ENTREPREN**EDU**

Enhancing entrepreneurial ecosystems for education

HACKATHON HANDBOOK TEMPLATE

June 2023

D3.1 HACKATHON HANDBOOK TEMPLATE

HACKATHON ORGANIZER'S HANDBOOK AND PARTICIPANTS HANDBOOK TEMPLATE

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ABSTRACT	This deliverable provides an extensive (but not exhaustive) guide identifying all the core elements which ENTREPRENEDU local organizers must consider for the successful implementation of a hackathon. The Appendix of the deliverable also provides a template that can be used by each ENTREPRENEDU local organizer to prepare their custom Hackathon Handbook to be shared with potential participants or stakeholders.
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The ENTREPRENEDU Consortium is the following:

Participant number	Participant organisation name	Short name	Country
1	FONDAZIONE E. AMALDI	FEA	IT
2	FRAUNHOFER	Fraunhofer	DE
3	EUROPEAN BUSINESS ANGELS NETWORK	EBAN	BE
4	CORALLIA	ATHENA/ CORALLIA	EL
5	KLIYNTEH BULGARIA	CLEANTECH BG	BG
6	F6S NETWORK LIMITED	F6S	IE
7	LUISS	LUISS	IT
8	PANEPISTIMIO THESSALIAS	UTH	EL

● EXECUTIVE SUMMARY

During the implementation of the ENTREPRENEDU project, 3 hackathons will be organized in 3 different locations in relatively low-innovation countries: Italy, Bulgaria, and Greece. This distribution will guarantee diversification of participants, stakeholders, industries, sectors involved, and solutions generated. The partners assigned to the supervision of a hackathon are three: Fondazione E. Amaldi, Cleantech Bulgaria, and Corallia.

To ensure alignment between the three hackathons organized under ENTREPRENEDU, the overall coordination of the hackathons is led by Corallia, that has a consolidated experience in designing, promoting and organizing these events and in ensuring at once the contextualization at European, national, and regional level. To facilitate that kind of coordination between the different locations, an overall framework and specific guidelines are required.

This deliverable is the outcome of such a coordination activity, focusing on the design phase of the ENTREPRENEDU hackathons. The deliverable provides an extensive (but not exhaustive) guide identifying all the core elements which the ENTREPRENEDU local organizers have to consider for the successful implementation of a hackathon: Scope, Time, Space, Tools, Materials, People, Operations, and Overall Framework. The Annex of the deliverable also provides a template that can be used by each local organizer to make their custom ENTREPRENEDU Hackathon Handbook to be shared with potential participants or stakeholders.

This fundamental guidance is the result of Corallia documenting their numerous experiences in running innovation hackathons in the past decade. The analysis and guidelines that follow should help all three ENTREPRENEDU hackathons' organizers make the most of their efforts in planning an efficient and well-designed event for any type of business to accomplish its targeted goals. It should still be kept in mind though that there is no one-size-fits-all approach, so further coordination activities will take place between partners to facilitate successful hackathons.

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● LIST OF ACRONYMS

CRM   Customer Relationship Management

IP   Internet Protocol

KPI   Key Performance Indicator

Q&A   Questions and Answers

ROI   Return of Investment

SMART   Specific, Measurable, Achievable, Relevant, and Time-Bound

TCP   Transmission Control Protocol

URL   Uniform Resource Locator

VM   Virtual Machine

1 SCOPE

The very first step of designing the ENTREPRENEDU hackathons is identifying their **scope**: the extent of the area to which the hackathon is relevant. In general terms, the scope of each hackathon (or of any other similar initiative) can be analysed in six core interlinked elements: **purpose, scale, openness, context, deliverables,** and **target groups**. All these elements are analysed in the following sub-sections.

1.1 PURPOSE

The **purpose** behind the ENTREPRENEDU hackathon entails all the reasons for which the hackathon organizer decides to run the initiative. Ensuring that the entirety of the organizing team understands and has defined in a concrete manner the purpose behind the event is the very first milestone that should be achieved in the path towards the successful design of the hackathon, as it will set the foundations for several other planning decisions that may have to be taken. For those trying to put together a hackathon, defining the purpose is typically quite "personal" and should be aligned with the organizer's overall needs and goals. Such a purpose can be creating a culture of hackathons that help the empowerment of (a particular segment of) a local community, raising awareness of various technologies, identifying, and tackling specific social challenges, etc.

In the case of ENTREPRENEDU, the 3 hackathons that are set to be implemented shall follow the overall purpose of the project: *"... creating a highly replicable and scalable education model (Venture Capital Program) for both businesses and educational systems via a series of 3 Hackathons, developed at regional level and supporting developed concepts and ideas to become concrete solutions"*.

After identifying the overall purpose, further analysis is required by setting SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) objectives and defining the "success" of the hackathon. A hackathon is typically anticipated to provide at least a handful of intriguing, original ideas. A few standout concepts that may have a prototype and provide a quick demonstration of the concept or technology involved are ideal. A great hackathon should strengthen the innovation culture and further establish idea-sharing, effective collaboration, and creativity, driven by enthusiasm towards a shared goal.

The goals and success criteria can be described in both quantitative and qualitative ways. The goals already set by ENTREPRENEDU for all three hackathons that will take place under the context of the project are: *"Enhancing the proliferation of new business models and entrepreneurial skills by directly involving **90 teams** of youth (age 18 to 30 years old), in 3 different Hackathons (30 teams per Hackathons)"* and *"Supporting the **12 most viable and promising ideas and concepts** from the early stages to the commercialization of their solutions, through **5 concrete outcomes** that should be reached by the end of the project"*.

Beyond these main goals, the context of the hackathon and other aspirations of the local organizers can define further success criteria and KPIs such as the following:

- **Participants and Stakeholders Satisfaction:** Feedback procedures can give insights into the views of the participants and stakeholders. Several metrics can be included in this category (satisfaction on the venue, training, the perceived level of expertise of the mentors, etc.).
- **Participation volume and demographics:** The type of hackathon, the scheduling, the focus, and other factors will affect the volume. ENTREPRENEDU sets a target of 30 participating teams per hackathon, but another relevant metric is that of the actual number of participants. Interesting insights into e.g., gender balance could also be extracted from the registration or feedback input of participants.
- **The quantity of Ideas:** The quantity of ideas generated is extremely important, particularly when examined in relation to supplementary metadata. Typically, in most hackathons, there is one idea presented per participating team.
- **Percentage of Actionable Ideas:** The percentage of actionable ideas (those that are promising or worth further investment from a business point of view).
- **Percentage of IP-generating projects:** The projects eligible and valuable for IP protection.
- **Opportunities for publicity:** Measures of 'media attention' because of the hackathon event.

Special attention should also be given to KPIs already identified by ENTREPRENEDU, such as KPI-11 (at least 25% of the awarded teams/companies have women in strategic positions).

1.2 SCALE

Depending on their **scale**, the regional focus of the hackathons may differ. In general terms, hackathons may be **local, national,** or **international.** International hackathons consist of several local or national hackathons that take place at (approximately) the same time and follow a common framework. International hackathons may have geographic restrictions of their own taking place only in e.g., the Balkans or between EU member countries (e.g., the CASSINI Hackathons) or be truly global (such as the NASA Space Apps Challenge).

In the case of ENTREPRENEDU, three different **regional** hackathons will take place (in three different countries focusing on their own region) during different dates and with a possibly differing framework (although they will all be directed towards fulfilling the purpose of the ENTREPRENEDU project). Nevertheless, one or more of these hackathons may be integrated under a wider-scale hackathon (such as the aforementioned ones), should it be identified that the two frameworks (imposed by ENTREPRENEDU and the "core" hackathon organizers) can be integrated in a common plan.

1.3   OPENNESS

Under the **openness** aspect, hackathons are split into **internal** or **external** ones. Internal hackathons are focusing on the personnel or community of the organizer (company, university, etc.). External ones on the other hand are more open to the public, accepting (or even focusing only on) external participants.

In the case of the ENTREPRENEDU project, the three hackathons to take place will be open to the wider public. In specific, individuals between 18 and 30 years old, based in Europe, with a passion for innovation and a business idea in the hackathon area will be invited as well as startups based in low/moderate innovation regions in Europe.

1.4   CONTEXT

Under the **context** aspect, hackathons may be **themed** or **non-themed**. Themed hackathons focus on a specific aspect of human activity or value (e.g., "sustainability" or "future innovation"), a specific **market** (e.g., "transportation", "space", "insurance"), and/or a specific **technology** to use (e.g., requiring participants to focus on AI solutions or data and signals coming from satellite systems). Themed hackathons tend to identify a specific set of **challenges** to be tackled by their participants. Non-themed hackathons on the other hand may be completely open to any idea and may have no challenges at all. Non-themed hackathons are extremely rare and have the disadvantage of making it hard for participants to identify a project to focus on without much external input.

