



Strategies for Choosing Software for Small Transit Agencies

The National Center for Applied Transit Technology (N-CATT)

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Introductions



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About N-CATT

Launched in late 2019

Operated by the Community Transportation Association of America (CTAA) through a cooperative agreement with the Federal Transit Administration (FTA).

Mission: provide provide small-urban, rural, and tribal transit agencies with practical, replicable solutions and innovations.



Work includes:

Hosting hands-on workshops on topics such as GTFS, GIS, and Data Management.

Direct technical assistance through our Strategic Technology Technical Assistance Teams (STTATs).

Producing resources on adopting emerging technologies, such as zero-emission vehicles and choosing new software for transit operations.



Goals and Objectives



Transit Technology Overview



Procurement Strategies



Case Studies & Best Practices



Questions

Run of Show

Goals and Objectives

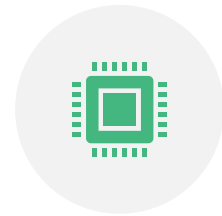
We hope that you will walk away with a more solid understanding of:



Scheduling and dispatching trends and types, and the issues faced by smaller transit agencies.



How to best approach your procurement process to ensure your needs are met by prospective vendors.



How other agencies have procured new software and what we can learn from their experience.



Where to find additional resources to reference when you decide to take the leap to procure a new software product.



Question:

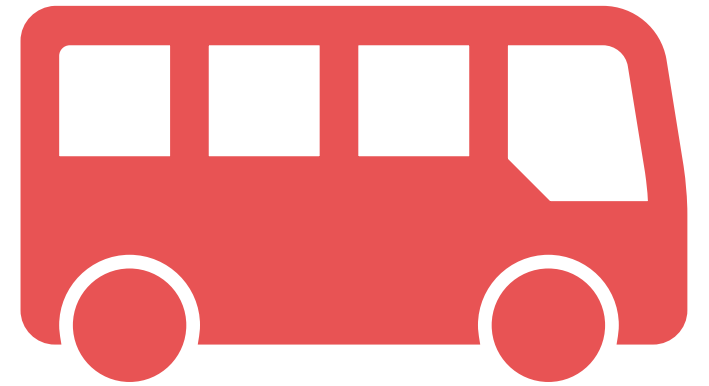
What type of scheduling and dispatching technology does your agency currently use?



Question:

What are the main issues your agency faces with its current scheduling and dispatching technology?

Transit Technology Overview



Recent Trends in Transit Technology



Cloud-based
Technology



Mobility as a
Service (MaaS)



Mobile Fare
Payment



GTFS-Flex



ETA Accuracy
Benchmark



Autonomous
Vehicles



Small Agency Transit Challenges

Internet/cellular data access.

Aging customer base with limited technology use.

Existing technology is not user friendly and does not integrate multiple functionalities.

Lack of resources and capacity to integrate new technologies.

Largely relying on tech developed decades ago.

What types of software are out there?

Commercial off-the-shelf software (COTS)

Open source and/or public domain software

Custom developed software



LICENSED
SOFTWARE
PRODUCTS



EXTERNALLY
HOSTED LICENSED
SOFTWARE



SOFTWARE AS A
SERVICE (SAAS)

