

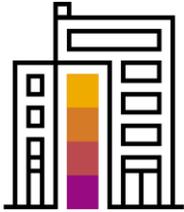


SAP® Innovation Awards 2020 Entry Pitch Deck

Enabling Smart Cities with Signify's BrightSites smart lighting pole + SAP Analytics Cloud

Signify





Company Information

Headquarters Eindhoven, The Netherlands
Industry High Tech – Lighting products and services
Web site www.signify.com

Signify is the world leader in lighting for professionals, consumers and lighting for the Internet of Things. Our energy efficient lighting products, systems and services enable our customers to enjoy a superior quality of light, and make people’s lives safer and more comfortable, and businesses more productive and cities more livable.

Light sources		Luminaires		Systems and Services	
<p>Philips deco LED</p>		<p>Smart Volume pendant</p>		<p>Allianz Arena, Munich</p>	
EUR 6.5 bn sales in 2018	29,000 employees in 70 countries	4.5% of sales invested in R&D in 2018	#1 LED 76% of sales is LED-based	#1 Connected lighting systems & services	#1 Conventional

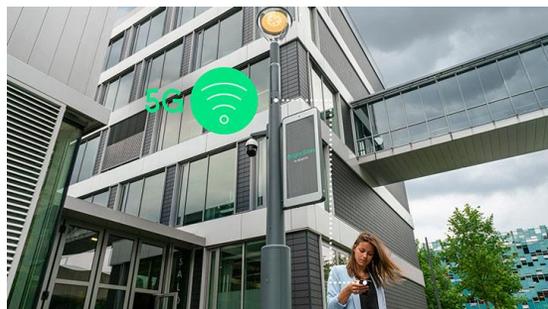
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Signify



“The Electric Light didn't come from the continuous improvement of candles”.

A genuine mash-up of products and capabilities to facilitate Signify's business model innovation: platform business model



Challenge

- Resolving Smart City challenges: internet connectivity, road safety, crowd control, pollution monitoring
- Enabling the required density for a 5G (and 4G) telecom infrastructure

Solution

Smart pole is a ready platform for lighting and city-wide 4G/5G and WiFi infrastructure. Accommodates wide variety of IoT sensors and cameras offering environmental monitoring and enhanced security options such as incident detection. With SAP Analytics Cloud (SAC), and the HANA data management platform, municipalities get real-time insights. SAP Chatbot is used for real-time luminaire control and failure detection ([link](#))

Outcome

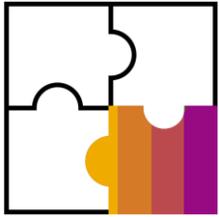
- Internet and telecom connectivity
- Incident detection via sensors, cameras and image recognition
- Real-time Insights to Action



30% Less energy consumption

Increased Citizen wellbeing

70% Faster response times of municipality service departments

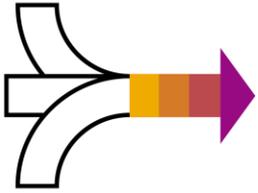


Participating Partner Information



No partner involved



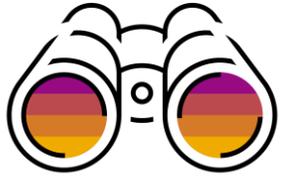


Business Challenges and Objectives

- Resolving Smart City challenges: city-wide internet connectivity, road safety monitoring, crowd control, pollution/environmental monitoring, incident detection
- Enabling the required density for a 5G telecom infrastructure: 5G telecom infrastructure requires a 6x higher density of antennas, leading to a 'jungle' of antennas in urban areas. BrightSites smart pole can be the 'hotel function' for such 5G network as outdoor public lighting infrastructure is already available in urban areas.

