

A Communities Guide to Prize and Challenge Competitions



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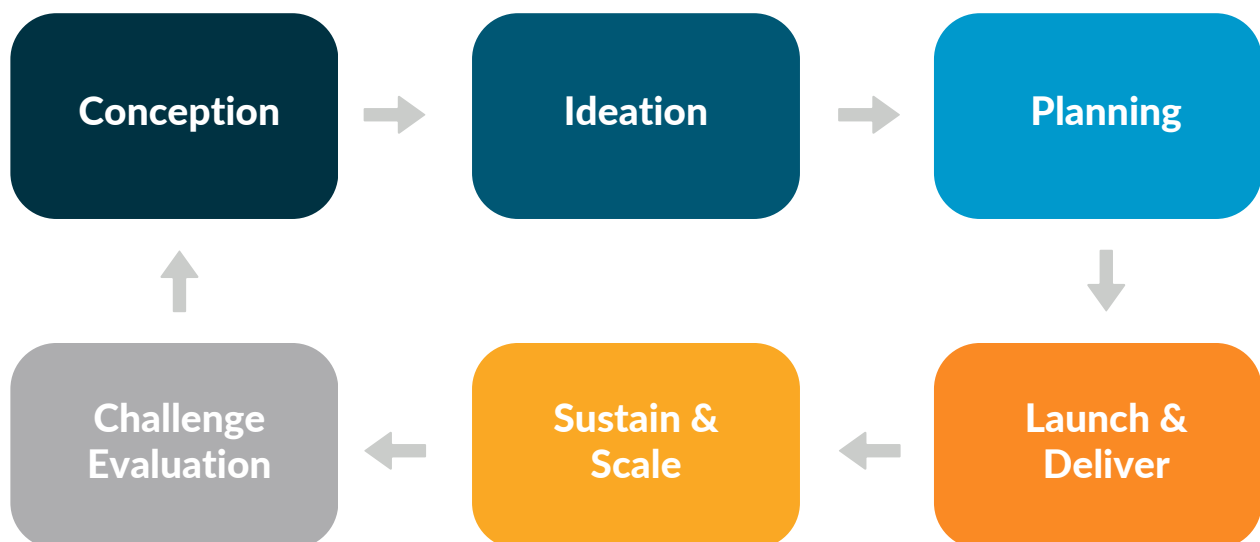
Introduction

Prize and challenge competitions allow communities to collaboratively solve complex problems. They offer various financial and exposure incentives to teams, cities, and organizations searching for solutions to complex problems. These competitions lower barriers to entry, encourage cross-sector collaboration, provide financial support for innovation, heighten public awareness, and deliver credibility to the winning teams. For example, the Department of Transportation Smart City Challenge provided \$50 million to Columbus, Ohio to encourage innovative solutions for creating an integrated transportation system. The Defense Advanced Research Projects Agency (DARPA) Grand Challenge accelerated the development of autonomous vehicles and helped launch autonomous vehicle companies like Waymo. Both challenges provided exceptional benefits to cities by bolstering new organizations and funding innovation.

These competitions are cost-effective methods to develop new ideas and improve solutions by betting on a set of objectives shared across a group. They orient teams towards outcomes - not processes - that lead to innovative breakthroughs and can help unlock systemic change.

Prize and challenge competitions have become popular over the past few years as organizations realize the value and opportunities they can bring to their region. However, creating an effective and sustainable program can prove challenging. In this playbook, city and nonprofit leaders will learn about tools (e.g., templates, external resources, exercises) proven to develop a prize and challenge competition across six phases.

Figure 1: Stages of Prize and Challenge Competitions | Source: Authors



Conception

Challenges are resource intensive and require careful consideration and planning in their nascent stages. It is tempting to jump right into the challenge statement that addresses the most pressing problems in our communities. The problem focuses on addressing the “why” and the challenge focuses on addressing the “how”. Therefore, before jumping to the “how”, we recommend defining a clear problem statement (find the “why”) and evaluating if a challenge competition is the best approach to addressing the problem. In this section, we provide guidelines for defining a problem statement, evaluating if a challenge is an appropriate approach to solving a problem, building a challenge team, and defining a challenge statement.

Define Your Problem Statement

The time spent in the conception stage - particularly to define the problem - will help avoid pitfalls at later stages. Defining a problem statement is tougher than it may appear. Here are some strategies to define a coherent problem statement.

- **Design With the Community, Not for the Community:** Engage the community you wish to serve to understand if the problem you perceive is one they experience.
- **Problem-Oriented:** Approach the process with an open mind focused on uncovering problems rather than looking for ways to include pre-determined solutions.
- **Root Cause vs. Symptoms:** Undertake a root cause and barrier analysis to ensure the problem is not a symptom of a more extensive systemic problem/failure.
- **Holistic Approach:** Problems don't exist in a vacuum, but are often an interplay of multiple systems and factors working against or in tandem with each other. Undertake a stakeholder analysis to identify who can enhance and augment your understanding of the scale and scope of the problem. (See [Civic Makers Stakeholder Identification template](#))
- **Model Practices:** Identify existing solutions and why they have failed to achieve the desired outcome and test if the status quo is the best outcome.



Some Problem Statement Prompts:

- **(User)** needs **(user need)** because **(insight)**. [See Problem Framing template from UNLEASH.](#)
- How might we **(human-oriented problem to solve)** through/by **(big hunch about the innovation)** so that **(important outcome that will happen)**?

A well-defined problem statement will save a lot of time and resources. More importantly, it won't result in inadequate solutions to a problem that didn't need solving in the first place.



A Good Problem Statement

- Clearly identifies the person, group, or entity facing the problem.
- Clarifies priorities and focuses on a problem in need of solutions.
- Outlines “why” the problem exists.
- Rallies others around a shared vision.
- Keeps everyone forward-looking and realistic.