Purchasing
Options

Scheduling & Dispatching Software Functionalities



Trip Planning



Trip Booking



Trip Scheduling and Manifest



Dispatching/Trip Management



Driver/Vehicle Management



Fare Payment and Billing



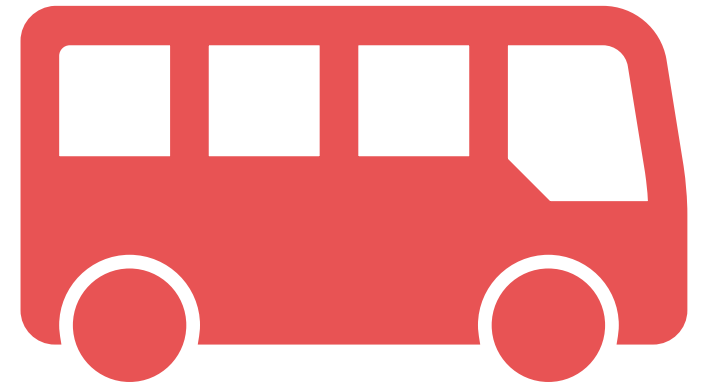
Customer Tools



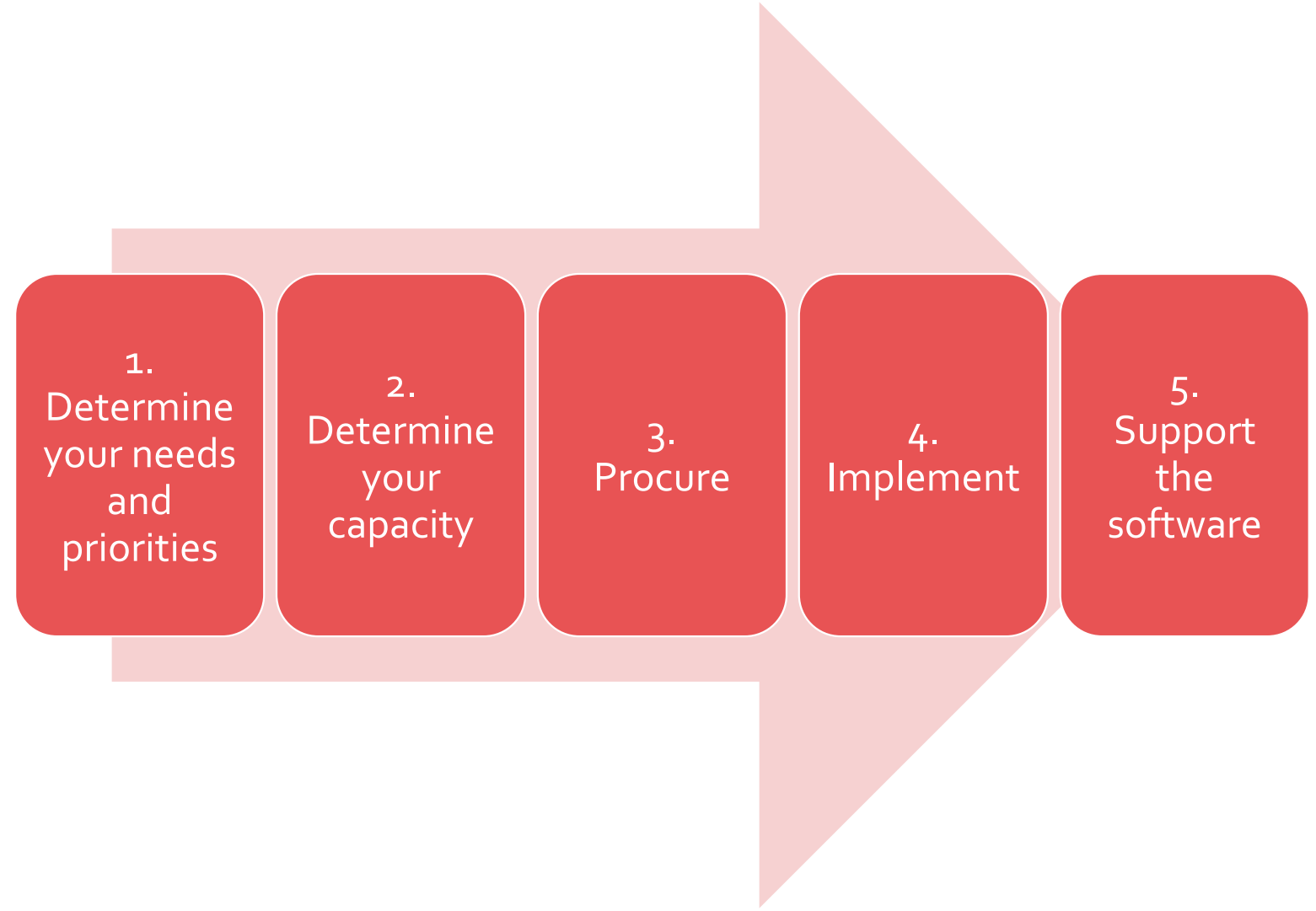
Reporting

...and in an ideal world, you need a scheduling and dispatching software that can integrate all of the above!

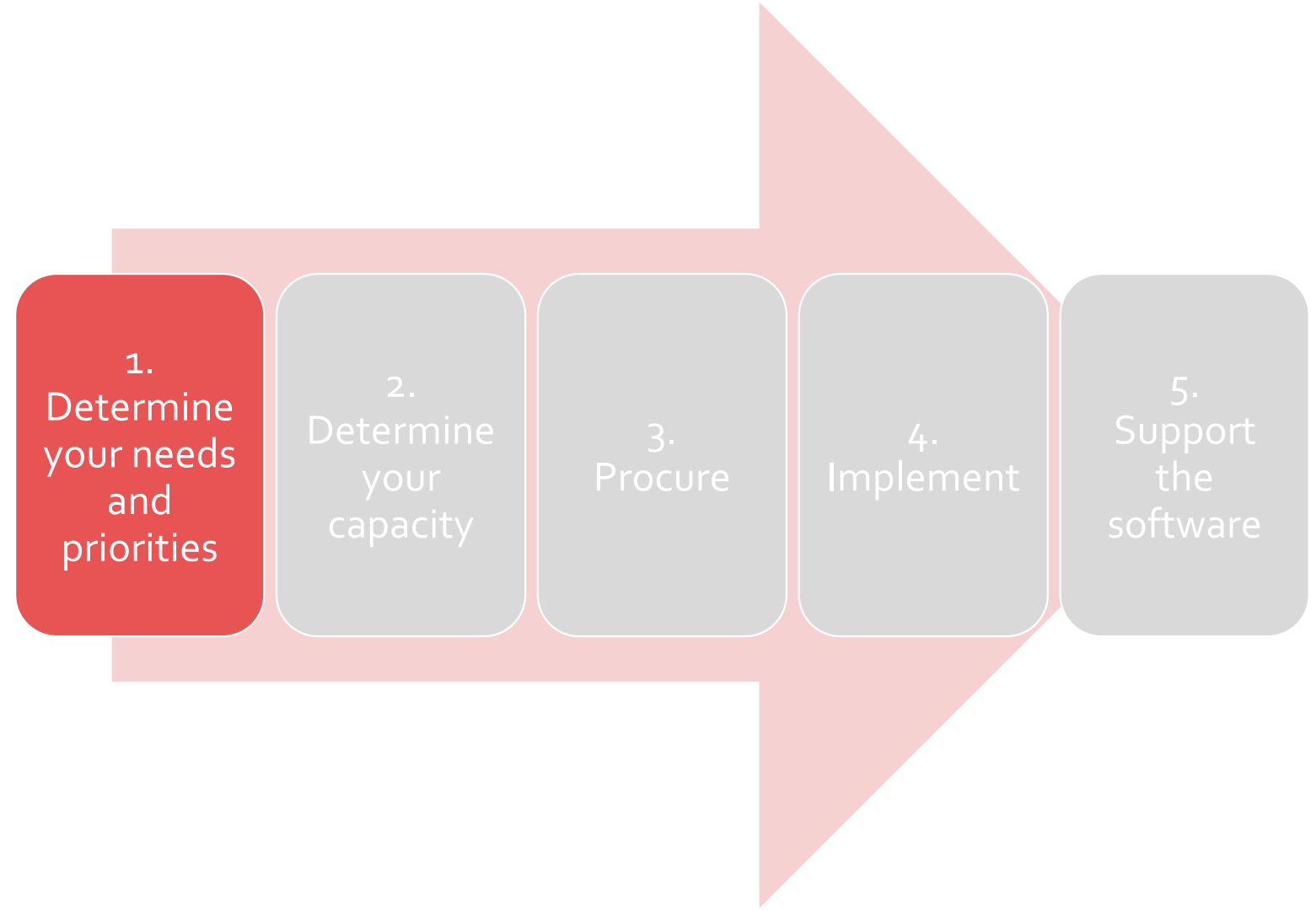
Procurement Strategies



Basic Procurement Methodology



Basic Procurement Methodology



At this first stage, you should...

