

# **City of Coral Gables**

Innovation & Technology
Department
(CGIT)

# SMART CITY SUCCESS STORIES: LAUNCHES, COLLABORATIONS, AND EVENTS

This Update: 06/30/2022 - See Latest Version at <a href="https://www.coralGables.com/TechStories">www.coralGables.com/TechStories</a> or <a href="https://www.coralGables.com/TechStories">Issuu.com/CGIT</a>



























The City of Coral Gables promotes the development of a smart city ecosystem that fosters innovation and economic growth by bringing together through technology People; Businesses, Organizations; Things, and Systems. By leveraging strategic planning and innovation, the City's digital transformation and smart initiatives benefit the citizens with continuous improvement of customer service and quality of life. Our smart city roadmap is defined by the components of transparency, value creation; open data and analytics; actionable information, efficiencies; citizen engagement, mobility, accessibility; crowdsourcing; inclusion, and collaboration. The success stories, launches, collaborations, and events below are part of our continuous and exciting journey to become a smarter city.

Raimundo Rodulfo, P.E., PMP MSEM, SMIEEE, ITIL, PCIP, CSSBB Director of Innovation and Technology / Chief Innovation Officer



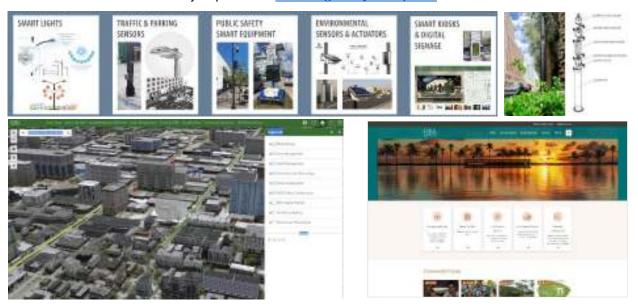




### **Launches and Events Coming Soon:**

Soon in 2022 – New fiber corridors, new technology construction, new smart poles and smart lights, IoT sensors/platform expansion, CCTV/ALPR phase IV, new city website digital experience platform, innovation districts, and other cutovers.

- New Internet of Things (IoT) sensors, smart city poles, and smart lights are being installed on Downtown Gables and other areas of the city. Sensor data currently reports real-time pedestrian counts, vehicle traffic, waterway, and environmental data. The City's IoT platform is also being enhanced with new integrated components and features.
- The City is implementing additional smart lights with CCTV cameras and sensors at 8<sup>th</sup> Street, Bird Road, and Craft Neighborhood / Douglas Road proximity area, plus additional CCTV cameras at Waterways and Parks, CCTV/ALPR/Speed trailers, software integration features, infrastructure upgrades, and new Digital Twin platform.
- New Electronic Permitting and Electronic Plan Review system went live in August 2021 and is being expanded in 2022.
- New Core Financial and HR cloud suite enterprise system implementation in progress. Going live in 2022.
- New City Website Digital Experience Platform (DXP) implementation almost completed. Going live in August 2022.
- New fiber corridors: Alhambra/Financial; Ponce de Leon-University/CBD; Andalusia/Mobility; Aragon/Arts & Culture.
- More information on the IT Project portfolio: IT Strategic Projects Update.



#### **Upcoming 2022 Cyberinfrastructure Milestones:**

- Enterprise Systems: 1. e-Permitting, Land Management, electronic plan review enterprise system rollout at the new Development Service Center / 2. Core Financial, HR and Supply Chain Enterprise System (Enterprise Business Capabilities Cloud Suite). Currently in Systems Integration Testing (SIT) phase (to be completed by Dec 2022) / 3. Implementation of citywide Standard Operating Procedures (SOP) electronic platform, templates, systematic processes, and best practices as per Baldrige criteria and benchmarks. Phase 1/2/4 department SOPs completed. Full completion expected by Sep. '22 / 4. New Digital Experience Platform (DXP) implementation in progress (beta launch in June '22, go-live in July '22).
- Technology infrastructure for new buildings: 1. Technology provisioning for the new Development Services Center at 427 Biltmore Way building renovation (all building tech/telecom infrastructure and services). IT work status: construction phase. / 2. Parking gate system upgrade citywide (backend and frontend equipment, systems, and platforms). / 3. Alarm System Upgrade. IT work status: Design phase completed. / Other technology provisioning for CIP projects in progress: Smart Mobility Hub, Smart Parking Garage 7, Fink Studio renovation, Fire Station 4, Granada Golf facility renovation, Passport Office entrance, Phillips Park, Lot 27 Park, City Hall Annex remodeling.
- Smart Districts, IoT/CPS: 1. CCTV Phase 4 (Monegro and 8<sup>th</sup> St new smart lights/sensors, new node at Granada, new waterway cameras, VMS-CAD integration), 95% completed. Scheduled for completion in May '22. / 2. New SCADA system/network. IT work status: Design & procurement finished. In the implementation phase, ETA 09-'22. / 3. Smart city poles: 1<sup>st</sup> pilot unit installed at Financial/banking district. Improved version 2 custom-designed for Coral Gables, with ASCE 7-10 wind load requirements. Next phase will start in 2022 with the expansion of the fiber corridors / 4. Smart City public kiosks expansion (4 more kiosks.) / 5. Smart districts and fiber corridors expansion (Alhambra, Ponce, Andalusia, Aragon.)

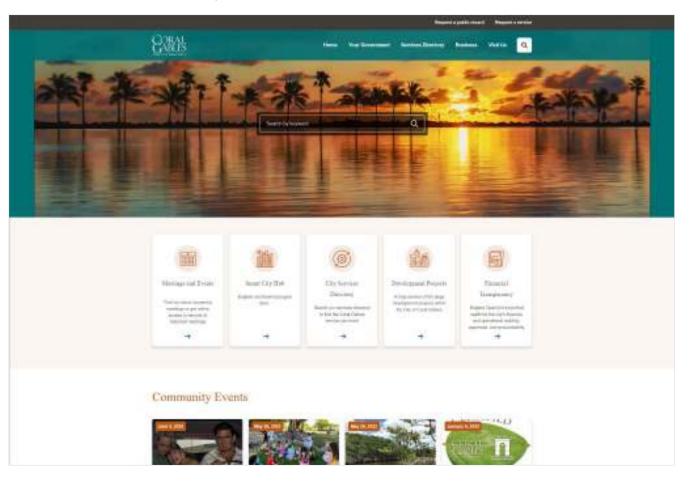
### 2022

# June 2022:

### Beta Launch of New City Website, Digital Experience Platform (DXP)

City of Coral Gables beta-launched a new city website: <a href="https://beta.coralgables.com">https://beta.coralgables.com</a>. This website was built on a state-of-the-art digital experience platform (Drupal DXP) with improved service-oriented design, citizen services directory, enhanced features and functionalities, advanced search function, integration with city applications, streamlined content, and new video and photography showcasing the City Beautiful's nature, historic landmarks, gorgeous residential areas, and vibrant business and arts and culture districts.

More: Beta Site - Presentation to City Commission - Post - eNews - Announcement

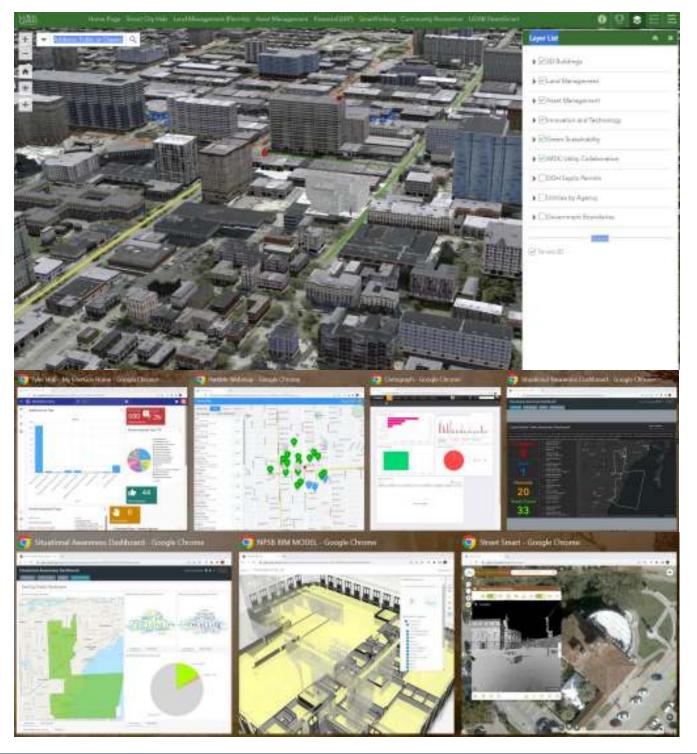




### New Homegrown Smart City Digital Twin Platform and Horizontal Integration Dashboards

The Innovation and Technology department (CGIT) developed a Smart City Digital Twin platform with Horizontal Integration Dashboards. The new homegrown digital twin platform merges the Coral Gables smart city hub public platform, the City's urban analytics Artificial Intelligence (AI) Internet of Things (IoT) platform, citywide enterprise systems and open data, and a 3D horizontal integration spatial computing platform. This architecture fosters interoperability in real time and connects the dots between all the city's enterprise systems and data domains to improve operational efficiencies and citizen access to digital services. It also allows for integration with building information models and immersive virtual reality user experience navigation for operations, inspections, monitoring, and control. The CGIT team recently presented this multi-platform at the smart city conference in University of Miami and did live demonstrations for professors and researchers at the UM's Institute of Data Science and Computing.

More: Coral Gables Smart City Digital Twin Platform - Presentation to City Commission



### Research Collaboration Project with the Department of Energy and the Pacific Northwest National Laboratory

The City's Innovation and Technology department (CGIT) started a research collaboration in January 2022 with the U.S. Department of Energy (DOE) and the Pacific Northwest National Laboratory (PNNL) on advanced traffic data analytics and optimization and applied artificial intelligence and machine learning. The research team will study intelligent traffic signals that can communicate in real time with connected and automated vehicles (CAVs) and urban computing systems to improve energy efficiencies and reduce energy expenditures, congestion, and emissions for regional transportation systems for multiple operational scenarios. The project, titled: "Autonomous Intelligent Assistant (AutonomIA): Resilient and Energy-Efficient City-wide Transportation Operations", was selected for funding by the Advanced Research Projects Agency (ARPA-E) -it's the only project selected in the category of Transportation Networks. This R&D project will develop a vehicle-to-signal communication and control test corridor and small-scale traffic network in Coral Gables, in the smart district areas where CGIT has installed fiber optics and smart city Al-powered poles and traffic sensors --that already collect real-time traffic data and feed the Coral Gables Smart City Hub Urban Analytics AI platform traffic dashboards. Project Abstract: "PNNL, the University of California at Berkeley (UCB), Aimsun, Siemens Technology, Traffic Technology Services (TTS), and the City of Coral Gables (CCG), will combine artificial intelligence (AI), multiscale simulation, and realtime control to improve energy efficiencies and reduce energy expenditures, congestion, and emissions for regional transportation systems for multiple operational scenarios. Our real-time transportation management approach leverages emergent connected automated vehicles with varied levels of autonomy (CAVs), sensing, and signaling technologies within a unified learning, simulation, and control paradigm to improve energy efficiency by 20% or more and reduce CO2 emissions by at least 20%. We will showcase AutonomIA on a small-scale traffic network in CCG for varying CAV penetration levels to demonstrate these gains."

More: Coral Gables CIO Raimundo Rodulfo presentation to City Commission - List of all the awardees



New Signs with a QR Code Installed at Trolley Stops, and Trolley Fleet Technology Upgrade: The Coral Gables trolley unparalleled service in the greater Miami area provides easy access to the Coral Gables central business district, Merrick Park area, and a seamless connection with Metrorail. Additionally, the use of trolleys helps reduce traffic and emissions. More than 3,500 riders use the service each weekday, and since adding Saturday service in October 2021, approximately 1,400 passengers have been utilizing the weekend trolley service each Saturday. New signs with a QR code have been installed at trolley stops which take users to a live app that shows where all the trolleys are and when they will arrive at a selected stop, significantly improving the customer experience. Also, the communications technology inside the trolleys was upgraded in June 2022. More: Post - Post - Other Mobility Articles





**CGIT Article Published by Gov't CIO Outlook Magazine:** The magazine published a smart city innovation article by CIO / Innovation & Technology Director Raimundo Rodulfo, P.E.: "Smart City Innovation and Technology Provides Opportunities for Collaboration": <u>Link</u>





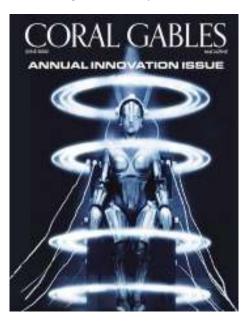
CIO Raimundo Rodulfo was a Keynote Speaker at the World Business Angel Investors Week Congress: CIO Raimundo Rodulfo, P.E., WBAF Miami Office Board Member was a keynote speaker at the WBAF (part of G20) USA Event hosted as part of the World Business Angel Investors Week on June 24<sup>th</sup>, 2022. His keynote talk was about "Digital and Business Transformation in the Post- Pandemic Economy". More: Post - Agenda - Event - Article





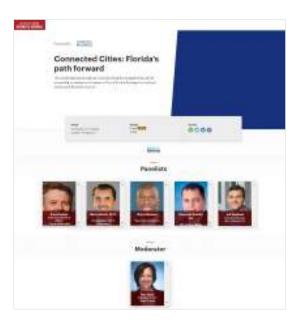
### Coral Gables Magazine 2022 Annual Innovation Issue: "Coral Gables: City of Innovation"

"Coral Gables, Known for its Traditional Trappings, Pushes the Envelope of Change" - "It may be surprising for some Gableites to learn that our historic city is at the forefront of the smart city movement, having earned national recognition for its innovative use of technology. The city has twice taken first place in the Open Cities Index, which measures how U.S. cities use data to better the lives of residents. Earlier this year, the city received the 2022 Smart City Innovation Excellence Award from the Smart Cities Council for being 'a leader in applying technology to improve operational efficiencies, quality of life, public safety, and mobility.' Most recently, the city was selected as a participant in a U.S. Department of Energy project for 'advanced intelligent traffic optimization'." More: Innovation Issue - Article



### **CGIT** at the Connected Cities Event: Florida's Path Forward

City of Coral Gables CIO Raimundo Rodulfo spoke at The Connected Cities webinar, an hour-long live program that is accessible to readers and viewers of South Florida Business Journal and Jacksonville Business Journal. "With the significant landmass that comprises Florida as a state and as the 15<sup>th</sup> largest economy globally, there are significant opportunities and challenges ahead as city leaders work to harness the power of technology. What does that mean for city leaders? How will this affect citizens? What does this mean for industry? What are the opportunities for smaller businesses to engage?". More: Event - Post



#### May 2022:

Expansion of City of Coral Gables Public Wi-Fi Network: The City of Coral Gables continues to expand its public Wi-Fi network as a part of the Smart Districts — Broadband Infrastructure Expansion Project. The city's Innovation and Technology (IT) department recently added a public Wi-Fi access point outside of the Coral Gables Museum, where it provides free public internet access in the open area of the museum, where outdoor events are held and public art is exhibited, as well as to sections of Salzedo Street and Aragon Avenue. The IT department has now completed 20 public Wi-Fi sites including Miracle Mile, the Venetian Pool, and Giralda Plaza. Phillips Park and the Alhambra Circle financial corridor are currently in progress. They also plan on bringing public Wi-Fi to the Coral Gables Art Cinema, Centennial Park, parking garages 1 and 4, the Ponce de Leon corridor, the Andalusia mobility corridor, and the Aragon Arts and Culture corridor. More: Post - News - Article



**Economic Development Week – Recognition to Tech Businesses in Coral Gables:** The City of Coral Gables is dedicated to the ongoing development of being a world class Smart City. From free Wi-Fi in Downtown Coral Gables to our sleek sensor poles, the city's large investment in technology is fostering innovation and attracting businesses and young professionals that are boosting our economic growth. During Economic Development Week 2022, our city gave a nod of appreciation to the 1,200+ tech-centric businesses that call Coral Gables home including: Esri, ERMProtect, Millicom (Tigo), ACI Worldwide, Amazon Web Services (AWS), Argos, and many more. More: Post - Release - Release



