

Handbook

Smart Green Island Makeathon 2020

04.03.2020 – 07.03.2020



**SMART
GREEN**
ISLAND

ITQ

competence in mechatronics
software and systems engineering

Handbook Overview

Smart Green Island Makeathon 2020

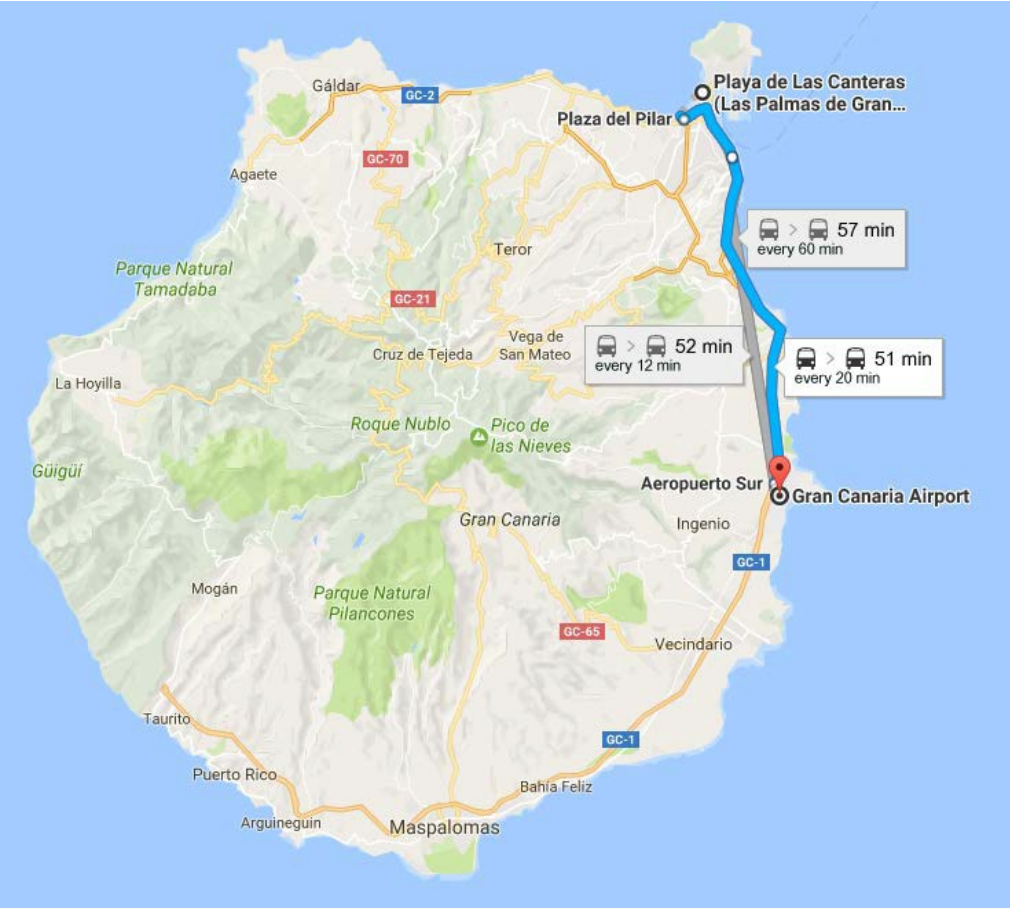
- Locations – Overview (Las Palmas, Event Location)
- Agenda of the Event
- Support onsite, Catering, Material, T-Shirts
- Communication before and during the event
 - Latest News through our WhatsApp Group
 - All Information during the Event through our Slack Channel (Link / QR Code)
- Registration – Technical Workshops
- How to build a Team?
 - Abstracts of our Industry Challenges
 - Recommended size of Teams
- Social Media Channels / Publication Guidelines

Locations – Overview

Location: Infecar, Av. de la Feria, 1, Las Palmas, Gran Canaria



How to get to Las Palmas?



- You can get from the airport to Las Palmas (capital of Gran Canaria) by bus within 1 hour
- You take line 60 - the grey marked buses go to the beach area, the other buses end in oldtown
- Or you go by taxi for ~30€.