First joint use cases are:

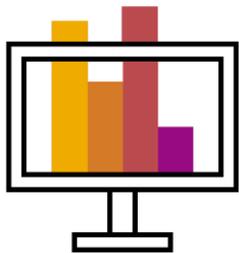
- Real time luminaire control using the SAP chatbot
- Failure detection using the SAP chatbot
- Real-time monitoring of energy consumption and incident detection, using SAP Analytics Cloud and HANA
- Facial image recognition to enable crowd control, using SAP Leonardo ML Functional Services + Data Intelligence



Project or Use Case Details

First joint use cases are:

- Real time luminaire control using the SAP chatbot
- Failure detection using the SAP chatbot
- Real-time monitoring of energy consumption and incident detection, using SAP Analytics Cloud and HANA
- Facial image recognition to enable crowd control, using SAP Leonardo ML Functional Services + Data Intelligence



Benefits and Outcomes

Business or Social

- Philips LED lighting provides a cost-effective, low-maintenance alternative to traditional street lighting – an important consideration for cities
- Increased municipality’s service levels to its ‘customers’: companies, citizens, tourists, etc.

IT

- Signify BrightSites is the **digital pathway of the modern city**. Using the ubiquity of a city's existing street lighting infrastructure, BrightSites poles deliver 4G/5G, Wi-Fi, LoRa, Sigfox, fiber hubs, and a possibility to accommodate wide range of IoT applications.

Human Empowerment

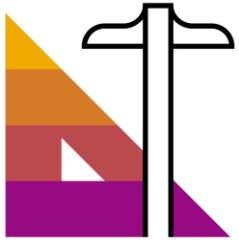
- Increased citizen wellbeing (safety, connectivity, municipality service appreciation, etc.)

- ✓ Internet and telecom connectivity
- ✓ Real-time Insights to Action
- ✓ Incident detection via sensors, cameras and image recognition

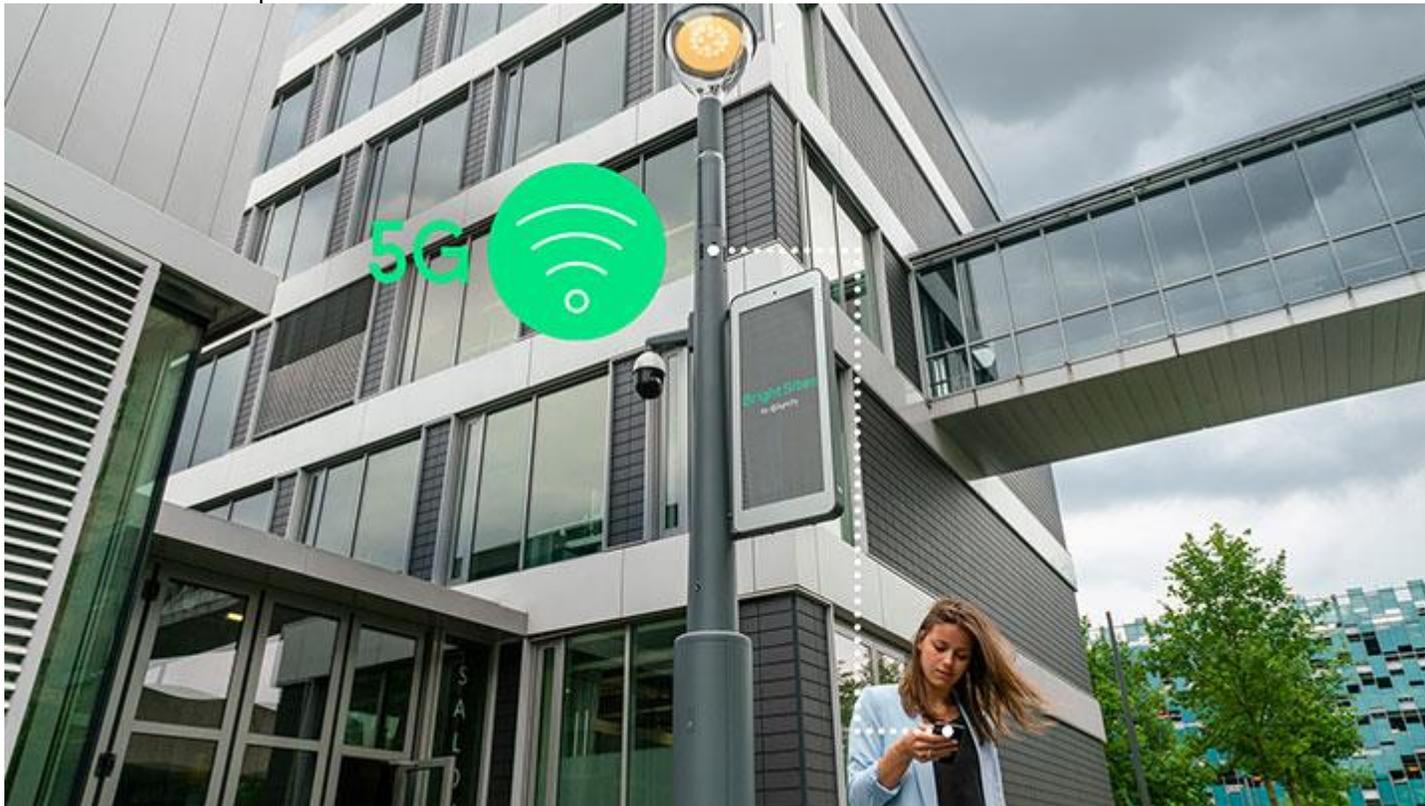
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Architecture



