
You Hacked and Now What? – Exploring Outcomes of a Corporate Hackathon

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Abstract

Time bounded events such as hackathons, data dives, codefests, hack-days, sprints or edit-a-thons have increasingly gained attention from practitioners and researchers in recent years. Existing work around such events however has mainly focused on the event itself while potential outcomes of hackathons have received limited attention so far. In this paper we will present preliminary findings from a case study of the outcomes of a large scale corporate hackathon. Our findings provide insights into the continuation of projects, the sustainability of teams and the potential effects of hackathon participation on individuals.

Author Keywords

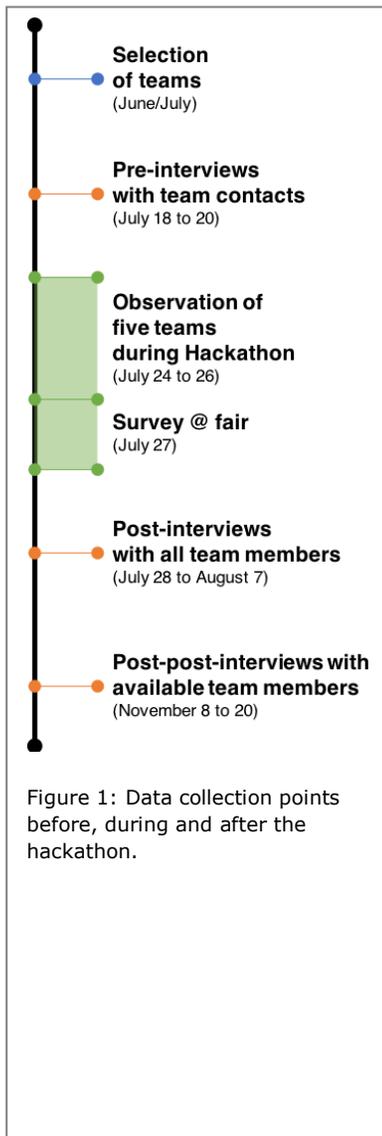
Hackathons; project sustainability; learning

ACM Classification Keywords

H.5.3. Group and Organization Interfaces:
Collaborative-supported cooperative work

Introduction

In recent years time-bounded events such as hackathons, data dives, codefests, hack-days, sprints or edit-a-thons have seen a steep increase in popularity. During such events people form –



oftentimes ad-hoc – teams and engage in intense collaboration over a short period of time. Collegiate events alone attract over 65.000 participants worldwide among more than 200 events each year [14]. But it is not only collegiate events alone. Hackathons have spread into a variety of different contexts ranging from corporations to higher education and civic engagement [15]. Hackathons come in varying forms where participants might be present face-to-face or collaborate remotely [16]; they may involve newly formed as well as existing teams working on new project ideas or well-defined agendas [8,13]; they may involve prizes while others do not [17]; they may have different goals such as creating startups, support civic open innovation strengthening interaction in specific scientific domains and teaching specific skills.

While there is a growing body of research around hackathons, existing work mainly focuses on the event itself. This work contains descriptions of events [2] and covers themes such as how hackathons teams self-organize [13], how teams and organizers deal with diverse audiences [5] and how non-software hackathons can be conducted [8].

While there is research around potential outcomes of hackathons, this work is still fragmented and scarce. Work around hackathon outcomes mainly focuses on identifying reasons for the lack of sustainability of projects [1,3,4] and on learning outcomes [9,11,12]. A general overview over potential effects of hackathon projects, project teams and participants so far is missing. Furthermore, it has to be noted that most studies are conducted in student or civic spaces while little attention has been paid to corporate hackathons. The lack of research around potential outcomes of hackathons is particular surprising in this domain

appears surprising since corporations increasingly invest in hackathons to foster internal innovation [18]. This in turn means that corporations have a vested interest in conducting hackathons that focus on creating sustained outcomes in the form of projects that can become future products. Our focus however is not on the sustainability of projects alone. Corporations also aim to provide opportunities for their employees to expand their competencies [10], their network [6] and generally create a positive and motivating work environment [7]. Hackathons can support existing approaches in these areas since they require forming teams and acquiring new skills or expanding on existing ones. We are thus taking a wider perspective on potential outcomes of hackathons by focusing on the following research questions:

- **RQ1:** What happens to projects that were developed during a corporate hackathon?
- **RQ2:** What happens to teams that participated in a corporate hackathon?
- **RQ3:** What effect does participation in a corporate hackathon have on its participants?

In order to answer these questions, we conducted a study on a large corporate hackathon. We will describe the procedure of our study in the following before reporting on preliminary findings.

Empirical study

Our study took place during Microsoft’s One Week hackathon in summer 2017. One Week is an annual global 4-day event during which employees of Microsoft engage in intense collaboration to conduct any project that they are interested in. The last day is reserved for a presentation session which is organized as a fair.

