

Digital Transformation and Smart City Initiatives:

*Internet of Things and
New Smart City Pole*



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CORAL
GABLES®
THE CITY BEAUTIFUL



INTERNET OF THINGS

REAL-TIME URBAN AND ENVIRONMENTAL VISIBILITY / PHYSICAL INTERFACING

SMART LIGHTS

TRAFFIC & PARKING SENSORS

PUBLIC SAFETY SMART EQUIPMENT

ENVIRONMENTAL SENSORS & ACTUATORS

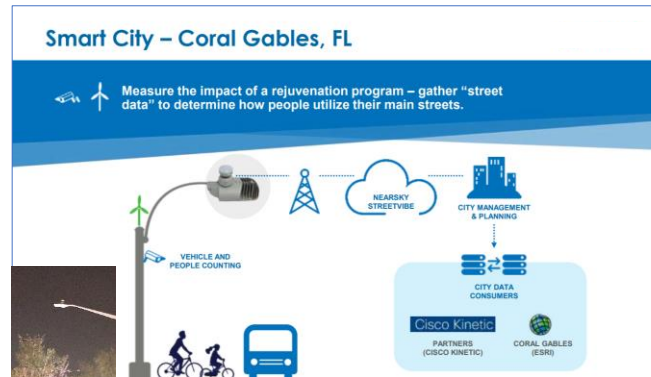
SMART DEVICES

SMART KIOSKS & DIGITAL SIGNAGE

ROBOTICS & SMART VEHICLES

Internet of Things (IoT) Smart City Systems

- Traffic sensors: pedestrians, vehicles, bicycles, visitors, RF
 - ALPR, CCTV cameras and public safety smart devices
 - Environmental sensors (waterways, air quality, noise)
 - Smart Parking sensors (counting available/occupied spots)
 - Smart Lighting controllers & IoT network / Smart Poles
 - Smart City Digital Kiosks; Smart Building SHM sensors
 - Telemetry sensors and actuators; Fleet Management, etc.
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- IoT sensor data is strategic and becomes actionable information (traffic engineers, public safety officers, urban planners, city management, researchers, businesses, public in general)
 - Open IoT data aggregated in the smart city hub and private IoT data is studied by researchers, marketing and city analysts and used by businesses, planners, public safety officials, traffic engineers, city officials and constituents that are part of the smart city ecosystem
 - Constituents benefit from actionable sensor data with dashboards visualization and statistics by hour/day/week/month
 - Used for urban planning and design, for traffic and civil engineering to design better and safer roads and infrastructure
 - Used by businesses to design strategies (retail, service), grow sales, understand market and consumer needs.



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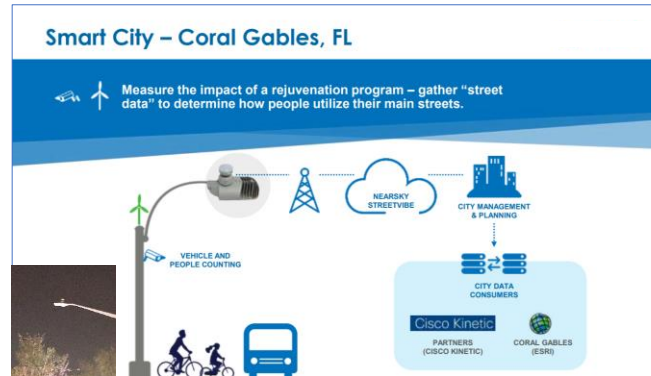
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Smart Lighting Systems

Additions in 2019-2020-2021:

- New smart lighting controllers on LED light poles on Miracle Mile in Downtown Coral Gables
- Smart light poles with IoT, motion sensors, speakers at residential street ends
- Controllers provide intelligent ON/OFF switching, dimming control, GPS, highly accurate power metering
- Analog and digital sensor inputs and constant status and health monitoring of the City's lighting fixtures
- Allow City staff to manage the lights either individually or as a group and apply business intelligence rules for energy and cost efficiencies
- Centralized management system also runs reports on energy consumption, LED burn hours
- Generate automatic alerts when there are issues affecting the light fixtures
- Each pole is labelled and geolocated in the system with GPS coordinates to be easily identifiable and located for maintenance and troubleshooting purposes
- Integrating controllers with the City's facility and asset management system so that it can automatically create tickets whenever a problem with the lights occur, helping City staff to promptly respond and troubleshoot accordingly



New Smart City Poles – consolidated/integrated technology - WIP

SMART CITY HUB PUBLIC PLATFORM:
WWW.CORALGABLES.COM/SMARTCITY



CES 2021 INNOVATION AWARD PRODUCT

Ekin Spotter V2

By Ekin Smart City Technologies



Honoree

Smart Cities



Ekin SPOTTER V2 is a smart city furniture that is designed to adapt to the texture of modern cities with its modular structure. Traffic analytics and management, including automatic license plate recognition and Red light, Speed and other traffic violations detection, surveillance, smart city environmental analysis -measurement of ammonia, carbon monoxide, temperature, humidity levels-, spotlight, speaker, WiFi hotspot modules all can be used in a single structure and serves to build sustainable cities thanks to this modular structure. With its stylish compact design, the product aims to meet the smart needs without exposing the city to mass of device.



New Smart City Pole

Ekin Spotter V2 – Coral Gables Custom Design

- First of its kind, engineered specifically for Coral Gables
- Custom design incorporates our city's ASCE 7-10 standard and FL building code wind load requirements
- Custom design incorporates our city's smart city telecommunications and IoT technology and interoperability requirements
- First one installed in the U.S.
- Won CES innovation awards in at CES 2020 and CES 2021
- Patented consolidated/integrated/aerodynamic, aesthetically pleasing all-in-one design
- Aerospace engineering and science of material principles
- First pilot at the Financial corridor in Downtown Coral Gables (Alhambra Cir and Ponce de Leon)
- Some of the services that will be consolidated in this pole are:
 - Public free Wi-Fi
 - CCTV
 - Traffic sensors (vehicle counters, pedestrian counters, safety, geofence ALPR)
 - Environmental sensors (air quality, noise)