Choosing a theme is very important to attract the right audience. Identifying concrete challenges is strongly recommended. Challenges should be formulated in a way that helps participants identify a specific problem or group of problems, without constraining them too much and leaving no space for creativity and differentiation. Depending on the purpose of the hackathon, the challenges may be announced way ahead of the hackathon dates or during the opening ceremony of the hackathon (see comment on "lead time" in the next sub-section).

The three hackathons to take place under the context of ENTREPRENEDU will have a theme and challenges of their own. However, all of them should ensure that they remain aligned with the project's purpose and focus on context that can enable the proliferation of new business models and entrepreneurial skills as well as the commercialization of the developed solutions.

1.5   DELIVERABLES

Beyond the hackathon's context, the ENTREPRENEDU hackathon participants should be directed towards presenting and delivering their results in a specific format. A **minimum deliverable** should be required for a successful submission and participation in the competitive part of the hackathon.

The format of the deliverable can be anything that will enable the proper evaluation of the teams' projects: a live pitch presentation or a pitch video, a filled in business model canvas, a functional prototype, a mock-up, a piece of code, a model, etc. Beyond the identification of the type of deliverable, further **requirements** should be set, based on the hackathon projects' **assessment criteria**. For example, in the case of a presentation, participants should be informed about the must-have and nice-to-have information to include (e.g., the Problem, the Solution, the Market, the suggested Business Model, the Competition, the Team, etc.) or extent and focus of development (focus on mechanics, the UI, the underlying model, concrete code, etc.).

1.6   TARGET GROUPS

The last aspect to be taken into consideration for the complete definition of a hackathon's scope is its **target group(s)**. Identifying their characteristics is very important for the process of setting specific hackathon registration eligibility criteria. These criteria may be related to the potential participants' **nationality**, **age**, **background**, skills, etc. A hackathon may be an attempt to attract aspiring entrepreneurs, innovators, programmers, etc. Regarding this aspect, ENTREPRENEDU is focusing on participants from the target regions (Italy, Bulgaria and Greece), aged 18 to 30 years old.

2 TIME

When studying the time-related matters of a hackathon, for a proper and complete planning, three aspects must be taken under consideration:

- The **duration**
- The **"when"**
- The **timing**

2.1 DURATION

Hackathons have historically been associated with coding teams **working through the night** and lasting anywhere from **24 to 48 hours**. This may not always be feasible due to e.g., venue constraints or participants' constraints (other obligations, such as young children). The option of pulling an all-nighter may also cause extra pressure on the participants, depending on their character. An alternative to giving the option to the teams to work through the night at the venue is setting specific **start and finish times** for each hackathon day and sticking to them.

Based on the abovementioned, all ENTREPRENEDU local organizers are advised to initiate their hackathon activities in the noon or afternoon of the first day and ending in the evening of the second or third hackathon day, closing 24 and 48 hours respectively.

The exact timing though will depend on the actual days selected for the hackathon and the venue. During the process of venue selection (for a physical hackathon), the permissible start and end times should be confirmed and agreed upon. The actual start and end times should take into account the time required for setting up and/or cleaning up the venue before and after the arrival and the departure of the participants respectively.

2.2 THE "WHEN"

It is crucial to plan the hackathon for **a date that works for all stakeholders** (including the ENTREPRENEDU local organiser). It should be noted that ENTREPRENEDU hackathons should not be organized on dates (or close to them) that will decrease the potential pool of participants or fragment the capacity of the organiser or the supporting community (e.g., sponsors and community partners). Such occasions are:

- **Other major events of the ENTREPRENEDU local organiser:** It is crucial to lessen the likelihood of a collision of large events taking place at the same time.
- **Major holidays, festivals, or vacations:** Such occasions might be heavily influenced by cultural aspects but having events in (but not necessarily around) holidays should be avoided.

- **Dates of other hackathons serving the same target group:** Participants frequently have a stronger preference for getting the finest experience. Making them choose between two or more hackathons could result in lower participation and have a significant impact on the number of people who register to attend the event.

- **Dates of major university exams:** A great portion of the potential hackathon participants are students. One of the easiest ways to attract more participants and capture their interest is to schedule the hackathon just after an exams' period (but certainly not during or right before one).

If possible, it is suggested to initiate each ENTREPRENEDU hackathon late on Thursday/Friday and end of Saturday or early Sunday, depending on the starting day. Each ENTREPRENEDU local organizer will try to link the hackathon to already existing and well-known international events, thus raising awareness on the activities promoted by the project.

2.3   TIMING

Setting the overall time frame of the ENTREPRENEDU hackathon is important for scheduling in a proper manner all the implementation activities of the event. It should be noted that two ENTREPRENEDU hackathon schedules should be created by the organizing team: one for internal use and one to share with the ENTREPRENEDU participants or other stakeholders. An indicative timeline of the several operations and processes to take place (internal scheduling) is provided in the following sub-sections (see also Section 7).

It is important for participants (and organizers) to be aware of potential schedule changes. The person in charge of social media (F6S) should oversee tweeting schedule updates, updating the event invitation as soon as they happen, and responding to inquiries from attendees in real-time.

2.3.1   BEFORE THE HACKATHON

4+ months before:

- Building the ENTREPRENEDU local Organizing Team (see Section 6.2).
- Defining the overall Scope of the hackathon (see Section 1).
- Deciding on a Duration and Date (see Section 2) for the event and other peripheral activities (e.g., info sessions, warm-up events).
- Setting the ENTREPRENEDU Hackathon Budget.
- Securing a Venue (see Section 3).
- Creating a Sponsors' Package and starting Sponsors' Outreach (see Section 6.3).
- Setting up the ENTREPRENEDU hackathon Website and/or registration page at a platform (F6S most probably) (see Section 7.1).

3 months before:

- Planning the ENTREPRENEDU hackathon logistics.
- Launching the ENTREPRENEDU Hackathon Outreach processes (see Section 7.1).
- Collection and monitoring of ENTREPRENEDU Hackathon Registrations (see Section 7.2).
- Planning the overall experience for the hackathon and pre-hackathon activities (creating detailed schedule for warm-up events, workshops, and the hackathon per se).
- Drafting up Judging Plans (see Section 7.8).
- Drafting up Mentorship Plans (see Section 7.6).
- Approaching and on-boarding volunteers, mentors, and judges (see Section 6).
- Securing the necessary Equipment and (online) Tools (see Section 4).

1 day to 1 month before:

- Creating a detailed Agenda and Event Plan.
- Getting a tentative headcount based on registrations so far.
- Arranging Transportation (if any) and Food/Swag procurement (see Section 5.4).
- Sending Reminders to the Participants.
- Following up with and briefing in the Mentors, Judges, and Volunteers.
- Setting up the venue.

2.3.2   DURING THE HACKATHON

Day 1:

- Last check on the facilities, the equipment, and the online tools.
- Welcoming stakeholders:
  - Managing late registrations and checking in participants and teams.
  - Welcoming mentors, sponsors, volunteers, and other stakeholders.
  - Giving out promotional material (swag, credits, etc.).
- Opening ceremony
  - Welcome address and hackathon introduction.
  - Sponsors' presentations (if any).
  - Announcements about the schedule, code of conduct, logistics, etc.
  - Presentation of the ENTREPRENEDU hackathon prizes and mentoring programme.
  - Keynote opening speeches.
- Running social media.

- Hacking initiated!

Day 2:

- Hacking continued.
- Checking in on hackers.
- Distributing Meals.
- Running social media.
- Running Workshops and sessions with mentors.
- Other activities (if any).
- Restocking supplies, picking up garbage, running logistics.

Day 3[1]:

- Hacking continued. Checking in on hackers.
- Distributing Meals.
- Running social media.
- Running Workshops and sessions with mentors.
- Competition/Projects' pitching and Judging.
- Key-note speeches or activities, giving out feedback forms (during jury's deliberations).
- Closing Ceremony: thanking all stakeholders, announcing the winners.

2.3.3   AFTER THE HACKATHON

- Clean up, remove signs, re-arrange the rooms, check for lost items, etc.
- Prepare and send out thank-you emails and feedback forms.
- Archive photos, videos, lessons learnt, survey results, etc.
- Prepare and send out press releases, update social media.

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[1] If there is no such day, move these activities to Day 2 and some of the Day 2 activities to Day 1.

