HACK AgriFood'20:
Online hackathon requirements and guidance

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1. Scope of HACK AgriFood'20

HACK AgriFood'20 is an international online hackathon aimed at helping the agriculture and food sectors overcome ongoing problems and solve challenges related to the COVID-19 crisis.

The strategic approach of HACK AgriFood'20 is based on 5 key objectives:

1. Supporting international and cross-sectorial teams of experienced or beginner innovators working on solutions related to the agrifood sector;
2. Involving a wide range of local and international agrifood stakeholders to shape project outcomes in line with market and end-user needs;
3. Focus on tangible results and delivering innovative solutions targeted on mitigating the effects of the COVID-19 crisis on the agrifood sector;
4. Maximizing dissemination and exposure of solutions developed during the event to end-users and other stakeholders;
5. Attracting additional support and investment for teams and their solutions developed during the event.

2. Background of the Hackathon

HACK AgriFood is an international hackathon focused on agriculture, food and associated sector innovations. The hackathon is the first and the only one of its kind in Lithuania.

The event was first organized by AgriFood Lithuania Digital Innovation Hub on October 12-13th, 2019 in a unique venue place – the renaissance style Raudondvaris Manor. The event was a huge

success, garnering both local and international interest and attention. During the 2-day on-site event, 18 teams from Lithuania and neighboring countries participated, supported by a total of 28 experienced mentors and experts.

Teams worked on and proposed solutions in the key areas of: Data driven agrifood (Big Data, AI, visualization, data science); Automatization, sensing and engineering (IoT, sensors, robotics, drones, satellites); Sustainability end efficiency (precision agriculture, improved productivity, process management); Crowd-farming and sharing economy (cooperative farming, equipment sharing, community-based production); Post-harvesting (supply chains, quality control, distribution networks, food waste reduction); Aquaculture (precision farming, sensors, process management, protection measures).

Three finalists of the hackathon presented their solutions to an audience of over 300 international agrifood technology, business and policy leaders, and received awards during the annual international conference – the *Agribusiness Forum 2019* (https://www.digitalfarm.lt).

3. Topics and Challenges

HACK AgriFood'20 proposes up to **15 challenges** – organized under **4 general topics** – to teams participating in the hackathon. All challenges are highly relevant and market oriented. The challenges are formulated in close cooperation and consultancy with agriculture and food sector companies - stakeholders, and offered to hackathon teams by a consortium of international industry clusters. Each challenge is patroned by one of the clusters or companies ("Challenge Owners"), which, in turn, offer guidance and support for teams working on the specific challenge.

Teams that are invited to participate in the hackathon will be required to choose and state the challenge they will be working on throughout the event. Several related challenges can also be chosen, as long as the foreseen solution adequately addresses all of them.

A preliminary list of topics and challenges is outlined in the table below. All challenges are published on the hackathon website (www.hackagrifood.lt), together with accompanying explanatory texts and video presentations by Challenge Owners and stakeholders.

Teams that join the hackathon will be required to declare the challenge they seek to address during the hackathon kick-off online event, which will be held on October 13th. If a reasoned explanation is provided during the first week of the hackathon, teams will be allowed to change the challenge of their focus.

General topics	Challenges	Challenge Owners
1. Local Food Supply Networks Quarantine measures and lockdowns throughout Europe have caused a rearrangement in the usual food supply networks. The value of using, supporting and promoting locally produced supplies and foods – as well as short food supply chains that link producers directly with consumers – has become apparent. In order to further reinforce local food supply networks, we are looking for visionary teams that can provide solutions in domains of: • Connecting local producers directly with consumers; • Projecting demand and priority of local goods; • Community-based supply chains; • Solutions for surplus food distribution.	1.1. Locally produced non-soya plant proteins	FoodService Cluster (Spain)
	1.2. Consumer-oriented short food supply chain solutions	Food Products Quality Cluster (Latvia)
	1.3. Creative means for encouraging provision of quality data	ART21 (Lithuania)
	1.4. Plant stress cause assessment	Vikonda (Lithuania)

