Introduction

Convergence is happening across industries and markets at great pace and the security sector is no different from other infrastructure related markets such as energy and transportation. As city populations and GDP continue to rise through urbanisation, so does the threat level, with increased populations leading to anonymity and the prevalence and clustering of high threat targets presenting terrorist groups with attractive opportunities. The current slowdown in the world economy has led to an increase in crime against a backdrop in Western economies of a reduction in police force headcount. This makes the role of technology increasingly important in ensuring a Safe City environment.

The emergence of smart technology is driving the creation of Safe Cities. Vast communication and sensor networks across cities enable law enforcement and other government agencies related to citizen safety to gather greater quantities of data, interpret it and react effectively. Greater interoperability allows technologies and networks to be linked and advanced analytics provides departments with the data they need to make effective decisions. Unmanned Autonomous Systems are beginning to emerge as a viable surveillance solution in countries with a favourable legislative framework. All of these factors are influencing the way cities evaluate their security requirements.

Cities have different infrastructure, threat levels, capabilities, resources and views on civil liberty which drives suppliers to give careful consideration to which cities have the best fit with their organisation’s capabilities and to prioritise accordingly. City departments are also highly complicated. Whilst one city may tender a project to provide a security solution across its infrastructure including transportation, citizen surveillance and other aspects of critical infrastructure development, in reality most city departments are highly decentralised and will manage their own tender process. This is an inefficient and expensive way to provide a Safe City solution resulting in unconnected systems. Cities must work harder to develop a city wide security master plan and industry needs to drive cooperation between government departments.

Public and Private sector procurement and implementation models also differ substantially with some city security solutions highly reliant on infrastructure provided by the private sector. CNL and the Manchester Police, UK, demonstrated how partnerships between the Public and Private sector can lead to improved security networks.
With increased IP penetration in urban areas technology is evolving and the competitor landscape has become confusing with organisations offering a wide range of solutions but rarely the entire capability required. Providing a one fit solution for all cities is not realistic and necessitates that system integrators work with a wide range of suppliers. A partner on one project may well be a competitor on another bid. The following market insight looks at the competitive trends in the market and future models of cooperation between organisations.

**Selecting the Right Growth Strategy**

A variety of growth models are used by organisations to strengthen their position in the Safe City market. Organisations with a single product approach need to ensure that they have a strong niche offering otherwise their role in the market will be squeezed. Shotspotter excels at positioning itself in gunshot technology with strong patents and good relationships in the market. They have identified their niche and are well positioned to grow. Other product manufacturers, especially in the area of video surveillance, understand the importance of expanding into other segments to provide a broader solution including the development of video analytics or complimentary security technologies such as access control.

Acquisitions are common place and generally fit into two categories, to either strengthen the organisations current market position or to broaden their offering. Information Technology, Telco’s and Defence organisations have all made acquisitions in the cyber space in recent years and this will continue to be a fiercely competitive space. The premium on best in class network security organisations is high, driven by press hysteria and a significant number of completed acquisitions. Several organisations have taken a back seat in this area, preferring to develop their own capabilities rather than paying the current market rate.

However, it’s not all about developing cyber capabilities. Cobham Tactical Communications & Surveillance has built its product portfolio and expanded the breadth of its offering to first responders steadily over the last 10 years. Key acquisitions include Micromill (2001), Orion (2003), Spectronic (2004), Domo (2006), MMI (2008), R Vision (2010) and Corp Ten (2011). The portfolio allows Cobham to provide a wide range of surveillance and cellular communication solutions including transmitters and receivers, tracking and locating solutions, audio and surveillance products and sensing solutions around the World.
Informal collaboration between organisations is not a novel concept but increasingly the market will become characterised by more formal relationships between large multinationals and also agreements with smaller technology developers. Using small technology start-ups as technology incubators is a well tested model and will continue to be a key partnership model. There are already significant examples of partnerships between large multinationals. In May 2011 Cassidian, an EADS Company, and Alcatel-Lucent announced a joint development agreement under which the two companies will provide a mobile broadband solution for emergency response and security communications systems. Cassidian will develop the radio heads and terminals in the 400 MHz spectrum with Alcatel-Lucent providing LTE expertise to jointly integrate public safety solutions. Broadband capacity will become an increasingly important element of public safety solutions enabling new applications such as video based situational awareness.

In addition LivinPlanIT is a prime example of an organisation focussed on developing a formal partner network to accelerate the delivery of connected cities. Delivering their Urban Operating System (UOS™) which enables sensors and actuators to be deployed across an urban area, their partner network allows LivinPlanIT to offer best in breed technologies whilst providing partners with the opportunity to leverage the network’s strength, fostering both growth and innovation.

Distribution channels are changing due to the increasingly important role of IT and telecommunications in urban security. From a technology perspective, traditional security distributors, consultants and integrators are increasingly under threat from IT distributors and consultants as the customer requirement changes. CIO’s and their departments are becoming increasingly important in specifying security systems and require partners that are able to understand their IT issues. Security technology providers are aware of this and a 2011 Frost & Sullivan survey of 222 security channel players highlighted that they are taking action to address this challenge with over 40% highlighting that they are running training programs and 22% choosing to partner with IT experts.

### Competitive Picture: Clear as mud?

The market is developing quickly with organisations from different industry backgrounds positioning themselves as leaders in a variety of technology and market segments. However, the picture is not static. Press coverage throughout 2011 and 2012 highlighted how organisations are still evolving their proposition through acquisition, new product development or partnerships.
Defence organisations are traditionally very strong in government related applications and will remain so in the future. Due to the high level of sensitivity related to CIP and the consequences to a city of a successful attack, governments need to ensure that the provider has a track record in protecting national assets. The cyber offering of Defence organisations is an example of how this group has evolved their offer to the market. A move into high end, private and commercial security markets is also expected, driven by new and evolving cyber capabilities offered by many key Defence companies. The delivery of an end-to-end security offering is relevant to large internationals and the financial sector.

