Alliance for Innovative Regulation

# How to Produce a TechSprint

## A Manual for Regulators

Alliance for Innovative Regulation

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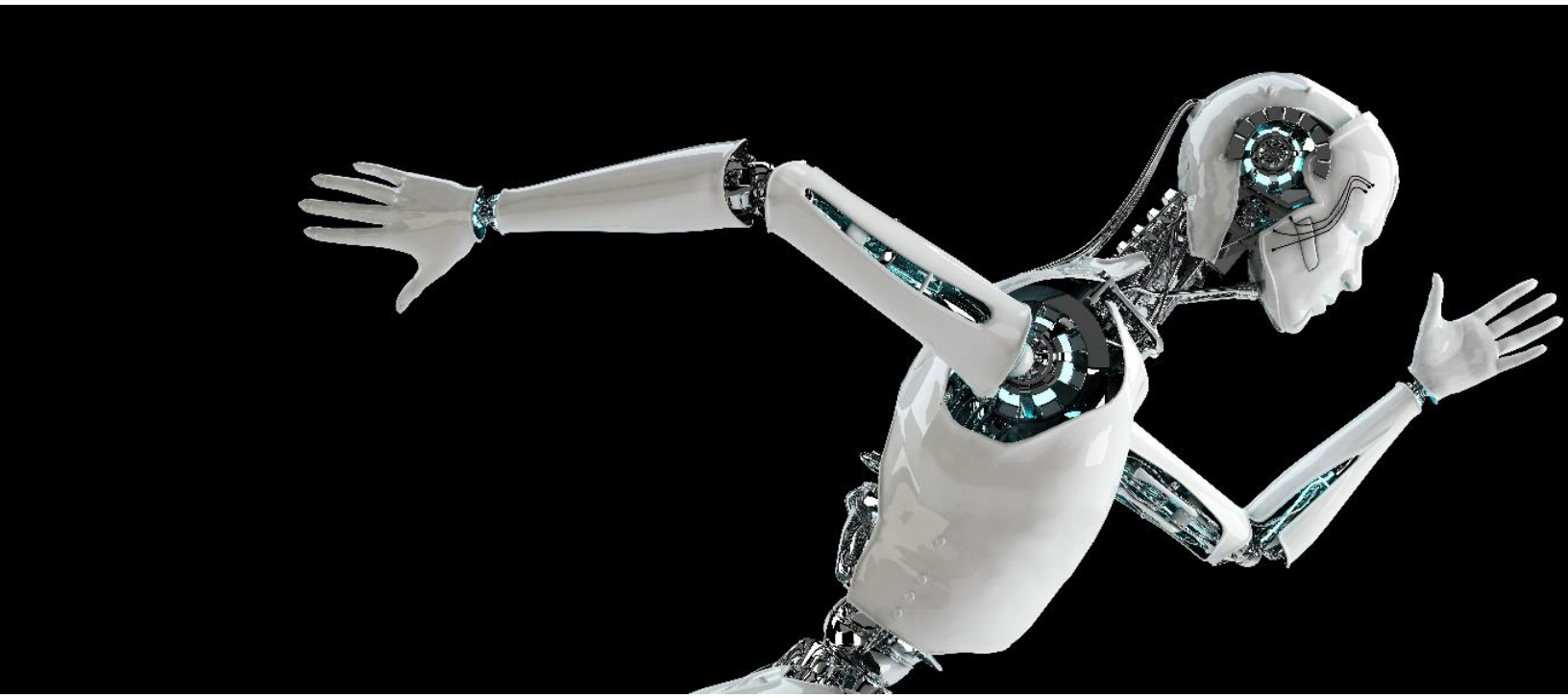

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# THE ART OF THE POSSIBLE

Financial regulators throughout the world are grappling with the accelerating technological change that is transforming the industry they oversee and their own ways of operating. They are also recognizing that new technologies and data availability can help solve long standing regulatory challenges that have been hard to address with the traditional tools for supervising banks and monitoring financial markets.

Responding to these forces of change, the UK Financial Conduct Authority has pioneered a new form of regulatory innovation called the TechSprint. Sprints adapt the techniques of hackathons -- a staple of the technology sector -- to meet the unique needs and constraints of financial regulatory bodies. In March 2020, the FCA published an article sharing learnings gleaned from conducting seven TechSprints.

A TechSprint brings together regulatory experts with software developers to collaborate in solving a regulatory problem. Sprints are a young form of regulatory innovation and the format is rapidly evolving. In general, they are designed as intense time-bound exercises (typically less than a week) and seek to produce prototype solutions in which participants actually start to write code. This creates a jumpstart on building concrete solutions, in contrast to traditional regulatory methods that rely mainly on discussion followed by writing of rules or guidance. This condensing of innovation cycle time becomes an exercise in the Art of the Possible.

The power of a TechSprint is that technologists and subject matter experts (SMEs) work side by side in collaborative problem-solving, pooling their respective expertise and learning from each other. Most regulatory SMEs are not familiar with how technology can be leveraged. Conversely, most software developers have limited understanding of regulatory objectives, systems, and legal constraints.

In July 2019, AIR — the Alliance for Innovative Regulation -- collaborated with the FCA to produce the first regulatory TechSprint in the U.S. Focused on privacy enhancing technologies (PET) to address anti-money laundering (AML), the TechSprint featured five teams and drew “hackers” from 35 companies including fintechs, large technology companies, and large and small banks. AIR hosted an observer track which was attended by 150 people, including dozens of representatives from 16 U.S. regulatory agencies.

Innovation is by definition an exploration into the space of the unknown. Frequently we have glimpses of “what” we could do, but cannot readily see “how” to do it. TechSprints are a path to the “how” in this equation. For regulatory agencies, they offer a powerful new tool, as well as many challenges and risks. This manual answers questions for regulators and others interested in producing a TechSprint, with the recognition, again, that innovation requires trying things that may not work. The manual offers an overview of our learnings and is a “how-to” companion document for the FCA’s article on TechSprints. It includes a sample project plan that outlines each sequential step in greater detail.

If you have any questions about how to produce a TechSprint, please visit our website or reach out to us directly.

Keep innovating,

Jo Ann Barefoot, Co-Founder and CEO

David Ehrich, Co-Founder and Executive Director

# 1. WHAT IS A TECHSPRINT?

A TechSprint is essentially a hackathon in which regulatory experts work in small teams with software developers for an intensive period to use technology to solve a specific problem. Hackathons are an innovation tool that have been used by technology firms for decades. In this context the word 'hack' means to find shortcuts or easy ways to solve problems, as in the phrase, "life hacks." Since the word also has negative overtones regarding computer security, the FCA has rebranded this kind of event as a 'TechSprint'. However, the participants in a TechSprint are still generally referred to as "hackers."

Regulator-sponsored TechSprints have explored issues as diverse as anti-money laundering, privacy-enhancing technologies for data sharing, financial inclusion, financial challenges for consumers with mental disabilities, regulatory reporting, and machine-executable regulation.

The regulatory TechSprint is a young innovation and, as more and more entities put it to use, its focus and format can vary. Some TechSprints occur over weeks or months rather than days. Some involve offsite as well as onsite work. Some simply produce demonstration prototypes, while others create actual computer code. Some yield working solutions and some generate concepts that need further incubation. Some are competitive, with judging and prizes, and some are not. Some TechSprints enable individual companies to compete, while others require multi-entity teamwork. Some solve for problems that relate to technology, but generate non-technology solutions. Some are sponsored officially by regulatory bodies and some are run by other entities that work with regulatory issues.

All have the elements of high collaboration, practical solution building, and rapid innovation. This manual has been prepared mainly for regulatory agencies to help design or sponsor TechSprints.

## TechSprint Manual and Project Plan

Incorporating learnings from the UK's Financial Conduct Authority and AIR, this TechSprint Manual is a working document that details the processes and best practices of TechSprint planning. It will be updated over time.

Accompanying the manual is a Project Plan Template that details each workstream with related action items, ownership, and the timeline for completion.

Throughout the manual, you will be provided with templates to help you organize your own TechSprint. Everywhere you see a blue text box labeled "AIR HELP" you can click on the links and use our sample documents. If you are restricted from opening the links, please download the supporting materials here.

**AIR HELP:**
Link to Detailed Workplan Template

## Key Benefits of a TechSprint

TechSprints can be successful tools to drive innovation for three key reasons:

### 1. Collaboration

TechSprints are valuable because they spur collaboration and dialogue across disparate stakeholders which frequently operate in organizational silos. Cross-silo collaboration is necessary both for technology innovation and to accelerate solutions.

TechSprints build collaboration on several levels:

- Between technology and regulatory experts
- Across often-siloed U.S. regulatory agencies
- Between regulatory agencies and market participants
- Between traditional financial institutions and fintech startups
- Across multiple jurisdictions

### 2. Sequencing of Technology and Policy Solutions

Technology innovation in the regulatory realm often hits obstacles that are grounded in current law, regulation, and protocols. You can see a better way to do something technologically, but are not able to adopt it because you are working under rules that were written for an earlier time. Sprint teams often struggle with this, as the software developers suggest something, and the regulatory SMEs say it cannot be done.

It can therefore be useful to separate conversations about technology and policy. Explore first whether there is a better technological approach. If so, identify what the policy obstacles may be. In some cases, the innovation may be adjustable to address these. If not, the agencies can plan a follow-up process to consider ways to update the rules. Rule changes can become easier when they build on the ability to demonstrate a better solution. In many cases, change can also be facilitated by a community of people who have become enthusiastic about the needed change, thanks to the collaboration sparked by the TechSprint.