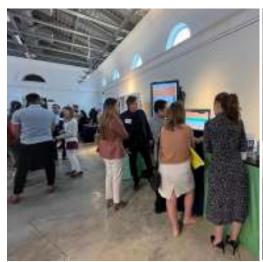


**CGIT Article Published by Gov't CIO Outlook Magazine:** The magazine published a cybersecurity article by Asst. IT Director Nelson Gonzalez, CISSP: "Introducing smart city solutions into highly-regulated municipal environments": <u>Link</u>





City of Coral Gables Exhibition at University of Miami Smart Cities Conference: The Innovation & Technology and Economic Development departments participated in the University of Miami's Smart Cities Conference, showcasing City of Coral Gables' smart districts technology infrastructure, urban analytics AI and digital twin platforms -and how our city leverages those technologies to boost citizen services, improve quality of life, and foster innovation and economic growth in our community. Our team had a great opportunity to learn from and collaborate with experts from academia, industry and government organizations who spoke at the conference and visited our exhibit booth. Thank you to UM's Institute of Data Science and Computing for the opportunity to participate in this wonderful event. The conference featured great panels and discussions on digital transformation, sustainability and smart building and construction innovation, research and use cases. More: Post - Post - Post - Post - Program - News











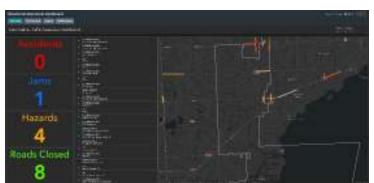




### Reengineering of the Smart City Hub Situational Awareness Dashboards

The Situational Awareness Dashboards of the Coral Gables Smart City Hub public platform have been reengineered and enhanced with new data dashboards and analytics on traffic, weather/environment, and public sentiment. Improvements and enhancements done include:

- 1. Coral Gables Waze CCP Traffic Awareness Dashboard: A research project collaboration between City of Coral Gables Innovation & Technology Department (CGIT), University of Miami Institute of Data Science and Computing (UM IDSC), and the Waze Connected Citizens Program (Waze CCP). The reengineered dashboard is a Beta prototype that analyzes and presents Coral Gables and Miami-Dade County traffic data and metrics from accidents, hazards, traffic jams, and road closed from external sources such as the Waze CCP platform. This dashboard augments with crowdsourced data the existing real-time traffic data and analytics from city sensors.
- **2. Traffic Analytics from the City's IoT sensor network:** real-time traffic data and analytics from city traffic sensors (already presented in the smart city hub urban analytics AI IoT platform section.)
- 3. **Coral Gables Hyperlocal IoT Weather Data Dashboards:** Real-time data dashboards of hyperlocal weather parameters (wind speed/profile, solar radiation, rainfall, temp/pressure/humidity, etc.) in public safety facilities, from systems like the scientific-grade/NIST-traceable multi-sensor environmental IoT weather station at the City's Public Safety Smart Building.
- 4. **Public Sentiment Analytics Dashboards:** Public Sentiment data dashboards from AI & ML analytic platforms for both public sources and internal citizen service requests and CRM systems. These dashboards were developed by CGIT's software engineers, leveraging APIs from the City's public sentiment analytics AI platform (ZenCity) and the City's citizen engagement and customer connect CRM platforms.





L-R: Coral Gables Waze CCP Traffic Awareness Dashboard - Traffic Analytics from the City's IoT sensor network



L-R: 3. Coral Gables Hyperlocal IoT Weather Data Dashboards - Public Sentiment Analytics Dashboards

More: Situational Awareness Dashboards - Smart City Hub Community Intelligence Center Section

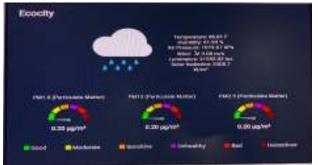
### Apr 2022:

### **Expansion of Smart City Environmental IoT Sensors and Analytics in Coral Gables:**

City of Coral Gables has continued expanding its smart city environmental sensing technology infrastructure, with additional Internet of Things (IoT) environmental sensors distributed through multiple devices and IoT/CPS end points such as smart city Al-powered modular poles, smart city kiosks, IoT water sensor buoy systems, hyperlocal scientific-grade/NIST-traceable multi-sensor environmental IoT weather stations, and environmental monitoring networks in collaboration with water scientists from Florida International University (FIU) Institute of Environment, the Southeast Coastal Ocean Observing Regional Association (SECOORA), the U.S. Geological Survey (USGS), the WeatherLink network, and other organizations.

The abovementioned city systems measure air quality (carbon emissions, pollutants/particulate, VOC, etc.) in the Coral Gables Downtown area; water quality (electrochemical parameters, density, pH, salinity, resistivity, etc.) and water level (flood detection/alerts) in water canals and coastal areas; hyperlocal weather parameters (wind speed/profile, solar radiation, rainfall, temp/pressure/humidity, etc.) in public safety facilities; and other cyber-physical systems and data sources. Environmental IoT sensor data is aggregated and analyzed in the Coral Gables smart city hub public platform and urban analytics AI IoT platform (<a href="www.coralgables.com/smartcity#iot">www.coralgables.com/smartcity#iot</a>) where real-time and environmental data dashboards and predictive analytics are provided to residents, researchers, emergency managers and city engineers. This data is also used by CGIT to analyze the viability of alternative power sources for network nodes, such as wind turbines and photovoltaic (PV) solar panels.

More: Coral Gables Smart City Hub Environmental IoT Sensor Dashboards - SECOORA - USGS



















**CGIT Presentation at the IEEE PES T&D Conference:** City of Coral Gables CIO Raimundo Rodulfo, P.E. EE and a senior member of the Institute of Electrical and Electronics Engineers (IEEE), spoke at the IEEE Power & Energy Society (PES) Transmission & Distribution (T&D) engineering conference, where he talked about the City of Coral Gables smart district infrastructure, energy efficiency and systems engineering at the IEEE Smart Grid and Smart Cities pavilion. The session kicked off with a presentation by IEEE President Elect Dr. Saifur Rahman on the Building Blocks of a Smart City and continued with project presentations of smart microgrid deployments and research. Post - Event - Session - Agenda









Coral Gables Smart City IoT and Urban Analytics Case Study at Smart Cities Connect in Columbus, OH: During the session "The Data-Driven Value of a Unified Plan and View", a panel of industry experts presented and discussed a City of Coral Gables Smart City IoT and Urban Analytics case study at the Smart Cities Connect conference in Columbus, Ohio. "In order to most quickly and effectively realize value gained from Smart City initiatives, a community must embrace and establish two key actions: First: Establish a unified and mutually benefitting plan amongst departments/agencies; Second: Have access to a Single Pane of Glass (SPOG) providing real time and historic reporting of the effects of their Smart/Connected infrastructure investments, which in turn allows communities to make automated data driven decisions that drive efficiencies and outcomes for their citizens. This panel will provide tangible examples from both end users and solution providers to help your community accelerate its success."

More: Post - Post - Post - Post - Post - Post - Post





**South Florida Tech Week Events:** City of Coral Gables staff participated in several events during the South Florida Tech Week, presenting, exhibiting, and demonstrating the Coral Gables smart city infrastructure and innovation initiatives. Events included: eMerge Americas, South Florida Tech Hub & DevCon, and the Miami Tech Week events.

**eMerge Americas - City of Coral Gables smart city expo booth** – The City's I.T. and Economic Development teams presented the Coral Gables smart city infrastructure, innovation and technology initiatives and economic opportunities: CIO Raimundo Rodulfo, Asst. Dir. Nelson Gonzalez, IT Analysts Alex Gamundi, Paulson Jean, Jorge Atencio | Asst. Economic Development Dir. Belkys Perez, Business Dev. Coordinator Francesca Valdes: Post - Post - Post - Event



**South Florida Tech Hub SoFlo DevCon 2022 | Developers Conference - CGIT Presentation**: City of Coral Gables IT Customer Support & GIS Manager Mark Hebert joined Drs. Sara and Avi Rushinek session: "360° AI Remote Assisted Reality Tech in The Metaverse", and presented some of the CGIT smart city spatial computing, XR and Web3 use cases and R&D projects: Post - Event



**Miami Tech Week Wrap up event** – CIO Raimundo Rodulfo participated in the closing event of the Miami Tech Week at the Vizcaya Museum and Gardens, hosted by Miami-Dade County: Post



### **CGIT Smart City GIS Presentation at the Esri Southeast User Conference**

City of Coral Gables IT Customer Support & GIS Manager Mark Hebert did a smart city GIS presentation at the Esri Southeast User Conference in Palm Beach, Florida. Mark's presentation was titled: "Expanding the Smart City Hub with More Collaboration".

Abstract: "A presentation from the City's new GIS Lab on the use of ArcGIS Hub technology and how we continue to develop uses for it. The GIS Lab is working with multiple departments to engage and collaborate with people, organizations, and businesses in and outside the City. We conduct outreach with education and government institutions to deliver services using innovative systems and technology built on Smart and Digital City principles. We solve operations problems and fill engagement gaps for City customers through the creative use of ArcGIS Hub Initiatives."

More: Sessions







NIST GCTC New Think Tank Portal and CGIT Collaboration: The National Institute of Standards and Technology (NIST) Global Cities Team Challenge (GCTC) supercluster leaders launched a new think tank portal and announced upcoming smart cities strategic workshops at George Mason University (GMU, Virginia) in August 2022, and at City of Coral Gables on September 12-13, 2022. City of Coral Gables CIO Raimundo Rodulfo collaborates with the NIST GCTC and its smart cities strategic planning initiatives as one of the supercluster and action cluster leaders.

More: Think Tank Portal - Video with CGIT Case Study



**Recent Academic Books, Video Journal Reports, Papers, and Articles:** Recent Academic Books, Video Journal Reports, Papers, and Articles featuring case studies and references about Coral Gables smart city initiatives:

Books and Academic Papers by multiple authors:

- Electrical and Computer Engineering academic book published in 2021 (also listed in University of Washington and Texas A&M University libraries): "LTE Cellular Narrowband Internet of Things (NB-IoT): Practical Projects for the Cloud and Data Visualization" by Dr. Hossam Fattah. Coral Gables engineering case study starts on Pages 15-19, 347, with references to an CGIT IEEE paper: Link IEEE Coral Gables Paper Reference
- Computer Science and Urban Computing academic book published in 2020: "Solving Urban Infrastructure Problems
  Using Smart City Technologies" by John R. Vacca, former NASA computer scientist who worked in the space station
  program Freedom and the International Space Station Program. It talks about the Coral Gables Smart City Solutions
  Competition organized by CGIT and University of Miami in 2018, on page 174 and 182: Link
- "Smart Cities Policies and Financing", also by John R. Vacca. <u>Link</u> (page 559)
- University of South Florida (USF) ISM 6436 Operations & Supply Chain Processes Class project about the Coral Gables smart city initiatives and the CGIT IEEE IoT Papers: Link

Video Journal Reports by Kurrant Insights:

- "A Tale of Two Cities Taking On The Smart City Dream : Seoul vs Coral Gables": Link
- "Smart Poles: The New Building Block to a Smart City?": Link

Articles by Futurism, GNC and AC&C:

- "Strong Investment in Development of Smart Cities to Boost Smart Pole Market". <u>Link</u>
- "Streetlights leverage digital infrastructure for smart city apps". <u>Link</u>
- "Drive-by property appraisals streamline data collection". Link
- "What 'smart city' means for 2021: How digital twins, AI and other innovations drive smart transformation". Link

#### Mar 2022:

Gartner Inc. Published a Case Study Paper about City of Coral Gables Smart City Initiatives: Gartner Inc., the world's largest IT consulting firm, published a case study about City of Coral Gables innovation and technology initiatives: "Case Study: An Intelligent Urban Ecosystem Approach to a Sustainable Smart City", by Bill Finnerty, Dean Lacheca. This case study was chosen as a result of the selection of the smart district expansion project at the City of Coral Gables as a finalist in the 2021 Gartner Eye on Innovation Awards for Government. "Maximizing value from smart city efforts requires cities to move beyond siloed IoT and data solutions. Cities must adopt an integrated approach, leveraging a digital government technology platform. This case study provides government CIOs an example to use in setting a vision for their communities." More: Post - Paper



Industrial & Systems Engineering Magazine: Coral Gables Smart City Case Study: The Institute of Industrial and Systems Engineers (IISE) published an article on the Coral Gables smart city innovation and technology initiatives in the April 2022 issue of ISE Magazine (a follow up on their previous article on Coral Gables published in 2018): "Smarter in the Sunshine State" (Page 46). "Coral Gables has upgraded its smart city efforts with sensors, data hub and a public safety center to become more accessible and sustainable.", by Keith Albertson. More: Post - Post



**e-Republic GovTech Magazine: Coral Gables Smart City ERP Case Study:** The e-Republic Government Technology (GovTech) Magazine published an article on the Coral Gables smart city enterprise systems projects in their March 2022 issue: "Systematic Approach Drives ERP Transformation and Smart City Success" (Page 28-29.) More: <u>Issue</u>



**CGIT at Cities Today Innovation Forum in Philadelphia:** City of Coral Gables CIO Raimundo Rodulfo participated in the City Leadership Forum on Digitalization, organized by the Cities Today Institute, and hosted by City of Philadelphia. Tech leaders of 15 cities from across North America and industry partners gathered in Philadelphia and had great discussions on connectivity, funding, digital transformation, IoT, business programs, and digital equity. More: Post - Post - Article





### Feb 2022:

### City of Coral Gables received the Smart Cities Council's 2022 Smart City Innovation Excellence Award.

City of Coral Gables received the 2022 Smart City Innovation Excellence Award from the Smart Cities Council, an international organization headquartered in Washington D.C., during the Smart Cities Council Innovation Workshop in Coral Gables. The Smart Cities Council praised our City Beautiful for being "a leader in applying technology to improve operational efficiencies, quality of life, public safety and mobility."

