

DEFINING TECHNOLOGY SUCCESS

HOW TO MEASURE THE SUCCESS OF TECHNOLOGY SOLUTIONS IN PUBLIC SAFETY



How is Technology Success Measured?

Law enforcement agencies and public IT leaders have been turning heads lately with innovative technologies, citizen engagement, creative use of open data, and increased capacity of personnel to complete their mission; they've been integrating services, leveraging open data, and using their budgets creatively to prove their relevance and enhance public safety.

In the Government of "Less," public safety functions often suffer from weaker budgets, fewer personnel, older infrastructure and equipment – all with the expectation of performing the same mission-critical functions under more stringent regulations and public scrutiny.

What makes the process of [innovating and adopting new technology](#) so complicated is that every officer, supervisor, politician, media mogul, and John Q. Public seems to have a different definition of what success looks like in public safety: aggregate crime data, number of traffic stops, citation revenue, arrest statistics, response times, cost reduction, and many other metrics.

So, when the dust settles and a public safety organization looks to upgrade existing systems or leverage a new technology solution, **what measure of success is most effective and how/when should law enforcement agencies approach measuring technology success?**

Evaluate Feasibility First

The first step in determining a technology solution's ROI (Return-on-Investment) is evaluating the feasibility of a system and its components.

Does the solution ensure compliance with relevant laws, regulations, statutes, and policies? Is the solution congruent with the mission of the organization, its values, and the expectations of its stakeholders?

This analysis is the responsibility of all parties involved, but these elements often go unchecked until the project is very deep into development or procurement.

Innovators can ensure projects start on the right foot by tackling these issues first.

Why is Technology ROI Difficult to Measure?

According to the [Center for Technology in Government \(CTG\)](#) at the University at Albany - SUNY, there are three main shortcomings in measuring technology ROI in government:



"Incomplete analysis of public value, resulting in too narrow a scope of what can be considered returns to the public"



"Lack of systematic attention to how government IT investments generate results of value from the point of view of the public"



"Weak or absent methods for tailoring a public ROI assessment to the specific goals of a government IT investment"

Assuming the project in question is feasible, current measures of ROI are often superficial and focus primarily on monetary cost, without fully capturing the [benefits of a technology or solution](#).

More importantly, [the political, social, ideological, strategic, and community stewardship benefits](#) – which are usually less quantifiable – go unnoticed or undervalued by decision-makers.

Leadership should examine technology ROI on a deeper level and articulate benefits ('return') to the public, the intended user, and government/public safety as a whole.

If not addressed and mitigated early, these shortcomings can halt a project before it gets the momentum necessary to succeed.

There are two main perspectives from which to examine public safety technology:

Direct (or “hard”) ROI and Indirect (“soft”) ROI.

Measuring Direct (Hard) ROI

These measures are often understood by the number-crunchers in the administrative offices and are relatively simple to evaluate and forecast because they are more-easily observed through profit/loss statements, staffing needs, etc.

In the private sector, **“hard” ROI is defined as the ratio of money gained (profit) or lost, relative to the amount invested (total cost).** Since public safety goals drive much further beyond profit margins and revenue, government can use different metrics to determine “hard” ROI.

Solutions can satisfy “hard” ROI analyses if they do some or all of the following:



Automate your processes for improved operational efficiency



Eliminate manual data entry processes and errors



Increase visibility via real-time information on inventory, equipment, and personnel



Improved customer and employee satisfaction



The result = grow your bottom line

“Hard” ROI measures are great tools and can serve as a quantifiable backdrop to the other, “softer” measures examined in the next section.



It is important to note that “hard” ROI does not always result in success. A prime example is in the ever-frequent reduction of personnel, resulting in significant impacts to law enforcement operations and staffing challenges that often outweigh cost savings.

Measuring Indirect (Soft) ROI

The truth about “hard” measurements is that, especially in government, many investments don’t end up paying for themselves the way they do in the private sector.

So how else can public safety measure their impact?

Though the “soft” benefits of a technology solution are **much less quantifiable and often over-looked**, they should not be discounted or taken any less seriously than “hard” ROI.

Stewardship	Time	Personnel
• Increased community visibility & service levels • Improved utilization of open data Enhanced law enforcement & government transparency • Improved ability to perform mission-critical functions and public safety objectives	• Reduced errors, rework & duplication of effort • Increased productivity of existing personnel • Minimized need for additional support staff	• Increased personnel safety • Increased job satisfaction • Reduced administrative burden on staff • Reduced need for costly/time-consuming training

These benefits fit within three main categories:

If broken down into more-manageable chunks, these “soft” ROI approaches have “hard,” measurable roots such as overtime costs, training burden, etc. and can complement traditional measures very effectively.

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Take-Aways

There are many variables that influence whether a technology solution can/will be successful. Because of this, sometimes ROI may only be observable after the solution has been implemented. When it comes to technology ROI, plan for both short term and long term benefits.

Whichever measures are chosen to evaluate technology ROI, public safety organizations should:



Know the stakeholders involved and understand what they want/need

Hint: the stakeholder mix may be very broad (users, general public, officials, etc.)



Determine the most appropriate ROI measures for your agency

Hint: some projects may require different measures



Understand who will be evaluating success and what is important to them

Hint: A combination of both “soft” and “hard” ROI may be most effective

In conclusion, it's safe to say that when measuring technology ROI in public safety, it's important to measure both the hard ROI measures and the soft ROI measures as outlined. In some cases, soft ROI measures are more important to the organization as they can have a far greater impact for the stakeholders and society as a whole.

So ask yourself, **what ROI measures are most important to you, your organization, and your community?**

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