EU Code Week Hackathons 2024 Toolkit

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Beneficiary in charge: **ALL DIGITAL, AVANADE, CoderDojo Belgium**

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Introduction to the Code Week Hackathons Toolkit

The EU Code Week Hackathons Toolkit is designed to guide organisers in planning and delivering successful hackathons. In this Toolkit, you will find step-by-step instructions and tips for creating engaging and impactful events.

What is an EU Code Week hackathon?

A hackathon is an event where participants with diverse skills collaborate to tackle global challenges. Participants form teams to brainstorm, design and code, aiming to produce a working solution or prototype by the event's conclusion. Beyond fostering innovation and teamwork, EU Code Week hackathons offer a platform for young enthusiasts to learn, develop their coding and problem-solving skills, showcase their talents, and be inspired by peers and mentors.

Central theme

The theme for EU Code Week 2024 is **Hello, Future!: Technical Solutions for a changing world.** Having a central theme fosters a sense of connection and belonging among participants across different countries and inspires careers in digital.

The theme focuses on decoding possible risks and future challenges (climate change, sustainability, food security, health issues, AI and its implication, digital inclusion, migration, access to education) and preventing them by finding digital solutions. The theme focuses on equipping participants with a broad range of digital and transversal skills needed to thrive in a changing world.

While overarching theme remains the same in all participating countries, challenges are adapted to address local needs and issues. This approach encourages participants to engage more deeply by identifying and tackling problems that are directly relevant to them or their communities, promoting the development of innovative, locally grounded solutions within the broader context of the EU Code Week 2024.

To guide participants, we have created several challenge questions which are authentic challenges different industries are grappling with and where digital solutions could make significant impact. However, each local organiser has the flexibility to design their own unique challenge.

Suggestions for Challenge Questions

Future of Work. How can digital or AI be leveraged to promote and sustain diversity and inclusion initiatives, ensuring equitable opportunities for all employees?

Healthcare. How can we develop digital systems that provide accurate and safe medical advice or support?

Agriculture. How can we leverage digital technology for a transformation in the agriculture sector addressing critical issues such as water scarcity and food security

Education. How can we leverage Technology to create a personalised, engaging and inclusive educational platform that caters to diverse needs of learners and empowers educators?

Your choice: Develop an innovative technical solution to address a pressing social or environmental issue of your choice

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How to get involved – steps to running your own Hackathon

1) Decide the scope of who will be involved e.g. class of 30 v cross-schools hackathon and the date/timing for your 24 hours hackathon
2) **Sign up** on EventTornado Hackathon platform - all hackathons will take place online via Eventornado. There will be one common online environment for all hackathons. Reach out to the partners from ALL DIGITAL, Avanade or CoderDojo to get admin rights.
3) **Appoint Mentors.** Mentors play a crucial role in hackathons and can facilitate the success and learning experience of participants. It is advisable to select mentors with diverse expertise, technical skills, teaching experience or experience of working with young people e.g. programmers, designers, pitching experts, business developers. One mentor could **support two or three teams**. Important: ensuring gender balance is crucial for fostering diverse perspectives and promoting inclusivity.
4) Engage at least 4 **jury members** with your final evaluation to ensure the diversity of expertise needed to fairly evaluate the entries
5) **Plan any useful workshops** or resources ahead of time e.g. teamwork, pitching skills, research skills, design thinking
6) **Plan the Opening Ceremony** e.g. slides with info about Code Week, challenge questions, code of conduct, suggested timings, how to submit the solution
7) **Agree the prize,** consider sponsors/company involvement
8) **Add your hackathon event to the EU Code Week map of events**

1.1 Timings of the Hackathons and EU Final

The EU Code Week 2024 Hackathons should take place **between October 2024 through to March 2025**. Each local organiser and National Hub has the flexibility to select the timing for their hackathons based on their specific needs. This means that they should consider factors such as local holidays, exam schedules and other relevant dates to determine the most suitable timing.

