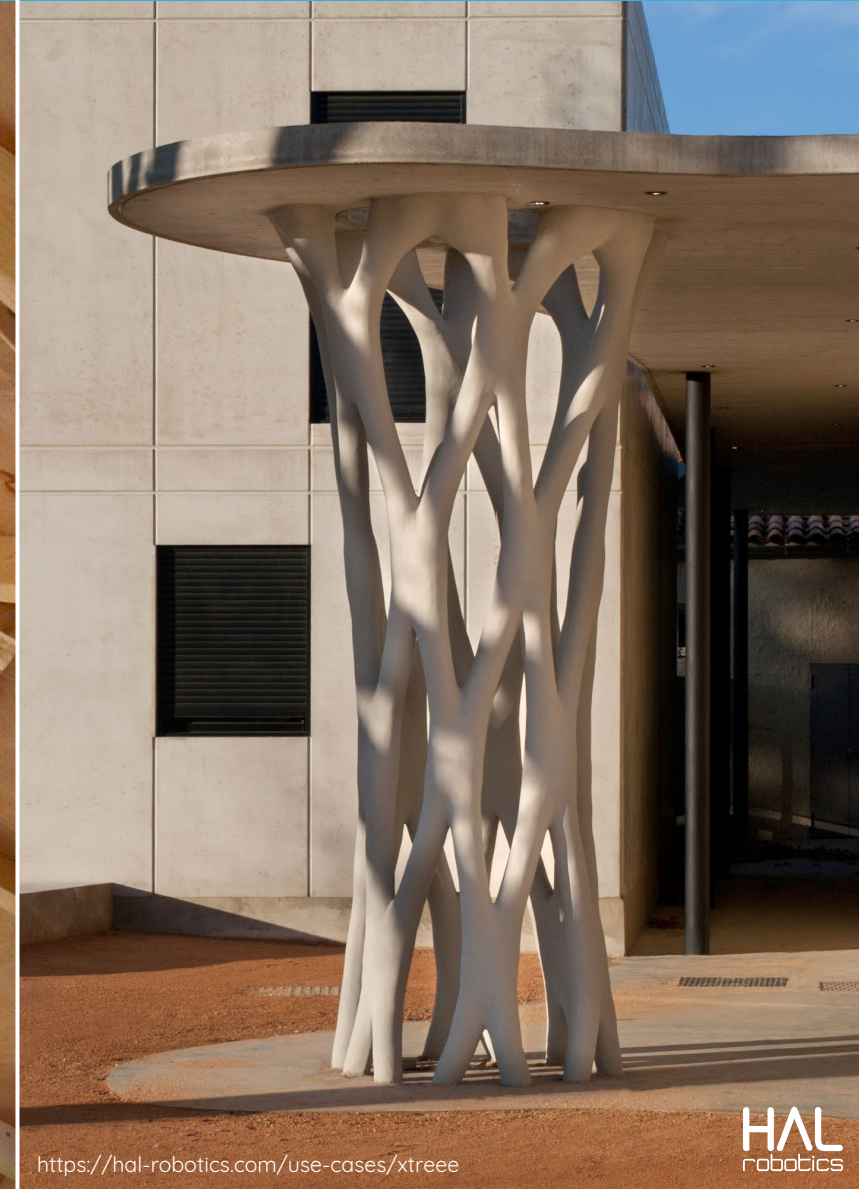
incremental steel sheet forming
Stressed Skins, CITA,



multi-robot prefabrication of doubly-curved timber shell
Construire le Courbe, ENPC build'in et al.



