

Intelligent Urban Exchange City Command Center: Cross Domain Data Analysis for Integrated City Operations

Digital Software & Solutions



Cities are turning to technology to cost-effectively achieve more livable and sustainable environments for their citizens. Smart cities combine data from multiple city domains and run advanced analytics that drive real-time decision-making and actions at the strategic and operational levels. Cities need a central operations platform that provides cross-domain urban insights for integrated city operations.

TCS Intelligent Urban Exchange (IUX) City Command Center is a modular and scalable offering that enables the city manager to view, analyze and optimize city-level functions and events in real time across departments.

Overview

Visibility Across City Functions: City managers need an intelligent, connected ecosystem to provide more connected transportation options, advanced public safety services, better constituency interactions and even decreased pollution impacts that can make a community more desirable.

IUX City Command Center lets managers visualize, monitor and analyze the city-level events & alerts across city domains in real-time. Users can track operational resources and assets (human and non-human).

Faster and Better Decision Making: To accelerate multi-departmental response efforts to incidents and emergencies across domains such as Energy, Water and Transport, city managers must understand impacted services and define and execute cross-functional processes for incident resolution. Furthermore, predicting failures and proactive maintenance will streamline operations, reduce costs and provide better experiences to the citizens.

IUX City Command Center uses intuitive and standards-based tools to define Standard Operating Procedures and resolutions for various emergency events, with notifications, resource management, analysis and actions. Users create and manage work-flows, monitor status of incident resources and track resolutions. The solution includes a robust KPI dashboarding tool with automated reporting across multiple data sources.

Extending the Value of Cross Domain Data: The IUX City Data Platform supports the City Control Center by on-boarding the data across city domains (real-time and batch) and providing an understanding of the interrelationships. The solution provides standards-based integration with city subsystems including video management systems, video walls and GIS servers. Additionally, the City Data Platform supports PMML and exposes data as an API in JSON for development of custom applications that access data from the IUX Platform, with data pipeline, model development and multi-language support for UTF-8 based languages.

Solution

IUX City Command Center makes city operations and services more resilient and intelligent by breaking down data and operation silos of multiple city domains for more effective situational awareness and better collaboration and coordination of city resources and services. The offering features:

The Integrated City Operational Dashboard lets users visualize, monitor and analyze the impact of city-level events and alerts. Users can track operational resources and assets (human and non-human) for fast and effective support and response. The integrated Video Management System enables real-time event qualification. Integration with city GIS servers enables users to perform geo-spatial analysis and render information on customizable maps with Geoserver integration and PostGIS database. The solution helps predict and avoid critical failures with proactive maintenance.

- **City Emergency Response Module** automates and accelerates multi-departmental response efforts across domains such as Energy, Water and Transport. It enables users to create and manage workflows, monitor status of incident resources and track resolutions.
- **Standard Operating Procedure Tool** uses BPMN standard-based SOP definition to resolve various emergency events with notifications, resource management, analysis and actions.



Benefits

IUX City Command Center and City Data Platform helps cities:



Optimize Cross-domain City Management

- Gain understanding of the status, interdependencies and impacts of core city functions
- Improve quality and timeliness of incident responses
- Proactively optimize cross-domain city functions for safety, livability and efficiency



Lower OpEx and CapEx

- Reduce total cost of ownership and increase ROI with easy integration into existing systems
- Reduce capital expenses with As-a-Service subscription pricing



Accelerate Implementation and Benefits Realization

- Integrate key city data into the data model using REST APIs to speed integration, including emerging IoT sources
- Pre-integration with Geo servers
- Easy data transformation and exposing the data to develop custom applications

The TCS Advantage

- **Industry Solutions:** Our software has been created by experts with proven experience in city operations. Our City Command Center and City Data Platform city data model incorporates the latest technology innovations and expertise from TCS' R&D.
- **Faster Deployment:** IUX's open standards platform enables faster solution implementation and integration with your enterprise's existing systems. APIs allow for the rapid building and integration of custom applications.
- **Lower Cost of Ownership:** IUX's modular architecture lets you buy only what you need now with the option to grow as your needs mature. The IUX applications also extend across additional domains such as water and transportation for collaborative and integrated city initiatives.
- **Simplified Business and Engagement Models:** As-a-Service subscription pricing does not require capital outlay. IUX applications are accessible online, on desktop or on mobile devices.
- **Experience Certainty Commitment:** Our corporate culture is one of superior delivery and customer certainty. Our consulting clients know the quality of our work, and now, companies can get that same level of quality, speed and certainty with our Digital Software and Solutions offerings.

Awards & Recognition



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TCS Digital Software & Solutions Group delivers on the promise of Connected Consumer Intelligence™. Our experience working with the world's most successful enterprises drives the development of integrated software that helps them meet the higher expectations of today's wired consumers and citizens. With TCS DS&S Group software, organizations can design experiences that logically connect every touch point of the consumer's digital and physical journey.

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