MAKEathon
Rapid Entrepreneurial Innovation to Hack key industry challenges for better food systems

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MAKEathon
A type of open innovation platform with rapid prototyping. Convenes multidisciplinary participants and provides resources and prototyping facilities for ideating and building physical prototypes within a short period of time. The online and hybrid elements, due to the COVID-19 restriction from 2020, allow more flexibility to time and location of the participation.

MAKEit Consortium
MAKEit consortium was originated from project MAKEit!, a research / impact creation project in 2019-2020. Lead by University of Cambridge, and co-funded by Cambridge University and EIT Food. The project addresses Grand Challenges around *creating smarter and simpler food value chains across Europe* by designing and delivering MAKEathons. 10 partners across Europe conducted a total 15 MAKEathons in 2019-2020 around the chosen food sectors: sugar, cocoa, meat, fruit & vegetables, fish and bread.
Innovation pain points

It's hard to focus on a challenge

New ideas are needed

Ideas need to be tested quickly and cheaply
Three Pillars of MAKEathon

• **Interdisciplinary Innovation**
  bringing diverse experts that are unlikely to mingle and ideate otherwise

• **Grand Challenges**
  Tackle problems that are difficult to solve but with potentially large social impact

• **Prototyping at Makerspace / industrial kitchen**
  Unusual yet powerful coupling between food sector and hands-on experiments with physical materials and tools
2019
4 countries hosted a MAKEathon and 95 participants attended, generating 21 valuable ideas.

2020
9 countries hosted a MAKEathon and 216 participants attended, generating 52 valuable ideas.

- Northern Ireland - How can we create dairy products that are healthy for the individual and for the environment?
- Iceland - Blue Bio-Economy: How can we add value to leftover raw material from the seafood industry to make this industry more sustainable?
- AZTI 2020 - Spain - Digitizing the fish processing industry to improve efficiency, product quality, and business intelligence.
- Spain - Sustainable packaging for bread and bakery industry.
- Belgium - Leftovers from cut asparagus from a farmer and apple pulp from a juice manufacturer.

2020
- Finland - Meat Hack: Valorization of sausage off-cut waste stream.
- UK - Reducing Sugar Consumption Hack.
- Germany - Prototype products better fitting the market, developing new marketing strategies and tools for marketing.
- Switzerland - 1) What can help to successfully rethink meat consumption habits? 2) What product and technology solutions can be offered that help rethinking meat consumption?
<table>
<thead>
<tr>
<th>Challenge</th>
<th>Task(s)</th>
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| **Case 1 Cocoa** | Reliability of Cocoa for chocolate industry  
1) how can we alleviate the poverty of cocoa farmers?  
2) how can we trace cocoa from the farm to the factory?  
3) how can we reduce or eliminate sugar in chocolate? |
| **Case 2 Dairy** | Health and sustainability of dairy industry  
How do we make healthy and sustainable dairy products? |
| **Case 3 Sugar** | Sugar over-consumption  
How can we help an individual manage his/her own sugar consumption? |
| **Case 4 Fruit & Veg** | Resilience of Fruit & Veg supply chain facing COVID19  
What can help the fruit & vegetable supply chains become more resilient to disruptions? |
| **Case 5 Fruit & Veg** | Fruit & Veg consumption  
How to sustain fruit & vegetable intake in time of crisis?:  
- Extend the lifetime of fresh fruits and vegetables  
- Overcome the low trust of consumers (fear) during fresh fruit and vegetable shopping  
- Modify packing materials and packaging to ensure fruits and vegetables safety  
- Retains freshness of the fruits and vegetables during online delivery |
| **Case 6 Meat** | Future consumer behaviour towards meat consumption  
Supply chain data transparency (farm to fork)/ consumer experience/ new service business models |
| **Case 7 Fish** | Digitizing the fish processing industry  
1) improve the fish industry efficiency  
2) guarantee the product’s quality of the fish and aquaculture products  
3) optimize the business intelligence focused on the final consumer |
| **Case 8 Meat** | Sausage industry left-over revalorisation  
How can cut-offs (e.g. end pieces) be transformed into new products? |
| **Case 9 Meat** | Game meat: a sustainable and healthy alternative  
Prototype products better fitting the market, develop new marketing strategies and tools for marketing |
| **Case 10 Seafood** | Seafood industry left-over revalorisation  
How can we add value to left-over raw material from the seafood industry in order to make this industry more sustainable? Salmon offcuts |
| **Case 11 Fruit & Veg** | Fruit & Veg industry left-over revalorisation  
Find a solution to a (for the time being wasted) by-products and to prevent food waste: leftovers from cut asparagus from a farmer and apple pulp from a juice manufacturer |
| **Case 12 Bread** | [-Plastic = + Sustainability] for bread industry  
find innovative and economically viable solutions for the packaging of bakery and pastry products that reduce the use of plastic, replace it with alternative materials, allow its reuse or improve its recycling, without compromising the safety or freshness of the products. |
| **Case 13 Meat** | Meat and Climate change  
Alternative meat Social solutions and technical solutions |
| **Case 14 Seafood** | Seafood industry left-over revalorisation  
How can we add value to left-over raw material from the seafood industry in order to make this industry more sustainable? Cod bone powder, otolith, and blowfish skin |
| **Case 15 Meat** | Future consumers and Meat  
What does sustainable food consumption mean for young adults? What kind of services would support it? |
Sugar Hack 9-21 July 2019

