

# The Exciting World of — Hackathons



# Train With Hackathons

By April Olt

**These brainstorming sessions can help companies resolve issues, solve problems, and generate new ideas.**

Have you heard of or ever participated in a hackathon? What even is that?

Most people associate a hackathon with the IT community or with computer hacking. Merriam-Webster defines a hack as “a clever tip or technique for doing or improving something.” By extension, a hackathon is an ideation session that requires participants to find a solution to a problem or assertion.

Think about your team or organization. Do you need to find a solution to an issue? Consider a hackathon. During the event, the sponsor gives participants a problem to solve along with creative constraints that require them to find an innovative solution.

For example, as the sponsor, you would come up with the problem, present this idea to a team or group, and give it a specific amount of time to solve the issue. You would provide the team with specific tools and parameters that it may use to solve the problem and send the team on its way. Team members would have the resources they need and would work together to solve the issue, problem, or question.

But this concept isn't limited to a specific industry or organization. Any company or team can use the hackathon format to create innovative solutions to any problem.

## Improvisation Hackathons

At ImprovEdge, we have developed a format for the hackathon experience using improvisation as the catalyst for brainstorming and discovering innovative solutions. Why improvisation? As improvisers, we are constantly challenged to think of new ideas or methods—to change. We embrace the “Yes, and” technique—which is accepting a new idea and adding to it—and adapt to changing situations. The foundational principles of improvisation combined with the hackathon experience encourage participants to think on their feet, manage in the moment, and accept unusual solutions. This highly interactive session teaches participants to apply concepts from the improv stage to be more effective at problem solving and has them practicing behaviors that enable effective innovation and change.

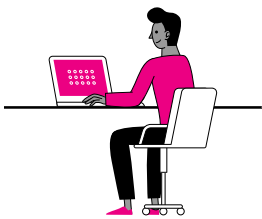


Clients in all lines of service have been successful in using this format to discover think-outside-the-box solutions and integrate ideas from diverse teams. Each of these sessions follows a structured format that prepares the group or team for the hackathon experience. Improvisational exercises are used as a catalyst for learning. These exercises are designed to engage the participants, explore specific actions and outcomes, elevate their ability to influence outcomes, understand their roles in the session, and create a positive experience for the entire team. Improvisers are trained to think on their feet and manage well in risky situations. These techniques build trust, collaboration, innovation, and the ability to transform and adapt to change.

## In Practice

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Here are some examples of how different types of organizations have used improvisational hackathons to solve problems.



### Universities

We worked with a large university extension program to facilitate a hackathon experience for its diverse teams. The event began with a keynote session that encouraged the use of improvisational behaviors, collaboration, and teamwork. The facilitator led all participants in games and exercises to set the stage for group engagement.

After the keynote, the participants split into smaller, predetermined groups of eight to 10 individuals. This portion of the event was structured as a brainstorming session, followed by idea development. The facilitators and other preassigned coaches assisted the groups during this process, as needed.

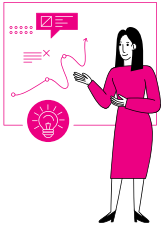
Throughout this day-long event, the university was able to connect employees, who primarily worked remotely across the state, and empowered them to solve problems in innovative and creative ways to connect the missions and outreach programs with their teams. The hackathon event involved community members as judges and allowed for follow-up platforms so that teams could continue to use these methods to solve problems when they returned to their remote offices.



### Industry

A large global pharmaceutical company used a hackathon event to generate solutions and ways to apply the company's core values to its customer relationships. The company expressed a desire to use improvisation techniques to improve collaboration and the team's ability to manage change. The hackathon experience enabled participants to immediately apply skills they had learned in the keynote session, which connected the participants with the idea that innovation is a learned behavior. The keynote exercises and activities encouraged them to embrace the core principles of improvisation that exist in high-performing teams and prepare for change, which is constant.

During the hackathon session, preassigned table leaders, which ImprovEdge trained, led and monitored the highly structured event. The table groups used improvisation and brainstorming exercises to generate ideas and land on one idea per table. Each table then collaborated with another group. Finally, the teams used improv to create a high-energy share-out of ideas in front of the entire conference.



## Professional Organizations

A law organization wanted to find a way to attract new members, solve communication issues, and increase fundraising. A hackathon event for the first yearly meeting resulted in several ideas for implementation over the next few years. The hackathon's structure followed a slightly different format than the previous examples.