2. Utilizing Food Side-Streams Food production is a wasteful process, during which between 20-40% of food is lost. Thus, utilizing the by-products and side-streams of these processes to produce value adding products is essential in our collective pursuits of sustainable environments and circular economies. The ongoing COVID-19 crisis has returned food production side-stream utilization into the spotlight. We are on the lookout for smart and easy to implement solutions that help with: • Side-stream value discovery; • Aggregating by-products; • Monetizing side-streams; • Side-stream recycling or utilization.	2.1. Reusing by-products from oil or juice production	Food Cluster (Austria)
	2.2. Optimizing food catering for major public festivals	Food Products Quality Cluster (Latvia)
	2.3. Valorizing dairy product manufacturing side-streams	Žemaitijos pienas (Lithuania)
3. Smarter Food Packaging The COVID-19 related disturbances in our food supply networks and consumption patterns have caused significant food waste, as well as led to major financial losses for food manufacturers, distributors and retailers. Packaging is one of the key factors at the center of all of this. We welcome all innovative solutions for food packaging that address such issues as: • Consumer-oriented traceability solutions; • Digital technology-infused packaging; • Reducing the environmental footprint of packages; • Biodegradable and recycled packaging.	3.1. Creative multi-functional food packaging	Packaging Cluster (Spain)
	3.2. Package-based product shelf life estimation	FoodService Cluster (Spain)
	3.3. Sustainable and affordable cutlery	FoodService Cluster (Spain)
	3.4. Sustainable sandwich packaging	Packaging Cluster (Spain)
4. Solving Last Mile Delivery On-line retail and food product or meal deliveries to the consumers' doorstep have skyrocketed throughout Europe and the globe, with the end of this surge nowhere in sight. Yet alternative retail channels and the so called "last mile delivery" remain relatively open fields for novel and efficiency-increasing solutions. We are welcoming teams that offer solutions related to: • Solving increasing demand for last mile delivery; • Controlling and monitoring conditions of last mile delivery; • Reducing the environmental footprint of last mile delivery; • Simplifying retail for food producers.	4.1. Novel efficiency-increasing solutions for food delivery	Food Cluster (Austria)
	4.2. Traceability of cold food chains	FoodService Cluster (Spain)
	4.3 TBA	TBA

4. Application and Selection process

Teams interested to participate in HACK AgriFood'20 need to meet the following eligibility criteria:

- The team needs to be composed of 3-5 team members, with at least one member fluent in English;
- The team must consist of members with diverse competencies and experience, relevant to the general theme of the hackathon – it is recommended that at least one team member should have knowledge in the domain of the targeted challenge;

- While teams representing already existing enterprises (SMEs, startups, etc.) with proven previous experience are encourage to apply, informal or student teams will be also considered;
- The team must confirm and ensure on their availability to participate throughout the entire hackathon period, as well as follow the rules and requirements set out by the event organizers.

Teams interested to participated are required to register by filling out the registration form on the event website (www.hackagrifood.lt).

All registrations will be reviewed and validated by the event organizational committee. Selected teams will be contacted via email and invited to participate in the event. Teams will be selected based on their eligibility, previous relevant experience and relation to the overall aims and theme of the hackathon. Team selection will be an ongoing process and teams will usually be informed on their acceptance to participate within a week after registration. No more than 20 teams will be selected.

Team registrations should be submitted on the event website no later than **2020 October 11th** (Sunday) **17:00 pm** (CET).

In the case a maximum of 20 teams are selected before the registration deadline, the registration process will be stopped and no new registrations will be accepted. Therefore, all interested teams are encouraged to register their intent to participate as soon as possible.

5. HACK AgriFood'20 phases

The hackathon will be carried out in several phases.

Team registration and selection phase – until October 11th

During this phase, an outreach campaign will be carried out to attract prospective teams to particimate in the hackathon. Potential participants will be contacted both through general public communication channels, as well as through direct contact. Every team interested to participate in the event will need to meet the eligibility criteria, register their participation on the event website and receive a formal invitation (for more details see *5. Participation and selection*).

Hackathon initiation phase – from October 12th to October 13th

During this phase, the hackathon will be officially initiated. No later than October 12th, all invited teams, as well as hackathon mentors, stakeholders and other associated partners will receive information on the hackathon kick-off event.