### 3. "Think Big and Start Small"

Many people believe that regulatory complexity is unsolvable -- that real, timely innovation in the regulatory system is not possible. TechSprints illustrate the power of taking a large problem and breaking it down into specific, actionable steps. A full, top down redesign of the regulatory system is unrealistic and riddled with the possibility of unintended consequences. However, over time, by focusing successively on individual bite-sized pieces of the system, you can develop new solutions that incrementally rationalize our regulatory structure, improve the effectiveness of regulatory outcomes, increase efficiency and lower costs for the whole system. Small "wins" build confidence that change is possible and build a community of people motivated to help facilitate it. TechSprints are not the only regulatory innovation that fit this pattern, but they are a key one.

## Spirit of the TechSprint

Mission and collaboration are key to the spirit of any TechSprint, and both must be communicated clearly and repeatedly throughout the event. TechSprints are ideation events, and participants are collaborative co-inventors.

The most interesting ideas result from strong collaboration among participants from different organizations and disciplines

- Hackers should normally be sourced from a broad cross-section of organizations to maximize diversity of input and optimize cross fertilization.
- Each team must have diverse skills and expertise (see Team Formation section for more on the key roles)
- The culture of a TechSprint should strive to engage cooperation and encourage the sharing of information and insights across teams. Daily scrum sessions with the team leaders surface any challenges that the teams are facing and Team Leads can jointly brainstorm solutions.

Intellectual property created during the TechSprint is generally owned collectively by the members of the team or is open source. Some sprints do allow teams in which colleagues from a single company work together, with clear ownership of IP. While this format may be useful in certain situations, this kind of TechSprint can limit the diversity of thinking that a collaborative TechSprint can demonstrate.

- Mission matters. Hackers are volunteers, and the universe of potential recruits is defined by the vision you create for the purpose of the hackathon. Especially for sprints that involve software developers from nonfinancial fields, it helps to frame the sprint to be less about “compliance” and more about the underlying goals of the regulations involved. For example, AIR has focused on topics like curtailing human trafficking, saving small business in the pandemic, and addressing use of cryptocurrency for purchasing child sexual abuse materials (CSAM).

## TechSprint Snapshot

While TechSprint formats can vary and the planning process is iterative, the general flow is as follows. Each step will be discussed in this manual, although not in chronological order since many activities occur in parallel.

### TechSprint Planning

- Arrange Agency permissions and address legal considerations
- Align with legal and communications teams on approval processes, timelines and deliverables
- Define problem statement
- Select agency partners to co-host the TechSprint (if applicable)
- Design the Sprint - competition, team make up, judging, incubator, etc.
- Begin to curate the TechSprint teams
- Review and schedule the different event components
- Set budget
- Identify sponsorship opportunities

### Data, Platforms, and Internet Access

- Identify and secure data to be used
- Select and test the technology platforms
- Onboard hackers to the platform

### Team Formation and Hacker Management

- Be conscious to define and create appropriate ground rules
- Recruit and register hackers for a variety of different roles
- Allow teams to self-organize with organic assembly of leaders and members
- Curate and refine the self-organized teams, as needed
- Select collaboration and communication platforms
- Host "Boot Camp" meeting (live or virtual) to introduce goals, processes, and platforms
- Introduce the teams to the Sprint Management Team

### Logistics and Operations

- Select physical venue or virtual platform
- Coordinate with onsite contacts to arrange for appropriate staff and catering
- Prepare a detailed agenda (run of show), consider event app
- Carefully plan out all audio/visual needs and test, test, test
- Coordinate final teams onsite, adjusting team roles and team leaders as needed
- Invite judges, speakers and observers
- Choose opening speaker to reinforce the importance of the problem statement
- Host daily scrum sessions with scrum master(s) and Sprint Manager
- Manage observer visitors and media
- Coach preliminary team presentations
- Execute Demo Day with a large audience, outside speakers and team presentations
- Throw a post Sprint celebration

### Communications

- Establish branding to drive consistency across communications and onsite collateral
- If desired, build a dedicated website and mobile app
- Design a communication plan including press coverage and social media
- Invite targeted media
- Take lots of pictures and videos to feature in follow up materials

### Follow Up

- Transition winners to the incubator environment, if applicable
- Follow up with media and communications
- Report on the Sprint with learnings and results

# 2. TECHSPRINT PLANNING AND DESIGN

## TechSprint Strategy

TechSprint strategy involves asking four questions: What problem do we want to try to solve? What do we want to learn? Who do we want to engage in our work, internally and externally? And how much risk should we take?

There are many problems across the financial services regulatory ecosystem which can be addressed using a TechSprint. Generally speaking, the ideal challenge is to look for a solution that would have high impact and would be easy to implement. A great way to choose a problem statement is to identify mutually-shared pain points between market participants and regulators. When both sets of stakeholders can benefit from the potential outcome, the resulting win-win dynamic can make it easier and more desirable for stakeholders to engage.

While uncovering actionable solutions is the concrete purpose of the TechSprint, it is important to recognize that the 'magic' of a TechSprint is creating a new network of collaboration and establishing relationships across disparate stakeholders that will last well beyond the timeline of the actual Sprint. This means the scope will span multiple stakeholders, and the planning process should think through what organizations to engage. For example, if you are working on a problem about financial crime, you will want to include law enforcement. For a topic on financial inclusion, you will want to include consumer advocates. Similarly, the Sprint can transcend silos inside the agency, bringing together disparate skill sets and helping agency participants build new or strengthened relationships and develop shared insights on key challenges.

To that end, every TechSprint is a learning opportunity, even if the exercise does not produce results that lead to implementation. Planners should consider whether the agency wants to delve into understanding a topic, such as a new technology or financial market innovation, and how the Sprint may be able to build knowledge as a by-product.
The most challenging part of this process is engaging the unknown. By definition, innovation is a process where you do not know the outcome. The Art of the Possible requires recognizing that a process of innovation will involve risks, to be anticipated and mitigated in the planning work.

## Getting Started

Planning and hosting a TechSprint is a big undertaking, engaging significant human resources and leveraging relationships across the ecosystem. At the onset, identify a Sprint Lead who will manage the overall planning and execution, and then select others to lead various aspects of the project (e.g. IT, legal, communications, event logistics, partner/sponsor management, and hacker management). With the right team in place you can effectively share responsibility, leverage individuals' strengths and passions, and drive collaboration within your own agency.

The next step is to arrange the appropriate agency permissions and address any legal factors. Internal partners in legal, communications, and compliance need to be consulted early to clarify any approval processes and align on timelines and deliverables. These teams can also advise on whether the agency has any limitations to consider that may impact your planning process. Agencies in the U.S. and globally vary greatly on what activities are and are not permitted. For example, sponsorships, in-kind donations (including data and platforms) or providing the teams with "swag" may not be allowed.

## Problem Statements

The next priority is to choose and articulate a problem statement. This will be the foundation of the TechSprint and will have implications for every other step of planning. Establishing it begins with understanding your agency's objectives and the intended outcomes for the TechSprint.
The selection of the problem statement will impact the size of the TechSprint, number of teams, curation of team participants, required data, recruitment of target companies with subject-matter expertise, and integration of other important stakeholders.

This section of the manual discusses factors that will shape the problem statement or be driven by it. Most of them are addressed in more depth in later sections.

### Scope and Definition

Setting the scope of the problem statement is critical. Too narrow, and the TechSprint will have limited impact; too broad and the TechSprint will struggle to produce an actionable solution.

TechSprints mobilize enormous human resources which are donated by organizations and represent significant opportunity cost. In addition to mutually shared pain points, participants (and participating organizations) are more likely to join if the problem statement is anchored in a mission for social good. Again, AIR has planned TechSprints focused on fighting financial crime that funds human trafficking and use of cryptocurrency to purchase child sexual abuse materials (CSAM).

When discussing options for problem statements, many agencies find that policy, legal, or protocol implications can devolve into circular thinking that can paralyze planning. While these kinds of constraints are important, emphasizing them at the outset can thwart or derail exploration of innovative technologies. In our experience, it can help to separate technology exploration from the policy considerations. Figure out first what is possible with technology. If the results are promising, move on to discussing how the technology solution can fit into a policy framework, or whether the policy framework would need to be reconsidered to absorb the technology.

**Considerations in Developing the Problem Statement**

**Objectives:**

- Who are the stakeholders (internal and external)?
- Who are the intended audiences?
- What are the specific intended outcomes?

**Relevance:**

- Is the problem of great importance for the agency?
- Is the problem a pain point for the industry?
- Is there a meaningful mission that can attract volunteers and galvanize tech companies?
- Will the problem attract academics, experts, and fellow regulators?
- Are there other influencing organizations that need to be included?

**Opportunity:**

- Is the problem complex and not solvable by a single stakeholder?
- Is progress evolving at an undesirably slow pace?
- Are there emerging technologies that provide a novel approach?
- What is the ease of implementation vs. impact tradeoff?

**Scope:**

- Is this a general question, or a specific technological solution?
- Are there specific problem statements of particular interest to individual stakeholders?
- Is the problem of sufficient scale to justify allocation of significant resources?
- Is there a compelling business case to justify the resources required?

Source: Adapted from the UK Financial Conduct Authority

## Problem Statement Development and Iteration

***1. Problem Statement Drafting***

Explore hypothetical problem statements with key thought leaders in their relevant areas of expertise, both inside and outside of your organization. Reach out to high-level strategic thinkers (e.g., head of AML for a major financial institution or leaders in financial inclusion), as well as on-the-ground experts (e.g., front-end developers) and academics. These conversations will help you prioritize potential problem statements and consider data sources required to work on a particular solution.

***2. Scoping of Data Needs***

Most (although not all) TechSprints require data with which the teams will work, and the data needs will depend on the problem statement. Before settling on the problem statement, consider what data will be needed and whether it can be obtained. This is discussed in depth in Section 3 - Data, Platforms, and Internet Access.

