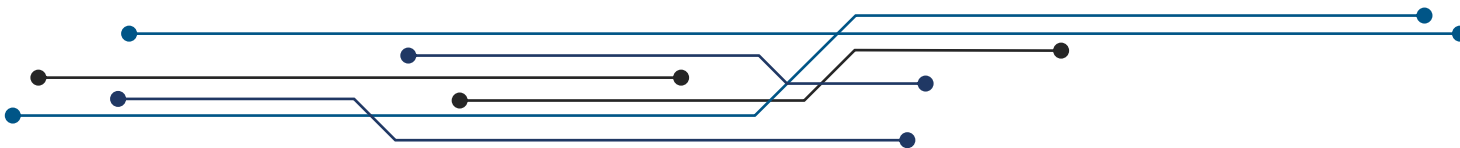


AUGUST 4, 2022



Regional Air Mobility: Opportunities and Challenges for Rural Communities and Small Airports



The Interconnected World of EIP

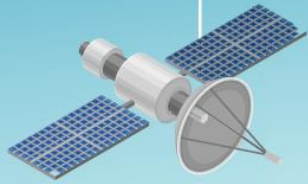
A future where previously independent technologies are all connected is rapidly approaching. This new interconnectivity will spawn new services and business models.

Deloitte's Emerging Infrastructure Platforms (EIP) delivers solutions to synthesize independent technologies such as Unmanned Aircraft System (UAS), 5G, and Digital Infrastructure as well as help shape policy and guide regulation to further incubate transportation modernization and infrastructure platforms to both public and private sector clients.

Core Capabilities

- Advanced Connectivity**
Next generation hardware and software are reshaping connectivity, enabling increased speed, latency, and reliability
- Digital Infrastructure**
AI and IoT are being incorporated into physical infrastructure, improving data, analytics, and cyber security capabilities
- Intelligent Transportation**
Connected, autonomous, and electric vehicles are disrupting traditional forms of mobility

Advanced Communication
Satellite Navigation providing real time location data to connected devices



UTM
UAS Traffic Management to monitor drone traffic



Smart Public Works
Digitizing public services such as water, power, and trash to optimize consumption, reduce waste, and detect irregularities



Intelligent Transportation Infrastructure
5G enabled connected traffic monitoring system that optimizes traffic lights as well as sensors on roads and buildings.



UAS enabled packaged delivery
Same day delivery utilizing autonomous systems to fly through the low-altitude airspace



Smart Factories
Automated Artificial Intelligence (AI)/Machine Learning (ML) enabled fulfillment centers to create leaner processes



Smart Warehouse
Processes to create goods are automatized, and provide customized outputs to meet consumer needs



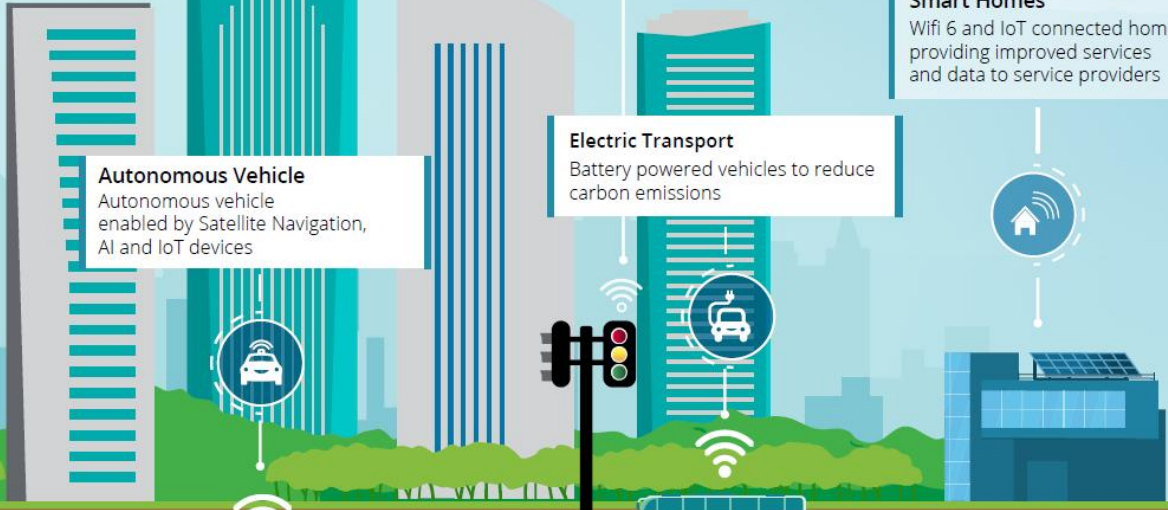
Autonomous Vehicle
Autonomous vehicle enabled by Satellite Navigation, AI and IoT devices



Electric Transport
Battery powered vehicles to reduce carbon emissions



Smart Homes
Wifi 6 and IoT connected homes providing improved services and data to service providers



