

“INDUSTRIAL HACKATHON”: TESTING CCI CAPACITIES FOR TACKLING INDUSTRIAL CHALLENGES

Regional Test Case Documentation

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TABLE OF CONTENTS

0. Abstract	3
1. Introduction.....	3
2. Objective.....	3
3. Applied approach	3
4. Results	4
5. Goal Achievement and Lessons Learned.....	5
6. Outlook, Sustainability and Transferability	7
7. Annexes.....	7

0. Abstract

Traditional industry does so far not perceive CCI as relevant for them and the challenges they face and will face in the future. As we on the contrary are convinced of the potential that lies in the collaboration of industrial companies and CCI, we wanted to provide a low-threshold opportunity to experience this potential. We asked companies to submit challenges and organized a Creative Hackathon where teams intensively worked on these challenges for 48 hours with support of mentors.

1. Introduction

A changing environment, evolving technologies and changing customer needs, challenge traditional industries to find new approaches and solutions so as to persist as industry and enterprises in the future. Creatives on the other hand often have unconventional approaches and new ideas at hand, with which they propel innovation. However, the industrial sector is not used to cooperating with external partners for innovation. CCI, if at all, usually come into play only at a late stage e.g., for the advertisement of products.

2. Objective

Cross-sectoral cooperation needs to start somewhere. We, therefore, wanted to provide a low-threshold opportunity, a platform, that allows creatives and industrial companies to meet and to create a positive experience and memorable moments that would lead to more openness towards involving creatives in innovation processes and to encourage future cooperation.

For the participating companies, this test case should bring unconventional approaches and fresh ideas and an understanding for the potential that lies in their collaboration with creatives. Furthermore, we hoped that some of the ideas presented at the end of the hackathon would be developed further.

Hackathons are a booming format and quite known already but are usually organized around software and coding challenges. The novel character of our test case lies in the utilization of this form for creative challenges. Our aim was to present around 40-50 creatives three real challenges to choose from.

3. Applied approach

The InduCCI project enabled us to test the format of a hackathon with challenges that can be tackled with creative skills. As we have never organized a hackathon before, we did research first and contacted organizers of other hackathons, such as [Industry Meets Makers](#). We also participated in an online hackathon to gain insights into the perspective of the participants.

Following this, we decided for a hackathon with 48 hours of “hacking time” plus small side program. We looked for a location that could host enough teams and allow them to adjourn to other places for their specific teamwork, a location that had the necessary infrastructure and material/instruments possibly needed, so that we could keep material costs low.

We published a call for challenges on our website, on social media and in our e-newsletter addressed to open-minded industrial companies that are facing complex challenges, want to go public with one and have no reservations about unconventional approaches. Additional criteria were the willingness to invest time into shaping the challenge for the

target group, availability for determined time slots during the hackathon, and readiness to offer the hackers incentives or/and prizes. We had to prolong the challenge twice and invited relevant business organizations (such as [Business Upper Austria](#) with a network of more than 2.200 partner enterprises, [IV OÖ - Federation of Austrian Industries](#) with 450 member companies in Upper Austria, makerspace [Grand Garage Linz](#) with its partners from industry) to share it via their channels as well. At the end of the call, five companies had contacted us and showed interest in the hackathon, however, only three of them sent in a challenge idea via a prepared template. The third challenge came in only three weeks before the hackathon started. With these companies, we met to discuss and specify the challenges, and then published them on our website, via social media, e-newsletter and channels of relevant organizations/persons (such as relevant universities, the creative hub called [Tobacco Factory Linz](#), makerspace Grand Garage Linz) to attract hackers.

We had to work out a Covid-19 prevention concept and register the event with the authorities. Hackers could register alone or with a team and did not have to decide for one challenge in advance. Due to Covid-19 we had to restrict the number of participants to 60 and had a first come first serve policy - there were no specific requirements for the participants to fulfil to take part. The max. number of participants was not reached.

To ensure a good information flow, we set up a slack workspace and invited all involved people to it. This communication tool was used before and throughout the hackathon.

4. Results

From 22 until 24 June 2021, our Creative Hackathon finally took place at the makerspace Grand Garage Linz. Of the 57 registered hackers, only 21 showed up. After a general welcome and the challenge pitches done by the companies Liwest, KTM and Vossen, the participants formed seven teams and chose one challenge to work on. The challenges were:

- Electric Urban Mobility: user journey for the urban customer of the future
- Visionary 5G applications: where will 5G be used in the future (focus on non-urban areas)?
- Circular economy: how can the process waste in the production of terry cloth be utilized?

