dribdat: co-creation for civic hackers



dribdat is an open source digital toolbox

for in-person and virtual collaboration. Collect bootstraps, resources and challenges, build teams and promote fair conditions, all in an accessible web-based interface familiar to hackathon participants. In one place, we can collect progress logs, link together all relevant designs, documentation or code, and connect to many other aspects of the experience of solving civic problems.

Using dribdat, we develop and showcase projects at time-bound collaborative events, usually at hackathons – an open contribution format for tinkering and innovation at the grassroots. With a strict deadline and careful preparation, such events are used to build a community of practice by lowering the barriers to entry for contributing creatively to NGOs, government and startups.

Emerging from the world of civic tech hacking – the use of open data to make governments more accountable – and related digital civil society initiatives, dribdat began on the premise that participants are using open source code and open hardware to create projects with real-world potential: and that, in doing so, we participate in an intensive data sharing experience. In this sense, hackathons can be thought of as focus groups where skill transfer and knowledge sharing is accelerated by open access. We made dribdat so that participant contributions become more sustainable and verifiable when their output gets published using modern web standards.

Digital innovation events are more than just a trendy way to get recruited into an IT job: they are venues for energetic collaboration, civic engagement, and technical experiments in an open, socialized setting. With the experience of organizing many such meetings in other tools, we use dribdat today to streamline efforts and encode best practices from the whole community.

The name dribdat is inspired by "dribbling" in basketball, with a hat tip to <u>Dribbble</u>, an online community for design, and the peer-to-peer <u>Dat protocol</u> for distributed open publication. In the following pages we dive deeper into what exactly makes dribdat tick.



dribdat is for splendid open source collaboration.

Designed with the goal of helping organizers take better care of their teams, dribdat features timekeeping and progress tracking dashboards to streamline information channels, making it easier to sustain the energy in the room or online event, to keep focus on driving ideas forward.

The open source code of dribdat is accessible for free (under the MIT license), with instructions for self-hosting the platform anywhere that Python runs - which is, basically, anywhere. We are making it easier to deploy on popular platforms using package management and containers. With a running application, you can set up your first hackathon. Future events can run on the same site.



On the front page you can see the featured upcoming event, as well as any future and past events. A short description is followed by a link to the event home page, as well as a second-by-second countdown of time remaining until the start or the finish line (once started). *Projects*, *Challenges* and *Resources* are shown in the event screen. Here you can learn about topics, find datasets, get schedules or directions, and any other vital information that the organizers have provided.

Before the event begins it is possible to *Share a challenge*, which can be organized by *Category*. People who are interested in a challenge can approach the initiator in person or via contact channels to express their support. Once the event has started, you can form a team by clicking the *Join* button, taking over a challenge and boosting it, or selecting *Start project* to begin afresh when open challenges are permitted. Dribdat's dashboard helps to keep track of time and your teams.



Opendata.ch / Open Farming Hackdays 2021



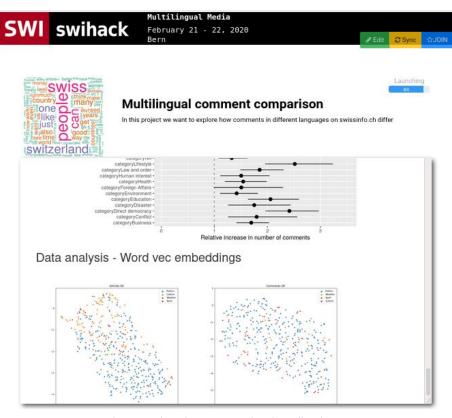
dribdat is a connection to your hackathon results.

We believe in the power of the Open Web: in dribdat-powered events, the teams are truly free to work as they please. Keeping up with every twist and turn in the online collaboration landscape, dribdat connects a support community sharing the best brainstorming, prototyping and code sharing tools, helping to ensure we can plug in to the most preferred platforms.

Typically, hackathons need some kind of publishing workflow that collects data from the team in a series of forms. We have often encountered this to be a laborious process that steals valuable time from teams and organizers while introducing bias and latency. Project aggregation is facilitated with the ability to start a project on the basis of existing data from GitHub or another site.

