Handbook

ITQ

MULTIVAC

IQS
PERSONA CIENCIA EMPRESA
UNIVERSITAT RAMON LLULL

The Event – 2 Days Makeathon

- **Location: Via Augusta, 390, 08017 Barcelona**

- **Start: Friday, 26.10.2018 – 9:00**
- **End: Saturday, 27.10.2018 – 14:00**

- **Different workshops during the Makeathon**
- **Be creative during the day, have fun at night**
- **Meet participants from different disciplines**
- **Enjoy free food & drinks**
- **Get in touch and learn from industry experts**

ITQ

competence in mechatronics
software and systems engineering

Smart IoT Makeathon

Agenda

Agenda | Friday 26.10.2018

Time	Topic	Who
9:00 – 9:15	Registration of Participants	All
9:15 – 9:30	Welcome Speech	IQS
9:30 – 9:45	Event Opening Speech	Multivac
9:45 – 10:00	Introduction Speech	ITQ
10:00 – 10:15	Presentation of Industry Challenges	Multivac & ITQ
10:15 – 10:30	Speech: How to Prototype and Present Your Ideas	ITQ
10:30 – 11:15	Brainstorming & Definition of Ideas	Teams
11:15 – 12:15	Idea Pitches (1 person per team)	Teams
12:15 – 21:00	Developing Prototypes / Technical Workshops	Teams
21:00 – 21:45	Day Resume Presentation	Teams
21:45 – Open End	Dinner & Networking	All

- **Location:** Via Augusta, 390, 08017 Barcelona

Agenda | Saturday 27.10.2018

Time	Topic	Who
10:00 – 10:15	Day Planning & Coffee	All
10:15 – 10:45	Morning Standup (1 person per team)	Teams
10:45 – 13:00	Finalizing Prototypes & Preparing Presentations	Teams
13:00 – 14:00	Final Pitches	Teams
14:00 – Open End	Lunch & Networking	All

Technical Workshops | 26.10.2018

Time	Topic	Expert	Place
12:15 – 12:30	Robot Remote Control	B.Eng. Icart	LEPI
12:30 – 13:00	Prototype Printing with BFB	Dr. García	LEPI
13:00 – 13:15	Programming with Scratch	Dr. García	LEPI
13:15 – 13:45	Programming with Arduino	ITQ	LEPI
13:45 – 14:00	MQTT as a Messaging Protocol	ITQ	LEPI
	Lunch		
15:00 – 16:00	PLC and Robot for Packaging	Dr. Reyes	Electronics Lab
16:00 – 16:30	Prototype Printing with BFB	Dr. García	LEPI
16:30 – 17:30	HMI Design	Prof. Yagüe	Electronics Lab
17:30 – 18:30	Simulation and Virtual Engineering	ITQ	LEPI

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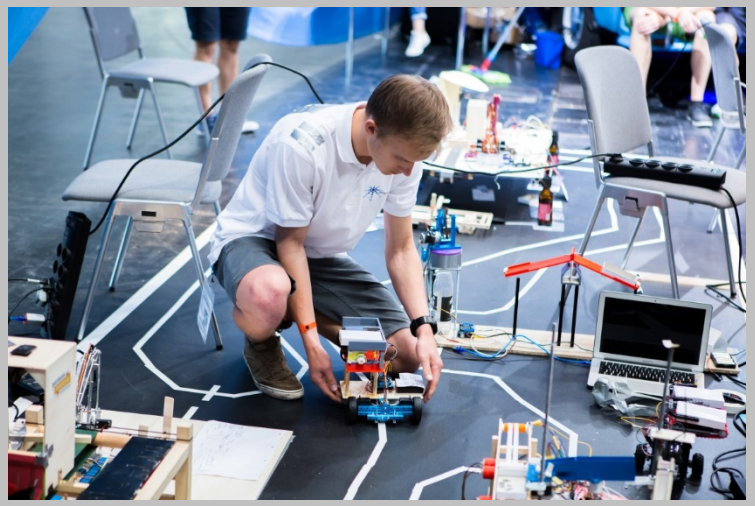
Industry Challenges



