

20210312

Global Food Security Lunch Time Seminar

MAKEathon

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

MAKEathon

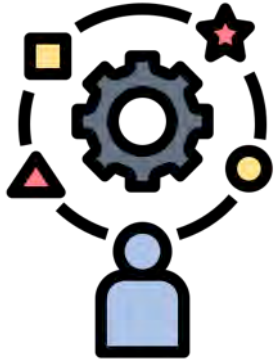
A type of open innovation platform with rapid prototyping. Convenes multidisciplinary participants and provides resources and prototyping facilities for ideating and building physical prototypes within a short period of time. The online and hybrid elements, due to the COVID-19 restriction from 2020,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

MAKEit Consortium

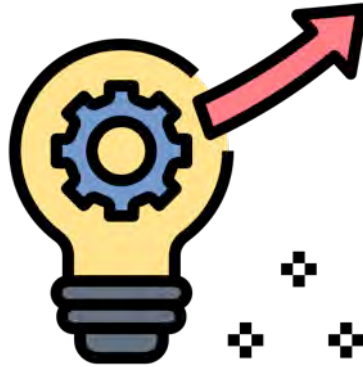
MAKEit consortium was originated from project MAKEit!, a research / impact creation project in 2019-2020. Lead by University of Cambridge, and co-funded by Cambridge University and [EIT Food](#). The project addresses Grand Challenges around *creating smarter and simpler food value chains across Europe* 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.



2020

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.



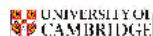
UAM Idea 2020

Spain - Sustainable packaging for bread and bakery industry.



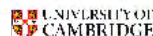
2020

Northern Ireland - How can we create dairy products that are healthy for the individual and for the environment?



2020

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



2019

UK - Reducing Sugar Consumption Hack.



VTT 2019

Finland - Meat Hack; valorization of sausage off-cut waste stream.



VTT 2020

Finland - To be done on 7-11 Dec.



2020

Poland - How to sustain fruit and vegetable intake in time of crisis?



#DIL 2020

Germany - Prototype products better fitting the market, develop new marketing strategies and tools for marketing.



#DIL 2019

Germany - Meat Waste Reduction; valorization of sausage off-cut waste stream.



riketto 2020

Belgium - leftovers from cut asparagus from a farmer and apple pulp from a juice manufacturer.



ETH zürich 2020

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?



ETH zürich 2019

Switzerland - Cocoa Hack.



This activity has received funding from EF- Food, the innovation community on Food of the European Institute of Innovation and Technology (EIT), a body of the EU, under the Horizon 2020, the EU Framework Programme for Research and Innovation

Challenge		Task(s)
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?: <ul style="list-style-type: none"> ▪ <i>Extend the lifetime of fresh fruits and vegetables</i> ▪ <i>Overcome the low trust of consumers (fear) during fresh fruit and vegetable shopping</i> ▪ <i>Modify packing materials and packaging to ensure fruits and vegetables safety</i> ▪ <i>Retains freshness of the fruits and vegetables during online delivery</i>
Case 6 Meat	Future consumer behaviour towards meat consumption	Supplychain 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?



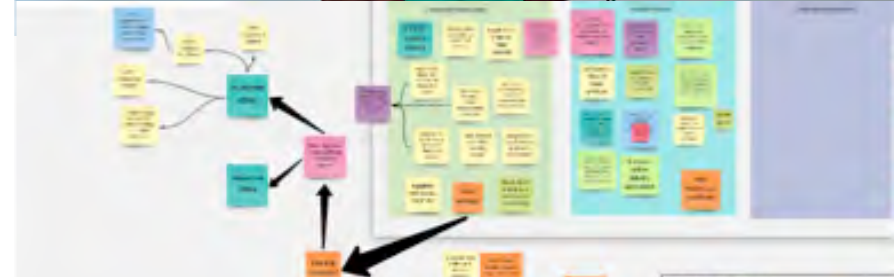
Maker Space Cambridge: the UK's biggest membership-based community makespace, a full range of facilities from 3D printers, laser cutters, CNC machines, wood workshop, metal workshop, fabric workshop, jewellery workshop, print making

Cambridge Fruit & Veg 21-22,27 July 2019



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?