60	Las Palmas de G.C. San Telmo - Aeropuerto Gran Canaria																							
	Aeropuerto Gran Canaria – Las Palmas de G.C. San Telmo																							
	Horas																							
Diario / Daily / Täglich	minutos																							
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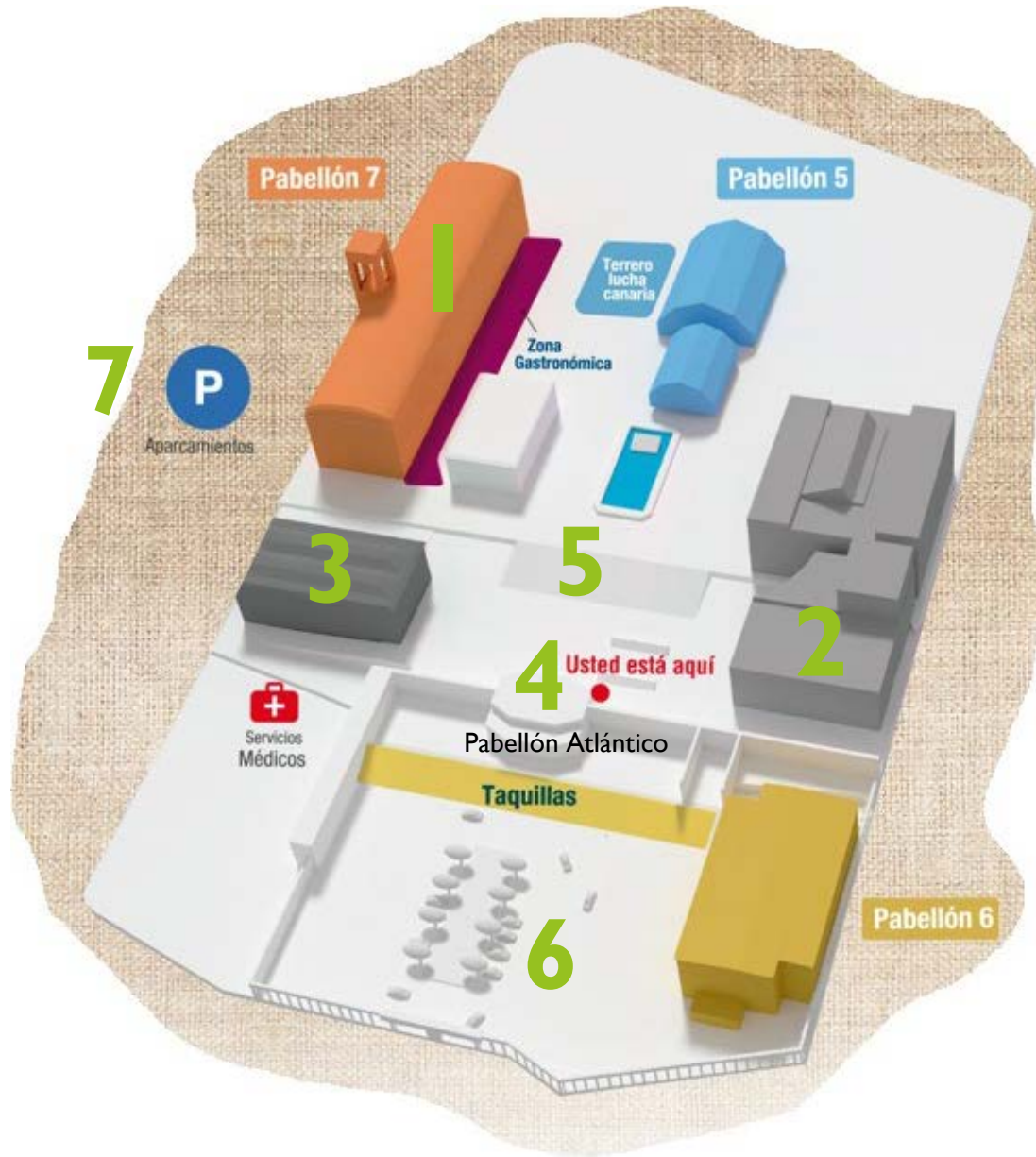
How to get to the event location?