To get to know each other closer, we had a first joint lunch, after which each company had another time slot called “deep dive” just with its hacker teams to go into detail about the challenge and answer specific questions of the teams. Afterwards, the work in teams started and lasted for 48h hours. In the evening of the first day, the teams had to submit a final team registration, where they informed us of their team’s name, its members and the challenge they picked to work on.

To make the hackathon a success, it was important for the participants to team up and join forces, to be in a good mood to focus on ideation and creation. To achieve this, we had two mentors supporting the teams in their process, and we offered side events and team meals throughout the event. The mentors had prepared material for different stages of it - ideate, prototype, test and adapt ideas, to support the hackers not to get stuck in the ideation process but develop the idea to a solution. The teams made use of this support to different degrees. Some wanted to work alone with little input from outside the team, others were happy to receive feedback and new directions to think about from the mentors.

Towards the end, we offered an input for all hackers by Niki Skene, who briefed the teams for their solution pitches and gave individual advice on how to best present their ideas. Afterwards the teams had to submit their solutions, so that we could prepare everything for the final presentation and the companies later had something in hand.

All teams worked until the end of the hackathon and presented their solutions in front of the jury and the audience. The jury consisted of a “core” - Georg Tremetzberger as the CEO of Creative Region, Michaela Schellner, Head of the Economy Department at [Brutkasten](#) and Maria Dietrich, COO at [ATMOS](#) - and of two representatives of the respective company that rated only the solutions of “their” challenge. Like this, always five people rated a solution via a [slido.com](#) form. Each team was able to reach a score of 30 points - up to five points in each of six categories. The categories were: challenge comprehension, creativity & innovation, user experience, feasibility, presentation (solution pitch), team performance. The score of each category was summed up at the end and so the winners were determined. This ranking, however, was only important for the companies, because they handed over prize money in form of checks. The rating was not relevant to us.

The teams came up with amazing ideas. Four of the seven teams chose the circular economy challenge and presented prototypes for products. The electric urban mobility challenge was chosen only by one team that designed a business case for electric mopeds. Two teams chose the 5G challenge - one looked for ways how to “convince” people of 5G and its possibilities, the other team designed a very professional use case for 5G.

5. Goal Achievement and Lessons Learned

The aim of providing a platform for creatives and companies to get aware of the potential that lies in their cooperation was met. All three companies, even the one whose challenge was chosen only by one team, said that the hackathon was a success and that they would participate again in one. They appreciated the direct contact with young, creative people that they could hardly arrange by themselves.

The participants also enjoyed the event, which is best visible in the fact that no one dropped out before it ended. We received the feedback that one or two additional blocks with theoretical input like the preparation for the solution pitch would be helpful. The side program should be voluntary, some theoretical input, however, obligatory to make sure that all teams have equal opportunities. It is possible that the input is not necessary for some, but it is also possible that some are simply not aware of a fact and therefore forget to consider it.

Following the hackathon, one company started to work with its winning team. They are about to participate in a so-called Innovation Agent Academy together. The company with the circular economy challenge reached out to us for further contacts with creatives and we arranged several meetings for them.

Due to the Corona pandemic, we had to postpone the hackathon twice - from summer 2020 to March 2021 and then again to June 2021. The event finally took place just three weeks after cultural events and bigger meetings were allowed to happen again. Before June 2021, such events were forbidden for more than half a year and vaccination was still not offered to everyone who wanted to receive one. The final date was, therefore, not the best option, also because exams were running at the universities. We could, however, not again postpone it, because we had advertised the hackathon for weeks already, summer was just around the corner, which meant even less availability of involved people and we

feared another lockdown after the summer. We believe that all these factors contributed to the high no-show rate.

We did not want to switch to an online version as we did with another test case, because we were convinced that the personal interaction - being physically in one place, eating with each other, feeling the atmosphere of the makerspace, spontaneously talk with each other etc. would influence the outcome and the readiness to keep working until the end and not drop out of the hackathon. The Grand Garage Linz turned out to be the perfect location for such an event, because the necessary infrastructure was at the place or around it, so that the teams could comfortably work on their ideas.

It proved to be more difficult than expected to win companies for sharing challenges. As mentioned above, we spread a call for challenges. One company answered quickly with an idea and as March came closer (the second date), we started to work on their challenge brief. Another company followed after the second postponement to June 2021 and the third company came on board literally on the day before the call was closed. In between, there were companies interested in participating, but did finally not do so for internal reasons.