concrete 3D-printing
Aix en Provence, XtreeE



<https://hal-robotics.com/use-cases/a-bridge-too-far>

<https://hal-robotics.com/use-cases/freeform-timber-structures>

<https://hal-robotics.com/use-cases/xtreee>

unique automation simplified > novel robotic applications

glass bending cobot

RoboGlass: AA Visiting School Taipei, Thibault Schwartz



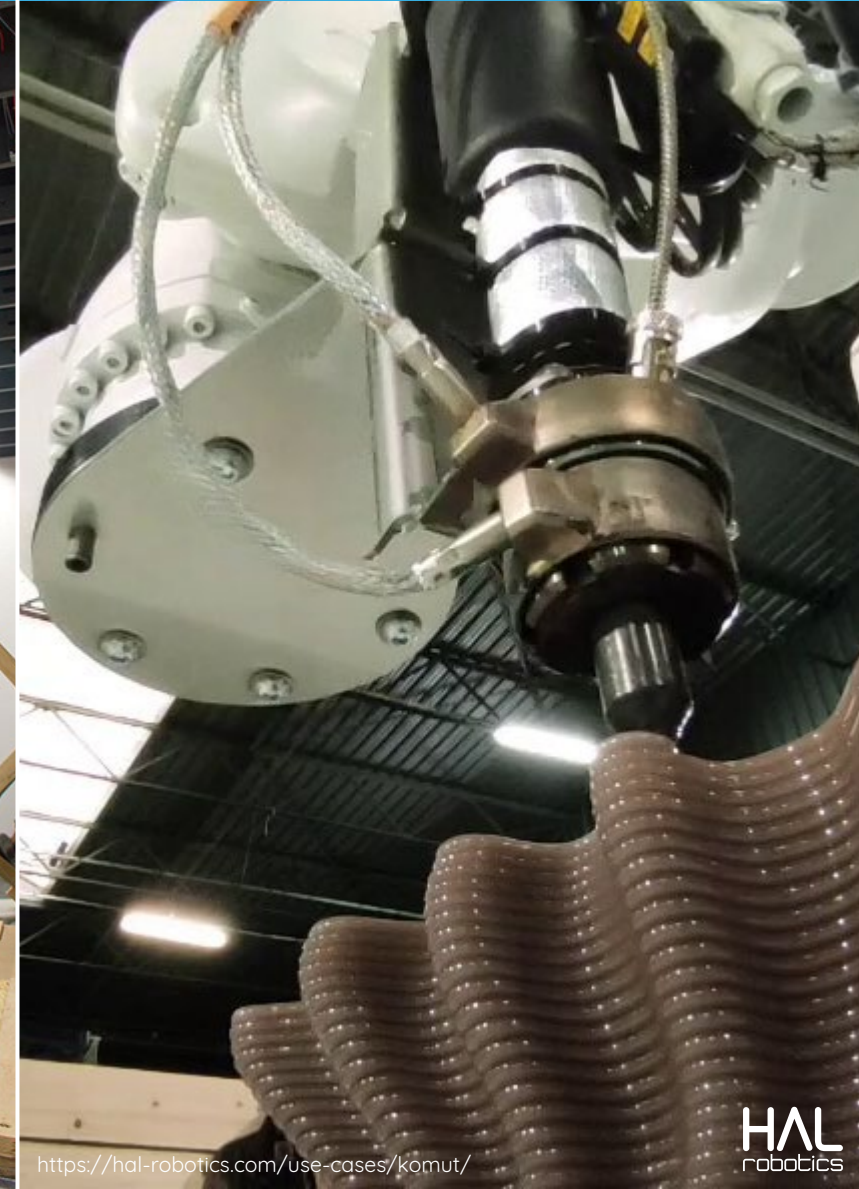
steam bending of timber studs using MoCap sensors

