Actionable Strategies

Smart Cities and Communities: Domains

Smart Cities and Communities

No Smart City initiative ever includes every possible domain. In fact, some of our clients are opposed to or prevented by regulation from implementing certain applications (e.g., video surveillance). Actionable Strategies has experience with the individual domains but most importantly, with integrating them and creating an overall governance structure with end-to-end processes.

The potential benefits of Smart City technologies extend to suburban and rural municipalities, campuses, distributed corporate locations, and managed real estate portfolios. The framework and approaches apply directly to each of these types of clients.

It is essential that none of the domains are considered in isolation. Rather, they should be treated as a component in providing a specific benefit to one or more stakeholders.

Smart Governance

This domain is highly visible and features direct interaction with citizens. It includes government transparency, citizen engagement, permitting, tax and fee collection, and other eGovernment functions. Enabling ICT includes Web sites, CRM, process automation, decision support, analytics, and databases.

Advanced integrated Smart City applications include holistic control centers, digital twins, and open data.

Smart Mobility

Mobility encompasses traditional public transportation modes including connections to airports, automobiles and traffic management systems, commercial traffic and freight, parking management, prioritization for emergency responders, bike and scooter sharing programs, and pedestrian flow. Mobility can have a direct impact on other initiatives such as Smart Energy (e.g., EV charging), Smart Safety (e.g., shared poles for traffic lights and surveillance), and Smart Economy (e.g., optimizing shipping and commuting times for businesses).

Smart Energy

Modern cities use Smart Grids to improve resilience to outages while also improving energy efficiency. Smart Grids allow for the incorporation of distribution energy resources and the use of renewables in power generation. Commercial, industrial, and residential consumers can participate in the two-way flow of power and integrate energy storage systems.

Smart Economy

Smart Cities aid in the planning and growth of the local economy. Technology is used to support economic development including e-commerce and open access to municipal digital services. Examples include tourism promotion, technical training in support of economic growth, economic development zones, and incentives for companies in Smart Energy, software, and high tech services.

Smart Buildings

Smart Cities should both incorporate municipal Smart Buildings and support their use in private enterprises. Enhancing operating efficiency and sustainability of buildings while providing a better tenant, owner, or visitor experience are enabled by Smart Building technologies.

Building automation and building management systems utilizing sensors integrated to property-specific data are part of Smart Buildings which also require integration to the rest of the Smart City. Smart City integration requirements include security, fire, water, environmental data, and energy management and the two-way flow of energy.

Smart Environment

The environment is an integral part of a Smart City. Technologies can facilitate the responsible use of natural resources such as water, land, and air. Smart Cities aid in addressing waste management, greenhouse gas emissions, pollution control, and other environmental issues.

Smart Health

Municipalities are key participants in healthcare delivery. Examples include providing or enabling telemedicine, acting as the

steward for private electronic health records, coordination of first responders, and ensuring wireless connectivity for wearable IoT devices.

Smart Safety and Security

Smart Safety and Security augment or automate measures to protect citizens, property, and the city itself. Examples include monitoring using CCTV often augmented with facial recognition and automation, coordination of emergency response systems, traffic management and accident detection, and citizen reporting tools such as physical call boxes and digital touchpoints.

In areas prone to environmental and man-made disasters, sensors can improve response when seconds count. These sensors can warn of impending events, alert responders if a disaster occurs, and pinpoint the exact locations for faster and coordinated response.

Keys to Success

Smart City investments can be substantial and operating costs can also be significant. Due to the broad stakeholder base and resulting complexity, strategic planning and risk management are essential.

The benefits can be impactful for many different stakeholders with dramatic results. Making a city more livable, a better place to work, efficiently governed, well-managed, and sustainable are all possible.