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Smart City App Competition Rules, Guidelines & Examples

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About the competition

This year the Tech-Prize App Competition is focused on Smart-City applications. The Tech-Prize Smart City Problem Solving Challenge is an Open-Ended APP development competition. The objective of the competition is to promote and reward IT development Skills and Creativity while solving some pressing social and infrastructure challenges in our community. The Open-Ended Competition means the participants can participate even if their App is not completely Developed.

In the 1960's Racine was identified as "Invention City". More patents were created, on a per-capita basis, than anywhere else in the nation. Tech-Prize desires to replicate that energy and creativity to reclaim that title. As a first step, Racine competed in and won a national smart-city competition based on the vision of this community in the future.

With this background in mind, Tech-Prize desires to motivate applications that support the smart-city objectives – and we are open to any great ideas that you might have.

While we've offered some ideas (see below), your submission can provide any functionality or service that you'd like. Keep in mind that our SMART City efforts include 3 primary objectives: Focus on improvements in the use of Energy, Transportation, and Communication for our citizens. Applications that provide value in these areas will be most desired.

Tech-Prize Smart City Problem Solving Challenge is an Open-Ended APP development competition. The objective of the competition is to promote and reward IT development Skills and Creativity while solving some pressing social and infrastructure challenges in our community.

The Open-Ended Competition means the participants can participate even if their App is not completely Developed. Each Submission is evaluated on the following criteria:

1. The originality of Concept
2. The complexity of the Solution
3. Revenue Model
4. Features and Functionality
5. Technical Documentation
6. User Interface Design



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7. User Experience / Application Flow
8. Quality of Click Through Mockup
9. Quality of Finished App.
10. Final Pitch and Presentation.

How does the competition work?

- The contest is open to all ages and educational levels.
- Teams can register on the App Dev Competition Page on the Tech-Prize website (www.tech-prize.org/app-dev-competition), any time before August 15, 2022. The final submission deadline is August 15, 2022, at midnight.
- There is no entry fee.
- Participants can come up with their original concept or choose one of the sample concepts.
- The participants are expected to use their own equipment and computers, giving them the freedom to work in their environment
- There are no restrictions on operating systems, development tools, programming platforms, frameworks, or languages.
- Participants may work from any location. Participants may form teams, and the teams may have any number of members.
- This is a competition to showcase your creativity and programming ability. All submissions must be designed and developed by team members. Any integrations with Open Source or Commercial API, Libraries, or Development platforms must be declared in the technical document of the submission.

IMPORTANT: Participants retain all rights to any application they develop.



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The Competition Categories

There will be three main prize categories and three prizes in each category as follows:

Best App Concept

- This prize is based on the concept of the App.
- The Sample App concepts, and their derivatives are not eligible for this prize
- The App UI or Code does not have to be completed, but an overview of the approach planned for the development is required and a project plan must be provided.
- **Submission Requirements**
 - Concept document minimum 250 words maximum 1000 Words
 - Information provided in the concept document must clearly define the application concept, Benefits of the application and who will use the application and some of the key features of the application.

Best UI/UX Design

- This prize is based on the visual design of the APP
- Any of the Sample App concepts and their derivatives provided by Tech-Prize as well as any other original concepts are eligible for this award.
- This award is based on the App UI design and the Application process flow. A fully functional and Coded App is not a requirement.
- An entry in this category is automatically eligible for the Best App concept category as long as it does not use the Tech-Prize provided App concepts.
- **Submission Requirements**
 - Concept document minimum 250 words maximum 1000 Words
 - Information provided in the concept document must clearly define the application concept, Benefits of the application and who will use the application and some of the key features of the application.



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- Documents to illustrate process flow and User Interface of the application. Tech-Prize recommends using free version of UI designing software such as <https://www.figma.com/>, InVision, Axure RP, Moqups, Lucidchart, Adobe XD, Mockflow, Balsamiq, Marvel.