Data can come from internal sources, but it would normally have to be anonymized and legal approvals would be needed to use it. Data can also be purchased from a third-party vendor, which can be expensive and time

consuming— requiring as much as three months of lead time, depending on the size and complexity of the data that would be required. The third data option is to require the teams to use only publicly available data, and to be proactive in preventing them from drawing on other non-public data sources to which team members may have access.

Regulators are increasingly trying to leverage synthetic data, which solves for the problem of privacy. Synthetic data can be expensive, but efforts are underway to make more of it available for this type of use.

**Considerations in the Data Selection**

- What data is needed to solve the TechSprint question?
- Where does the data reside?
- What are the privacy constraints/considerations for using that data?
- Does the problem statement require synthetic data?
- What companies can generate the data? How long would it take?
- Is data proprietary? Can it be downloaded onto individual laptops?
- If data is being downloaded, is there enough WiFi capacity at the site to accommodate?
- If data is not being downloaded, is the selected computing platform prepared to handle the processing requests?
- Will teams be permitted to use outside data? If so does outside data have to be free and publicly available to all?
- Will company representatives be permitted to use their firm's proprietary data and if so, with what ground rules?
- Is the data coming from your country and if not, will it raise format complexities (such as differences in postal code structure or whether dates are listed as month/day versus day/month)?

To help determine the viability of each problem statement, using the above questions, create a list of the data and technology needs associated with each statement. Some priority problem statements may need to be de-scoped if data or data-related expertise is not readily available.

***3. Technology Platforms***

The primary tech platforms used in TechSprints are Amazon Web Services (AWS), Microsoft Azure, and Google Cloud. Platform time can be expensive, so it makes sense to pursue a sponsorship relationship with the platform providers and ask them to donate the processing time and provide tech support at the event, assuming your agency permits this approach. Many TechSprints offer all three platforms as options, as each has a different set of support tools available.

***4. Participant Expertise***

The problem statement, along with considerations of scope and data, also impacts which companies can and should participate. The more narrow and directed the scope (e.g. explore homomorphic encryption), the more important it is to have companies with specific content expertise and the harder it is to curate multi-company

teams because of potential conflicts among competitors. Curation of the participant companies is an art requiring trade-offs across specific stakeholders and depends on desired outcomes.

***5. Iteration***

Socialize your list of problem statements with industry experts and academics to refine and confirm the potential statements and associated requirements. In some cases, the problem statements may need to be iterated or adjusted because of availability of data, technology, or expertise required. Once the hacking teams are selected, they may have input into the final shaping of the problem statement. This will engage the teams' thinking and render feedback that you might not have considered.

**AIR HELP:**
Link to sample proposed problem statement list

## Partners

The U.S. regulatory ecosystem has multiple regulatory bodies, many of which are grappling with similar challenges. TechSprints are a powerful tool to help spotlight these challenges and proposed solutions, helping to align stakeholders and energize focus and prioritization. Wherever possible, consider opportunities to partner across agencies or jurisdictions (e.g. federal and state, or international). Managing a partnership can be complex, but partners come with many benefits: expertise, physical and human resources, connections, and outside perspective. Most importantly, many topics worthy of a TechSprint require engagement from multiple entities and working together to find solutions through a TechSprint can create alignment across stakeholders.

Agencies can also consider partnering, formally or informally, with non-government entities such as universities, nonprofit organizations, and trade associations.

If the agency will need an external venue as the site for the TechSprint, it can explore having facilities and infrastructure donated by a third party and acknowledge this in the design of the event.

## TechSprint Design Considerations

The culture, experience and outcomes of a TechSprint are a direct result of how it is designed, and the design is intrinsically related to the problem statement you choose. So, consider the following questions in the early stages of planning.

### Is there a winner? Will there be a prize?

In general, a competitive TechSprint will tend to drive a high level of energy and excitement for both participants and the audience regarding who will win. A competitive format also creates an opportunity to articulate clearly the criteria for success and keep the teams focused on them. In addition, competitive Sprints are an occasion to enlist active engagement from leaders in the agency and/or the field by inviting them to serve as judges. In our experience, most TechSprints and hackathons do have a competitive design.

There can be drawbacks to using a competitive approach. One is that competition tends to reduce collaboration and cooperation between the teams, especially if the prizes are highly desirable. This can be a good or bad element, depending on the mission of the TechSprint and the outcomes you are looking to drive. Awarding prizes also requires that there be at least three teams, in order to make judging meaningful.

Another factor is whether the teams have multi-organization or single organization makeup, as discussed below. In many TechSprints, agencies do not want particular regulated companies or vendors to be able to claim the honor of having "won" the regulatory body's contest.

If there are enough teams, competition can be designed to have multiple prizes emphasizing different dimensions, such as one for "potential to be a game-changer" and one for "most practical to implement."

If you plan to conduct a competitive sprint, you will need to decide on prizes. Prizes usually take one of two forms. At a minimum, they usually involve giving the team members a tangible award at the Demo Day gathering – for example, a certificate, plaque, or medal. In more ambitious sprints, the winners may be given the opportunity to move into an incubator environment operated either by the agency or another organization, to develop the winning solution/s further. The latter strategy requires considerable advance planning.

### Will you permit single-company teams?

As discussed earlier, regulators may limit the number of participants on each team who come from any single company. If your objective is to maximize creative impact, it will be a priority to set up teams with a diverse make up. If you are looking to promote a quick-to-market solution, you can consider allowing each team to be made up from a single company. Again, however, if you allow single-company teams and set up a competitive format, winners can claim to have "won the TechSprint," which could imply an agency endorsement. Expectations around this should be made explicit at the start.

## Roles in a TechSprint

The following are the basic roles to be performed in the sprint.

### Hackers

The hackers are the people who actively work on solving the problem in the TechSprint teams. You can read more on different roles of team members in the Hackers Management section of this TechSprint Manual.

### Doctors

These are "floaters" who are made available to guide the teams as needed. They may be experts in the subject matter, such as compliance officers or lawyers, or may be designers – whatever knowledge sets may be helpful.

### Observers

The TechSprint can be designed to include opportunities for others to observe the hacker teams at work. These people may be senior agency officials and/or key influencers in the broader regulatory ecosystem who want to learn more about this topic or how TechSprints work.

### Demo Day Attendees

Typically, a larger group of key influencers are invited to attend TechSprint Demo Day/s, to encourage them to learn about the proposed solutions and potentially support implementation inside their own organizations. Demo Day's audience – senior decision-makers, investors, academics, and influencers – is a significant factor for the success of the TechSprint.

### Judges

If the TechSprint will include judges **(discussed below)**, they should be distinguished individuals drawn from across government and industry and should know the regulatory and market landscape of the focus area.

### Speakers

Prominent thought leaders and experts in the particular field can be invited to speak during the TechSprint.
For the hackers, it can help to open up the first day with a talk by an expert who is an end user of the process the hackers will work on improving. For example, if the TechSprint will address how to improve Suspicious Activity Reports on financial crime, a law enforcement speaker might tell the group about how they use the information generated and what data or features they would wish to have.

On Demo Day, it makes sense to have several speakers address the large invited group as well as the hackers. This could be someone who brings the topic "to life" in terms of why people should care about doing it better. One agency, for example, has featured a leader from a humanitarian organization to illuminate the harm that financial crime inflicts on society. If partner organizations have particular subject-matter expertise, these can be invited to share presentations.
Demo Day can also feature panel discussions of relevance to the TechSprint subject, with panelists drawn from financial and technology firms, academics, and other subject-matter experts.

## Curation of the TechSprint Teams

The next step in the planning process is to design the makeup of the TechSprint teams and lay out the strategy for recruiting their members. The number of teams will be driven mainly by the sprint's scope and goals, but normally would include at least three (especially if prizes will be awarded). Normally teams will have about 8 – 12 people, although this can vary. Decisions about number and size of the teams can evolve as the process develops.

Selection and recruitment of the team participants involves two levels. The first is determining what kinds of organizations to invite. The second focuses on determining, within those entities, which people and kinds of people to recruit.

Regarding organizations, the agency should consider both what kinds of perspectives are needed for building solutions in the TechSprint and what entities will be influential in the follow-up. It is also worth considering the TechSprint's potential for educating key players who may be unfamiliar with the technology or issues that will be explored, but that will have influence in any path forward.

Most TechSprints will benefit from having a cross-section of organizations by type, role, size, geography, and public/private positioning. For example, a bank regulator might hold a TechSprint that would invite large banks, regional institutions, and community banks, large and small fintechs, regtech firms, tech firms, vendors, other agencies, academics, law firms, and experts or advocates on the topic involved, such as in law enforcement, financial crime, financial inclusion or, commercial lending, and trade groups involved in commerce or commercial real estate. The agency may also want to directly enlist individual experts in the field.

The organizers will have to decide whether to allow current vendors in the space to participate and if so, whether vendors will have separate rules to prevent the tendency to leverage this kind of event as a sales opportunity.

Some TechSprints may benefit from including people who should be the ultimate beneficiaries of the policy work, such as small business owners joining in a TechSprint about small business financing.

The more specific the problem statement, the more deliberate and targeted the need for depth in a particular area of expertise. For example, for a TechSprint on data encryption, you will need to engage companies that specialize in these cutting-edge technologies.

Once a good mix of organizations is engaged, the agency can ask them to help identify individuals from their ranks who understand the topic at hand and/or who have the needed technology skills or subject knowledge. This is a curation process and requires a delicate balance between enlisting technology engineers (including coders, engineers who understand the tech stack, product, and design) versus subject matter experts.

This process should be customized for the specific problem statement and TechSprint design. For example, "hackathons" may be natural and comfortable in a university setting, but when working with college students you will need to be prepared to provide more content expertise as well as generalized support on problem definition and how to structure basic communications.

