The landscape of location based data

Opportunities for government to collect digital exhaust.

Technologies accelerating the use of location intelligence

Accelerator	'Smart' devices	Sensors	Cloud storage	Machine learning	Remote imagery	BIM /CAD/GIS integration	IPv6 (Internet Protocol Version 6)
Impact	•Enable context-based interactions between government and citizens. •Device sensors can detect location, direction and movement, enabling contextualized services, and generating billions of new data points.	•Sensors provide constant data collection about our physical and natural infrastructure, offering a vibrant picture of trends across a range of data sources.	- Allows for storage, scaling and processing of vast amounts of location data, and enables government and other stakeholders to share geo-data.	•Computer algorithms get smarter with practice by 'learning' from historical spatial data, software can scan new data to identify anomalies and patterns that yield predictive insight.	•A blend of commercial and government satellites, planes and drones provide a near real-time picture of the changing conditions on the Earth's surface, enabling government and citizens to observe and understand human activity, land use patterns and natural features like climate.	•Building Information Modeling, Computer Aided Design and Geographic Information Systems; these traditionally separate systems for modeling physical structures are increasingly connected, enabling seamless asset tracking and analysis inside and outside of structures.	- The way the Internet communicates. This new version expands the amount of addresses and improves geolocation, enabling more websites and apps to have a better sense of a user's location.
Today	Geo-tagged tweets and text messages are used to connect with citizens.	Cities can monitor and track air quality to inform better regulations.	Agencies share geo-data on a common platform.	Law enforcement can create predictive models for violent crimes.	Imagery provides awareness about events like natural disasters, migration patterns and foreign conflicts.	Site planners and inspectors use GIS and building specifications to perform more uniform evaluations.	Road signs, utilities and other infrastructure are connected to the internet.
Tomorrow	Government uses geo-fencing to push information to individuals based on location.	Government can trace contaminated food to its source immediately, and even predict an outbreak.	Real-time data from millions of sources are securely available anywhere, anytime.	Unstructured social data becomes instant insight for policy makers.	More granular imagery allows for remote monitoring of public infrastructure to predict future needs.	Directions seamlessly continue from outdoors to inside buildings.	Emergency managers rapidly assess damage using data points from thousands of inanimate objects.