3　SPACE

Together with the time-related aspects for the ENTREPRENEDU hackathons, the space-related ones are of utmost importance for the success of the three events. The ENTREPRENEDU hackathons can be **physical, virtual,** or **hybrid**. All these options have their own benefits and drawbacks. Each ENTREPRENEDU local organizer will select the most appropriate format to maximize the participation and the impact of the ENTREPRENEDU event. A description of the features for each format follows.

3.1　PHYSICAL HACKATHON

In the case of a "**physical**" (or "in-person" and "on-site") hackathon, (almost) all the ENTREPRENEDU hackathon activities (opening ceremony, hacking, mentoring, judging, etc.) take place at a physical venue and physical attendance is necessary for the participants. There may be some "digital" elements (streaming workshops owing to the workshop room's size restrictions, using a communication platform like Discord for announcements, etc.). Hackers can come and go as they like (which is frequent if they live nearby), but each hacker must physically appear for check-in and judging. Swag and prizes are distributed on site, so there is no shipping required after the event. A location and food or snacks are available for in-person gatherings. A physical hackathon will frequently enable participants to interact more naturally between them and e.g., their mentors, use physical materials and tools (like sticky notes and whiteboards), and directly receive tangible rewards like prizes or gifts at the conclusion of the event.

Securing/booking the venue for the event as soon as the hackathon dates are chosen is very important. The venue can either be external or part of the local organizer's facilities. In the former case, naturally, the ideal scenario would be to find a free venue. Universities' facilities or company-sponsored spaces may provide such an option, especially in case the facilities owner decides to support (in kind in this case) the hackathon. Approaching multiple entities that stand to gain something by sharing their space (such as a tech company that recruits programmers and designers) is one approach that could be followed. If it is not possible to find a free venue, another option would be to rent a coworking space with most of the required **infrastructure** (see below) in place. If this option is also not feasible, then the hackathon should take place online.

The venue should cover the following requirements:

- **Capacity:** The facility should hold the maximum volume of individuals expected (including all hackathon organizers, participants, mentors, judges, etc.).
- **Space arrangement:** The venue needs to offer locations for attendees to hack and listen to speakers, as well as allocated sections for equipment, food, sponsors, breaks, etc.

- **Chairs and desks/tables:** There should be enough chairs and desks/tables for all attendees. Each hackathon team is expected to use one or more desks/tables (depending on its size) in a banquet-style setup for hacking (that may have to be easily rearranged to a classroom-style setup for workshops). It should be kept in mind that rooms with this setup may accommodate the fewest number of people compared to alternatives.

- **Wi-Fi:** Fast, secure, and dependable Wi-Fi for hacking and connecting all devices is one of the most crucial aspects. On average, it should be able to handle two devices per participant. It should also be investigated whether any specific ports are blocked. Additionally, the organizers should look for the servers, ports, and Ethernet cables that may be needed, depending on the hackathon and challenges requirements.

- **Power:** It should be ensured that there is enough amperage to support tenths of laptops, phones, and hardware components. Each participant can be assumed to have at 2 devices on average. Each hackathon team table should have its own power strip. Extension cords and power strips will also be needed for hackathon equipment such as the projector, microphone, streaming camera/PC, etc.

- **AV resources and personnel:** At the very least, a projector should be available for the organizers' and the teams' presentations. In the case of large rooms, a microphone may be required. Other equipment such as cameras for streaming may be necessary.

- **Lavatories:** Rooms equipped with sinks and a single occupancy toilet should be available.

- **Air conditioning and heating:** Special attention should be taken in case the hackathon takes place after regular business hours (which is commonly the case in late hours or during the weekends). Measures should be taken to have air conditioning/ heating capabilities during the whole duration of the hackathon.

- **Janitorial services:** It should be ensured that the venue remains clean throughout the hackathon. In case janitors are not available and/or have not been hired for these services, event volunteers can undertake the tasks of emptying trash cans, keeping the lavatories clean, etc.

- **Security:** The location must be safe for the attendees and the equipment, and ideally, it should have insurance in the event of a fire or theft. Security personnel should be available in the event of an overnight stay.

- **Accessibility:** The location must provide easy access to public transportation, accommodations for people with special needs, elevators, and areas for relaxation and sleeping (especially if hacking continues into the night).

External venues may have their own specific rules and required fees that should be confirmed. A few questions to ask are:

- **Food:** Does the venue offer catering? If it does, is it mandatory to use it? What is the cost? Is it allowed to bring in outside food, or is food required to be provided from a specific venue caterer? Does the location have a dock for receiving deliveries?

- **Advertising and photography:** Are there any restrictions regarding advertising and photography?

- **Security:** Are there any particular security rules that have to be followed?

- **Hackathon hours:** Is it possible to organize an overnight event? It is crucial to inform the potential venue that people may be working in the space overnight.

- **Setting up:** Is it possible to visit/reserve the venue one day before the event to set things up, without paying extra fees? Are there any restrictions related to e.g., posting signs at the main entrance of the building to inform participants where they should go?

- **Services:** Are extra fees required for security, a fire marshal, janitors, etc. in the building? Are these services available?

3.2   VIRTUAL HACKATHON

In the case of a "**virtual**" (or "online", "digital", and "off-site) hackathon, (almost) all the ENTREPRENEDU hackathon activities take place at a digital space, without an on-site presence of participants. Digital spaces enable the invitation of anyone from anywhere in the world. This includes participants but also experts, mentors, and jury members. The diversity is, therefore, much higher. A digital space such as a platform where teams can form and where creativity can flourish enables collaboration and co-creation even during a pandemic.

A digital event might take place worldwide. Although it might be targeted at specific entities in the host area, anyone with access to the internet can take part during the event's scheduled time. Operations such as mentoring, pitching, and judging take place using **online tools** (see Section 4).

Virtual hackathons tend to be cheaper, as they completely remove the venue costs and costs related to food and promotional items. Depending on the available budget and the organizers' priorities, it may be possible to arrange for shipping promotional items and/or providing food vouchers to online participants. Hackathon prizes may be delivered through online services.

Virtual hackathons have the disadvantage of making interaction between all stakeholders less direct and making the distribution of hackathon perks, if not impossible, much more expensive. Another crucial disadvantage is the dependence of the hackathon on the connectivity capabilities of all stakeholders with delays or cancellations taking place in case a participating team or a speaker cannot connect to the digital venue.

3.3   HYBRID HACKATHON

"**Hybrid**" hackathons can take several forms, but most generally, they require running all the operations related to both the physical and virtual ones. One of the greatest challenges of this type of hackathon is identifying and successfully implementing "touchpoints" between the

online and on-site participants. Such is the case of the pitching and judging phase, during which it must be decided for example whether all teams will be presenting their project through an online tool or whether different presentation approaches will be followed. In other words, two events must be coordinated concurrently. This entails a lot of dangers and may increase considerably the required workload for the organizing staff. Moreover, at a hybrid event, digital hackers often feel excluded compared to the on-site participants.

4 TOOLS

There are hundreds of digital tools that could be exploited for the hackathon's preparation and organization. It has been identified that most of these tools fall broadly between three platform types: Hackathon Platforms, Events Platforms, and Community Platforms. The need to use such tools and their selection will be discussed between each ENTREPRENEDU local organizer and the ENTREPRENEDU communication leader (F6S) in order to identify which features can be included and provided already through the F6S platform. Figure 1 summarizes their features and the reasons to use or not to use such solutions in a hackathon.

FIGURE 1: TYPES, FEATURES, AND PROS & CONS OF HACKATHON-RELATED TOOLS.

By extent, Figure 2 presents some examples of such platforms (tested by Corallia) and provides insights into alternatives that could be used and notes to be taken under consideration.

FIGURE 2: TYPES, EXAMPLES, ALTERNATIVES TO, AND NOTES ON HACKATHON-RELATED TOOLS.

In general, online tools could be used for: streaming (e.g., Streamyard), Video Calling (Zoom, Google Meets, Discord), hosting virtual conferences (Hopin, Gather.Town), Chatting (Slack, Discord), Hackathon projects submission (e.g., Devpost), digital Check-ins (Discord bots, Google forms, Typeform), or integrated hackathon management platforms.

Depending on the theme of the ENTREPRENEDU hackathon, other types of online services may have to be considered, such as access to **cloud resources, VMs, data repositories**, etc.

5 MATERIALS & (OTHER) LOGISTICS

Beyond the equipment and infrastructure mentioned in Section 3, extra procurement and administrative issues that may have to be taken under consideration for a successful ENTREPRENEDU hackathon (especially in the case of a physical one) are related to **food, promotional items, prizes, transportation,** and **safety**.

5.1 FOOD

An essential component of a hacker's experience is food. Hackers can connect over shared meals, which also provides them with the energy they need to develop their projects.

5.1.1 WHAT TO OFFER

A variety of **snacks,** including sweet (cookies, candies), salty (chips, nuts), and nutritious (fruit, granola bars) ones, should be available throughout the hackathon event.

