

White Paper:

Synergy—Smart Cities and Next Generation 911

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Introduction

This White Paper will address the potential benefits for integrating the ongoing Smart City initiatives with implementing a Next Generation 911 solution.

Smart City initiatives, worldwide, are driven by the continuous pressure on local government to provide services to continually expanding urban populations, creating increased serve demand from limited resources. Deciding where best to invest resources and enhance services is a major challenge to local governments.

Many cities and counties have already invested in “smart” infrastructure and have a roadmap to become Smart Cities within the next 5-10 years. In many cases transportation systems have lead the way with significant investments.

The synergy between transportation and public safety service delivery is clear. Traffic and traffic congestion is recognized internationally as the biggest challenge to the ability of public safety agencies to respond quickly to an incident. Integrating public safety systems and intelligent transportation systems is a goal of cities world-wide and considered a best practice. Examples in the US like Fairfax County, Virginia’s McConnell Public Safety and Transportations Center (M-PSTOC) represent the trend to integrate these two vital functions and systems.

The Smart City Concept—The Smart City concept has developed to help local governments to effectively balance the continual pressure on limited resources and growing urban populations. Smart City concepts are facilitating the ability of stakeholders to collaborate across functional and departmental lines. The initiatives enable government leaders to make informed data drive decisions on budget allocations and future investments.

The Smart City approach has provided a method for using data to better manage those resources. Public safety services, next to education is generally the largest expense of resources for local governments. The data created by public safety, since it touches and interacts with so many other local government functions and citizens daily, is a rich source of data to assist leaders to make informed, data driven decisions on budget and investments.

Smart City technical solutions generally have three major components. These components include **broadband data network** to transmit data from government agencies in multiple structured and unstructured formats to a **common data platform** or data lake that can manage the data regardless of whether it is structured or unstructured for use by the business intelligence or **data analytic solutions** used to analyze the data.

Smart Cities and the Role of Public Safety—Public safety services are a significant portion of any local government’s service delivery. In providing these services, the public safety agencies create large volumes of structured and unstructured data on a daily basis to include incident reports, records systems, body-worn camera and surveillance video, 911 call and dispatch data, emergency medical data, as well as fire protection and suppression and others.

The Smart City approach promotes interoperability across law enforcement, emergency services and other government agencies such as public health, transportation, and social services to streamline operations and provide ‘situational awareness’ to all stakeholders involved in the management of a city’s security. This approach fosters collaboration and sharing of intelligence information.

Next Generation 911 and the Smart City Link—NG911 solutions require an Emergency Services IP network or ESInet, an IP based secure, dedicated network for public safety communications and data sharing. The ESInet can provide one of the key components of the Smart City technical infrastructure: the broadband data network. Furthermore, the NG911 solutions can provide the basis for establishing a common data platform across the multiple city/county agencies. Public Safety generates volumes of useful data daily that is already being generated by multiple systems supporting the public safety agencies. The ESInet can provide the basis for a secure, dedicated city-wide Smart City data network.

While much of the emphasis of the Smart City discussion involves performance dashboards and data analytics technologies, the network capabilities and data structure are just as important in the initiative’s ultimate success or failure. In reality, this means that public safety agencies can be major beneficiaries of integration with the Smart Cities project.

The Opportunity—Many jurisdictions have purchased or are planning to purchase new public safety systems such as Computer Aided Dispatch and Records Management Systems. These projects offer an opportunity to prepare the common data platform and obtain data analytic of business intelligence solutions that are imbedded in these systems. Implementing an ESInet would be the next logical step, moving from the old switched telephone and network systems to a IP-based network, offers jurisdictions with the opportunity to enhance their data management, analytics and transport.

By leveraging the existence of NG911 ESInet connected with Smart City predictive analytics tools and big data, can contribute directly to enhancing real-time response procedures and emergency response systems. These solutions are enabling governments, emergency management agencies, fire and police departments to better protect their citizens from

everything from terrorist attacks to natural disasters. City governments are looking for new ways to across departmental lines to link public health, fire and rescue, and social services to better serve their citizens.

Where do We Come In?—Winbourne Consulting is one of the leading public safety communications systems consulting firms in the world. Winbourne Consulting served as the technology consultant to the Fairfax County, VA M-PSTOC to integrated traffic and public safety systems. We are working to link NG911 systems and Intelligent Transportation Systems with Smart Cities initiatives in Vietnam where the solution described above is being implemented. We have worked on multiple NG911 projects in the US as well as city dashboard projects related to 311 data. We can leverage that experience to support our clients planning or implementing Smart City projects.