No copypasta needed: projects which get published in a compatible source repository - such as <u>GitHub</u>, <u>GitLab</u>, <u>Bitbucket</u> - or supported wikis, such as <u>Etherpad</u>, <u>DokuWiki</u>, <u>Google Docs</u>, ... - can be synchronized so that documentation can take place, and *continue to happen in a distributed way*, using standard formats such as the *README* files preferred in open source.

Users may also use short Twitter-like posts with <u>Markdown</u> formatting to document their project, and we are working on simpler, more direct ways to capture insight into participant activity – such as <u>dridbot</u>, a Slack integration that allows updating projects directly within a team channel.



Swiss Broadcasting Corporation / #swihack 2020



dribdat reduces friction for more effective collaboration.

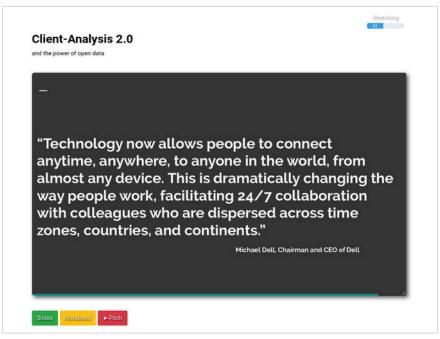
Project presentations and demos are made easily and efficiently available for evaluation when each team can update their own progress level, generating an automatic metric for profile completeness and activity levels, and giving each project a meaningful progress score.

Team members can subscribe to the project once you have started it, and immediately gain access to improving the content. Their public profile will then be linked to it, and platform activities (messages, progress reports, code commits) can be tracked along side their team-members. We are working to build this into a powerful tool for tracking performance and recognizing contribution, and support embedding real-time collaborative text editing, such as CodiMD and Jupyter notebooks directly in the project, to minimize the friction of on-boarding participants.

We believe that dribdat has potential to be used in a variety of formats – such as *Agile/Scrum sprints*, *Design Thinking* workshops, or in *Rapid Prototyping* activities: anywhere that time is of the essence, and a scrappy, "can-do" attitude reflective of the hacker ethic is encouraged.

Nevertheless, our current design focus is on enabling civic hacking and open data science.

Our data exports, API and dashboards allow organizers to at a glance see how all their teams rank both during and after the event, extracting real-time statistics for insight on the pulse of the hackathon, pointing to improvements and providing compelling content. Fundamental to all of this is the experience of the hackathon participant, their ability to represent their team, be aware of what's happening in the wider event, document their efforts, and present the results.



Opendata.ch / Energy Data Hackdays 2020



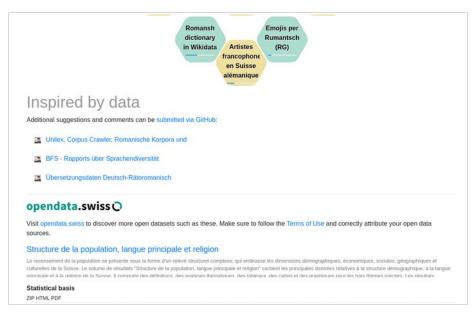
dribdat is about interoperability.

This is not just a metaphor: this platform is a digital glue between a plethora of tools and processes that are being deployed in the civic tech community, enabling quick and painless deployment and support of hackathons. Tools like dribdat are important instruments in facilitating concentrated social change-making that is digitally sustainable.

Several innovations on this level are baked into the core of dribdat: support for Frictionless Data, the "open-source toolkit that brings simplicity and gracefulness to the data experience" (frictionlessdata.io) which we use to accelerate the process of unpacking and exploring open information sources in the crucial early research & experimentation phases of a hackathon.

We have created and promoted an open schema for publishing hackathon results: *hackathon.json*, a simple, readable text file at the root of any dribdat instance. Along with Data Package export, and compliance for <u>Schema.org</u> and <u>Open Graph</u> standards, we strive to ensure that hackathon publications are picked up by search crawlers and easily federated.

