

# Innovation Studio

TPB Regional Public Transportation Subcommittee

*October 2024*



Chicago Transit Authority

# Project Purpose & Need

- A key goal for the Innovation Department is to incorporate **cutting-edge technology and process improvements across the CTA** to enhance the customer experience and increase operational efficiency.
- Existing public sector/government procurement processes often **require a public agency to specify the specific tool or solution it needs, but with the new mobility landscape and rapidly evolving technology ecosystem that can limit procurements** to only known tools and technology capabilities.
  - Procurements can take anywhere between one year and 18 months or more to complete.
  - Additionally, Request for Proposals (RFPs) require the Agency to have significant details and understanding of the specific tool or solution, which limits the opportunity for new solutions and can cause challenges with implementation.
- The CTA is looking for an **agile, quick process for prototyping solutions and piloting tools** in cases where the agency does not yet know what tool or solution would best serve its needs.



# Project Overview

- **The Innovation Department is recommending to authorize the creation of an Innovation Studio**
  - Innovation Studio will allow CTA to quickly pilot solutions and new technologies for some of CTA's biggest challenges with the goal of scaling successful pilots into long-term programs.
  - The Innovation Studio program will be managed by the Innovation Department and will launch pilot projects with external parties each year.
- **Innovation Studio will have multiple problem statements released annually**
  - External parties (companies/not-for-profits/organizations) can respond to the problem statements with proposed solutions.
  - The Innovation Department will lead the pilots or proof of concepts (POCs) in close partnership with departments supporting or benefiting from the projects.
  - Project development, implementation, and evaluation are anticipated to take twelve months.



# Peer Agency Comparison: New York and Boston



## Transit Innovation Partnership

All Challenges 2019 2020 2021 2022 2023



Human Capital Challenge  
Finalists Announced



Operational Efficiency Challenge  
Finalists Announced



Recovery Challenge  
Pilot Winners Announced

## New York: Transit Tech Lab

- A **public-private initiative** that includes the Metropolitan Transportation Authority (MTA) and Partnership for New York City.
- The Transit Tech Lab provides a **pathway for growth-stage companies to efficiently solve public transportation challenges**, and allows public transportation agencies to explore **innovative, private-sector solutions** to challenges they face in their services.
- Every year, the Lab announces **two “Challenges”** that **address the regional transit agencies’ most pressing issues** and requests companies from around the world to present solutions.

## Boston: Massachusetts Bay Transportation Authority’s (MBTA) Innovation Proposals

- MBTA has an **open invitation approach** in which they accept proposals on a rolling basis. An Innovation Proposal is a written offer (conceptual proposal) that is submitted to the MBTA on the initiative of the submitter.
- Conceptual proposals are submitted first, and detailed proposals next if the agency is interested in the submitted concept.
- MBTA also invites employees with innovative ideas to submit proposals

## Innovation Proposals

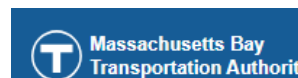


### Employee Innovators



Are you an MBTA employee with an innovative idea? We want to hear from you.

[Learn more](#)



# Proposal Evaluation and Implementation

## Proposal Evaluation Process

### Phase I

- Initial review of submissions by the Innovation Department for clarity, responsiveness, feasibility



### Phase II

- In-depth evaluation by the Innovation Department and CTA stakeholder departments
- Presentations from Innovators on proposal
- Determination on whether to move forward with pilot based on pre-established criteria



### Phase III

- Innovation will prepare a recommendation memo for selected pilots and stipend amounts for final approval by Chief Innovation Officer.
- Chief Internal Auditor will review and confirm that the evaluation process was appropriately followed.



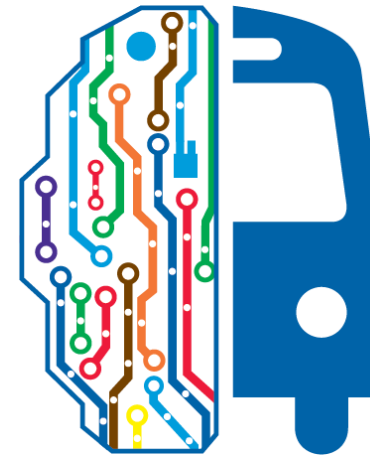
### Launching Pilots/POCs

- Law and Innovation will work with selected Pilots/POCs to finalize a Professional Services Agreement (PSA/contract).
- Innovation will work with depts. on implementation, troubleshooting issues and management of pilots. It is anticipated this process will take no longer than 12 months