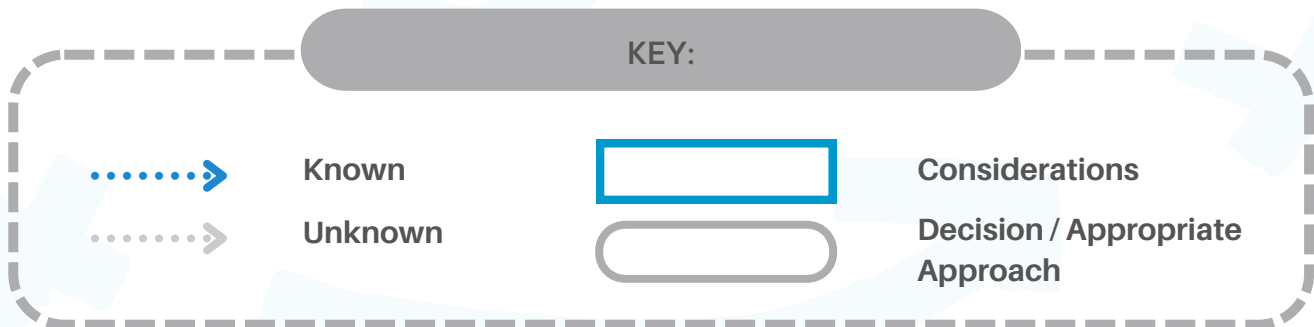
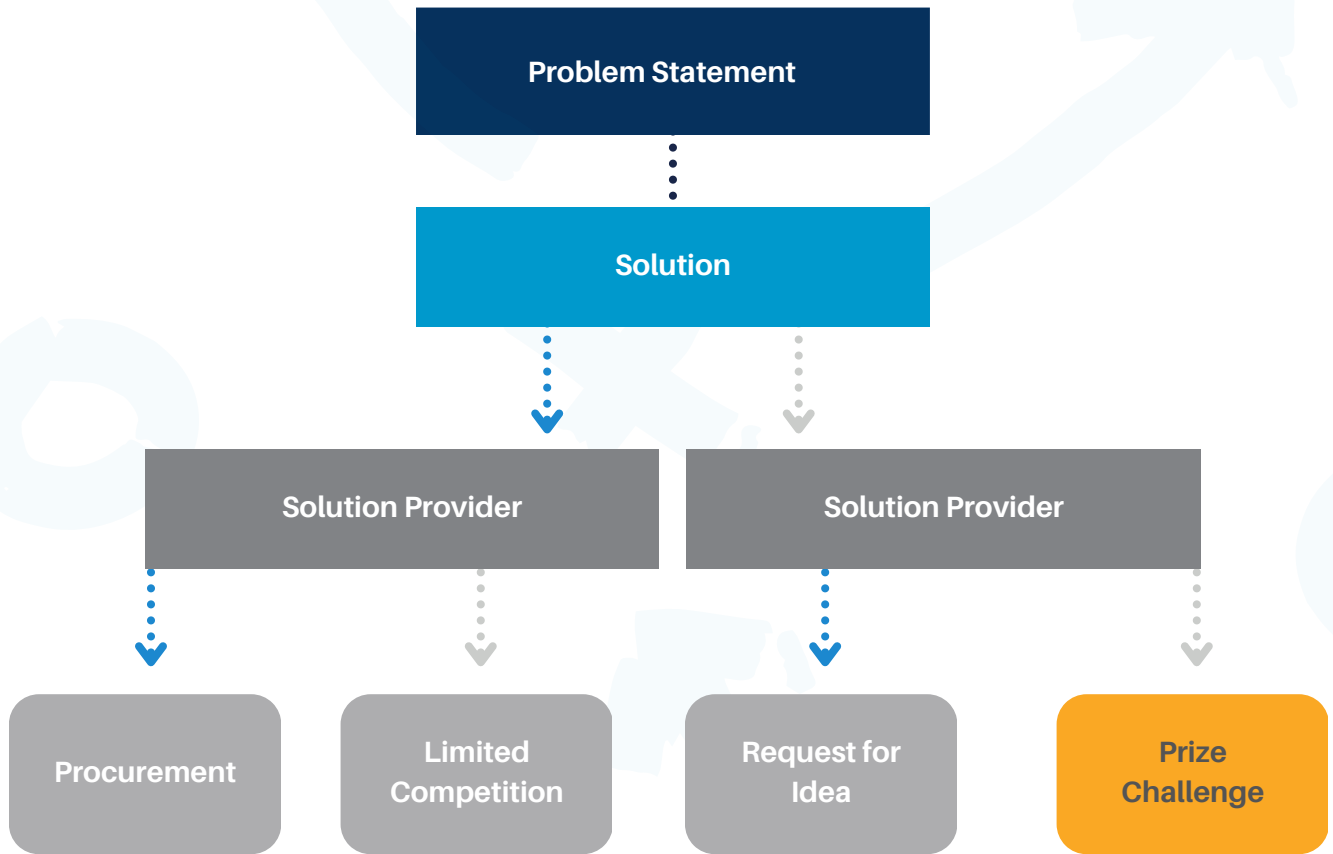
Questions to Consider

- Does the problem statement align with the organization's strategy? (it makes it easier to get buy-in from leadership)
- Have we included everyone who might be affected by the problem?
- Is there a staff member(s) knowledgeable about the issue?
- Do we have an understanding of why existing solutions are unable to solve the problem?

Method Exploration

The solution and solution provider play a critical role in determining the suitability of a prize or challenge competition. The decision outcome matrix/tree below illustrates outcomes based on knowledge of the solution and the solution provider.

Figure 2: Assessing Challenge Viability | Source: Authors



- **Solution Known, Solution Provider Known** → If both the solution and the solution providers are known, a standard procurement process to acquire the solution is likely the best way to solve the problem.
- **Solution Known, Solution Provider Unknown** → If the solution is known but not the solution provider, consider launching a limited competition asking vendors to deliver the specific known solution (RFP).
- **Solution Unknown, Solution Provider Known** → If the solution is unknown, but the solution provider is known, issue a request for innovative ideas from vendors that fit the profile of the known solution provider (RFI).
- **Solution Unknown, Solution Provider Unknown** → When the solution and provider are unknown, a challenge or prize competition is ideal. An unknown, unknown decision allows diverse vendors and ideas to compete against each other to discover the optimal solution to the problem.

