



# A SYSTEM OF ENGAGEMENT FOR PUBLIC TRANSIT

Your Ticket to Smarter Service





# GAIN A COMPETITIVE ADVANTAGE WITH ESRI

As congestion increases in our urban environments, smart cities are increasingly grappling with the need to effectively solve their mobility challenges. Arguably this remains the most significant challenge for cities worldwide.

At the same time, our urban mobility patterns are rapidly changing, and public transit riders have become more diverse, transforming expectations of public transit services. As a result, public transit agencies can no longer operate as they have in the past, but rather they need to transform themselves to meet current mobility requirements.

And this requires access to the best information and analytical tools to help you redesign services for the 21st century. Location intelligence helps you meet those expectations by bringing together information from across your organization and powerfully visualizing your data to help you make the best decisions. It combines sophisticated digital mapping, big data analysis, and the ability to automate many processes to help public transit agencies improve their planning, operations, and performance and ultimately drive ridership gains.

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# DIGITAL TRANSFORMATION IN PUBLIC TRANSIT

As one analyst remarked, “Just about every modern organization is scrambling to harness the potential of digital technology to get a competitive edge,” and public transit is no different. Given the rapidly changing environment most public transit agencies find themselves in, transit professionals understand the need to leverage new technologies to improve performance and increase ridership, maintain their assets and infrastructure, and ensure the safety and reliability of their service.

This puts a greater emphasis on the need to invest in new technologies and further heightens the importance of creating an effective information infrastructure. A comprehensive information environment becomes the foundation for sharing a wealth of data across divisions and gaining organization-wide insights to drive better and more effective decision-making.

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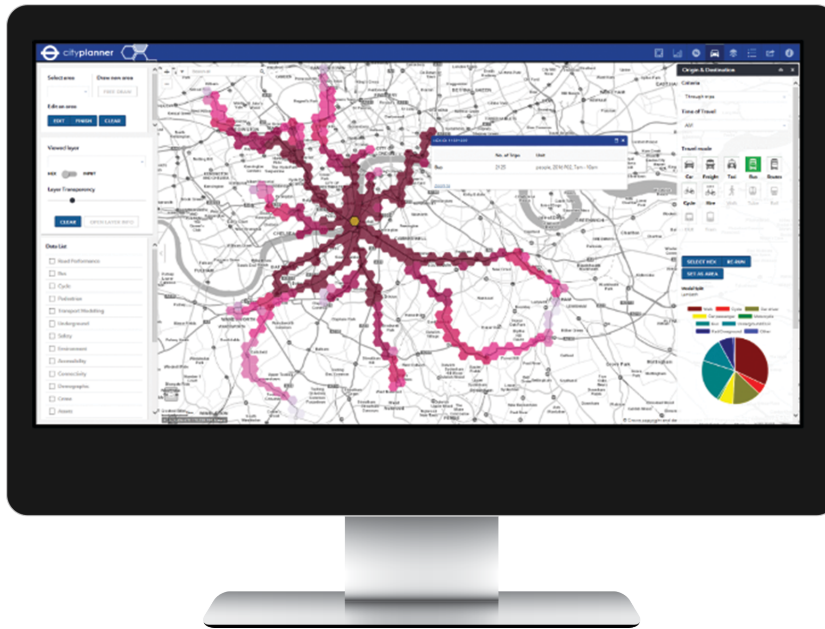


# ACCESS TO INFORMATION

A central component of a successful public transit agency is that everyone within the organization must be able to access the information they need to more effectively carry out their daily tasks. In most organizations, information is often siloed and not easily shared across their departments. But creating an effective information architecture requires the ability to bring together information from these various silos—planning and operations, for example—to support more collaboration and effective decision-making.

First, there should be a single location for users (with appropriate permissions) to access authoritative data, using any device at any time. The core principle is that the ownership and stewardship of the data should remain with the group responsible for collecting and maintaining the data, but the data should be available from an easy-to-access site. And anyone should be able to get to the information they need with no more than three clicks from any device.

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"ArcGIS has enabled us to create an invaluable new support tool that will help us make the right decisions sooner and accelerate the delivery of schemes to create Healthy Streets for Londoners."

