

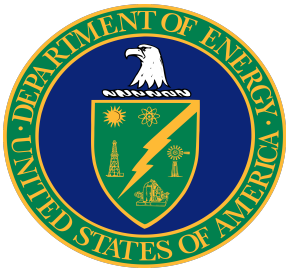


The City Chattanooga Digital Twin

CDOT and it's Partners take on the
challenges of tomorrow, today.



CDOT's External Collaborations on the Digital Twin:



- Supports a US DOE initiative utilizing Big Data and High Performance Computing (HPC) in an effort to improve energy consumption and reduce traffic congestion in a complex urban environment.
- CSCC sees additional benefits in the areas of Health, Public Safety, and Economic Development.

The Chattanooga Twin (CTwin)

- A large-scale, real-time 'digital twin' of a city's traffic patterns will provide deeper insights on:
 - Modeling of an entire city grid rather than traditional corridor studies.
 - Evacuation modeling for major natural or man-made disasters.
 - Better response performance by first responders through better navigation and potential predictive analytics.
- Plans to duplicate on the Chattanooga Smart Community Collaborative test bed.

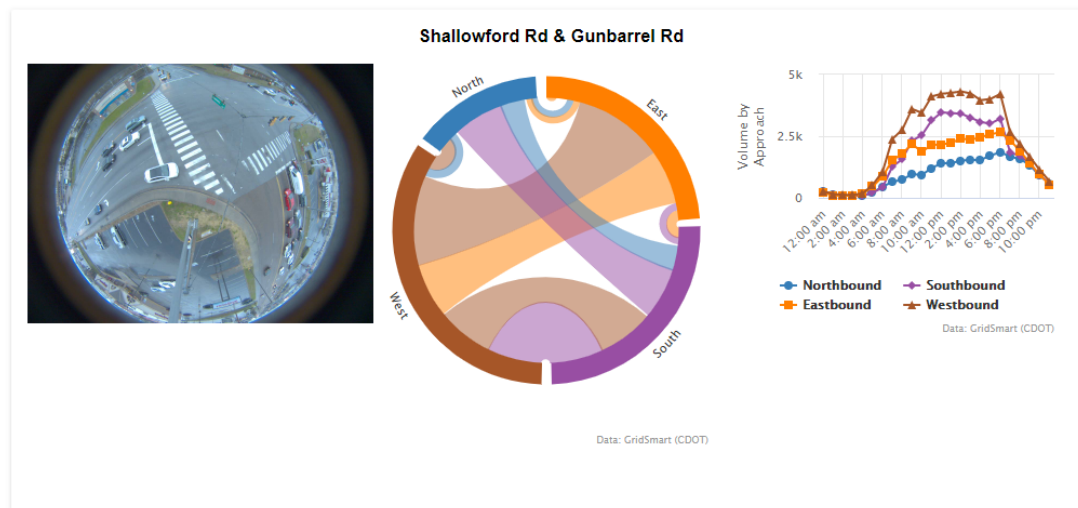
Shallowford Road Corridor:

- 7 Signalized intersections with Interstate 75 cross-cutting the corridor near its center.
- Home to a Regional Mall



Chattanooga Digital Twin (CTwin)

GridSmart Cameras

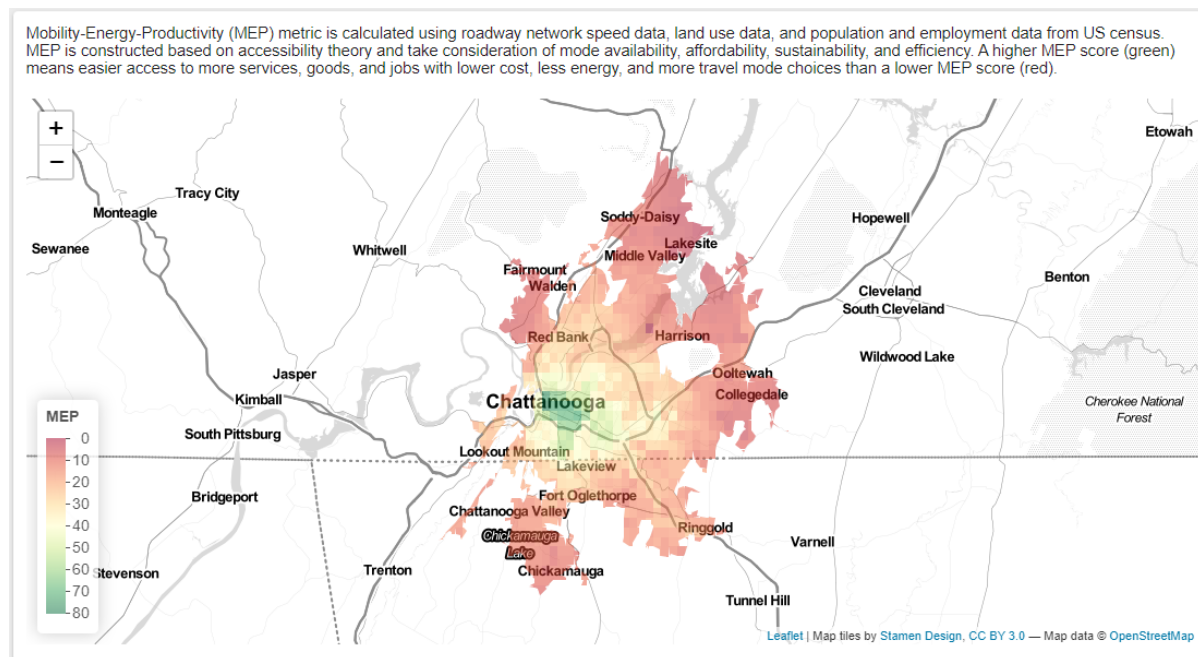


The current goals of CTwin are:

- 1) achieve 20% energy savings at the regional level and
- 2) provide situational awareness of the Chattanooga region by visualizing real-time data; quantifying baseline energy consumption; estimating energy savings for identified corridors; and developing a freight plan.

Eventually, this data may be used to implement real-time cyber physical control of traffic infrastructure (e.g., traffic signals) and vehicles to alleviate traffic congestion and potential incidents.

Mobility-Energy-Productivity (MEP)



Access to services, goods, and jobs with lower cost, less energy and more mode choices is indicated by green.

Contact Information



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