For this event, the facilitator began the session with an introduction of the concepts and foundational principles of improv and then engaged the audience with group exercises. In the next section, the participants split into predetermined groups of six to 10 and applied what they'd learned through a facilitator-led brainstorming exercise. At the end of this exercise, each group produced one idea then created a three-minute pitch of their idea and presented it to a team of judges. The judges awarded prizes to the winners, and during the afternoon breakout sessions, the groups had the opportunity to adopt one of the ideas into their interest group action plans for the next year.

## Next Steps

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Now that you've seen specific examples about how hackathons work, you can follow these five steps to use this formation for your next ideation session.

1

### Decide the Question or Problem You Want to Solve

A successful hackathon begins with a problem. Make sure the question or problem is broad enough that you don't limit the ideas. The question should guide creativity while limiting it just enough to provide parameters for those ideas. For example, "How can we get more customers?" may be too broad. Instead try, "What can we do to improve our relationship with customers?"

2

### Use Predetermined Groups

Assign groups with participants from diverse teams, experience levels, departments, and geographic locations. Keep in mind that diverse teams will assist in the creative and innovative process. Divide participants into groups of four to seven individuals, then decide whether each group will look at the same problem or question or will address a different aspect of the problem.

3

### Think Like an Improviser

Apply the principles of improvisation to the session. Energize the room with positivity and embrace each idea, contribution, and thought with, "Yes, and." The set-up to the event should include engaging exercises, games, and reward systems. Select a layout or space that encourages creativity. For example, you could have various toys on each table or beanbag chairs or a musical opening session. Whatever you decide, make it fun and creative.

4

### Communicate Creative Constraints

Improvisation and ideation both require creativity along with specific rules and boundaries. As improvisers, our exercises are structured so that the rules contribute to the creative process. An exercise like the Ad(d) game prepares the participants for a brainstorming session. Karen Hough details the game in her book *Go With It: Embrace the Unexpected to Drive Change*.

To set up the Ad(d) game, first select a group of five to six players. This group has a seemingly impossible task: It must market an everyday object that has a quality or aspect that makes it appear unusable; for example, a laundry detergent that makes your clothes look dirty. Each person shares an idea or contribution for marketing this new product. As a member of the group contributes an idea, all participants must shout, “Yes, and.” In this exercise, participants must accept every idea and contribution. I am always surprised at how many times the object seems marketable by the end of the exercise.

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### Structure the Day and Train the Facilitators

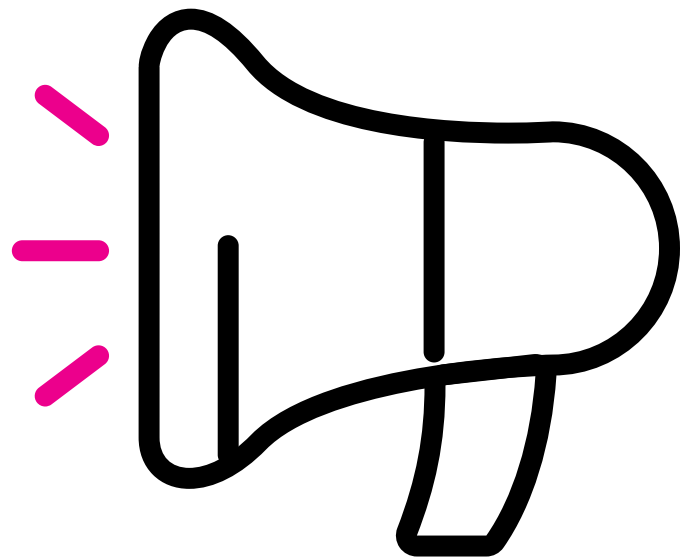
While planning your hackathon experience, create a specific timeline and work with your facilitators ahead of the event. One of the critical components of the creative constraints is time. Is this a half-day, all-day, or overnight event? This experience can be valuable in any of these formats if you have established the structure and predetermined the timeline.

Because time is an important piece of this format, make sure you have a timer visible and accessible throughout the session and people dedicated to reminding the groups of the time left in each session. One way to improve accountability is to assign one person in each group as the timekeeper. Provide your facilitators with the script for the day, train them on each of the exercises you will use, and assist them with creative ways to encourage the group to embrace the “Yes, and” technique.

6

### End With a Celebration and a Share-Out

Discover fun ways to celebrate the ideas at the end of the session. One of the organizations that held a hackathon decided to have every group find a creative way to share their ideas to the entire organization and then asked participants to vote for their favorite idea from each group. Another client offered a cash prize for the winning idea following its implementation.



Whatever you decide, embrace the unexpected and have fun. Decide how you want to follow up with the ideas or solutions, and follow through with an accountability plan.