The companies needed a lot of support once they decided to send in a challenge draft. Much time went into shaping these drafts so that creatives were attracted by it, “outsiders” could understand it, the scope of the challenge was right for 48 hours, the expectations of the companies concerning the outcome were clarified, the engagement of the companies during the hackathon was agreed on, etc.

We have to experiment further with hackathons in order to see, whether it is better to have three very different industry challenges like we had, or to have them come from similar fields. In option one, you need to address a lot of different target groups to attract enough hackers, whereas in option two a real competition could arise (if wanted), where the companies have to convince hackers with interesting challenges and perspectives for later involvement/cooperation. A big learning is that hackers follow challenges. This means that the challenges should be elaborated at an early stage to promote the event. It makes sense to inform universities about the upcoming hackathon.

Anyhow, motivating enough people to participate as hackers is crucial. We later heard of some that they had not been sure if they brought the “right” kind of background to participate. This insecurity might stem from the connotation of hackathons as coding events and should be considered in promoting it.

A hackathon requires courage and openness from both sides: the companies share insights and challenges that they really face, while the hackers especially in the end, when pitching their results, put themselves out with ideas and due to the time limit of course imperfect solutions. One might therefore consider organizing a hackathon on “neutral ground”, like we did, so that both sides step out of their comfort zone. On the other hand, and depending a lot on what outcome is expected, arranging a hackathon at the company site would allow much deeper insights for the hackers.

Two companies stayed in the background, while one was very present at the event. Depending, again, on what outcome the companies expect to receive, both options are legitimate. The more space a company leaves its hackers, the more it “risks” of receiving “detached” solutions. Being very active and present during the hackathon on the other hand bears the risk of influencing the hackers in their ideation process and receiving

solutions similar to what is already thought of/worked on in the company. These aspects should be discussed with the companies beforehand.

6. Outlook, Sustainability and Transferability

From the beginning of organizing this hackathon, we were aware of its great potential. We knew that if we delivered a successful hackathon, the companies who sent their challenges would possibly start seeing CCI as interesting and serious cooperation partners and the creatives could gain direct, unconventional access to these companies and show what they have to offer. If this first hackathon was successful, it would then only be the start of this kind of event organized by us.

We learnt a lot during the hackathon and are now testing two other formats of connecting CCI and industrial companies. After these have been implemented, we will draw our conclusions and see which one or which combination works best for organizing another event in 2022.

Apart from this, we will continue to bring industrial challenges and creative minds together. We really believe in their cooperation and considered this in our new magazine, the Creative Review, where we seek projects of CCI with industry to show their results and inspire others to follow.

Looking at the transferability to other regions, we see no hindrance for organizing such an event elsewhere. A hackathon is quite a complex event with lots of elements to bear in mind. The impact of the format grows with the experience of its organizers. Certain factors might be individual from region to region (e.g. how to reach target groups, how to address companies) and so the main advice we can give is to try, evaluate, learn and try again.

7. Annexes

Call for challenges (in German):

<https://creativeregion.org/events/call-for-challenges/>

Template for challenge brief to be sent by interested companies (in German):

https://creativeregion.org/vorlage-challenge-briefing-_creative-hackathon-2021/

Promotion of the event/challenges (in German):

<https://creativeregion.org/events/creative-hackathon/>

<https://creativeregion.org/2021/05/hackathon-challenge-2-5g-anwendungen/>

<https://creativeregion.org/2021/06/hackathon-challenge-3-e-mobility/>

<https://creativeregion.org/2021/04/hackathon-challenge-1-frottier/>

Hackathon program (partly in German):

https://creativeregion.org/wp-content/uploads/2021/06/hackaton_timetable.jpg

Final team registration on day 1 (in German):

<https://docs.google.com/forms/d/e/1FAIpQLSeMKC3jCpM5xohyL-ySwDPUA3zTQTljPl4V7zgbaT4NM2N3Nw/viewform>

Submission of the solutions on day 3 (in German):

https://docs.google.com/forms/d/e/1FAIpQLSf_iWKJTdMM_0lA7_1JqD1V9YfIS_lz_A7PAMTaThXauXg-AQ/viewform?usp=sf_link

Coverage of the hackathon (in German):

<https://creativeregion.org/2021/06/win-win-situation-fur-creatives-und-unternehmen/>