For event organizers, our backend allows quick browsing and export of project data: in document form for evaluation by jury, or in CSV or JSON formats for external workflow. Spammy or invalid entries can be easily hidden or cleaned up. With OAuth 2 support, user profile administration can go through an external, enterprise-scale provider such as GitHub or Slack. We can generally support integration with any kind of data platform or collaboration tool through embedding or APIs. We can work with event management software, even other hackathon platforms, if you need to mix and match features: dribdat is intended to be part of an ecosystem of compatible Internet tools.



Forum Helveticum / Plurilingualism Hackathon 2018



dribdat is being excellent to each other.

This project was built in the tradition of creative and ethical hacking. We combined best practices in using wikis, issue tracking, and content management systems, and created the basic framework of the application at a hackathon in 2015. Since then, we have battle-tested it at many events with thousands of people. And the people have spoken to us about what they want from the experience.

In the first years of service, dribdat has supported dozens of events around Switzerland, becoming the official hackathon platform of Opendata.ch - the Swiss chapter Open Knowledge - and its working groups, the Open Network Infrastructure Association - whose members are core technical contributors to dribdat, DINAcon - the largest annual Swiss conference for digital sustainability, DayOne - an association organizing patient-centric Health Hacks, and other valued pioneers.



Open Network Infrastructure Association / MakeZurich 2019

One of the most important areas of feedback from our participants has been to understand what information should be made as visible as possible, to benefit our users despite the time pressure: these are a clear and readable Code of Conduct, Terms of Participation, and starter guides. Dribdat comes with support for the Hack Code of Conduct and Creative Commons licenses out of the box. We have built in a 7-step process inspired by the School of Data Pipeline, that we recommend for attractive and efficient data expeditions and hackathons. Around these it is possible to set up a Resource area with recommended tools, datasets, or brainstorming instruments, and all the content can be customized to fit other patterns and methods.

Independently developed at the grassroots, behind the scenes of this project are compacted qualities of what we believe entails good collaboration: a supportive atmosphere that proliferates diversity and tolerance, clearly stated goals, community support and progressive guidelines. Inclusive co-creation with better design and algorithms is an area of active development, currently the focus of research collaborations, upcoming publications, and development proposals.

All attendees, sponsors, partners, volunteers and staff at our hackathon are required to agree with the Hack Code of Conduct. Organisers will enforce this code throughout the event. We expect cooperation from all participants to ensure a safe environment for everybody. For more details on how the event is run, see the Guidelines on our wiki.

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dribdat is not all the things.

This is a niche product with unique features and clear limitations. While you will find a variety of enhancements being worked on in our Issue Tracker, here are a couple of major areas where we are lagging. Visit awesome-hackathons for similar products that you may wish to consider for your needs, and the dribdat Open Collective to discover a number of ways to support our project.

Dribdat has a minimal built-in **user profile**, allowing the use of an anonymous username and disposable e-mail address to log in. Collecting personally identifiable information is not the goal of the project: facilitating recognition in a privacy-protecting way is. We have OAuth 2 support and suggest using tools like Slack or GitHub for managing user authentication, or asking users to create profiles in the community platform that you integrate with dribdat - like the open source Discourse forum software. You could also recommend "CV builder" platforms like LinkedIn or Stack Overflow to conveniently promote everyone's hackathon experiences. Nevertheless, the ability to display people's accomplishments in an interesting way remains an area of improvement.

Dribdat does not feature a **form builder**. We have left the project structure open ended, allowing organizers and teams to define how people can engage as contributors or testers. This is certainly part of the challenge of succeeding with promoting a hackathon idea, but also a major area of improvement to assist beginners and encourage active participation through questionnaires and templates. While it is possible to include this in the "Getting Started" guide shown to teams, we are working on designs for enhancing this, as we see many organizers set up separate online forms for registration, collecting feedback, or asking specific questions to the teams.

{ hacknight challenges }



Find out about the Fairphone Open project, deploy and compile a local build of the operating system into an Android Emulator - or if you have an actual Fairphone (or a cooperative friend), try to install a custom build on the device



Use the Build instructions to get the source and put together your own local build of Fairphone OS. See if you can put the DINAcon logo into the lock screen, or make some other modification - use your imagination!