CAUTION CAUTION CAUTION CAUTION CAUTION CAUTION

Make sure to carefully consider all solutions and scan the market for solution providers before using the challenge viability matrix/tree.



Questions to Consider

- Will the problem invite innovative solutions when presented to the public?
- What are the roadblocks to achieving the potential solutions?
- How will the solution create impact? Who will it impact?

Build your Challenge Team

Once the group determines that a challenge competition is the best method for solving the problem, the next step is to build your challenge team. A well-structured challenge team is the key to successfully developing a challenge competition.

Sample roles and responsibilities of a challenge team:

Challenge Manager



Leads and manages all aspects of the challenge, ensures timely completion of tasks and milestones, and monitors project progress.

Subject Matter Experts



Possess expert knowledge of the technology and infrastructure required to support the challenge.

Support Staff



Provides administrative and research support and helps carry out day-to-day activities of the challenge.

Communications Manager



Identifies and reaches potential applicants and manages all challenge-related communications with the community and applicants.

Challenge Specialist



Offers guidance and best practices for designing and structuring the challenge. If a specialist is unavailable, someone with procurement knowledge can serve as the next best option.

Challenge Manager's Team:



Subject Matter Experts



Challenge Specialist



Communications Manager



Support Staff

Define your Challenge Statement

To ensure success, establish a well-defined challenge statement. The following key components should define a clear and compelling challenge statement:

- Broad but clearly identified target community.
- Unique value of the solution defined as the anticipated outcomes and benefit it will bring to the community.
- Feedback and problem statements from end-users (One example is office hours with community experts and residents).
- Technology buckets (IoT, blockchain, etc.), and the challenge type (technology, social, innovation, etc.) incorporated.

Problem Statement

The problem statement outlines the “**why**” of a problem.

Clearly defines the current state

Challenge Statement

The challenge statement outlines the “**what**” and the “**how**” of the problem.

Clearly defines the gap and the expected outcomes (the ideal state)

Challenge statements communicate expected outcomes that applicants need to accomplish. The statement should be broad enough to attract a wide range of unique ideas, while maintaining clear and narrowly defined outcomes.

Problem Statement



Current State

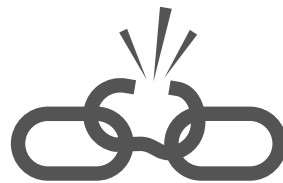


The Problem



The Why

Challenge Statement



Missing / Broken Link



The Gap



The What



Ideal State / Expected Outcome



The Solution



The How



Problem Statement

Road users are at risk in high-traffic corridors and intersections during major seasonal events.

Challenge Statement

Develop a scalable IoT solution and/or software application by leveraging the City of West Lafayette's existing IoT infrastructure and data inputs and the Discovery Park District's NineTwelve 5G/IoT Lab to improve safety for vulnerable road users who navigate high-traffic corridors and intersections during major seasonal events.



Idea In Brief

- Challenges are resource intensive; therefore, carefully defining a problem statement and evaluating challenge viability should take priority.
- Problems don't exist in a vacuum. It is important to include all stakeholders, including those impacted by the problem, in the problem-framing stage.
- A well-structured challenge team is key to successfully achieving the expected challenge outcomes.
- Challenge statements must clearly define the expected outcomes of a potential solution.

Ideation

The ideation phase focuses on identifying funding, partners, and the challenge type. This section discusses three critical aspects of the ideation phase - funding and partnerships, challenge types, and challenge structure.

Funding and Partnerships

Funding and partnerships help set challenge design option boundaries. The funding amount significantly influences the challenge design, making it a critical step in planning. Communities should also consider timelines, staff resources, and organizational and municipal strategy alignment when seeking funding, program resources, and in-kind support.

To begin, challenge teams should understand the various types of internal and external funding available. Table A shows seven funding types with examples, and they are arranged based on the complexity of the acquisition.



Table A: Funding Types & How to find them | Source: Authors

FUNDING TYPE	DEFINITIONS/ EXAMPLES	HOW TO FIND THEM?	CONSIDERATIONS
Individual Donors	Involved community members with interest in the topic of your challenge.	Look for individuals who have donated to institutions in the community meeting related needs.	<ul style="list-style-type: none"> • Easy to use • Less strict rules • Smaller funding amounts
Local Foundations	Local foundations support community-based initiatives related to their mission.	Speak with partners in the space and identify investments that align with your topic area.	<ul style="list-style-type: none"> • Easy to use • Large funding amounts • Limited restrictions depending on the foundation
Local Tech Groups	Tech or business groups that have a pulse on the current technology needed for your local community.	Check out local accelerators and co-working spaces in your community to learn if they want to support the project.	<ul style="list-style-type: none"> • Easy to use • Great partners for technical challenges • Generally less strict funding restrictions • Funding amounts vary • Often have space or time to offer mentorship or training for participants.
Corporate Partners	Local or large corporations in your community with an adjacent business stream to your challenge.	Reach out to companies working in a complementary or adjacent space to the challenge and gauge their interest to advise, judge, or sponsor.	<ul style="list-style-type: none"> • Stricter terms of use • Larger funding amounts • Funds vary greatly depending on the corporate partner
City Funding	Discretionary funding available from municipal departments or offices.	Socialize the challenge idea throughout your department and all city departments. Make sure to identify how the challenge will benefit all of you.	<ul style="list-style-type: none"> • Harder to use than many other funding types • Can be larger funding amounts
Local Universities	Local universities or colleges willing to sponsor your community's challenge.	Researchers may align their projects with your focus areas, and faculty may create applied research.	<ul style="list-style-type: none"> • Harder to use than other funding types • Universities have more restrictions on how outside groups use their funding • Important to identify how they will benefit
Federal Funding	The federal government has various funding opportunities that communities can use for challenges. Applying for these can be challenging, but they can provide large sums of funding.	Check out the US Ignite Federal Funding Tool .	<ul style="list-style-type: none"> • Often have complex and time-consuming applications • Highly regulated • Large sums of funding

Resources

When acquiring resources, stay creative! While cash is the most versatile funding for a challenge competition, consider the in-kind support partners may offer. Examples include scholarships, training program offerings (accelerators, tuition reimbursement), office space, mentorship, exposure to buyers/decision makers, or credits (Azure, Google Cloud, and AWS).