Address of the Event: **Infecar**, Avenida de la Feria I, Las Palmas de Gran Canaria

- From the beach area you can use the bus lines 24 or 21 to **Infecar**
- From Vegueta you can take the buses 11 or 91 to **Infecar**



Location Overview – Infecar



1. **Pabellón 7**
 - Making & Hacking
2. **Palacio de Congresos**
 - Opening & Final Presentations
3. **CDTIC**
 - Workshops
 - Daily Presentations
 - Sponsor Lounge
4. **Pabellón Atlántico**
 - Check in
5. **Outside Area**
 - Solar Cars Exhibition
 - Outdoor Food Area
6. **Parking**
7. **Parking (external)**

AGENDA

03.-07.03.2020, Las Palmas | Gran Canaria

Location: Infecar, Av. de la Feria, 1, Las Palmas

Agenda: Tuesday, 03.03.2020

Smart Green Island Makeathon 2020

Time	Topic	Where
18:00 – 20:00	Early Check in	Pabellón Atlántico

Please Pay Attention:

Because of the large number of participants, “Early Check in” on the previous evening would be very helpful

Event Summary – 4 days

Smart Green Island Makeathon 2020

- **Tuesday 03.03.2020 from 18:00 – 20:00**
 - Pre-Registration at Event Location
Pabellón Atlántico – Infecar, Av. de la Feria 1, Las Palmas de Gran Canaria
- Start Event: **Wednesday, 04.03.2020 – 8:30 am**
 - Infecar, Av. de la Feria 1, Las Palmas de Gran Canaria
- Make, Create and Have Fun during 4 days!
- Lunch and Drinks are provided during the day
- Material (Latest Technologies) available and Workshops held by Experts
- End Event: **Saturday, 07.03.2020 – 20:00**

Agenda | Wednesday, 04.03.2020



Smart Green Island Makeathon 2020

Time	Topic	Who	Where
08:30 – 10:00	Check in	All	Pabellón Atlántico
10:00 – 10:30	Opening Speech	Raul Garcia Brink/Cabildo	Palacio de Congresos
10:30 – 10:50	Why we do Makeathons?	Dr. Rainer Stetter/ITQ	Palacio de Congresos
10:50 – 11:15	Welcome Platin Sponsors: <ul style="list-style-type: none"> ▪ Beckhoff ▪ B&R ▪ Igus ▪ Mathworks 	Stefan Lorenz/Beckhoff Patrick Haberstroh/B&R Alexander Muehlens/Igus Philipp Wallner/MathWorks	Palacio de Congresos
11:15 – 12:15	Industry Challenges Presentations	Platinum & Gold Sponsors	Palacio de Congresos
12:15 – 12:20	Makeathon Introduction	Stefan Zombori	Palacio de Congresos
12:20 – 12:25	Introduction Social Media Approach	Anis Kossentini	Palacio de Congresos
12:25	Group Foto with all Participants and Partners	All	Palacio de Congresos
12:30 – 13:30	Speed Dating with Partners and Teams	All	Pabellón 7
13:30 – 14:15	Lunch	All	Pabellón 7 and Outside Area
14:15 – 17:45	Brainstorming / Teambuilding	All	Pabellón 7
15:15 – 17:45	Workshops	(Voluntary)	CDTIC
17:45 – 19:00	Team Presentations and Pitches for Sponsors	All	CDTIC

Agenda | Thursday, 05.03.2020



Smart Green Island Makeathon 2020

Time	Topic	Who	Where
09:00 – 10:00	Day Planning & Coffee	All	Pabellón 7
10:00 – 10:30	Standup	Representative of the teams	Outside Area
10:00 – 13:00	Making & Hacking	All	Pabellón 7
13:00 – 14:00	Lunch	All	Pabellón 7 and Outside Area
14:00 – 18:30	Making & Hacking	All	Pabellón 7
18:30 – 19:15	Presentations – Part I	Teams Part I	CDTIC
19:15 – 20:00	Presentations – Part 2	Teams Part II	CDTIC