Visit the Fairphone Bugtracker to see the most actively discussed and developed issues, and contribute to the conversation - make a bug patch or address a feature request at the HACKnight!

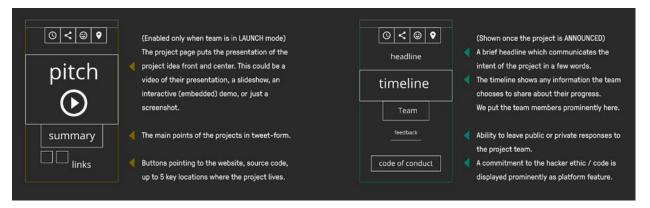
Tip: at some hackathons, like the <u>hacknight challenge</u> pictured here, we follow an easy-moderate-advanced structure ("ski pistes") in their task descriptions. Other events set up a template which forces project teams to think about this issue.

dribdat is not all the things. (continued)

While featuring a robust and mobile-ready user interface, the overall **User Experience** is rather underwhelming. Our project has not yet the benefit of a dedicated effort in UX engineering, and at the moment caters perhaps more to the needs of organizers who wish to facilitate a smooth event, than to the more diverse needs of hackathon participants. If it is to be desired that an application is more in the foreground and engaged with by users, then it needs to be an enjoyable and mutually beneficial process. We have started the <u>backboard</u> project in response to requests for a smoother user interface for participants, based on a next-generation client/server <u>architecture</u> developed by a student group, and aim to make progress on this soon.

In running hackathons, we are used to relying on a bunch of **complementary tools**. The organizing teams often use spreadsheets and calendars to make drafts and detailed plans. Clearly, the goal should not be to replace all of this with a new "15th competing standard", and integration with wikis and docs is already at the heart of the offering. The issue is focusing on the core needs and fitting dribdat correctly as a part of the workflow. Charting this and making sense of priorities is an effort started with several organizations to try to nail down a product strategy for dribdat.

At this time, **commercial support** for dribdat is an issue. The code base has developed organically using crowdsourced requirements. So far there is no broadly available Platform as a Service or a service provider running instances on demand. We believe there is a market for this and are happy to talk to any IT company who would be willing to put some thought into this. We are also connected to newer attempts to build a scalable operating system for hackathons, such as through <u>VersusVirus</u>. While setting up a small dribdat instance is easy and should be enough for a few teams to getting started, the organizers of large events typically rely on multiple content and communication platforms. Look for vendors who have experience with Python and Bootstrap, and get advice on how best to plug dribdat into your infrastructure and software architecture.



Tip: visit the dribdat <u>design repository</u> to get supplementary documentation and wireframes.





In a Nutshell, dribdat...

- ... has had 1180 commits made by 9 contributors representing 8596 lines of code
- ... is mostly written in Python with a low number of source code comments
- ... has <u>a well established</u>, <u>mature codebase</u> maintained by <u>a small development team</u>
 with <u>increasing Y-O-Y commits</u>
- ... took an estimated <u>6 years of effort</u> (COCOMO model) starting with its <u>first commit in September, 2015</u> ending with its <u>most recent commit 1 days</u> ago

(openhub.net/p/dribdat)

Summary

A project rooted in open data standards and emerging technologies for open networks, dribdat can run as a cloud service, as an on-premises self-hosted solution, or even on a dedicated hardware device for ease of deployment. Our maintainers are dedicated to running open source hackathons, involved in standardization and data integration efforts. Alternative versions and new designs are being promoted through an open code organization. It is possible to support the work at any time through our transparently funded OpenCollective project.

The easiest way to try dribdat is to sign up for an upcoming event, and to use our platforms as participant. You can visit the home page to get links to example deployments, instructions on how to set up your own server and start your own events. If you need help or advice with any of this, or would like to contribute to the project in some way, please get in touch via dribdat@datalets.ch or through any of these links below.

Thank you for reading! Your feedback is very welcome: the latest version of this document can be found at github.com/dribdat/design & discussion threads are open in various community channels.