More: Post - Post - Post - Event - Event - News - News - News - Post







Connected Cities Tour Summit and Smart Cities Council Infrastructure Innovation Forum in Coral Gables: The 2022 Connected Cities Tour and Smart Cities Council Infrastructure Innovation Forum kicked off in Coral Gables on February 24-25. Leaders from Coral Gables and Miami-Dade County joined with the tech community to explore how broadband infrastructure and technologies like cloud, AI and IoT are enabling Smart City innovations that impact quality of life, operational efficiency, sustainability, resiliency, and public safety. The CGIT team hosted the event in the City's state-of-the-art Police & Fire Headquarters building and provided tours of the Coral Gables smart districts and smart city technology hub. The Chief Innovation Officers and government leaders of Coral Gables and Miami-Dade County were joined by technology leaders to share use cases, business models and technology architectures. Coral Gables received the Smart Cities Council Infrastructure Innovation Award of Excellence during the event. More: Post - Post - Site - Event



The Spelai Thick Tank

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New smart lights, Safety Cameras and Traffic Sensor Poles: CGIT recently completed the installation and cutover of multiple smart lighting, CCTV/IoT poles and traffic sensor systems. Some of the benefits and areas of positive impact are: public safety, traffic safety/management/engineering, mobility, energy management/efficiency, data value for residents and businesses, and smart parking. All these technologies have been connected and integrated to the Community Intelligence Center (CIC) at the City's Emergency Operations Center (EOC), and the smart city hub and urban analytics Al platforms. Some of the technologies deployed include:

- Completed, went live in February-March 2022: 2 new, additional smart light poles at the Monegro corridor streetend gates, enhancing public safety in that neighborhood residential area: Sarto Ave., Aledo Ave. Also, a CCTV camera was installed at the San Sebastian Ave. gate. The technology of these smart lights include CCTV cameras, motion sensors, loudspeaker, network connectivity, control, data analytics, and IoT sensing integration: Link
- Completed, went live in January 2022: 6 new, additional optical sensor poles with CCTV cameras and edge analytics AI (traffic counters), enhancing public safety and traffic safety at busy parks, roads, and intersections: 2 at Ferdinand Park East/ West; 2 at Granada and 8<sup>th</sup> St; 2 at Granada and Bird Rd; 2 ALPRs also at Granada and 8<sup>th</sup> St. The technology of these smart sensor poles includes CCTV cameras, artificial intelligence and computer vision, control, data analytics, IoT sensing integration (multimodal traffic sensor edge analytics and safety sensors): Link
- **Previously in 2021:** 3 smart lights were implemented at Romano Ave., Camilo Ave., Cadima Ave street-end gates.
- Previous smart lighting technologies deployed in 2019 and 2020: Other smart lighting technologies in Downtown Coral Gables include more than 50 smart lights and smart lighting controllers with energy efficiency management, Industrial IoT sensor integration, urban analytics AI platform, automated features such as LED light status reporting and energy use analytics, predictive analytics of light burn, and other advanced features: Link Link Link



### AWS Published Case Study about City of Coral Gables Smart City IoT Urban Analytics AI Platforms and Services.

Amazon Web Services (AWS) big-tech cloud provider published a case study about City of Coral Gables deployment of Traffic and Lighting IoT and Urban Analytics AI platforms like Quantela on AWS cloud to help the city leverage IoT data to provide better services to citizens, drive efficiencies, reduce operating costs, and perform predictive infrastructure maintenance. CGIT Systems Manager Ayanes Apolinar explains in an interview the benefits of these cloud-native IoT and AI platforms as part of this case study. More: <a href="Case Study">Case Study</a>



### CGIT at the Data Science Salon Event – Panel: "Machine Learning & AI in the Enterprise."

CIO Raimundo Rodulfo spoke at the Data Science Salon panel "Machine Learning & Al in the Enterprise" with Dr. Michael Mannino and tech founder/entrepreneur Charles Irizarry. More: Post



City of Coral Gables Cybersecurity Presentation to Consular Corps: The Consular Corps and The World Affairs Council held a cyber security reception with the City of Coral Gables where the Consular Corps and guests were welcomed by Mayor Vince Lago, who made remarks on the vital role of cybersecurity in a global context. A 'Cyber Security: Best Practices' presentation was delivered by Raimundo Rodulfo, the City's IT Director & Chief Innovation Officer; followed by a tour of the City of Coral Gables EOC and Technology Center. More: Post - Post



Smart City Public Safety and Communications Technologies deployed at Carnival on the Mile event: The Coral Gables Police, Fire, Community Recreation, and Innovation & Technology departments deployed multiple smart city public safety technologies during the Carnival on the Mile event, to enhance safety and connectivity for all attendees, participating organizations, and support personnel. Those technologies included the new Mobile Command Post, public Wi-Fi, fiber and satellite communications, public safety CCTV cameras, traffic IoT and environmental sensors, smart city kiosks, mobile apps, and other technologies. More: Post





#### Jan 2022:

### Kickoff of the Coral Gables Smart Districts Fiber Corridors and Smart Poles Expansion:

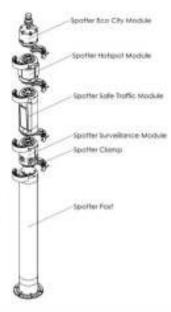
This project will cover the installation, connectivity, and turnkey of 25 additional fiber optics corridor segments and 8 additional smart city poles, to augment the existing fiber corridors and smart city IoT sensors installed citywide in previous years. This project will expand the City's current technology infrastructure to provide additional broadband and communications capacity, hyper-connectivity, automation and efficiencies for public safety, mobility, digital inclusion, economic development, tech entrepreneurship, telehealth, education, and other quality of life impacts. Coral Gables was the first city in the U.S, and North America that installed this new generation of Al-powered smart city poles (first pilot installed last year 2021 in Alhambra Circle). The new poles were engineered specifically for Coral Gables, with resistance to hurricane winds, 5G-enabled communications, public Wi-Fi, high-resolution cameras and traffic, safety and environmental sensors with Al edge analytics, and will incorporate the industrial design created for Coral Gables by renowned international design firm Pininfarina to align the technology infrastructure with the beauty and aesthetics of the Coral Gables brand and historic, Mediterranean-revival architecture character. Work will be completed in 4 phases:

- Phase 1: Financial Corridor on Alhambra Cir: 3 additional fiber block segments + 1 additional smart city pole.
- Phase 2: Ponce de Leon and University corridors: 14 additional fiber block segments + 5 additional smart poles.
- Phase 3: Mobility Corridor on Andalusia: 3 additional fiber block segments + 1 additional smart city pole.
- Phase 4: Arts & Culture Corridor on Aragon, and Merrick Way: 5 add'l fiber block segments + 1 add'l smart pole.

CIO Raimundo Rodulfo presentation to City Commission: <u>Agenda</u> - <u>Video</u> - <u>Documents</u> | <u>Post</u>







**Greater Miami Chamber of Commerce Smart City Event:** CIO Raimundo Rodulfo joined a panel of experts to discuss how to build an infrastructure to meet the needs of today and tomorrow in the region. <u>Post</u> - <u>Site</u> - <u>Event</u> - <u>Video</u>



### 2021

#### Aug-Dec 2021 -Latest Launches, Collaborations, and Events:

#### Dec 2021:

- City of Coral Gables at the U.S. Census Innovation Lab's The Opportunity Project (TOP) Summit 2021. Post Video
- CIO / IT Director Raimundo Rodulfo spoke at the Smart City Expo Miami 2021: Site Post Article

### Nov 2021:

- CGIT is one of the finalists (4 in the Americas region, 12 worldwide) in the Gartner Eye on Innovation Awards. These awards recognize government organization initiatives that make innovative use of data and emerging technologies to tangibly advance their progress toward digital government. Finalists are selected by benchmarking against world-class performance standards. Post Videos
- On GIS Day 2021, CGIT held an informal open house in person and virtually at the GIS Lab of the IT Department customer support office located in the City Facilities campus. IT GIS Manager Mark Hebert demonstrated with our team how we use GIS and spatial computing technologies to provide location-aware services to our citizens. Post
- Groundbreaking ceremony of the ParkSmart-certified new Minorca/PG7 Parking Garage facility, which will feature smart parking technologies and parking guidance cyber-physical systems. News
- CIO Raimundo Rodulfo spoke at a technology webinar session about Cloud ERP. Link Link
- News on the City's new state-of-the-art Mobility Hub project: News
- The Smart Cities Council and Dense Networks Think Tank held a session on "Coral Gables Smart City Innovation".
   CIO/IT Director Raimundo Rodulfo and Economic Development Director Julian Perez spoke at the event. Post Site
- CIO Raimundo Rodulfo was keynote speaker at NEACS Artificial Intelligence 2021. Video Site Speakers Post



















#### Oct 2021:

- City of Coral Gables featured at the NIST-sponsored Cybersecurity Symposium for Smart Cities 2021, with multiple speakers and presenters: Mayor Vince Lago, CIO/IT Director Raimundo Rodulfo, Economic Development Director Julian Perez, Asst. IT Director Nelson Gonzalez, Asst. Economic Development Director Belkys Perez, IT System Manager Ayanes Apolinar and Sr. IT Analyst Alex Gamundi. Site Videos: 1, 2, 3, 4, 5, 6
- City of Coral Gables received 3 CyberTrust Awards (City, IT Director, Economic Development Director): Video.
- Sr. IT Analyst Alex Gamundi received the "Employee of the Year" award: Post

### Sep 2021:

- City of Coral Gables celebrated IT Professionals Day: CGIT Team Story
- CGIT Analyst Sean Meadows presented a deep learning applied-AI smart city project at Strata.AI Deep Learning Demo Day. Sean's research project applies AI deep learning models and algorithms to analyze planning and zoning satellite maps in the City and derive actionable analytics on land management, residential properties, and housing. Post
- CIO Raimundo Rodulfo joined the Miami AI Collective, a think tank that brings together business, research, industry,
  and technology leaders to begin the process of incubating, fostering, and growing an economic development
  initiative centered around the business opportunities that Artificial Intelligence has to offer. From talent creation,
  startup incubation, IP development to enterprise adoption that could ignite and introduce the equivalent of
  terraforming for significant business industries and sectors.
- City of Coral Gables featured in the Miami-Dade Beacon Council Tech Committee Amplify Miami campaign: Post
- CIO Raimundo Rodulfo was keynote speaker at Day 3 of the Miami ML and Al Meetup Week, and joined IT Analyst Sean Meadows from his team in a panel at Day 4 of the event. More: Sites: 1, 2 Video: 1, 2, 3 Posts: 1, 2, 3, 4, 5, 6

Aug 2021: New electronic permit system went live. Link



### June 2021 - New Al-Powered Smart City Pole Goes Live, first of its kind in the U.S.

Our CGIT team installed the City's first Al-powered smart city pole at a pilot location on the financial corridor in Downtown Coral Gables. This innovative pole (smart city furniture) was specifically engineered for Coral Gables and is the first one installed in the U.S. Its custom design incorporates our city's engineering standards (ASCE 7-10) and Florida building code wind load requirements, and our city's sensor and telecommunications technology and interoperability requirements. This product won innovation awards at CES 2020 and 2021 and has a patented consolidated, integrated, aerodynamic, aesthetically pleasing all-in-one design that applies advanced aerospace engineering and science of material principles. Some of the services consolidated in this pole are public free Wi-Fi, CCTV, traffic, and safety sensors (vehicles, pedestrian, multimodal, speed, red-light, public safety, situational awareness), environmental sensors (air quality, noise, weather), computer vision and AI IoT edge analytics and alerts. The pole started to provide live video and real-time analytics to the Coral Gables Smart City Hub public platform, the City's Urban Analytics AI IoT platform, the City's Community Intelligence Center (CIC) and Emergency Operations Center (EOC) at the Public Safety Headquarters. CGIT engineers is working on pole design improvements with the manufacturer and an industrial design firm, to be featured in the smart districts expanded corridors.

More: <u>CIO presentation</u> - <u>News</u> - <u>Post</u> - Stories <u>1</u>, <u>2</u>, <u>3</u> - Press Release: <u>1</u>, <u>2</u>, <u>3</u>, <u>4</u>, <u>5</u>











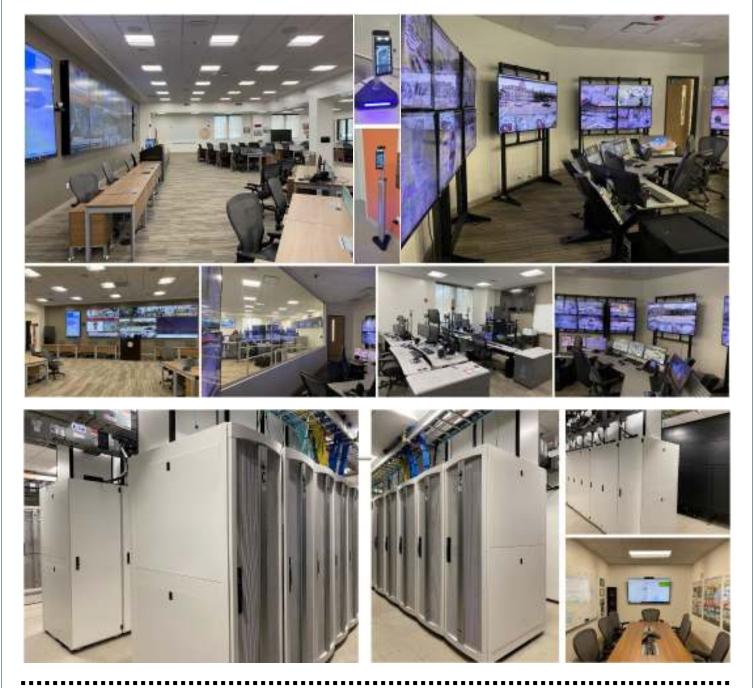


### Jan-Mar 2021 - New Public Safety Headquarters, Smart Building Technology Infrastructure Projects Cutover.

Robust and advanced smart building technology infrastructure and telecommunications were provisioned for the new state-of-the-art Public Safety Headquarters (including Police, Fire, Emergency Operations Center: EOC, Community Intelligence Center: CIC, e911 Communications Center, Communication Department and CGTV, and I.T. Department); the new I.T. Primary Datacenter / City Network Headquarters; e911 PSAP upgrade and other smart building technology cutovers.

Brand-new technology infrastructure and project management for this state-of-the-art facility included fiber optics corridors, core and distribution computer network with faster, smarter, safer, and more resilient and reliable backend cyberinfrastructure and electronics, low voltage wiring, computer networks, IPTV audio and video systems; Wi-Fi, sensors and actuators; cybersecurity and physical security systems; internet and voice/data circuits; Building Automation Systems, temperature screening kiosks with access control integration and employee facial recognition, dispatch consoles; in-depth network security assessment to validate the robustness of the newly deployed infrastructure; and other smart building provisioning.

More: City News - Story



### Jun 2021 - Meet AIDA, the new Artificial Intelligence Digital Assistant for the Coral Gables Smart City Hub Public Platform.

As one of the 17 public agencies selected to participate in the inaugural STIR Labs program funded by the National Science Foundation (NSF), CGIT collaborated with researchers at West Virginia University, MIT, UC Berkeley, and Stanford in the development of an Artificial Intelligence Digital Assistant (AIDA) to help citizens navigate the Coral Gables Smart City Hub public platform and easily find tools, apps, data, and other resources.

City Innovate STIR Labs is a national applied research program funded by the National Science Foundation that connects governments and academic teams to co-develop and apply research that offer solutions to the critical issues that communities face utilizing a Challenge-Based Approach.

The AIDA system is currently in pilot/prototype Beta test mode in the Coral Gables smart city hub public platform.

More: Coral Gables STIR Labs Project - AIDA Bot Prototype Beta-Testing Page - Smart City Hub with AIDA Bot



### Jun 2021 - Coral Gables Project Presentation and Live Working Prototype Demo to NSF at the City Innovate Summit 2021.

The STIR Labs annual summit was held to share what was learned throughout the year and create space for dialogue around best practices in navigating government academic partnerships. Topics included advancing critical research, broadening the number and diversity of researchers working within communities, and promoting integrative research.

The City's CIO Raimundo Rodulfo and Dr. Saiph Savage (MIT, WVU) presented the Coral Gables STIR Labs project and a working prototype of the AIDA AI digital assistant bot to NSF and the STIR Labs cohort at the Summit.

More: Summit Panels Agenda - Coral Gables Presentation Video - Summit Full Video - Post



### Mar 2021 - City of Coral Gables Named Top-Performing U.S. Organization in the 2020 Open Cities Index (OCI)

For second year in a row, City of Coral Gables was named the top-performing U.S. organization in the Open Cities Index (OCI), a data-driven government benchmark from the Public Sector Digest (PSD). Per the award organization: "The City of Coral Gables scored the highest out of all US participants and jumped an incredible 21 ranks from the 2019 OCI earning them the title of Most Improved. Ranking 1st overall in Readiness and 3rd overall in Impact, they are constantly striving to make government data accessible." "This year, a new dataset category was added specifically to gather data on how municipalities have adapted to share COVID-19-related data with their community and external organizations... The City of Coral Gables utilized datasets derived from city traffic and environmental city sensors to provide visualizations on the change in residential mobility throughout the City." More: <a href="Coral Gables Award">Coral Gables Award</a> - <a href="Award Website">Award Website</a>



### Jan-Mar 2021 - New Core Financial and HR Enterprise System Implementation Started

Our CGIT team working with various City departments (Finance, Human Resources, Executive Steering Team, Working Groups), started the implementation of the City's new Core Financial and HR Enterprise System (Infor CloudSuite). This advanced system will implement an efficient and horizontally integrated government enterprise system (Enterprise Business Capabilities, EBC), to complete in 2022 the transition to paperless processes and digital efficiencies citywide, integrating with several other enterprise systems that were recently implemented in key areas such as infrastructure services, community recreation, document management, permitting and land management. The key components of the new enterprise system revolve around Core Financials, Procurement, HR, Payroll, and Asset Management.