Agenda | Friday, 06.03.2020

Smart Green Island Makeathon 2020

Time	Topic	Who	Where
09:00 – 10:00	Day Planning & Coffee	All	Pabellón 7
10:00 – 10:30	Standup	Representative of the Team	Outside Area
10:00 – 13:00	Making & Hacking	All	Pabellón 7
13:00 – 14:00	Lunch	All	Pabellón 7 and Outside Area
14:00 – 18:30	Making and Hacking	All	Pabellón 7
17:00 – 17:30	Workshop – How to structure your pitch?	Representative of the Team	CDTIC
18:30 – 19:15	Presentations – Part I	Teams Part I	CDTIC
19:15 – 20:00	Presentations – Part 2	Teams Part II	CDTIC



Agenda | Saturday, 07.03.2020



Smart Green Island Makeathon 2020

Time	Topic	Who	Where
09:00 – 10:00	Day Planning & Coffee	All	Pabellón 7
10:00 – 10:30	Standup	Representative of the Team	Outside Area
10:00 – 13:00	Making & Hacking	All	Pabellón 7
13:00	Hand in Presentations	All	Pabellón 7
13:00 – 14:00	Lunch	All	Pabellón 7 and Outside Area
14:00 – 15:50	Exhibition tour of Demonstrators	All	Pabellón 7
15:50 – 16:00	Group Foto with all Participants and Partners	All	Parking 6
16:00 – 18:30	Final Pitches	All	Palacio de Congresos
18:30 – open	Get together	All	Pabellón 7 and Outside Area



Overview Technical Workshops

Smart Green Island Makeathon 2020

Technical Workshops

Smart Green Island Makeathon 2020

Wednesday March 4th 2020

Time	Topic	Who	Where
15:15 – 15:45	Fast prototyping using Model-Based Design to integrate AI on low-cost hardware	MathWorks	CDTIC
15:45 – 16:15	Programming Basics with TwinCAT 3	Beckhoff	CDTIC
16:15 – 16:45	Installation and commissioning of igus motor-controller DI and D3	igus	CDTIC
16:45 – 17:15	Getting started with Arduino compatible hardware & sensors by Infineon	Infineon	CDTIC
17:15 – 17:45	Augmented Reality Quick and Shiny Device Connectivity with a Finger Snip App Design by Drag and Drop	Software Factory	CDTIC

Thursday March 5th 2020

Time	Topic	Who	Where
10:30 – 11:30	Make and Program with B&R	B&R	CDTIC
11:30 – 12:00	Combination of PLC and the freedom of a Linux OS	WAGO	CDTIC
12:00 – 12:30	3D Printing Workflow	TUM	CDTIC

Robotic Workshops

Smart Green Island Makeathon 2020

Thursday March 5th 2020

10:00 – 13:00	German Robotics – Panda Robot	CDTIC
14:00 – 17:00	German Robotics – Panda Robot	CDTIC

Friday March 6th 2020

10:00 – 13:00	German Robotics – Panda Robot	CDTIC
14:00 – 17:00	German Robotics – Panda Robot	CDTIC



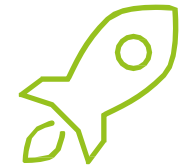
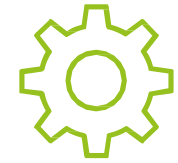
Support Onsite, Catering, Material, T-Shirts

Smart Green Island Makeathon 2020

ONSITE SUPPORT

Smart Green Island Makeathon 2020

- All our ITQ staff will be there to support you with any questions and needs
Please feel free to contact us!
- Please make sure to download the APP Slack –
which will be our main Communication Platform
- Make sure to be part of our Smart Green Island WhatsApp Group
- to get latest information
- Make sure to be part of our Social Media Community!
- **Let's show the WORLD what we are DOING during the 4 days...**



Checklist

Smart Green Island Makeathon 2020



Please bring the following things on your trip to Gran Canaria:

- Motivation
- Laptop
- (European) Health Insurance Card
- Swimsuit



Checklist

Smart Green Island Makeathon 2020

You will receive for free during Makeathon working hours:

- Lunch (*no breakfast*) and drinks
- Makeathon T-Shirts to wear during the Event
- Support from Staff Members and Sponsoring Companies
- All the Technical tools you need



Checklist

Smart Green Island Makeathon 2020



You will receive for free during Makeathon working hours:

- A lot of Hardware
- Different MAKEATHON Industry Challenges
- Be creative during the days, fun time in the nights
- Meet students from different countries and disciplines
- Networking around the MAKEATHON



Food Truck – Chef on The Road

Smart Green Island Makeathon 2020

- For the little hunger in between!!
- The food truck offers little snacks every day at the event location
 - The participants pay on their own!!