In general, TechSprint participation will be by invitation (if the agency's protocols permit it) or else will use a process of inviting proposals and screening entrants to meet the criteria. It is common for invited guests to suggest others, which can be approved case-by-case to fill out needs. Curating the makeup of the room is more art than science, conducted in a collaborative atmosphere that is focused on problem solving and the sharing of best practices. This will determine whether participation should be tech-heavy or policy-heavy, and whether or not certain kinds of individuals will build or detract from the community.

By the end of the participant selection process, the TechSprint will have a diverse set of participating organizations and the appropriate mix of subject and technology skills.

## Event Components

Before developing detailed logistics for the TechSprint, the planning phase should include creating a basic summary of each element of the event to think through logistical needs:

### Boot Camp for Hackers

Before the event, the hackers should have the opportunity to gather (virtually or in person) and learn about the problem the TechSprint is tackling, why it is important, and what the process and rules will be. Allow time for hackers to ask questions about technology and logistics, and engage with the organizers and other hackers. Even before hosting the Boot Camp, create a collaboration tool (e.g. Slack) to encourage hackers to start connecting immediately with one another. It is likely that activity on the platform will not pick up until after the Boot Camp.

Following the Boot Camp (or even before) the teams will begin to self-form, as discussed later under Team Formation.

### TechSprint Opening

The TechSprint opening is the first full onsite event for a live, in-person sprint, and the official kickoff for a virtual one. It should begin with welcomes from the organizers and senior agency officials and a chance for the participants to meet each other.

This is the time to adjust the makeup of the teams to be sure they are coming out with the right sizes and mixes of skills.
The teams should meet the Sprint manager and discuss any technology and logistical considerations.

Then the teams should be given their charge, preferably with an outside speaker as discussed earlier. It is common at TechSprints to have participants, especially from the tech side, who have little familiarity with the regulatory problem they will work on. Sometimes this unfamiliarity will include an assumption that the problem is about "bureaucratic" processes that, on their face, may seem boring. It helps to ground the teams in why their work will be not only fascinating and fun, but important.

### Solution-Building

The solution-building portion of the TechSprint should occur over multiple days, usually within one work-week or less, or over a weekend. This work is best done in-person, but can be managed by video conference and communication tools like Slack.

The solution-building phase also includes a daily scrum session, as discussed below.

### Daily Scrum Sessions

Each team will select a Team Lead, and this group should meet daily with the hacker management lead to discuss progress, problems with technology, data or subject matter, and other issues.

## Panel Discussion

Panel discussions on topics relevant to the TechSprint are a valuable addition. They can be held at any time during the hacker program to break up the solution-building, or they can be a part of the Demo Day agenda. Speakers agencies, financial and technology firms, academics, and other subject-matter experts can participate on the panel.

## Observation Sessions

To leverage the impact of the Sprint to a wider audience, it can be worthwhile to invite people to attend briefings and observation sessions. Small groups of 5-20 people will hear an introductory presentation about the TechSprint context and process and then walk the TechSprint floor to engage directly with the teams.

## Pitch Coaching

At some point toward the end of the TechSprint, have the teams practice their pitch in front of the Doctors/TechSprint staff.

## Pitch Deadline

The official TechSprint closing is a deadline set for hackers to complete their solution-building. It should be communicated at the opening of the Sprint. The deadline should give the teams enough time to submit the level of solution required by the organizers, while also allowing enough time for the TechSprint A/V team to test and load all presentations into one place for Demo Day.

## Demo Day

This event is usually the next day after the TechSprint has closed and should engage VIPs who may or may not have already attended an observation session earlier during the TechSprint.

Depending on the size of the TechSprint, make the Demo Day a full-day or half-day event, ensuring it is worthwhile for those traveling to attend. It includes demos of the solutions by the hacker teams, as well as keynote speeches. The keynote speakers who carry the most weight should be at the beginning and end of the day to help assure that attendees stay for the duration. The day should conclude with an award ceremony if appropriate.

Solution presentations can be anywhere from 4 – 10 minutes depending on the number of teams, followed by a set amount of time for Q&A from judges and potentially the audience. Short presentations require the teams to be focused and keep the Demo Day from dragging. Teams will describe the challenge they are solving, explain their solution, and the impact it will have.

For a competitive TechSprint, an award ceremony is the culmination of Demo Day. Define the criteria for the winner at the beginning of the planning process. An award could be granted for multiple award categories, or a composite score could determine one or several overall winners (e.g., first, second, third place). Sample award categories could include most practical (ease of implementation), most original, and greatest impact.

### Demo Day After-Party

An after-party may be organized for the TechSprint hackers and attendees as a celebration for the winning team and the hard work of all the teams, and as a cross-sector networking opportunity.

Additional events may include hacker happy hours and ancillary dinners, such as for groups of regulators..

As you are outlining the various events that will comprise your TechSprint, consider which, if any, of the sessions should be filmed. You will want to start identifying your A/V needs early in the planning process.

**AIR HELP:**
Sample TechSprint Agenda
Example Demo Day Program – Washington DC – AML TechSprint

## Budget and Sponsorship

The final step of strategic planning is determining the TechSprint budget. Major considerations for the budget include:

- Venue
- Catering
- Human Resources (Project Manager needed at minimum)
- Data Provider
- Technology Platform Provider
- Marketing
- Travel by team members
- Audio/Visual (sometimes provided by the venue)

Depending on the scope of the event and your in-house capabilities, the TechSprint may require significant additional funding. This can be provided in-kind (e.g. donation of space, catering, etc.) or with traditional sponsorship packages, if agency rules permit these.

**Sample List of Sponsor Benefits**

- Event and pre-event naming opportunities
- Inclusion in press releases and programs
- Signage at the TechSprint
- Recognition by speakers from the podium
- Press exposure
- Recognition on agency's website
- Opportunity to invite people to the TechSprint and any VIP receptions at the event
- Reserved tables

# 3. DATA, PLATFORMS, AND INTERNET ACCESS

## Data Sourcing

Once the problem statement and ideal data sets are at least partially defined, you will need to reach out to data providers to determine whether real data sets are available and legally accessible. Make sure that the specific data elements are what is needed to solve the problem and understand the bias that might be already present in the existing data sets. Depending on the data requirements of the potential solutions, you may need several data sets and providers.

At this stage, engage with internal data protection and legal specialists. It is crucial to ensure that both real and synthetic data does not breach regulation (e.g., the European GDPR - General Data Protection Regulation). An impact assessment (e.g., DPIA - Data Protection Impact Assessment) may need to be completed for various agencies before specific data may be used.

If real data is not accessible or appropriate, you will have to explore the creation or purchase of synthetic data. The complexity, cost, and time to develop the data will be determined by the data elements you require. Ask data providers to create or curate the data sets based on the defined problem statements. Specify any regulatory or regional requirements (e.g., synthetic data that replicates activity of U.S. consumers or U.S. regulations may look vastly different from the same type of data for European consumers).

Next, blueprint and socialize the data sets with industry experts and academics to ensure that the data addresses the problem statements. Involve a technologist who accesses and tests the data to approve that it meets the needs of the problem statements. Several iterations of the data may be required to ensure that it is curated appropriately.

Try to negotiate the rights to store any data you buy in a repository for future use. If the data is for one-time use, make sure that you secure onboarding resources to help the hackers gain access to the data before the TechSprint and onsite resources from the data provider for troubleshooting during the TechSprint.

Once the data is gathered, create a summary of the data ecosystem and share it with hackers before the Boot Camp. It can be a simple Excel document with a tab for each type of data set. This summary should not include the data itself, only definitions of fields, data types, descriptions, and other key information about the data.

**AIR HELP:**
Link to Data Configuration
Link to Data Definitions for Synthetic Data

### Technology Platforms

Hackers can normally access TechSprint data in two ways. First, they can access and download the data sets directly and use their own tools to analyze it. In this case, encourage hackers to download data before the event begins, and also assure that there will be ample WiFi capacity at the event, with the needed bandwidth for the data downloads. Alternatively, you can require hackers to access the data onsite at the TechSprint through a data environment like Microsoft Azure, Amazon AWS, or Google Cloud.

### Provider Sourcing

If you decide that the data should be accessed through a preset data environment, reach out to major cloud computing platforms to negotiate a sponsorship in the form of free access to the platforms for TechSprint hackers. The market for cloud computing is very competitive and there is interest in TechSprint sponsorship. AWS, Microsoft Cloud, and Google all have cloud platforms that work well.

Be sure to negotiate enough computing credits to allow hackers to run meaningful analyses. Additionally, invite a technologist or affiliated technology resource to conduct a detailed analysis of potential computing needs. Feed that information back to the platform providers to ensure the platforms are providing adequate computing capacity. Providing only one platform can suffice, but if it is possible, obtain sponsorships for multiple platforms as hackers will appreciate having the choice.

Whichever platforms you choose, ask for dedicated onboarding resources from each to help the hackers get onto the platform before the TechSprint begins, and seek onsite resources for troubleshooting the data during the TechSprint. Additionally, consider inviting platform providers to participate as hackers for the TechSprint as this will significantly help the teams navigate the platforms during the TechSprint.

## Platform and Data Testing

At least two months before the TechSprint, connect the data provider(s) and cloud computing platform(s). These providers should load the data onto the platform and run several tests on the ease of onboarding and access. The platform's technology architecture must be aligned with the data elements. Important areas to check include:

- Time and effort involved in platform credentialing and setup
- ETL (extract, transform, load) of data
- Completeness and correctness of data set
- Moving and processing the data on the platform
- Access to data in an easily queried format

Organize the data and platforms test at the venue to make sure that the WiFi capacity and firewall settings do not impede onboarding or analysis, even with multiple teams.

