# Technology Procurement Playbook

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# 1. INTRODUCTION TO N-CATT & THE PLAYBOOK

THE NATIONAL CENTER FOR APPLIED TRANSIT TECHNOLOGY (N-CATT) IS A FEDERAL TRANSIT ADMINISTRATION (FTA) FUNDED TECHNICAL ASSISTANCE CENTER FOCUSED ON PROVIDING SMALL-URBAN, RURAL AND TRIBAL TRANSIT AGENCIES WITH PRACTICAL RESOURCES FOR REPLICABLE TECHNOLOGICAL SOLUTIONS AND INNOVATIONS.

THE TECHNOLOGY PROCUREMENT PLAYBOOK, AS IS, SHOULD BE CONSIDERED A LIVING DOCUMENT. THE INTRODUCTION AND STAGE 1 ARE INTENDED TO ILLUSTRATE USE CASES FOR EACH STRATEGY. N-CATT IS ACTIVELY COLLECTING EXAMPLES OF SUCCESSFUL PROCUREMENT DOCUMENTS AND EXPERIENCES FROM AGENCIES INTERESTED IN SHARING, WITH THE INTENTION OF ILLUSTRATING THE USE OF A PARTICULAR STRATEGY IN A PROCUREMENT OR AGENCY PRACTICE. THESE WILL BE INCLUDED IN THE PLAYBOOK AS THEY ARRIVE*.

WE ANTICIPATE CHANGES TO THIS DOCUMENT OVER TIME, HOPEFULLY ON A QUARTERLY BASIS IF APPLICABLE, TO HIGHLIGHT STRATEGIES FOR AGENCIES TO KEEP IN MIND AS THEY EMBARK ON THEIR TECHNOLOGY PROCUREMENTS, WHILE ALSO DIRECTING THEM TO ESTABLISHED GUIDANCE FROM THEIR OWN AGENCY AND FTA. READERS SHOULD CHECK THE PROCUREMENT PLAYBOOK PAGE IN TECH UNIVERSITY, AND LOOK OUT FOR ANNOUNCEMENTS IN N-CATT'S NEWSLETTER FOR UPDATES.

*IF YOU HAVE AN RFP, IMPLEMENTATION PLAN, OR OTHER PROCUREMENT DOCUMENT YOU'D LIKE TO SHARE WITH THE INDUSTRY FOR ADAPTATION, PLEASE REACH OUT TO N-CATT STAFF.

The acquisition of technology seems to cause more consternation among FTA grantees and recipients than almost any other set of administrative processes. It shouldn't have to be that way.

This "Playbook" won't solve your transit technology procurement issues, but it does aim to cast a fresh light on technology procurements, and will give you some ideas that may make your future procurements proceed successfully and satisfactorily.

In all honesty, technology procurements aren't any different than other procurements your transit agency routinely conducts. The fundamental key to success is the same, regardless of whether you're procuring technology, rolling stock, professional services, or just about anything else: you've got to know your own procurement policies and procedures, and you should be familiar with pertinent federal, tribal or state, or local government requirements that may affect how you carry out your procurements.

This document presumes the reader to be involved with transit procurements that involve FTA funding, and that the reader may be associated with a rural, small-urban or tribal public transportation program. If that doesn't describe you very well, you may find the contents to be interesting, but not necessarily applicable to your circumstances.

In contrast to federal guidance documents, such as FTA's Third Party Contracting Circular, federal technical assistance documents, such as FTA's "Best Practices Procurement and Lessons Learned Manual," or federal agency-sponsored training, such as the National Transit Institute's series of five training classes on transit agency procurement (search "Procurement" in the course catalog), this publication does not offer detailed guidance on how to comply with federal rules or policies. Instead, it

offers a number of strategies that may help you with aspects of your transit-related technology procurements. While the strategies described on the following pages may be useful and successful for FTA grantees, nothing discussed herein supersedes your own procurement policies, and it's important to note that what may pass muster as an FTA-compliant practice in one transit agency may not be allowable in other transit agencies.