Data Management & Analytics Platform

SAC Chatbot Leonardo ML

SAP Cloud Platform

HANA



Deployment

Deployment status Live

Date May 2019-

Number of users 1,000's

SAP technologies used:

	SAP product	Deployment status (live or proof of concept [POC])	Contribution to project
1	SAP Analytics Cloud	Live	Analytics
2	HANA	Live	Data management
3	Chatbot	Live	Conversational AI
4	SAP Leonardo ML Functional Services + Data Intelligence	Live	Facial image recognition

5

If you have used one of the services or support offerings from SAP Digital Business Services during the implementation or deployment phase, please select with one or more of the following offerings:

- SAP MaxAttention™
- SAP ActiveAttention™
- SAP Advanced Deployment
- SAP Value Assurance
- SAP Model Company
- Others: Presales
- SAP Innovation Services
- SAP Innovative Business Solutions

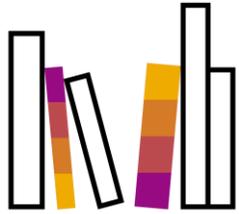
IVE



Advanced Technologies

The following **advanced technologies** were part of the project.

	Technology or use case	Yes or No	Contribution to project
1	3D printing	No	
2	Blockchain	No	
3	Internet of Things (IoT)	Yes	Sensing, streaming analytics
4	Machine learning or AI	Yes	Image recognition
5	Conversational AI	Yes	Chatbot
6	Robotic process automation	No	
7	Data anonymization	No	
8	Augmented analytics	Yes	SAC, HANA, Data Intelligence

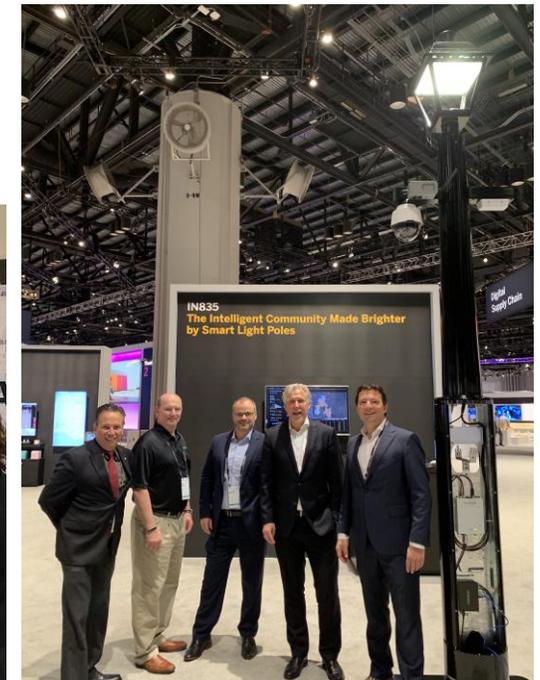


Additional Information

Signify and SAP are currently jointly bidding on several tenders, including:

- A road & transport authority in UAE
- A smart city customer in Argentina

Furthermore, we are doing joint marketing



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