## Hacker Onboarding

If you have decided that hackers should use a predetermined cloud platform to access the data, onboard hackers to the platform after the Boot Camp, but with ample time to sample the data and get acquainted with the operability of the platform. Connect individual hackers to the dedicated onboarding resource of the preferred platform.

If there is more than one platform from which hackers can choose, include information on this in the Participant Pack (see more information on the Participant Pack under Hacker Recruiting and Registration), so that before the Boot Camp hackers can specify which platform they would like to use. Ensure that the list of platforms and data resources (remote and onsite) is also available at the Boot Camp.

You can decide to share sample data sets with hackers before the TechSprint starts. If so, sample data sets should be easy to open and examine without having to ingest the complete data set. The accounts or credentials must be the same for access to both the sample data sets and the full data sets.

Data and platform providers should work together to ensure that databases are pre-populated on the platforms, so teams do not spend significant time running import scripts. Similarly, third-party tools like Tableau and SSRS should be available to hackers without asking platform providers.

## Troubleshooting

Best practice is to make sure that each platform and data provider sends one onsite resource who is available to hackers during working hours.

## Internet Access

Sufficient internet access is crucial to hackers during the TechSprint. Because hackers will be accessing and analyzing large data sets, the recommended connection should be 200-300 Mbps. The WiFi should be open and not restricted by firewalls to enable hackers to access data quickly and thoroughly. Additionally, if there is a need for livestreaming any part of the TechSprint to/from another location, this could take up additional broadband capacity.

Organize the test of the existing onsite WiFi capacity in multiple locations on the TechSprint floor to identify black out spots and ensure that boosters are added if necessary. Make sure that the venue has broadband cables if needed. Repeat the internet test the week before the TechSprint begins.

# 4. TEAM FORMATION AND HACKER MANAGEMENT

## Ground Rules

Hackers are volunteers, either as individuals or assigned by employers who have volunteered their time. All end up devoting long hours to building solutions. Hacker management requires a dedicated TechSprint Manager who:

- Acts as a single point of contact
- Facilitates team formation
- Has access to data and platforms
- Manages hacker logistics for the Boot Camp, TechSprint, and Demo Day
- Holds a daily scrum of Team Leads
- Clears problems and answers hackers' questions
- Interfaces with observers as they visit the TechSprint floor

In addition, the manager will set the collaborative tone for the event and promote a culture within and across the teams.

The tone of openness and inclusivity should extend beyond the TechSprint solution-building days and through the Demo Day presentations by lifting up the hackers and keeping them front and center during the culminating events. If possible, hackers should have prime seats for the Demo Day presentation. Ample time should be built in for hacker team demos and engagement with the audience, and technology should be organized so that teams can present the most robust versions of their solutions (which may be live demonstrations of working solutions, or may involve video).

A baseline set of rules should be communicated to hackers before and during the TechSprint. The rules must be clear and reinforced regularly, before the TechSprint and in real-time. Below is a sample set of rules that may be modified for each TechSprint.

**Sample TechSprint Ground Rules**

1. All hackers must attend the Boot Camp, fill out the registration form, and sign a release form to participate in the TechSprint.
2. Team Leads and Scrum Masters must attend the Boot Camp and Team Leads/Scrum Masters calls.
3. Each team must meet the set minimum for number of participants and have at least one of each type of fixed team role. See Team Formation for team role descriptions.
4. In a multi-organization team format, no more than two representatives from one company should be on the same team.
5. Teams can only use the data provided by the TechSprint organizers and may not download any data to their local computer.
6. Government vendors are not allowed to lead teams without checking with you.
7. Work presented during the pitches must be original, created over the course of the TechSprint. Teams may reference pre-existing technology, but it must be clear what is new and what is not.
8. Teams will observe any restrictions set by the venue in terms of accessing adjacent space and hours of space availability.
9. Participating firms should refrain from commenting publicly on their involvement in the TechSprint prior to the agency announcing what organizations are involved.
10. Any communications beyond social media (e.g., digital content or press releases) that refer to the TechSprint need to be agreed upon with the agency prior to release.
11. Participants are asked to use the word "collaboration" and avoid the use of the term "partnership" with the sponsoring agency in communications, including social media.
12. No attributable quotes or reference to other firms' data are to be made via firms' communications.
13. Hackers must be able to access Slack or any other team management platforms for team collaboration and communication with organizers.

## Hacker Recruiting and Registration

This manual's section on Planning covered the basic process of inviting organizations and selecting individuals to participate as Hackers, in order to assure participation both by the desired cross-section of organization types and of individual expertise. An email describing the event should be sent out with an 'invitation pack' to all potential attendees. This can be designed either as an application process or as confirmation for participants that are already engaged.

It can be helpful to set up a unique email address designated for external communications, such as techsprint@[hostorganization].[com]

The email should lay out the kinds of skill roles that will be needed. If you are planning for teams from different companies, invitations should ask for 1-3 hackers to fill any of the described team roles.

As hackers begin to sign up and self-describe their skills and capabilities, you may discover that you are short on participants for a specific role and you may need to reach out for hacker participation and specify a certain type

of role. Front-end developers are typically the most difficult role to fill, followed by back-end developers and designers. All participating organizations will have business and domain experts, but only some will have the right technology requirements to send technologists.

To confirm a hacker's place in the TechSprint, have them fill out a sign-up form to collect basic information like name, contact information, headshot, and company. The form should describe the various team roles and invite hackers to self-identify as being qualified for specific ones. Also collect logistical and technology requirements like dietary needs, disability needs, and preferred technology platform.

Google Forms works well, but a form embedded in a website is also an option if you choose to build a dedicated website or app for the TechSprint.

Hackers should also sign a release form covering IP protection and use of photos/videos of individuals and solution demonstrations. Work with your General Counsel to leverage an existing release form or create a new one tailored for your TechSprint. Once the sign-up form and the release form have been completed, you should send the hacker a participant pack with more information on the event (date, location, team formation, rules, etc.) and invite them to the hacker Boot Camp.

There should be a clear deadline for hacker sign-ups that is communicated in all emails, participant packs, and on the website.

Similar invitations should be sent to people being recruited as Doctors.

Also notify participants if you have organized a discounted hotel block near the TechSprint venue.

**AIR HELP:**
Link to Sample Hacker Sign Up Form
Link to Sample Participant Pack

## Hacker Boot Camp

Boot Camp participation should be required for all hackers as it is the orientation session that gets them acquainted with the concept of a TechSprint and gives them instructions for team formation, technology, and logistics before the TechSprint begins. Boot Camp is also an opportunity to kick off the team formation process, so that the teams will be ready to begin solution-building immediately when the TechSprint begins. It is a best practice to include an overview of the subject matter in the Boot Camp to ensure that all hackers have a basic level of understanding.

### Holding the Boot Camp

If the Boot Camp is held in person, schedule it at the end of the day and encourage participants to go out for a drink or meal and continue their brainstorming/discussions.

If possible, record the Boot Camp so that it can be shared with hackers.

**Elements of the Boot Camp presentation**

- Introduction to host organization and team, including the Hacker Manager
- Introduction to types of companies and skills joining the TechSprint (include pictures of hackers already confirmed)
- Explanation of the TechSprint goals and why the exercise is important
- Introduction to team roles and extra functions
- Rules of engagement and team formation, including the number of expected teams, problem statement selection, and how to invite people onto a team or volunteer to join one
- TechSprint best practices
- Content on TechSprint focus area
- Agenda for the TechSprint, including timings for kick-off, demo deadline, and pitch schedule for Demo Day
- Dress code during the TechSprint and for Demo Day
- Provision of meals during the TechSprint
- Venue resources, hours, and accessibility
- Demo of collaboration tools and other technology
- Pitch guidance for content and timing
- Judges and judging criteria of pitches if applicable
- Communications guidelines and disclaimers, including social media, press, and privacy of individuals, organizations, and solutions
- Contact information for key resources
- Q&A

## Boot Camp Follow-Up

***Boot Camp Follow-Up***

After the Boot Camp, send out a follow-up email to all registered hackers that includes the video recording of the Boot Camp, links to the collaboration tools, and any additional instructions and requests. This email can also be forwarded to last-minute hacker additions.

***Floaters Call***

Organize a follow-up call with self-selected floating roles, after the Boot Camp, but before the start of the TechSprint. This call focuses on coaching each floating role and how to deliver feedback during practice demos.

***Team Leads Call/Briefing***

A follow-up call with Team Leads should be organized after the Boot Camp, but before the start of the TechSprint. For this call, focus on getting a sense of how the team formation process is going. Team Leads should be asked whether there are any issues that teams or leads are facing, and whether team roles or sizes need to be adjusted to make the teams more equally sized and functionally diverse.

Start the call by asking all the Team Leads to share their process for team formation and outreach -- some may already have recruited many team members, while others may not have started at all. Additionally, some team

roles may be in shorter supply (e.g., front-end developers) and may require a request from you to share the resources.

***Scrum Masters Call/Briefing***

Scrum Master(s) should be selected by the planning team and can be included in the Team Leads call. If the TechSprint is large enough to warrant multiple Scrum Masters, an additional follow-up call can be scheduled 2-4 weeks before the TechSprint begins. This call should focus on the same things as the team lead call and clarify that Scrum Masters are responsible for updating you on the progress of teams towards their goals.

## Team Formation, Leadership and Naming

Once the basic sprint participant list is established, the teams will typically self-organize organically. Again, following the Boot Camp, participants can use the Sprint communications platform to begin to propose problems they want to work on under the sprint's Problem Statement, and can invite others to join. Individuals can describe their interests and skills and match up with teams that need them. Again, this will occur with an eye to meeting the Sprint's requirements for diversity of types of organizations and for individual skills.