Partners on the challenge committee bring unique perspectives and experiences. They can offer insights into designing the challenge, proposal evaluation, and team assistance. Partners can serve as thought leaders, mentors, or guides.



Questions to Consider

- How to integrate partners throughout the lifecycle of the challenge?
- Which partners do you need from various sectors, and when?

Challenge Type

Once communities solidify funding and partnerships, determining the type of challenge that will lead communities toward success is key.



Questions to consider:

- What outcome are you seeking?
- Who are your target participants?
- How much funding is available?
- What resources are available (e.g., staff time, consultants, etc.?)

In “Challenge Prizes: A Practice Guide,” NESTA, a United Kingdom-based innovation agency, outlines various challenge types. Each type offers a different outcome and timeline. Table B highlights the different challenge types, outcomes, and examples:

Table B: Understanding Challenge Types with Examples | Source: Authors

CHALLENGE TYPE	OUTCOME	EXAMPLES
Breakthrough Prizes	Creating transformative solutions to complex problems.	The Longitude Prize is a challenge that rewards teams of innovators who develop a point-of-care diagnostic test that will conserve antibiotics for future generations. (https://longitudeprize.org/)
Scaling Prize	Scaling transformative solutions to achieve broader impact.	The Virginia Cybersecurity Challenge sought submissions from researchers and faculty members at Virginia public universities to develop a cybersecurity prototype that leverages unique elements of emerging 5G technologies to provide secure operations or communications in ways not possible on previous-generation networks. Participants were encouraged to use funded prototypes to create commercial solutions. (https://cyberinitiative.org/innovation/virginia-cybersecurity-challenge.html)
Startup Challenge	Building early-stage innovators' capacity supporting their entry to the market.	The Inventor Prize aims to help smaller inventors overcome the barriers they face. This type of challenge supports individuals, teams, or companies that would likely struggle to access resources and support otherwise. (https://inventor.challenges.org/)
Community-Centered Prize	Bringing innovators and communities together to develop better solutions.	The Long Beach AR Developer Challenge sought innovators, thinkers, entrepreneurs, start-ups, and solution makers of all skill levels to rise to create immersive AR experiences in Downtown Long Beach. Participants received technical mentorship support and unveiled their solutions to the public. (https://www.longbeach.gov/smartcity/projects/long-beach-ar-challenge/)
Spotlight Prize	Shining a light on a neglected issue or problem.	The Southeastern Pennsylvania Transportation Authority (SEPTA) AR Challenge encouraged developers and creatives to innovate solutions that leveraged AR technology to improve the commuting experience for individuals with disabilities. (https://www.us-ignite.org/pitch-day-septa-for-all-ar-challenge/)
Testbed Challenge	Stimulating innovation in support of policy or regulatory objectives and informing future policy.	The Civic Innovation Challenge, a multi-agency, federal government research, and action competition, aims to fund ready-to-implement, research-based pilot projects with the potential for scalable, sustainable, and transferable impact on community-identified priorities. (https://nscfivinnovation.org/)

The challenge types listed above can act as a guide as communities move forward in the design process. Once a community identifies a challenge type, it should determine the challenge structure. Challenge structures can vary widely and have room for creativity.

Challenge Structure

Establishing the challenge structure gives competitors a clear understanding of the timeline, format, eligibility, evaluation, and amount of effort necessary. The structure’s design will depend on the challenge type. There are two common structure formats, gated and one-stop competitions.

Table C: Challenge Attributes| Source: Authors

ATTRIBUTES	GATED CHALLENGES	ONE-STOP CHALLENGE
Duration	Long-term (6-12 months), multiple different phases	Short-term (1-3 months), only one phase
Cost	\$\$\$\$- with a longer term and multiple winners per round, gated challenges tend to be more expensive.	\$\$- with only one event and one or a small number of winners, these challenges tend to be less expensive
Applicants	A lower number of applicants with several winners across phases	Unlimited applicants
Solutions	More fully baked solutions that have lasting power	Numerous solutions, but they may lack staying power

Eligibility for prize and challenge competitions dictates who can participate. Different challenges have different target participants. Common starting points are individuals, companies, nonprofit organizations, colleges, and universities.

Structure Decision Time: Consider the size and type of companies invited to participate. Determining the right size and type depends on the desired results and is vital to ensuring equity.

While a complete competition evaluation should be conducted at the end of the challenge, communities should incorporate ongoing project evaluation, starting during the ideation phase. Evaluation themes to address from the get-go include:

Cost



Is the challenge affordable?

Scale



Can the challenge deliver impact at a large scale?

Feasibility



Is the challenge feasible for the defined environment?

Equity



Does the challenge advance equity in its design?

Sustainability



Would you want to redo the challenge year after year?

The ideation phase should set a framework for executing a prize or challenge competition. Each phase will move the process forward and guide communities toward a successful prize or challenge competition.

Idea In Brief

- Leverage all of your partners in the search for funding.
- One challenge type may not fit all of your needs. Tailor your challenge to your goals and resources.
- Be creative and utilize the resources available to you.

Planning

Challenges require diligent planning and preparation. This section discusses three critical aspects of the planning stage - call for proposals, evaluation and assessment, and communication and engagement strategy.

Call for Proposals

The quality and integrity of the proposals received will depend on the structure of the application process. An effective call for proposals should level the playing field for all potential applicants, ensuring that the work required to apply is reasonable and does not add unnecessary barriers.