Water must also be available at all times. Ideally, it should be in a big dispenser that allows people to fill up their own containers. Coffee and tea are nice-to-have, whereas a variety of juice and drink options could also be available.

Buffets are typically the best choice because guests may pick and select what they want. Depending on the volume of participants, it may be necessary to find strategies to let as many individuals serve themselves at once as possible. An attempt should be made to serve a variety of foods; avoid serving the same options repeatedly.

Dietary preferences or limitations should be considered. There must be high-quality vegetarian and vegan options, such as pasta, rice dishes, grilled mushrooms, lentils, etc. The vegetarian option should not be just a side salad. Going all-vegetarian may also be a viable option. Other eating preferences should also be considered, such as allergies, lactose intolerance, gluten intolerance, etc. These preferences can be identified on an individuals' level by requesting this type of information during the registration phase (see Section 7.2). Requesting individual pre-packed meals from your existing food vendors to accommodate dietary restriction is a viable option. If it is not possible to accommodate someone, they should be informed in advance and be suggested local restaurants and groceries. Another option would be to offer them a gift card to purchase food from an external food vendor.

5.1.2 FOOD PROCUREMENT

Often, venues will demand that the organizers use their own catering services. Before starting to evaluate food-vendors or put in any orders, it should be determined whether the selected venue has any such restrictions.

Each food vendor may have distinct order requirements and delivery timeframes. It is recommended to communicate with a vendor 4 weeks before the event and finalize the orders 1-2 weeks before the event. It should also be confirmed how and when to return the chafing dishes, table linens, and other reusable supplies (if provided by the vendor). A vendor is delivering the food to the hackathon location, the drop-off should be scheduled half to one hour before the arranged time of serving the food. This time arrangement is good enough to avoid getting the food cold or to give the organizers extra time in case the delivery is delayed. Explicit instructions about the delivery location should be provided and two backup phone numbers of organizers should be shared.

An estimation regarding the cost is 7-15 EUR per person per meal. To cut down costs, an attempt could be made with the vendor to get a discount or even secure them as an in-kind sponsor and supporter of the event.

5.2   PROMOTIONAL ITEMS ("SWAG")

Promotional items ("swag") are frequently offered at hackathons. Such items can be T-shirts, backpacks, mugs, notepads, pens, thermos, etc. If selected for the purpose of the ENTREPRENEDU hackathons, such material should have the unique branding of the ENTREPRENEDU hackathon. Making swag bags for everyone can cost as little as 5 EUR per participant. If it is planned to provide T-shirts, they should be available for all body types and sizes.

5.3   AWARDS AND PRIZES

One of the best types of prizes that can be given to participants is related to chances that will enable them to pursue their idea further, get educated on a target subject, and receive experts' support. It is good practice to define a specific number of hours that the winners can spend with domain experts under a training, mentoring, consulting, or even incubation/acceleration program. Given the overall goals of the ENTREPRENEDU project, a prize of that type is expected to be provided to the winners.

Participants to the ENTREPRENEDU hackathons will have access to the following opportunities:

Business acceleration and mentoring programme - The winners of the hackathon will be offered a business acceleration and mentoring programme. This programme will provide support, resources, and guidance to turn their ideas and projects developed during the event into successful businesses. Winners will have the opportunity to work closely with industry experts and experienced mentors, receiving valuable advice on how to develop and grow their business idea.

Networking opportunities - The hackathons will bring together passionate and talented people from various fields and expertise. By attending the event, the participants will have the opportunity to connect with other professionals, industry experts and potential collaborators.

Professional growth - The hackathons will offer a stimulating and collaborative environment where participants can acquire new skills, refine their expertise and learn from experienced mentors and other participants.

Visibility and recognition - By participating in the hackathon and presenting innovative solutions, participants will have the opportunity to gain visibility and recognition. This can lead to further opportunities for collaboration with organizations taking part in the hackathon.

Interdisciplinary skills - The hackathons will offer the opportunity to work with people from different disciplines, learning to collaborate and integrate ideas and knowledge to create more comprehensive and innovative solutions.

Moreover, ENTREPRENEDU local hackathon organizers can think and search for additional awards and prizes that are considered to be a good way to reward hackers for their hard work. Cash prizes are simple to use for events, as they can be split between the members of the winning teams, no matter their number. However, in some cases they have a far lower perceived value than more conventional ones. A good alternative to cash prizes is prizes that are given in kind. These can be gadgets and equipment (sometimes related to the hackathon) such as Arduino starter kits, laptops, tablets, drones, VR equipment, etc. They can also be unique items such as posters, limited edition swag, custom trophies, and experiences (e.g., tickets to attend a rocket launch, in the case of a space-themed hackathon).

5.4   TRANSPORTATION

If the venue is free, transportation and travel reimbursements are often the most expensive elements of a hackathon. While many participants may have come to expect some type of paid transportation, it is not essential to put on a successful hackathon and not something that is often present. Charter buses are typically the most affordable option for getting hackers to and from the hackathon event (most buses fit 56 attendees). An interesting option to investigate is offering **travel vouchers** to a set number of participants.

6 PEOPLE

The entities related to each ENTREPRENEDU hackathon are the hackathon **participants**, the local **organizers**, the **sponsors** (of any type and if any), the **experts** supporting the event (mentors, key-note speakers, jury, etc.), and **supporters** in general. Each one of these entities requires a different approach in managing them efficiently. The characteristics and suggested approach for each one are presented below in order to support ENTREPRENEDU local organizers on how to manage them properly.

6.1 PARTICIPANTS

The ENTREPRENEDU hackathon **participants** ("hackers") are its lifeblood. **Online presence** and tools (e.g., Eventbrite) are in most cases necessary for the attraction of new participants, even in the case of physical hackathons. Each participant is expected to work through one **team** and work on a specific **project** addressing one of the ENTREPRENEDU hackathon's challenges.

A crucial part of organizing a good hackathon is making participants **feel welcome** and assisting them in participating in an activity. The belief that one does not belong to the hackathon because they (supposedly) lack certain abilities or are not intelligent enough is a common problem for **newcomers**. It is the responsibility of the ENTREPRENEDU hackathon organizer to make them aware that a hackathon is not just about high-level programing (or programing in general), but entails many other aspects and activities in which participants can exploit their unique abilities. First-time hackathon participants frequently struggle to choose a project to work on because of their lack of experience. They might not yet be able to connect their own abilities to the kinds of tasks being undertaken. The local organizer must attempt to direct them toward a team and project where they will be useful and welcome.

Having a **list of projects and the participants' skills** (acquired during the registration and check-in stages) in advance is one way to accomplish this. Many participants may join the hackathon as individuals and will have to join an already set-up team. It is the responsibility of the local organizer to undertake **matchmaking activities** even before the hackathon days, e.g., during matchmaking and/or warm-up pre-hackathon events. In other words, the organizer should strive to form teams as much as it strives to attract established teams.

Specific eligibility criteria may be set for the participating teams. Some indicative requirements are the following:

- Teams must have at least 2 team members and can go up to a maximum of 8 members.
- Teams must consist of at least 1 person with a technical profile and 1 with a business profile.
- Teams must have an idea to work.

- All teams must register their team and initial project submission on the ENTREPRENEDU Hackathon registration platform before the start of the Hackathon Weekend.

In general, the ENTREPRENEDU hackathon should have a relatively low **entrance threshold** for individuals. Participants should be able to walk in, understand what is going on, and find a way to participate right away (whatever their level of involvement is). Everyone should have the chance to play, construct, or otherwise contribute to one or more of the tech-related projects presented without opening a laptop. ENTREPRENEDU hackathons should be as interactive as possible.

Defining the **target groups** and the pool from which new participants must be extracted is very important. Certain characteristics of the participants (background, skills, etc.) are closely related to the hackathon's goals and theme. The hackathon can be more or less selective — everybody may be permitted to attend, or certain requirements may have to be fulfilled. As the main goals of hackathons are typically to develop new applications, address user problems, or test out emerging technologies, they have historically had a technical focus. However, hackathons offer a unique chance for interdisciplinary and cross-domain cooperation, requiring skills ranging from programming to marketing and graphics design. Participating teams should be encouraged to adapt the proper mix in each team.

Some **indicative** eligibility criteria that can be set for the ENTREPRENEDU hackathon participants are the following:

- Only individual, natural persons can participate in the hackathon.
- Participants must be residents of an EU Member State.
- Participants must be of legal adult age (18 – 30 years old) at the moment of registration.
- All participants are welcome regardless of race, creed, color, ethnicity, nationality, religion, sex, sexual orientation, gender expression, age, physical appearance, body size, disability, or marital status.
- Participants can be students, professionals from industry or academia, people working for governments, non-profits, etc. The goal is to attract committed participants with technological experience and an entrepreneurial spirit and to build teams around ideas that have potential to last beyond the hackathon.
- All participants must register to the hackathon before the start of the Hackathon Weekend.
- Participation in the hackathon is free.