1

Select a primary staff member who is responsible for the procurement from start to finish.

2

Cast a wide net to identify your needs.

3

Familiarize yourself and your agency with different software capabilities.

**Determine
Your Needs**

Potential Software Capabilities to Consider



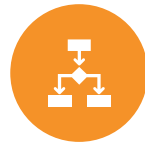
Mobile payment options



Automatic scheduling



Trip Optimization



Trip Prioritization



Real-time vehicle tracking



Common customer profile database



Integrations with existing platforms

At this stage, you should...



Rank your needs/desired software capabilities



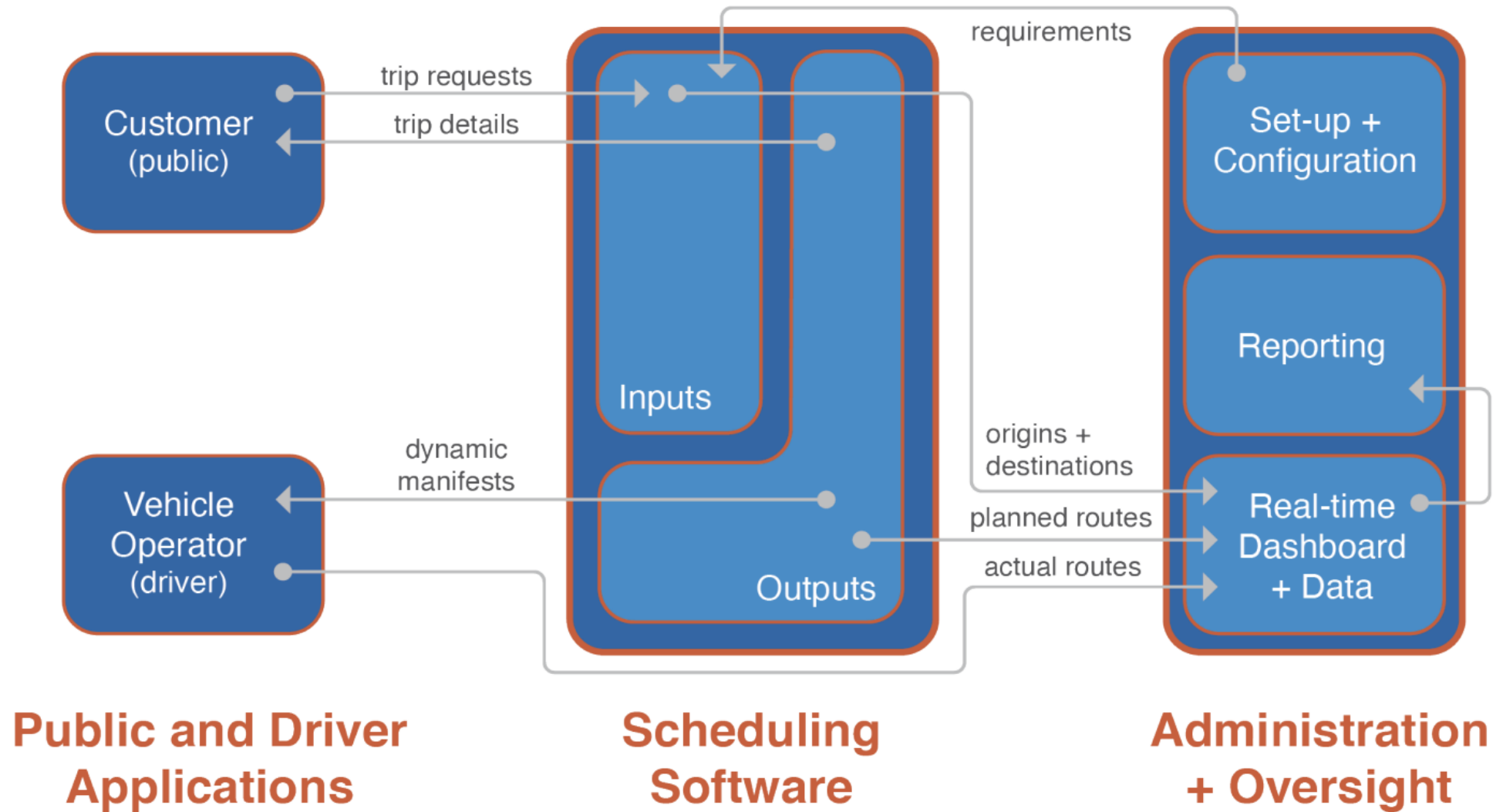
Establish measurable goals



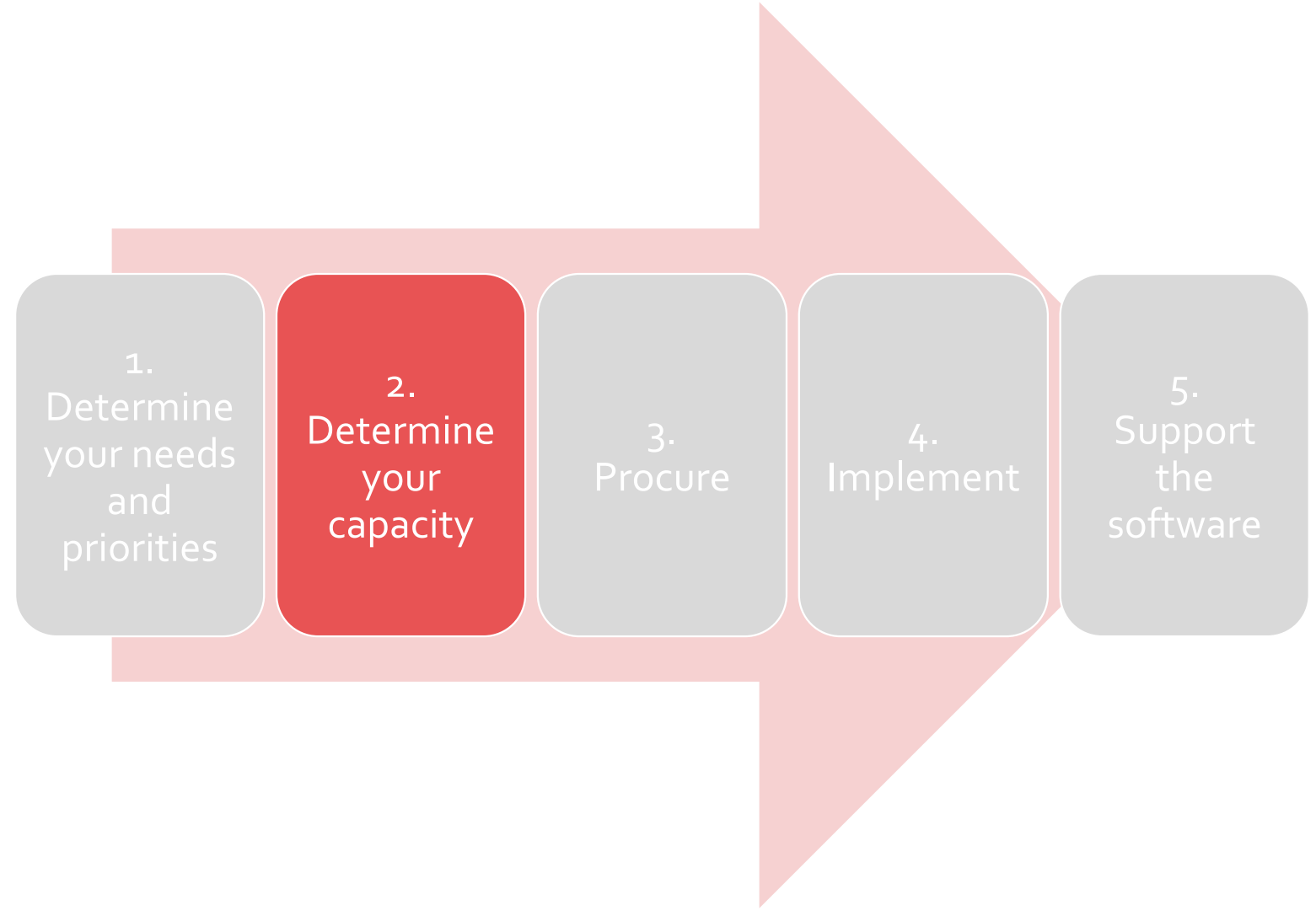
Determine connectivity goals

**Determine
Your Priorities**

Interoperable Software Example



Basic Procurement Methodology



At this stage, you should assess...



Roles of current staff



Willingness/ability to bring in additional manpower



General understanding and acceptance of future role shifts

**Determine
Your Staff
Resources**

At this stage, you should consider...

Researching

Researching
available grant
funding

Reaching
Out

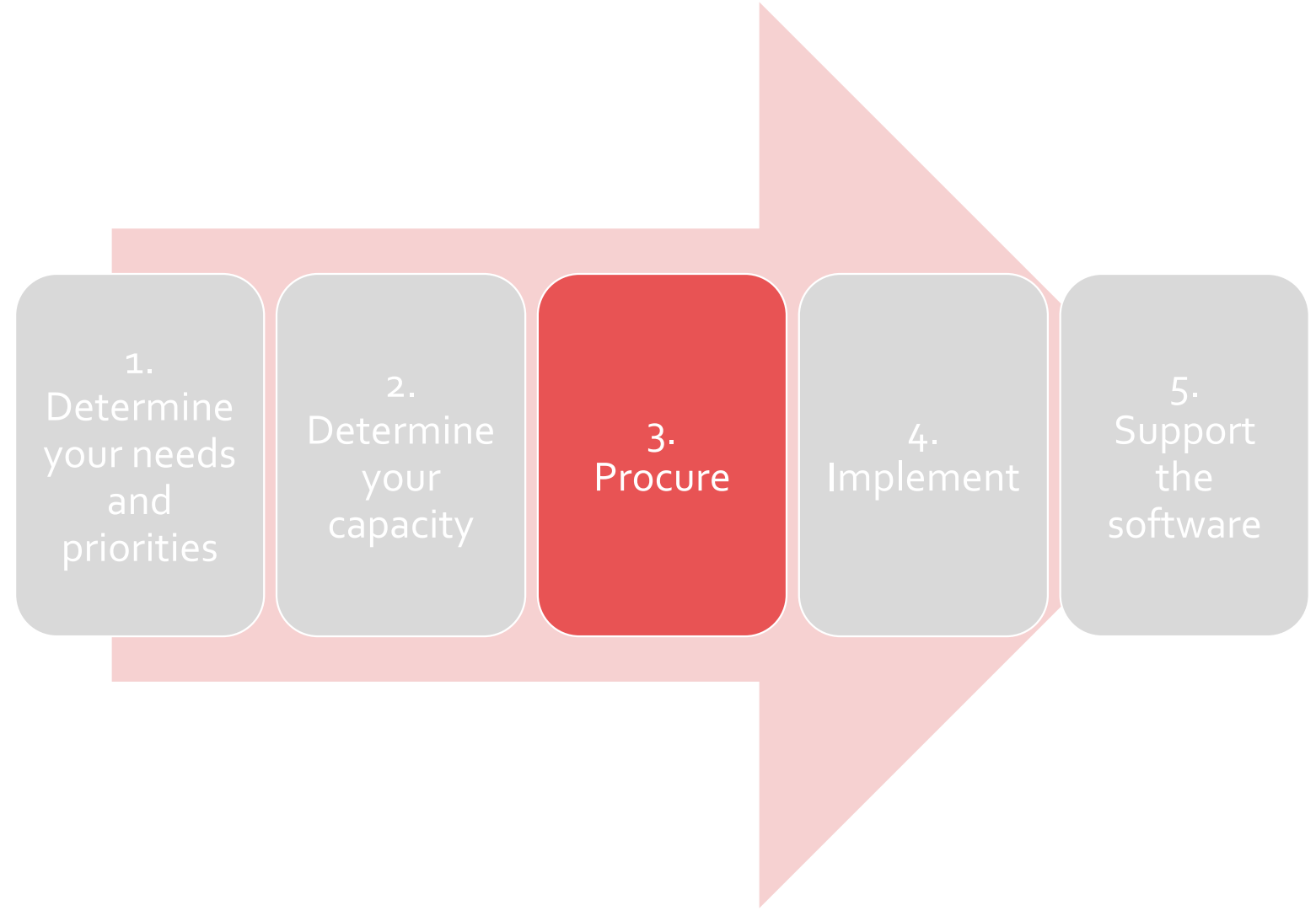
Reaching out to
your state DOT
for resources