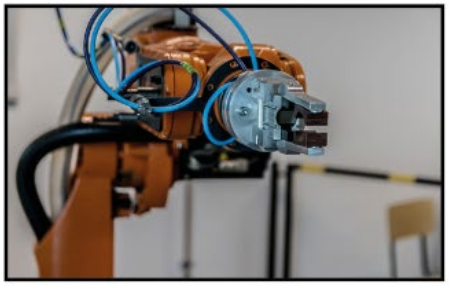
Industry Challenges

SMART IDEAS

Create your own idea and realize it

SMART PACKAGING

Create a smooth communication improving HMI



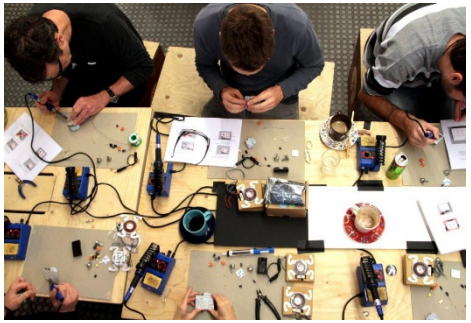
SMART MACHINE

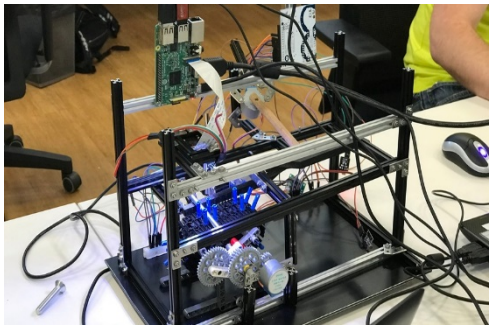
Control an industrial robot via the internet

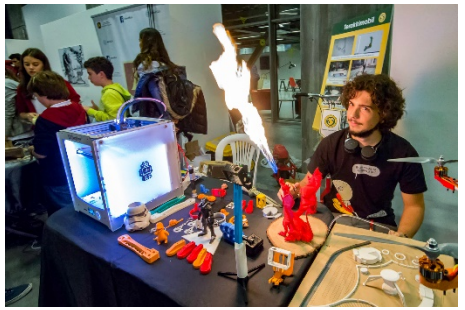
Smart Ideas

Challenge	Description
Show off!	Realize your own project with your materials or the resources provided during the event and present it!

Resources	Quantity
Arduino Kits	12
Raspberry PI Kits	6
Stepper Motors	10
Servo Motors	8
Solar Panels	2
LCD Displays	20
RFID Kits	10
Soldering Stations	2
Electronic Components	30 Kg
3D Printers	2