Beyond clarifying the eligibility criteria for participation, it is crucial to communicate to potential participants what they can earn from the hackathon. Reasons to join may be:

- To make this world a better place by offering new solutions to the identified challenges.
- To put their exceptional technical talent, strong scientific or business background to use.
- To meet people active in the innovation and technological sectors.

- To start their own business and create new products and solutions for the sector they wish to work on.

- To join a new Start-up

- To get guidance and support on the development of their proposed solution.

- To take advantage of the unique prizes (e.g., post-hackathon mentoring) offered at the hackathon.

- To materialize their desire to launch and build their Start-Up.

- To have fun and meet new people that share the same interests with them.

6.2   ORGANIZER'S TEAM(S)

The successful organization and facilitation of the ENTREPRENEDU hackathons require an enthusiastic and skilled team consisting of members with complementary talents, and capable leadership. All ENTREPRENEDU partners will be involved with the organization and implementation of the hackathons (during planning and/or during the actual event) for achieving good results and reassuring a successful organization of all three ENTREPRENEDU hackathons.

The following roles and task forces/teams should be taken into consideration and set from the ENTREPRENEDU local hackathon organizer's side when distributing roles between ENTREPRENEDU partners:

- **Management & Networking Team:** The team is responsible for the overall management of the hackathon and of the other organizer's teams responsible for its facilitation. It is also responsible for seamless communication and alignment with other core activities of the organizing entity (e.g., European projects undertaken, entrepreneurship initiatives such as incubators, etc.). The team sets the overall strategy, management, and Monitoring & Evaluation tools necessary for the successful hackathon implementation. Finally, the team works towards securing the auspices and support of Governmental and Public Agencies as well as financial or in-kind support from Sponsors.

- **Administration & Financials Team:** The team is responsible for all the activities related to the preparation of the physical part of the hackathon (venue, equipment, connectivity, catering, procurement, security, public hygiene, etc.) as well as to the financials pertaining the hackathon in general, such as budget estimation and monitoring, running all the activities for receiving the sponsorships secured by the Management & Networking Team, transferring monetary prizes to the local winners, etc. The team also manages and coordinates any Volunteers that may physically support the hackathon.

- **Communications & Marketing Team:** The team is responsible for all the activities related to the branding, marketing, and communication activities of the hackathon, and attracting individuals and teams to participate in the event. It runs the off-line and on-line

promotional activities, builds and manages a network of Community partners, secures Media and Promotional sponsorships, etc.

- **Scientific & Technical Team:** The team is responsible for working on the Hackathon Challenges and tailoring them to the local ecosystem needs and interests, managing the Scientific Committee, the Mentors and Key-note Speakers network, and jury of the hackathon, creating guides for the hackathon participants, aggregating potential tools and datasets that could be used by the aspiring hackers, etc.

- **Operations Team:** This team is responsible for the hacker experience at the hackathon per se. Every aspect of what the hackathon looks and feels like falls under the activities of this team. The team also manages all the Hackathon platforms, and facilitates (pre-)hackathon activities (e.g., teams matchmaking).

Of course, depending on the nature of each local organizer and each ENTREPRENEDU Hackathon, the task forces formed may differ. It is crucial to highlight that all ENTREPRENEDU hackathon organizer's teams will be on the same page before the hackathon so that they can work as a unit rather than as distinct teams with different goals. To get there, concrete **project management** and **team management** approaches will be followed (see Section 7).

6.3   SPONSORS

ENTREPRENEDU hackathon local organizers can try to receive the support of sponsors to achieve higher results, attract a larger audience. Five categories of sponsors can be targeted based on the needs of each ENTREPRENEDU hackathon local organizer:

- **Financial/ Monetary Sponsors:** These sponsors provide direct financial support so that the organizers can cover hackathon costs.

- **In-kind Sponsors:** Entities (usually companies) that provide free services or products, such as platform credits or hardware.

- **Strategic/ Media Partners:** Entities that aid in marketing and promotion, frequently through publications and outreach related activities.

- **Community Partners:** Entities that assist with free hacking, mentoring, judging, access to target events or volunteer recruitment.

These are all broad categories, and there may be sponsors that can fit into numerous categories at once.

Sponsors should be secured as early as possible. Getting sponsorship for such an initiative may not always be an easy task, but it can be achieved through the following steps:

1. Doing **research** to identify and understand potential sponsors: Especially in the case of financial and in-kind sponsorship, sponsors will offer something (cash, venue, food, etc.) with the expectation that they gain something in return. Sponsors may support hackathons for three main reasons: a) with the purpose of receiving immediate

feedback on their goods (particularly APIs and development tools); b) to affect people's perceptions of their company's brand, product, or service; and c) to hire full-time workers and interns.

2. Creating **sponsorship packages**: Packages should be designed in a way that can persuade the sponsors (especially the financial ones) that they will be getting their money's worth. Packages can include offers such as promotion of the sponsor before, during, and after the hackathon (through social media mentions or the welcome speech), the option to give a speech at the opening ceremony of the hackathon or have a banner/booth at the event, the option to submit a special challenge of their own or display their services/goods, etc. It is important to find the ideal balance between obtaining enough sponsorships and not detracting from the objectives of the event. It is common to identify three sponsorship tiers: a cheap, moderate, and expensive one, with the option of negotiating a custom offer.

3. Creating **sponsorship material**: Sponsors are like investors in that they want to know that the investee is serious before providing them with funding. Organizers should not approach sponsors until they have proof that the hackathon is almost certainly going to happen (day and time set, traction gained, etc.). Communication material could take the form of a **prospectus**. The prospectus should be 2-3 pages and highlight the basics of the hackathon (event name, date, projected attendance, website URL, contact email). The story behind the event, an introduction to the organizing team, a note about what the organizers are trying to accomplish, as well as what makes the event special can also be noted. Finally, an overview of the available sponsorship packages should be included, while noting that custom packages are also available.

4. Sending a well-crafted **email**: Contact should be made with the decision-makers at each targeted entity. If in doubt, an email should be sent to the CEO or (in some cases, more preferably), the Marketing, Recruiting, or HR departments. In case of no response, a follow-up can be attempted after 3–4 days. The contact is "pingable" up to three times. In the forwarded email, a deadline to respond should be provided.

5. Having an exploratory **phone call**: In parallel with the previous steps (or as a follow-up) phone calls could be made to directly communicate to the potential sponsors the vision of the hackathon, to sell the story behind it, to stress out what makes the hackathon special, and to present the sponsorship packages and negotiate upon them. Once again, a deadline should be set for receiving an answer.

6. Tracking **progress**: After the first response from the potential sponsor, an e-mail can be sent a week or two later offering to answer questions. Communications should be tracked with a CRM (Customer Relationship Management) tool, an email service, or a simple Excel file.

During the implementation of the ENTREPRENEDU hackathon and after it, it should be ensured that the sponsors are satisfied so that they will be more willing to support future events. Regular professional communication is essential to persuading them that they have received

more value than they paid for. When the event is over, they should be thanked publicly on the ENTREPRENEDU website and through social media of the project.

6.4   EXPERTS

Experts are essential to participants' success since they support them during the ENTREPRENEDU hackathon. They can be given specific assignments and be allowed to closely monitor the development of each of the teams they are assigned. If an ENTREPRENEDU hackathon does not take place physically, experts can communicate through video-calling services. Generally, all experts can be coordinated by the organizer's Scientific & Technical Team (see Section 6.2).

Domain or business experts will be used in each ENTREPRENEDU hackathon consisting of ENTREPRENEDU partners and not only as:

- **Members of a Scientific Committee:** This body is responsible for aggregating scientific and business content related to the Challenges of the hackathon and identifying all the educational material and tools that can assist the participants with providing innovative and technically sound solutions. Expected outcomes from the activities of this committee include technical documentation or a detailed challenges description, as well as related speeches and workshops.

- **Key-note speakers:** Key-note speakers are expected to initiate the first day of the hackathon main event, coming from prominent institutions related to the theme of the hackathon. Even though their role can be educational, their main contribution should be to inspire participants and create hype around the challenges.

- **Mentors:** The mentors are experts that will provide their knowledge and know-how directly to participating teams not only during the days of the main hackathon event, but also during the pre-hackathon complementary events (e.g., training sessions). Some of these members may also participate in post-hackathon trainings of the winning teams.