A hackathon experience can provide a new and innovative way to solve an old problem or communication issue, develop a new tip or technique, or energize an individual, team, or organization.

**April Olt is the director of instructional design and a facilitator with ImprovEdge.**

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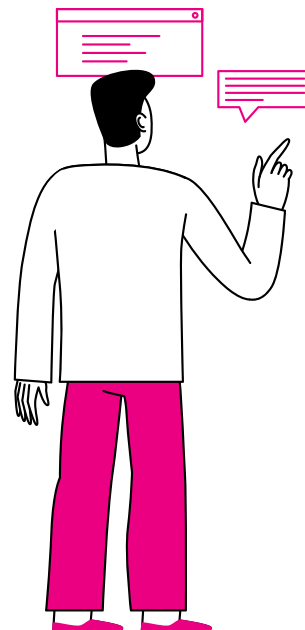
**Check out April Olt's session from the 2018 ATD International Conference & Exposition: [How to Use Hackathons as an Innovative Training Format](#)**

## Expert Advice on Hackathons

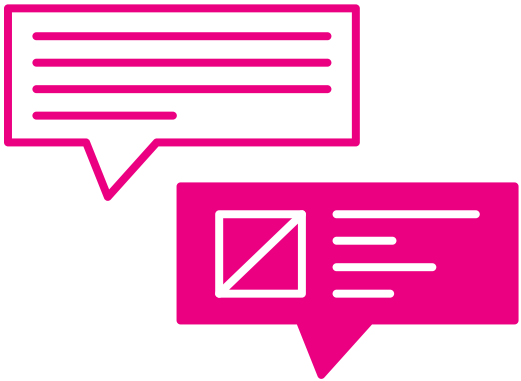
Sanjana Paul, co-founder and executive director of The Earth Hacks Foundation, answered some questions on these popular events. Sanjana holds a bachelor's degree in electrical engineering and physics, works as an atmospheric science software developer at NASA, and created Earth Hacks to use the untapped university hackathon innovation model to combat the climate crisis.

### **Q. How do you know what project to start with?**

Most times, you don't. A huge part of the hacking process is leaning in to the "rapid" part of "rapid innovation" and coming up with a project at the hackathon, trying three projects before finding one you like, or just getting pulled into something you initially might not be too interested in but transform into a work of art. Going with your gut is a huge asset, even more so than going with your skill set, because hackathons are an opportunity to learn.



## Q. What projects should you not use hackathons for?



There's a contest hosted by Blockstack called "Can't Be Evil" that works on projects that generally can't—no matter how hard someone with malicious intent tries—be used for, well, evil. That's generally a good guide for what not to create at an event, as are hackathon codes of conduct. Most have explicit policies outlining zero tolerance for abuse and harassment (and if you go to a hackathon that does not have one, strongly encourage them to create it!), so any projects that violate those codes are definitely off-limits. If you have doubts about your project, think it could be harmful if it falls into the wrong hands, or are not sure how it will be received by the audience it's intended for, check with a mentor or organizer for advice on a case-by-case basis.

## Q. What is the recommended size of team?

Most teams consist of two to five people. It's generally not recommended you work alone at a hackathon, as it's a collaborative learning environment, and it can also get tricky to manage the opinions of large teams (more than six people). That being said, if a friend group of seven comes into the hackathon and finds a project that each of them has a well-suited skill set for and want to work on it as a team, go for it!



## Q. What is the suggested length?



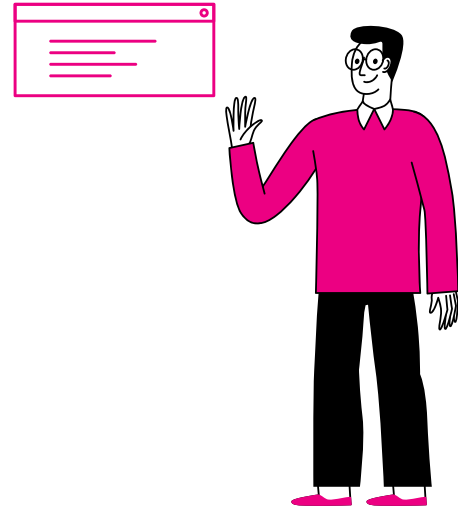
At least 24 hours of hacking time, not including judging or opening and closing ceremonies. We've found that a two-day event that starts on a Saturday morning and ends on a Sunday afternoon or evening is usually pretty well-received, with ample time for other activities in the mix.

## Q. Are participants given any work to do ahead of the hackathon event?

Generally, no, but this varies on a case-by-case basis.

