



## Experimenting with Innovation

By Kevin Knutson

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In the early 1940s, Lockheed Martin created a special unit called the Lockheed Advanced Development Program, which eventually became better known by its nickname, the “Skunk Works.” Breakthrough technologies were urgently needed to address swiftly changing requirements and to test new ideas for the U.S. military, so the program was designed to avoid bureaucratic obstacles. By focusing on rapid prototyping and field testing, new ideas could be developed and implemented in a short timeframe. The first project, a new fighter jet designated the XP-80, was designed and built in an astonishing 143 days.

Since then, the skunk works concept has been used in business and engineering to build programs that have permission to experiment and try out new approaches. These programs exist to work on advanced projects and disruptive technologies. Many cities — including Baltimore, Maryland; Portland, Oregon; Chicago, Illinois; Philadelphia, Pennsylvania; and Los Angeles, California — have

developed a similar approach, establishing innovation offices and funds to identify, finance, and implement experiments designed to test new ideas and approaches. These programs are the local government version of skunk works, where experimentation is encouraged and supported.

### WHY EXPERIMENT?

Because of the constant pressure to use tax dollars as prudently as possible, new programs or services are sometimes considered risky. Therefore, agencies might tend to pursue only the approaches that have been proven again and again, missing opportunities to use new technologies or take bold action.

By definition, an experiment is designed to test a hypothesis, so failure is always a possible outcome. Openly acknowledging this gives staff the freedom to risk failure and learn from the experiment. Another way of looking at it is that, whatever its outcome, an experiment is always a success. If the program works as expected, the government has a new way to address a public problem. If not, the program is stopped and the government has avoided a major investment in a program that doesn't work.

To manage the risk involved in new programs or services, governments might consider treating them as experiments, funding the program provisionally and at a reduced scale until they are proven effective. Of course, an experiment is not the same thing as a wild guess. Programs that receive any level of funding must be vetted. But approaching new spending in a new way can allow a government to try more and varied approaches to solving problems, including approaches that may seem too risky to roll out across the entire organization. Experimentation promotes learning from experience and making adjustments in response, two key characteristics of resilient organizations.

### WHAT MAKES FOR A GOOD EXPERIMENT?

Some ideas are appropriate for an experiment and some are not. Two considerations can be used to determine whether an experiment is appropriate: scalability and safety.

Scalability is the extent to which the proposed concept can be tried on a small scale and then expanded to a larger scale if it succeeds. Starting on a small scale helps limit the adverse consequences of failure, but it's important to remember that it's not always possible. For example, an investment to install new devices for giving traffic citations on police motorcycles is scalable, while a new police station is not. It's just not possible to build half a police station to see if it works.

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The second consideration is the extent to which the proposed expenditure addresses a safety need. Experimentation would be not be appropriate in cases where delaying the full implementation would place the community, organization, or employees at an unacceptable level of risk.

The scalability and safety considerations can work together to help prioritize project selection (see Exhibit 1). Spending that is scalable and does not affect safety is the ideal candidate for an experiment. Ideas that fall into the other categories can be evaluated as well, but care must be taken to ensure that there is no undue safety risk.

### MAKING THE BUSINESS CASE

When an idea is considered, a business case must be made to determine if the idea should be funded. There are five key elements to making the case:

- **What effect do we expect?** The experiment should have a clearly defined standard of performance against which the experiment can be judged. This indicator should align with the goal of the expenditure in an obvious way. For example, if the expenditure is intended to provide a direct benefit to the public, then the indicator should address the extent to which constituents are better off as a result of the expenditure.
- **Is it something we should do?** The selection process should be guided by some statement of the government's service priori-

#### Exhibit 1: Prioritizing Project Selection

	Clear and Present Safety Need	Not a Clear and Present Safety Need
<b>Scalable</b>	Not a good candidate for experiment (e.g., replacing obsolete bulletproof vests for police officers)	Ideal candidate for experiment (e.g., new technology for ticket writing on police motorcycles)
<b>Not Scalable</b>	Not a good candidate for experiment (e.g., responding to an extreme event)	Not a good candidate for experiment (e.g., new police station)

ties, and the proposed spending should align with these priorities. Proposed experiments and their goals should also align with these priorities.