Communication

Before and during the Event



The Event – 4 Full of Days MAKEATHON

Smart Green Island Makeathon 2020

- Communication
 - Use our Slack Channel for the whole communication



<https://bit.ly/2PtB4Ib>



JOIN US NOW!

The Event – 4 Full of Days MAKEATHON

Smart Green Island Makeathon 2020

- Communication
 - Who accepted to be informed via our WhatsApp Group will get Messages/Latest News through this Channel



<https://bit.ly/384iDdl>



JOIN US NOW!

Registration – Technical Workshops



Registration Links for Workshops

- Register here for Technical Workshops

<https://terminplaner4.dfn.de/sgi20>

- Register here for the Robotic Workshop

<https://terminplaner4.dfn.de/sgi-panda>



How to build a Team ?

- Recommended size of Teams, Disciplines etc.
- Abstracts of Industry Challenges

How to build a Team?

- Recommended Team size 5-10 persons
 - Special requests could be discussed
- It would be good that persons from different universities / disciplines work in a Team
- Our Platinum and Gold Sponsors will provide following Ideas / Industry Challenges!!!
 - For these Challenges there will be the right material and experts to coach you!
- Further Ideas or Challenges also possible
 - Special requests could be discussed

Industry Challenge - Beckhoff

Smart Green Plastic Detection

- *The increasing garbage in our environment right to our doorstep and in the oceans has become a global issue. Avoidance and reduction of plastic waste is a main goal from today's perspective but cannot be implemented promptly in many areas of our life.*

Therefore, we - Multivac and Beckhoff - ask the question: How can I, as a consumer ensure that the plastic packaging that I bring into the recycling process is really recycled and does not end up in our environment. New plastic packaging - 100% biodegradable and the message of this packaging "I am recycled" should contribute to this.



Mr. Stefan Lorenz
Beckhoff Automation
GmbH & Co. KG

BECKHOFF

Industry Challenge – B&R

Smart Green Garbage Sorting Machine

- *Thrown away garbage is a global problem that doesn't stop at Gran Canaria. Already in 2019, several teams dealt with the question of how this waste can be automatically collected by using modern technologies. In 2020 we will take the next step. Our goal is to develop a smart green garbage-sorting machine.*



Mr. Dr.-Ing. Patrick Haberstroh
Head of Education Network
B&R Industrial Automation GmbH

PERFECTION IN AUTOMATION
A MEMBER OF THE ABB GROUP



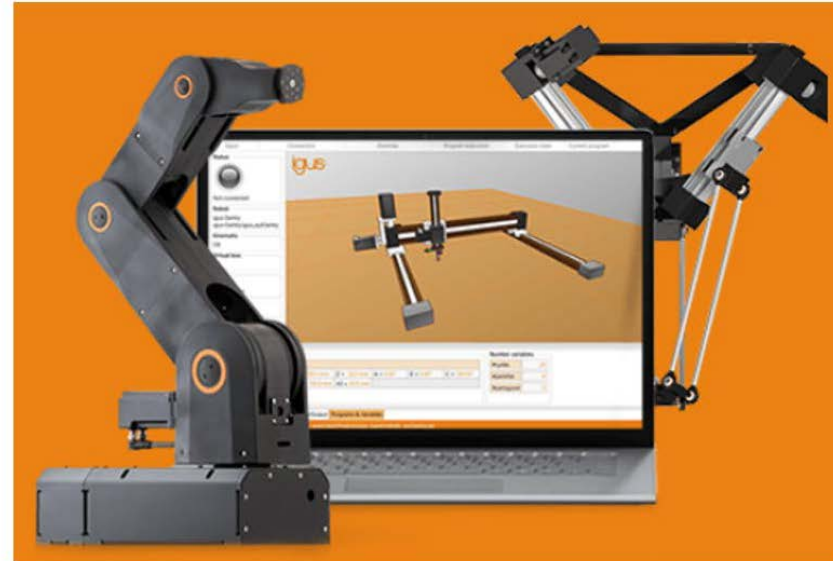
Industry Challenge – Igus



LOW
COST
AUTOMATION
by igus

vertical farming

igus® plastics for longer life®



Challenge vertical farming

- We need your ideas?
- What is additionally needed for vertical farms or inhouse farming in general?
- Built up a robot farming solution?
- Perhaps you need additionally apps, for growing or water the plants?
- Cutting, proving or watering applications.