# Defining the Problem Statements

- Successful problem statements should:
  - Address key challenges facing the agency and its riders that are within the Agency's control
    - We have other avenues to pursue pilots or projects that require significant external input/engagement (e.g. Bus Lanes with CDOT or engaging unhoused riders with DFSS)
  - Aligns with customer feedback received through surveys and other engagement opportunities
    - Quarterly rider survey results show service frequency/reliability and accuracy and availability of real time information as key painpoints in the rider journey
  - Actionable to address a specific challenge
    - We should not be looking to implement overly broad problem statements or attempting to have problems statements to solve every challenge through the Studio
- Public voting of problem statements to ensure problem statements aligned with rider issues



Innovation  
Studio



# 2024 Problem Statements



**Safety:** *How can CTA automatically detect people or large objects on the tracks to enable swift intervention?*

**Internal Process Improvements:** *How can CTA automatically monitor the condition of physical assets at bus stops or their use over time?*



**Customer Experience:** *How can CTA expand real-time arrival and alert signage to bus stops?*



# Information Session for Interested Businesses and Organizations

- CTA DBE Team and Innovation Team did significant outreach to technology/innovation organizations, business community, educational institutions and community stakeholders to get the word out about Innovation Studio and encourage participation.
- Over 25 individuals attended the information session with many other individuals downloading and listening to the recording of the session
- Q&A period for one month post information session with answers posted on our website

## Innovation Studio



Innovation Studio is our initiative centered around testing new and innovative solutions to help solve issues facing our riders. Each year, we will release problem statements through Innovation Studio to solicit innovation proposals from external innovators. Successful proposals will be piloted on our system and successful pilots may be scaled into long-term solutions. The 2024 problem statements are focused on issues of safety, internal process improvements, and customer experience.

**Safety:** *How can we automatically detect people or large objects on the tracks to enable swift intervention?*

Right-of-Way (ROW) intrusion, defined as a person or object entering or occupying rail track, is a serious safety concern for our riders. We are seeking innovative solutions to detect and respond to ROW intrusion in real-time to prevent service delays and help ensure a safe commute for everyone.

**Internal Process Improvement:** *How can we automatically monitor the condition of physical assets at bus stops or their use over time?*

Our riders engage with myriad public transit physical assets throughout the Chicagoland area. The monitoring of these assets presents a hefty operational burden. To reduce this burden, we are seeking innovative solutions to monitor transit related physical infrastructure and its use.

**Customer Experience:** *How can we expand real-time arrival and alert signage to bus stops?*

Our robust regional transit system operates over 120 bus routes that serve nearly 11,000 bus stops throughout the City of Chicago and suburban municipalities. Of these, only about 400 have digital signage reporting real-time bus arrival estimates. We are seeking a turn-key, self-contained, scalable solution to expand real-time arrival and customer alert information signage to bus stops in a variety of environments.

### Proposal Process

The deadline for innovation proposals the 2024 problem statements is April 15<sup>th</sup> at 11:59 p.m. CT. Innovation proposals will be evaluated in two phases. During Phase 1, proposals will be evaluated by an internal review committee for responsiveness, feasibility, and timeline. Innovators whose proposals pass the Phase 1 Evaluation will be selected to move to Phase 2. During Phase 2, Innovators will be given the opportunity to present their innovation proposal, which will be evaluated by a panel of stakeholders and subject matter experts from CTA. From these presentations, CTA will select one or more winning innovation proposals to proceed to pilot. Application forms and additional information can be found on the Innovation Studio website at [www.transitchicago.com/innovation-studio](http://www.transitchicago.com/innovation-studio).

### Connect with Us

The CTA will be holding an information session on March 18<sup>th</sup> at 2:00 p.m. CT where we will discuss Innovation Studio, the 2024 problem statements, and the application process.

Register here: [https://us02web.zoom.us/webinar/register/WN\\_j-hi0hloTEGYJoAQ6O358Q](https://us02web.zoom.us/webinar/register/WN_j-hi0hloTEGYJoAQ6O358Q)

Questions can be e-mailed to [InnovationStudio@transitchicago.com](mailto:InnovationStudio@transitchicago.com) until 11:59 p.m. CT April 1<sup>st</sup> and will be shared on the FAQ page.



# Applications Received

Phase	Safety	Customer Experience	Process	Total
Applications Received	14	7	9	31
Passed Phase 1	10	5	3	18
Passed Phase 2	5	2	1	8
Selected for Pilot	2	2	1	5

Phase 1 review of written applications was conducted by Innovation department staff.

Phase 2 review of company presentations was conducted by evaluation committees comprised of stakeholders and subject matter experts.