Challenge

How might we help reduce people's sugar consumption?

Maker Space Cambridge: the UK’s biggest membership-based community makespace, a full range of facilities from 3D printers, laser cutters, CNC machines, wood workshop, metal workshop, fabric workshop, jewellery workshop, print making
Challenge

What can help the fruit & vegetable supply chains become more resilient to disruptions?

Hybrid event using zoom, miro and remote prototyping with participants from 5 continents around the world
MAKEit Meat (Dec 15-16 2019) - Helsinki - VTT

Future consumers and Meat: What do young adults think about meat products, What kind of services would they expect in the future?

F2F Makeathon, 22 students, one teacher, 4 experts, 5 facilitators, 3 observers

Teams: Wellbeing of the animals, Carbon neutral meat production, Alternative sources for proteins, Future meat factory, Planetary diet
MAKEit Meat (Dec 9-14 2020) - Helsinki - VTT

Future consumers and Meat: What does sustainable food consumption mean for young adults? What kind of services would support it?

Fully online Makeathon, 27 students, one teacher, 4 company representatives as experts, 8 facilitators for 7 groups → Digital visualizations of future services
MAKEathon From Forest to Fork
New Products and Marketing Concepts for Game Meat.
5 Teams & 10 New Concepts and Prototypes in 3 days!

Beef
- 24g fat
- 229 kcal
- 13g protein

Deer
- 3g fat
- 94 kcal
- 21g protein
MAKEit Seafood (2020) - Reykjavík/Akureyri/Neskaupstaður & Bolungarvík/Ísafjörður - Mátís

4 location
46 participants
2 winning teams
19 partners
17 press coverage
Revalorising asparagus & apple pulp side streams for human consumption

MAKEit Veg (2020) - Leuven, Belgium

6 innovative product prototypes

2 days of intensive brainstorming and prototyping...

...with multidisciplinary teams
The Challenge: [- Plastic = + Sustainability]
Reduce the use of plastic in packaging for the Bread&Bakery Industry

- 3 days
- Online work and prototyping (Slack, Zoom)
- 6 innovative solutions
MAKEit Dairy: How do we make healthy and sustainable dairy products?

- **Blended MAKEathon**
- **18 participants**
- **8 countries**
- **prototyping at home**
- **and remotely**
- **one challenge**
- **3 innovative solutions**

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**Overall Acceptability**

- **Appearance**
- **Aroma**
- **Taste**
- **Aftertaste**

- **Standard**
- **Reduced Sugar**
- **Reduced Sugar and Fat**

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- **Food as medicine**
- **Mood Boosting Food**
- **Convenience**
- **Global Flavours**
- **Sustainability**

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**Belfast Online MAKEathon**

Join us and help revolutionise the Dairy Supply Chain

24 November - 1 December

![MAKEathon banner](image-url)
Challenges: How can digitalization help fish processing industry in:

1. Improving the efficiency of the fish processing industry
2. Guaranteeing the quality of the fish products
3. Optimizing the business intelligence

- 1 week of intensive work and prototyping
- Hybrid event using Zoom, Slack and remote prototyping
- 4 innovative prototypes
How to sustain the fruit & vegetable intake in time of crisis (e.g. pandemic)?

MAKEitFRUVEG MAKEathon - Warsaw (Poland)

9 days of fabrication workshops and intensive prototyping

6 innovative product prototypes
Our solution

Easy, Ready-to-Use Toolkit

Two Ways of Engagement

Your Benefits

Great sandpit to initiate entrepreneurial innovation

Make a positive change while making money
MAKEathon Toolkit

A to Z guide

…to design a MAKEathon:
• Challenge identification- task formulation-programming-recruiting
• Virtual, physical and hybrid options

Slidedecks & templates

…to run a MAKEathon for 5 days:
• Day 1: Intro & team up
• Day 2: Inspiration & Prioritisation
• Day 3: Ideation
• Day 4: Prototyping & Finalising
• Day 5: Pitch

Tips & case studies

Lessons from our 15 MAKEathons
…with varying challenges, audience groups and formats!
Thank you!
Get in touch to find out more

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