Reallocating

Reallocating
costs

**Determine
Your Financial
Resources**

Basic Procurement Methodology



Conventional Procurement Process



Write and release RFP



Evaluate responses based on established criteria (i.e. lowest-cost bid option)



Develop contract with selected vendor



Test the product



Implement the product

RFP Development Strategies



Reference peer RFPs



Engage stakeholders



Work in long-term items (i.e. testability, performance language, training of staff, a partnering/learning approach)




Ask to see references, sample contracts, etc.




Develop and communicate a robust scoring/evaluation methodology

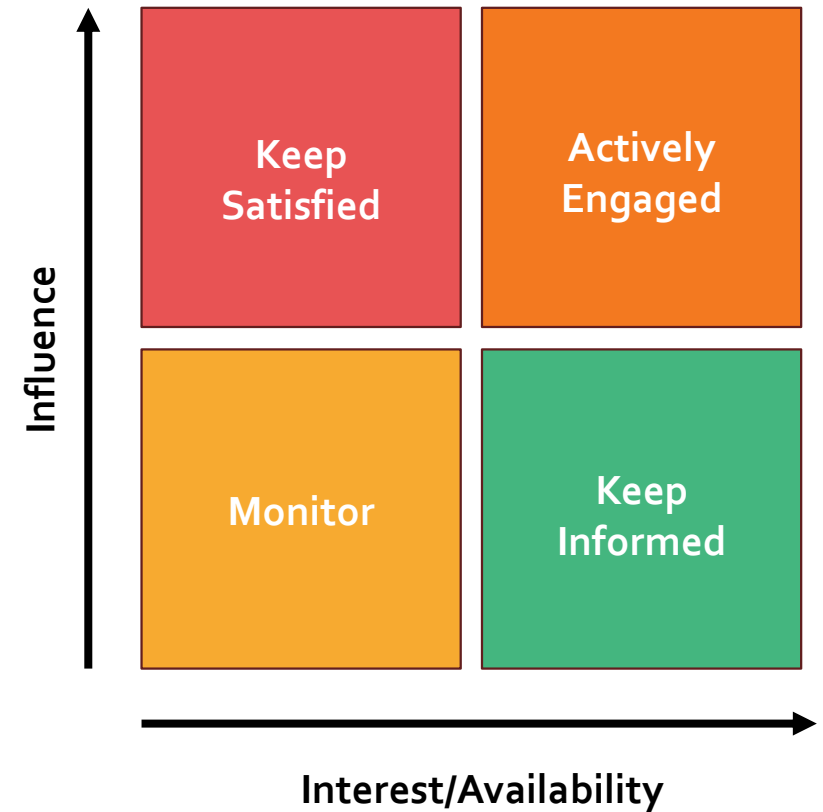
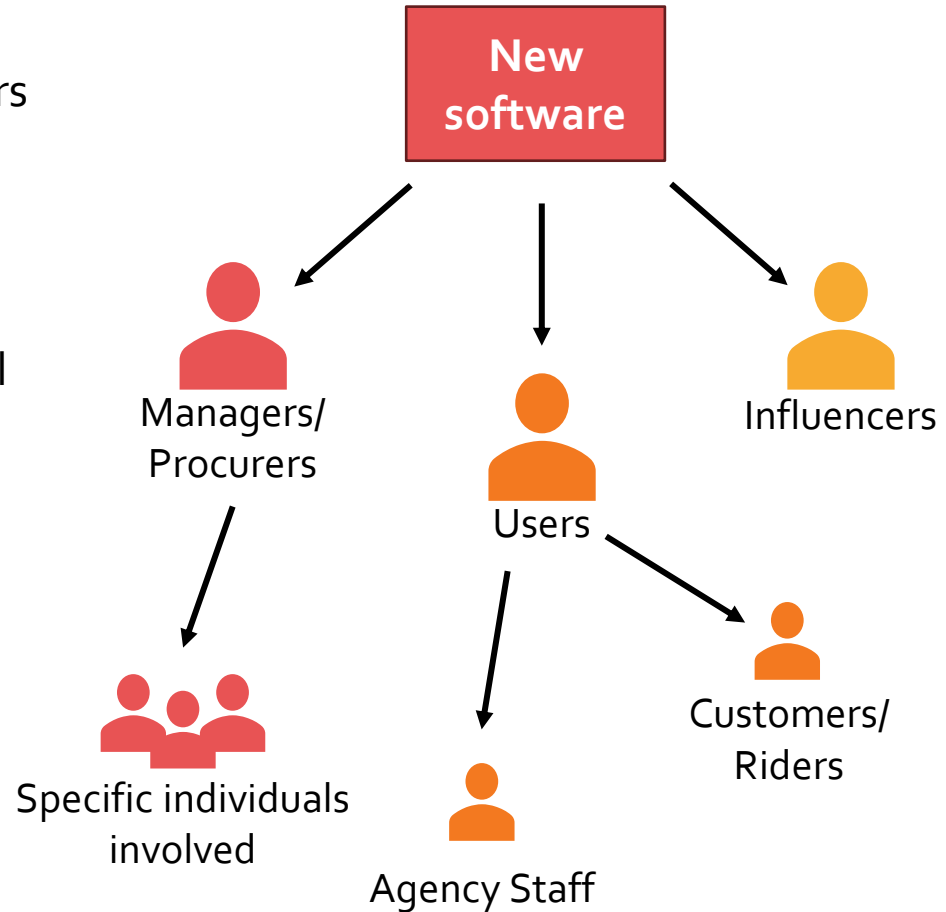
Stakeholder Engagement