Best App

- This prize is based on the visual design of the APP
- Any of the Sample App concepts and their derivatives provided by Tech-Prize as well as any other original concepts are eligible for this award.
- This award is based on the App UI design and the Application process flow. Fully functional and Coded App is not a requirement.
- An entry in this category is automatically eligible for the Best App concept category as long as it does not use the Tech-Prize provided App concepts.
- **Submission Requirements**
 - Fully coded and working version of the App Binary or link to an App Store to download the App
 - Concept document minimum 250 words maximum 1000 Words
 - Information provided in the concept document must clearly define the application concept, Benefits of the application and who will use the application and some of the key features of the application.
 - If all the features are not yet completed, present documents to illustrate process flow and User Interface of the application. Tech-Prize recommends using free version of UI designing software such as <https://www.figma.com/>, InVision, Axure RP, Moqups, Lucidchart, Adobe XD, Mockflow, Balsamiq, Marvel.

Register your Application Idea using this URL:

<https://tech-prize.org/app-competition-form/>



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App suggestions

This section contains some ideas for your consideration.

IMPORTANT: Tech-Prize has not conducted any patent research and does not guarantee that these or similar ideas are not executed by others.

The participants can use these ideas as is or modify them using their own creativity. Some Apps may need Public Data Sources that may not be available for the prototype, (for example Bus location, GIS data), use of simulators, or sample data is encouraged.

IMPORTANT: Keep in mind that original ideas will score better than these examples.



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Share the Love

Problem to Solve	
<p>Give your old Appliance or Furniture second life and help a family in need.</p> <p>Sometimes, if we do not find a good home for a slightly used appliance or furniture or you do not have a second pair of hands to help the moving of the item, it ends up in a landfill. Not an earth-friendly act. Especially, when there are many good homes that can be benefited.</p>	
Key Features	
1	Donors can upload pictures and information about the Item to donate.
2	Interested parties can claim the Item.
3	A volunteer can enlist to help.
4	IRS value calculator for determining the value of the donation (or link to external service like Goodwill)
5	Directory of organizations that pick up the donations
6	Directory of Repair Technicians / Furniture Refurbishers
7	Ability to display advertisements or Google AdMob integration



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Save the Hawk

Problem to Solve	
Racine's Kestrel Hawk landfill is filling fast, an App that can reduce solid waste, promotes recycling and composting to increase the life span of the landfill.	
Key Features	
1	Day counter for potential last date for Racine Kestrel Hawk Landfill
2	Track and record your own trash disposed of, brownie points when one shows the decline
3	User-submitted ideas for Reducing Solid Waste
4	User-submitted Composting Ideas
5	Ability to publish Garage Sales (what is sold in Garage Sale does not go in the landfill)
6	Instagram like a gallery to showcase ideas for reuse.
7	Ability to display advertisements or Google AdMob integration

Move-In Racine

Problem to Solve	
Thanks to the efforts of VGR and Tech-Prize more people want to move to Racine. Let us make it easy for them to find their Home based on what they need	
Key Features	
1	Directory of Home and Apartments
2	Integration with MLS, GIS, County Real Estate Tax Data
3	Integration with Virtual Tour / VR walkthrough
4	Ability to filter data based on User Preferences such as: <ul style="list-style-type: none"> • Zip Code • Area features (Distance from Gym, Schools or Grocery Stores) • House features # of Room, Bedrooms, Bathrooms, Floors • Community features such as Swimming Pool, Amenities, etc.
5	Directory of Renters, Real Estate Agents, and Brokers
6	Ability to display advertisements or Google AdMob integration



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(Smart) City Light City Bright, Safe Racine See Tonight

Problem to Solve	
<p>Properly lit streets are the best way to make a safe street, but keeping bright lights on all the time can waste resources and cost money. Wouldn't it be nice if on a foggy day city lights turn on automatically to lighten the area, or the lights turn them off when not needed without any human intervention? What if the lights turn on or off based on the traffic and or crowd density?</p>	
Key Features	
1	Smart Sensors Integration
2	Integration with GIS systems
3	Visual map showing Smart lights and their State (On or Off)
4	Ability to adjust the Parameters that drives On / Off Behavior
5	Ability to display advertisements or Google AdMob integration
6	Sustainability Calculator that calculator savings compared to traditional Street Light