More: CIO Presentation - Post

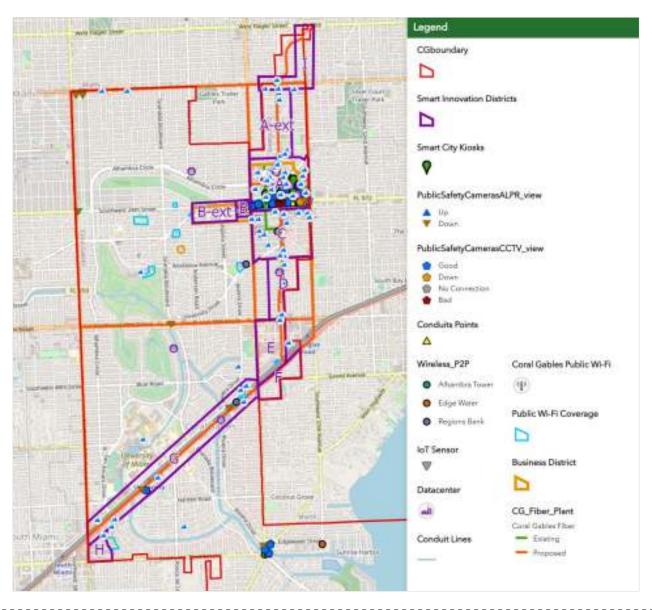


### Jan-Apr 2021 - New Fiber Optics Corridors and Smart Districts Urban Cyberinfrastructure Expansion

CGIT completed the construction and go-live of a new fiber optics corridor connecting smart/innovative districts A, B and C, Salzedo St., Sevilla Ave., Regions Bank node, Coral Gables Museum, Parking Garage 4, Parking Garage 1, Miracle Mile, City Hall, and the new I.T. network headquarters located at the New Public Safety Building.

Engineering plans are underway to expand the City's Smart Districts urban cyberinfrastructure and broadband in multiple phases leveraging CIP and grant funding. Some of these phases include: *i*. Financial/banking corridor on Alhambra Cir., with engineering, construction, provisioning and integration to connect the new Ekin Spotter v2 smart city pole (first pilot pole was installed at the intersection with Ponce de Leon); *ii*. Smart/Innovation/Mobility districts main corridor throughout Ponce de Leon (all district segments), to start in 2022 with engineering, construction, provisioning and integration to provide public Wi-Fi, public safety cameras and sensors (CCTV, ALPR, red-light, speed), IoT traffic/mobility sensors (vehicles, pedestrians, multimodal) and environmental sensors (air quality, noise) in the entire Ponce de Leon corridor that connects all the City's smart districts and economic zones from Flagler (N) to the Underline/US-1 (S); *iii*. IoT and urban intelligence infrastructure (safety/traffic environmental sensors, smart poles...) and public Wi-Fi mesh network for the Ponce de Leon smart corridor (all districts).

These corridors and other smart districts cyberinfrastructure can be seen in the Coral Gables Smart City Technology Infrastructure Interactive Map: <a href="https://www.coralgables.com/smartcitytechmap">https://www.coralgables.com/smartcitytechmap</a>



Apr-Jun 2021 – New Urban Analytics IoT AI Platform - CGIT implemented a new Urban Services Analytics Artificial Intelligence Platform (Quantela, HQ in Silicon Valley), which replaces our previous Internet of Things (IoT) sensor data dashboards with one of the most advanced technologies of its kind. This new platform helps our team in the implementation of a smart city horizontal integration model. The new public dashboards of this system are published in the Smart City Hub public platform (www.coralgablessmart.city) and are currently showing real-time vehicle and pedestrian traffic data with added data visualization and integration tools and application programming interfaces (API's), which will be augmented with other automation and analytics capabilities from this robust technology. This technology won the World Economic Forum's 'Technology Pioneers' award in 2019 and CRN's IoT Innovators Award in 2020. It converges the internet of things, machine learning, artificial intelligence, process automation, and predictive analytics to shorten the tech cycle between urban infrastructure and decision-making insight. More: IoT Urban Analytics Dashboards



### May-Jun 2021 – New Traffic Studies in Coral Gables Continue Leveraging IoT, Computer Vision, AI and ML Technologies.

CGIT has continued deploying advanced technology and analytics for mobility research, like this recent multimodal traffic study at the intersection of Sunset Dr. and Red Rd. for PW traffic engineers and the TPO. Our CGIT team uses computer vision, AI and ML technologies and leverages IoT sensors, fixed and mobile CCTV cameras and trailers infrastructure to conduct automated detection, classification, analysis, and computation both at the edge and in the cloud, training computer vision engines with machine learning algorithms to improve the accuracy of the counts.



June 17<sup>th</sup>, 2021 – Event in Coral Gables: Emerging from the Challenges of COVID-19 Smarter, Stronger and More Sustainable The Consulate General of Canada in Miami and the Coral Gables Chamber of Commerce presented "Emerging from COVID: Smarter, Stronger & More Sustainable," an international comparative in sustainability best practices for cities and Small and Medium Enterprises. Topics of Discussion: Sustainability and Smart City initiatives in Canada and Coral Gables and how that helps drive investment; How sustainability makes good business sense; How companies, regardless of shape and size, can play in this space, despite the deception that it's too expensive.

Opening Remarks By: Mayor Vince Lago | City of Coral Gables

Introductory Remarks By: Honorable Susan Harper | Consul General of Canada in Miami

Moderated By: Mark A. Trowbridge | President & CEO, Coral Gables Chamber of Commerce

Panelists: Matt Anderson | Senior Sustainability Analyst, City of Coral Gables; Lawrence Eta | Chief Technology Officer, City of Toronto; Raimundo Rodulfo, P.E. | Chief Innovation Officer, City of Coral Gables; Anabella Smith | Principal, Zyscovich Architects; Karen Smith | CMO, Feedback Solutions Inc. More: <a href="Event">Event</a> - <a href="Post">Post</a> - <a href="Video">Video</a>



May-Jun 2021 – 2021 Digital Disruptors Globant Award - City of Coral Gables' CIO Raimundo Rodulfo was selected as a winner in the 2021 Digital Disruptors Globant Awards, in the Transformation Catalyst category. Per the award organization: "This global award aims to recognize those individuals that stand out and go the extra mile in order to guarantee their companies stay at the frontline of the digital revolution. They drive change within their organizations, motivating their peers to reinvent themselves, encouraging a culture of innovation and challenging the status quo." "The Transformation Catalyst award category recognizes those who carry out a business transformation that impacts every aspect of the organization." The award's global judging panel featured thought leaders in the technology industry, including top executives from Airbnb, The Walt Disney Company, NAX Group, Xapo, Inter-American Development Bank, and Globant. Thank you to the award organization and the judges for the opportunity to highlight the accomplishments of our City and our CGIT team! More: <a href="Mayards Page">Awards Page</a> - <a href="News Release">News Release</a> - <a href="Post">Post</a> - <a href="Post">Post</a>





Mar-Sep 2021 – City of Coral Gables Google Partnership: Grow with Google Program - The City recently announced that it is now a Grow with Google partner, and started hosting a series of free workshops, hosted by Google Coach, Vicente Pimienta (Digisults Google Partner), that will help small businesses enhance their digital skills and grow their bottom lines. More: Post - Registration - Workshops calendar:

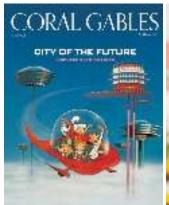
- June 24: Get Your Business on Google Searches & Maps
- July 29: Learn the Basics of Google Ads
- August 26: Optimize Your Energy for High Performance
- September 23: Use YouTube to Grow Your Business





### Jun 2021 - Coral Gables Magazine 2021 Innovation Special Edition: "Coral Gables: City of the Future"

City of Coral Gables was featured in the Coral Gables Magazine 2021 Innovation Special Edition: "Coral Gables: City of the Future." From the article: "With a Core Drive to Be the Nation's Top 'Smart' City, the Gables Opens Itself to Innovation. To understand just how 'smart' the City of Coral Gables has become, one need only visit the new Public Safety Building, which houses the police, fire and emergency services department. There, on the fourth and fifth floors, is the high-tech hub that runs the city's neural network." "'A smart city leverages technology and innovation and best practices to improve quality of life – in mobility, public safety, transportation, environmental sustainability – everything that matters to the quality of life for the citizens,' says Raimundo Rodulfo, the city's head of Information Technology. 'The smart city leverages the technology of the moment.'" More: Article - Magazine Innovation Issue - Post











From L-R, T-D: City Manager Peter Iglesias, CIO/IT Director Raimundo Rodulfo, Assistant IT Director Nelson Gonzalez, Sr. Sustainability Analyst Matt Anderson

**Jun-Sep 2021 – New Articles and Interviews about Coral Gables Smart City Case Studies -** These are some of the new articles from several technology sites and organizations that have recently covered the Coral Gables smart city technology initiatives:

- GCN: Coral Gables leans into smart city services. Link
- AC&C: What "smart city" means for 2021: How digital twins, AI and other innovations drive smart transformation. Link
- StateTech Magazine: Coral Gables, Fla., Uses Data Analytics in New Smart City Projects. <u>Link</u>
- Cities Today: Cities are shaking the infrastructure tree to find new funding. <u>Link</u>
- Kurrant Insights Video Interview. Link







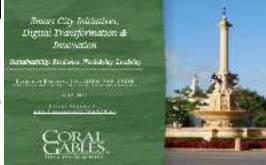




**July 2021 – Recent Presentations on Coral Gables Smart City Initiatives -** These are some of the recent presentations by CGIT staff at universities and industry events, covering the Coral Gables smart city technology initiatives:

• Jul 22- CGIT presentation at Purdue University, NIST GCTC ARSC workshop. Speaker: CIO Raimundo Rodulfo. Site-Agenda-Video







• Jul 12- CGIT presentation at ESRI User Conference. Speaker: CGIT Customer Support & GIS Manager Mark Hebert. Link





• Jul 8- CGIT presentation at US Ignite Smart Gigabit Communities Summit. Speaker: CG CIO Raimundo Rodulfo. Link





Jun 2021 – City of Coral Gables Joined US Census Open Innovation Labs' "The Opportunity Project (TOP)" Sprint. City of Coral Gables Information Technology and Economic Development departments collaborated submitting a challenge proposal to the US Census Open Innovation Labs (COIL) program "The Opportunity Project (TOP)", which helps teams use federal open data to build solutions to our nation's toughest challenges, connecting them with experts from the tech industry, communities, and government. The City's challenge proposal, focused on leveraging technology and innovation for small business resilience and competitiveness, was selected by the US Census to participate in a TOP sprint in 2021 in partnership with federal agencies and NYC. More: CG problem statement - News - TOP site







June 16<sup>th</sup>, 2021 – City of Coral Gables at the Public Sector Network Summit: Improving the Use of IoT in the Public Sector.

At the PSN event "Improving the use of IoT in the Public Sector – USA," CIO Raimundo Rodulfo presented City of Coral Gables case study "Redefining Normal: Exploring the Scalability of IoT Solutions & Devices." After his presentation, he joined a group of experts from government, industry, and academia to discuss strategies and use cases to improve public sector services, creating smarter infrastructure, and enhancing livability and safety with IoT.

More: Agenda - Event - Coral Gables Case Study Presentation - Post



May 25, 2021 – CGIT Presentation at City Commission Meeting: Smart City Initiatives, Innovation, Technology and Awards. CIO / IT Director Raimundo Rodulfo did a presentation at City Commission Meeting on May 25, 2021, about the Coral Gables Smart City Initiatives, Innovation, Technology and Awards. More: Agenda Item - Presentation Deck - Video



### Mar-May 2021 - Recent Additions to the Coral Gables Smart City Hub Public Platform:

Section	New Items	
Top Menu	- AIDA: Artificial Intelligence Digital Assistant Bot (Beta)	
App Store	- Magical Park Augmented Reality (AR) App - Actionbound Augmented Reality (AR) App - SaferWatch App	A 3
eGov City Services	<ul> <li>Gridics Codehub &amp; ZonelQ 3D:</li> <li>Zoning Code / Zoning Map / Parcel Check</li> <li>Lobbyist Registration Portal</li> </ul>	
Internet of Things	- Quantela Urban Analytics IoT AI Dashboards	
GIS	<ul> <li>New GIS Hubs, Maps, Storyboards, and Apps</li> <li>Broadband and Digital Equity GIS Dashboards</li> <li>New GIS Open Datasets</li> </ul>	
Community Intelligence	- Energy and Resources Insights Dashboards	

More: Smart City Hub Public Platform

### May 2021 – Smart Cities International Collaboration Team.

CIO Raimundo Rodulfo was invited to join the International Collaboration Team of Amnick, a think tank created by City Leaders from around the world, 110 Tech Companies, Business Leaders, Municipalities and Universities. In 2021, Amnick launched 6 new startups in: Environment, Innovation, Technologies (AI, IoT, Digital), Smart Cities, Transportation and Cybersecurity. Amnick also publishes City Pulse: a Smart Cities, Environment & Technology Magazine.

More: Amnick International Collaboration Team



Mar-May 2021 – City of Coral Gables at the World Business Angel Investment Forum (WBAF) Grand Opening Ceremonies After creating a national office in Washington, DC, in 2020, the World Business Angels Investment Forum (WBAF) USA established a Miami office in 2021. Coral Gables' CIO Raimundo Rodulfo was invited to join the WBAF Miami Board of Directors, and to speak at the Grand Opening Ceremonies of the WBAF World Smart Cities Economic Development Commission (WSC-EDC) in April and the WBAF Miami Office in May. The Grand Opening Ceremony of the WBAF WSC-EDC was attended by over 1200 people from 132 countries around the world. WBAF is an international organization and affiliated partner of the G20 Global Partnership for Financial Inclusion (GPFI), that aims to ease access to finance for startup businesses and is committed to collaborating globally to empower world economic development by creating innovative financial instruments for innovators, startups, and small and midsize enterprises (SMEs). More: WBAF Video

April 27<sup>th</sup>, 2021 - Grand Opening Ceremony: WBAF World Smart Cities Economic Development Commission | Post - Post



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Grand Opening Ceremony

May 25<sup>th</sup>, 2021 - Grand Opening Ceremony: WBAF Miami Office | Post - Post - Post



#### May 12, 2021 - Development Services Center Groundbreaking Ceremony

In March, the City broke ground on the remodeling of the Development Services Center at 427 Biltmore Way. Once completed, this building will serve as a one-stop-shop for Building, Planning and Zoning, Code Enforcement, and the Board of Architects. State-of-the-art technology will greatly enhance the customer experience for residents and business owners. New electronic systems such as EnerGov and LaserFiche will facilitate a paperless workflow process, online permit management, and electronic plan review creating a more transparent and convenient process for customers.

More: eNews - Ceremony





#### May 2021 – City of Coral Gables at the Intelligent Cities Summit

At the 2021 Intelligent Cities Summit, CIO Raimundo Rodulfo spoke in two sessions: "Building Intelligent Assets" and "What does the Future Hold for Us?" with a group of experts from government, industry, and academia.

Also, at the People First Summit collocated event, Assistant Chief of Police Hajir Nuriddin spoke in the session "Panel: Changing the Culture."

More: Event - Post







# Jan-May 2021 - Recent Original Papers and R&D Collaboration Projects with Academia and Industry Organizations.

- 1. Original Paper, 2019-2021: City of Coral Gables Smart Building Structural Health Monitoring (SHM) IoT Plan. Link
- 2. US Department of Energy (DOE), EERE, PNNL Lab / Moving Coral Gables Toward a Sustainable Future Transportation and Energy Analysis.
- 3. City Innovate, STIR Labs, WVU, UC Berkeley, MIT, NSF / 2020 STIR Labs Cohort Challenge / CGIT NSF-Funded Research challenge: "Improve accessibility and confidence for smart city hub users" / Link
- 4. FIU Institute of Environment and Department of Biological Sciences, NOAA, UM, SECOORA / First-Adopter, Practitioner / Funded Project Title: Integrated coastal flood observation network for citizen engagement and improved data, modeling and projections / Link
- 5. Missouri University of Science & Technology (MUST), FIU College of Engineering and Computing, NSF / Co-PI researcher / Abstract Title: Big Connected Data Enables (BCDE)
- 6. USF Dept. of Mathematics & Statistics, FIU College of Engineering, NSF / First-Adopter, Practitioner / Abstract Title: NRT-HDR-IDEAS: Inspiring Data-Centric Engineers And Scientists (IDEAS) for Leading Human-centered Smart Cities.

