

Challenges to Implementing Digital Cities Technology

Systems

- Lack of a common platform
- Agreement on a common platform for economies of scale
- Systems integration
- Competing standards
- Infrastructure
- Availability of connectivity

Data governance

- Data governance
- Need for agreed data standards
- Data management and access
- Data agreements
- Need for public data policy that aligns with open internet
- The City does not see data quality maintenance as an important job
- Complex systems integrations. Connecting disparate systems in real-time requires expertise and IT infrastructure. Cybersecurity would need to be addressed in every implementation for monitoring, securing, and maintaining. Governance rules for data need to be enforced to meet all applicable compliances.

Funding

- Funding (6)
- Capital investment
- Having sustained funding, people, and process to maintain a citywide system
- Funding sources for devices needed by residents to use systems

Procurement/Vendors

- Time/process period for procurements and renewals is too long
- Contracting for our data systems/apps
- Various approval tiers required for contracting
- Ability to contract for design/build projects for IT system builds
- Data locked in proprietary vendor systems
- Many solutions are not "open" and proprietary
- Data sharing is not seen as a must-have in procurements
- Tech Marketplace adds vendor markups and cost becomes an issue
- Tech Marketplace can prohibit PPP

Cybersecurity

- Cybersecurity
- Need for security program for IoT

Compliance

- Compliance challenges
- Surveillance Ordinance (4)

Legislation

- Industry influence on legislation that is detrimental to the City
- Need for Board of Supervisors resolutions on changes

Community

- Community buy-in
- Strong political and local activist suspicions of City motives

Prioritization/Change management

- Competing interests and priorities
- Interdepartmental priorities
- Adoption and change
- Cultural shift to adopt new processes and technologies to govern operations based on IoT and policies derived from the operational data from IoT systems
- Lack of understanding of disruptive technologies and unwillingness to think "outside the box"
- City momentum and "sunk costs" in legacy technologies

Interdepartmental

- Partners
- Lack of collaboration between agencies
- Competing interests and lack of collaboration between city agencies.

Hiring

- Hiring delays for the staff needed for the work

Resources/Staffing

- Resources
- Personnel and resources required to manage solutions
- Lack of staffing for infrastructure maintenance
- Having technology consultant on how best to fill needs
- IoT skills and capability
- Technical capabilities. Staff would need to be trained in specific solutions to configure, administer, and maintain.
- No/low data culture, very little data-based decision making

Other

- Deployment scope and scale
- Deployment and implementation approaches that are not disruptive to current infrastructure
- Rapidly evolving technical sector
- Privacy concerns
- Balance between technology and nature