The duration of the hackathon is 24 hours which can be distributed in a maximum of 4 days, depending on the preference of each organiser (i.e. during school hours, the weekend, school holidays). Each organiser should ensure that participants have enough time to develop their ideas and prepare the pitch, jury has the time to review all proposals, pitching sessions, Q&A, and awards ceremony.

Example timing for a 4-day hackathon:

Day 1:

- Morning: Hackathon Opening Ceremony including announcing Challenge options
- Work with your team to define the challenge you want to work on.
- Do the North Star exercise- see Appendix.
- Ask Tips: Does the technology actually solve a human pain point? Why? How will what your proposing impact them (small or large scale)?
- Review any useful workshop content to support your ideation phase e.g. teamwork, design thinking
- Afternoon: Create a fully thought-out problem statement you want to solve and start outlining must have features.
- Discuss team roles.

Day 2:

- Define team roles and responsibilities
- Research your idea. What technologies, methods, platforms and innovations will you use to deliver a solution for a better future?
- Start building out your idea demonstration. This may include coding or a demonstration of the research you've done to show it is feasible

Day 3

- All day – continue building out your demo
- Start working on your story for your pitch. Describe issue and why it's an issue, your North Star and what you are solutioning for, a vision of how your idea will improve the world, a description of the solution bearing in mind the criteria. Remember to prepare answers for questions around feasibility, cost, reach, ethics and promotion.
- Test Demo and story together ahead of tomorrow
- Practice your pitch

Day 4

- Practice your pitch
- Get ready to pitch!
- Attend the Hackathon final and present to panel of judges

Some necessary steps that need to be included in organisation of each hackathon:

- Hackathons should start with an opening ceremony
- Challenges should be defined and announced to all teams at the same time
- If there is a need for workshops or some additional mentoring sessions, it is advisable to organise these in advance and record them. In that way, these additional workshops will not interrupt the idea development during the hackathon day. By recording them, you can ensure that the teams have access to the content as they see fit. Ideas for topics of the workshops: how to prepare a good pitch, how to manage teamwork, etc.
- Each hackathon should have a pitching session where each team will pitch their idea (either live or pre-record the pitch) followed by a short Q&A session per team to answer jury's questions)
- Each hackathon should finish with an award ceremony
- EU Final: After the national hackathons are completed and the winning teams have been chosen, these top teams will receive an invitation to compete in the EU level finale, scheduled for April 2025. Finalists will present their submission (5 mins max) and participate in a Q&A with the executive judges. This final event will be conducted online, providing the winning teams with the opportunity to present their innovative ideas to an international jury. There will be 1 Grand Prize Winner for the best solution.

1.2 Hackathon participants

Each hackathon should involve **at least 30 participants that are 15 to 19 years old**. **Each team should have 4 to 6 participants**.

All team members should help develop the idea and participate in the building of the pitch/presentation, but you might consider the following leads in your team to ensure success: **developer**, **designer** (UX designer), **pitch lead.** Beyond these, participants can also choose different roles, such as project manager, research lead, marketing or communications lead – please see **Appendix B** for descriptions of the various roles.

1.3 Eventornado Hackathon Platform

Eventornado hackathon platform can be used for the full hackathon process, starting from the registration and idea collection, managing registrants' data, showcase the projects, evaluate and give feedback. Along with the platform, participants will have access to the chat function via Discord. Overall, Eventornado is very flexible and can be customised to fit purposes of specific hackathons. Importantly, Eventornado is **fully GDPR compliant and secure.**

National hackathon organisers will be responsible to check and monitor whether the participants have registered for the correct challenge in the specific country, their progress and provide guidance throughout the event. We recommend that 2 to 3 key members from each organiser's team have full access to the platform to effectively manage and support participants.

Detailed guidebook for organiser's prepared by Eventornado can be found here.

The EU-level finale will be held online via virtual conference platform (Zoom, Microsoft Teams, or similar – to be announced at the later stage).

1.4 Mentors

Mentors play a crucial role in hackathons and can significantly impact the success and learning experience of the participants. When identifying the mentors, it is important to keep in mind their expertise and how they can support the participants. It is advisable to select mentors with diverse expertise, technical skills, teaching experience or experience of working with young people. Depending on the specific local challenge, different profiles might be needed to provide the well-rounded support for the participants. Here are some suggestions for the mentor profiles: programmes, designers, pitching experts, value proposition experts, business developers, topic-specific mentors.