The official start of the hackathon (kick-off online event) is scheduled to take place on October 9th. During this event, hackathon participants will be introduced to the overall goals and activities of the event, as well as the hackathon programme, schedule and team of mentors. Challenges will be introduced by their respective Challenge Owners. Each team will be asked to make a brief presentation of themselves to relevant Challenge Owners ("speed dating" format).

Teams will be asked to finalize their choice of which challenge(s) the team seeks to address by October 12th, after which teams will be assigned to appropriate mentorship tracks.

Mentoring phase – from October 13th to November 20th

During this phase, teams will be engaging with mentors, developing solutions that address specific challenges and refining their value propositions.

Internationally recognized mentors with extensive expertise in agrifood technology and innovation will deliver mentorship to teams participating in the hackathon. Mentorship will encompass both challenge relevant technical mentorship, as well as business related mentorship to help shape the outcomes according to market needs and business best-practices. Stakeholders (the potential end-users of the solutions) will also partake in mentorship, providing teams with valuable insights into the issues faced by the particular agriculture and food sub-sectors and practical guidance.

Mentoring seasons will usually take place at weekdays. The seasons include general mentorship provided to all hackathon teams, challenge and/or technology specific mentorship, as well as 1-on-1 seasons between dedicated mentors and teams. Each team is expected to devote an estimate 3-4 hours per week for participation in mentorship seasons. All seasons will be held online (video conference calls) and at least one representative per team is required to participate. A complete schedule of mentorship seasons will be announced during the hackathon kick-off event.

In addition, every Friday teams will be required to submit a brief progress report, outlining team progress and main steps made during the previous period of the hackathon.

Finalization phase – on November 21st-22nd

A solution and pitch finalization event will be held on November 21st-22nd. During this online event, hackathon participants will engage in an intensive 2-day work session with mentors and experts, to be held in parallel with an on-site hackathon for local beginner innovators. The aim of the event will be for teams to finalize their solutions and to shape their pitch presentations. At the end of the event, all team will be expected to deliver their pitch presentations, which will be streamed to a panel of international jury members (see *7. Evaluation procedure and criteria*).

Three leading teams will be selected for the last phase and presented with a unique opportunity to pitch their solutions to participants of the *AgriBusiness Forum 2020* (November 26th).

Award phase – on November 26st

The three leading teams selected in the previous phase will pitch their solutions to an audience of international agrifood technology, industry and policy representatives participating in the annual conference *AgriBusiness Forum 2020*. From among these teams, the final places of winner will be announced and the teams will be awarded with prizes and benefits (see *8. Prizes*).

6. Evaluation procedure and Criteria

All teams participating in the hackathon will be required to deliver a pitch presentation on the proposed solution to one or several challenges of HACK AgriFood'20. The pitch will need to be delivered in the format of a video presentation during the final event planned on November 21st.

Pitches will be evaluated within the context of specific challenges, and within the context of the overall hackathon.

Challenge Owner evaluation:

Challenge Owners will evaluate proposals that are directly related to their respective challenges. If a proposed solution is considered the best among other challenge participants and meets or exceeds the expectations of the Challenge Owner, the proposing team can be announced as "Challenge Champions" and awarded with non-monetary prizes (see *8. Prizes*).

In the cases when no proposed solution sufficiently addresses the challenge and does not meet the expectations of the Challenge Owner, no team is announced as the Champion of the challenge. The principles and criteria of evaluation are at full discretion of the Owners of respective challenges.

Jury evaluation:

All pitches and the solutions presented within them will be evaluated by a jury of international experts. The jury will consist of 18 internationally recognized experts from the technology and business domains, as well as representatives of key agrifood sector stakeholders.

Every jury member will individually score every hackathon team, according to the criteria of Relevance, Novelty, Feasibility and Impact (see table below). These scores will be aggregated, averaged and a unified list of teams and their scores will be produced. The teams with the 1st, 2nd and 3rd highest scores will be announced the winners of the hackathon and take the respective 1st, 2nd and 3rd places. In the case several teams are at a tie, the jury will decide on which team is rated higher.

The decision made by the jury will be final and unappealable by any parties involved in the hackathon.

