REQUEST FOR IDEAS (RFI)

This document contains a Request for Ideas (RFI) on how the city can utilize assets for new technological purposes to improve operations while generating revenue at the same time. The information obtained from this RFI will be used by the City as a basis for further discussion and the development of an RFP. Suppliers wishing to respond to this RFI should read this document carefully and follow the guidance for responding.

Using Technology to Create a Smart City

Posted: Tuesday, July 12th, 2016
Response Due: Friday, August 12th, 2016 @ 05:00 p.m. EST

ATTENTION: Andrew Buss, Deputy Chief Information Officer
Office of Innovation and Technology
Andrew.buss@phila.gov

Jim Kenney, Mayor
Rebecca Rhynhart, Chief Administrative Officer
Request for Ideas

1. Administrative Information

Philadelphia Office of Innovation and Technology (OIT)

The Philadelphia Office of Innovation and Technology (OIT) is the central IT organization that oversees the technology infrastructure for the City. The Office of Innovation and Technology seeks inspiration from the marketplace of innovators, technologists, engineers, marketers, programmers, and city enthusiasts to come up with new uses for existing assets that provide public value and generate revenue.

2. Context

The City of Philadelphia, a pioneer in innovative technology adoption, aims to create a multi-purpose wireless network that can enhance the City's ability to deliver quality services to Philadelphians and creatively address digital divide challenges through a revenue sharing, public private partnership model. In addition, the City aims to use technology to improve services and operations, and to this end is interested in ideas related to the Internet of Things (IoT). Interested parties are encouraged to consider opportunities to utilize existing assets outlined in the challenge description to move Philadelphia closer to its goals.

3. Request for Ideas (RFI)

The City of Philadelphia is interested in determining if the existing assets outlined in Section 4 could be leveraged to better city operations and services. The City seeks information and ideas on any products and technologies that could use these assets as a platform to improve public safety, public infrastructure maintenance, energy efficiency, public space management, transportation and quality of life for the residents and businesses of Philadelphia.

Listed below are some examples of Internet of Things (IoT) capabilities that would enhance the City’s ability to deliver quality services to Philadelphians. Proposed solutions should be designed to allow for adapting, upgrading and integrating additional functionality. The list is not intended to be exhaustive and responders are encouraged to share additional ideas.

**Meter Reading:** Remote meter-reading that allows information to be collected and forwarded to the Water Department for billing purposes.

**Street Lighting Controls:** Dynamic lighting systems that can be controlled remotely, react to citizens, provide valuable data, and/or reduce energy costs.
**Gunshot Detection:** Detection devices that can identify a gunshot and send the information to the City’s 911 Center while simultaneously alerting the City’s cameras in the vicinity to focus in on the location.

**Transportation Analytics:** Technologies that can detect changes in traffic flows, pedestrian and cyclist activity, and parking availability.

**Infrastructure Monitoring:** Detection and monitoring of the City’s critical infrastructure such as roads, bridges, airports, water, and power systems.

**Public Safety Surveillance:** Additional video surveillance points and cameras, used exclusively for public safety purposes, which police could monitor, especially in high crime areas.

**Free, high-speed public wi-fi:** Wi-fi that would support communities of mobile/flexible workers and improve overall lifestyles in the form of greater productivity and services, improved planning and development, collaboration in the digital era, and economic growth.

**Sensor Technology:** Combined monitoring with sensor technology that collects data in real time. For example, the City would know when a street has iced over so salt crews can be dispatched.

The City seeks submissions that address one, some or all of the capabilities above. Any additional ideas that advance city operations are welcome. The optimal submission would address a number of capabilities with one single solution, and the City is interested in ideas of what can be accomplished in public-private partnerships and entering into revenue sharing agreements with selected vendor(s). The City is open to piloting solutions in specific areas within the City.

