



Providing the Poles That Connect Tomorrow's World Today

DWM Holdings, November 2017

Streetlights continue to change the world. Okay, while that may feel like a bit of an overstatement, they are transforming our cities. Before street lighting made its debut, the night was considered a time of “transgressions.” Respectable ladies and gents had no business out on the streets after dark. Lighting reclaimed these “forbidden” hours for people to socialize and conduct business. From the first candle and oil lanterns to today’s data-driven smart LED systems, street lighting has been a boon to local businesses, tourism, and residents.

Today’s technology is leading the next revolution in street lighting. “Smart Cities” can now direct drivers to vacant parking spots via a phone app, change traffic flow by altering signal patterns and warn drivers of congestion, among other things. According to Forbes’ “6 Ways the Internet of Things is Creating the City of the Future,” objects connected to the Internet will reach 25 billion by 2020. With this connectivity in place, cities will have a central dashboard or control system, allowing administrators to monitor activity and adjust elements, such as traffic signals or street lighting, with the swipe of a touchscreen.

Streetlighting and Poles: A Critical Component of Smart Cities

Information – You can walk outside and point your cell phone at a building, and, with one touch, obtain information about a business. In the same way, light poles can also communicate with your smart phones, providing information such as geographic coordinates. Say you want to know how traffic is up ahead, wondering what events are in the area, or where to park? Just consult the corner light pole through an app on your smart phone!

Safety & Communication – Good communication goes two ways, which is why smart poles are starting to offer emergency buttons that allow people to call for help, while built-in speakers broadcast information. Sensors can detect rising floodwaters, biological and radiological hazards, structural stability, and even gun fire, then relay that information to first responder command centers. Another mode of communication includes pole-mounted LED banners that promote upcoming events, provide real-time traffic routing information and send out Amber Alerts.

Energy Conservation – Today, it's estimated that up to 40% of a city's electricity use is dedicated to street lighting. With continued pressure to keep operating costs down, local city councils are eager to find savings – and lighting represents a prime opportunity. The Philip's company claims that switching to LEDs and using an "intelligent" system can save a city 70% on energy costs and substantially reduce the environmental impact. Another option is to dim or turn off street lights at times of low usage. Many street lights are now equipped with sensors that automatically adjust brightness based, not just for the time of day, but also adjusting for cloud cover and pedestrian activity.



Now, if you're thinking these features may be too cost-prohibitive, consider the fact that even a small town could easily offset the price of new streetlights via the energy savings made possible by LEDs and smart lighting, along with selling ad space on electronic banner signs.

"Think about it; light poles already have a power supply, they are tall, sturdy, accessible and abundant. They could be a central component of smart cities by harnessing the power of real-time local information and making it easy to convey that information to citizens and visitors alike."

From: "Smart Cities Embrace the Power of the Light Pole," Industrial Electrical Connectors Business & Technology, Remke Blog, 2015

Are You Talking to Me?

In Middlesbrough, England, street lights have been equipped with a full suite of monitoring devices. One day, when operators saw a cyclist ride his bicycle through a crowd of pedestrians, they broadcast a message over the loudspeaker, “Would the young man on the bike please get off and walk, as he is riding in a pedestrian area?”¹ The surprised and embarrassed young man dismounted and walked his bicycle as instructed.

Source: “Innocent Enough?”
by Chris Matyszczyk,



Imagine navigating the world in complete darkness, which is the challenge of those who are blind. To assist these folks is an innovation called “navigational headsets,” which use sensors in lamp posts to help people “hear” their surroundings through bone-conducting vibrations which create a “3D soundscape” around the user. An audio headset uses GPS and Bluetooth beacons, among other technologies to help people with sight loss navigate cities.

Positioned for the Future

We may not have, just yet, the futuristic cities “promised” by sci-fi thrillers and our favorite space-age family, the Jetsons, but smart cities are here – and getting smarter every day. As our cities begin to adapt to our needs, what future applications do we foresee for the once-humble light pole?

A Place to Power Up – Per the 2017 International Energy Agency (IEA) Report, there are more than two million electric vehicles on the road around the world – and that number is growing. Streetlights would make a perfect charging station for these vehicles. Simply plug your car into a nearby post while you dine or shop.

Pick Me Up – With the advent of autonomous vehicles, light poles can offer a perfectly unique “address” for pick-up or drop-off. These vehicles use a diverse array of sensors to drive navigation, which can easily connect to apps that identify GPS coordinates.

How’s the Weather? – Sensors installed in light poles can monitor climate, air quality, noise and other livability factors, allowing city administrators or property managers to make improvements. (Now, if only they could control the actual weather!)

Is that a Bird, a Plane or a Drone? – Seeing a pigeon perched atop a streetlight is not an unusual sight, but what about a drone? A recent article in Popular Science, entitled “Amazon Patent Lets Drones Perch on Streetlight Recharging Stations,” details Amazon’s approved plans for a series of drone “perches” installed throughout cities, including atop light poles. These perches or landing pads are planned to act as charging stations for drones, as well as facilitate cargo transfers and communication.

AT&T unveiled its “Smart Cities” program at CES 2017 Las Vegas. The aim is to not just provide more intelligent lighting, but also monitor things like traffic circulation, parking spots, air quality, weather emergencies and even gunshots. They envision opening the platform for citizens, developers, entrepreneurs and universities to “create new revenue streams, drive economic development and make cities a better place to live, work and play.”

Source: “AT&T’s Smart Streetlights Can Smooth Traffic, Detect Gunshots,” www.phillymag.com, by Steve Dent, 2017.



Still Lighting the Way

Street lights have come a long way from their modest beginnings of simply providing light – extending the day for people and businesses. These ubiquitous features of our towns, neighborhoods, campuses, entertainment venues, and parking lots, are now an integral part of a smart city’s infrastructure.

Through our unique combination of operational excellence and transparency, DWM Holdings is well positioned to meet the growing demand for connected devices and smarter, more responsive cities. The transformation from smart city to responsive city fits well into our concept of “poles as real estate” and how data collection is applied to enhance the city experience for its citizens.

From traffic surveillance and information kiosks, to autonomous vehicle addresses and drone stations, we are positioning poles for the future. Smartphones, wearable devices, cars, homes and streetlights may soon be interconnected in ways we’ve only imagined.

About DWM Holdings

DWM Holdings is the umbrella company for a portfolio of light pole manufacturing brands: United Lighting Standards; General Structures, Inc.; Lyte Poles; and UniPost Systems. The business was founded by Douglas William MacVoy in 1971. Since that time, it has grown both with and ahead of the lighting industry — all of which has shaped a company steeped in a rich tradition of developing outstanding partnerships. We are doing things differently — and having a lot of fun along the way.

Please visit dwmholdings.com for more information.

Sources:

“Amazon Patent Lets Drones Perch on Streetlight Recharging Stations,” Popular Science, by Kelsey D. Atherton, 2016.

“AT&T’s Smart Streetlights Can Smooth Traffic, Detect Gunshots,” www.phillymag.com, by Steve Dent, 2017.

“6 Ways the Internet of Things Is Creating the City of the Future,” Forbes, 2015.

International Energy Agency Report, 2017, as featured in Technica, by Megan Geuss, 6/12/17.

“Smart Cities Embrace the Power of the Light Pole,” Industrial Connectors Business & Technology, Remke Blog, 2015.

“The Sci-fi Future of Lamp-Posts,” by Rory Hyde, The Guardian, 2014.

“Utility Poles of the Future Look Great and Work Better,” Engineering, by PDH Academy, 2017.