**Q. Do sponsors give any direction vis-à-vis solving the problem at hand?**

Yes! The sponsors of the hackathon usually team up on these challenges for a reason, and have representatives present at the event to provide expertise and help with problem-solving. The extent of this depends on the individual event, but we encourage mentors to have as much fun as the participants and stay overnight if they wish, eating snacks and sharing ideas.



**Q. Does the sponsor select groups or do people choose their own?**

The sponsors of the event usually have representatives at the event to help with team formation and other aspects of the hackathon, but a sponsor representative will not (or should not!) hinder team formation in any way. Participants should be free to join an existing group if there is unanimous consent or to start their own if they wish to.

**Q. Is there an effort to get a diverse skill set or mindset in any group?**

This mindset is usually to the team's advantage (the vast majority of Earth Hacks' winning teams are interdisciplinary), so we do try to facilitate this during team formation. Ultimately, it depends on the individuals involved, the challenges they are working on, and the environment of the hackathon they are in.



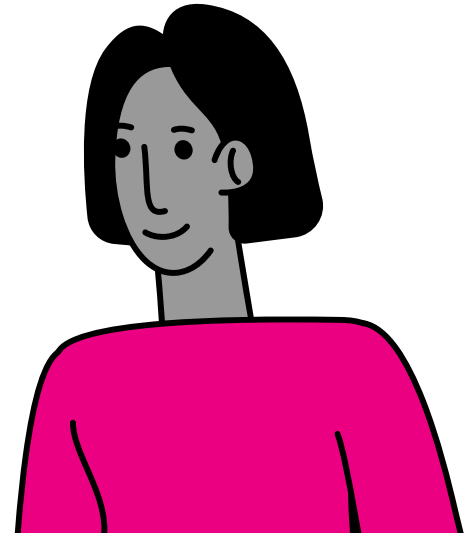
**Q. Are virtual hackathons doable? If so, what are the logistics involved in them?**

Certainly—while virtual hackathons will not have the sense of community and random, fun interactions an in-person hackathon has, having a set period of time to solve a problem in collaboration with others can definitely be accomplished. Some general guidelines to follow would be setting an appropriate timeframe, choosing a problem that lends itself to online work, and picking an appropriate communication method.



**Q. For newbie hackers, do you suggest a team lead or facilitator who has been through the process? Or perhaps a lead is always a good idea to keep focus?**

No, not always. We generally recommend allocating some time in the hackathon schedule for team formation, during which time participants can work with hackathon organizers and mentors to form their team if they did not come with one. While there can be benefits to having someone experienced with hackathons on your team, there can also be benefits to having people who don't have that experience—if you don't know the traditions and unspoken rules, you can't be constrained by them!

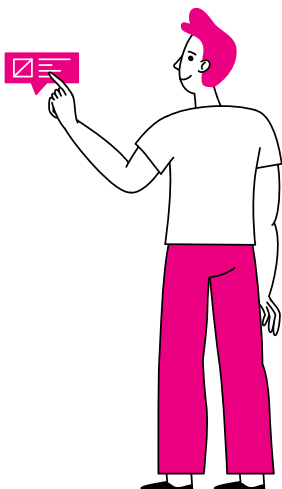
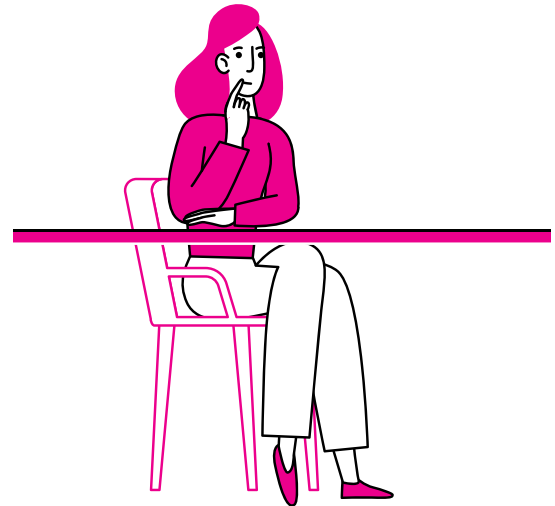


**Q. There are some who use design thinking—focusing on the people you're serving, using empathy—in conjunction with hackathons. Is that something you espouse at Earth Hacks?**

Definitely. Earth Hacks works with students to hack the climate crisis—that's absolutely impossible without a sense of empathy.

