

Using Modern Technology To Advance The Customer Experience At The Stop

Learning Zone Session



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Expectations & Introductions



Session Agenda

01 DART's Goals

02 Tolar's Approach

03 Urban Solar: Powering Better Bus Stops

04 WaySine: RTIS & Portal Host

05 Questions & Answers

DART Goals & Project History

01 Accessible

Create a stop environment that is convenient to use, with appropriate curb access and a sidewalk free from obstructions.

02 Informative

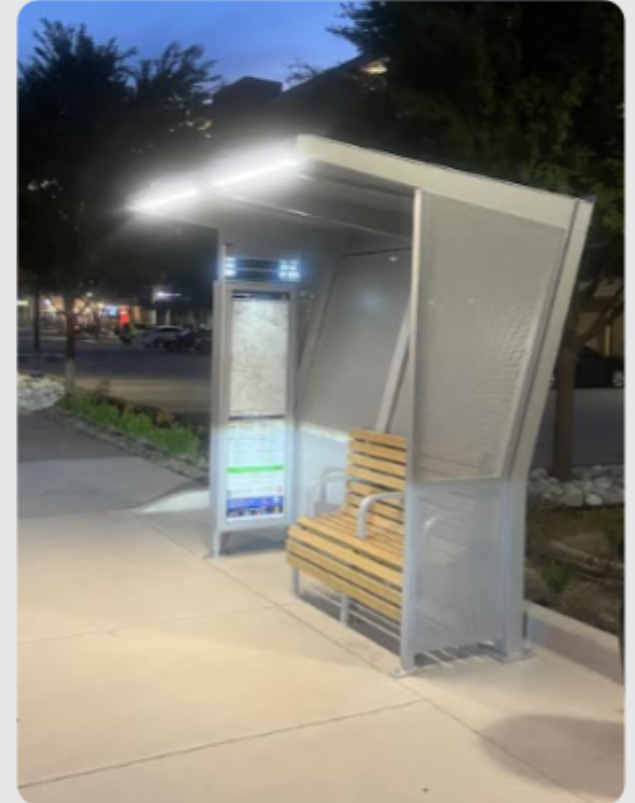
Provide service and real-time travel information to riders at bus stops, including schedules and service disruption information.

03 Safe, Secure, & Comfortable

Provide a stop with reliable lighting, ample seating and protection from the elements.

04 Defining Success

Establishing clear outcomes and measurable benefits for the transit agency, operators, and riders.



DART : Why the DART pursued a modern customer-information solution

Key Drivers

01 FEEDBACK

Rider surveys emphasize the critical need for improved safety measures and reliable live-information.

02 MAINTENANCE

Strategic adoption of low power dot matrix technologies to lower long-term upkeep overheads.

03 TESTING

Comprehensive performance reviews of signs and lighting solutions prior to deployment.

Accessibility

To ensure universal usability across all stations, several key features have been integrated into the modern solution:

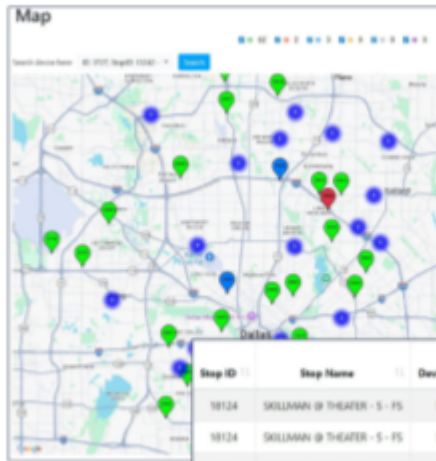
- **Accessible Pads:** Structural construction of highly compliant boarding pads.
- **Motion Audio:** Environment-activated voice announcements for riders.
- **Wheelchair Access:** Enhanced spatial planning for effortless boarding.
- **Rider Visibility:** High-contrast structural markers and ambient optimization.

How did we get here?