Products and Services provided by the communications industry can be divided into those offered by Infrastructure vendors and those from Communications Service Providers. Their security portfolio will be derived from their core asset strengths in networks or connectivity services. For example, such market leaders in infrastructure as Cisco, Alcatel-Lucent or Ericsson would have based their security offers around their network equipment from infrastructure to servers, end points and devices, while adding services and system integration to their portfolio. The latter group of providers, including most Tier 1 telecoms companies such as BT and Telefonica, bundle their security offering together with their enterprise communications portfolio.

The provision of IT solutions to the Safe City environment is not limited to the traditional IT giants such as IBM and HP. Defence organisations such as Northrop Grumman and multi disciplined conglomerates such as Siemens (with an IT, building technology and security proposition) also provide relevant services. To that extent there is a level of competition between these players but also formal and informal partnerships on a project by project basis. What marks out the traditional IT players from, for example, Defence organisations, is their experience in providing IT solutions that are not limited to public safety or security applications. Their ability to embed themselves in government and city organisations is a distinct competitive advantage.

The building technology and integration market is made up of a diverse range of organisations providing anything from basic lighting to complex building management control systems. Larger players in this market who have both the technology expertise and ability to handle large scale projects are increasingly positioning themselves as providers of turn-key city security solutions. Siemens are the obvious example but other organisations
such as Honeywell are already active in new Smart City projects (SmartCity Malta) and Schneider Electric is likely to offer a more substantial Safe City solution in the future.

Finally there are emerging organisations with a background in IT and/or security that today are not widely known but are making an impact in the market. AGT International, for example, was founded in 2007 and now employs 2,000 globally. The key R&D facility is in Darmstadt, Germany with presence in global markets including Brazil, India, ME, Europe and China. AGT has deployed one of the world’s largest and leading edge safe city projects and innovated in additional urban management solutions worldwide. AGT has its own advanced C4I and intelligence systems for cities, security solutions for urban critical assets and infrastructure, and systems for natural disasters and crime centres which are all protected by AGT's cyber security. AGT's solutions include advanced prediction tools, embedding next generation social media and mobile phone data and context, to provide cities with relevant information and decision makers with proven KPIs to support future planning scenarios.

Building and Executing the Right Partnership Model

The need for a strong partnership network and collaborative environment in the Safe City market is clear but developing and executing a successful model remains a challenge. PSL has developed an 8 step methodology that is now a recognised standard (BS11000) that is
being implemented by several significant players from the Defence and Security industry. Specifically the model enables organisations to focus their efforts from concept to disengagement and follows the steps outlined below.

1. Awareness: understanding where relationship management fits with your business objectives
2. Knowledge: understanding how others have progressed and developing your approach
3. Internal assessment: evaluating how your own organization is positioned to collaborate in conjunction with BSI
4. Partner selection: finding the right partner relationship to complement your objectives
5. Working relationship: building a joint approach focused on mutual benefit
6. Value creation: developing additional value from the relationship
7. Staying together: ensuring that you measure and maintain maximum benefit
8. Exit strategy: recognising the changes both internal and external and preparing for disengagement

Implementing a workable partnership model and embedding it within the business is a key requirement for success within the Safe City environment.

**Conclusions and Industry Recommendations**

Frost & Sullivan has identified the following critical success factors for organisations that are looking to succeed in the Safe City space. Whilst many may seem straightforward not all organisations have a clear and targeted approach to Safe Cities.

1. Be clear on your market position and proposition. Clearly identify your future market and value chain position in a rapidly evolving market which will require frequent re-evaluation.
2. Know your competitors. Organisations are continually evolving their offer to the market, forming new alliances and demonstrating solutions through live projects. In a fiercely competitive market with 1000’s of organizations active across the value chain it is essential to provide a clearly differentiated market offering.
3. Prioritise your city targets and be proactive in driving a change in thinking around the benefits of integrated urban security. Safe City opportunities are not limited to the large or rapidly evolving urban areas and can be driven at local authority level, through regeneration projects or by mass events. Consider what makes a city an
attractive prospect with economic power/ ability to spend, IP penetration, current city threat (crime, terrorism and natural disasters), city maturity, urban expansion and privacy concerns all being important drivers and restraints.

4. Customer alignment and intelligence. Decision making varies dramatically according to the city. Tender processes and requirements can differ substantially and not all opportunities will be suitable. Clearly understand the decision making structure of each city and influence accordingly.

5. Evaluate the sales approach and the skills set of existing staff. Channels are changing and business development is becoming more complicated which requires different skill sets. Ensuring your team have the necessary skills sets is essential to success in this market.

6. Prove the return on investment. In a cash strapped economy government departments need to be clear on the added value of Safe City solutions. Providing clear ROI’s and ideally examples of live projects or working solutions will help demonstrate the benefits.

7. Build your local network. Local presence is crucial but equally working with local partners is important especially in LATAM and APAC. Following the prioritisation of target cities, build local supplier networks and leverage local public sector relationships.

8. Select the right partners within a clear collaborative framework. Being able to bring best in class technology providers and key brand names to a bid is essential. Demonstrating a strong network of partners with clear, shared goals and a mix of global and local presence will position organisations favourably.

Frost & Sullivan’s new report on Safe Cities is available now. To know more about this report please contact andrew.thorndyke@frost.com or balaji.srimoolanathan@frost.com.

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