Homepage: <u>dribdat.cc</u> Sources: <u>github.com/dribdat</u>

Funding: opencollective.com/dribdat Tracker: github.com/dribdat/dribdat/issues

Blog: opencollective.com/dribdat/updates Twitter: @dribdat

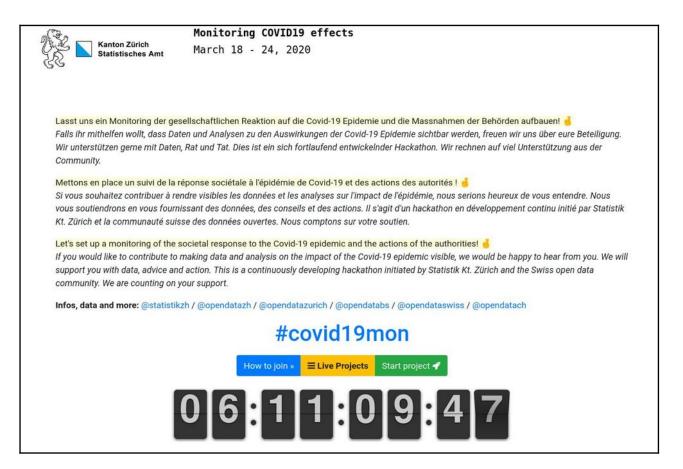


2015 - 2021

On the following pages are reference deployments with background details.



p. 10



The open data community at the front-lines of a digital response to the COVID-19 pandemic.

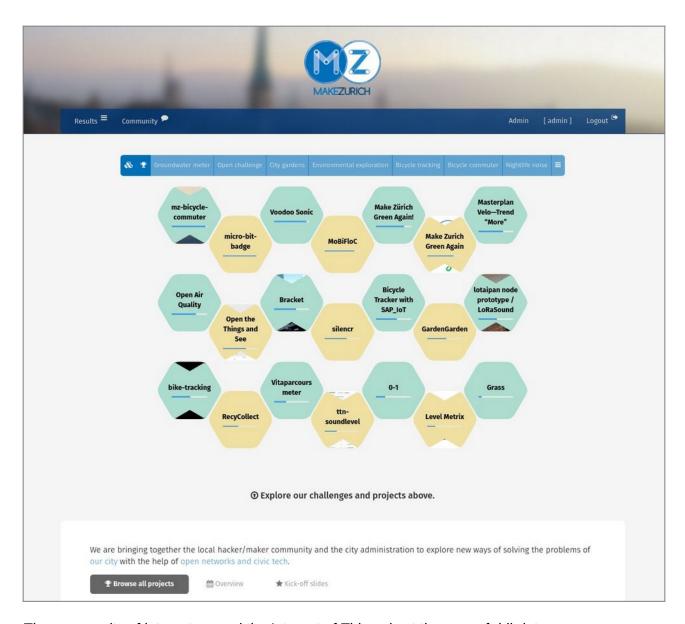
#covid19mon

User: Canton of Zürich

Application: https://db.schoolofdata.ch/event/7

Discussion: https://forum.opendata.ch/t/18-3-1-year-of-covid19mon/757

Integrations: Mattermost, GitHub



The community of interest around the Internet of Things is at the core of dribdat.

MakeZurich

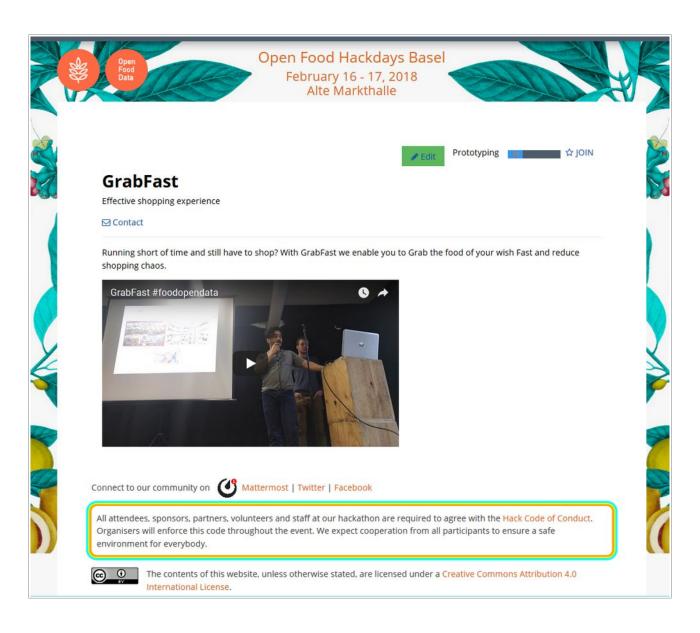
User: Open Network Infrastructure Association