Elements of an Effective Call for Proposals

- Clearly state the outcome(s) the solution is expected to achieve.
- Highlight who can and cannot apply, including organization type, technology type, geographic scope, organization size, team size, etc.
- Outline the criteria that will be used to assess and evaluate the proposals.
- Clearly state submission guidelines, deadlines, review timelines, and office hours (if any).
- Provide all supplemental information:
 - Contact information for any questions or queries
 - Resources applicants will be offered
 - Resources applicants have to obtain themselves
 - Resources applicants can request
 - Special accommodations (if any)

A well-designed application process should entice high-quality applicants from a diverse pool to enter the competition. It is important not to create barriers to application. The application process itself should create a level-playing field for all potential applicants. Overly time-consuming and tedious application formats can deter applicants who are resource constrained.

Table D: Proposal Template Examples | Source: Authors

TYPE	EXAMPLES	PROS	CONS
Short paper/proposal format	CCI Challenge Application Format AR Challenge Application	<ul style="list-style-type: none"> • Offers flexibility in responses • Not as time-consuming as a comprehensive application • Gives them a headstart in terms of already having their idea written on a paper 	<ul style="list-style-type: none"> • Inconsistent responses • It may be time-consuming for reviewers
Tailored Pitch Canvas	Pitch Canvas by David Beckett	<ul style="list-style-type: none"> • Helps to get concise targeted responses • Easy to fill out • Less time consuming both for applicants and reviewers 	<ul style="list-style-type: none"> • May not offer sufficient details
Comprehensive Application	100&Change Org	<ul style="list-style-type: none"> • Forces applications to think through every detail of the project 	<ul style="list-style-type: none"> • Very tedious and time-consuming • Time-consuming for reviewers
Video Submissions + Slide Decks * TRY THIS: Combine video submissions with a Pitch Canvas	Sample	<ul style="list-style-type: none"> • Allows applicants to share a vision with the judges in a way that is different from the written proposal format • Easy to review • Less tedious and demanding 	<ul style="list-style-type: none"> • May miss/forget to provide the information requested

Picking the right proposal template depends on the challenge type, how the applications will be assessed, and available resources to evaluate and assess the applications. While deciding on the call for proposal design, ensure that applicants provide all the information needed to fairly and consistently evaluate the applications.

The application also offers an opportunity to collect feedback on the process and next steps:

- Ask applicants about their application experience, and how much time it took them to complete a submission
- Include space for additional comments
- Ask what support they would need to be successful

Evaluation and Assessment

Application evaluation and assessment plans need to be set in the planning stage. These plans ensure the same criteria are used to assess applications fairly. To first define the evaluation criteria and scoring rubric, it's important to ask:

- How do we define the challenge's success?
- How will we evaluate or measure the success?

US Ignites team managed the West Lafayette Smart City Challenge, where the city of West Lafayette and the Innovation Partners Institute (IPI) at the Purdue Research Foundation were looking for a scalable IoT solution that would improve safety for vulnerable road users who navigate high-traffic corridors and intersections during major seasonal events on the Purdue Campus. After much deliberation with the city and IPI, we defined potential success definitions in terms of impact and sustainability.

Table E: Challenge Success Factors | Source: Authors

SUCCESS FACTORS	DESCRIPTION	EVALUATION CONSIDERATIONS
Impact	The winning solution should make roads and intersections safer for pedestrians.	<ul style="list-style-type: none"> • How will we measure if the solution made the roads and intersections safer? • Do we have historical data on accidents? If yes, how many years of data do we have? • Is there a campus survey on students' perception of campus safety?
Sustainability & Scalability	The winning solution should be commercially viable and scalable to accommodate other road safety use cases.	<ul style="list-style-type: none"> • What's the timeline for evaluating if the solution was sustainable? • Post challenge checks/milestones?

Defining Evaluation Criteria and Scoring Rubric

A thorough evaluation of proposals requires well-defined evaluation criteria and a robust scoring rubric. This is key to separating strong proposals from weaker ones. While the evaluation criteria adds structure and objectivity to the evaluation, the scoring rubric makes it easy to quantify the different elements of the proposal by providing guidance on score assignment .

Elements of a Robust Evaluation Criteria and Scoring Rubric

- Uses success factors (discussed in the previous sub-section) and clearly identifies indicators for measuring success.
- Adds objectivity to the decision-making process and helps reviewers avoid bias.
- Chooses a scale and clearly establishes a score assignment scheme for each criteria. Here is an [article on how to choose the right scale](#).
- Assigns weights based on the importance of criteria. Provides a clear justification if the weights are not equally distributed across different criteria
- Samples:
 - [Challenges.gov Rubric](#)
 - [Trait Scoring Rubric](#)
 - [Oregon Design Sprint Judging Criteria](#)
 - [OVERCOME Review Criteria and Scoring](#)
- Useful Resources for Developing a Rubric for Assessment:
 - [You Be the Judge: When Competitions Employ an Engineering Design Rubric](#)
 - [GU Developing a Scoring Criteria](#)
 - [Rubrics for Assessment](#)
 - [Faculty Innovation Center, University of Austin, Texas](#)
 - [Robotics Educations & Competition Foundation - Judge Guide 2020-202](#)

Building An Evaluation Team

Creating an evaluation team requires defining the scope of work and qualifications for the judges. The scope may include the time needed to review applications, the number of applications each judge will review, meeting cadence, qualifications, experience required, and remuneration (if any). Consider having judges from diverse backgrounds, professions, and races to ensure a holistic and comprehensive approach to application evaluation. If remuneration is not available, consider reaching out to internal staff with subject matter expertise to serve as judges. Other alternatives can include people you know in your network, your challenge partners, or leaders who are active in the community.

Things to Keep in Mind While Selecting Judges

- Do they have the experience and knowledge to judge the applications?
- Is there any potential conflict of interest?
- Do you have the resources to compensate (cash or in-kind) the judges for their time or are you looking for judges to volunteer their time?



Communication and Engagement Strategy

The communications and engagement strategy should pique interest in the challenge from the target applicant pool and encourage potential applicants to apply. It will determine who applies for the challenge and the number of applications received.

As discussed, the engagement and communication strategy will differ depending on the challenge type. For example, hackathons engage many participants for a one-time event, whereas multi-phased challenges sustain engagement with fewer participants.

It is important to go beyond just communicating and focus on engagement. While a communications plan is essential to spread the word and raise awareness of the competition, an engagement strategy is necessary to support the applicants so that they successfully apply.