- **Jury members:** The judges are responsible for evaluating the ideas and solutions of the participating teams in the main competition event of the hackathon (see also next sub-Section).

In the case of external experts, special attention should be given to attracting them to the event. People that could be invited as experts are professors, instructors, technology evangelists, business leaders from the industry, hackers from past events, etc.

6.5   JURY MEMBERS

The ENTREPRENEDU Hackathon **Jury Members** (or hackathon "**Judges**" or "**Evaluators**") will make up a jury that will evaluate ideas and teams during the hackathon. At a minimum, they will evaluate pitches at the end of the event.

The ENTREPRENEDU Hackathon Jury Members will consist of senior experts by the ENTREPRENEDU partners, but additional senior stakeholders can also be invited. Having well-known individuals in this position enhances the hackathon's legitimacy.

In case an ENTREPRENEDU hackathon local organizer decides to involve external to the consortium judges, they should begin looking for them around two months prior to it. For hackathons that will not run parallel evaluations (all teams are evaluated from the same jury one after the other), it is common to have 5 or 7 members (an odd number to avoid tie ups). It should be aimed to have two or three extra judges to a buffer list when contacting the judges to tackle any last-minute unavailability.

As a last note, two important issues should be kept in mind regarding the jury members. Any kind of **Conflict of Interest** between jury members and the competing teams should be avoided and be reported immediately after being recognized. Moreover, in case the external jury members get access to more sensitive material (e.g., closed source-code submitted by a team to demonstrate the feasibility of the project), they should sign some sort of **confidentiality agreement.**

7 OPERATIONS

This section covers some additional important operations and processes that all three ENTREPRENEDU hackathon local organizers shall take into consideration in order to implement a successful hackathon. It should be noted that these operations are focusing on the side of the hackathon participants (following the **hacker's journey**), whereas processes related to other stakeholders are presented in previous sections (e.g., venue selection in Section 3.1, securing sponsors in Section 6.3, experts selection in Section 6.4).

7.1 HACKATHON PROMOTION

The promotion of each hackathon will follow standard **branding**, **marketing**, and **communication practices** of the ENTREPRENEDU project.

7.1.1 WEBSITE

The ENTREPRENEDU Website will function as the hackathon's face to the external world. The website needs to be carefully created, keeping in mind that it will represent the hackathon to the community and reflect its ideals. Not only that, but excellent design language contributes to the establishment of a brand, which has a significant impact on how attendees will view the value of the hackathon.

The ENTREPRENEDU hackathon website will have the following elements:

- **Landing Page:** The landing page provides crucial information about the hackathon, including its name, logo, dates, and—most importantly—a registration button. It is also possible to include interest forms for judging and mentoring on this page (although they can also be included in other parts of the website).

- **About:** The hackathon's details. Typically, this section includes all the key details the audience must be aware of, such as the event's objectives, the organizer's driving force, a brief description of the organizing team, etc.

- **Sponsors:** This part is very important for building the hackathon's brand awareness and for the businesses that sponsor it. A good way to express gratitude for their support is to include the name, tiers, and links to the sponsor's website. This page may also include the option for entities to express interest in supporting the event.

- **FAQ:** An important element for any aspiring hackathon participant. This page can significantly reduce the load of support-request emails.

- **Tools/Documentation:** This section generally contains all the important documentation of the hackathon including the rules, code of conduct, challenges description, hackathon manuals/handbooks/survival guides, information on available tools and datasets to be used, etc.

- **Contact:** A page to include support emails and/ or any contact form or registration button (again). The page should also include links to the event's social media accounts.

The website will be updated on a rolling basis as new speakers and sponsors are confirmed, the schedule is updated, pre-hackathon events are set up, etc. Adding new sections about different improvements and updates is a great way to keep participants engaged. Other elements that could be included on the website as they are finalized are the: **Schedule**, **Venue**, **Prizes**, **Challenges**, and **Speakers, Judges & Mentors.**

7.1.2   (SOCIAL) MEDIA

Another important topic to concentrate on will be marketing. Reaching as many people as possible while concentrating on the appropriate audience for the event is crucial. The ENTREPRENEDU hackathon local organizers in collaboration with the ENTREPRENEDU communication leader should communicate the story behind the hackathon and answer to questions like "What is the hackathon's brand?", "How is it special?", and "What would make participants want to join the event?". Common approaches are to point out the advantages of the hackathon, the convenience of participating, and the fact that it is free.

All ENTREPRENEDU channels and additional free and low-cost ones should be investigated to advertise the event: Facebook, LinkedIn, Twitter, Instagram, Reddit, mailing lists, websites, and blogs. To inform the media about the event and all the pertinent information (theme, vision, timeline, rewards, and sponsors), a press release can be used. The organizer's community managers can encourage as many people as possible to participate by using email campaigns, radio commercials, and other media. Targeted Ads should also be considered, as they are cheap and effective. Attention should be paid to keeping the corresponding social interfaces lively and up to date.

7.2   REGISTRATIONS MANAGEMENT

Registration of participants to a hackathon can take place through various means such as simple Google forms, Eventbrite registration forms, and even hackathon-specific (registration) platforms. For the ENTREPRENEDU hackathons, registration of participants will take place to a dedicated area in the F6S platform.

Obtaining basic information on the hackathon's participants will be crucial as the primary registration process gets underway. The more data acquired beforehand, the better the planning can be for several aspects of the event. An indicative list of the common information to include in the ENTREPRENEDU registration form follows. Each local organizer can adjust it accordingly. Only the questions that are necessary for running the hackathon event should be mandatory. In many cases, in optional questions, an "I prefer not to answer" or "Other" option could be provided.

- First Name, Last Name
- Phone Number, e-mail address
- Age, Country of Residence (can be useful to check compliance with restrictions)
- Gender (Man, Woman, Non-Binary)
- Affiliation, Highest level of formal education completed (dropdown list), Job title
- Major/Field of Study (dropdown list)
- Dietary Restrictions (Vegetarian, Allergies, etc.)
- T-shirt Size (dropdown list, should only be included in case such swag will be available)
- Address Line 1, City, Country, Postal Code (in case any kind of shipping takes place)
- Hackathon experience (first time, experienced, etc.)
- Hacker Type (e.g., Developer, Designer, Data Scientist, Communicator, Project Manager, etc.)
- Workshops interested in (dropdown list if list available)
- How they heard about the event (dropdown list)
- Joining with a team? (yes/no) If yes, what's the name of the team?
- Any special needs/requests (free text)

Beyond the requested information, a form should probably include statements/disclaimers for which the participants may have to confirm their acceptance or not (with e.g., checkboxes). Such statements may be the following:

- "I have read and agreed to the [insert-hackathon-name-here] Code of Conduct and Rules (link)".
- "I authorize the ENTREPRENEDU organizing team of [insert-hackathon-name-here] to use my application/registration information for event administration".
- "I authorize the ENTREPRENEDU organizing team to send me occasional emails about relevant events, career opportunities, and community announcements". (optional)

Note: As with all personal data, the utmost care should be taken to keep participant data safe.

Statistically, about **40% to 60% of the registrations will turn into actual hackathon attendances**. This should be considered when setting the registration goals for each hackathon: registrations should be about double the intended number of participants. A rule of thumb is trying to have 100% of the target attendance signed up two weeks prior to the event and 200% of the target attendance signed up one week prior to the event.

A plan should also be set up in case there are more registrations than anticipated for the event. An option is to set a cap on the maximum number of registrations or use a selection process to pick the attendees that will have the chance to attend the event. It should be noted that the

limit may have to be in place even for non-physical hackathons, as even in that case, certain constraints (e.g., available time for the pitching competition) are in place.

Another thing to consider is the fact that another process/mechanism may have to be in place to register not only individuals, but also the actual teams that will compete in the hackathon. In this scenario (and especially in the case of a non-physical hackathon) registration may have to take place through more elaborate registration/hackathon platforms.

7.3   CHECK-IN PROCESS

In case of a physical hackathon, on the day of the event, it is crucial to establish a clear check-in procedure so that it is monitored who will be attending the event. The corresponding statistics will give the opportunity to each local organizer to determine the precise reach of the event and make any last-minute changes to the event schedule or procedures. If, during registration, a data category was omitted, check-in can be used as an opportunity to get that info.

A means for the organizer's staff or for volunteers to confirm who has registered is necessary. An easy way to set up check-in is to search for the name in a Google spreadsheet that has a column to mark with an X or to have pre-printed the registration lists and make any markings on a physical copy of the list. While volunteers are conducting the check-in procedure, it is a good chance to distribute any promotional material available. A separate form for late registrations could also be provided.

In the case of participants joining the hackathon virtually, staff of the Operations Team can launch online calls using the hackathon online communication platform to greet the teams and confirm their presence.