One mentor should **support two or three teams**, this can be further adapted to each local context depending on the actual needs.

1.5 Jury members

Jury members need to be informed about the evaluation criteria and expected results. Our suggestion is to organise a brief training for jury members to give them the overview of the hackathon format, evaluation criteria, and how to give constructive feedback to participants.

How to select jury members?

- Experience and expertise: the jury should consist of professionals with expertise relevant to the hackathon's theme and local challenge. It is important to consider technical and non-technical expertise.
- Diverse perspectives: Jury should involve individuals from different fields and be diverse themselves in terms of gender, ethnicity, and background
- Previous hackathon experience: involving jury members that were participants or mentors at hackathons may support their decision as they have been through similar processes themselves

In school context, the jury members could be teachers from relevant subjects, senior students who participated in similar events, industry experts (such as local professionals or parents who work in relevant fields), and school administrators (such as principals).

1.6 Overarching evaluation criteria

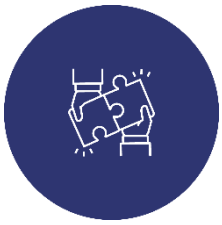
When organising hackathons across various national contexts, it is essential to establish clear and consistent evaluation criteria.

The overarching evaluation criteria for EU Code Week 2024 Hackathons are:

Relevance: Has the team understood the challenge? Does their solution solve the challenge? (20 points)

Innovation and creativity: Has the team developed a strong, ready-to-use solution for the problem or challenge? Do they employ an innovative approach? (20 points)

Feasibility and functionality: Is the proposed solution technically feasible? How well designed is the demo? How user-friendly is the solution? How do they plan to further develop their idea? (20 points)



Collaboration and teamwork: Did the team work well together? How was the synergy between the members of the team? How fast did they work? (20 points)

Presentation & soft skills: How well has the team presented their ideas and solutions using tools and mediums at their disposal? (20 points)

1.7 Hackathon solution

Some teams might have the time or resources to already develop an app or product prototype, this might not be the case for all participants. Thus, in the EU Code Week 2024 Hackathons, we are asking participants to:

1) Develop a full presentation (PowerPoint) of their idea, walking the jury through. This includes outlining the challenge, explaining the concept behind the solutions, and showing how it could be implemented and scaled in the real world.
2) Each team to present or record a 5-minute presentation of their solution for review by a Jury Panel.

1.8 Hackathon prizes

Each participating team will get a certificate of participation, and the winners should get the winning certificate, this applies to the national hackathons, but also to the EU-level finale planned for April 2025.

The closing of the hackathon and award ceremony depends on the hackathon organiser and the involvement of local sponsors (such as tech companies, universities, educational centres). Organisers, project partners and local sponsors will be encouraged to provide additional rewards for the winners, such as mentorship opportunities, tech tools, or access to various learning opportunities.

1.9 EU Code Week Hackathons Code of Conduct

Hackathons is a fun, enjoyable activity and should be a safe space for everyone involved (the organisers, participants, mentors, jury, and everyone else). To make sure that there will be safe space for everyone, it is important to establish a code of conduct that participants agree upon registration. **Code of Conduct is a set of norms, rules and responsibilities outlining how to behave when joining the hackathons**.

- Treat everyone involved (participants, hackers, mentors, jury, organisers, sponsor, partners) with utmost respect and kindness
- Embrace diversity and be considerate of different backgrounds, perspectives and experiences
- Harassment, discrimination of any form of inappropriate behaviour will not be tolerated. This includes racist, sexist, or exclusionary jokes.
- The consumption of alcohol, narcotic or psychotropic substances is strictly prohibited during the event
- Respect the intellectual property rights of others and ensure that the work submitted is original
- Immediately report any behaviour that compromises the safety or well-being of participants to the organisers. All reports will be handled confidentially and taken seriously.