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Smart Home Energy Audit App

Problem to Solve	
<p>There are many points in an average house where the energy or natural resources are being wasted without the knowledge of the owner. SMART devices can help improve efficiency. Awareness of consumption can lead to reduced usage with a positive impact on the environment.</p>	
Key Features	
1	Ability to add Property Information such as a unique identifier that does not disclose Personal Identifiable Information
2	User can input house dimensions similar to MLS listings
3	Add all the appliances and fixtures that use resources such as Gas, Electricity, and Water.
4	The app compares the Usage data to Regional Aggregate data. For example, compare the properties of Electricity Consumption/ Sq Ft to that of Average Electricity per Sq FT, etc.
5	Record and Track consumption data
6	Provide useful information and tips to reduce consumption
7	Use SMART sensors to measure data
8	Ability to compare data with Utility bills
9	Ability to display advertisements or Google AdMob integration

Food locator for Social Distancing

Problem to Solve	
<p>I'm hungry for wings as an example who makes the best, next best, etc based on reliable customer reviews? Most App rate the restaurant as a whole, but individual dishes are not rated and compared with other establishments. Carry out and Delivery will be new normal in post-COVID-19, therefore, we need to identify establishments that provide Pickup and Delivery.</p>	
Key Features	
1	Restaurant Directory with Menu Listings
2	Location of Service and Driving Direction.
3	Cross-reference of Menu Items to Food Establishments
4	Mapping of Menu Name as per Restaurant Menu to Generic Food Item
5	Menu Item Review and 5 Star rating system
6	Once selected, can order and add to order other items available there for pickup or delivery.
7	The ability for Establishment Owner to respond to Fake reviews Social Authentication
9	The ability for Owners to add Daily Specials and Promotional Items
8	Ability to display advertisements or Google AdMob integration



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Green (Smart) Building / Campus Calculator

Problem to Solve	
In Racine, we have many old structures and buildings that are using more energy than needed. Simple upgrades can save costs and reduce environmental impact.	
Key Features	
1	Smart Sensors Integrations
2	Report and track power usage at all hours
3	Directory of Government Agencies and Business that help Energy Utilization
4	Recommend improvements for sectors, wings, buildings to reduce heating/air conditioning/lighting needs and then once approved implement, this is across many different types of controls and systems that exist.
5	Show the savings Calculator / Calculate Environmental impact based on Energy Saved
6	Ability to display advertisements or Google AdMob integration
7	Display Alerts during abnormal Utilization

Bus Tracker for RYDE

Problem to Solve	
Public transport and Shared Ride is a sustainable alternative or only option for many Racine Citizens. But one has to go through too many apps or websites to get the best option.	
Key Features	
1	Interconnect three or more options such as Bus, Uber, Lift, Bicycles, Scooters, Trains
2	Ability to enter in your pickup location or present location and the destination,
3	the app will find the fastest or cheapest method to make the journey and book them.
4	Bus and Train Timetables
5	Bus / Train Location Tracker
6	Ability to display advertisements or Google AdMob integration

Hotspot Racine

Problem to Solve	
COVID-19 has demonstrated the lack of internet access in the community. The local businesses can provide free WI-FI and be rewarded by improved business	
Key Features	
1	Location map and driving directions to the nearest business that offers free Wi-Fi
2	The ability for businesses to provide their information
3	The ability for vendors to manage their Data
4	Ability to display advertisements or Google AdMob integration
5	Bandwidth Tester
6	User-generated ratings
7	Ability to display advertisements or Google AdMob integration



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Format for submitting your own Idea

Problem to Solve	
Key Features	
1	
2	
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