



# Cultivacktion

Harvesting innovations through technology to create a more inclusive agricultural transformation in Indonesia



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## Indonesia Data Hackathon Submission Guidelines and Jury Pack

### **Background**

The Indonesian agricultural sector is pushed for changes. By 2050, the Indonesian population is expected to exceed 320 million, of which 234 million will be urban dwellers, which means sufficient production and a strong logistics system is essential. The consumers are diversifying their food choices, whilst paying between 13% to 61% higher than the prices received by farmers. On the other hand, high food prices, low dietary quality and unsafe food are important contributing factors to Indonesia's high rates of malnutrition in its different forms. Furthermore, land conversion and Climate Change will only act more as an additional burden to the country's food production. On top of that, the overuse of fertilizer in horticulture threatens the sustainability of the environment. To adequately produce, transport and feed the growing population while keeping the environmental sustainability requires careful and thoughtful measures for changes.

However, the current condition of Indonesian farmers has plenty of room for improvement. 56% of the farmers are smallholders, on average earning only US\$3.2 per day, which means they will face difficulty in obtaining sufficient financial support and to produce in large scales for better profitability. 61% of the farmers are already above the age of 45 years old and 74% have only received primary education. 75% still practices traditional and manual farming methods. These act as barriers to boost productivity, access to supporting infrastructure, capital, markets, and information. To avoid the current situation further exacerbating and perpetuating, Indonesia's agricultural sector must find a breakthrough.

To operationalize and take full advantage of digital technologies in the agriculture and food sector, public and private actors will need to work together to develop a "digital agriculture ecosystem". The Government of Indonesia and the private sector would need to play different but complementary roles: (i) the GoI to address digital building blocks (digital literacy and connectivity), regulatory and incentive frameworks; (ii) private sector to develop and deliver solutions on sustainable business models. Strengthening digital technologies and approaches in agriculture and food systems aligns well with the Ministry of Agriculture's priorities for the transformation of the sector. Indonesia has a vibrant and strong agriculture technology (AgTech) community: at least 55 agriculture-specific digital solutions already exist in Indonesia, developed by the private sector, at varying stages of maturity and scale. Existing solutions cover five key areas, including supply chain and data management, market access, digital financial services, digital information, and precision agriculture.

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The World Bank Group, Microsoft, TaniHub, in partnership with the MoA and other key players in the digital agriculture sector, envision a series of hackathons and innovation challenges to facilitate the acceleration of disruptive agriculture technology adoption in Indonesia. Under the collaboration with GIZ, FAO, GrowAsia, IPB University, Data Science Indonesia, and the West Java Provincial Government, the first hackathon – “**CultivHaktion**” will be held from September to October 2021, focusing on the West Java horticulture sector. The hackathon aims to demonstrate the value of agriculture data and digital technologies in addressing the key challenges in Indonesia’s agri-food sector as well as build the capacities of young innovators, male and female, to develop digital solutions for agriculture. The hackathons and innovation challenges will serve as a platform for a wide range of actors in digital agriculture (e.g., governments, private sector, academia, civil society organizations (CSOs), tech innovators, and farmers) to interact and learn from each other, build networks, find synergies, as well as co-invest to support the further development and scaling up of promising AgTech solutions.

*The objective of **Cultivhaktion** is to demonstrate the value of agriculture data and digital technologies in helping to solve Indonesia’s agri-food sector’s key challenges as well as build the capacities of agricultural tech innovators to develop replicable and scalable digital solutions. The platform also intends to identify promising pilots for mainstreaming under the [ICARE Project](#) and other relevant channels.*

The event will comprise of the **hackathon** itself, as well as a series of accompanying **webinars** on digital agriculture that will be open to the public. Considering the COVID-19 pandemic, the hackathon will take place in a fully virtual setting.

## Problem Statements

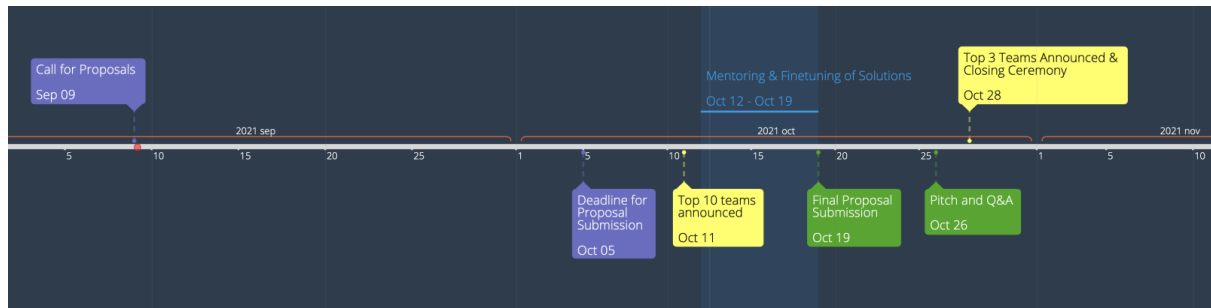
Participants will be invited to submit solutions around three broad themes that reflect challenges faced by the central and subnational governments as well as private sector actors in agriculture.