This Code of Conduct needs to be included in the registration, along with the information that pictures and/or videos might be taken during the event for promotional purposes and documentation and how participants can exercise their right not to be photographed.

CodeWeek.

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EU Code Week Hackathons

Code of Conduct

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Your hackathon

This toolkit is meant to guide you through the organisation of the hackathon, and you are welcome to use it as if best fits your hackathons, and there is no need to follow exactly what is written in the toolkit, apart from the central theme, hackathon platform and the overarching evaluation criteria.

In Appendix A you will find ready to use templates and checklists. Note that these contain general information about hackathons, but you can adapt it and use as it best fits your hackathon and its timeline.

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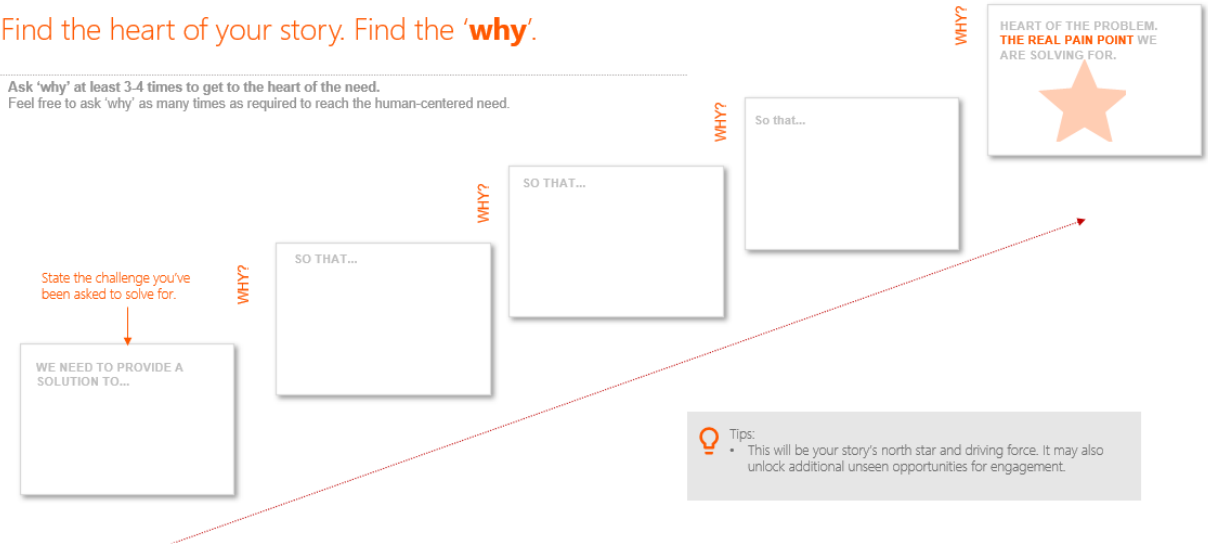
Appendix

Appendix A – Useful planning templates

Find your north star

Find the heart of your story. Find the '**why**'.

Ask 'why' at least 3-4 times to get to the heart of the need.
Feel free to ask 'why' as many times as required to reach the human-centered need.



Tips:
- This will be your story's north star and driving force. It may also unlock additional unseen opportunities for engagement.

Hackathon planning template

1. **Event overview**
    a. Hackathon name: [EU Code Week 2024 Hackathon]
    b. Central theme: [Hello, Future!: Technical Solutions for a changing world.]
    c. Local challenge(s): [list of local challenge(s)]
    d. Date & Time: [start date and time – end date and time]
    e. Duration: [24 hours]
    f. Location: [Eventornado + any other conferencing tools, if you decide to use any]
    g. Target audience: [youth: 15 – 19 years old]
    h. Number of participants: [number]

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2. **Planning timeline:**

Task	Responsible person(s)	Start date	End date	Comments
Define date and time				
Define challenges				
Event platform setup				Make sure all information relevant to your local hackathon is available on Eventornado
Virtual conferencing tool setup (if relevant)				If you want to use a virtual conferencing platform where participants could pitch their ideas, make sure to set it in advance and share it with the participants, mentors and jury (and general public, if relevant
Contact potential sponsors (if relevant)				
Hackathon promotion & participants outreach				
Mentors & Jury recruitment				
Participants review on Eventornado				Make sure that all participants from your local context chose the right challenge on Eventornado