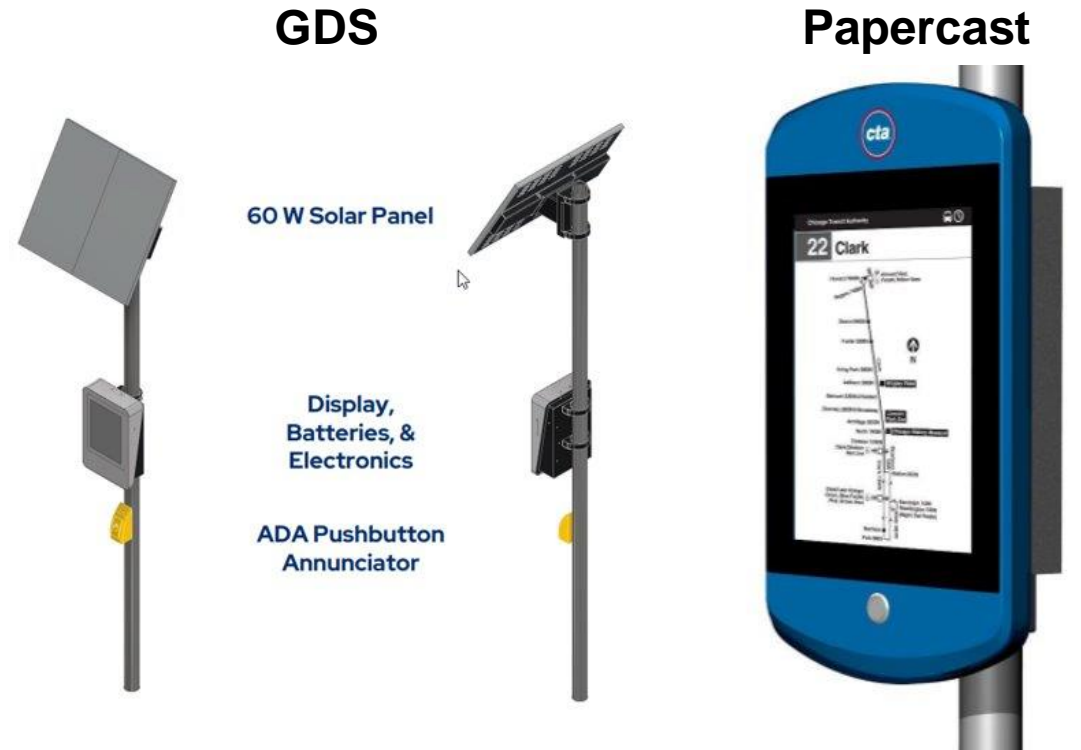
Final pilot selection was conducted by the Chief Planning and Innovation Officer.

After final selections were made the Chief Internal Auditor conducted an internal review of the process prior to notifying applicants of final decisions.



# Customer Experience Pilots

- Agency selected two proposals for piloting: GDS and Papercast.
- Both offer similar physical products but have unique back-end solutions.
- The products do feature differences in display sizes, methods of power, and text-to-speech buttons.
- Running both pilots will allow CTA to compare the advantages of each solution and various product features.
- \$55k stipend for both companies to fund hardware and licenses



# Current Status

- CTA's Board approved the stipends and Innovation PMO is in the process of executing contracts and beginning pilot program for the customer experience pilots.
  - Expected launch of pilots is in January/February 2025
- Pilots will be monitored for success throughout their duration and successful pilots will inform a next steps of a procurement process to pursue a system wide implementation to solve these business problems.
- CTA will return to board for approval of other pilots' project stipends, as necessary, later this year.



# Timeline

Description	Start Date	End Date	Duration
<b>Solicit feedback on problem statements from Citizens Advisory Board, public, etc.</b>	12/12/2023	1/15/2023	4 weeks
<b>Set up web page, email address, submission form, finalize outreach plan (prep for launch)</b>	11/1/2023	1/26/2024	12 weeks
<b>Board Review and Approval</b>	12/13/2023	12/13/2023	1 Day
<b>Web Site and Proposal Intake Go Live</b>	1/29/2024	-	-
<b>Proposal intake period</b>	2/19/2024	4/15/2024	10 weeks
<b>Information Session(s) on Innovation Studio organized by Innovation, DBE and Procurement</b>	3/18/24	-	
<b>Internal Evaluation, Phase 2 Evaluation, Final Selection</b>	4/15/2024	7/1/2024	12 weeks
<b>Contract, Legal, Agreements drafted and finalized</b>	7/1/2024	ongoing	7-8 weeks
<b>Pilot Decision Announced</b>	10/9/2024	ongoing	-
<b>Pilot Period</b>	10/9/2024	June/Oct. 2025	9-12 months
<b><i>Begin next round of problem statement development and POC/pilot solicitation</i></b>	<i>1/2025</i>	<i>3/2025</i>	<i>3 months</i>



Innovation Studio - Agency initiatives - CTA  
(transitchicago.com)