**Q. Any lessons learned that you'd care to share so others could avoid them?**

If you're having an in-person hackathon, do not give hackers less than 24 hours to work! To make sure the experience is fun for everyone, give yourself some wiggle room. Try to make the net outcome of the hackathon beneficial—generate as little waste as possible, pack in as many educational and team-building activities as you reasonably can, and minimize “dead time” when people are bored. If you are having an overnight event, make sure that there are designated quiet areas for people who want to take naps.



**Q. What are the benefits and challenges of using a hackathon to problem-solve or find new solutions?**

Hackathons as an innovation model are astounding in that they can produce robust, working prototypes of solutions to a plethora of issues in an extremely short timeframe. However, a big challenge is finding a way to ensure the projects don't just end after the hackathon and never find themselves implemented. Working on post-hackathon follow-up methods is one of our core activities at Earth Hacks, and I hope that more hackathon attendees become interested in continuing their projects beyond a first prototype stage.

# 10 Reasons to Encourage Friends to Go to Hackathons

A few reasons this blogger encourages any budding developer to go to a hackathon:

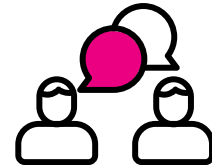
## **You'll learn what you don't know.**

Hackathons are as much a social event as a coding event. In the process of talking to people, you'll learn from the tools they use or the tools and resources they talk about using.



## **You'll realize what you do know, and teach others about what you know.**

Technology is big, and there's a wide range of people who go to hackathons. An iOS developer is not going to have the same range of expertise as an Android developer or a web applications developer or an Arduino hacker or a UX designer. Don't be shy about sharing your skills—even if it's a cool trick in Photoshop. I guarantee there will be people who don't know how to use Photoshop too.



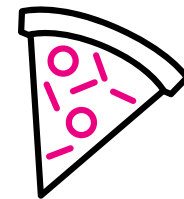
## **You'll get to pair-program.**

THIS. Pair-programming is awesome if you want to focus on getting as much done as possible in a short amount of time, and would enjoy talking out problems with a partner. It's best to find someone of a similar skill level and take turns "driving" (typing) and advising.



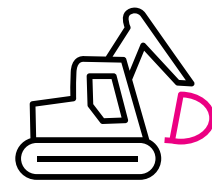
## **Free food!**

To be honest, the food quality depends on how much attention the organizers pay to it. But yes—most times, expect nourishment.



## **You'll build something by the end of the weekend.**

More often than not, it's not completely done. . . . but you'll likely have something visual to demo, and that's all that matters.



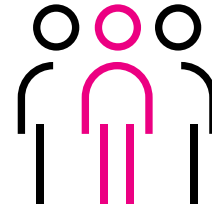
## **You'll automatically contribute to open source.**

Hint: If it's software, push it to GitHub.



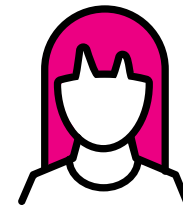
## **You'll meet many interesting, motivated people.**

Who goes to hackathons, if not motivated people who think it'll be fun to spend a weekend building something?



## **You'll make new friends.**

Hackathons are time-sensitive, sometimes intense experiences that force people to work together. This makes for great bonding experiences.



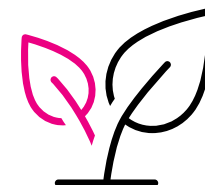
## **You'll be on a prize-winning team 10–25 percent of the time.**

Companies sometimes sponsor hackathons to advertise their APIs or products to developers. They also occasionally sponsor prizes. What this often means is that there's no single hackathon "winner," but rather multiple winners.



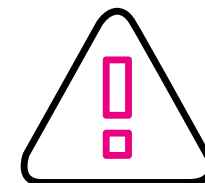
## **You'll grow as a developer.**

You'll learn a lot from talking to people, from being forced to better understand the unfamiliar framework your team picked to use, and from being able to sit by your team and ask or answer any immediate questions.



## **A few misconceptions about hackathons:**

- You have to be on time.
- You have to pull an all-nighter or sleep overnight.
- You have to be a good programmer.



You don't have to be a good programmer, stay overnight, or even be on time to go to a hackathon. Half the time, most of the attendees won't know what they're working on until a couple hours in—after they've formed teams with other strangers. Approach hackathons with the willingness to meet people and to learn, and you'll have a fantastic experience.

Excerpted from **The Coding Diaries** ([codingdiaries.com](https://codingdiaries.com))

# Resources

[A Valuable Resource Guide to Hackathons](#)

[Explore How HR Can Improve the Employee Experience](#)

[Worldwide Hackathon Figures in 2018 and Trends to Expect in 2019](#)

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