3. Pre-hackathon checklist

- ☐ Define the target group and format (duration, rounds)
- ☐ Define hackathon challenge(s)
- ☐ Reach out to stakeholders and see if they can support with organisation, promotion, mentors, or prizes
- ☐ Eventornado platform setup
- ☐ Set up Zoom / Google Meet / Teams (or similar) online event (if relevant)
- ☐ If participants will join the online hackathon from the same space, make sure there is good internet connection
- ☐ Event promotion (social media, EU Code Week website, emails)
- ☐ Open registration to participants
- ☐ Mentors selected and briefed
- ☐ Jury selected and briefed
- ☐ Finalise the event agenda
- ☐ Plan the facilitation of the event (is there a specific Master of Ceremony?) Virtual or F2F?
- ☐ Prepare resources for participants (guidelines, FAQs, challenge descriptions, etc)
- ☐ Ensure all technical infrastructure is in place

4. Event agenda

[Time]	Registration and welcome
[Time]	Introduction to EU Code Week Hackathon - Timeline - Theme & Challenges - Evaluation criteria - What is expected? - Platform overview - Code of Conduct
[Time]	Mentor's introduction
[Time]	Keynote speech / workshops (if applicable)
[Time]	Hacking sessions
[Time]	Submission deadline
[Time]	Pitching session
[Time]	Pitch and presentations review by jury, selection of the winning idea
[Time]	Award ceremony & closing

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Post-hackathon checklist

- ☐ Contact the winners with information about their prize and invite them to participate in the EU-level finale
- ☐ Send thank-you messages to all participants, mentors, jury members, other stakeholders
- ☐ Share photos and videos of the event on social media
- ☐ Prepare the winners to participate in the EU-level finale
- ☐ Collect feedback from different groups (participants, organisers, mentors, jury)

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Appendix B

Hackathon roles description

Pitcher

The project pitch is a crucial part of the hackathon, as it involves presenting the team's idea and work to a group of people who can help make the group's idea a reality.

The pitcher is responsible for communicating the team's idea and solution to the jury and potential users.

The pitch must address all the evaluation criteria: the challenge and relevance of the solution, the innovative aspect (or what's new and unique about the proposed solution), the technical part covering the technical choices made by the team, and finally the creative part with the chosen design.

- **Responsibilities:**
  - Develop a clear, understandable pitch that highlights the challenge and the solution and its importance
  - Collaborate with the team members to understand the technical and design aspects of the solution
  - Practice and deliver the pitch within the time limit (3 to 5 minutes)
  - Answer the jury's questions

- **Skills:**
  - Strong communication and presentation skills
  - Ability to explain complex ideas in simple language
  - Confidence in public speaking
  - Time management

- **Tips for the pitcher:**
  - Know the audience
  - Grab attention of the jury and the audience by bringing them straight into the story
  - Practice the pitch to make sure that the pitch doesn't overrun the timing
  - Your enthusiasm counts – make sure to express clearly why you believe in the proposed solution

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- Be prepared for the Q&A session: think about possible questions that jury might ask and look into weaknesses of the solution. Take a moment before answering the questions

Developer

The developer is responsible for building the technical solution of the project, whether it's a website, app, or another type of digital solution. This might include writing code, testing, debugging, and implementing key features.

- **Responsibilities:**
  - Write clean, efficient, and maintainable code to build the solution
  - Collaborate with the UX designer and other team members to ensure the user interface is user-friendly and functional
  - Troubleshoot to ensure smooth functionality
  - Test the final solution to make sure it functions before the presentation

- **Skills:**
  - Strong proficiency in relevant programming languages (e.g., JavaScript, Python, etc.)
  - Familiarity with front-end and/or back-end development tools and frameworks
  - Problem-solving skills

- **Tips for the developer:**
  - Start with a basic version of the solution and gradually add features
  - Work closely with the designer to ensure that the interface and functionality align
  - Test frequently to catch and fix bugs early
  - Keep notes on your code and development process

Designer (UX designer)

The UX designer is responsible for creating the user experience and interface of the solution. They make sure that the solution is user-friendly, intuitive, and visually appealing, creating prototypes, and final design assets.