All Bent Out: Joshua Bard, Thibault Schwartz & Richard Tursky



Large scale 3D printing of recycled plastics

Komut Studio

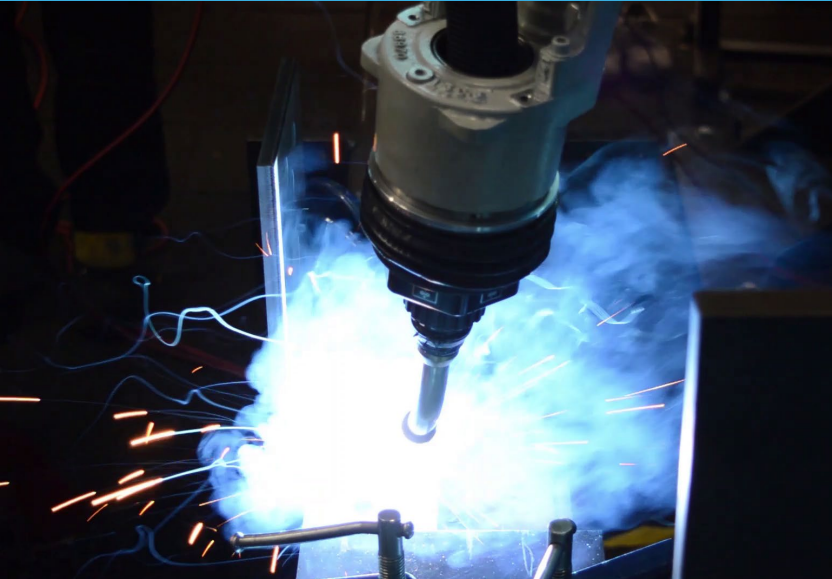


<https://hal-robotics.com/use-cases/komut/>

unique automation simplified > novel robotic applications

welding process monitoring from edge devices

Bryden Wood, ABB, HAL Robotics



embedded motion planner for modular industrial robots

Inovo Robotics, HAL Robotics



drilling and fastening robot for service installation

COSCR: HAL Robotics, InnoTecUK, ABB, Skanska, Skyjack, BRE



application automation

We build upon our tried and tested software framework to deliver robust solutions integrating into your systems.

- ✓ mixed or novel processes
- ✓ programming robots from CAD/BIM
- ✓ equipment selection
- ✓ data integration



collaborative development

Extend your in-house capabilities with our cross-disciplinary expert team, and deliver those previously impossible jobs.

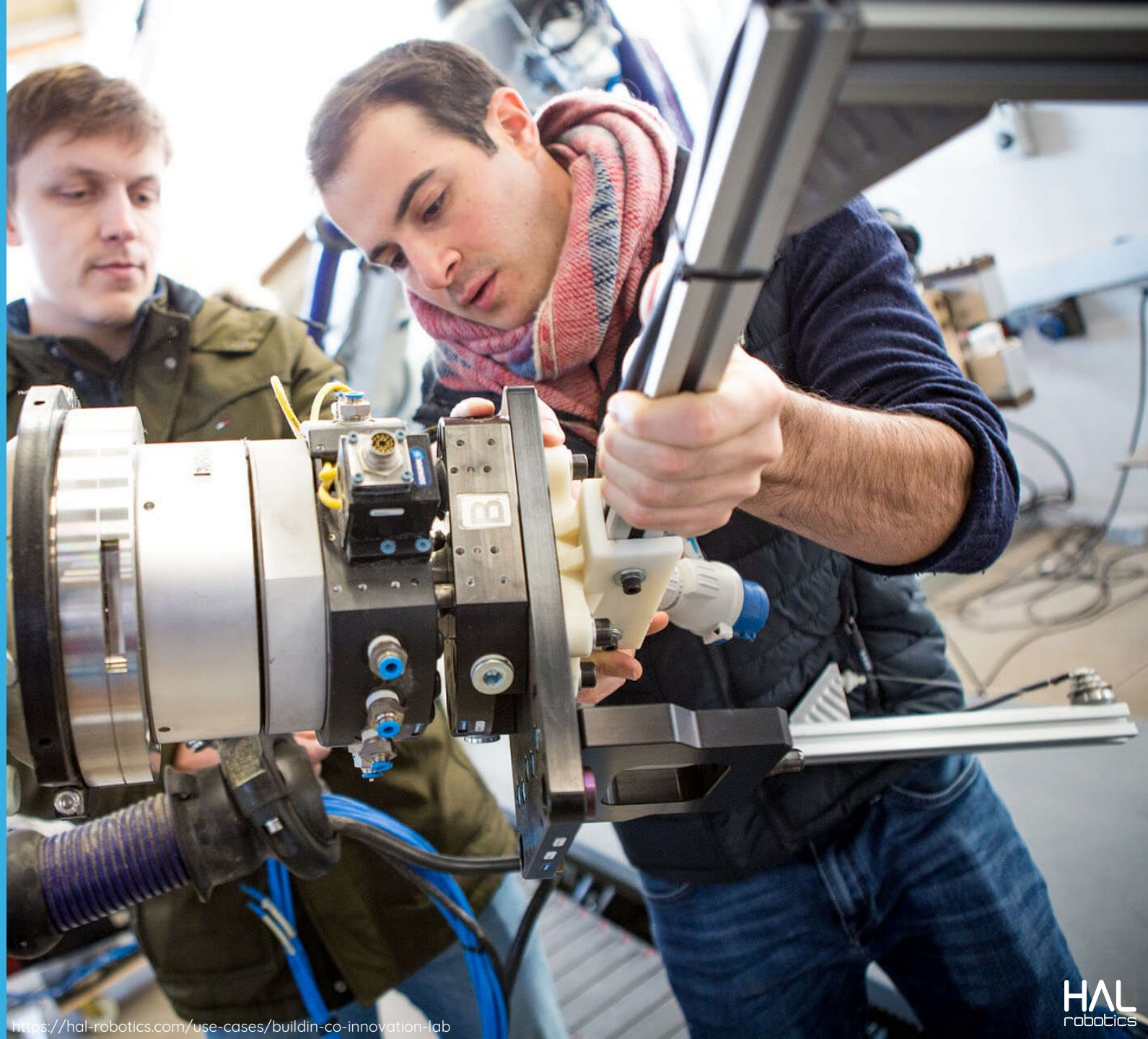
- ✓ processing complex geometry
- ✓ complex motion planning
- ✓ parametric programming
- ✓ multi-vendor programming
- ✓ hybrid edge-cloud computing