Responses to this RFI will help guide the City in drafting any subsequent Request for Proposals (RFP). However, this RFI does not commit the City to draft and post an RFP or to award any contracts. This RFI and the process it describes are proprietary to the City and are for the sole and exclusive benefit of the City. No other party, including any respondent, is intended to be granted any rights under this RFI. Any response, including written documents and verbal communication, by any respondent to this RFI, shall become the property of the City and may be subject to public disclosure by the City, or any authorized agent of the City.

**4. Assets**

There are **25 tower sites** under long term lease with the City located at key access points throughout Philadelphia. The City spends significant funds every year to lease and maintain these tower sites via fiber connection that sits idle. The 25 tower sites were leased as part of a project to provide citywide wi-fi a decade ago, which was unsuccessful for various reasons. Providers interested in using the tower sites will have the opportunity to take over the leases. If the solution requires installation of different equipment at different heights, the leases will have to be renegotiated. See Appendix B for tower sites.
Existing fiber: All of the tower sites are connected through leased fiber, which is terminated at each site. It would be the vendor’s responsibility to initiate new leases.

Public Safety Spectrum: The City has access to public safety spectrum in the 4.9 GHz range for use by public safety applications if the selected vendor can integrate such into the proposal. Primary uses of the 4.9 GHz band are for hot spots, point-to-multi-point, base/mobile/portable operations, broadband permanent fixed point-to-point links, and temporary fixed point-to-point. Communications must be related to the protection of life, health or property. Unattended and continuous operation is permitted. Voice, data and video operations are permitted.

Street light poles The City lighting system is comprised of 105,000 roadway lights; 18,640 alley lights; 5,000 pedestrian scale or ornamental lights; and 400 park lights. A portion of these assets would be available for this project. Selected vendors would have access to both street light pole power supply and the physical infrastructure. This does not include access to wood utility poles.

Right-of-way access to tunnels, water mains, and sewers that is critical to the solution’s functionality and scale.

The City is interested in and open to the idea of providing access to additional assets (facilities, buildings, street furniture, etc.) that strengthen the solution’s potential to deliver revenue and public value. Providers are encouraged to be creative and consider a diverse array of potential uses such as public wi-fi, public safety, and the use of sensor technology to support various IoE (Internet of Everything) devices. Although additional assets cannot be promised at this stage, inspiring ideas will be taken into consideration during the development of any Request for Proposals.

5. Submitting a Response

5.1 Who Should Respond

The City welcomes ideas from technologists, telecommunications specialists, advertising agencies, social entrepreneurs, engineers, architects, designers, NGOs, and general city enthusiasts working locally or internationally.

5.2 How to Respond

One electronic copy in machine-readable format (MS Word format or PDF) should be sent via email to both andrew.buss@phila.gov and ellen.hwang@phila.gov with the subject line “Smart City Submission – First name, Last name”. Please use the RFI template provided in Appendix A for your responses. Your proposal should also include:

- A cover letter which summarizes your response, includes areas to which you are responding, and indicates if supporting documentation is included in your response.
The response itself, covering any or all of the areas of information requested by this RFI.

It’s encouraged that you limit the size of your response to approximately 10 pages including supporting documentation. Responses must be received no later than Friday, August 12, 2016 5:00 PM EST.

Questions regarding this RFI are to be submitted to bigideasphl.com by no later than 5:00 PM (EST) on Wednesday, July 27, 2016. You will need to register on bigideasphl.com in order to post your question. Any questions sent via email or posted on social media will be directed back to the comment section on bigideasphl.com. All questions received by this date and time will be answered appropriately. The title of such comment should read, “RFI – Smart City [insert firm name].” The City expects to respond by Friday, August 5, 2016 to questions received by that date and time. Questions by respondents, and any additional information that the City provides in response to such questions, will be posted on bigideasphl.com.

ATTENTION: No questions are to be directed to the Mayor’s Office, Office of the Chief Administrative Officer, and the Office of Innovation and Technology.