- **Responsibilities:**
  - Design user interfaces that are visually appealing, and intuitive
  - Create mock-ups and prototypes to demonstrate the user flow
  - Collaborate with the developer to ensure the design is implemented correctly

- Gather quick feedback from team members or classmates to improve the design
- Ensure that the final product is easy to navigate and provides a positive experience for users

- **Skills:**
  - Basic skills in design software or tools (e.g. Canva, or drawing tools)
  - Understanding of user-centred design principles
  - Creativity and attention to detail
  - Ability to create designs that are functional and visually appealing

- **Tips for the designer:**
  - Conduct quick user research to design with the end user in mind. Consider their need, preferences, and challenges
  - Focus on creating clean and intuitive design
  - Familiarise yourself with design tools
  - Share design with team members to get feedback and make improvements

Project manager

The project manager oversees the planning, execution, and delivery of the solution within the hackathon timeline. They coordinate tasks, keep everyone on track, and make sure everything is running smoothly.

- **Responsibilities:**
  - Set clear goals and timeline for the team
  - Organise tasks and delegate responsibilities based on team members' strengths and roles
  - Monitor progress and ensure the team is meeting deadlines and hackathon requirements
  - Facilitate communication between team members and manage conflicts or challenges
  - Ensure the solution is submitted on time with all required elements (pitch, code, visual presentation, etc.)

- **Skills:**
  - Strong organisational and time management skills
  - Leadership and decision-making abilities
  - Clear and effective communication
  - Problem-solving skills and flexibility

- **Tips for the project manager:**
    - Break down the project into clear, achievable goals and milestones
    - Be ready to adapt to unexpected challenges and changes
    - Keep the team informed about progress and communicate regularly
    - Use tools like to-do lists of project management apps to track task
    - Foster a collaborative environment where team members feel comfortable sharing ideas and providing feedback

Research lead

The research lead gathers information that helps the team better understand the problem they are solving, as well as potential users or communities who will benefit from the project. They ensure that the project is based on real-world needs and facts.

- **Responsibilities:**
    - Conduct research to validate the problem
    - Identify key user needs and potential use cases for the product
    - Look into existing solutions or similar projects for inspiration
    - Provide insights and data to guide the design and development process
    - Collaborate with the team to ensure the product addresses real-world problems

- **Skills:**
    - Strong research and analytical skills
    - Ability to gather and organise data from variety of sources
    - Critical thinking and attention to detail
    - Ability to present research findings in a clear and helpful way

- **Tips for the research lead:**
    - Start the research as soon as possible to have enough time to gather and analyse collected information
    - Use reliable sources and make sure that your research is up to date
    - Prioritise information that directly impacts your project's goals and objectives – try to ignore irrelevant details
    - Present your research in a clear and simple way

Marketing or communications lead

The marketing or communications lead is in charge of creating the narrative and promotional materials for the solution. They ensure that it is explained in a way that engages the community and communicates its importance. They will create content, develop messaging, and work on strategies to promote the solution during and after the hackathon.

- **Responsibilities:**
  - Develop clear, simple and engaging messaging that explains the project's purpose and benefits
  - Create content (e.g., social media posts, presentations, posters, etc.) to promote the solution
  - Support the pitcher in developing talking points or strategies for the pitch
  - Gather and respond to feedback to refine messaging and promotional efforts

- **Skills:**
  - Strong writing and communication skills
  - Creativity in preparing messages and promotional materials
  - Basic skills in design or content creation tools (e.g. Canva)
  - Understanding the target audience and how to engage them

- **Tips for marketing or communications lead:**
  - Tailor your messaging to resonate with the target audience
  - Use engaging and creative visuals and catchy phrases to get attention
  - Use feedback to refine messages and promotional materials
  - Work closely with the pitcher and other team members

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