Technology

Modernizing Infrastructure

The administration's \$3.5T infrastructure bill will fund modernization efforts to repair and integrate 5G and Internet of Things (IoT) into traditional infrastructure

Interconnectivity

The emergence of technologies such as the IoT, 5G, Wi-Fi 6, and Satellite Navigation will enable connected devices to communicate with one another in near-real time

Improved Mobility

Developments in electrification, AI, and connectivity can facilitate electric autonomous vehicles in land, air, sea and space

Combatting Climate Change

Greenhouse gas emissions (GHGE) will be reduced with data driven decision making and energy efficient practices to minimize negative effects of transportation and infrastructure

Shifting Consumer Behavior

Constituents are becoming accustomed to automated processes and frictionless customer experiences

Culmination

An interconnected World

The culmination of social, political, and technological trends are shaping a future where individuals have a personalized experience, decisions are data driven, and public infrastructure is connected to IoT

The Converging Market for Connected Infrastructure

Convergence and interconnectivity are driving exponential market growth across three main capability areas of connected infrastructure; Advanced & Intelligent Transportation, Advanced Connectivity, and Digital Infrastructure & Public Works. The Emerging Infrastructure Platforms Sub-Offering will uniquely address each of these capability areas as we position to go-to-market.

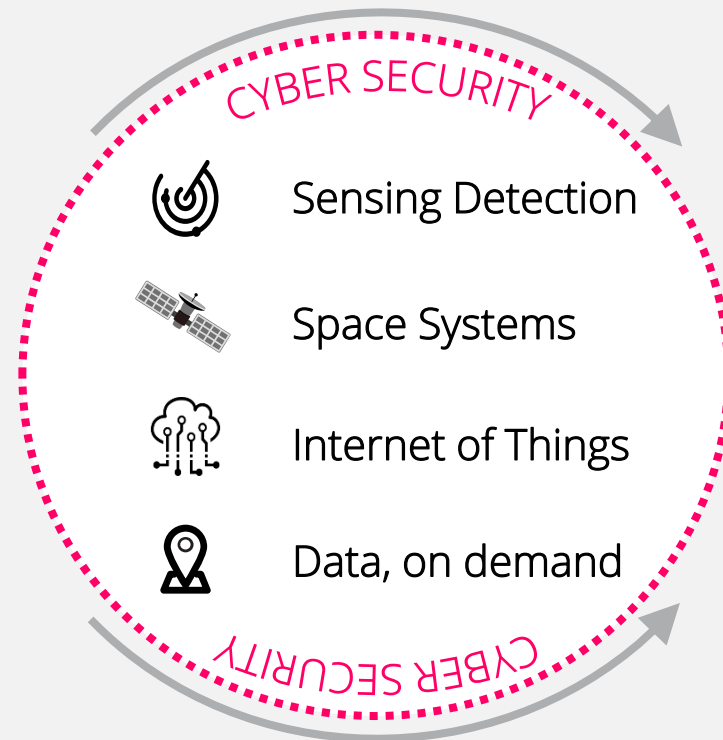
Macro-Trends Impacted by Interconnected Systems

Sustainability & Climate

Equity & Accelerating Urban Development

Evolving Consumer Behavior

New Business Models



Converging Components of Connected Infrastructure

Intelligent Transportation

(Drones, AAM, Autonomous vehicles, Remote Sensing, CUAS, UTM)

Advanced Connectivity

(5G - XG, advanced analytics, automation, network management)

Digital Infrastructure

(Smart infrastructure, digital transformation)

EIP Capability Areas



The convergence and Interconnectivity of intelligent and connected platforms will require complex systems integration, seamless connectivity, and must ensure public safety as these disruptive mobility technologies become mainstream.

Capability Areas

Digitally enabling infrastructure, transportation, and the human experience through engineering and integration services, regulatory and financing support, and analytics.

Intelligent Transportation

Intelligent transportation brings the technical capabilities, relationships, and subject matter expertise to help clients navigate the disruptions caused by future mobility technologies (e.g., connected, autonomous, electric).



UAS Traffic Management (UTM)



Robotized Logistics



Counter UAS



Digital Data Collection

Advanced Connectivity

Advanced Connectivity technologies such as 5G/Next G, Wi-Fi 6, and Non-Terrestrial Communications represent a revolution in hardware and software that can greatly reshape where connectivity could be deployed and what can be enabled via enhanced speed, latency, and reliability.



AC Design and Engineering



AC Readiness & Transformation



Legislative, Policy, & Regulatory Advisory



Deployment & Operations

Digital Infrastructure

Next-generation technologies (e.g., IoT and AI) are becoming embedded in physical infrastructure and providing local governments with unprecedented capabilities. We support the development of technology solutions that enable insights into the benefits of connected infrastructure.



Smart Infrastructure



Intelligent Transportation Systems



Cloud & Digital Transformation



Cybersecurity