Application: http://now.makezurich.ch/

Discussion: https://forum.schoolofdata.ch/t/22-30-6-makezurich-2018

Integrations: Slack, GitHub, The Things Network





From 2016, dribdat became the official platform of Opendata.ch hackathons around Switzerland.

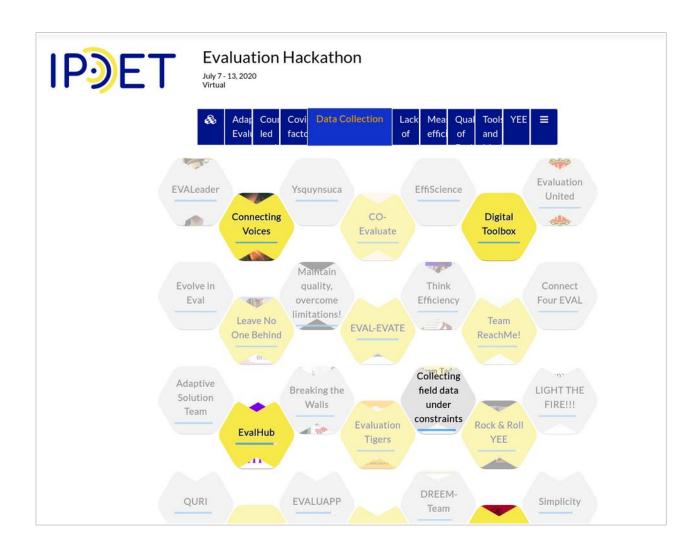
Open Data Hackdays

User: Opendata.ch - Swiss Chapter of Open Knowledge

Application: http://hack.opendata.ch/

Discussion: https://blog.datalets.ch/039/

Integrations: Datacentral, CKAN, Discourse, GitHub, Slack



Evaluation Hackathon

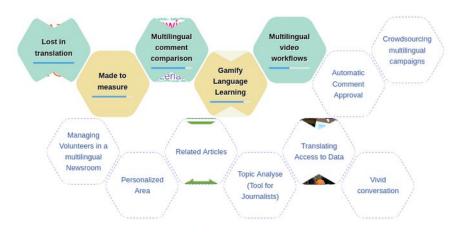
User: International Program for Development Evaluation Training

Application: https://evalhack.org/

Discussion: https://opencollective.com/dribdat/updates/a-season-of-hackathons

Integrations: Slack, Disqus, YouTube





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On Feb. 21 and 22, Switzerland's first Multilingual Media Hackathon took place in Bern at the newsroom of SWI swissinfo.ch, the international service of the Swiss public broadcaster SRG-SSR. **Many thanks to all involved!** There is documentation here, live streamed presentations (YouTube), and commentary on social media (Twitter) to explore. For more details, visit our website.

Multilingual Media Hackathon

User: Swissinfo

Application: https://db.schoolofdata.ch/project/58

Discussion: https://blog.datalets.ch/065/

Integrations: CodiMD, GitHub, YouTube





Climathon Zurich

User: City of Zürich

Application: http://hack.opendata.ch/event/4

Discussion: https://blog.datalets.ch/023/

Integrations: Slack, Hubot (sodabot), GitHub



Image courtesy of Impact Hub Zürich

Dribdat's first release, designed in cooperation with Swisscom

Internet of Things Hackathon

User: IoT Zürich Community

Application: https://datalets.ch/dribdat/iot-2015/

Discussion: http://blog.utou.ch/2015/an-internet-of-open-things-to-tell-stories/

Integrations: Slack, GitHub, Twitter, Instagram, Heroku, custom hardware