More: Complete List of Published Original Papers and R&D Collaboration Papers

# April 7th, 2021 - City of Coral Gables at the Public Sector Network Summit: Digital Transformation in Local Government

At the PSN event "Digital Transformation in Local Government," CIO Raimundo Rodulfo spoke in the session "Building out Endemic Public Sector Digital Capabilities: People, Processes, & Technology" with a group of experts from US GSA, State University of New York (SUNY), City of Mesa (AZ), and State of California DMV. More: Agenda - Post



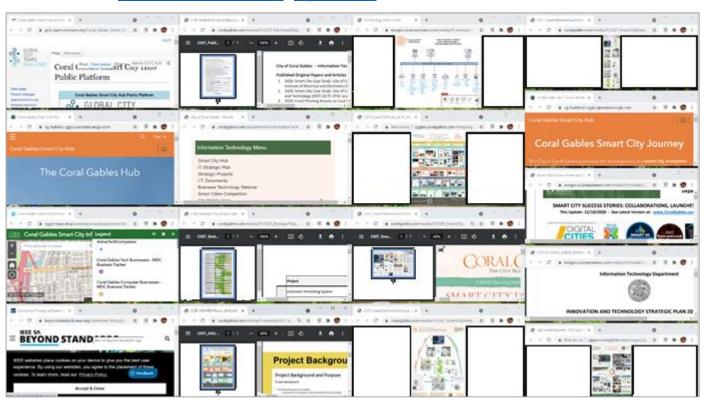
Apr 2021 – CGIT at Smart Cities Connect 2021 - CIO Raimundo Rodulfo spoke in a session on Urban Operations (Lighting, Water, Waste, Planning, Emergency Response) with colleagues from San Diego, Toronto and Long Beach at Smart Cities Connect 2021, where he had the opportunity to share information about urban infrastructure operations and technology services in Coral Gables and learn from experts leading urban operations in other cities. More: Post - Agenda



#### Feb-Jun 2021 - New Additions to the Coral Gables Smart City Digital Library.

Multiple information resources and tools have been added to the Coral Gables Smart City Digital Library page, including a Smart City Infrastructure GIS Map application, a smart city frameworks architecture, an innovation poster with AR, technology presentation slideshows, media, and other resources. Some of the public resources on this page are:

- Innovation and Technology Strategic Plan (Updated)
- IT Smart City Bulletin (Updated)
- Smart City Journey Storyboard (New) Roadmap Poster (New)
- Smart City Strategic Management Framework Architecture (New)
- Smart City Technology Infrastructure Map (New)
- Smart City Brochure with Augmented Reality (New) Innovation Poster with AR (New)
- IT Strategic Projects (Updated)
- Awards and Recognition (Updated)
- <u>Published Papers</u> (Updated)
- Videos: <u>City Innovation</u> <u>Smart City Journey</u> <u>IT Awards</u> <u>IEEE</u> <u>Smart City Slideshow</u> (New)
- Smart City Hub Public Platform (Updated)
- Smart City Engineering Framework Smart City Strategic Plan Focus Areas Chart
- Smart City Interoperability Systems Engineering Model
- IT International Team Excellence Award QE Framework Poster
- I.T. Department
- NIST GCTC Coral Gables Action Cluster Superclusters



#### Feb-Jun 2021 - CommentSold eCommerce Licenses for Small Businesses.

In an effort to help our business community that was negatively impacted during the COVID-19 pandemic, the City is offering free e-commerce software for retail businesses who need assistance establishing their online presence. A limited number of 1-year licenses from CommentSold has been awarded to qualifying Coral Gables retail businesses. The license and services associated with CommentSold will facilitate making a sale on social media. More: Post



# Apr 2021 – The Urban Complex Interview: Coral Gables Information Technology and Economic Development Directors.

The Urban Complex Podcast explores the relationship between technology and cities better suited to serve its inhabitants. In April 2021, Chris Richardson and Dominique Papa interviewed Raimundo Rodulfo and Julian Perez, City of Coral Gables' Information Technology and Economic Development Directors. More: <a href="Podcast">Podcast</a>



# Mar 2021 – Cities Today Institute, Communities of Practice: Digital Transformation Roundtables.

The mission of the Cities Today Institute (CTI) is to assist community leaders as they design and implement policies, strategies, and projects by providing training and leadership forums, peer-to-peer mentoring, a shared research library, and funding partnerships. City of Coral Gables' CIO Raimundo Rodulfo joined the Cities Today Institute, Communities of Practice: Digital Transformation roundtables with municipal and industry leaders discussing key topics such as urban infrastructure, cybersecurity, ROI, smart city initiatives and use cases. More: CTI Website - Article



#### Feb-May 2021 - City of Coral Gables Technology Workshops for Small Businesses.

To help businesses become more resilient, adapt to the new normal and transition to a stronger online presence, the City of Coral Gables held a Technology Workshop Series. The free workshops and subsequent course material were designed to give businesses the information and skillset needed to improve their selling capability beyond their brick-and-mortar stores. The goal is to empower businesses with the tools and skills needed to expand, diversify, and thrive.

The technology workshops were divided into three groups: (1) a digital boot camp with online marketing essentials; (2) an instructional and comprehensive program to add an e-commerce component to your business; and (3) learn how innovative apps can help businesses make sales. The City's Economic Development Department led this initiative in collaboration with the City's Information Technology Department and their technology and innovation partners in industry and academia: Google partners, Silicon Valley technology NPOs, University of Miami, Coral Gables business organizations and members of the local business community. More: <a href="Syllabus">Syllabus</a> - <a href="Workshops Videos">Workshops Videos</a> - <a href="Post">Post</a> - <a href="Post">Post</a>





#### Feb 2021 - FIU Smart Cities CIO Roundtable.

City of Coral Gables CIO / Director of Information Technology Raimundo Rodulfo joined a CIO Roundtable on smart cities challenges and opportunities, organized by the Florida International University Department of Public Policy & Administration led by Dr. Sukumar Ganapati, as part of the program "Advanced Cyber Infrastructure Training in Policy Informatics," funded by NSF.

More: NSF Project Page - FIU Cyberinfrastructure Team - FIU Program Post



#### Mar 2021 - CGIT at the CityAge Strategic Summit 2021.

CIO Raimundo Rodulfo joined the conversation at the CityAge Strategic Summit 2021: "Smart City Solutions for a Post-Pandemic World". Event description: "Next week on March 30<sup>th</sup>, alongside ESI ThoughtLab, we're bringing together an exclusive group of city leaders to discuss what cities around the world are doing to improve in a post-pandemic world and to share ESI ThoughtLab's latest research on global #smartcity best practices." More: <a href="Summit Post">Summit Post</a>





# Feb 2021 - Stanford University TreeHacks Innovation Competition

CIO Raimundo Rodulfo was invited to be a judge at Stanford University TreeHacks innovation competition. Multiple teams of Stanford engineering and science students pitched to the judges their teams' brilliant ideas and their drive to tackle challenges affecting their communities. Congrats to Team TrustChain for winning first place in the competition! More: Post - TreeHacks Site - TreeHacks 2020





# Feb 2021 – CGIT Presentation to the National Public Safety Telecommunications Council (NPSTC) IoT Working Group.

CIO Raimundo Rodulfo was invited to speak at the National Public Safety Telecommunications Council (NPSTC) March 2021 meeting, to share with nationwide public safety technology leaders the Coral Gables use cases, strategies, challenges, and accomplishments on public safety technology and IoT.

Event Information on the NPSTC Website: "Please join us this Wednesday, March 3rd for a presentation from Raimundo Rodulfo, Director of Information Technology and Chief Innovation Officer for the City of Coral Gables, Florida. The presentation is titled 'Smart City Initiatives CPS/IoT Use Cases in Public Safety – Sustainability, Resilience, Workability and Livability'. Coral Gables was founded on innovation, being one of the very first planned communities in the United States. Today, they are known nationwide as a Smart City, leveraging information and communication technologies to benefit residents, employees, businesses, and visitors, as well as make the city more resilient and sustainable. The National Institute of Science and Technology (NIST) included and highlighted Coral Gables' smart city initiatives in its Global City Teams Challenge (GCTC). We look forward to this highly informative presentation."

More: NPSTC Website - Event



# Feb 2021 - CGIT Smart City Lighting and IoT Presentation at the 25th Annual ARC Industry Forum

The 25<sup>th</sup> Annual ARC Industry Forum went virtual in 2021, with the theme: "Accelerating Digital Transformation in Energy & Cities". Coral Gables CIO Raimundo Rodulfo spoke during the session: "Smart City Lighting and IoT" and presented the City's smart lighting and IoT projects on a panel with industry leaders from Georgia Power, ANSI, Phillips, Signify, and others. More: <a href="Event">Event</a> - <a href="Session">Session</a> - <a href="Video">Video</a>

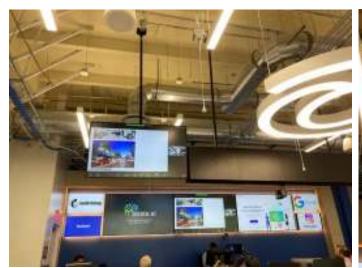


# Jan-May 2021 – MOU with Strata. Al on Data Science and Al Education and Workforce 4.0 Skills Development Collaboration.

City of Coral Gables executed a Memorandum of Understanding (MOU) with Strata.AI to collaborate on Industry 4.0 workforce skills development and education on data science and AI. Professionals from the City's IT department participate in the training courses provided by program director Dr. Sayyed Nezhadi, Ph.D. in AI from the University of Toronto and industry practitioner and researcher. The syllabus of the courses is aligned with today's industry and smart cities' needs, and includes modules focused on data science foundations, machine learning, deep learning, and applied AI concepts, with practical, hands-on project presentations by each student at the end of each module.

IT Application Analyst Sean Meadows from our Coral Gables IT team presented two applied-Al projects on analyzing and developing ML random forest predictive models from real-time traffic data in Coral Gables, and a research on the correlation of digital inclusion and Covid-19 impact factors in NYC boroughs.

More: MOU and Syllabus - Al Project Demo Day Event







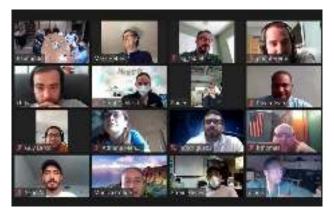
#### Jan 2021 - CGIT Presentation at the COVID Challenge & Innovations - Smart Cities & Cybersecurity.

CIO Raimundo Rodulfo spoke at the event: "COVID Challenge & Innovations - Smart Cities & Cybersecurity" as part of a panel from members of NIST-led Smart Secure Cities and Communities Challenge.

More: Event Page - Post



Jan-Jun 2021 - New Cyberinfrastructure Upgrades and Enhancements: CGIT completed multiple enhancements/upgrades to the City's cyberinfrastructure: i. Worked with the Fire Department implementing the National Fire Operations Reporting System (NFORS) with intelligent platform and real-time analytics; ii. Worked with the HR Department in the implementation and data migration of a new Benefits Management Software system (Bentek); and worked with the Finance department in the implementation and data migration of a new Retirement software system; iii. Completed the Cartegraph Asset Management enterprise system rollout for Landscaping, Community Recreations, and Public Works Utilities Division; iv. e-Commerce, cashiering and points of sale upgrades; v. Improved and enhanced the City's cybersecurity, network, and telecommunication infrastructure; vi. Cloud, datacenter, systems integration, servers, and client computers upgrades; vii. Wi-Fi network expansions; viii. Conducted a Payment Card Industry (PCI) annual compliance program and other network audits; ix. telephony network/circuits upgrades; x. Provisioning of smart lights (CCTV, IoT, public announcements) at multiple street-ends in the Monegro corridor; x. citywide mobile management and data archiving upgrades; xi. Citywide alarm monitoring central station upgrade; xii. Kerdyk Tennis Center Access control upgrade; xiii. Police Motor's unit hardware upgrade; xiv. Technology provisioning for new Police Community Office (all technology equipment/wiring, network connectivity and services); xv. Technology provisioning for new Parking Administration Office; xvi. Citywide assessment of process gaps related to the use of printers and paper and implemented several paperless solutions in conjunction with all city departments; xvii. Developed several homegrown systems and applications, including an award-wining Procurement Evaluation App, a passport fee sheet application, a Police TSD Dashboard, a Police Video Request App, a Police IMR report automation system, multiple Geographic Information Systems (GIS) applications and geospatial digital services, and other enhancements and upgrades.



Jan 2021 – City of Coral Gables CIO received the Key to the City of Coral Gables: Mayor Raúl Valdés-Fauli presented Raimundo Rodulfo, the City's Chief Innovation Officer / Director of Information Technology with the Key to the City in recognition of the IT department's cutting-edge work and development of smart city technology. "We salute Raimundo and his team for their work in providing critical technology services and fostering continuous improvement and innovation in our City," said the Mayor: <a href="Mayor: eNews">eNews</a> - <a href="Post">Post</a>





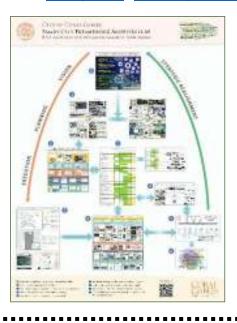
# 2020

# Dec 2020 – CGIT Innovation and Technology Strategic Plan, 2020 Update.

Our CGIT team released its 2020 update of the City of Coral Gables Innovation and Technology Strategic Plan. Our plan was updated this year with strategic management framework graphics and detailed smart city roadmap innovation vision and strategies; new strategic projects and initiatives; IT business continuity and recovery strategies during the pandemic; and internal/external 360-degree input with vision, insight, feedback, goals, and priorities from City leadership, CGIT staff, and STEM and business SMEs from industry/government/science/academia. More: Strategic Plan - Smart City Roadmap







# Dec 2020 – Coral Gables Smart City Drone Use Cases Presentation at the UAS Taskforce Meeting

City of Coral Gables CIO Raimundo Rodulfo and Sr. IT Analyst Alex Gamundi presented our City's drone use cases at a meeting of the UAS Taskforce. Some of our use cases presented included: i. Hurricane rescue recon and damage assessment; ii. Combined use case of drones with traffic/crowd/data analytics, IoT sensors, AI/ML, autonomous routes, and computer vision on real-time Incident Command Post scenarios; iii. Drone delivery for public safety and emergency management scenarios; iv. Live video broadcasting; with autonomous routes; with cellular or satellite communications; v. Outdoor Covid-19 testing sites monitoring; vi. Building rooftop water accumulation damage assessment; vii. Fire accreditation, site operations/inspections; viii. Telecommunication tower/antennae inspections; ix. LiDAR GIS 3D modeling and aerial orthophotography in collaboration with universities; x. Public Communications and media production for CGTV PEG channel, YouTube, social media, and webcasting channels. More: Agenda - Presentations - UAS Task Force - NCTUG Site



#### Nov 2020 - City of Coral Gables named to the list of 8 Smart Cities to Watch in 2020.

State Tech Magazine named Coral Gables as one of the 8 Smart Cities to Watch in 2020. Out City Beautiful was recognized for being at the forefront of using technology to address residents' needs during the pandemic: "These cities have focused on using technology to address their residents' urgent needs during the pandemic." "StateTech is introducing a new crop of smart cities to watch, following up on our 2018 report that highlighted eight promising smart cities. This new batch of rising smart city stars have focused their efforts on providing the right smart city applications at the right time for their residents."

More: Announcement – City post



# Nov 2020 - City of Coral Gables Technology Awards Presentation.

During November Commission meeting, our team celebrated several technology recognitions received by our City, including two trophies received in October for technology accomplishments in Urban Infrastructure, Open Data, and digital government services, and two recognitions received from State Tech magazine as a smart city and technology influencer.

Thank you to State Tech Magazine, Smart Cities Connect Foundation & US Ignite, and the Public Sector Digest & Open Data Exchange for these recognitions to our City and our team!