Criteria	Description	Score
Relevance	Proposed solutions will be scored in respect to their: • Relevance to the hackathon, its topics and challenges; • Alignment to overall market needs of the European agrifood sector.	0-5
Novelty	Proposed solutions will be scored in respect to the novelty of employed approach, creativity (where applicable) and innovativeness of the solution. This criterion includes the aspects of: • Technological novelty and innovativeness; • Business innovativeness and uniqueness of the value proposition.	0-5
Feasibility	Proposed solutions will be scored in respect to their potential to be developed into fully market ready products or services. Feasibility encompasses the aspects of: • Technical achievability; • Soundness of the business model; • Scope of efforts needed for commercialization.	0-5
Scalability	Proposed solutions will be scored in respect to their potential to be reused, adapted and scaled on a European level. This includes the aspects of: • Technological and methodological scalability; • Functional scalability and adaptability for different use cases; • Potential to be used in different market conditions.	0-5
Impact	Proposed solutions will be in respect to their foreseen positive impacts on the environment, economy and society. This criterion includes aspects of how proposed solutions contribute to: • Tackling the negative impacts of the COVID-19 pandemic; • Reducing the environmental footprint of the agrifood sector; • Supporting sustainable and resilient business practices.	0-5
	Evaluation sum:	**0-25**

7. Hackathon Prizes

After the evaluation process is finalized and results announced, the winning teams will be awarded with prizes and additional benefits. Within HACK'20, two types of winners will be announced with different prizes awarded to them.

Challenge winners:

Teams that are selected as the best within their respective challenges will be announced as "Challenge Champions". These Champions will receive non-monetary prizes and benefits (in the form of partner offered services, consultancy and support, access to certain infrastructure, inclusion in acceleration programmes, etc.) that are set per specific challenge. The prizes will be provided on behalf and at the discretion of the Owners of respective challenges. Prizes per challenge will be announced on the event website (www.hackagrifood.lt).

Hackathon winners:

Based on the evaluation of an international jury of experts, 3 top-scoring teams will be selected from among all participants and announced as the winners of the hackathon:

- 1st place winning team will receive a prize of €5000;
- 2nd place winning team will receive a prize of €3000;
- 3rd place winning team will receive a prize of €2000.

In the case if a hackathon 1-3 place winning team is also a Challenge Champion, the team will receive both respective (monetary and non-monetary) prizes and benefits.

Participants, nominees and winners will be also gain additional publicity and promotion by:

- Having the opportunity to pitch their solutions to an audience of international agrifood technology, industry and policy leaders in the annual conference *AgriBusiness Forum 2020* (www.digitalfarm.lt);
- Being announced on the SmartAgriHubs Innovation portal and during EIT Food events;
- Promoted through the international business and public stakeholder networks of the hackathon organizing partners.

8. Obligations and Requirements

- Teams must confirm and ensure on their availability to participate throughout the entire hackathon period, as well as follow the rules and requirements set out by the event organizers;
- Not following the rules and requirements set out by the event organizers can result in the removal of the team in question from the hackathon, at the discretion of the event organizers;
- Key technical details and know-how of the developed solutions are considered the intellectual property of the teams who developed them;

- After hackathon end, challenge owners have exclusive first-look rights towards the solutions developed during the hackathon and individually discuss the terms of solution use and commercialization with the teams that developed them;
- All information presented publicly (eg. via pitches) during the hackathon (including initial ideas, developed concepts, technical details and business models) is considered public domain knowledge.

9. Hackathon organizers

HACK AgriFood'20 is organized in close cooperation by 6 international partners (agrifood sector hubs and clusters) coming from 4 EU countries:

AgriFood Lithuania Digital Innovation Hub (Lithuania)
www.agrifood.lt

SMART Food Cluster (Lithuania)
www.smartfoodcluster.com

Food Products Quality Cluster (Latvia)
www.ppkk.lv

Business Upper Austria – Food Cluster (Austria)
www.lebensmittel-cluster.at

Foodservice Cluster of Catalonia (Spain)
www.clusterfoodservice.org

Packaging Cluster (Spain)
www.packagingcluster.com

HACK AgriFood'20 is supported and endorsed by:

SmartAgriHubs (cross-European network of agrifood DIHs)
www.smartagrihubs.eu

Safe Smart Food (European Strategic Cluster Partnership)
https://safesmartfood.eu