Stakeholders include:

 Managers/procurers

 Users

 Influencers (special interest groups)



Consider exploring...



State Cooperative Purchasing Schedules



Joint Procurements



Public-Private Partnerships



Performance-Based Procurements

**Alternate
Procurement
Strategies**

Vendor Pricing

When comparing vendors' cost estimates...



Don't just consider the upfront cost



Ensure you are aware of what is included in the vendors' cost estimates

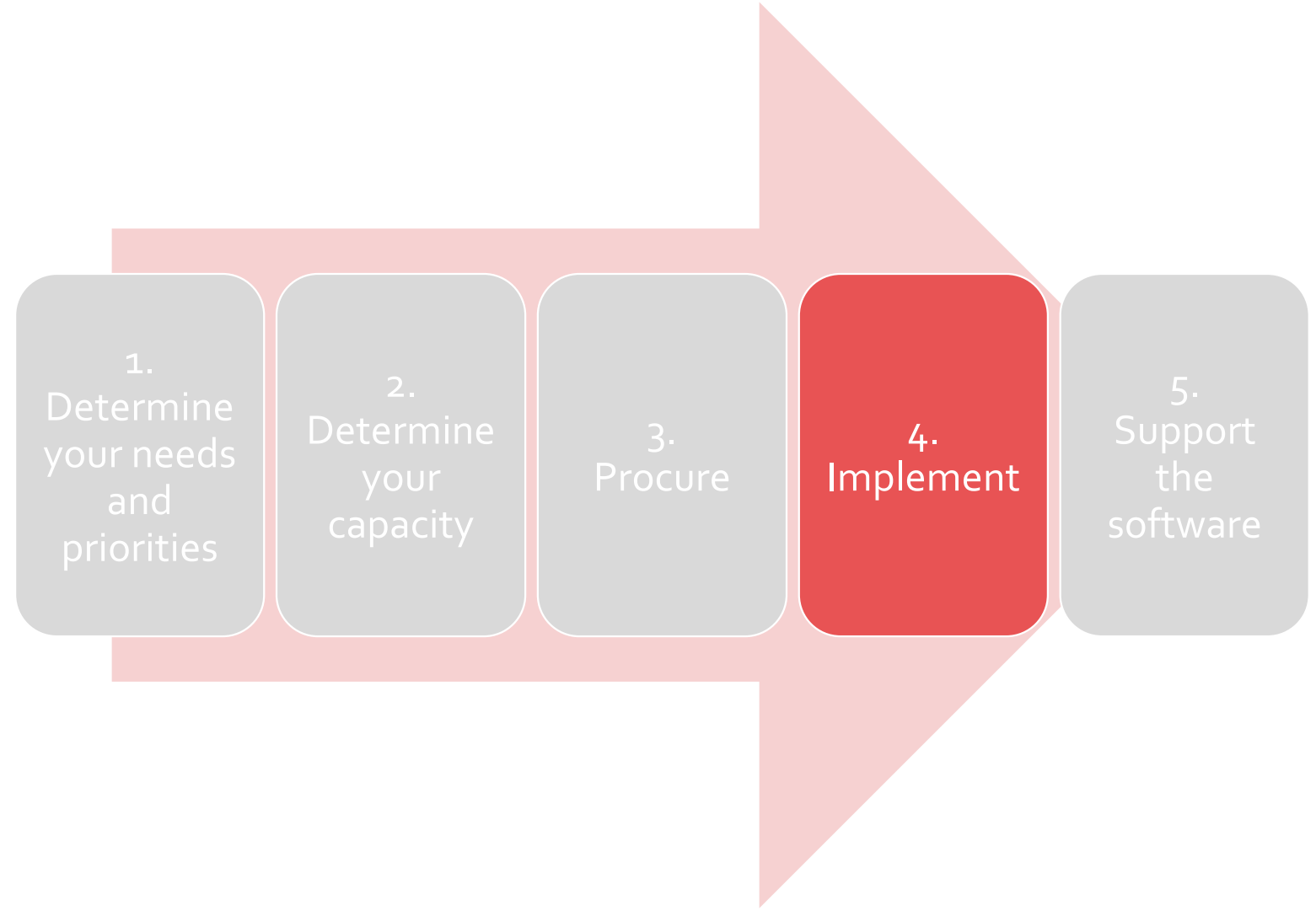


Ask about price increases over time



Maintain a return on investment mindset

Basic Procurement Methodology



During implementation, you should...