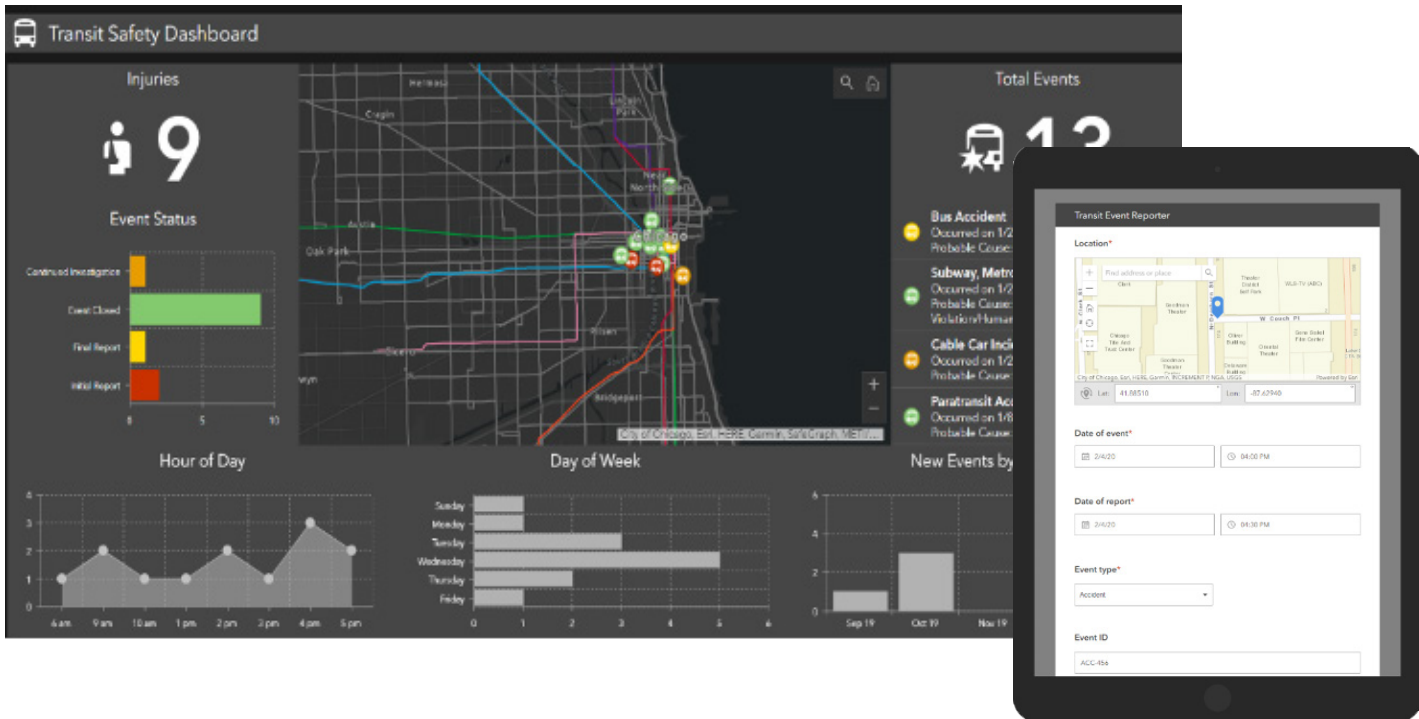
—Henry Cresser,  
Principle Strategy Planner, TfL

# LEVERAGE EXISTING TECHNOLOGY

Most public transit agencies have already made a large number of technology investments and management systems that contain critical data and information. The problem is that the data is not shared across their organizations in ways that can be used for more effective decision-making. GIS is a perfectly suited technology to leverage more from your existing data systems. Because almost all data in transit has a location component, GIS can serve as the denominator between different datasets, allowing you to maximize the value of your data.

The goal is not to build new, large, complex systems but rather to leverage the data that you already have and make it much more widely accessible. Fundamental is the notion that data should be unlocked and made widely available based on user credentials. Largely through creating open APIs between existing port management systems, getting the data—including real-time data—into a common location brings new levels of control into a complex environment.

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# SIMPLE, USER-FOCUSED APPLICATIONS

The data is exposed and made available through user-focused, simple applications that are designed to facilitate the daily workflow of the various users. What we call a system of engagement creates targeted information products that are designed to provide data, maps, and apps to individual

business units, allowing them to collaborate and bring the right information to their analysis and work. Esri's various applications are often connected to other applications, such that larger, complex workflows can be supported by a series of smaller, focused applications.

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## TAILORED APPLICATIONS

Another key concept is that the user applications should be designed for very specific workflows and the individual users. For example, maintenance staff who are conducting safety inspections need an application that is very simple and helps them efficiently collect the information, which is seamlessly updated in the corporate database. For the field personnel, a simple configuration of Esri's ArcGIS® Survey123 helps field crews quickly collect the information they need (including photos) and move on.

Meanwhile, supervisors do not need the field collection application but rather a dashboard that allows them to monitor progress. A tailored application is configured for supervisors that gives them a real-time view of field progress and can generate any needed reports.