By the way, let's talk briefly about that word, "technology." This document is all about technology procurements, by which we are referring to the acquisition of all sorts of things that involve either computer components, data management and/or data manipulation. Some strategies below may be helpful to the procurement of low-dollar, off-the-shelf equipment or software. Other strategies will be more pertinent to high-dollar, complex acquisitions of advanced-technology rolling stock, complex software platforms, or the engagement of technology-based mobility services such as "Mobility as a Service" (MaaS), "Mobility on Demand" (MOD), or the like. And some strategies in this document may be helpful across the entire spectrum of technology procurements among public transportation systems.

If you want four key points to assure some success in your technology procurements, here are the essentials:

- Make sure your procurement policies comply with applicable federal, state, tribal and/or local requirements.
- Make sure you understand your procurement policies, including whatever flexibility they may allow.
- Follow your procurement policies, consistently.
- If you find your procurement policies awkward, balky, cumbersome, or aggravating to follow, it doesn't matter; follow them anyway. Do not try to cut corners or short-circuit your policies just because there's something you want and you think your policies stand in the way.

As has already been stated, this particular document is not to be regarded as any sort of official policy statement or guidance from FTA or any other agency of the United States Government. If you need, or want to refer to, official agency resources, here are three key places to turn:

1. FTA's Circular 4220,1F "Third Party Contracting Guidance," is the definitive reference document on what's required of FTA grantees in all their procurement and contracting actions. At the time this playbook was prepared, the current edition of that essential FTA guidance document was Circular C-4220.1F, as revised March 18, 2013. It can be found on the FTA website at https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/third-party-contracting-guidance.

2. The FTA "Best Practices Procurement & Lessons Learned Manual" is a comprehensive compendium of practices and interpretation of FTA's procurement policies, and should be on the desk or desktop of anyone whose job involves carrying out procurements associated with FTA funding. This manual is updated from time to time, and the most current version, dated October 2016, can be found on the FTA website at https://www.transit.dot.gov/funding/procurement/third-party-procurement/best-practices-procurement-manual.

3. More generally, FTA maintains information about its procurement policies and requirements on several pages within the agency's website. Use your browser to bookmark https://www.transit.dot.gov/funding/procurement/procurement, as that's a site most FTA grantees' procurement personnel will need to visit with some frequency.

# 2. STAGE 1 – PAYING ATTENTION TO THE BIG PICTURE

## 2.1. Strategy: Start with a vision

Your transit agency's technology investments have some kind of purpose, right? If not, you probably shouldn't be pursuing them. And your transit agency itself has some form of stated purpose, doesn't it? So, before starting any significant technology procurements, take some time to develop a sort of "technology vision statement" for your transit agency. No one is requiring this of you, but if you can articulate how technology is helping your agency fulfill its purpose, you're more likely to focus on investing in technology that's designed to bring success, as opposed to investing in technology for its own sake.

This technology vision statement, like all vision statements, should be brief. It doesn't need to address all your technological challenges or aspirations. Its point is to connect your organizational mission and vision and the role of technology in your organization's success. It's where you should be able to turn whenever a stakeholder is asking "Why are you making these particular technology decisions?"

For example, Benzie Bus, in rural Michigan, has posted its overall statement of Mission, Vision, Beliefs and Values on its website, which you can view at https://www.benziebus.com/about/our-mission/. You can see how technology is referenced several places in this statement, including its final bullet point:

> "Our public transportation system should be a leader in its industry through the use of modern technology related to clean fuels and innovative service, including the prospect of providing on-board wireless Internet access and real-time information at bus stops (and via the Internet) regarding when the next bus will arrive. We will seek to be at the forefront of transportation technologies related to delivering excellent service that meets our community's social, economic, and environmental goals."

No, not every single technology investment will link directly to the specific items cited in that statement, but when decisions on technology are being made, Benzie Bus's leadership can ask, and answer, the question of "how is this technology going to help us deliver excellent service that meets our community's goals?"

## 2.2. Strategy: Proceed with a plan

In almost every transit agency, there are a lot of plans you're required to have, but no one requires you to have a "technology plan." And many smaller transit agencies' managers probably haven't even thought about such a thing. So, why is this a good idea?