"The Information Technology (IT) team was recently honored with several awards including State Tech Magazine naming the City Beautiful as one of 'Smart Cities to Watch in 2020.' They received top ranking in the U.S. Open Cities Index by the Public Sector Digest and in Urban Infrastructure in the 'Smart 50 Awards' by the Smart Cities Connect Foundation, among others."

"Our team strives to find technical solutions that can enhance the services our City provides our residents," said Raimundo Rodulfo, Director of IT. "Technology is ever changing, and we need to strive every day to learn and adapt our approach."

More: City post



CGIT team members (L to R: GIS Analyst Peterson Pierre-Louis, Applications Manager Lemay Ramos, CIO Raimundo Rodulfo, Sr. Systems Analyst Alex Gamundi, Systems Manager Ayanes Apolinar) with Coral Gables Mayor Raúl Valdés-Fauli

# Nov 2020 - City of Coral Gables in the Fall 2020 Edition of the American Society for Public Administration PA Times Magazine

The Fall special edition of the quarterly publication of the American Society for Public Administration (ASPA), PA Times: "COVID-19 – Public Service During a Pandemic", featured an article co-authored by Raimundo Rodulfo, City of Coral Gables CIO, and Dr. Sukumar Ganapati, Florida International University (FIU) Professor of Public Administration. The article, titled "Dealing with COVID-19: How Coral Gables Is Using IoT and Data Analytics to Respond," leverages CGIT applied-IoT research and case studies during the pandemic (paper published by NIST GCTC) and FIU research in the subjects of cyberinfrastructure and public administration. More: Article - Magazine



#### Nov 2020 - New Fire Station 2, Trolley Depot Building, and 911 Backup PSAP Cutovers

The City of Coral Gables held a ribbon-cutting and hose uncoupling ceremony to celebrate the total renovation of Fire Station 2 and a new Trolley Depot. The fire station's state-of-the art technology and training facilities will ensure that our firefighters are ready to provide the best of services to our residents as well as a trolley depot to more efficiently serve the more than 1.25 million passengers that use the system every year. The Fire Station houses four new bays for fire vehicles, three classrooms- which include a state-of-the art medical simulation lab, a high-fidelity Incident Command and Fire Training area, and a new training tower. The new Trolley Depot is now located within the City and only a short distance away from our routes. The City's new backup 911 system is housed at the trolley building.

New and advanced technology infrastructure was provisioned by our team at these new/renovated facilities, including: fiber optics network, network and telecommunications redundancy/resilience, new high-speed smart network electronics, new 911 backup PSAP system, consoles and computer stations, Wi-Fi network, energy resilience systems, IP telephony and TV systems, security systems, and other cyberinfrastructure.

More: City News Post 1 - City News Post 2



#### Oct 2020 - City of Coral Gables at the Smart 50 Awards Gala at Smart Cities Connect 2020.

In October 2020, CGIT attended the Awards Gala of the Smart Cities Connect Expo and U.S. Ignite conference, receiving the Smart 50 Award for Urban Infrastructure. City of Coral Gables was named a recipient of the 2020 Smart 50 Award earlier this year. The Coral Gables Smart Districts competed with innovative and transformative projects from around the world and received the award under the Urban Infrastructure category. We are proud of the positive impact that this initiative had in our City, improving quality of life, and fostering economic growth. Excerpts from the announcement: "Smart 50 Awards, in partnership with Smart Cities Connect Foundation and US Ignite, annually recognize global smart cities projects, honoring the most innovative and influential work. This year, primary categories included community engagement, digital transformation, smart mobility, urban infrastructure, and urban operations." "These municipal-scale projects exemplify innovation and concrete influence in their community or communities or implementation."

More: Announcement - Awards - City Video - Agenda - Award Gala - City Commission Presentation - Magazine



# Oct 2020 - City of Coral Gables at the Cybersecurity Symposium for Smart Cities 2020.

In October 2020, City of Coral Gables participated as keynote speakers, exhibitors, and co-organizers in the Cybersecurity Symposium for Smart Cities, "One World Together via Technologies", sponsored by the National Institute of Standards and Technology (NIST). Governments, Small Businesses, Nonprofits, and Industry re-discovered pressing needs of our time, reenvisioned strategies, and re-connected to share the latest resources, innovations, and success stories.

More: Event site — Welcome Message Day 1 - Keynote 1 Day 1 — Keynote 1 Day 3 — Keynote 3 Day 3 - All Sessions



# Oct-Nov 2020 - New Primary Datacenter / Network Headquarter and other Technology infrastructure for new buildings.

The City's new primary Datacenter / Network Headquarter and other technology infrastructure for new buildings is being completed at the new Public Safety Building, Trolley building and Fire Station 2. That includes all building technology and communications infrastructure and services, new fiber corridors, building automation systems, structural health monitoring (SHM) IoT sensors, new 911 PSAP and backup PSAP equipment, new IT datacenter HQ (network core and distribution), new Emergency Operations Center (EOC) equipment and Community Intelligence Center (CIC) rebuilt technology infrastructure, and new 911 Communications equipment stations, among other technologies scheduled for completion in November 2020. Complete list of infrastructure projects getting smart technology provisioning: Article







## Oct-Dec 2020 - City of Coral Gables at Smart City Expo Miami.

CIO/IT Director Raimundo Rodulfo spoke at the "20 Cities Experiences by Smart Disruptors" TED-style series of the Smart City Expo Miami and received a "Smart Disruptor" recognition from the organization. More: Site – Agenda – Video – Recognition







# Oct 29-30, 2020 - City of Coral Gables at the Smart Regions Innovation, Resilience & Recovery Virtual Workshop.

CIO / IT Director Raimundo Rodulfo spoke at two sessions of the Smart Regions Innovation, Resilience & Recovery Virtual Workshop hosted by the Global City Teams Challenge (GCTC) Smart Regions Collaborative, the National Telecommunications & Information Administration, the National Association of Regional Councils, and US Ignite and sponsored by the National Institute of Standards and Technology. Sessions: "Regional Showcase Panel: East Coast" and "Regional Data Sharing Panel". GCTC Smart Regions Collaborative promotes smart city and community projects that cross jurisdictional boundaries to create efficiencies, improve sustainability, and increase quality of life for all residents. More: Workshop Recordings - Agenda - i3



Oct 2020 – City of Coral Gables recognizes our CGIT Team on Florida City Government Week: "We highlight our award-winning Information Technology team during #FLCityWeek. We appreciate the work they do every day to ensure productivity between all our departments through virtual meetings and mobility solutions as well as providing technology services for our citizens and our team members. Thanks in large part to their hard work we were able stay connected and continue to keep #TheCityBeautiful moving forward and serving our residents during this challenging time." We are proud of our team! Post



# Oct 2020 - City of Coral Gables at Smart Cities Week Global.

CIO Raimundo Rodulfo spoke at Smart Cities Week Global on two sessions:

"Secure and Resilient Digital Transformation Best Practices": This session provided succinct, actionable guidance on operational resilience, security and privacy best practices for the new operating and living environment we are all in that may be more dangerous in our work from home environments.

"The Rise of Smart Regions": The Global City Teams Challenges Smart Regions Collaborative and leading regional groups and experts discussed how they launched their efforts and where they plan to take it in the coming years.

More: Post - Session 1 - Video Session 1 - Session 2 - Video Session 2



# Sep-Oct 2020 - City of Coral Gables selected as one of 17 public agencies in the inaugural STIR Labs program funded by NSF

City of Coral Gables was selected as one of the 17 public agencies to be part of the inaugural STIR Labs program funded by National Science Foundation, NSF. STIR Labs is a ground-breaking program transforming government-academic collaboration. Our City team will be part of a cohort that will work closely with prestigious academic institutions tackling research needs to address community issues surrounding AI-empowered decisions/solutions, transportation, emergency management, economic recovery, urban planning, housing, resilience and sustainability among others. Some of the Coral Gables research challenges will include artificial intelligence and machine learning applications for predictive analytics and other smart city solutions to improve citizen services and open data platforms for decisionmakers and first responders: Post - Challenge



# Sept 22, 2020 - CGIT at Two Cybersecurity Events

Assistant IT Director Nelson Gonzalez, CISSP spoke at two virtual events with fellow cybersecurity and technology experts:

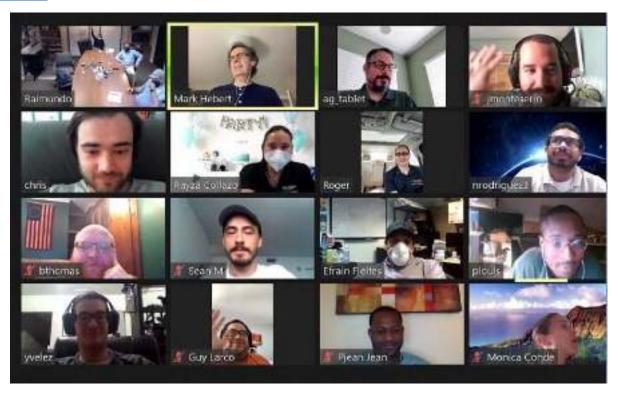
- "Enterprise Cybersecurity in the Covid-19 Era" with FIU technology experts at the Florida League of Cities tech event: Link
- "Safer, Smarter Cities Need Advanced Technologies" with experts at the Global Security Exchange 2020 conference: Link





# Sept 15, 2020 - City of Coral Gables recognizes our CGIT Team on National IT Professionals Day:

"Today, on National IT Professionals Day, we salute our great Information Technology team. Thanks to their expertise, @CityCoralGables has been connected and serving our residents. Below is a picture of them at work!" We are proud of our Team! City Post



# Sept 2020 - Updates on CGIT STEM Research Original Papers: Covid-19, IoT, AI, Data, GIS, Cybersecurity.

The City of Coral Gables Information Technology department team has continued publishing STEM research papers in multiple fields such as smart city technologies, electrical engineering, quality engineering, engineering standards and best practices, Public administration, data science, applied A.I., Internet of Things, smart city case studies, crime data analysis, GIS, cybersecurity, and others. Here is an updated list of original papers and articles (authored or co-authored by CGIT staff) published by scientific/academic journals, engineering magazines and technology publications. More information:

Full list of CGIT Published Papers & Research Collaborations. Most recent papers authored/co-authored in 2020:

- Smart City Case Study: City of Coral Gables Leverages the Internet of Things to Improve Quality of Life. Published by the Institute of Electrical and Electronics Engineers (IEEE) Internet of Things Magazine. <u>Link</u>
- Smart City Case Study: City of Coral Gables COVID-19 CPS/IoT Data Analysis. Published by National Institute of Standards and Technology (NIST) GCTC CPAC and submitted to IEEE International Smart Cities Conference (ISC2). <u>Link</u>
- Email Phishing Attacks to Local Municipalities on the Rise during the Covid-19 Pandemic. NIST GCTC CPAC. Link
- Smart Cities to Become Mainstream. CIO Review Magazine. Link
- Coral Gables Smart City Engineering Framework and Systems Integration Model. Institute of Industrial and Systems Engineers (IISE). Under peer review.
- Smart City Technology Strategies for Water Management. OneWater Academy. Link
- Dealing with COVID-19: How Coral Gables, FL is Using IoT and Data Analytics to Respond. American Society for Public Administration (ASPA) and Florida International University (FIU). Under peer review.







**Sep-Nov 2020 – Scam Prevention Webinars:** CGIT and the Adult Activity Center offered free webinars on Scam Prevention, with important tips for residents to protect themselves from becoming victims of internet scams and phishing emails. Post



**Sept 2020 - Public Sector Innovation virtual event:** City of Coral Gables Chief Innovation Officer / Director of IT Raimundo Rodulfo spoke at the inaugural event of the Public Sector Innovation Series, discussing collaborative governance in a panel with City of Atlanta CIO Gary Brantley and IRS Manager of Partnership & Innovation Alicia Miller: <a href="Post">Post</a> - <a href="Slides">Slides</a></a>





Sept 2020 – City of Coral Gables Case Study Presentation at the .NEXT Conference 2020: City of Coral Gables was a smart city technology case study at the at the .NEXT 2020 Hyperconverged Infrastructure conference. Senior IT Analyst Alex Gamundi presented our City's use of hyperconverged software-defined networks, hybrid clouds and datacenter cyberinfrastructure stack to support high I/O smart city applications, IoT traffic, virtual machines, data warehouse and enterprise systems. This scalable technology has been an important piece of the backbone supporting our smart city hub. More: Conference site.



Sept 2020 – CGIT at the Singularity University Smart Cities Applied A.I. Event: CIO / IT Director Raimundo Rodulfo spoke in a panel on Smart Cities and Applied A.I. with University of Miami Dean of Architecture Rodolphe el-Khoury, at a Singularity University virtual event. "An in-depth discussion of current and future prospects of the intersection of cities and technology. What does AI mean for the future of cities?": Event - Post - SU site



Sept 2020 – Drone Delivery Test for Emergency Operations: Our CGIT team tested the capability of delivering small load/cargo supplies via drone to an area (e.g.: during emergency management operations, hurricane rescue-recon at a remote or inaccessible area, etc.), with radio control and using a small parachute for the cargo delivery. This drone technology also leverages a new satellite communication technology developed in Silicon Valley, that features a small form-factor dish made of a lightweight sturdy engineered material that can be disassembled/reassembled and stored in a small suitcase, and it's powered by origami-type solar panels. Our CGIT team use drones with live video broadcasting (via cellular or satellite communications) and with autonomous routes to support multiple needs for public safety operations, public services and infrastructure, hurricane rescue-recon, outdoor Covid-19 testing sites operations, building rooftop water damage assessment, tower/antennae inspections, GIS/aerial LiDAR photography, video analytics, and other uses.



**Sept 2020 – ITSP Magazine Podcast with City of Coral Gables and Singapore:** Listen to an insightful conversation on the podcast: "Smart Cities, Regions, Countries, And Planet - It Is When We Collaborate That Humanity Benefits" with smart city tech leaders from Coral Gables and Singapore, moderated by ITSP Mag: <a href="Podcast Recording">Podcast Post</a>



**Sept 2020 – City of Coral Gables at the Miami Tech Summit 2020:** CIO Raimundo Rodulfo participated in the panel "What's Working in Supporting Remote Workers" at the 2020 Miami Tech Summit. More: Summit



# Sept 2020 - City of Coral Gables CIO at the "Using Data During Crisis" Smart City Session with New Orleans CIO and ZenCity

City of Coral Gables CIO / IT Director Raimundo Rodulfo participated in a panel discussion with City of New Orleans CIO Kimberly LaGrue and ZenCity Director of Urban Policy and Partnerships Assaf Frances: "Using Data During Crisis", discussing how New Orleans and Coral Gables leveraged data insight, A.I. and machine learning capabilities in their public sentiment analytic platforms for situational awareness, decision-making, and citizen engagement during the Covid-19 pandemic. This session will be part of the Smart Cities Connect 2020 virtual conference and expo in October: Agenda - Session



#### Sept 2020 - City of Coral Gables CIO was named to StateTech's 2020 State and Local Government IT Influencer List

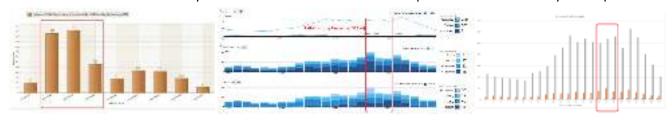
City of Coral Gables Chief Innovation Officer / Director of Information Technology Raimundo Rodulfo was named to the StateTech Magazine list of "30 State and Local Government IT Influencers Worth a Follow in 2020": Announcement - eNews





# Sept 2020 – Coral Gables smart city combined use case of Drones, IoT, and A.I. on a public safety scenario:

The City's IT Department assisted the Incident Command Post in real time during a public event, by providing live drone aerial video multicasting via cellular and satellite backup communications, with automated route navigation, and assisted by IoT traffic and behavioral sensor data analytics -transmitting live directly to the ICP situation room. Post-event, our CGIT team used a methodology for area analytics and count verification in an open urban system. The CGIT methodology in this new study employed IoT data from traffic optical sensors and behavioral traffic RF sensors, and object detection and classification metadata produced by an A.I. algorithm on drone footage. The mathematical verification of the telemetry source correlation used 1. Jacobs Method; 2. Computer vision AI analytics on drone footage; 3. IoT traffic data analysis from the smart city hub CPS platform (optical sensor + edge analytics + cloud analytics); 4. RF sensor behavioral data analytics from the smart Wi-Fi mesh network management system; 5. Correlation Analysis: applying the calculated behavioral ratio to the IoT foot traffic data, which produced a result verification accuracy of 96% correlating three independent CPS telemetry sources -better than expected. Results from this case study were shared with academic research partners for further analysis and peer review.