As a result, the teams will be partially formed by the time of the Sprint's opening. At that point, the organizers can help the groups complete their team formation, assuring that each one meets the Sprint's criteria.

At the opening, teams will also select Team Leads, if they have not already done so. Team Leads are ultimately responsible for making sure that they have the right members on their team.

It is not uncommon for the curation of team makeup and team leadership to continue as the Sprint proceeds, as individuals may switch teams or small teams might merge. The TechSprint Manager should facilitate this as needed.

At the Sprint opening, the teams should be asked to give themselves names if they have not yet done so. These can evolve as the work proceeds and teams begin to refine what their solutions will do, but should be fairly well set by the second day of the sprint.

## Team Roles

The curation of the teams' makeup should achieve the following set of roles on each team.

Note that an individual on a team could play multiple roles or just one —innovative collaboration and flexibility are key. Additionally, it is strongly encouraged that each team include at least one hacker from a previous TechSprint, who is familiar with the concept and processes. This hacker will be able to share best practices and help build a collaborative culture. Variations in team structure are fine, so long as teams are confident that they can meet their targets and they fall within the Sprint's structure guidelines (team size, roles, etc.).

The following team role overview is adapted from the TechSprint materials of the Financial Conduct Authority.

***Team Leader***

In addition to a team role, leaders will be responsible for curating their teams based on the database of participants. They will manage the team's timeline and deliverables, act as the point person for TechSprint organizers, and join a daily scrum session during the TechSprint.

***Designer***
Designers are the "big ideas persons" who can make unicorns and hit moonshots. Designers know the right design to make the moving parts fit together seamlessly.

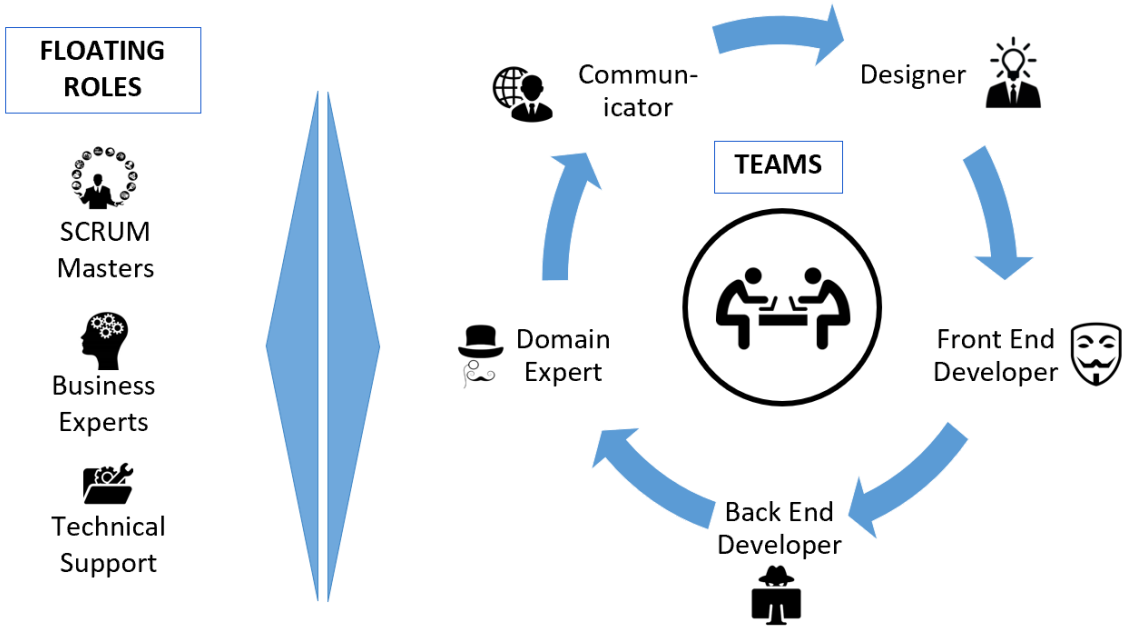
***Front End Developer***
Front End Developers make buttons do stuff, make screens transition, convert design to functionality, ensure the user flow works correctly.

***Back End Developer***
Back End Developers work with APIs, know data well, and are prepared to manipulate it for good. They glue stuff together to make it all work seamlessly.

***Subject Matter Expert***
SMEs have in-depth knowledge about the subject matter of the TechSprint, the industry, and operating processes that help drive decisions. SMEs shape the product to avoid pitfalls. Each SME should provide a detailed overview of her or his unique focus area.

***Communicator***
Communicators work on product descriptions and presentations to make them irresistible commodities and present team updates to TechSprint Observers. Communicators can also supplement the team leaders in talking with the TechSprint organizers about the teams' progress without disrupting their colleagues. Communicators may also be tapped to share updates with VIPs, Doctors, or Observers of the TechSprint.

## Illustrative Team Structure




## Floating Roles

***Scrum Masters (full-time over the course of the TechSprint)***
Scrum Masters are internal or external technologists who are experienced with Agile development and have led scrum meetings (a daily touch-base designed to update status and raise impediments, but not solve problems).

They will work with the teams to surface and solve any blockers, provide feedback and link the team with other resources. Scrum Masters must attend the Boot Camp and Team Lead and Scrum Master calls.

***Technical Support (full-time over the course of the TechSprint)***
Technical Support assists with technical issues that arise during the TechSprint, to help teams overcome any hurdles.

***Business Experts (can hold office hours)***
Business Experts help teams by sharing their knowledge about the industry in all of its complexity, the problem statements, and the current issues that the TechSprint is trying to solve.

***Doctors***
Doctors are floating helpers to the teams as they work through their solution-building. They provide feedback as teams practice their demos for the Demo Day.

During the TechSprint Opening, ask any hackers who are still looking for a team and all Team Leads who still need a specific skill set to meet for some last-minute trading and organizing. This can be informal but should be facilitated by the organizer most familiar with the team formation status or by the Hacker Manager.

## Deadline for Problem Statement Selection

Some TechSprints assign specific problem statements to the teams. More often, the organizers allow some time for teams to finalize a statement of the specific problem they are setting out to solve, within the sprint's overall Problem Statement. You may want to set a deadline for this, shortly into the active part of the sprint. This deadline can be combined with the final team formation deadline to minimize independent report-outs.

## Collaboration Tools

### Slack

Create a free Slack workspace for the event and invite all hackers, organizers, and data/technology resources to join just after the Boot Camp. This allows hackers to begin forming teams ahead of the TechSprint and gives the organizers an easy way to communicate information to all hackers at once. Hackers can also begin asking questions to the providers of the data and platform as they begin the onboarding process. By the time the TechSprint begins, you should strongly encourage the hackers to join the Slack channel to promote the culture of collaboration and streamline information sharing. The requirement for using these collaborative tools should be clearly stated in participation packs and at the Boot Camp.

Note that some regulators and financial institutions may block Slack from being accessed through organization email addresses. In this case, ask hackers to access the platform using a personal email and computer instead.

### Other Collaboration Tools

Depending on the size of the TechSprint, a collaboration tool like Miro or Github can be used as a digital whiteboard to post important information, both from the event organizers (e.g., contact info, dataset overview, housekeeping info, etc.) and the hackers (e.g., team member recruitment, problem statement selection, data exploration, etc.). For smaller TechSprints, a Google document or sheet could accomplish the same goals.

**AIR HELP:**
Link to Miro Board
Link to Github
Link to Slack

## During the TechSprint

The following events will occur during the sprint.

### Daily Scrum Sessions

TechSprint organizers should conduct 30-minute scrum sessions 1-2 times per day with Team Leads and Scrum Masters to make sure teams are on track, address major issues, and facilitate sharing across teams. Meetings are best in a separate room (to allow them to speak candidly). Quickly ask each Team Lead to provide an update of his or her team's progress, issues they are facing, and insights they have gained.

### Midweek Socializing

It may be beneficial to host a midweek social for hackers in the evening of the middle day of the TechSprint (not the first and not the night before the deadline). Choose a location outside of the TechSprint floor. This provides hackers the opportunity to get to know one another and form a sense of community.

### Demo Practice Sessions

The afternoon or evening before Demo Day, prepare a separate conference room with A/V hookups so each team can set up their presentations. Doctors and Scrum Masters should attend and provide feedback, considering the TechSprint rules and judging criteria.

### Solution Deadline

Communicate the Solution Deadline to hackers at the beginning of the TechSprint, along with formatting requirements for the final demo (e.g., only PowerPoint and whether live online demos are viable). Teams often feel anxious close to the deadline, so organizers should be available to answer questions, but should avoid disrupting teams with meetings or feedback. If necessary, you can cancel or shorten Team Lead/Scrum sessions, especially if no major issues need to be addressed.

### Demo Collecting and Testing

There should be a designated resource to make sure that teams submit their demos on time. To avoid A/V complexities at the venue, it is suggested that all the presentations be pre-loaded on one laptop. Make sure the Internet, Internet browser, and links all work on the presenter laptop on-site.

# 5. LOGISTICS AND OPERATIONS

The logistics of a TechSprint require great attention to detail. Make contingency plans for all critical aspects of the event. If there is no internal capacity for this workstream, then the logistics can be outsourced to a venue or event planner who must be engaged early in the planning process.

## Venue

Select a central location, providing easy access to both participants and observers, and consider the following when making a choice:

- Single point of contact for the venue
- Enough space available for hacker teams, observers, and Demo Day attendees
- Separate space for the onsite planning office
- Accessible by hackers into the evening
- Easy access to different areas of building: bathrooms, conference rooms, etc.
- Quality of A/V and presentation space for Demo Day

A small office and/or storage area is essential for the host (and team) providing a place to receive and store supplies, prepare materials, and meet privately.