DART : Project history: from the original need to the current deployment approach

Remote Monitoring

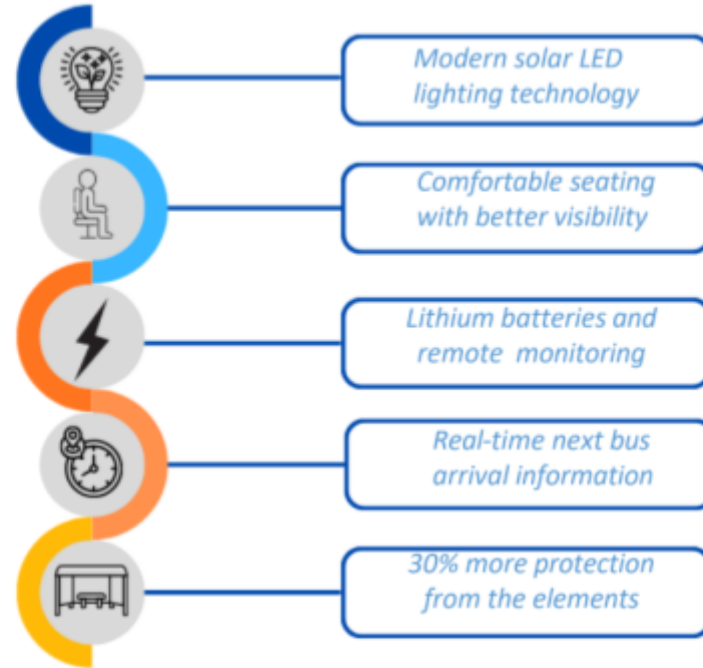


- Proactive approach to addressing issues before our riders experience them
- Maximize maintenance staff and dispatch the right skillset
- SMS alerts: low battery, power outage, communication outage, geofence irregularities

Stop ID	Stop Name	Device ID	Timestamp	Gap	Battery Voltage V	Solar Voltage V	Temperature (°F/°C)	Signal Strength
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:52:04 PM	14/A	3.56	4.64	86.58/30.32	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:47:03 PM	5m 1s	3.55	4.64	86.13/30.07	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:41:49 PM	5m 14s	3.57	4.39	85.94/29.97	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:32:29 PM	9m 20s	3.55	4.78	85.41/29.67	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:25:19 PM	7m 10s	3.59	3.60	85.77/29.87	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 12:17:08 PM	8m 11s	3.56	4.61	85.15/29.53	Excellent
10124	SKILLAMAN @ THEATER - S - FS	S107	3/2/2026 11:58:47 AM	20m 21s	3.57	3.96	83.14/28.41	Excellent



Shelter Features



DART : What success looks like for Maintenance, Riders, and the Agency

- 1 Improved ridership experience 
- 2 Ridership growth 
- 3 Higher customer satisfaction 
- 4 Deliberate maintenance response