Anticipate a long timeline and significant staff involvement



Train staff members



Test the software against a variety of scenarios



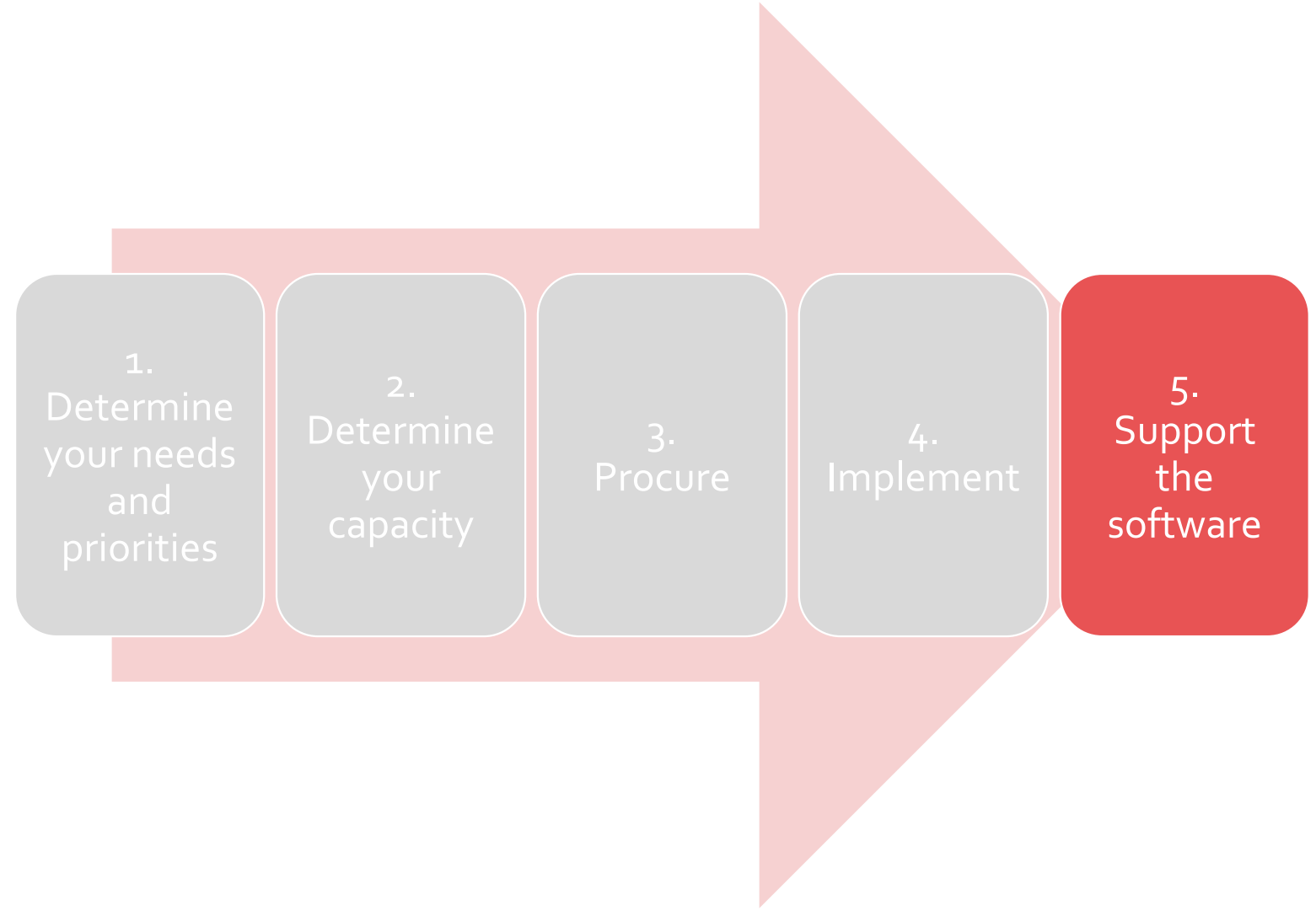
Continue to engage stakeholders



Ensure vendor support meets your expectations

Implementing the Software

Basic Procurement Methodology



To support the software, plan for...



Software maintenance downtime



Software upgrades



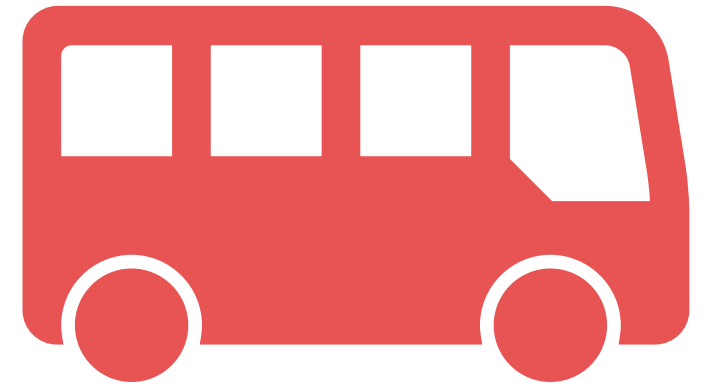
Integrating additional modules/service expansion

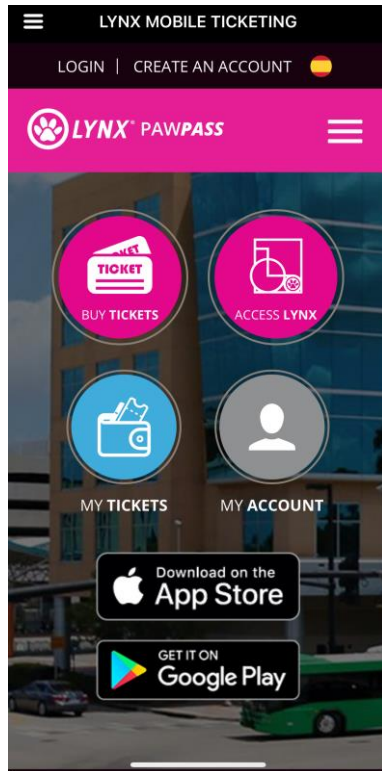


Ongoing staff training

Support the Software

Case Studies and Best Practices





LYNX

Transit agency for central Florida, serves about 300K residents.