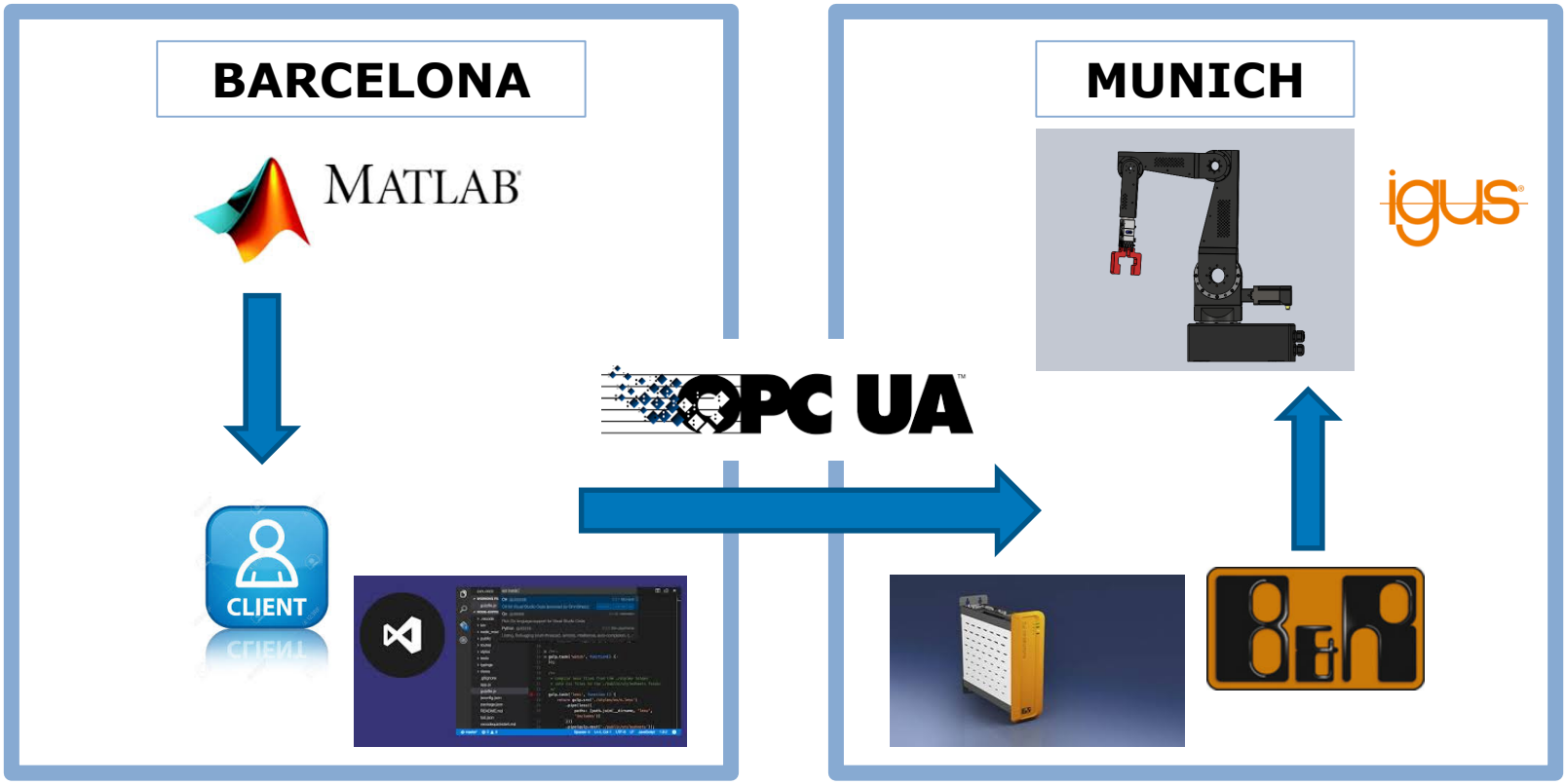


Smart Packaging – sponsored by MULTIVAC

Challenge	Description
Geolocation Viewer / Track & Trace	• On each pack, all stations and controls to go through for each product are documented as coordinates. • One App makes it possible to read such data and track and trace the product connecting to e.g. Google Street View. • The idea is to visualize different stations using virtual reality - if possible - within this App • The idea from MULTIVAC is that in this way the client gets an added value from local products, tracking from the origin, through processing, packaging and delivering.
MULTIVAC talks to you	• Develop a HMI, where the user is able to read error diagnosis from a packaging plant. • Develop a system based on voice-control so that the HMI returns that diagnosis.

Smart Machine

Challenge	Description
Remote Control	Control a Robot and its Digital Twin via the internet



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Annex
Translations
ESP

Smart Machine (ESP)

Challenge	Description
Geolocation Viewer / Track & Trace	• En el embalaje se documentan en forma de coordenadas las estaciones y controles por los que pasa el producto. • Una App hace posible la lectura de estos datos y el seguimiento del producto conectandose por ejemplo con Google Street View. • En la App se pueden ver las distintas estaciones por via mobil o VR. • El cliente tiene así el valor anadido de ver como de local és su producto. • Así por ejemplo se puede ver el lugar de origen del producto, donde se ha procesado y empaquetado. Toda la cadena de producción pasa de esta forma a ser totalmente transparente.
Multivac talks to you	• Desarrollar un sistema HMI en el que se pueda leer el diagnóstico de errores de la planta de embalaje. • Desarrollar un sistema de control por voz en el que la HMI devuelva el diagnóstico en forma de mensaje de voz.

Sponsors

The event is only possible thanks to the initiative of ITQ GmbH and our great sponsors!

The event is sponsored by:

In collaboration with: