Models to engage innovators

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Hackathon

A hackathon is a multi-disciplinary event in which technology-oriented participants engage in collaborative problem-solving and prototyping over a short, intensive (usually up to 48 hours) period of time.

PROS

- Gather a more diverse set of preliminary solutions from a broader cross section of individuals, from technologists to subject matter experts, and across a range of organizations from established companies and nonprofits to early-stage startups and entrepreneurs

- Generate preliminary solutions in a fraction of the time that it would normally take to solely develop or in partnering with a single organization

- Raise awareness of an issue area and build foundation of a community around articulated project, flagging to stakeholders that you're taking a collaborative approach and open to partnerships for work moving forward

CONS

- Solutions developed will be in preliminary and prototype stages, and without incentives for continued efforts, there is no assurance that teams will carry forward projects after hackathon

- Need linkages with technology community and networks and outreach via partners; the success of a hackathon depends on the expertise and energy of the participants in the room

- Can't be too prescriptive of desired end solution; hackathons are expected to be open-ended to a degree and highly collaborative environments that produce a range of solutions

Online Tool
DevPost Hackathon Platform

Hackathon example: FCA Tech Sprint*

* The FCA referred to the event as a tech sprint rather than a hackathon to refrain from promoting the notion of "hacking."

- In November 2016, the Financial Conduct Authority (FCA) held a two-day hackathon focused on "unlocking regulatory reporting"
- Around 100 developers and 30 organizations participated including banks, startups, regulators, non-profits, consulting firms, and software development organizations, among others
- Participants worked in teams to develop potential solutions to improve firms' understanding of regulatory reporting requirements and realize efficiency gains in the preparation and transmission of regulatory data
- One of the culminating efforts converted the FCA's "Handbook" of regulatory rules into machine-readable text, and used this structured information to create a chatbot that provided automated advice and personalized filtering that uncovered relevant rules in the Handbook that would apply to a particular type of firm inquiring
- More information can be found here

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Bootcamp

A bootcamp is a structured workshop-style event focused on bringing together technology players (and broader community) and demoing solutions that usually lasts between three to five days.

PROS

- Raise awareness of project efforts and build foundational community around articulated agenda that sets stage for an open and collaborative engagement moving forward

- Provide opportunities for engagement with multiple types of stakeholder ranging from collaborations with technologically-oriented participants as well as broader project planning with strategy-setting partners

- Gather input and and buy-in from participants for next steps grounded in sector best practices and collaborative goals

- Need to have a clear run of show to usher along activities and sessions over the course of multiple days; logistics for week long events take substantial time in advance to organize for full participation

- No guarantee that participants will continue to stay engaged after bootcamp without incentives and roadmap for engagement

- Can be difficult to balance sessions between open and highly collaborative agenda and closed-door strategy sessions

CONS

Online Tool
100 Open Innovation Toolkit

Bootcamp example: Monetary Authority of Singapore's Fintech Festival

- In 2016, the Monetary Authority of Singapore organized with the Association of Banks in Singapore a fintech festival that ran parallel to a bootcamp
- The event connected the global FinTech community around three main issues areas: RegTech, FinTech and Tech Risk
- The convening was attended by government agencies, startups, financial institutions, ecosystem partners and investors, and the engagement focused on the following sessions (more information can be found here):

Hackcelerator Demo Day	Regtech Forum	Fintech & Tech Risk Conferences	Fintech Awards	Innovation Lab Crawl
The Hackcelerator Demo Day showcased fintech solutions at the culmination of a 10-week virtual program that focused on developing working prototypes around select problem statements including RegTech. (Info here)	The RegTech Forum looked at opportunities and challenges in progressing RegTech including promising examples of new technologies, the role of the public sector, and the compliance areas with the greatest need for advancement. (Agenda here)	The fintech and tech risk conferences brought together the ecosystem on the following topics: cyber security, blockchain, online fraud monitoring, and cloud adoption, among other areas.	The FinTech Awards highlighted solutions chosen by private and public sector judges as innovative approaches in select focus areas; winners included startups, financial institutions, and technology companies.	Innovation labs exhibited their fintech solutions including Visa's Innovation Center, National Cybersecurity R&D Lab, Google, and ANZ Innovation Studio, among others.

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Sprint

A sprint is methodological, goal-driven engagement with a team or solution focused on driving forward a particular element of development (i.e. design sprint, data sprint, or code sprint) usually in under a week (numerous sprints can be repeated in a single engagement over a longer period of time)

PROS

- Progress development of a solution quickly in a framework focused on prioritizing user value and breaking down assumptions

- Familiarize project team with agile-development methodologies for continued iterative development and user testing

- Targeted engagement that provides a deep dive into team's capacity as well as an examination of solutions' "product market fit"

CONS

- Limited to and by pre-identified team(s) or solutions; need to conduct adequate due diligence to ensure that those involved are the right fit for the engagement

- Requires an engaged sprint leader that has committed time to drive forward the sprint methodology in its entirety and has the capacity to keep the team(s) on track with agenda and actions items

- Need to prioritize stakeholders involved; sprints can become unwieldy as they grow in size and scope

Online resources
Google Ventures: Design Sprint Guide
18F: How To Run Your Own Sprint

Sprint Example: 18F's Agile Design Sprint

- 18F is a specialized team within the U.S federal government focused on building digital solutions and streamlining technology projects with government agencies
- In an engagement with the Department of Labor, 18F utilized a sprint methodology to meet the following objectives: 1) Prove that the agency could produce a user-centered, technically feasible solution in days, not months; 2) Provide a model for human-centered design and agile development practices; and 3) Produce a concrete minimum viable product that the team could build on moving forward
- The sprint utilized the following approach (more information can be found here):

1. Kick-off & prioritization
An initial kick-off phase to align the group around the problem and get agreement on plan moving forward. This phase focused on identifying users the would act as a guide, listing goals and non-goals of the project, brainstorming ideas for initial features and prioritizing tasks based on user value and feasibility.

2. Start to build
This phase focused the development team (designers, developers, product owners and primary users) on creating a minimal viable product. This session utilized a project board to track and organize the completion of features and user stories to prioritize their development.

3. Design & development
This phase focused on quickly designing and iterating on product mockups that allowed the team to see problems and opportunities before development. The team then utilized open source, publicly available tools to streamline the product's creation.

4. Get feedback & repeat
Gathering feedback quickly from users through the design and development and into this final phase was a priority of the sprint. This allowed the team to create a working prototype with a clear user interface and actionable features that the user valued.

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Data dive

Data dive (also sometimes referred to as a data jam) is when a selected organization works alongside teams of data scientists, developers, and designers to analyze, visualize, and mashup data to gain initial insights into their programs and build preliminary prototypes to enhance their services.

PROS

- Take advantage and see the potential of a range of approaches including data visualizations, data analysis, data wrangling, and data management, among others

- Foster data prototypes and initial insights in a fraction of the time and costs that it would normally take to hire an internal data science team or procure a specialized data analytics firm

- Raise awareness of a data set or problem and build foundation of a community around issue area(s), flagging to stakeholders continued collaborative approach for project's next steps

CONS

- Requires capacity to fully anonymize and desensitize data if internal dataset(s) are being opened up to participants to ensure that data privacy and data protection standards are met

- Need linkages with networks of data practitioners and outreach with established data community partners to ensure the level of expertise of participants

- No assurance that teams will carry forward projects beyond prototypes and initial phases completed during data dive; need to have incentives and build commitment structure for continued effort
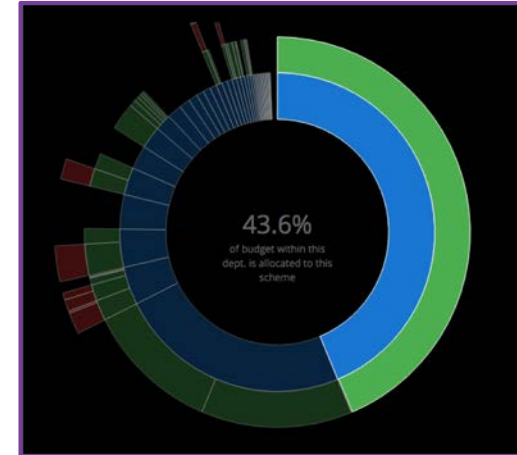
Online resources
A Guide To Data Innovation (UN Global Pulse)

Data dive example: DataKind diving into Indian government data

- Datakind, a community of data scientists, held a weekend-long data dive to help four civic organizations in India better utilize, build on and analyze a range of datasets, from public complaints to judicial court data, for project areas identified by the participating institutions
- All teams worked to first break down the data projects into tasks and problem areas, then created tangible working solutions, and finally, established a roadmap for long-term solutions
- The data dive focused on the following four areas with the aligning organizations (more information can be found here)

One of the data visualization created

Data Visualization
The data dive worked with Centre for Budget and Governance Accountability to extract budget data from a range of sources, convert the data into structured and analyzable information, and finally visualized the ten years of this state budget data and allocations.

Machine Learning
The engagement built a recommendation engine based on Rang De's user and web analytics for the organization to better allocate credit among its borrowers.

Data Analysis
The engagement leveraged the last four years of data from a municipal public complaints portal to help the eGovernments Foundation better understand the types and trends of complaints being received, and then utilize machine learning to generate alerts for better urban governance.

Data Maintenance
The data dive supported Daksh efforts and organized the legal data across several courts in India to better understand and depict the current state of the judiciary system.

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Datapalooza

A datapalooza convenes public and private sector partners in workshop-based event to showcase data solutions, and sets the stage for plans to mobilize efforts around a specific data project or database(s).

PROS

- Get up to speed on current best practices and potential data solutions from a range of innovators

- Raise awareness and build a community around a dataset or data project and set the stage for continuing a targeted engagement

- Provides opportunities for engagement with multiple types of stakeholder ranging from data scientists to key partners

CONS

- Need linkages with and outreach channels to data solution partners and innovators to ensure that valued solutions are created

- Often a dataset is opened to participants to catalyze action and solutions, which requires capacity to ensure that data privacy and data protection standards are met (or that participants are vetted to comply with data policies)

- No guarantee that teams will take forward projects after datapalooza

Online resources
Datapalooza How-To Guide (Socrata)

Datapalooza Example: U.S. Department of Health and Human Services' Datapalooza

- The U.S. Department of Health & Human Services (HHS) hosted its first datapalooza in 2010, and has continued to organize datapaloozas annually
- The event brought together technology innovators and sector experts around a HHS dataset and asked: "If you had this data, what would you do with it?"
- The participants brainstormed different applications and services in a "data jam," and then were challenged to put their ideas into action and reconvene in 90 days to showcase their solutions
- These innovations would need to hold up against two criteria: (1) provide concrete value, and (2) have a sustainable model for development
- The first datapalooza culminated in 20 solutions or upgraded services that built upon the open data, and since then, the participating community has continued to grow
- More information can be found here

"The Datapalooza had two important effects. One, it inspired entrepreneurs and innovators to get involved. Two, it gave us ammunition to liberate more data. Some folks within the government were adopting a "wait and see" attitude about data liberation. They weren't ideologically opposed—it's just that they said, "We've got a lot to do, so why should we invest in this?" We invited them to the Datapalooza, and when they saw that in 90 days these amazing innovators had taken open data and turned it into fully functional new products and services to advance their mission, they were blown away."
Todd Park
Former US Chief Technology Officer

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Data competition

A data competition provides a financial reward to analyze or build a service utilizing a shared or publicly open dataset in a defined timeframe.

PROS

- Generates a diversity of solutions (data algorithms, data visualizations, data management, data security, data analysis, machine learning etc.) and can uncover insights not biased by being prescriptive of a particular approach

- Attracts a more wide ranging group of innovators that might not normally engage in traditional procurement processes or request for proposals

- Provides an opportunity to raise awareness of efforts from community and garner media attention, in particular when announcing data competition winners

CONS

- Outcomes are hard to anticipate, and for institutions with a specific solution in mind, targeted procurement of services with a specialized firm can warrant more directed results

- Requires capacity to fully anonymize and desensitize data involved to ensure that data privacy and protection standards are met

- Need linkages with networks of data practitioners and outreach with established data community partners to ensure the expertise of the participants involved

Online resources
Open Data Handbook Resource
Kaggle's Data Science Competition Platform

Data Competition Example: Australia's GovHack Open Data Competition

- In 2016, the Australian Government held its 7th annual GovHack open data competition to foster utilization of more than 170 data sets, including from the Australian Financial Security Authority, that it had made available
- The competition was held in partnership with private sector sponsors to offer 70 prizes for the technology community to build apps, visualization, analyses and other data solutions; one such prize was the machine learning competition sponsored by Google
- The prize offered $6,000 for teams to utilize government data sets to train machine learning tools and software libraries in order to uncover insights and create solutions for policymakers
- More information can be found information can be found here

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Request for proposals (RFP) or applications (RFA)

Request for proposals (RFP) or applications (RFA) are calls to solicit proposed solutions, often made through an open bidding process, for the procurement of vendors. RFPs are used for contracts, while RFAs are for grants.

PROS

- Determines upfront timelines, costs and requirements of project
- Allows ample room for vendors to detail relevant experience and solutions
- Provides the ability for a targeted engagement with clear guidelines

CONS

- Often limits pool of applicants to traditional players or "usual suspects" unless sequenced after community scoping engagement
- Run the risk of procuring "off-the-shelf" solutions not easily adaptable to changing needs or landscape
- Concerns that traditional RFPs often more expensive, bureaucratic and time consuming than other options

Online resources
Digital Services Playbook

RFP example: White House Office of Science Technology Policy's staged contracts

- The White House's Office of Science Technology Policy issued guidance based on agencies experimentation for a staged contract method for procurement
- The approach stresses rapid and inexpensive assessment of diverse technologies and prototypes, and forgoes the extensive requirements of traditional acquisition processes
- Staged contracts broadly follow a three-phased evaluation focused on first an expression of interest in the form of short concept papers, then invite-only proposals targeted to aligning technology contractors, and subsequent pilot evaluation. The approach is further detailed in the following stages (more guidance can be found here):

1. Announce
Release a "broad funnel" solicitation for contractors to submit short concept papers communicating the essence of their proposed technologies

2. Study
Invite promising offerors to submit more detailed proposals with both technical and cost components, and encourage them to ask questions to facilitate clear understanding of needs

3. Evaluate
Evaluate selected full proposals in pilots, during which there is ample opportunity for offerors to communicate with end users and refine their technology

4. Deploy
Decide to deploy, terminate, or further evaluate pilots for future projects

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Challenge prize

A challenge prize invites participants to contribute a solution to a specific problem statement incentivized by offering a financial reward (and sometimes in-kind) to be executed in a defined timeframe.

PROS

- Attract a wide ranging groups of innovators that might not normally engage in traditional procurement processes or request for proposals

- Pay only when results or pre-set goals are met, allows for a diverse pool of potential solution not biased by being prescriptive of a particular approach

- Provides opportunity to garner media attention and broader awareness from community, in particular when announcing challenge prize winners (for certain participants, "stamp of approval" recognition is an important non-monetary driver of engagement)

CONS

- Need to be plugged into and leverage innovators networks, partners and relevant audiences that will ensure a high-level and quality participation

- Strike the right balance in the challenge prize's solicitation to ensure requirements are open enough to foster a range of innovative solutions but also provides enough parameters for relevant solutions to objectively be judged against each other and meet needs

- Clarify intellectual property issues at the onset to ensure all stakeholders are on the same page concerning the rights and ownership of the end solution

Online resources
YouNoodle Platform

Challenge prize example: Citi's public sector "Tech for Integrity" challenge

- Citi is running an open innovation challenge for the public sector to source solutions focused on the following areas:
  i. Financial technologies and electronic banking solutions that improve transparency and efficiency;
  ii. Big data solutions and advanced analytics that detect, deter and prevent fraud and inappropriate transactions;
  iii. Digital solutions that secure government information, networks and transactions; among other issue areas
- Citi is leveraging collaborations with global investors, accelerators, startups networks, and industry partners for outreach to tech innovators, and partnering with PwC in a virtual accelerator with developer tools and resources.
- More information can be found here):

1. Crowdsource	2. Apply	3. Accelerate	4. Demo	5. Award
Citi crowdsources pain points globally to give tech innovators concrete examples of where technology has the potential to solve public sector issue areas	Tech innovators apply to participate in the challenge by submitting an outline of their solution focused on a specific pain point area (for example, government transactions)	Selected applications are invited to participate in a virtual accelerator run by PwC focused on adding value to and further detailing the proposed solution	Finalists are announced and invited to showcase their working prototypes in demo days with regional governments, Citi and program stakeholders	Awards are provided and potential piloting opportunities are explored with Citi, governments and stakeholders

Models

HACKATHON

BOOTCAMP

SPRINT

DATA DIVE

DATAPALOOZA

DATA COMPETITION

REQUEST FOR PROPOSALS OR APPLICATIONS

CHALLENGE PRIZE

ACCELERATOR MODEL

Accelerator

An accelerator model is a fixed-term, cohort-based program where the sponsoring organization selects aligning participants (usually early-stage startups) to accelerate their development through mentorship, educational components, and often capital which culminates in a demo day or pilot project.

PROS

- Provides adaptable model in which sponsors and organizers can customize focus areas, participants, and goals
- Brings together multiple layers of the entrepreneurial ecosystem including startups, investors, and mentors in a concerted effort
- Contributes to the development of the broader technology community

CONS

- Crucial to source the right participants, as they'll largely be in the driver seat setting the direction of development of their products and solutions; structuring the accelerator around proof of concept projects and pilot partnerships rather than traditional equity investments can provide more aligned outcomes
- Can be resource intensive to carry out an accelerator program; estimate for a traditional accelerator is around $1 million a year for two cohorts (costs are wide ranging based on focus, participants and time of accelerator)

Online resources
F6S Accelerator Platform

Accelerator example: BoE's Fintech Accelerator

- Beginning in June of 2016, Bank of England (BoE) launched its accelerator to harness fintech innovations for central banking
- The BoE accelerator is in the process of running short proof of concept projects in priority areas identified by its staff
- These areas were announced in a public call for expressions of interest, and focused on the following technologies and approaches: data analysis, management and anonymisation; cyber security; distributed ledger technology; and machine learning
- The PoC projects that have been completed or ongoing through 2016 are with the following six firms (more information can be found here):

PWC
Understanding blockchain and distributed ledge technology and smart contract applications

Enforcd
Leveraging their analytic platform to assess and draw out trends for regulatory enforcement

Threat Inteligence
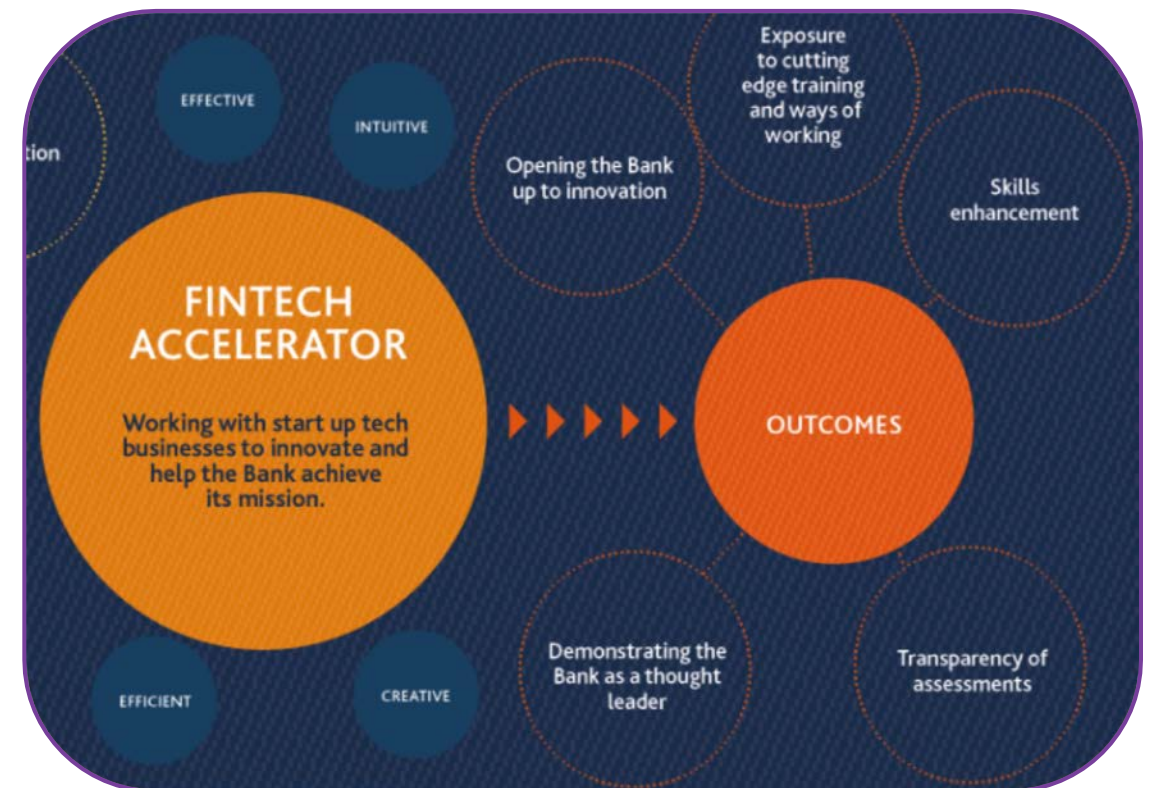Bolstering security based on data collection, sharing and analysis collection

BMLL
Machine learning for anomaly detection and analysis of limit order book data

BitSight
Assessing cyber resilience based on publicly available data

Privitar
Exploring the value and process for desensitizing data for broader sharing