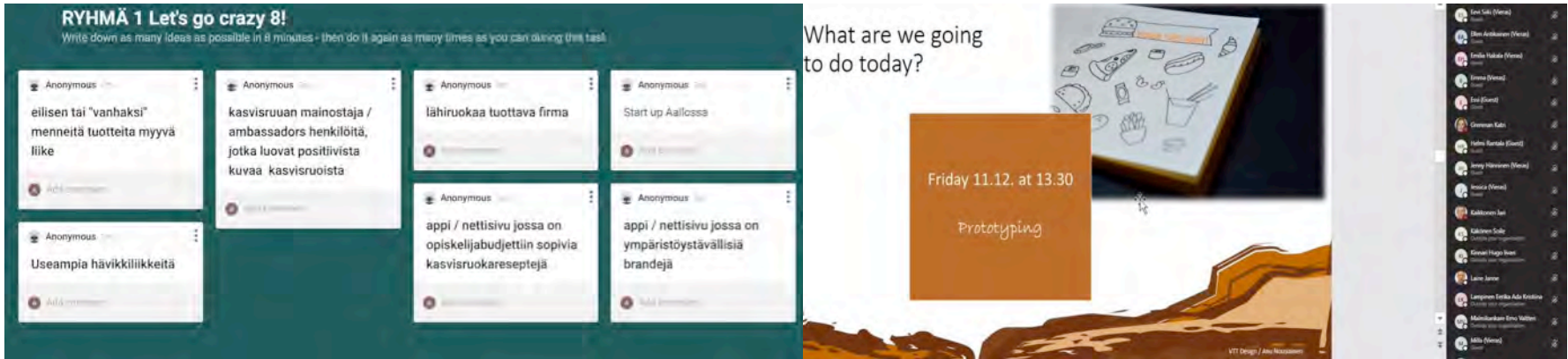


F2F Makeathon, 22 students, one teacher, 4 experts, 5 facilitators, 3 observers 5
Teams: Wellbeing of the animals, Carbon neutral meat production, Alternative sources for proteins, Future meat factory, Planetary diet



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

From Forest to Fork - 14-19 October 2020

WORKSHOP

MAKEathon from forest to fork

DJV Deutscher Jagdverband 

Workshop at German Institute
of Food Technologies (DIL) · Quakenbrück

14 - 19 October 2020

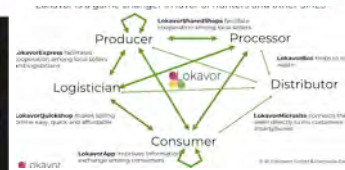
  

Game meat Valorisation
100% Local
100% Sustainable
100% Healthy
100% Taste

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

4 location

19 partners

46 participants

17 press coverage

2 winning teams

Þannig er nafnið á verkefni þessu.

Nemendur Háskólaetevurinn taka þátt MAKEathon Matís

Í dag hefur verið haldin MAKEathon í Reykjavík og Bolungarvík. Þetta er fyrsta MAKEathon sem hefur verið haldin í báðum borgum. MAKEathon er verkefni sem hefur verið haldin í Reykjavík og Bolungarvík. Þetta er fyrsta MAKEathon sem hefur verið haldin í báðum borgum.

Vistvænn pappír sem vex

Ad hlutað sýningu þessu og verkefni þessu er matís. Matís er fyrsta MAKEathon sem hefur verið haldin í Reykjavík og Bolungarvík.

MAKEIT VERKEFNIÐ Á VESTFJÖRÐUM



MAKEit Seafood (2020) - Reykjavík/Akureyri/Neskaupstaður & Bolungarvík/Ísafjörður - Matís





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

MAKEit Bread&Bakery, 21-23 October 2020 - UAM - IMDEA Food

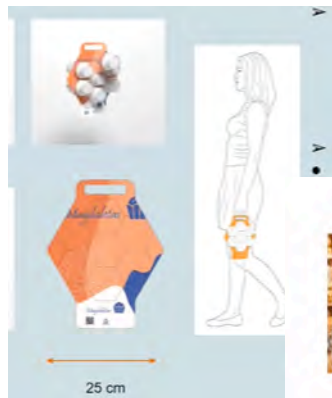
The Challenge: [- Plastic = + Sustainability]