7.4   OPENING CEREMONY

An opening ceremony will be an essential part of each ENTREPRENEDU hackathon to communicate all the necessary information someone might need on the day of the event to make the most of the hackathon experience. During the Opening Ceremony, the following could be covered:

- Welcome speech.
- The event schedule, highlighting the major deadlines.
- The hackathon rules as well as the hackathon challenges and prize categories.
- Information related to operations (e.g., how to reach out to the organizers).
- Key-note speeches.

- Any sponsored content arising from obligations the organizer may need to follow (if applicable).

7.5   HACKING

The hacking period is the heart of the hackathon and the time during which teams are focusing on their mission: to create something novel and impactful. Teams will concentrate on outlining their proposal, designing and offering an initial prototype, and attractively describing their solution. The event should be seen as an opportunity for teams to document and demonstrate a solution rapidly through the production of a prototype and/or the rehearsal of a pitch.

The main activities taking place during this period from the ENTREPRENEDU hackathon local organizer's side are:

- Supporting matchmaking and teams' formation.
- Communicating timelines and rules for every step of the hacking process—brainstorming, pitching, formulation, and presenting, including meal/coffee times.
- Making sure mentors/advisors are available to the participants and helping teams create their pitches.
- Engaging participants with other side activities (optional and, in some cases, counterproductive).
- Ensuring that all participants have dedicated time to work on their projects and suitable physical or virtual space and equipment.

Matchmaking is the top priority of the organizing team upon the launch of the hackathon. With the participants' check-in process being complete, a lot of individuals may still be in search of a team to join, so that they can compete. Matching individuals based on their skill sets could help them form effective teams.

Support over the prototype or pitch creation is also provided during this period. It is possible for the organizers to nominate **free-floating experts** that will provide coaching and mentoring. Mentors have the most important role in the entire process. They are vital to the process since many participants have never built a prototype or a business model. For online hackathons, mentors can periodically check in with teams to monitor progress and offer support. Another option is for the mentors to be available during specific **mentoring timeslots** during which they can have one-to-one sessions with teams that book the slots. Finally, an alternative is running **workshops** open to all participants (see also next sub-Section).

Organizing **small breakout sessions** of mini-events or games can be a good way to help hackers have some fun, meet people around and find something useful from the whole experience. Taking a break can help hackers reset before going back to their projects. However, special attention should be given to avoid spending too much of the hacking time in such activities, thus hindering the work of the teams.

Finally, constant **communication** and availability of the local organizers during the hackathon is crucial. The organizers should help participants with unforeseen challenges, motivate them, and provide frequent and informative reminders based on the schedule (live or through communication channels that the participants use). An extremely important task is to ensure that all teams **submit their projects on time**, so that they can proceed to the competition phase. In general, uploading/submitting pitch decks or pitch videos may time. Editing these materials also takes time. It is crucial to give participants enough time to do this.

7.6   TRAINING & MENTORSHIP

It is a good idea to create a manual that can support mentors. This manual could be created by the Scientific Committee (Section 6.4) of each ENTREPRENEDU hackathon and include sections on what to ask hackers, how to troubleshoot with hackers, and helpful resources and tools for beginners. A specific procedure and set of instructions should be provided to the mentors to confirm the framework and format under which they will mentor the teams.

Giving each mentor specific time slots (for one-to-one sessions with teams, ranging from 20' to 40') can be quite efficient. Nevertheless, mentors should also be encouraged to attend the hackathon as long as possible. Another option is to allow hackers to approach a designated mentors' area to ask questions.

Having training seminars or hands-on workshops is also a good way to give newcomers something to do that they will feel more comfortable with than jumping right into hacking. Workshops can be set to analyze further the hackathon's topic or certain technical abilities that will be helpful. Workshops are a good opportunity to talk about practical concerns.

7.7   COMPETITION

ENTREPRENEDU hackathon participating teams will be asked to provide a video or a live pitch of their idea, a live demo of the product or prototype, or an offline pitch presentation. A typical presentation format may demand information related to the tackled **Problem**, the developed **Solution** and **Innovation** behind it, the Target group, the **Market and Competition**, the **Business Model**, the skills of the **Team**, etc.

The exact procedure and format may vary between each ENTREPRENEDU hackathon depending on the specific features and setting of each event and the number of participants. In most hackathons, teams are asked to pitch in front of the jury and then answer their Questions. The time allocated for the **presentation** and for **Q&A** depends on the number of projects that are competing and the time available. Typically, the presentation ranges from 3' to 10' and the Q&A session from 2' to 5', depending on the time constraints. For example, at a hackathon with 10 participating projects, the competition phase can be completed in two hours if 12' are allocated per team (7' for presentation, 4' for questions, and 1' as a **buffer**).

It should be noted that the ENTREPRENEDU hackathon's rules and challenges should be considered as final upon the launch of the hackathon. Changes to the game's rules while players are still "playing" might cause anger, dissatisfaction, and even a participant's withdrawal from the activity.

7.8 JUDGING

Before the ENTREPRENEDU hackathon day, the local organizer must define the **assessment criteria** and **assessment processes** to be followed for the evaluation of the teams.

It is important that all projects are judged fairly, and against the same set of criteria. The chosen criteria depend on the scope of the hackathon. These criteria should not be overlapping with each other and should be easily mapped to the participants deliverables (e.g., if there is a "team" criterion, it should be communicated to the teams that they have to present their skill sets). Some criteria that may be worth considering:

- **Relevance:** Relevance to the hackathon theme and challenges.
- **Innovation:** Is the solution especially creative? How outside-of-the-box would it be considered? Does it have potential for differentiation?
- **Technical achievement:** What technology was used in creating the solution? What is the potential, maturity, and/or feasibility level of the solution? Technology transfer?
- **Application:** How can it be used and what kind of impact will it make? What is the market, societal, and/or environmental potential? Is there any impact in the education sector?
- **Quality of the team:** Quality of the team, including technical expertise, business expertise, understanding of the thematic area, commitment to the project and ability to pitch it.
- **Intellectual Property:** Does the solution fall under any opportunities related to intellectual property?

It should be ensured that the criteria (along with their weights if applicable) are clearly communicated to both the hackathon participants and of course the jury members. Letting the judges meet the hackers before the presentation can be a good idea for them to acquire more information on the teams. Similarly, the project submissions of the teams can be used as reference during final deliberations.

A common format is each jury member providing their own scoring for each team (without it being directly visible to the other members). Upon completion of the individual evaluation, all the scores of the jury members are aggregated, and the mean score of each team is used to determine the final rankings. Internal deliberations may take place in case a decision-by-consensus approach is chosen to be followed. During this phase, key-note speeches can take place to fill in the gap in the participant's schedule.

7.9   CLOSING/AWARDS CEREMONY

Once the winners are selected, it is time to announce them in a closing ceremony. A closing ceremony guarantees that hackers receive adequate appreciation for their accomplishments and gives other supporters a chance to address the attendees one more time. A good format for this part of the hackathon is talking while using slides. People often remember the start and the end of an event for years to come; therefore, this is a crucial point for any event, and finishing strong is important.

ENTREPRENEDU hackathons will announce each 4 winning teams resulting in 12 winning teams overall. Experts or sponsors (if any) may be good candidates to announce the results and award them their prizes. The concluding talk can include information related to upcoming (similar or not) events.

7.10   POST-HACKATHON SPRINT

To close out the ENTREPRENEDU event, the following post-hackathon checklist can be used. The involvement of different ENTREPRENEDU partners according to their role is necessary. Close collaboration with the communication leader (F6S) is of high importance.

- Send a "Thank You" note to all stakeholders (participants, sponsors, supporters, etc.) with key numbers, event highlights, and good photos. Forward them a post-hackathon survey.
- Do a thorough analysis of the participant data and any other relevant statistics, channels used for outreach, quality of the hackers and their submissions, and get "like–dislike" feedback from the attendees.
- Collect evidence of the hackathon success— aggregate press mentions, tweets, photos, videos, etc. Publish photos, videos, and project success stories across your social channels.
- Create a document for your team to dump feedback and challenges during the event and event planning process.
- Settle the books and send final payments. Carry out a retrospective cost-benefit analysis.
- **Make sure to follow through with winning ideas** until they start receiving the support of the project.

8 OVERALL FRAMEWORK

The following sub-Sections provide some examples that could be used by ENTREPRENEDU hackathon organizers to set their own Code of Conduct, Rules, and other related clarifications related to the hackathon framework.