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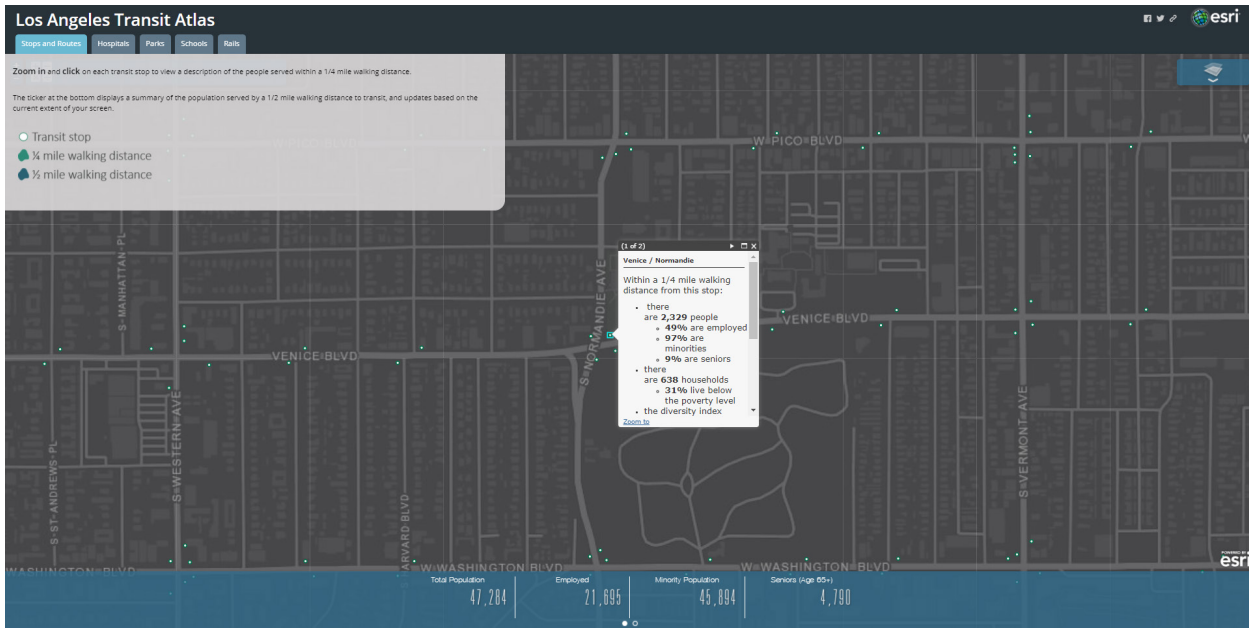
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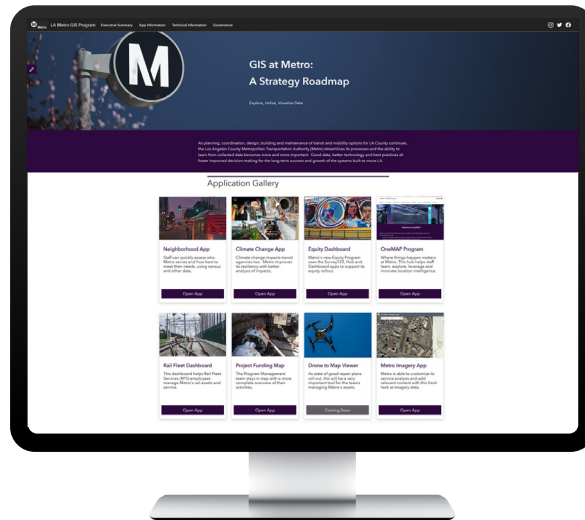
# SUSTAINABLE TECHNOLOGY ENVIRONMENT

Because the focus of a system of engagement is to empower everyone within an organization with the relevant data and information they need for their daily workflows, the system is designed to create a sustainable technology environment that provides for continual innovation.

The design and build of the technology environment are driven entirely by user needs. Once it starts enabling staff with the information and targeted applications designed to support their daily workflows, it becomes a continual process of refinement and improvement. The system of engagement helps redefine the way in which people are connected to information, with the goal of increasing business efficiency and performance.

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# THE ADVANTAGES OF OFF-THE-SHELF TECHNOLOGY

A final characteristic of a smart transit agency is the use of off-the-shelf technology and reliance on configuration rather than customization as much as possible. With off-the-shelf technology, it is the responsibility of the vendors to ensure that each version of their software has backward and forward compatibility and interoperability with other platform technologies and does not need a significant rewrite to integrate with existing IT architectures. This represents huge savings to IT budgets, particularly as platforms increasingly move to the cloud.

Esri's system of engagement is designed to reduce the risk of failure—relying on configurable, off-the-shelf technology (ArcGIS software) as much as possible. Esri has a large number of prebuilt templates and applications that are designed to allow for a quick implementation pattern, with simple configuration rather than custom coding. Covering everything from mobile workflows, operational awareness, and business dashboards to constituent engagement applications, these templates and applications are designed for easy configuration and simple implementation.

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# LET YOUR AGENCY THRIVE WITH ESRI

With the power of location, your organization can take the steps toward becoming a smart and thriving public transit agency. Esri's ArcGIS is a full software solution—with mobile, desktop, server, and online components—working to bring all your business systems into one dynamic information engine. Understand your business data through information-driven maps and spatial analysis. See where you excel and assess where you can improve performance.

## Get Started Today

Creating your own system of engagement is possible.

For more information, visit

[go.esri.com/smart-transit](https://go.esri.com/smart-transit).

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