### Accessibility and Signage

The venue needs to be easily accessible to visitors for the duration of the TechSprint. Hackers must be able to access the TechSprint floor and bathrooms without being escorted by venue staff. Opening hours will be defined by the venue; 24/7 is preferred, but must be open to the hackers from 8am-6pm local time at a minimum. Heating and air conditioning must be turned on after hours as long as hackers are onsite.

The venue should also allow large signs and volunteers in the lobby and other public areas, especially for Demo Day, to direct hackers and attendees. Minimal signage and decorations should be allowed on the TechSprint floor and Demo Day rooms. Most venues will provide easels or tripods for the necessary signage.

### Meeting Rooms

The following rooms and materials should be confirmed:

***Hacker Room (from TechSprint opening until solution deadline)***

- Comfortably fit the maximum number of hackers in team table formation
- Extra space for observers and host team is a plus
- Movable tables and chairs (hackers will likely reconfigure the room)
- Access to power adapters and plugs
- Post-It paper pads, easels, whiteboards, and markers
- Presentation capability (projector and computer plugin)
- WiFi accessibility required, hardwired Internet is a plus
- Ability to serve food/drinks

***Demo Day Room (could be same as Hacker Room)***

- Comfortably fit expected attendees
- Theater-style configuration
- WiFi accessibility required
- Livestreaming capability (if needed)

- Presentation capability (projector and computer plugin)
- Ability to serve food/drinks
- Additional anteroom or open gathering space is a plus for networking and food/drinks

***Extra conference room(s) (from TechSprint Opening until solution deadline)***

- For scrum sessions and ad-hoc team meetings
- Demo Day - rooms for judges' deliberation, press, and photographer/videographer

***Observer Briefing Room***

- Comfortably fit 10-20 attendees in each session
- Presentation capability (projector and computer plug-in)
- Additional anteroom or gathering space is a major plus for networking and food/drinks

***Dedicated Demo Day Hacker Room***

- Comfortably fit the maximum number of hackers in team table formation
- If there is not enough room in the main Demo Day room, then hackers should have a separate room where they can practice their presentations and leave their belongings during the demos
- Presentation capability (projector and computer plugin)
- Livestreaming capability of the main Demo Day room, so hackers can observe the speakers.

### Hotel Rooms

Consider reserving a block of hotel rooms close to the TechSprint venue. Staying in one hotel allows teams to be close together, and conference rooms at those hotels could be booked for after-hours collaboration. This hotel information should be communicated once hackers have officially registered for the TechSprint.

### Internet Access

[Requirements described in Data, Platforms & Technology section]

## Venue Staff

If the host agency is using an off-site facility, identify a single point of contact at the venue for staff management.

Other staff and considerations include:

**Security Guards:** If an attendee list is requested by the venue, categorize it by type (hacker, observer, Demo Day attendee) and explain which days and access each group needs

**Front Desk/Admin:** Same as security guards

**Audio/Visual:** Assign oversight to someone on the team and ensure they are prepared with a list of requirements and are aware of any third-party A/V staff onsite

**Other Onsite Roles:** You will need volunteers to be available for set up and to change room configurations. A single point of contact should manage all volunteers and establish a primary channel for communicating quick and easy directions once they are onsite. Volunteers are needed for the:

- Hacker Boot Camp: set up, check-in, direct crowds
- TechSprint Opening: set up, check-in, direct crowds
- Observer Briefings: set up, check-in, direct crowds

- Demo Day Setup: organize tables and chairs, check name tags, set up/alphabetize name tags, pick up printed materials, last-minute errands
- Demo Day: check-in and direct crowds, pick up unclaimed name tags
- After-Party: direct crowds and note no-shows for host team records

## Schedule, Scripts, and Slides

### Schedule and Run of Show

Develop a detailed run of show or an item-by-item, minute-by-minute schedule that includes logistics, technology details, roles, and responsibilities. Use a program that easily accommodates modifications. Consider including:

- Exact timing with notations of AM/PM and time zone
- Color coding by attendee group (hacker, observer, judge, volunteer, etc.) clearly denoting who needs to be where at what time)

Plan a run-through of the event with the team onsite just before opening the TechSprint.

### Script

A script is a good option if you plan to have multiple speakers throughout the TechSprint. Write a script to correspond with the run of show, tracking all speakers and remarks in a single document. Understand speaker preferences beforehand so that you have time to prepare individual remarks on notecards if necessary.

### Slides

Prepare slide decks for the kick-off of the TechSprint and for Demo Day, including slides introducing each major speaker or topic.

## Catering

Plan to provide breakfast, lunch, and snacks for the hackers. Capture any dietary restrictions via the hacker registration survey (most common are vegetarian, gluten free, and kosher). Food offerings should be cold and served buffet style, allowing hackers to break when convenient.

- Breakfast: cold continental breakfast plus coffee/drinks (served ~8 am)
- Lunch: cold chef's choice lunch plus drinks (served ~12 pm)
- Snacks: individually packaged and not messy (served ~3 pm)
- Liquids: water/soda/coffee/tea available all day. If allowed by the venue, provide beverages (alcoholic and non-alcoholic) after ~6 pm
- Coffee/tea and light breakfast/snacks may also be provided for the observers and Demo Day attendees.

Ensure plans for continuous trash removal and bussing, especially if food is served in the same room where hackers are working.

## Audio/Visual

A/V may be the area over which you have the least control and the most likely part of the program to fail, especially at an offsite venue. Expect at least a few A/V issues to arise before and during the TechSprint, so plan contingencies for all possible points of friction. Establish a clear communication channel and plan between the

host team and the A/V team. Because of the complexity involved, potentially explore outsourcing the A/V needs for the TechSprint. Consider the following:

- Does the venue have a dedicated A/V team?
- How easy is it to communicate with the A/V teams?
- Will there be many interchanges between types of media during presentations (e.g., switching from PowerPoint to video to livestreaming)?
- Will there be livestreaming with another site?
- Is there an attractive backdrop and lighting for the speakers, especially if they will be videoed and photographed?
- Microphone considerations, including podium mic (speaker must be stationary), handheld mic (harder for livestreaming), lavalier mic (cannot be passed – best option for livestreaming)
- Note that if the event is videoed, the videographer will need to mic the speakers and that this microphone could conflict with the mics of the venue, creating noise feedback. Test this in advance.

An A/V resource at the venue should coach all external organizations (outsourced A/V team and host) on how audio works in the rooms. The same A/V resources should be present during all testing and at the event for any emergency A/V management/risk mitigation.

## Judges and Speakers

### Judges

Confirm judge participation at least one month in advance and follow up with a Judging Deck that outlines the rules of the TechSprint, number and types of awards, judging criteria, and bios of the participating judges. Select an odd number of judges to enable a clear majority vote.

On Demo Day, a planning team member should be dedicated to managing the judges and their deliberation process. Judges should be seated in reserved seats in the front row. Provide a one-page Scorecard for each judge to use in evaluating each team. The scorecard should include the TechSprint rules and point allocation guidelines for each criterion, and with room for the judges to write comments to themselves on each demo. Following each demo, the judges should be invited to ask questions of the team. Ideally, each judge will be able to ask at least one question to each team. If time does not permit this, rotate which judge asks the first question.

Following the demos, give the judges at least 30 minutes for deliberation in a separate room. If there are many teams or if the award is significant (e.g., acceptance into an accelerator), then 45 minutes or an hour may be scheduled.

Judges may be invited to share other feedback for the teams at the Awards Ceremony.

**AIR HELP:**
Link to Sample Judging Scorecard

### Speakers

Confirm all speakers at least one month in advance, and request all presentations (PPT or PDF) be submitted one week in advance.

## Risk Management

One goal of this manual is to help identify and mitigate risks associated with producing a TechSprint. These are complicated events. Examples collected from real-life TechSprints are included to help agencies anticipate and avoid possible pitfalls and to create contingency plans to make it easier for the TechSprint planning team to pivot quickly. In case you have any questions, you can always contact AIR for additional information and advice. Watch-out areas include:

| Risk | Watch Out |
|---|---|
| Sourcing hackers/attendees | Solicit the right number of hackers with the right mix of skill sets to field a robust and diverse set of teams. |
| TechSprint attendees | Consistently follow-up to confirm participation leading up to the event - Don't be surprised by last minute drop-offs. |
| Data procurement | Ensure data sets are available, useful, scrubbed, and free of bias. |
| Data access for hackers | Confirm if the data is accessed centrally through the platform, or if data downloaded on individual laptops (with legal and privacy constraints). |
| New Tools / Platforms | Understand any Agency rules and procedures around selecting and onboarding new technology. |
| Platform access for hackers | Select platforms that are easy to onboard and technically compatible with hacker computers. |
| WiFi capacity at TechSprint site | Know the capacity and any resources competing for WiFi - multiple hacker teams working simultaneously will drain resources quickly and there may be onsite complications as well. |
| Team dysfunction/breakdown | Be prepared to moderate, advise, coach, and counsel team members to work through group dynamics, stress, and fatigue. Sometimes teams can be combined or reconfigured. |
| Onsite logistics | Details count - plan ahead and heavy up onsite resources to follow-up, chase-down, and course-correct. |
| Demo Day attendance | Chase down commitments from observers and judges to make sure that teams are appropriately recognized for crossing the finish line. |
| Award impact on collaboration | Balance collaboration and competition by selecting an appropriate prize value (the larger the prize, the less collaboration you can expect). |
| Demo Day tech failures | Manage this multimedia affair closely - plan carefully and create contingency plans to seamlessly flex. |

**AIR HELP:**
AIR contact information

# 6. COMMUNICATIONS

## Brand, Messaging, and Materials

To be sure that your TechSprint's communication is consistent and effective, start by developing the narrative and visual identity of the particular TechSprint. Focus on strategic communication messages, effective graphics, and consistency.