8.1 CODE OF CONDUCT

- *"Activities promoting or related to alcohol, tobacco, religion, politics, intolerance, violence, firearms, pornography, obscenity, gambling, or illegal drugs are explicitly excluded from the hackathon.*
- *We are dedicated to providing a harassment-free experience for everyone, regardless of race, creed, color, ethnicity, nationality, religion, sex, sexual orientation, gender expression, age, physical appearance, body size, disability, or marital status. We do not tolerate harassment on our platforms in any form.*
- *Sexual language and imagery are not appropriate on our platforms.*
- *Any person violating these rules may be sanctioned or expelled from the hackathon at the discretion of the organizer."*

8.2 RULES

"Here you will find an overview of the most important rules for the hackathon. Read the full terms & conditions at: (link)

- *No development may start before the actual date and time of the Hackathon Weekend.*
- *To ensure a level field for all contestants, all code must be created by the team, during the Hackathon Weekend.*
- *You are permitted to use publicly available or openly licensed APIs, SDKs, frameworks, and other software libraries for your project.*
- *Any software development tools and/or programming language can be used."*

8.3 AWARD DECISION

"The award decisions shall not be subject to legal challenge. The decisions rendered by the experts appointed by the Organizer shall be final and binding for all Participants of the Hackathon. Participants shall have no right to a justification of such decisions."

8.4   IPR, OWNERSHIP OF RESULTS & CONFIDENTIALITY

"The ownership of any intellectual property developed by participants during and within the scope of the hackathon will remain with the individual participants.

The ENTREPRENEDU Coordinator and the ENTREPRENEDU Hackathon Local Organizer will not assume ownership of the intellectual property. They may use non-confidential textual and audio-visual descriptions of the intellectual property that are provided by participants in the context of the hackathon, for promotional purposes.

The ENTREPRENEDU Hackathon Organizer confirms not to disclose any confidential information acquired through the organization of the Hackathon to any third party. The Organizer furthermore ensures that all experts and mentors involved in the Hackathon commit to a non-disclosure agreement."

8.5   DATA PROTECTION

"The ENTREPRENEDU Hackathon Organiser shall handle and protect all personal data in accordance with the privacy policy that is to be defined by the Principal and in accordance with the applicable privacy laws and regulations, in particular Regulation (EC) 45/2001 and Regulation (EU) 2016/679 (General Data Protection Regulation)."

8.6   USER SATISFACTION

"Participants agree to complete a short user satisfaction questionnaire after the Hackathon."

• APPENDIX A

The Appendix of the deliverable provides a template that can be used by each ENTREPRENEDU local organizer to make their custom Hackathon Handbook to be shared with potential participants or stakeholders.

[Insert Hackathon Name]
Manual

TEMPLATE SCOPE & USAGE INSTRUCTIONS

The scope of this template is to provide the core structure/table of contents as well as guidelines about the expected content that should be filled in to create a Hackathon Manual.

It should be kept in mind that a Hackathon Manual may be used by several parties. It can be used a:

- an internal document for the local organisers to aggregate all the information regarding the hackathon setup and activities.
- an external document to be shared with potential hackathon participants.
- an external document to be shared with potential supporters, mentors, etc.

Please, follow the instructions below:

- Feel free to add your own branding or personal touch. Especially in the case of running a hackathon also supported by another organisation (main organiser), you may have to use their branding anyway. Nevertheless, you can still use the document structure and guidelines provided for the actual content.
- Remember to replace the title of the document (page 1) accordingly.
- Make sure to keep proper version control.
- Ensure that the core text has a consistent font style.
- Remember to update the Table of Contents.
- Explanations on what is expected to come into sections are given. Remove or replace the explanations in the text of the document before saving and submitting the final version of the document.
- Maybe not all questions can be answered, yet. Before starting editing, read the whole template first. This will help write text in the dedicated paragraphs. Avoid duplicating content.
- You can add subsections as you see appropriate. You should make the Manual your own.

DELETE THIS PAGE BEFORE PUBLICATION

TABLE OF CONTENTS

1 ABOUT [INSERT THE HACKATHON NAME]

1.1 INTRODUCTION

[Present the Hackathon! Give information about its theme, its overall format, its duration, its scope, its offers. Provide an overall view of the experience.]

Lorem Ipsum.

1.2 THE CHALLENGES

[Introduce the hackathon theme and challenges. Get into the details of the problems on which participants should focus and any special requirements or constraints they should take under consideration. Present a list of specific topics from which the participants can select.]

Lorem Ipsum.

1.3 DATE AND LOCATION

[Identify the starting and ending date of the hackathon and the starting and ending time of the event at each day. Provide information about the format of the hackathon (physical, virtual, hybrid) and details about the venue (if any) or the online tools to be used..]

Lorem Ipsum.

2 WHO CAN JOIN?

2.1 ELIGIBILITY CRITERIA FOR PARTICIPANTS

[Identify all the requirements that should be fulfilled for a participant to be able to register to the event.]

Lorem Ipsum.

Funded by the European Union

2.2   ELIGIBILITY CRITERIA FOR TEAMS

[Identify all the requirements that should be fulfilled for a team to be considered eligible and be allowed to compete in the hackathon event.]

Lorem Ipsum.

3   WHY SHOULD SOMEONE PARTICIPATE?

[Focus on describing offers of the hackathon, including an overview of the experience, specific perks identified, awards and prizes, opportunities to test own capabilities, etc.]

Lorem Ipsum.

3.1   PRIZES

[Present all the prizes offered to the winners in detail and clarify the awards system to be followed. Try to identify and provide prizes to all participants.]

Lorem Ipsum.

4   STAKEHOLDERS

[Focus on describing the involved stakeholders like the organizing team, mentors, jury, etc.]

Lorem Ipsum.

4.1   CORE AND LOCAL ORGANISERS

[Introduce the core organizers (in case of an international event taking place concurrently in multiple places) and the local organizer (that will probably be you). If this is not the case of an international event, just present your own organisation. Details provided should be on an organization/company level.]

Lorem Ipsum.

4.2   THE LOCAL ORGANISING COMMITTEE

[Details provided should be on an individual's level. Provide the names and background of your team members. Let the participants know who is going to be the main of contact with which they will interact.]

Lorem Ipsum.

4.3   SCIENTIFIC COMMITTEE AND MENTORS

[Details provided should be on an individual's level. Provide the names and background of the Scientific Committee and the Mentors that will participate in the hackathon trainings, mentoring, and workshops.]

Lorem Ipsum.

4.4   SPONSORS AND COMMUNITY PARTNERS

[Mention all sponsor types and their categories/levels, and provide one or more visuals with their logos.]

Lorem Ipsum.

5   THE HACKATHON WEEKEND

[Provide a detailed schedule of the pre-hackathon, hackathon, and post-hackathon periods. Focus on the most important aspects, and especially on upcoming warm-up or other events.]

Lorem Ipsum.

5.1   REGISTRATION TO THE HACKATHON

[Present step by step the participants trip into the hackathon. Start from the (pre-)registration phase and move towards details related to joining the necessary platforms, attending specific preparatory events, and participating in the main event.]

Lorem Ipsum.

5.2   THE HACKATHON TIMELINE

[Present step by step the participants trip during the hackathon. Identify activities that will take place (e.g., mentoring) and steps that should be followed to experience them.]

Lorem Ipsum.

5.3   PROJECT SUBMISSION

[Provide details on the expected deliverable to be provided by the competing teams (prototype, live pitch presentation, other). Make sure to provide all the details necessary for the participants to provide the expected content in a timely manner.]

Lorem Ipsum.

5.4   EVALUATION PROCESS AND FINAL PRESENTATION

[Present in detail the evaluation criteria and the overall evaluation process to be followed.]

Lorem Ipsum.

6   EVENT LOGISTICS AND RELATED COST

[Provide details related to the hackathon logistics. Confirm whether the hackathon is free and what services, equipment, infrastructure, materials, and tools are freely available to the participants. Cover fundamental aspects such as equipment that will be provided and equipment that the participants are expected to bring with them (e.g., laptop).]

Lorem Ipsum.

7   TECHNICAL SUPPORT AND TRAINING

[Provide details on the expected deliverable to be provided by the competing teams (prototype, live pitch presentation, other). Make sure to provide all the details necessary for the participants to provide the expected content in a timely manner.]

Lorem Ipsum.

8　COMMUNICATION – INFORMATION

[Provide contact details, links to the hackathon channels, and general instructions that can facilitate communication between you and the participants.]

Lorem Ipsum.

9　MISCELLANEOUS

[Expand on any other details that are deemed necessary, such as a brief presentation of the hackathon rules (going beyond the evaluation phase), the event's Code of Conduct, Data Protection, and clarification on the Ownership of the produced results.]

Lorem Ipsum.

10　FAQ

[Include a list of Frequently Asked Questions and their answers.]

Lorem Ipsum.