Consider the following while creating a communications and engagement strategy:

- Who's the target audience/applicant?
- What is the geography you are targeting? (local applicants vs. statewide vs. national)
- How will you reach the target applicants? (webinars, blogs, press releases, email, etc.)
- Where will you house all the challenge information? (website)
- How often will you communicate?
- Who will be the point of contact for questions and queries from potential applicants?

[Resource: Refer to Civic Makers Communications Strategy & Messaging Guidelines](#)



Idea in Brief

- An effective call for proposals is simple and creates a level playing field for all potential applications.
- A well-defined evaluation criteria adds structure and objectivity to the proposal evaluation process, whereas a scoring rubric provides guidance on score assignment and makes it easy to quantify the different elements of a proposal.
- A robust communications & engagement strategy goes beyond communicating and focuses on engagement with potential applicants. It ensures that potential applicants feel supported in the application process.

Launch and Deliver

The fourth stage of designing and implementing an innovation challenge is the launch and delivery of the competition. This section includes how to launch a challenge, how to attract applications, best communication practices, and how to select the best winner or winners.

Build a Work Plan

Before launching an innovation challenge, develop a work plan incorporating all the work done in the previous sections. A work plan will break down the different phases of the challenge, key milestones, and a timeline for approaching the launch and delivery. Each work plan will be slightly different depending on the type of challenge but should include key elements before the challenge launches:

Challenge Milestones:

- Official launch date
- Application due dates
- Information webinar dates
- Evaluation meeting dates
- Phase breakdown

Communications Plan Components:

- Press release
- Social media plans
- Webpage
- Outreach plan

Work Breakdown:

- Determine roles and responsibilities



Considerations

When making a work plan, **include a buffer to extend deadlines!** One potential issue that can occur when launching a challenge is that the announcement does not have enough buzz to drive participation. A **buffer** allows challenge teams to extend deadlines but not interrupt the flow of the work plan.

Call for Proposals

When you are ready to launch, double-check that the call for proposals includes the following components: a challenge statement, partners, an accurate but flexible timeline, applicant eligibility qualifications, and an award.

The ideation section of this playbook covered crafting effective challenge statements, and application structure examples and templates can be found in the planning section. Incorporate these into the call for proposals, communications, and engagement plans.

Implement the Communication and Engagement Strategy

Implement a communication and engagement strategy for a successful competition with these components: a press release, social media plan, and a distribution list.

1

Press Release

- Overview of the challenge, links to the website and key dates
- Quotes (mayor, key partners, etc.)
- Include all of the partners

2

Social Media

- Tool kit for partners
- How to use, sample posts, etc.
- Inspirational video from key figure

3

Distribution

- Create a list of key targets to distribute the information to
- Think about business students, and individuals

4

Webpage

- Include the application, challenge question, and all eligibility requirements
- Develop a way to collect email addresses

5

Engage

- Schedule a webinar or workshop to answer questions
- Create a FAQ page on your website
- Make follow-up calls and send emails

With the launch of the communication and engagement strategy, share the social media toolkit and the press release with partners and distribute the application to target participants. Refer to the Ideation section for more information on partnerships and building a strong partner ecosystem.

Deliver

Collect Applications

The final challenge launch step is collecting participants' applications. As mentioned in the above section, the application can take various forms. It's important to provide participants with easy ways to submit their applications and a relatively simple process.

Identify the Winning Proposal

After collecting applications, the judges need to review the submissions and decide on the winner(s). Providing a judging packet helps the judges complete this task. This packet provides directions for reviewing and scoring the applications based on the target criteria.

A sample judging packet and rubric are [at the end of this playbook](#).

The judging packet should include the following information:

- **Evaluation Procedure, Teams, and Schedule**
 - This portion of the packet should outline the process for evaluation, all of the members of the judging team and the planning committee, and a full timeline for the challenge.
- **Coordination Team Activities**
 - In this section, outline the responsibilities of the judging panel. Some important things to include are how much time you expect the process to take and additional details on the timeline.
- **Evaluation Panel Activities**
 - Here the packet should include all of the tasks and deadlines for the judges.
- **Evaluation Criteria**
 - This is where the scoring rubric for the proposal will be located. The rubric should match up to the application given to the participants. *(See the Defining Evaluation Criteria and Scoring Rubric Template)*

With a small number of applications, each judge can review and score each application. With more than four applications per judge, it's essential to distribute the review load amongst the judges. At least two judges should review each application and can provide ample written feedback to the challenge host.

After the judges have made their individual decisions on their assigned proposals, bring them together to have a virtual or in-person meeting to discuss the applications and come to a consensus on the challenge competition winner or winners. *(See the Defining Evaluation Criteria and Scoring Rubric Template)*

When it's time to communicate the results with participants, best practices indicate that rejections and award emails should be distributed at the same time. Once the teams have been contacted about their proposals and any final questions addressed, publicly announce them on a joint release with each competition sponsor. This can draw public interest to the challenge competition and the winning solution!

Follow-up and Manage the Award

As the challenge proceeds, it is vital to stay in communication with each of the participants. Constant contact ensures each competitor remains on track and follows through with their proposal. This can be done via emails or weekly or monthly calls. Depending on the prize purse, the challenge team may consider tracking the budgets of each of the participants.

It's crucial for challenge organizers to focus on the challenge process and building successful teams. Building successful teams help to build the future pipeline of entrepreneurs, small business owners, and dedicated community advocates. It makes the challenge process not a one-time event, but a true long-term development opportunity for a community, region, or state.



Idea in Brief

- **Develop a detailed but realistic work plan that allows for changes throughout the duration of the challenge.**
- **Create clear and timely communication materials to attract top candidates.**
- **Make the evaluation process as simple for the judges as possible.**
- **Build successful teams; it'll create a lasting impact on the community.**

Sustain and Scale

Clearly, challenge competitions require effort to design and execute. Similarly, many of the solutions that win these challenges also require a lot of effort to come to bring to fruition beyond the event itself. As such, organizers and judges can struggle to weigh the viability and sustainability of a solution. So, how do organizers maximize outcomes from these challenges, and how do the participants scale an idea from concept to prototype to commercial scale?