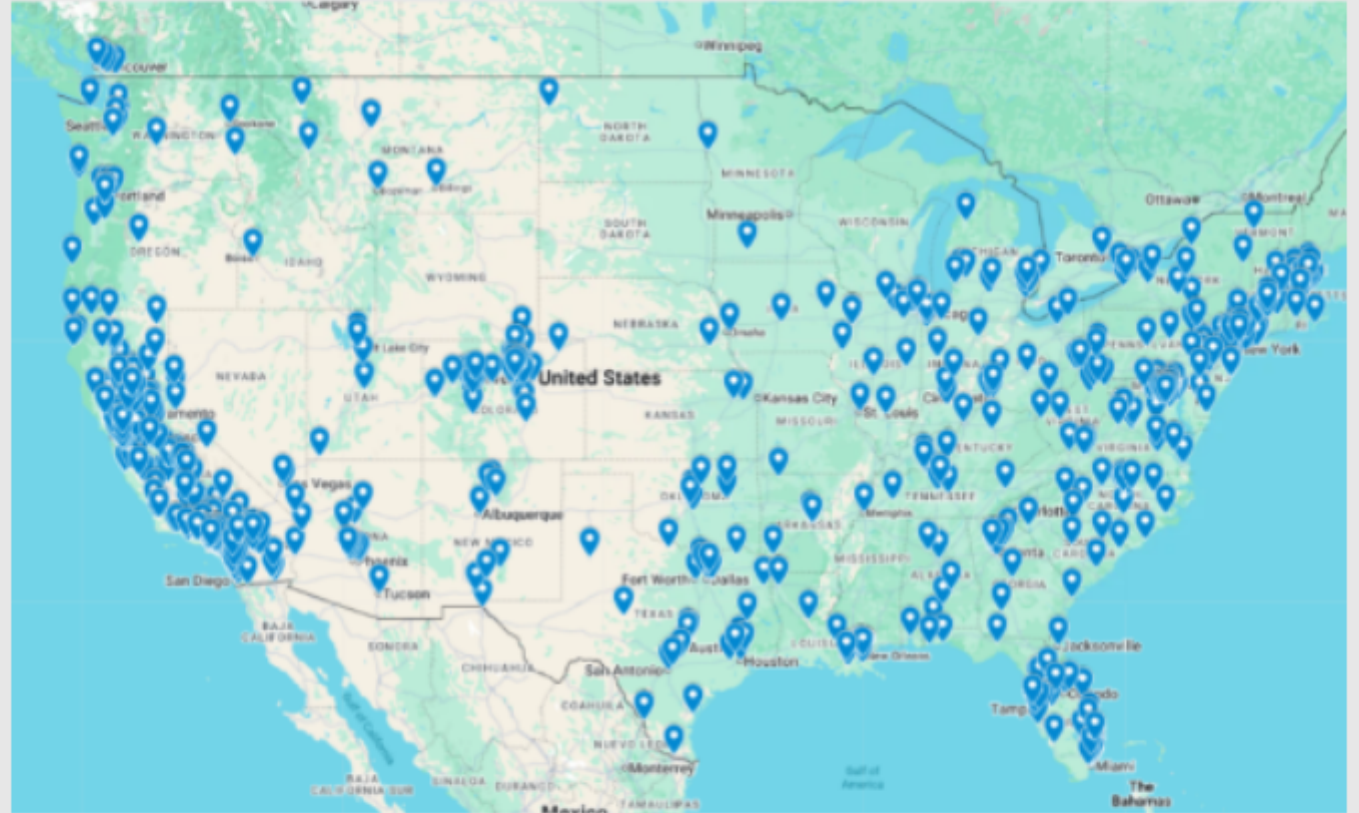
Tolar Manufacturing: Connecting Communities Since 1991

A recognized industry leader in the design and fabrication of transit stop infrastructure

The deepest portfolio of transit shelter options in the industry

Lifetime structural warranty

Robust QA/QC program audited annually by an outside agency



Tolar's Approach to the Solicitation



1 Agency Priorities

How Tolar interpreted the agency's requirements and operational priorities

2 Tech Requirements

Review of the technology requirements and key components

3 Key Partners

Selecting key technology partners that could meet or exceed agency requirements and shared Tolar's values

4 Stop Design

Designing the stop as a connected, safe customer-information point that met the agency goals

5 System Integration

Where solar power, real-time information and remote management fit together

6 Value Articulation

How do we articulate the value of our solution in the solicitation response

Urban Solar: Powering Better Bus Stops

30,000+ systems since **2008**

500+ transit agencies using Urban Solar lighting systems

40+ transit agencies using Urban Solar e-paper real time information displays



Urban Solar: Powering Better Bus Stops

New **ECM-X** next-gen lighting controller launched in **2026**. First scale deployment with **DART**.

ECM-X Benefits: Increased lighting performance, increased reliability, simplify troubleshooting, remote monitoring when paired w/digital display.

The **ECM-X** makes it easy for transit agencies to manage their assets with limited resources.



Urban Solar: ECM-X Benefits



Intelligent Lighting Control

Automatically adapts to changing solar conditions at every stop and season, maximizing light output and system reliability simultaneously.



Remote Monitoring & Diagnostics

Integrates with real time information displays to transmit live diagnostics via cellular to the cloud, allowing your agency to manage all of their lighting and display systems through a unified portal.

Urban Solar: ECM-X Benefits

Cost Efficiency

Monitoring leverages display modem and SIM card, eliminating redundant hardware, data fees, and SaaS licensing fees.

Reduced Site Visits

Eliminates the need for in-person check-ups. Issues can be resolved before they impact transit riders.

Proactive Maintenance

Staff receive specific alerts, allowing them to arrive on-site with the correct tools and parts for efficient repairs.

Simplified Management

A single portal and SaaS license minimize onboarding, training and management overheads and provides a single source of truth.