R&D support & training

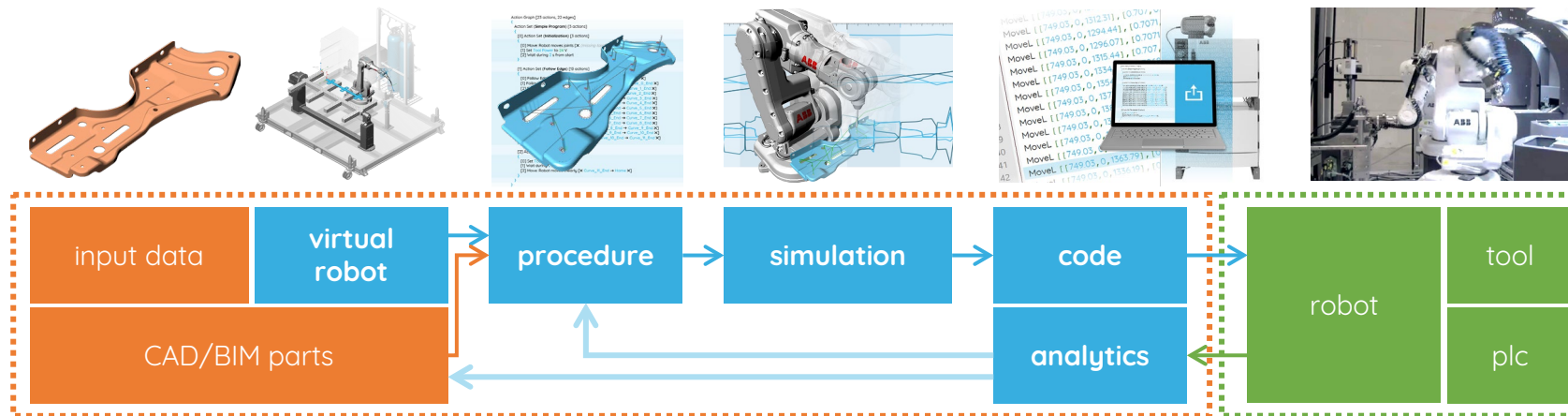
We have developed highly flexible tools based on our core technologies to allow researchers to accelerate their robot application prototyping, and focus on the topics that really drive them.