Aspects of a Successful Solution

Some of the core elements needed for a successful solution are:



Viability

Is there a clear business proposition and product-market fit for the solution and what is the likelihood of success when considering the team's ability to develop it beyond the competition?

- Do participants fully demonstrate what's promised and does it solve the challenge?
 - Business (or Value) proposition: the proposal acknowledges the problem, introduces the solution, and connects the product/service with the target audience.
 - Product-market fit: the proposal solves a real problem or need, and there's a reasonable opportunity for growth in the intended market.



Longevity

Consider the outcomes of the challenge competition beyond the competition event. What does the solution look like a year out? Understand that it can, and often does, evolve as the team does additional research and development.

- Keep in mind, however, that the longevity of the solution may be influenced by the type of competition that's been organized and the judging criteria. For instance, if the judging criteria is weighted to favor innovative ideas versus a solution's impact, the idea's longevity may not go beyond the competition. But, if impact is most important, the solution may be expected to live beyond the competition and should be judged accordingly.



Team

A team's (or individual's) ability to drive a solution forward beyond the competition event can be difficult to quantify. Still, more often than the solution created, the team can be what determines overall success. Some things to consider are:

- Does the team have the experience? Does the team have the ability to deliver on the solution? Is the team organized?



Support

Monitoring and driving a solution forward requires support after the competition event. To consider an applicant's network of support, ask:

- Are there funds to drive the solution forward?
- Is there buy-in from stakeholders?
- Are there collaborative communities that can assist, connect, and/or guide the solution beyond the initial challenge competition (incubators, accelerators, etc.)?
- Does the team have relevant advisors and mentors to help guide them?
- Are there meetups post-challenge competition? Are there peer groups to connect the winning team(s)?
- What types of development frameworks are in place?
- Is there civic trust and community support/engagement in place to see the solution through?



Unsuccessful Solutions

While many people pursue challenge competitions, not every solution that is presented is likely to succeed in the long-run. Some core aspects of ideas/solutions that aren't viable beyond the competition include:

- **Too Broad:** the solution isn't well defined or the main problem hasn't been appropriately addressed
- **Missing Concepts:** the team is missing key elements of success, such as a solid business concept or plan to monetize the solution
- **No Accountability:** the team doesn't have mutual accountability or culture beyond the competition
- **Lack of Support:** there's a lack of support from challenge competition organizers and partners beyond the event

How do these ideas scale from prototype to commercial scale?

There are several stages that occur as solutions develop. If one development phase is preferred, organizers should ask for submissions at those levels during the application phase of planning. Organizers can structure the presentations to feature proposals at various stages of development.

Development Stages

There are several development stages that solutions must go through before they hit commercial scale, which can take several years to achieve.

Ideation

A concept or potential solution for a challenge needing significant development or testing.

Proof of Concept (PoC)

In the “pre-product” stage of development, the team proves the validity of an idea within a small group of users, within a controlled environment, or as a prototype.



Deployment(s)

The fully deployed solution in a live environment becomes part of the partner’s/customer’s service offerings to communities. Documentation and standard operating procedures by customer implementations support adoption. These long-term situations present opportunities to renew or extend or even expand the solution(s).

Scale

Sustainment, replication or transferability across multiple markets or cities define success at scale. Rapid growth supports continuously deployed and managed solution(s) and service increases.

Minimum Viable Product (MVP)

At the “product” stage of development, the solution demonstrates core functionalities and features. The team can test how potential users and customers receive the idea through discovery and testing. In cycles of iteration, the solution may change throughout this phase of development as the team receives feedback from potential users and customers.

Pilot(s)

Application of the MVP in the real world presents opportunities to move from a controlled testing environment to a limited-time, small-scale, live implementation. In a time-limited pilot, teams demonstrate effectiveness outside of the laboratory to check assumptions and pivot when needed. Again, iteration cycles illustrate a potential for replicability of working solutions and transferability to other scenarios.

How the team moves through these stages of development depends upon a myriad of factors, including team dynamics and skillsets, the stage of the solution is in the development cycle, a clear problem with solution, available funding, etc. As such, many pathways to success exist, and no two teams or companies go through the same experiences or phases of development the same way or at the same time. Support elements can assist the teams in reaching these development stages and potentially accelerate the process.

Support Elements

Partners/Customers

One thing to consider is whether or not partner/customer procurement processes/policies are in place. Do challenge partners and organizers know how a solution will be implemented or procured after the competition event? Determining how a winning solution will be managed and used is crucial for long-term success.

Example: CivTechSA program out of San Antonio, Texas (2017-2021) paired startup companies with city departments to generate custom tech solutions for a community and its residents. The startups responded to a request for proposals (RFP) and, once selected, developed solutions to solve a real community or city problem with the potential for deployment within the city of San Antonio. The startups took their solution from concept to pilot with the opportunity for procurement over several months, working closely with the city departments, potential users, and mentors.



Funding

While prize money can serve as a powerful incentive to participants, there are other ways to encourage participation. For example, providing access to mentors or potential funders can help attract and motivate applicants. Moreover, additional funding from external sources, including grant programs, such as Small Business Innovation Research (SBIR) grants, or investor organizations, like venture capitalists, and/or customers can be immensely beneficial for a winning team.

Resources

Is there a support system in place to help guide and introduce teams to key partners, customers, and mentors throughout the process? Is there access to subject matter experts (SME), experienced business executives and founders, mentors, etc. to assist the teams in their journey?

Connecting winning people/teams with resources such as entrepreneurial centers, incubators, accelerators, mentors, and advisors is a great way to ensure long-term success. Without an ecosystem of support, there's little room for a solution to grow beyond the initial challenge event.



Can the solution be adapted for other problems, other departments, and other cities nationwide?

Solutions that are targeted at solving singular problems can be highly effective, but limited if they can't move beyond the initial scope, especially if other communities can benefit. Instead, it can be more viable for long-term sustainability and effectiveness if the winning solution has multiple applications and can be used to solve several different problems across numerous communities/cities.