For starters, let's look at technology in the same vein as you look at vehicles, structures and other capital assets. For those capital assets, you take note of what you have, when you acquired the assets, what

they cost when acquired, their useful life, their current value, their condition, and related points. One of the benefits of having your transit asset management plan is that you can assess the current state of your system's assets, plan for timely replacement of vehicles, renovation of buildings, etc., and identify your needs to sustain and grow your transit operation. Those same exact principles can – and really ought to – guide your technology decisions and priorities.

Here are three notions that help make the case for technology planning within transit agencies, including smaller transit agencies:

1. All technology, whether hardware, software, or something else, has a useful life. The useful life of most technology items tends to be pretty short, often in the one- to three-year span of time. Therefore, as soon as some technology is acquired, it's imperative to begin planning for what to do at the end of that technology's lifespan.

2. All major procurements, including major technology procurements, take time to carry out. The span of time from initially planning the procurement, identifying needs and lining up likely financing, until the moment that technology is acquired and placed in service, can vary widely, but it's not unusual for major technology procurements to take between three and five years, and sometimes longer, to reach fruition.

3. Technology changes. Often, it changes rapidly, with significant changes to hardware, software, and the underlying architecture of technology being made every year.

Do you see the procurement conundrums above? If it's going to take three to five years for you to complete the acquisition of technology with a useful life of three years, you've got a challenge on your hands. And if the technology you procured is obsolete even before you placed it into service, you've got yet another challenge on your hands.

Thoughtful and ongoing planning is one way to avoid those pitfalls. There's no standardized format for a transit agency's technology plan, but some elements it could contain include:

An overview of the transit agency's current operating environment and planned near-term changes;

  – A focus on technologies currently in use at the transit agency, ideally supplemented by an appendix that lists elements of these technologies, dates of acquisition, acquisition costs and sources of acquisition funding, current value (if any), ongoing license fees or other recurring costs, useful life, date(s) for next replacement or upgrade, and any related data points that are important to your transit agency (if that sounds remarkably like what goes into your transit asset management plan, there are reasons for that, including the fact that some of your technology may also be included in the asset management plan, and the fact that asset management planning should be something you're already comfortable doing, even if technology planning seems like unfamiliar territory);

  – Major technology needs that are not currently being met, and major technology needs that will have to be met during the period covered by the technology plan;

  – Narrative and quantitative descriptions of upcoming major technology projects, including descriptions of what's planned, how and why those particular projects were selected over other projects, budgetary requirements, and interoperabilities/interdependencies among these technology projects;

  – Prioritization of technology projects and strategies, along with indications of resource requirements, available resources, and timelines associated with implementing these projects

and strategies; and, ultimately,

–  Identification of technology projects that have been selected for implementation in each year of the planning period, whether new or continuing, possibly supplemented with a set of additional projects that may be accelerated or substituted if resources or circumstances change.

Curious to see how a plan like this could look? Recently, the Shasta Regional Transportation Agency engaged a consultant to prepare a technology plan for the Redding Area Bus Authority (RABA) a small-urban public transit system in northern California. The 2014 edition of that plan is online at https://gosalmonrunner.com/DocumentCenter/View/1781/Transit-Technology-Plan, and is an insightful, useful, possibly even replicable, document for other small transit systems to emulate.

For an example of a more complex transit technology plan, the city of Ottawa, Ontario, launched its "Transit Technology Roadmap" in 2010, and has updated that roadmap annually. You can get a glimpse of this far-ranging plan at https://app06.ottawa.ca/calendar/ottawa/citycouncil/csedc/2010/06-21/Transit%20Services%205-Year%20Technology%20Roadmap_FINAL.htm.

## 2.3.  Strategy: Review your procurement policies

To be brutally honest, let's embrace the fact that many of the most tumultuous experiences transit agencies have with their technology procurements often stem from failing to follow their documented procurement policies. So, it might actually be a good idea to take a fresh look at your procurement policies, so that you can be sure of matching the right methods with the particular procurements you're carrying out.