- Enhancing farm productivity and making production systems more resilient to shocks, including climate shocks
- Facilitating farmers access to markets (finance, input, output)
- Supporting public sector decision-making

The three Problem Statements come from three different perspectives - Central Government, Provincial Government and Private sector on the use of data.

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## Milestones



| Date         | Theme  |
|--------------|--|
| Oct 05, 2021 | Deadline for Phase 1 proposal submissions        |
| Oct 10, 2021 | Announcement of Top 10 Teams                     |
| Oct 19, 2021 | Deadline for Final Proposal Submissions          |
| Oct 28, 2021 | Closing Ceremony and Announcement of Top 3 Teams |

## Phase I screenings

To apply, the lead applicant from each team must submit Proposals using the Expression of Interest form available at the hackathon website by **October 5, 2021**.

Registrations open on 1 Sept, but applicants have until DEADLINE to complete and submit their applications. We highly encourage teams to make use of open and proprietary datasets and resources available on the hackathon website, as well as to attend the Opening Ceremony.

The EOI should include the following information

- Lead Applicant, Core Project Members, and Project Partners
- Technology Solution and Project Concept
  - Problem Statement
  - Technology Solution
  - Innovativeness of the solution
  - Pilots, Implementation, Case Studies, Impact
  - Scalability

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- Project Risks
- Alignment of the project with the Problem Statement
- Declaration from the participant
  - Confirm the project members have read, understood, and agree to comply with the hackathon rules
  - Confirm the project members have the Intellectual Property Right (IPR), through ownership or licenses, to use the technology solution

The submissions **should** also include a recorded video of maximum **2 minutes** and include a demo of the working application/prototype via a step-by-step visual demo and be available in English. The portal should also include the option to allow applicants to upload additional documents such as blogs or slide deck (optional).

\* It is mandatory to make all the submissions in **English**

The proposals will be reviewed based on the following criteria -

- Must be serving farmers in Indonesia
- Must be a registered entity with at least one year of operations
- Must have implemented a Minimum Viable Product
- Must have a revenue generating business model
- Must be in validation/scaling stage of the business
- Must address at least one of the 3 Problem Statements
- Must combine digital technologies, data analytics and innovations, and have a strong component of emerging technologies
- Must have strong technical and functional capabilities among the team members

**10 teams will be shortlisted at this stage and be provided mentorship and collaboration opportunities until October 19.**

The 10 shortlisted teams will be required to sign an NDA for gaining access to proprietary datasets that are provided for the sole purpose of development of MVP. They will also be given a well-researched and documented catalogue of open datasets that are relevant to the three problem statements.

## Final Judging

Before the deadline on October 19, the 10 teams must make their final submissions on the online portal.

- The final submission must contain all information (updated if necessary) from the preliminary proposal submission
- All projects must contain the following in their submission
  - Project Overview (in a short blog format)

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- Include working code with GitHub/GitLab repository URL
- Include documentation, infrastructure diagrams
- Slide deck
- Demo Video of maximum 5 mins duration presenting the prototype, scalability, and impact of the proposed solution and how it addresses the problem statements
- If there is a working prototype or MVP which is web-based, the URL to access the demo with documentation should also be provided.

The jury will review the submission package and prepare for the final pitch and Q&A with the teams scheduled on October 26th. Each team will have 5 mins for the pitch + 2 mins of Q/A with the Judging Panel. Following the pitch, judges will fill in the scoring sheet -

| Category                                  | Description   | Score (0-10) |
|---|---|--------------|
| <b>Relevance</b>                          | Problem Statement -Solution Fit, Robust to real-world and substantiated in the application, clear and differentiated value proposition  |              |
| <b>Innovation</b>                         | Creativity and Originality of the idea, Potential to scale incrementally  |              |
| <b>Implementation</b>                     | Datasets and Technologies used, Evaluation Methods, Data architecture and Infrastructure, User Experience and Design Validations  |              |
| <b>Collaboration</b>                      | Team, Partners, use of open tools/data, open code, sharing resources, Organization plan, and maturity   |              |
| <b>Impact and Sustainability</b>          | Demonstrated potential for real-world positive impact, identifying project risks and having a strategy to manage them, Sustainability, evaluating the technology for ethical issues and has addressed any potential negative outcomes or biases present in their technology or solution |              |
| <b>Management Team and Pitch Delivery</b> | Diversity and different set of capabilities should be demonstrated across the management team as well as staff members of the business.   |              |

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|--|---|--|
|  | <p>team possess deep knowledge and expertise on the market, capacity to execute the scale-up of their business</p> <p>engaging and interesting pitch with use of visual aids, response of the presenter to the questions from the Judging Panel</p> |  |
|--|---|--|