■ **How much do we need to invest to know if will work?** The scale of the experiment should be limited to the minimum size necessary to determine whether the assumed cause-and-effect relationship underlying the expenditure works.

■ **How long before we'll know if it's effective?** The experiment should have a clear end date, at which point the impact of the experiment will be assessed against its goals. The duration of the experiment should only be as long as it will take to determine if the expenditure will produce its expected results. The duration necessary will vary depending on the nature of the expenditure — some experiments could have clear results in as soon as a few months, while others may take significantly longer.

■ **How will we know if it works?** There should be a formal process by which the results of the experiment are evaluated. The evaluation should determine if the organization will move forward with a wider implementation of the concept, if more study is needed, or if the expenditure will be discontinued. The evaluation should also include a mechanism to catalogue broader lessons for the government that might help it be more effective in the future.

## HOW TO START EXPERIMENTING

Before an organization establishes such a funding source, many questions must be answered, such as where the money for this fund will come from, what type of expenditures are eligible for funding, and who will decide which spending proposals will be funded.

When innovation funding begins, a solid experimental design is essential for getting good results from an experiment. The business case and results evaluation processes should be well articulated and budgeting procedures should be set up to ensure that well-designed experiments are proposed.

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## INNOVATION IN ACTION

To encourage out-of-the-box ideas, the City of Baltimore implemented two new approaches — an innovation fund and the Employee Innovations program.

Since 2012, Baltimore has invested about \$7.1 million in an innova-

tion fund to experiment with new approaches. The program provides seed money for one-time investments that will lead to improved results, increased revenue, and/or reduced ongoing operating costs for city services.<sup>1</sup> The fund started with an appropriation of \$2 million, and a committee made up of staff and citizens evaluated ideas. The citizens chosen for the committee were tech entrepreneurs or people with experience evaluating loan applications.

The Baltimore Innovation Fund was designed to be self-sustaining, repaying loans by using a portion of the savings from early investments to fund future projects. Grants are awarded through a competitive process and agencies get to reallocate 50 percent of any savings for the first two years for departmental needs, after which 100 percent goes to repaying the loan. Once the loan is satisfied, the savings go to the city's general fund. The idea was to push forward projects that improve efficiency and customer service while protecting and enhancing funds for projects that demonstrated success.

An early example was a project called "E-Plans Review" by the Department of Housing and Community Development. In fiscal 2012, the innovation fund awarded \$396,500 to the project team to establish an electronic plans review process, moving away from the existing paper-based system. The original process included rolling garbage cans to move hard copies of plan sets from

office to office. The team identified the potential to reduced cycle time by 20 percent, increase customer satisfaction, decrease customer costs, increase revenues (from a premium passed along to developers), and decrease departmental annual operating costs by at least \$54,000. The initial implementation was a success, and the department is now expanding the program, installing new servers and migrating historical data. In addition to increased revenue and efficiency gains, two positions were eliminated in the process, freeing up those resources for other uses. The program has fully repaid the original loan amount and is now generating savings to the city's general fund.

Other ideas that have been funded include an inter-county broadband network, from the Mayor's Office of Information Technology; several new parking meter approaches, from the Parking Authority of Baltimore City; a video camera accident-reduction plan, from the Baltimore City Fire Department; and the transformation of the Baltimore City Police Department's crime lab to a state-of-the-art training and DNA analysis center.

The city's second approach to innovation, the Employee Innovations program, was recently developed to encourage city employees to think creatively and submit ideas for process improvements in their offices, departments, or agencies. Whether the idea leads to actual savings, revenue generation, or improved customer service isn't of concern — it just has to be new and add value. If an employee's idea is

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implemented, he or she will receive a one-time payment of \$1,500 to \$5,000. That's a good incentive for thinking about ways to do things better.

## CONCLUSIONS

Given the risk of establishing new programs and services, local governments should consider establishing a skunk works approach as a potential tool for encouraging experimentation throughout their organizations. An innovation fund is a way to do this thoughtfully and deliberately. |

### Note

1. See the City of Baltimore's Innovation

Program web page at <http://bbmr.baltimorecity.gov/InnovationProgram.aspx>.

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