Reduce the use of plastic in packaging for the Bread&Bakery Industry

- 3 days
- Online work and prototyping (Slack, Zoom)
- 6 innovative solutions



#MAKEitBREADBAKERY



- Long selflife
- Multipack/individual packaging
- Barrier properties (heat treatments)
- Conservation guarantee
- Family unit



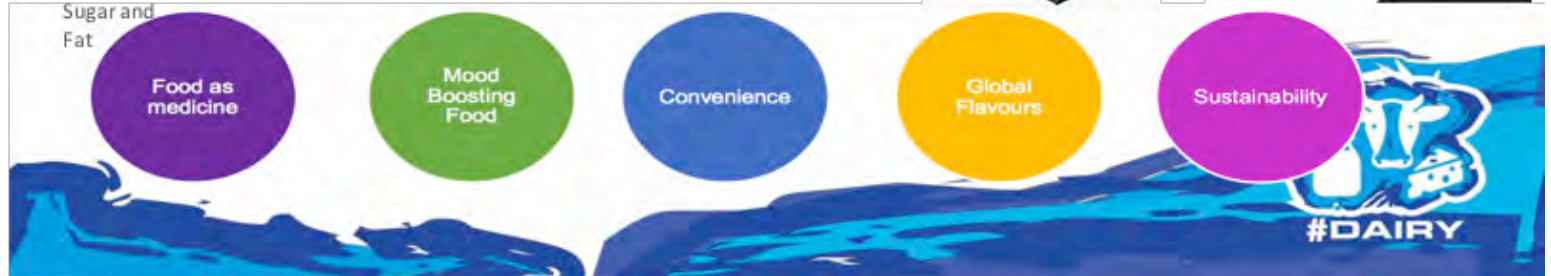
MAKEit Dairy: How do we make healthy and sustainable dairy products?



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



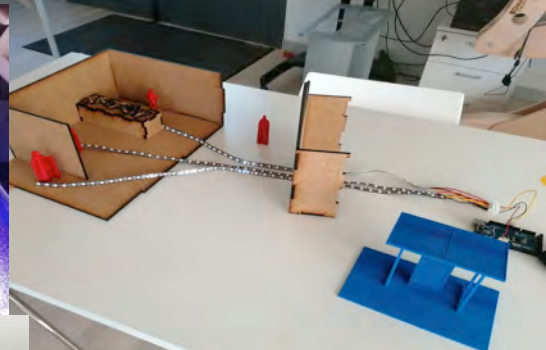
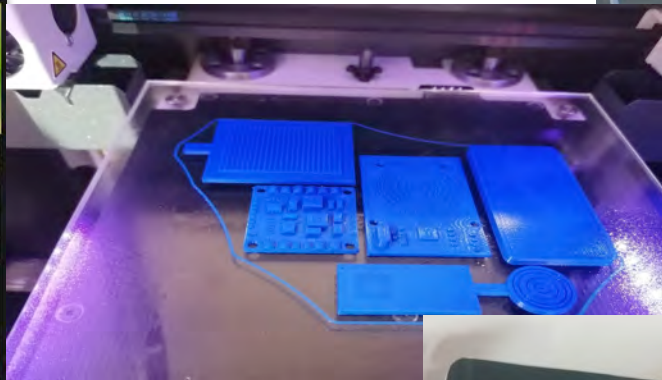
- Standard
- Reduced Sugar
- Reduced Sugar and Fat



MAKEit SEAFOOD (2020) - 6th-13th November - Bilbao (Spain) - AZTI

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



1 challenge. 6 tasks. 12 days. 58 applications. 21 countries. 6 teams. 30 innovators.



UNIVERSITY OF WARSAW

MAKEitFRUVEG MAKEathon - Warsaw (Poland)



9 days of fabrication workshops and intensive prototyping



6 innovative product prototypes

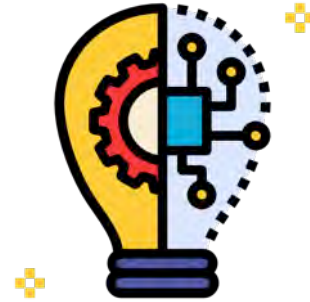
Our solution



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

Dr. Curie Park
Research Associate
University of Cambridge

cp538@cam.ac.uk