Hackathons
Events
Learnings
Plans!

Hans Hagenes Bøe
Prototyping Troll @ IdeaSquare, CERN
# Activities in total @ IdeaSquare

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
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<tbody>
<tr>
<td>2019</td>
<td>127</td>
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<tr>
<td>2020 (planned)</td>
<td>87</td>
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Activity duration

<table>
<thead>
<tr>
<th>Duration</th>
<th>2019</th>
<th>2020</th>
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<tbody>
<tr>
<td>1-2 Days</td>
<td>68%</td>
<td>56%</td>
</tr>
<tr>
<td>3-4 days</td>
<td>16%</td>
<td>16%</td>
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<tr>
<td>5+ days</td>
<td>16%</td>
<td>28%</td>
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Activity types

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<tr>
<th></th>
<th>2019</th>
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</thead>
<tbody>
<tr>
<td>Hackathons</td>
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<td>10%</td>
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<tr>
<td>Events</td>
<td>68%</td>
<td>55%</td>
</tr>
<tr>
<td>Student Courses</td>
<td>20%</td>
<td>35%</td>
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<td>9</td>
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<tr>
<td>Events</td>
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<tr>
<td>Student Courses</td>
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Hackathons @ IdeaSquare

Ideasquare is helping the hackathon organizers, but is not responsible for the event. This means that the hackathons have a lot of variety in the topics and themes. This also increases serendipity. CERN internal hackathons are usually project related hackathons (for example LCHb, and CMS Patatrack Hackathon). Some of the events organized at IdeaSquare could have been named Hackathons but are called “Workshop” instead.
Events held at IdeaSquare differ greatly and are everything from few hours to 3 days long. Topics and themes vary from programming to building, and from cooking to finding new solutions to everyday problems. Most of the topics are related to sharing experiences.

Recurring CERN events in 2019:
- Entrepreneurship Meet-Ups (EMUs) – this format, organized by KT, was put on hold in 2019 and is being transformed
- Idea Circle Dinner Discussions (ICDDs) – bi-weekly meetings focusing on various science communication topics. Organized by volunteers (Sameed & Liyana) who will continue with a similar format under a different name (“Scinaptics”) in 2020
- LabVIEW workshops – a series of 6 workshops organized in October-November by Patryk Jankowski (EN-SMM-MTA) and Adriaan Rijllart. No info yet on whether a new edition will be organized in 2020

IdeaSquare hands-on workshops in 2019

European Physical Society’s Technology and Innovation Group (EPS TIG) FPGA Workshop: Hands on Event on FPGA where IdeaSquare held a hands-on workshop on the use of Raspberry Pi.

Good feedback on the event, and something that should and will be repeated.

Only Hands-on Event co-organized by IdeaSquare Staff

More info: https://indico.cern.ch/event/788273/
The workshops at IdeaSquare have been given a facelift the last 6 months in order to make them more inviting and intuitive to use. Moreover, the IdeaSquare’s storage spaces have been cleaned and organized.
Machine Shop
3D Printer Studio
Learnings

The workshops are getting more and more use and is something that should be available to the CERN community. This may foster serendipity when people bump into each other or help each other build. Data on every user is collected so that they can be called back to help IdeaSquare. This is part of the agreement in order to use our spaces.
Plans for 2020 and onwards

IdeaSquare should be a prototyping space for ATTRACT projects to aid their development.

IdeaSquare should be the space where Science Gateway designs and makes their public interactive exhibitions. Make the physical building blocks for the hands-on lab at Science gateway.
Plans for 2020 and onwards

Host more hands-on events.

In 2018 a hands-on event was held in the use of 3D printers. This is something that can be repeated. [https://indico.cern.ch/event/761350/](https://indico.cern.ch/event/761350/)

Repeat FPGA workshop with Raspberry Pi’s as educational platform.
IdeaSquare has helped internal CERN people to make roughly 108 3D printed parts in 2019, where 71 had a design that could easily have been made with a laser cutter. This would drastically increase prototyping speed and output from the labs.

Designs that can be easily converted to laser cuttable patterns are boxes, mounting plates, simple geometries.
Investment Proposal : Laser Cutter

Looking to i.e. the Swiss FABLAB network we can see that over half of the labs has a laser available. In the Norwegian FABLAB network all labs (5) have a laser cutter and in the Finnish FABLAB network all labs (7) have a laser cutter.

Similar spaces to IdeaSquare such as SDG lab also have a laser cutter with testimonials such as:

“Students came to look at the 3D printer, but stayed to use the Laser cutter”
or
“3D printing is too slow, let’s laser cut it”
Investment Proposal: Laser Cutter

What do we do with this investment?

1. Bi-weekly Hands-On 2-hour training sessions to educate people in the use of the Laser Cutter that would, ideally, be included in the learning hub CERN catalogue.
2. Approach Science Gateway as a facility where they can prototype and produce exhibitions.
3. Function as an ATTRACT makerspace to collide the different projects to foster serendipity.
Questions? Comments?

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#Ideasquare #ThinkDoCollaborate #CERN