During this fair teams can present their products to the wider Microsoft public. Participation in the hackathon is voluntary but encouraged by management. In order to participate, employees had to register in a web-based tool in advance of the hackathon. The tool allowed employees to join an existing project team, propose their own project, register as a team and search for additional project members. The teams had between three and four members on average.

We focused our study on five teams that collaborated at the largest hackathon site in Redmond which hosted around 5.000 participants in two large tents. The teams were carefully selected based on the dimensions of familiarity among team members and relationship between their hackathon project and their everyday work. Two of the teams consisted of employees that work together on a daily basis while three teams had been specifically formed for the hackathon. The teams had between three and seven members.

Our data collection includes semi-structured interviews which were conducted before, directly after and four months after the hackathon with the aforementioned teams (c.f. Figure 1 for an overview of the data collection procedure). We attempted to conduct both follow-up interviews with all team members but could not reach them all. We did however interview at least two participants of every team four months after the hackathon. In addition to interviews we also observed the teams during the entire duration of the hackathon and conducted a survey at the fair.

We focus our analysis on the interviews that were conducted four months after the hackathon, since they are most directly related to our research questions.

These interviews lasted between 13 and 29 minutes each. We also include results from two survey questions which focused on intentions to continue with the project and with the team to help us understand the prevalence of individual continuation intentions. The interviews that followed immediately after the event were not formally analyzed for this paper, but they provide additional context.

Preliminary findings and outlook

Using an open coding procedure, we focused on the continuation of projects (RQ1) and teams (RQ2) as well as potential effects on individual participants (RQ3).

Projects: About 70% of the members of the five teams we studied reported an intention to continue working on the project they started during the hackathon. An analysis of the follow-up interviews revealed that indeed two out of the five projects will be continued. Our analysis however also showed that none of the original team members will be involved in the continuation of the projects they started. One of the projects will be continued by a group that was already planning to develop a similar software before the hackathon ("*X told to Y: I think these guys have built what you are trying to build*"). While the other project will be continued by a group that perceives the project as a suitable addition to their existing product ("*they have a fairly similar app*"). It appears reasonable that projects are continued by groups with a fitting product since all hackathon projects we require additional resources to reach a shippable state ("*I would say that it needs a month to make it really usable*").

This finding subsequently made us focus on identifying how those groups became aware of the project that

they will take over. We found that the connection was mainly facilitated by presentations that took place after the hackathon (*"we presented our project to multiple groups"*). Some of these presentations were a direct result of a group's participation in the fair (*"a manager came by and I showed her/him our project"*) while others were based on individual networks (*"our group leader has connections"*).

When investigating the three projects that had not been continued we found one project that will not be continued despite fitting to an existing product line. As potential reasons for the discontinuation of this project, study participants mentioned that there was *"no immediate demand"* and that *"the project will create a new business case that we are not ready for"*.

The continuation of a project in our case thus first required exposure to other groups and second a fit to existing projects as well as a suitable demand.

Teams: Similar to the aforementioned projects about 70% of our study participants stated their intention to continue working with the same people after the hackathon. However, despite those intentions only two teams continue working together which *"were actually all from the same work team"*. While this is hardly surprising given the way the company is organized we also uncovered follow-up activities of other teams. They *"met for lunch"*, *"chatted about next steps"* or even *"connected with some folks individually to tap into their skills for my current job"*. Teams thus continued based on the work situation as well as individual affordances.

Individuals: We found a large variety of different effects of hackathon participation on individuals. First,

we found that participants acquired additional technical skills (*"I learned how the 3D stuff works"*). Some of those skills were directly applicable at work (*"I use some of the skills I learned"*) while others were not (*"I cannot do AR in my current job"*). Team leaders also reported that they gained skills related to project management (*"I had the opportunity to organize something from start to finish"*). Second, participants also reported that the hackathon *"sparked an interest to develop other skills"*, instilled confidence in the ability to acquire them (*"I feel more equipped now that I have a background in those [technical] topics"*) and had a positive effect on individual's perception of their workplace (*"that Microsoft does hackathons [...] has become something important to me"*). Third, we found that participation in the hackathon had direct as well as indirect impacts on the workplace of the participants. Three of our study participants got promoted after the hackathon. Participation in the hackathon was not the only reason for their promotion, but certainly played a role as evident by the following statement: *"Success in the hackathon shows creativity and capability"*. In addition to promotions one participant also mentioned that participation in the hackathon positively affects her/his manager's perception her/him (*"participation in the hackathon is in my annual progress report [...and I receive...] positive feedback by my manager"*). We thus observed direct effects on individual skills, interests and confidence as well as effects on the workplace for individual hackathon participants.

The findings presented in this work provide insights into potential outcomes of corporate hackathons. They also point towards future research directions such as identifying antecedents of project and team continuation and ways to influence them.

Author background

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