Industry Challenge – MathWorks

Wildfire Detection

- *Uncontained wildfires not only damage the local flora and fauna but can also have a detrimental effect on global climate. An effective operation to halt the progress of a wildfire requires good information about the current situation.*
- *The project we propose here is to make use of intelligent systems to help determine the best way to combat these fires while minimizing the risk to firefighters. This goal can be achieved by making use of various data sources including (but not limited to) weather prediction data, satellite images, real time drone footage and any other relevant data.*

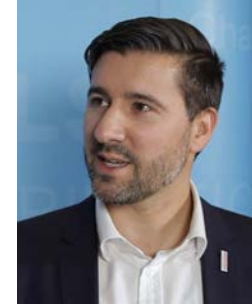


Mr. Philipp Wallner
Industry Manager
The MathWorks GmbH

Industry Challenge - Honda

Smart Lawn Mover

- *Robots can mow the lawn. Is this smart enough? What if...they could also recognize and avoid living obstacles? That is the main goal of the Honda Industry Challenge to develop new approaches for a Smart Lawn Mover.*



Mr. Dr.-Ing. Michael Fischer
 Department Manager
 Digital Solutions & Electrification Research
 Honda R&D Europe (Deutschland) GmbH

Industry Challenge – Infineon

Maker Components

- *Since a while, Infineon Technologies offers a large portfolio of third party compatible hardware (e.g. Arduino/Raspberry) for makers, like sensors or microcontrollers.*
- *This Industry Challenge allows participants to utilize their skillset on up to three different topics: Energy harvesting, embedded data consumption or data processing/visualization plus services, to manage, control and maintain factory machines and using at least one Infineon Maker Component.*



Mr. Ratimir Brester
System Engineer for IoT
Infineon Technologies AG



Industry Challenge – Wago

Solution for a Smart Grid

- *This Industry Challenge is about making private households independent of the major electricity suppliers. A smart grid system should be set up in the area or in the respective community.*
- *In addition, a simulation of energy producers and consumers should be developed. Various relevant scenarios have to be considered, such as: Overload situations, remuneration and contract issues, as well as energy storage and distribution mechanisms.*



Mr. Jürgen Pfeifer
IoT & Cloud Partnermanager
Industry Manager Factoryautomation
WAGO Kontakttechnik GmbH & Co. KG



Social Media Channels



Social Media

Communication Channels

- **Be up-to-date** through our **Social Media Channels**
- **Like, share and post** what you are doing to the world!
- Use our **ITQ GmbH Communication Channels**
- Are you already a **Fan or Member of our Social Media World????**
- **Join us! Like us!** And be part of our **SOCIAL MEDIA NETWORK COMMUNITY**

Social Media

ITQ GmbH Communication Channels



[@facebook.com/ITQGmbH/](https://facebook.com/ITQGmbH/)



[@instagram.com/itqgmbh](https://instagram.com/itqgmbh)



[@twitter.com/itq_gmbh](https://twitter.com/itq_gmbh)



[@linkedin.com/company/itq-gmbh](https://linkedin.com/company/itq-gmbh)



[@youtube.com/user/ITQInfo/](https://youtube.com/user/ITQInfo/)



[@www.itq.de](http://www.itq.de)

Social Media

Communication Channels

Please USE ALWAYS these HASTHAGS to get most ATTENTION:

#makeathon2020 #smartgreenisland #itqgmbh

Additionally use:

#innovation #dosomething #socialentrepreneurship #engineeringstudent

Use the Links of our Sponsors and Partners as well!!

Universities 2020



Many Thanks to our Sponsors 2020



Platinum

BECKHOFF



igus®

 MathWorks®



Gold



WAGO

infineon

Q-loud
Ein Unternehmen der QSC AG

HONDA



Silver



OPTIMA
EXCELLENCE IN PACKAGING



Bronze

BÖLLHOFF



See you soon...



SMART GREEN ISLAND MAKEATHON 2020