Consider the story and message that you want to convey. Develop branding and graphics that convey innovative thinking and collaboration, as well as the theme of a particular TechSprint.

To ensure that the TechSprint's communication is consistent from the very beginning and aligned, both internally and externally, develop a communication kit that includes:

### 1. Basic Visuals - poster of the event with:

- Main graphics
- The title or slogan of the event
- Logistics (date and location)
- The social media hashtags
- Information on organizers, sponsors

### 2. One-pager on the TechSprint, including:

- Logistics (date and location)
- TechSprint theme and its importance
- Challenges that the TechSprint is seeking to solve, expected outcomes
- Information on organizers, sponsors, participants (if known)

### 3. Media Guidelines

- Ground rules for any public communication regarding the TechSprint apply to all participants including hackers, speakers, judges, partners, and sponsors.

**Sample Communications Guidelines for All TechSprint Participants**

1. Finalizing participants – we are in the process of gauging interest and finalizing participants. Although the TechSprint has been publicly announced, we would appreciate all communications with ourselves and potential participants to remain confidential until participants are formally announced
2. Announcement of participants – we expect to be in a position to confirm and announce participants of the TechSprint by the week of [date]
3. Terminology - Decide how the agency wants participants to publicly describe their relationship (e.g. "partnership," or "in collaboration with" etc.
4. Press – any wider communications (e.g., digital content or press releases) that refer to the TechSprint need to be agreed upon with the Strategy and Planning team prior to release
5. Privacy – no reference to other firms' data are to be made via firms' communications
6. Social media – participants are welcome to provide supporting communications after this announcement via social media, and are encouraged to post before, during, and after the TechSprint using hashtags (add TechSprint hashtags such as #TechSprint)

## Event Website and Mobile App

While not required, an event website or mobile app can help your team and attendees by centralizing key information and resources. If either a website or app is created, provide the relevant budget to make sure it is robust and useful.

### Website

The TechSprint website should provide the following:

- TechSprint concept/context
- Logistics (date and location)
- Registration (can be password protected if invite-only)
- Information on sponsors and organizers
- Data resources/repository

### Mobile App

A mobile app is only recommended if a significant number of attendees will actually download and use it. Many event management platforms provide a mobile app as part of their product packages. A mobile app should provide the following:

- Logistics (date and location)
- A detailed schedule with links to speakers and resources
- Access to other TechSprint participants (bios and messaging)
- Feedback on specific sessions
- Information on sponsors and organizers
- Automated mass communication to participant segments

## Social Media and Press Planning

### Hashtags

Create a simple hashtag for the event that is unique and memorable. Hashtags are useful for generating earned media attention and tracking engagement with the event afterward.

Model use of the correct event hashtag plus any other relevant tags from your and your partners' Twitter accounts. However, limit the number of hashtags and ensure that the event hashtag is shared widely – on the website, in participant packs, in the event program, in takeaways, on signage, on the teams' worktable tents, and on slides during the presentations.

### Social Media Posts

The primary social media platforms for events like this are Twitter and LinkedIn, but Facebook and Instagram could also be used if it is in line with your agency's social media strategy. Post the initial information regarding the TechSprint; two weeks before the TechSprint starts you can intensify your social media presence. The posts could include statistics on the topic area, event participation, quotes, video messages, and announcements.

Planned social media posts should include:

- Boot Camp (2-4 weeks out)
- Announcement of teams (2 weeks out)

- TechSprint opening (each presentation)
- Each day of the TechSprint highlighting key events (observer/content briefings)
- Demo Day opening (each presentation/keynote)
- Team demos (1-2 teams)
- Award presentation
- Follow-up post with links to summary and videos

### Press

Two weeks before the TechSprint begins, send out a press release to target press outlets to share information on the TechSprint with the broader financial regulatory and technology community.

Invite journalists to attend the Demo Day.

Prepare a press kit to hand out. Identify specific hackers, judges, or VIPs that the press can interview. Your Press Kit should contain:

- Agency's background
- Management/Staff Bios
- A Selection of Important Press Releases on past TechSprints
- TechSprint Statistics Sheet
- Graphics, including logo and event theme
- Contact Information

## Photos & Videos

Document the TechSprint by taking photographs and videos throughout the event on an ad-hoc basis. It is also worth hiring professionals to take specific photos and videos for social media and future marketing purposes.

Both photographers and videographers should arrive at least one hour before the required start time, have dedicated space to set up their equipment in the room, and test all video and recording equipment before the start time.

Create a shot-list for the photographer and videographer throughout the event. Create a list of key interviewees and the questions to ask each of them and book a separate room for individual interviews.

For video recordings, a crucial component is the quality of sound. If a separate microphone is used, test whether it will create feedback with in-room A/V equipment. Also, again, plan for light and speaker backdrop for photography.

Consider gathering short videos from participants, judges, and guests during and right after the event, and at the after-party if any, asking how their experience was and how they felt about participation. These can be developed into a video about the TechSprint to share and to post to the agency website.

## Decks and Presentations

You will need to prepare a variety of decks and presentations in support of the Boot Camp and the TechSprint itself. Leverage the branding/theme you have created to ensure a sense of consistency. Here are some examples of what you will need to produce:

- Hacker Information Deck (hackers)
- Invitation Deck (observers and attendees)
- Judging Deck (judges and hackers)
- Boot Camp presentation for hackers
- TechSprint Opening + Keynote (collated)
- Observer Briefings
- Demo Day Opening + Keynotes (collated)
- Demo Day Demos (collated)

## Printed Communication Materials

Know where you can print materials onsite (or close by) in case of last-minute needs during the TechSprint. Always have contingencies plans in place. Below are the key print items and considerations:

### Signage

- Large official event posters mounted on foam board or other sturdy material (24 in x 36 in), including the name of the event, host organizations, venue, dates, and the event hashtag
- Smaller event posters (8.5 in x 11 in) to hang on walls and distribute
- Hashtag posters (8.5 in x 11 in) to hang on walls and distribute
- Step and repeat backdrop for Demo Day
- Table tents for hacker tables, if desired

### Judging

- A one-page document featuring pictures and titles of all judges, including the Chairperson of the Judging Panel if there is one
- Handout on judging criteria and instructions
- One set of judging scorecards that judges may fill in by hand (one set per judge)

### Name tags

- Print name tags for each TechSprint participant showing full name, plus company in smaller font
- If it is important to have participants be badged, best practice is to be prepared to provide new name tags each day

### Plaques, Medals, Trophies

- All require advance ordering to avoid significant surcharges

### Miscellaneous

- Promotional Stickers
- Ground rules for hackers to post on the TechSprint floor
- List of important contacts to display on the TechSprint floor

## Feedback Survey

Prepare a simple electronic survey to send to participants immediately following the TechSprint. Use an approved survey platform such as SurveyMonkey which automatically aggregates responses. Stick with mostly multiple-choice questions using a scale wherever possible, but also leave room for freeform comments in case participants have suggestions.

# 7. FOLLOW-UP

Take the following steps after the TechSprint.

## Thank You Messages

Send out pre-drafted emails to TechSprint participants. The follow-up emails should include links to feedback forms and PDF versions of the presentations from the event. Send thank you notes to judges and keynote speakers. In addition, prepare and send out follow-up emails to any contributors and, if appropriate, connect them with the winning team(s). Consider thanking senior people in the hacker's organizations for making them available, commending the value each brought to the effort.

## Internal Debrief

Once immediate communication action items have been completed, conduct an internal debrief. Focus on whether objectives were achieved, what worked well, and what did not. This applies to the event as a whole, as well as each workstream, e.g. venue, logistics, hacker management, etc.

If the team is in one place, plan one long debrief session. Otherwise, schedule multiple calls to debrief specific workstreams of the TechSprint. Additionally, the agency as a host should debrief the event with any TechSprint partners.

## External Debrief

Just as important as the internal is the external debrief. The feedback surveys should kickstart the process. Don't hesitate to send out reminders to prompt higher levels of survey participation. Two to three weeks after the event, schedule debrief focus groups for hackers and key attendees who would like to participate.

## Information Collection

Once feedback is collected, update your TechSprint Manual with new insights and best practices. Capture any new data and demos in a repository owned by the agency and accessible to hackers, where applicable.

Additionally, collect the names of attendees and no-shows and pass them along to the external communications workstream to record.

- Follow-up emails – Emails drafted for each participant segment with blanks for the winning team and ad-hoc prizes. These emails should thank participants for their time and energy, provide a link for photo and video sharing, as well as reiterate communications rules of the TechSprint, especially relating to press.

- Feedback surveys -Surveys should be created for each participant segment and included in the follow-up email drafts.

**AIR HELP:**
Link to Sample Feedback Survey

## Post-Event Press and Social Media

After the TechSprint, send follow-ups to all the journalists that have attended the event. Offer help with any additional information that journalists may need to make sure that information has been published correctly. Monitor the invited press outlets for publications.

Update and publish write-ups that were planned before the TechSprint:

- Op-ed: fill in blanks and post to agreed-upon platforms
- Website: update your agency's website with the winning team and pictures/videos from the TechSprint
- Social media: post the winners list and first few photos immediately after the TechSprint. In the next few days add more pictures from the TechSprint.
- Create a short promotional video capturing live footage of the TechSprint and featuring highlights and accomplishments. Post the video on social media and your website.
- If the TechSprint leads to the project being further incubated, keep the information refreshed on an evergreen site and plan future events for any key milestones.

# CONCLUSION

The AIR Team hopes this manual is useful to financial regulatory agencies planning to host TechSprints. We will continue to maintain it, so please offer suggestions based on your own experience, and please do not hesitate to contact us at www.RegulationInnovation.org if you have questions or need help in organizing a sprint event.

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