The City anticipates the following scheduled for the RFI process:

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<tr>
<td>1</td>
<td>RFI release</td>
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<tr>
<td>2</td>
<td>Questions regarding the RFI due</td>
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<td>3</td>
<td>Responses provided</td>
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<td>4</td>
<td>RFI submission due date</td>
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5.3 RFI Response Contact, Review and Clarification Process

This RFI is issued with the intent to survey the industry to obtain information that provides guidance, which may be used in the preparation of RFP. Based on those responses, the Review Committee will augment its roadmap which may result in one or more RFPs. To fully comprehend the information contained within a response to this RFI, the Review Committee may request further clarification in the form of brief verbal communication by telephone, written communication, electronic communication, or a presentation to the RFI Review Committee. Companies responding to this RFI shall designate a single contact within that company for receipt of all subsequent information regarding this RFI. The name of this contact will be made available to the Review Committee.

5.4 Distribution of RFI Responses and Copyrighted Material

Copies of all documentation submitted in response to this RFI will be available to the Evaluation Committee for review purposes. According to the City’s Policies and Procedures, proprietary and confidential material shall not be included in any response to the OIT.
Appendix A:
RFI Response Template
### 1. General Information

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<td><strong>1.1</strong></td>
<td>Firm Name:</td>
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<td>Street Address:</td>
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<td>City, State, Zip:</td>
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<td><strong>1.4</strong></td>
<td>Primary Business:</td>
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<td>Point of Contact:</td>
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<td><strong>1.6</strong></td>
<td>Title:</td>
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<td><strong>1.7</strong></td>
<td>Phone:</td>
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<td><strong>1.8</strong></td>
<td>Email:</td>
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<td><strong>1.9</strong></td>
<td>Willing to make a presentation for City, if requested?</td>
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<td><strong>1.10</strong></td>
<td>Parent Company (PC) Name:</td>
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<td><strong>1.11</strong></td>
<td>PC Street Address:</td>
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<td><strong>1.12</strong></td>
<td>PC City, State, ZIP:</td>
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<td><strong>1.13</strong></td>
<td>PC Primary Business:</td>
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### 2. Proposal

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<tr>
<td><strong>2.1.</strong></td>
<td>Please describe your solution and how your organization would address some or all of the points outlined in the RFI. Please include proposed uses, capacity, and/or services proposed to be delivered. Please list which assets your solution would repurpose (this can be one, some or all). <em>250 words or less.</em></td>
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<td><strong>2.2</strong></td>
<td>Does your solution require additional in-kind City resources (e.g. staff time, technology, access to other city-owned assets, etc.)? <em>150 words or less</em></td>
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<td><strong>2.3</strong></td>
<td>Please provide a list of what you view as the City’s responsibilities versus what your organization would provide? <em>250 words or less</em></td>
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<td><strong>2.4</strong></td>
<td>Explain how your proposed solution can generate revenue? To your best ability please estimate how much anticipated revenue your solution will produce on an annual basis? <em>250 words or less.</em></td>
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<td>2.5</td>
<td>Explain how your proposed solution benefits the City and its residents? <strong>250 words or less.</strong></td>
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<td>2.6</td>
<td>Has your solution ever been implemented before? If yes, please list where your solution has been implemented and the results of each deployment. <strong>250 words or less</strong></td>
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<td>2.7</td>
<td>Would you need to partner with any other organizations or firms to deliver your solution to Philadelphia? If so, do you need support identifying potential partner organizations? <strong>250 words or less</strong></td>
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<td>2.8</td>
<td>Based on your understanding of the scope of this project, what challenges or areas of concern do you have? <strong>250 words or less.</strong></td>
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<td>2.9</td>
<td>What additional information should be included this RFI? <strong>150 words or less.</strong></td>
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<td>2.10</td>
<td>What would the financial model of your proposal look like? <strong>250 words or less.</strong></td>
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<td>2.11</td>
<td>How would you describe your business? (size, minority or women owned business, history) <strong>250 words or less.</strong></td>
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<td>2.12</td>
<td>Please propose a time line for the completion of the project. <strong>250 words or less.</strong></td>
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<td>2.13</td>
<td>Would you be open or recommend piloting the proposed solution within certain areas of the city at first? If so, please elaborate.</td>
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Appendix B: Tower Locations
Tower Locations