Agency for Science, Innovation and Technology (Lithuania)
https://mita.lrv.lt/en

10. Contacts and Dates

HACK AgriFood'20 website – **www.hackagrifood.lt**

Email for additional information and questions – **ask@hackagrifood.lt**


October 11th
End of team registration
October 13th
Hackathon kick-off online event
October 15th
Start of mentorship seasons
November 21st-22st
Final sprint and pitches
November 26st
Nominee pitch and awards at the *AgriBusiness Forum*

		General organizational activities	Mentoring activities	Dates
Week #0	Mon			2020-10-05
	Tue			2020-10-06
	Wed			2020-10-07
	Thu	**Expert guidance** *Meeting between participating experts and organizers*		2020-10-08
	Fri			2020-10-09
	Sat			2020-10-10
	Sun	**Team registration deadline** *Until 5 pm GMT*		2020-10-11
Week #1	Mon	**Final invitations** *Final accepted teams invited to participate*		**2020-10-12**
	Tue	**Kick-off event and Speed dating** *Meetings between teams and Challenge Owners*		2020-10-13
	Wed			2020-10-14
	Thu		**Mentoring day #1** *Tech and Business mentors approach teams*	2020-10-15
	Fri		**Team progress recap** *Brief team report on activities and progress*	2020-10-16
	Sat			2020-10-17
	Sun			2020-10-18
Week #2	Mon		**Webinar #1** *Creative thinking and design*	2020-10-19
	Tue	**Challenge Owner guidance** *Meeting between Challenge Owners and organizers*		2020-10-20
	Wed			2020-10-21
	Thu		**Mentoring day #2** *1:1 sessions and Q&A with Challenge Owners*	2020-10-22
	Fri		**Team progress recap** *Brief team report on activities and progress*	2020-10-23
	Sat			2020-10-24
	Sun			2020-10-25
Week #3	Mon			2020-10-26
	Tue		**Mentoring day #3** *Experts review initial ideas and challenge teams*	2020-10-27
	Wed			2020-10-28
	Thu			2020-10-29
	Fri		**Webinar #2** *Bringing novel ideas to market* **Team progress recap** *Brief team report on activities and progress*	2020-10-30
	Sat			2020-10-31
	Sun			2020-11-01
Week #4	Mon			2020-11-02
	Tue		**Mentoring day #4** *1:1 sessions with Tech and Engineering experts*	2020-11-03
	Wed		**Mentoring day #5** *1:1 sessions with Business experts*	2020-11-04
	Thu		**Mentoring day #6** *1:1 sessions with Marketing experts*	2020-11-05
	Fri	**Midway overview** *Hackathon organizational overview with stakeholders*	**Team progress recap** *Brief team report on activities and progress*	2020-11-06
	Sat			2020-11-07
	Sun			2020-11-08
Week #5	Mon			2020-11-09
	Tue		**Mentoring day #7** *1:1 sessions with Challenge Owners*	2020-11-10
	Wed			2020-11-11
	Thu			2020-11-12
	Fri		**Webinar #3** *Master template for the perfect elevator pitch* **Team progress recap** *Brief team report on activities and progress*	2020-11-13
	Sat			2020-11-14
	Sun			2020-11-15
Week #6	Mon			2020-11-16
	Tue			2020-11-17
	Wed			2020-11-18
	Thu	**Jury guidance** *Meeting between jury members and organizers*		2020-11-19
	Fri			2020-11-20
	Sat	**Finalization and Grooming** *Intensive 2-day work seasons with mentors*		**2020-11-21**
	Sun	**Finalization and Grooming** *Intensive 2-day work seasons with mentors*		**2020-11-22**
		Jury evaluation *Team pitch evaluation and nominee announcement*	**Pitch season** *Teams pitch the solutions developed during the hackathon*	
Week #7	Mon			2020-11-23
	Tue		**Final Q&A** *1:1 consultations of nominee teams by organizers*	2020-11-24
	Wed			2020-11-25
	Thu	**Final nominee pitches and award ceremony** *During the AgriBusiness Forum 2020 (www.digitalfarm.lt)*		**2020-11-26**
	Fri			2020-11-27
	Sat			2020-11-28
	Sun			2020-11-29