# May-Aug 2020 - CGIT collaborates with strategies and case studies to the NIST GCTC CPAC and its COVID-19 E-Resource Kit.

City of Coral Gables IT team is honored to be part of the NIST GCTC Cybersecurity and Privacy Advisory Committee (CPAC) Covid-19 volunteer taskforce with the objective: Share succinct, actionable guidance and case studies on Operational Productivity & Resilience, Security and Privacy for the new and largest telework environment created due to the pandemic. Our City also collaborated with case studies and ideas to the NIST GCTC COVID-19 E-Resource Kit, helping municipalities, communities, businesses and first responders stay safe, secure and productive during these challenging times. Thank you to GCTC COVID-19 Taskforce leader Pamela Gupta and to all the government, industry and community leaders that participate in this wonderful endeavor. To learn more: Post with video – Resource Kit – Website – Coral Gables Case studies

- Coral Gables Case Study paper: "City of Coral Gables COVID-19 CPS/IoT Data Analysis." The objective of this study is to facilitate the observation, analysis, and application of CPS/IoT data during the City's response to the pandemic. Link
- Coral Gables paper: "Email Phishing Attacks to Local Municipalities on the Rise during the Covid-19 Pandemic." The objective of this paper is to raise awareness on the risks that local municipalities face from this kind of phishing attacks and the growing threats associated with them, and to propose solutions and best practices to mitigate those risks. Link



#### July 2020 - CGIT at the Webinar: Open Data in Support of Covid-19 Relief

CIO / IT Director Raimundo Rodulfo presented the City's Covid-19 data systems, hyper-local data hubs, strategies and initiatives at the Webinar: "Open Data in Support of Covid-19 Relief" with members of the DataGovs smart region data collaboration team (Miami-Dade County, City of Miami, City of Coral Gables, Microsoft Philanthropies, GitHub, Code for South Florida). More: Event - Video



#### June 2020 - The IEEE Published a Coral Gables Smart City IoT Case Study Original Paper

The Institute of Electrical and Electronics Engineers (IEEE) published a Coral Gables smart city case study original paper: "City of Coral Gables Leverages the Internet of Things to Improve Quality of Life" in their research library and in the June 2020 issue of the IEEE IoT Magazine. The paper, authored by CIO / IT Director and IEEE Senior Member Raimundo Rodulfo, PE, talks about the engineering, design, strategic planning process, use cases and quality of life benefits from the Coral Gables smart city engineering framework and its diverse array of cyber-physical systems (CPS), Internet of Things (IoT) platforms, and smart connected devices for numerous applications. The paper also explains how the City's IoT network relies on a transport layer of high-speed resilient communications with fiber optics and wireless infrastructure that covers the City's most critical arteries, facilities, smart districts in Downtown as well as university campus and residential areas; and how real-time IoT data is visualized and presented to the public and all stakeholders for consumption and collaboration via the Coral Gables Smart City Hub public platform. Paper - Magazine



# Jun-Aug 2020 – CGIT Recognizes Dr. Sara Rushinek from UM for her partnership with our Smart City Initiatives.

Our CGIT team recognized Dr. Sara Rushinek from University of Miami for her continued partnership and collaboration with our Smart City and technology Initiatives. Dr. Rushinek is a distinguished professor of business technology at University of Miami in Coral Gables, an inductee of the Women in Technology International (WITI) Hall of Fame, and a renowned technology expert in industry and academia with a remarkable career and numerous accolades. Dr. Rushinek was a keynote speaker at the 2020 WITI Virtual Summit, and the WITI members in our City's IT team were delighted to attend the summit and the keynote speeches. Our City and the WITI members in our CGIT team are grateful for her partnership and mentorship, and for her active collaboration with the smart city and business recovery initiatives in our community. Post - Video by CGTV.



#### Jun-Aug 2020 - Updates on CGIT Smart City STEM Research and Standards Collaborations.

The City of Coral Gables CIO and the Information Technology department team are collaborating with researchers at STEM organizations in science, academia, government and industry in the development of research proposals and standards in multiple fields such as smart city technologies, electrical engineering, smart energy, resilience and sustainability, engineering best practices, public administration, data science, applied A.I., Internet of Things, smart city case studies, GIS, cybersecurity, public safety, and others. Here is an updated list of recent CGIT collaborations on STEM research proposals and standards and blueprints: Full list of CGIT STEM Research and Standards Collaborations - Most recent in 2020:

- FIU College of Engineering and Computing / CGIT role: Co-PI researcher / Abstract Title: CIVIC Data Platform for Resilient Futures: Accelerating Data-Driven Science, Policy Making and Community Solutions.
- UM College of Engineering & SimLab / CGIT role: Co-PI researcher / Abstract Title: Hurricane Resilient Microgrid Energy System (HERMES): City of Coral Gables.
- NIST GCTC smart city coalition & Silicon Valley municipalities and tech non-profits / CGIT role: First-Adopter, Practitioner / Abstract Title: Collaborative Research: Adaptable Resilience Ecosystem (ARE)
- FIU College of Engineering and Computing / CGIT role: Team Member / Abstract Title: Cyberinfrastructure for Monitoring Urban Microbiomes (CyberMUM)
- FIU College of Engineering and Computing / CGIT role: Team Collaborator, First-Adopter / Abstract Title: Advanced Cyber Infrastructure Training in Policy Informatics / Link
- IEEE P2784. Guide for the Technology and Process Framework for Planning a Smart City / CGIT role: Editorial team / Link
- NIST Smart Cities and Communities Framework (SCCF) / CGIT role: Workgroup Member. Link
- NIST GCTC CPAC Covid-19 Resource Kit for municipalities. Link
- ISO/IEC/IEEE 23026. International Standard 23026 for Systems and software engineering Engineering and management of websites for systems, software, and services information / CGIT role: Workgroup Lead / Links: ISO / IEC / IEEE
- IEEE 1680.4. International Standard for Environmental Leadership and Corporate Social Responsibility Assessment of Servers / CGIT role: Workgroup Member / Link
- Technical Books: "VMware Horizon 6 Desktop Virtualization Solutions" (2014), "Mastering VMware Horizon" (2015) / CGIT role: Reviewer, content editor.

More: City Presentation















#### May-Jul 2020 - Coral Gables IT Department Case Studies in Recent Gartner's Smart Cities Research Papers

Global IT research and advisory firm Gartner Inc. featured the City of Coral Gables IT Department in two of their recent research papers:

- Refreshed in July 2020: "Smart City Funding Models: It's Time to Be Creative." Analysts: Bill Finnerty, Bettina Tratz-Ryan. This paper highlights Coral Gables' citywide continuous improvement program developed to improve effectiveness and optimize spending, and its results impacting the city with greater customer satisfaction, improved services and low costs for operating IT. Originally published in 2019, and reviewed in 2020 with updates on Coral Gables projects and others: **Gartner Abstract**
- Published in May 2020: "Predicts 2020: Resilient Smart City Development Requires Data-Driven Engagement of Citizens and Businesses." Analysts: Bill Finnerty, Bettina Tratz-Ryan. This paper analyzes how ClOs use data to establish shared social and business benefits and drive the engagement needed for sustainable success, including City of Coral Gables examples of street kiosks, partnerships with the private sector, smart city funding models, and EV charging stations. **Gartner Abstract**

# Gartner

# July 2020 - City of Coral Gables at the Smart City Services Connectivity Webinar with City of Las Vegas and City of Cary.

Connected Cities Tour event information post: "Learn from 3 Leading City Innovators. July 14 at 11 am. Nicole Coughlin Raimundo (City of Cary CIO), Michael Lee Sherwood (City of Las Vegas CIO) and Raimundo Rodulfo (City of Coral Gables CIO) will share how they are using connectivity to enable new capabilities". Post



# June 2020 - City of Coral Gables at the Fiber Broadband Association Webinar: Fiber and the Smart City

CIO / IT Director Raimundo Rodulfo joined Lisa Youngers, CEO of the Fiber Broadband Association (FBA), and Peter Murray, CEO of the Connected Cities Tour think-tank at the "Fiber for Breakfast" session of the FBA. They had an insightful conversation on how Fiber Optics connects Smart Cities and plays a key role on various initiatives and successful use cases: Post - Site



#### Mar-Aug 2020 - CGIT Joined the Miami-Dade Beacon Council Technology Committee and its Covid-19 1MPACT Initiative

CIO / IT Director Raimundo Rodulfo Joined the Miami-Dade Beacon Council Technology Committee (MDBC-TC) think-tank and its Covid-19 1MPACT Initiative. Mr. Rodulfo presented the Coral Gables smart city initiatives at the March 2020 meeting of the MDBC-TC with representatives from all its member organizations from business, nonprofit, government, and academia. He also shared City of Coral Gables' business technology and data use cases with the 1MPACT Covid-19 task force during their June and July workshops. MDBC-TC supports the community's innovation ecosystem including incubators, accelerators, cowork spaces, technology and entrepreneurship education programs and impactful meetup groups: MDBC-TC - 1MPACT





#### May 2020 - City of Coral Gables Business Technology Webinar.

The City's Information Technology and Economic Development departments organized and held a Business Technology Webinar with experts from academia, industry, government and nonprofits, to help Coral Gables small/medium businesses leverage technology and the digital economy to connect with their customers and suppliers during these challenging times. Thank you to all the businesses and community members who attended the Webinar! Thank you also to our fellow panelists: Dr. Sara Rushinek (University of Miami), Lan Jenson (ADA, GCTC CPAC, TechCARES Silicon Valley nonprofit), and Rowland Saer (Seeed eCommerce organization), who joined CGIT (Raimundo Rodulfo, Nelson Gonzalez, and Alex Gamundi), for their active participation, insightful ideas, and contribution of resources to help businesses leverage technology during these challenging times. Thank you to the City's Economic Development director Julian Perez and his team for their leadership and partnership organizing this event. The webinar's recorded video, information material, digital surveys data, slides, Q&A, links to useful resources and other support material can be accessed here: <a href="https://www.coralgables.com/BusinessTechnologyWebinar">https://www.coralgables.com/BusinessTechnologyWebinar</a>





# May 2020 - Coral Gables Information Technology (CGIT) at the Smart Cities Digital Transformation Council meeting.

CIO / IT Director Raimundo Rodulfo presented the Coral Gables smart city initiatives, strategic plans, and engineering projects at the May meeting of the Smart Cities Digital Transformation Council. Video recording and meeting information: <u>Link</u>.



May 2020 – City of Coral Gables highlighted by Microsoft as a technology case study during the Covid-19 pandemic.

Microsoft published "Technology Powering a City During Turbulent Times" on our use of technology during Covid-19: Post



# May-Aug 2020 - City of Coral Gables is a Member Organization of the NIST GCTC Smart Regions Civic Data Hub Initiative.

NIST GCTC and NTIA have started a new smart regions national initiative to develop a Civic Data Hub and Service Delivery Platform. This project will advance cross-domain opportunities for organizational change that will support federal, state, local, tribal and territorial (SLTT) governments in achieving enterprise-wide cost savings, improved government efficiency, economic development, and civic engagement. It will create a standardized framework, technical specifications, and a formal governance organization that will bring together the requirements of multiple federal, state and local government entities, and the platform microservices necessary to create interoperability across disparate information systems, and to create robust data-driven digital services. Municipal Members: State of Alaska, Department of Health and Social Services; State of Oregon; City of Coral Gables, FL; Smart City PDX, City of Portland, OR / Member organization from Academia: Georgetown University / Four GCTC tech industry partners: Innovation Corridor B2B; SAS Systems; Oracle; ESRI.

There will be a kickoff workshop session in October at the Smart Cities Connect conference, where CIO / IT Director Raimundo Rodulfo will present the Coral Gables smart city hub and smart city data initiatives, and the collaboration initiatives as cochair of the NIST Data Supercluster. More details: <a href="NIST GCTC Smart Regions website">NIST GCTC Smart Regions website</a>

# SMART REGIONS COLLABORATIVE





# May-Aug 2020 – Data and technology collaboration MOUs between Miami-Dade County, City of Coral Gables, City of Miami

City of Coral Gables and Miami-Dade County collectively with City of Miami executed a Memorandum of Understanding (MOU) to engage and participate in a Utility Coordination GIS viewer for the purpose of sharing information in support of coordinating utility projects in order to minimize construction impacts on residents across Miami-Dade County. This MOU is part of a smart region data collaboration initiative between City of Coral Gables, Miami-Dade County and City of Miami, with participation of industry and nonprofit partners (DataGovs, Microsoft Philanthropies, ESRI Citizen Hub, GitHub, and Code for South Florida) to connect, interoperate and share real-time data and insight about traffic/mobility/transportation/MOT, utilities, CIP projects, right of way, smart city sensors, and other civic data. The goal of this data collaboration is to improve communication, efficiencies and interoperability between our municipalities through a centralized geospatial data hub and GIS apps that can be used by municipal employees from Public Works, Planning, Building, Zoning, Public Safety, IT and other areas of our three organizations. MOU Documents







#### May-Aug 2020 – City of Coral Gables was a Smart City Digital Twin Case Study at the AECNEXT/SPAR3D Engineering Expo.

City of Coral Gables and Broward County were smart city digital twin case studies at the AECNEXT/SPAR3D Engineering Expo during an engineering presentation on the role Building Information Modeling (BIM) and Virtual Design and Construction (VDC) play in SMART City initiatives, where SMART Cities fit into a BIM/VDC World, and their different approaches (a "BIM Bottom Up" to a "SMART CITY Top Down" approach) to Smart Cities and the digitization of their built environments.

In the past, BIM and VDC technology tools and digital twin models were created for the City of Coral Gables new Public Safety Building. More: <a href="Presentation">Presentation</a>



#### May 2020 - CGIT joined the IEEE P2784 Smart Cities Standard Work Group

CIO/IT Director IEEE senior member Raimundo Rodulfo joined the international standard workgroup and editorial team for the new engineering standard IEEE P2784: Guide for the Technology and Process Framework for Planning a Smart City: Link



#### April 2020 - CGIT at the One Water Academy

City of Coral Gables joined the OneWater Academy (OWA) initiative and collaborated with a research paper on smart water strategies to the inaugural OWA blog: "Smart City Technology Strategies for Water Management", contributed by CGIT CIO. More: OWA Launch post - CGIT Article on Smart Water





# Feb 2020 – Tour of University of Miami Supercomputer with UM IDSC and City Staff

A team from the City along with representatives from the University of Miami recently toured Equinix Network Access Point of the Americas, where the University of Miami's Supercomputer and the City's secondary network headquarter are housed. The NAP connects Coral Gables to the rest of the world via fiber optics. UM's supercomputer is an incredible piece of machinery that can analyze big data at very high speeds. This helps us stay informed on ways we can improve the quality of life for both the residents and business community. Coral Gables was one of the first municipalities in the state to have collocated and secured its network systems at the NAP. City of Coral Gables is collaborating with UM researchers to leverage UM's supercomputer in the analysis of all of the City's complex smart city data.