- ✓ introduction to industrial robotics
- ✓ focused on-premises workshops with hands-on programming tutorials, tailored to your applications



HAL robotics framework

Underpinning our services is the **HAL Robotics Framework**, an **extensible and modular software** which facilitates inter-device **communication**, **adaptive programming** of robot tasks, and **motion planning for one or many robots** working together.



- design tools, ERP, MES, databases
- HAL Robotics Framework
- automation & process equipment

✓ **vendor agnostic**
simulate and program
any robot or process

✓ **end-to-end**
workflow, from cell
modelling to
execution

✓ **deploy anywhere**

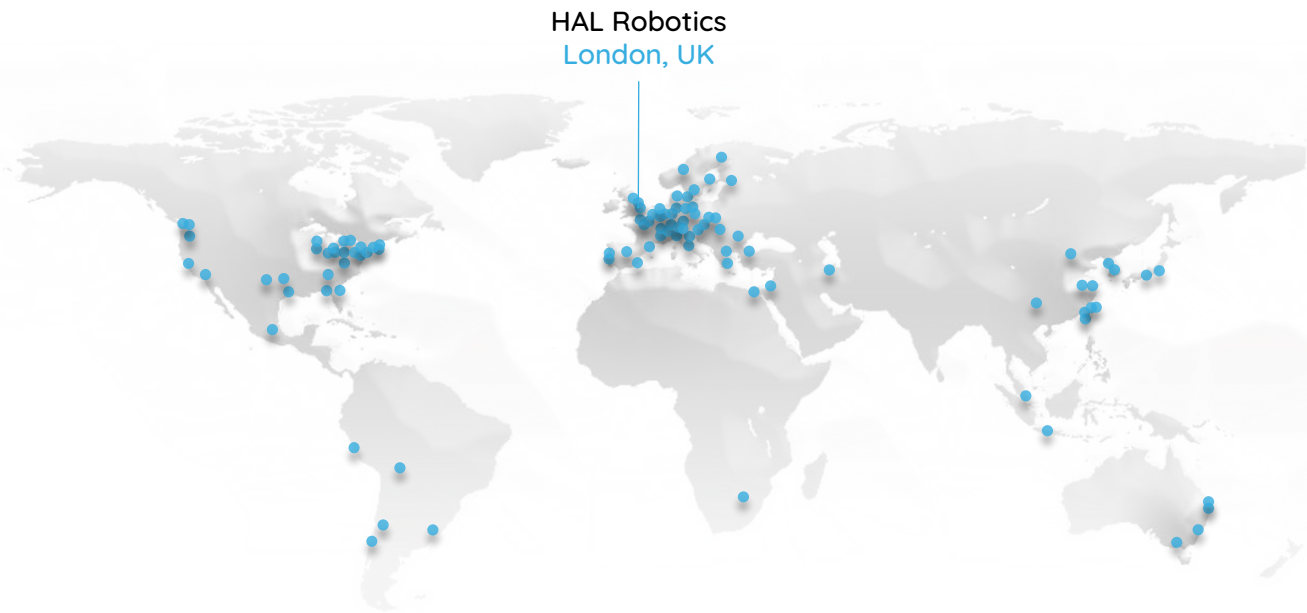
- ⚙️ Service
- 🖥️ Console
- 🌐 Web Service
- 📱 Mobile App
- 🖨️ Standalone App
- 🔌 Embedded Systems

✓ **for CAD users**



enabling new applications, **worldwide**

2500+
users



30+
countries



adoption





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BESPOKE SOFTWARE FOR ANY **PROCESS, ROBOT OR PART**

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