At a minimum, it's helpful to learn from your past experiences. In all likelihood, your transit agency has been procuring technological goods and services for many years; so, what's worked well in the past, and what's been problematic in the past? In looking at procurements that somehow went awry, you should determine if those historical issues were matters specific to those procurements (and thus not as likely to be a current concern), if they were issues in your own agency's challenges with the procurement policy that no longer are issues (for example, the procurement was being managed in ways that didn't quite fit the stated policies, and now your key staff are positioned to follow the policies better), or if there were issues that since have been addressed through changes in established policies. Along the way, it's important that you recognize recent any updates or revisions in your procurement policies. After all, unless you yourself are working with these policies on a constant basis, you may have forgotten about, or not known about, changes that may affect how you're going to carry out your latest procurements.

Keep in mind that the aim of this strategy is not to find what's wrong with your policies, nor to find how they can be revised. All that's suggested is to make sure you actually know what they are, and how to use them. As you look over your policies, here are some possible points to ponder:

Are there dollar values or other thresholds that distinguish your lower-dollar, less complex procurements from your higher-dollar, more complex procurements?

For your lowest-dollar technology procurements, which tend to be small things like individual devices, supplies, some usage or licensing fees, off-the-shelf software, etc., do you have – and can you use – a

streamlined process that provides the necessary documentation and compliance with yours and your funding agencies' policies, yet allows you to maintain "business as usual" without interruption?

With respect to your larger procurements, what are your range of options for conducting them? For instance, are you limited to sealed-bid procurements for the technology you acquire, or are there ways to conduct solicitations for which factors other than price can be considered?

You may be tempted to explore a non-competitive "sole-source" procurement. If so, proceed with utmost caution, and be absolutely certain you understand how your policies address this approach. Generally speaking, sole-source procurements are not something to encourage, but there are times when they may make sense, if allowed by your policies. For instance, if you need compatibility with existing technology, and there demonstrably is only one vendor able to provide what you need that maintains that compatibility, you may be able to justify a sole-source procurement. But even then, it's good to ask if you really know and can document that the one vendor is the only source for the technological compatibility you require, and that launching a competitive solicitation will not achieve the same procurement outcome. In cases where compatibility with an existing system is a need, consider performing an analysis between upgrading and a new acquisition. Even if new, the technology may be offered by more than one vendor, thereby allowing for competition versus a "sole or single" source.

As one example from among many, you can take a look at Jefferson Transit Authority's current "Purchasing Policy," which is posted on their website at https://jeffersontransit.com/wp-content/uploads//Procurement-Policy-2017.pdf. Jefferson Transit is a rural transit provider on Washington State's Olympic Peninsula. There is nothing radical nor revolutionary about their FTA- and state-compliant purchasing policy document, which is why it's a good example to cite, bearing in mind that there are many other good procurement policy documents to be found around every corner of the American public transit network. Reading through the Jefferson Transit policy, you'll see that it does not treat technology procurements as anything special; this is important, as your procurement processes are to be applied equally to all your purchases, regardless of whether they have anything to do with technology. You'll see that Jefferson Transit has a range of processes, including "micro purchases" of goods and services under $2,500, a variety of "informal" procurement processes for goods and services between $2,500 and $150,000, and several "formal" processes for procurements valued above $150,000. It's good, too, to see how Jefferson Transit addresses situations of non-competitive procurements and other situations that can arise in any procurement, whether technological or not.

## 2.4. Strategy: Team up with your allies and colleagues

For many important reasons, developing proper specifications and soliciting bids, quotations or proposals from qualified or suitable vendors takes a good deal of time and effort. What if someone else has already done that for you, or if someone else already has negotiated competitive prices for the exact goods or services you're seeking to acquire?

"Piggybacking" is the process of attaching yourself to a procurement that's already been negotiated and awarded by another entity, in which you're seeking to acquire some of those same supplies or equipment as already specified and negotiated in the original entity's procurement. When transit agencies are carrying out piggyback procurements, it's often for the acquisition of rolling stock or manufactured items, but the strategy can be used for some technology procurements. If this is applicable and of interest to you, look carefully at what you're seeking to do, make sure it's consistent with the original entity's procurement, and be very attentive to FTA requirements, which are discussed in detail at https://www.transit.dot.gov/funding/procurement/third-party-procurement/piggybacking and related pages on their website.