D-Link®

Why D-Link is investing in The Smart City

By Neil Patel, Director European Marketing and Business Development

The Smart City is a popular industry buzz-phrase right now, but what exactly makes a city smart?

At a macro level, according to the Seattle-based Smart Cities Council, a Smart City "uses information and communication technology to enhance its liveability, workability, and sustainability."

Hence, Smart City projects can range from individual products - such as connected public benches or smart buildings - through to fully-networked urban public transport and road systems. It's an exciting, innovative and burgeoning industry that's set to become a major business growth area for networking equipment vendors over the next five to ten years.

Smarter switching in the connected city

D-Link is quite a unique organisation in the smart cities space, with a particular interest in developing new smart switching technologies to support a wide range of projects. A number of our partners in this space are truly on the cusp of some truly exciting innovations.

In Taiwan, for instance, our engineers are deploying our ruggedized switches at roadside junctions to be used in gantry cameras, which have the capabilities to check speed, road licenses and other vehicle information.

In addition to such local projects that we are already involved in, it's useful to take a look at some of the dominant technology trends impacting smart city design, such as self-driving cars, for example. It was notable that every single car vendor at CES earlier this year had an autonomous vehicle technology demo or announcement. Now, this functionality is great if you are on a motorway, because the sensors in your connected-car can control proximity-level obstacle awareness.

But if you take that functionality and you bring it into an urban setting, you quickly have a very large problem beginning to develop, because of the fact that there are lots more obstacles and lots of other things to be considered – pedestrians, buildings, street furniture, and so on.

You also have traffic lights and junctions. A key question is this: if you get to a junction, how does a car know where that junction is? Currently, that functionality is still too highly reliant on GPS, which too often gets degraded by buildings blocking or reflecting the signals and causing a seriously problematic degradation of accuracy. Just a couple of metres matters immensely when it comes to stopping at a busy urban junction.

Urban sensors and traffic beacons

The industry is now realising that, in order to support smart cars, dynamic traffic management and similar applications, millions of reliable and robust sensors and beacons will be required to aid accurate positioning will soon need to be installed at urban junctions and traffic lights using self-power or PoE. What's more, these will all need to be connected to be able to communicate with cars, and be networked back to central systems.

Additionally, smart cars are set to deliver increasingly huge amounts of data about current road and traffic conditions, which needs to reach other vehicles to update in-vehicle navigation and traffic apps. This means that the data interchange is two-way. Hence, there is an additional benefit to having this type of high capacity beacons in the field: as they can function as an additional backup support to cellular networks.

There will also be a growing need for 'hubs' to aggregate and backhaul data from (or to distribute data from) sensors, smart signage, CCTV, environmental sensors and so on. With the forecasted growth in demand for these types of PoE beacons and roadside cabinets, this is the reason why D-Link is investing heavily in the development of industrial - or hardened - switches that can be deployed in these kinds of applications.

If you have a beacon that is at a junction, there also needs to be a cabinet that powers it. With these new types of smart city beacons requiring the best quality, ruggedized, industry-standard PoE powered switches. That's where our market is headed. Plus, there are also the obvious installation benefits associated with these types of wireless car-to-beacon technologies – which don't require the onerous digging or complicated planning association with mains cabling.

Creating smarter, more robust switches

We're investing in engineering D-Link branded technologies that is especially designed to be used in these types of applications. This will allow our switches to be used in factory automation, in smart roadside and railside cabinets, or they can be deployed in harsh

environments such as oil fields, gas fields, and mining operations and so on.

The important thing to stress here is that this is a strategic and long-term investment, because developing these new technologies for smart city beacons is not a transactional business. It's about forging long-term relationships. It's about working with our partners to understand what they need, developing the code that needs to go into the devices, making it bespoke, getting the product into the customer and developing this new business together.

And instead of being amortized over two or three years, this business is amortized over ten or twenty years. Because once these solutions are in place, they will continue to be deployed. And the opportunities for D-Link and its partners will continue to grow, as more cities across the globe choose these types of smart, connected technologies.

Providing the best support on the ground

Finally, D-Link not only has the technological expertise to deliver the best, cost-effective switching solutions for smart cities, we also have the reach, the global touch and specialists in the field that smart cities innovators can work with to develop the bespoke solutions that they need.

Many of the other players in this space may well have the products, but they don't have anybody locally on the ground to help customers if and when they have a problem.

Our network of partners will be key to supporting the organisations making our cities smarter. Who are these partners and customers? They are currently mainly established IT suppliers, but they could be anybody working in this space to develop smart city technologies and solutions.

As an enabling technology supplier, for example, D-Link is currently working with a whole range of smart city start-ups, with several car manufacturers and some larger organisations in the automation space. And we are working hard to get our products in their hands to demonstrate why we believe we can justify our claim to being the preferred supplier of networking technology for the smart city.

For more information: www.dlink.com