For instance, US Ignite partnered with a team out of the University of Utah on air quality monitoring to see correlations between COVID-19 deaths and air pollution. The project has since grown beyond its initial application in Utah and expanded to other cities, including Chattanooga, Tennessee; Kansas City, Missouri and Kansas; and Cleveland, Ohio.

As such, if an expanded solution is a desired outcome for challenges, then the organizers should ensure that additional support and resources are available to help further a solution's development.

How do you tap into SMEs from industry, universities, and others to support them?

Expectations: Strategies to assemble planning committees, source subject matter experts, mentors, and advisors, and increased collaboration within the different teams before the event creates ways to deepen involvement with these individuals and organizations. The more complex the challenge is, the greater the need for internal and external support.

Mentors and Advisors: Universities and industry SMEs bring a wealth of knowledge and experience that can make a difference when it comes to increasing the viability of a solution. We recommend getting connected with university stakeholders and professors well in advance of the challenge event. These specialists help participants examine their solutions from real-world perspectives and hone their skills with considerations for market applications. Leverage a diverse pool of research and professional practitioners to connect and inform participants following the event.

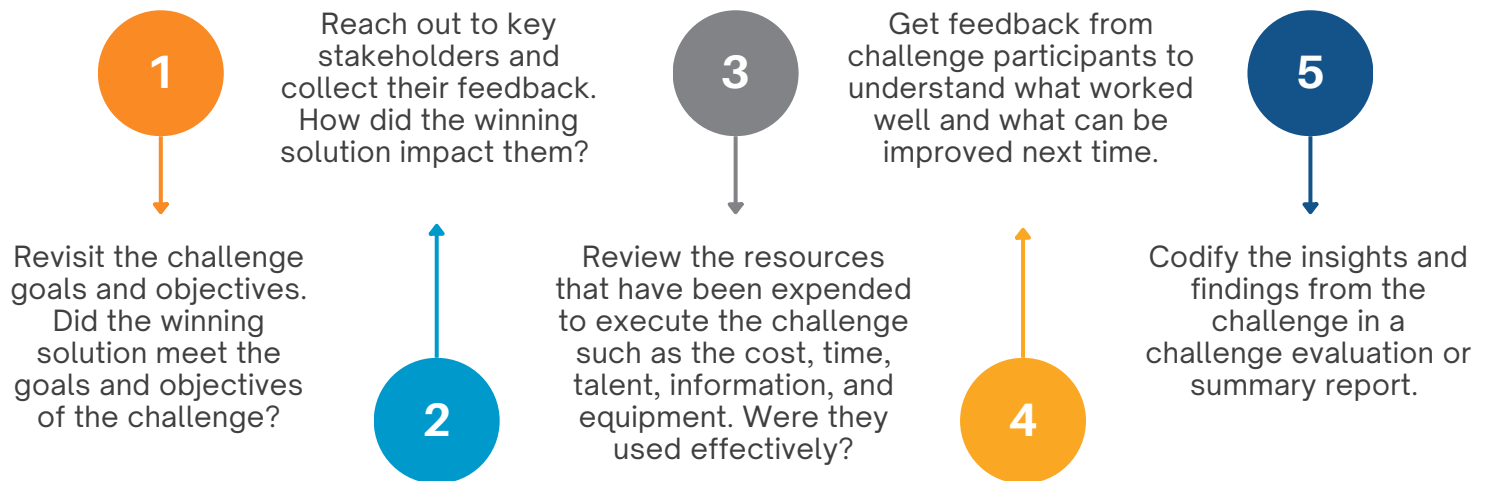
Idea in Brief

- The more complex a challenge, the more external support from SMEs (industry, universities, etc.) is needed.
- Tap into industry and university organizations and programs early in the planning process by attending networking events, entrepreneurial programs at the university level, and reaching out directly to professors and industry experts to recruit talented participants and or mentors and advisors to better source and or support teams as they move through the challenge and beyond.
- Maintaining connections with those SMEs after challenge events will encourage them to be invested in the outcomes and provide future opportunities for teams to collaborate and move forward on their solutions.



Challenge Evaluation

One of the last steps to wrap up the competition is to evaluate the challenge itself. Challenge evaluation helps organizers reflect on the challenge design and understand what worked and what didn't work. The challenge organizers can use the following steps to evaluate their challenge competition:





USIGNITE CHARIoT CHALLENGE

Challenge organizers can also evaluate the impact of the winning solution if it's possible to collect data on solution outcomes. For example, a road safety challenge can look at data on road accidents pre-and-post solution deployment. Evaluating the impact of the solutions is critical in challenges that offer multi-year funding support or challenges that are focused on fostering winning solutions into startups.

Unfortunately, evaluating a winning solution's impact can be very time and resource intensive and may be a tedious undertaking for organizers with limited resources. At the very least, organizers should evaluate the challenge itself to assess the effectiveness of the design and identify areas for improvement. Lessons learned and challenge evaluation insights will enhance the conception and ideation of future challenges.

Idea in Brief

- Organizers should consider evaluating the impact of the winning solution (outcome evaluation) and the challenge itself (process evaluation).
- Organizers with limited resources should focus on process evaluation.
- Challenge evaluation creates a positive feedback loop and enhances the conception and ideation of future challenges.

Acknowledgements

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About US Ignite:

US Ignite collaborates with smart communities and research testbeds to drive high-impact solutions to their toughest challenges. Operating like a high-tech startup, our organization delivers timely results by applying technical expertise, stakeholder engagement, and targeted tools. US Ignite works tirelessly to ensure our programs are effective and reach the communities that need them the most.



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Born in Austin, Texas — Zpryme produces influential research, events such as ETS (Energy Thought Summit), and premium media experiences that challenge the status quo.

About John S. and James L. Knight Foundation

We are social investors who support democracy by funding free expression and journalism, arts and culture in community, research in areas of media and democracy, and in the success of American cities and towns where the Knight brothers once had newspapers. Learn more at kf.org and follow @knightfdn on social media.



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