Over a three-year period, agency deployed three different applications:

March 2016 - WebAccess for ADA compliance

March 2019 - PawPass for mobile trip payment

October 2019 - LYNX Connects for trip planning

Lessons Learned

Rarely a “wrong” way to approaching improving digital services for the public.

Start with your priorities.

Albany Transit System (Oregon)



Transit system for city of 57K residents in western Oregon.

2021 - Released RFP to procure new paratransit scheduling & dispatch system

Previously utilized Routematch for paratransit services

RFP brought in four prospective vendors

Created a list of requirements that they asked vendors to fill out and submit with their responses, indicating whether or not they were able to address each requirement.

Lessons learned

Don't be afraid to change vendors if one is not meeting your needs.

Sometimes finding out what vendors are out there helps with decisions and procurement.

List of met requirements allows for creativity from vendors.

Requirements Checklist

EXHIBIT H	SELECT ONE RESPONSE FOR EACH REQUIREMENT	
	YES	The proposed system currently meets this requirement and is included in the proposed system, at the proposed cost.
	NO	The proposed system currently does not meet this requirement.
	MR	Modification is required to meet the requirement (please add comment).
	UD	Under development (please add comment with E.T.A.).

REQ ID	Mandatory or Not	Vendor Reply	Requirement
H.01			DATABASE
H.01.A	M		Build New Client Database Files: The selected proposer shall be responsible for providing a data templates in order for staff to begin compilation of necessary data for use in the new software.
H.01.B	M		Data Conversion of Existing Client Database: The selected proposer will evaluate current client and destination database from Routematch and develop appropriate data conversion process that converts existing client & desitination information into a compatible format for use in the scheduling and dispatching software solution. Selected proposer will convert all files as required for loading in relevant data and will provide a verification report to help ensure files have been migrated properly. Additional data conversion items like standing rides from Routematch would be nice to have.
H.01.C	M		Database Attributes: Client database shall be capable of providing a full range of data elements for each client in the system. Information shall include full identification including gender, address, contact details, third party/emergency contacts, disability status, mobility aides used, required accommodations, caregiver, language spoken by client, program affiliation, third-party contract payee options, and a space for client or location notes. Additionally, system shall permit assignment of various demographic codes, such as elderly, youth, etc.
H.01.D	M		System shall be capable of tracking trip purpose for each trip with user customization possible in terms of defining various trip purposes.
H.01.E	M		Customer Look-Up: The customer database shall provide functionality to allow customer service agents to readily look-up client records for edit, trip-booking, etc. Search capabilities should be based on customer name, and identification number, phone number, address, or similar characteristic. When looking up a customer, auto-complete features are desirable to minimize user input.
H.01.F	M		New Client Entry/Customer Edits: System shall be capable of registering new clients, capturing information about addresses, disability type, space requirement, load/unload time, fares, payment options, eligibility conditions, funding sources, etc. while a customer service agent has the new customer on the telephone. System shall permit edit of all fields in a customer records in a real-time basis and shall permit suspensions (temporary) of service.
H.01.G	N		Client Details: System shall be capable of recording and displaying trip history details specific to each client, such as recent trip dates, trip origins, or trip destinations. System must have the ability to capture information on trip cancellations and no-shows specific to individual customers.

Group Procurement: Six Midwestern Agencies

In 2022, N-CATT worked with a group of six midwestern counties who were interested in replacing or improving their transit technology suite.

Used Routematch, but all of counties agreed that software was not meeting their needs.

Employees performed the functions by hand in lieu of software.

Agencies prioritized planning, booking, scheduling, dispatch, and payment.

What was needed was an entirely new software.

2024: The counties have undergone a procurement process leading to the selection of the TripMaster software – very satisfied with smooth implementation

Lessons learned:

Think through what you need, upfront time investment

Group procurement can be an efficient use of resources





SEPTA

The Philadelphia region's transit authority

Agency was running paratransit using Routematch and running into performance issues and wanted to modernize

Received several proposals and went with RideCo, did best job of meeting needs through process

Lessons learned

- Replacing software with modern technology can enhance user experience

- Consider requesting demos from vendors/finalists

Procurement Best Practices for Small Agencies

Partnership & learning approach with vendor

Start small – What's your biggest priority?

Group procurement for resource constrained agencies

- Can align on needs

- Easier for partner agencies to join

Ask vendors to pitch solution

- Typically, agencies outline, vendors explain delivery



STTATs

Strategic Technology Technical Assistance Teams

Work with small-urban, rural, and tribal transit agencies to help strategize their technology investments

Applications are open!

Visit: <https://n-catt.org/technology-strike-teams/>

Or scan our QR code! →





Guidebook Structure

📅 Date: February 18, 2022

Jump to section

Guidebook Focus and Software Types

The Guidebook primarily focuses on specific types of software—shown below—that are common for many small transit agencies. Of approximately 1750 small transit systems of less than 20 vehicles in the USA, over 1125 (65%) are providing some form of demand responsive transportation service and therefore require trip booking and scheduling capabilities (although for very small systems this function can often be accomplished without an actual software product designed specifically for this purpose). However, the Guidebook is applicable to essentially all software relevant to small transit agencies.

**Trip
Planning**

**Trip
Booking +
Scheduling**

**Trip
Payment**

Types of software: Trip planning, Trip booking and scheduling, Trip Payment

Download our Guidebooks at n-catt.org/tech-university/!



Questions?

Contact us:

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