Urban Solar: Additional Maintenance Savers

Next Gen Luminaires

- Replaceable IK10 impact rated lens
- Hidden security fasteners
- Warm white (3500K) LEDs
- Welcoming light distribution

LiFePO4 Batteries

- Expected 10+ year battery life (vs. 3-5 years for lead acid batteries)
- Greater resistance to high ambient temperatures



Solar Powered Real-Time Signage & Remote Management Portal



Solar Powered Real-Time Signage



Remote Management Portal



Rider Satisfaction / Trust

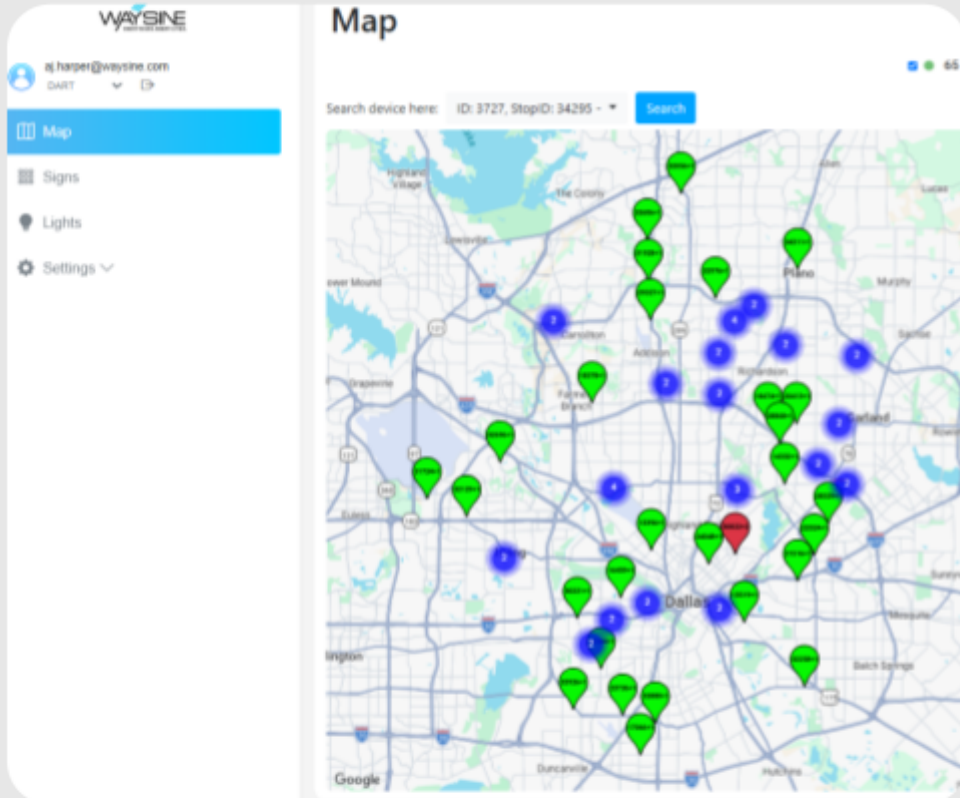


Maintenance Time / Cost



Return on Investment

Portal overview: How data and remote monitoring support proactive maintenance to reduce overall maintenance costs.



Monitor, Alert & Diagnose

Detect and identify issues instantly before they cause systemic outages.



Reduced Time in the Field

Minimize field visits with smart telemetry and precise remote diagnostics.



Increased Reliability

Enhance asset uptime and build rider confidence at the transit stop.



Preventative Maintenance

Proactively resolve hardware anomalies before they become critical failures.

Clearer information creates greater confidence



Eliminate rider anxiety



Communicate reliability



Enhance Rider Satisfaction / Trust



Vandalism and vagrancy



Safety and security

Doing More at the Bus Stop in a Fiscally Responsible Manner



Ridership

Increased passenger counts and farebox revenue (\$\$)



Rider Satisfaction & Trust

Enhanced passenger experience builds long-term confidence



Maintenance Time & Cost

Lower overall upkeep expenses and minimized hours in the field (\$\$)



Result

A game changing solution that improved the customer experience, at the agency's front door of service, the bus stop

Let's Hear Your Thoughts
scan the QR code to download the
presentation



Continue the Conversation

Join us at Booth 4231 for a closer look at the solution

See the WaySine portal and connected-stop technology

Talk with the panel about your agency's priorities and challenges

Bring your questions—we'd love to continue the conversation

