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

we program industrial robots to execute variable, complex and uncommon tasks.
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/
welding process monitoring from edge devices
Bryden Wood, ABB, HAL Robotics

embedded motion planner for modular industrial robots
Induvo Robotics, HAL Robotics

drilling and fastening robot for service installation
COSCR: HAL Robotics, InnoTec, UK, ABB, Skanska, SkyJack, BRE

https://hal-robotics.com/use-cases/weld-monitor/
https://hal-robotics.com/use-cases/inovo-robotics/
https://hal-robotics.com/use-cases/coscr/
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

https://hal-robotics.com/use-cases/build-in-co-innovation-lab
services

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

https://hal-robotics.com/use-cases/cosc/
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

https://hal-robotics.com/use-cases/build-in-co-innovation-lab
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.

- 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
  - Rhinoceros
  - Grasshopper
  - BricsCAD

- design tools, ERP, MES, databases
- HAL Robotics Framework
- automation & process equipment
enabling new applications, worldwide

HAL Robotics
London, UK

2500+ users
30+ countries