Photo, from L to R: Dr. Joel Zysman (UM, Director of Advanced Computing), Raimundo Rodulfo (City, CIO / IT Director), Alex Gamundi (City, Sr. IT Systems Analyst), Ed Santamaria (City, Asst. City Manager), Dr. Michael Mannino (UM, Director of Programs), Martin Torres (UM, Sr. IT Manager)

#### Feb 2020 - City of Coral Gables at the Canada-Florida Smart Cities Roadshow

CIO / IT Director Raimundo Rodulfo joined City of Miami CIO Mike Sarasti, and Dr. Sukumar Ganapati and Dr. Selcuk Uluagac from Florida International University CEC at the Canada-Florida Smart Cities Roadshow event at Miami-Dade College in Downtown Miami. During this business event, organized by the Canadian Consulate and their Trade Commission, pitch sessions, deep-dives and roundtable discussions focused on societal challenges and the technological advancements being used to address them. It was a wonderful event and a great opportunity to share, learn and collaborate with the Canadian and South Florida smart cities ecosystem. More: Post - Event





L to R: Raimundo Rodulfo (CIO, City of Coral Gables); Mike Sarasti (CIO, City of Miami); Dr. Selcuk Uluagac and Dr. Sukumar Ganapati (FIU)

#### Feb 2020 - City of Coral Gables at The Smart City Event / IoT Evolution Expo in Fort Lauderdale

In February 2020, IT Director / CIO Raimundo Rodulfo was a speaker at The Smart City Event / IoT Evolution conference in Fort Lauderdale. He had the opportunity to speak in two insightful sessions (P3 for Smart Cities Success / Smart Cities Leveraging the Edge) at the Tech Supershow in Fort Lauderdale, which co-located six events in one venue: IoT Evolution Expo, Smart City Event, IIoT Conference, Intelligent Edge Expo, ITExpo, and Connected Real Estate Summit. Thank you to Ken Briodagh and to my fellow panelists for the insightful conversation and the learning takeaways! More: Agenda









#### Feb 2020 - City of Coral Gables at the Connected Cities Tour-Miami

In February 2020, City of Coral Gables IT Director / CIO Raimundo Rodulfo and City of Miami CIO Mike Sarasti were keynote speakers and panelists at the Connected Cities Tour symposium in Miami. The University of Miami was a great setting for Dense Networks' Smart City Miami event and hearing from city leaders as well as network deployment and tech experts.

More: post - post







# Feb 2020 – City of Coral Gables at the ASPA South Florida Best Practice Conference

Assistant IT Director Nelson Gonzalez spoke at the American Society for Public Administration (ASPA) South Florida 14<sup>th</sup> Annual Best Practices Conference, in a panel with cybersecurity experts from Florida International University (FIU): "Cyberinfrastructure and Security in Local Government": <u>Link</u>



# Jan 2020 - Future Cities Competition

For the second year in a row, CIO / IT Director Raimundo Rodulfo had the wonderful opportunity to be a final judge at the Future Cities Competition in FIU. It never ceases to amaze the brilliance, creativity and imagination of the solutions these young minds present to big challenges such as resilience to natural disasters, water and energy management/conservation, and other critical issues impacting the cities of today and tomorrow. Anyone working on smart city initiatives and engineering projects could find inspiration in these middle school projects. Congratulations to the winners: St. Hugh School (1st), Key Point Academy (2nd) and Doral Academy (3rd). Thank you to the Florida Engineering Society, IEEE and FIU for inviting us to participate in this inspiring event! More: Site - Event







# Jan 2020 - New Coral Gables Smart City Brochure with Augmented Reality (AR)

The City of Coral Gables IT Department new Augmented Reality (AR) brochure on smart city initiatives was launched at CES 2020. Using an AR app, the readers can watch a video virtually embedded on the physical brochure. An electronic copy of the brochure can be downloaded here: Smart City Brochure



Jan-Mar 2020 – CGIT Smart City Presentation to the Institute of Electrical and Electronics Engineers (IEEE) El Salvador Section Chapter (IEEE R9) / Visit to Sister City Public Safety Technology Center.

CIO / IT Director IEEE Senior Member Raimundo Rodulfo presented via webinar the Coral Gables smart city technology and innovation initiatives to members of the IEEE El Salvador Section Chapter, per invitation from IEEE Chapter Chair Mayra Méndez. Thank you to Mayra Méndez and the IEEE chapter section members for organizing this webinar and for the great exchange of ideas! <a href="IEEE Region 9">IEEE Region 9</a>



Coral Gables is a Sister City of Santa Tecla in El Salvador. Back in December 2019, IT Applications Manager Lemay Ramos visited Santa Tecla's public safety technology center as part of a City delegation with Coral Gables Mayor Raúl Valdés-Fauli: Video



Jan 7-10, 2020 - City of Coral Gables at CES 2020 - Our City Team was at CES 2020 (Consumer Electronic Show, smart city expo) exhibiting the Coral Gables smart city technologies, infrastructure projects and economic opportunities; and collaborating with our smart city partners in NIST, University of Miami, and USDOC; and meeting with trade delegations and industry innovators. Thank you to All who visited our booth at the smart city expo, including:

Dr. Rhee, the associate director of the Cyber-Physical Systems Program and head of the global smart cities program at NIST, and a great partner and supporter of our smart city initiatives. Our team had a thoughtful conversation with Dr. Rhee about smart city initiatives and successful partnerships that improve quality of life in our City. At his session on smart cities public/private partnerships at CES, with distinguished panelists from NIST, Smart Cities Dive, Lyft, Horiba Mira and City of Las Vegas, Dr. Rhee mentioned the Coral Gables smart city frameworks and case studies.

Dr. Sara Rushinek and Dr. Avi Rushinek, renown researchers in business technology at University of Miami, and great partners and supporters of our smart city initiatives and demo labs. UM is a key partner providing research and academic skills and resources to our smart city initiatives and pilot projects in diverse areas (computational science, urban planning, data science, crime analysis, GIS, electrical engineering, smart grids, smart city competitions, innovation strategies, 5G, augmented reality.)

More information: News Post - Coral Gables Smart City Brochure at the CES Exhibit - Media







L to R: CIO Raimundo Rodulfo, Assistant Economic Development Director Belkys Perez, Sr. IT Systems Analyst Alex Gamundi.







L to R: City Sr. IT Systems Analyst Alex Gamundi, NIST CPS Director Dr. Sokwoo Rhee, City CIO Raimundo Rodulfo.







L to R: Dr. Sara Rushinek UM), City CIO Raimundo Rodulfo, Dr. Avi Rushinek (UM), City Sr. IT Systems Analyst Alex Gamundi

Jan 2020 – IoTC Connected Mobility Breakfast - CGIT had an insightful and productive conversation with industry leaders at the Connected Mobility Breakfast, alongside the CES 2020 expo in Las Vegas. We discussed the future of smart cities mobility technologies, autonomous vehicles, IoT, urban robotics, and other relevant topics. Thank you to the IoT Consortium and to NIST for inviting us to participate! IoTC







Jan 2020 – University of Miami 5G Pilot Program in Coral Gables Campus - The University of Miami (UM) campus in Coral Gables is the first college campus in the United States to adopt AT&T's 5G+ service and Edge technology that will speed and expand computing time and mobile app tools. UM and AT&T planned to roll out 5G+ millimeter wave and Multi-access Edge Computing technology on the Coral Gables campus, with a target completion date in spring 2020. The goal is to help support innovative teaching and research methods. The City of Coral Gables collaborates with UM as part of this pilot, in the areas of Internet of Things (connecting City sensors nearby the University) and augmented reality (AR) immersive user experience for smart city applications. More: <a href="Article">Article</a>



Jan-Dec 2020 – New Articles and Case Studies: Covid-19 technologies, emergency communications, infrastructure, IoT, 5G, data, business tech – City of Coral Gables technology, smart city initiatives have been recently featured in various publications:

- Microsoft, "Technology Powering a City During Turbulent Times" on our use of technology during Covid-19: Article
- <u>Coral Gables Magazine</u>, "Building the City of the Future" on smart building strategy, cyberinfrastructure projects: <u>Article</u> | "People: Director of IT, Chief Innovation Officer" on IT leadership and accomplishments: <u>Magazine</u> <u>Article</u>
- <u>Kurrant Insights</u>, "In the City of Coral Gables, businesses have gotten a boost thanks to a #SmartCity Hub that provides real-time access to traffic data, environmental monitoring, crime analytics and more.": Post
- <u>Broadband Communities magazine</u>, "5G, Smart Cities Will Need a Lot of Fiber Smart-City Applications Emerge" features our use case of fiber optics for network resilience: <u>Article</u>
- The City Beautiful magazine, "Tech Hub" (page 24) explores the Coral Gables smart city initiatives and innovation, including the recognition by the NIST GCTC program and the smart city hub public platform: <a href="Article">Article</a> | "A Guide to Smart City Resources" (page 52) talks about technology resources for businesses in the smart city hub public platform: <a href="Article">Article</a>
- <u>IoT News</u>, "How the IoT will save lives: Applying IoT technology to emergency communications" talks about the need for standardization in emergency communications, mentioning City of Coral Gables as a case study for the use of engineering standards such as IEEE 802 in its resilient network, proven when Hurricane Irma struck the city in 2017: <u>Article</u>
- ESRI, "Delivering Smart Communities & Smart Cities through a Geospatial Strategy" features our smart city hub: Paper
- **UrbanLand**, "Keeping an eye on privacy as cities get smarter": Article
- Miami Today News, "Poles united 5G antennas, traffic cameras, WiFi hotspots" on our smart pole industrial design: Post
- PdxEng, "5G wireless densification in Smart Cities" about Coral Gables working on an engineered pole concept: Article
- GovLaunch, "Coral Gables, FL Smart City Hub Districts Track Projects": Post
- Book: Solving Urban Infrastructure Problems Using Smart City Technologies John R. Vacca Ref. 69 (page 182) Book

# Jan 2020 - City of Coral Gables Smart City Vision is a Cover Story on the StateTech Magazine Winter 2020 Issue

City of Coral Gables Smart City Vision is a Cover Story on the StateTech Magazine Winter 2020 Issue. The cover story is also presented in the featured article on Page 18: "Street Smarts: Coral Gables, Fla., Puts Data to Work for Citizens - A smart city initiative heralds resiliency, efficiency and democratization for the City Beautiful." Thank you to StateTech Magazine and author Derek Rice for sharing our story and our vision with your readers and the tech community! Article - Mag - CMU - Post





#### Jan 2020 – City of Coral Gables CIO's Article published by CIO Review Magazine

CIO / IT Director Raimundo Rodulfo wrote an article for CIO Review Magazine, titled "Smart Cities to Become Mainstream," analyzing adoption and impact of exponential technologies and digital transformation on public sector programs: Article.





# Jan 2020 - City of Coral Gables featured in the NIST GCTC Report to the U.S. Department of Commerce

Dr. Sokwoo Rhee, head of National Institute of Standards and Technology (NIST) Cyber-physical Systems (CPS) and smart cities program (GCTC), submitted a report this year to the U.S. Secretary of Commerce on the results of the NIST GCTC Expo in Washington D.C. (event in which our City team spoke and presented the Coral Gables smart city initiatives.)

On Pages 12-13 of his report "2019 Global City Teams Challenge: Smart and Secure Cities and Communities Challenge Expo", Dr. Rhee indicated: "The Coral Gables Smart City Hub Platform is one model example of a smart city ecosystem successfully using open source platforms to collect and exchange data from sensors and other sources. To be successful, trusted data exchange is critical among people, business, organizations and devices." More: NIST Report Link







#### 2019

## Dec 2019 - City of Coral Gables Won 1st Place U.S. Ranking Award in the 2019 Open Cities Index

The City of Coral Gables received a trophy for being the top performing U.S. organization in the 2019 Open Cities Index (OCI). The Open Cities Index (OCI) was developed by the Public Sector Digest (PSD) in partnership with the Open Data Exchange (ODX) as an appraisal framework to gauge the level of openness in cities across North America. The Open Cities Index is Canada's first benchmarking study for municipal open data initiatives and serves as a tool for public sector organizations to measure the maturity of their open data programs. Several municipalities from the United States participated in 2019, and Coral Gables received the top performing U.S. rank recognition. More: <a href="Mayard Certificate">Award Certificate</a> - <a href="Announcement">Announcement</a> - <a href="Presentation">Presentation</a>



# Dec 2019 - City of Coral Gables CIO's Article published by Gov CIO Outlook Magazine

CIO / IT Director Raimundo Rodulfo wrote an article for Gov CIO Outlook Magazine, titled "Every Smart City Project is a Strategic Project", where he analyzes some of the technological, economic, and societal transformation trends in the Smart City space: Article





#### Dec 2019 - Tour of the Miami River with FIU Water Scientists

CGIT had the wonderful opportunity to join a team from City of Coral Gables in a tour of the Miami River aboard the ship Venetian Lady, with Florida International University president and environmental scientists from the CREST center for aquatic chemistry and FIU's Institute of Environment. FIU demonstrated in the tour how they use environmental science and advanced technology such as robotics (aquatic drones), sonar, IoT sensors, digital fabrication and other tools to measure environmental conditions in waterways and recommend measures to improve those. Our City works with FIU in research studies using aquatic sensors located in city waterways. We share this data on the Coral Gables smart city hub public platform and the City's sustainability channels to benefit researchers, engineers, emergency managers and all constituents that derive actionable information from it. Thank you to FIU for inviting us to participate in this learning experience! More: Post









**December 2019 – City of Coral Gables featured on the Innovate Miami Book** – Coral Gables' innovative programs, smart city initiatives and accomplishments were featured on the new book Innovate Miami, a thoughtful portrait of the innovation and entrepreneurial ecosystem in our region. More: <u>Site</u> - <u>eBook</u> - <u>Web Story</u> - <u>Augmented Reality Video</u>



**November 2, 2019 – Kickoff Meeting of the Smart Region Data Govs Partnership** – Technology leaders of Miami-Dade County, City of Miami, City of Coral Gables, and Microsoft Civic Innovation met at the City of Coral Gables IT Department to kick off a new smart region DataGovs collaborative initiative. The purpose of this collaboration is to improve municipal services and government efficiency; foster intergovernmental collaboration, innovation and strategic partnerships; and, advance smart cities collaboration in the Miami-Dade County region and South Florida region in general.

Data Govs is a public-private collaborative network in South Florida that brings together City and County employees, inspiring them by sharing best practices of data/tech projects in a positively supportive environment. Data Govs is an initiative proposed by Gregory Johnson of Microsoft TechSpark and Lucas Hernandez, Director of Civic Engagement of the program. More: Data Govs GitHub Site.











L-R: Jose Lopez (Miami-Dade County), Gregory Johnson (Microsoft Civic Innovation), Mike Sarasti (City of Miami), Raimundo Rodulfo, Chris Cowen, Leighton Shervington (City of Coral Gables)

#### Sep-Nov 2019 - New Smart Lighting Systems in Downtown Coral Gables

The City finalized the installations of 50 new smart lighting controllers on LED light poles on Miracle Mile in Downtown Coral Gables. These new 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. They also allow City staff to manage the lights either individually or as a group and apply business intelligence rules for energy and cost efficiencies, through a centralized management system that also runs reports on energy consumption, LED burn hours, and 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. In Phase II of this implementation CGIT will integrate the 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.

#### Jun-Nov 2019 - New IoT Sensors in Downtown Coral Gables

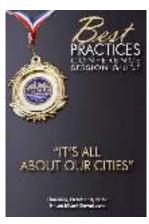
The City finalized the installation of more than 30 new Internet of Things (IoT) sensors in Downtown Coral Gables. These new sensors report vehicle and pedestrian traffic data in real time from several locations and in multiple directions, including: Miracle Mile (all 4 blocks), Miracle Mile intersections at LeJeune Rd, Salzedo St, Ponce de Leon Blvd, Galiano St, and Douglas Rd; Giralda Ave & Galiano St; Merrick Way & Aragon Ave. Also, new environmental sensors in Miracle Mile/Le Jeune Rd/Douglas Rd report air quality data including carbon emissions (CO2, CO/CO2) and air pollutants (PPM, VOC). Other IoT sensors in Downtown, currently in integration phase, are also measuring noise dBs and detecting occupied/available street parking spaces. The new IoT traffic sensors dashboards are available to the public on the Coral Gables smart city hub platform at <a href="https://www.coralgables.com/smartcity">www.coralgables.com/smartcity</a> under the Internet of Things section of the menu.





October 3, 2019 – City of Coral Gables Presentation at Miami-Dade League of Cities Best Practices Conference – Our City participated with panelists in the session "Smart Cities: Challenges and Use Cases in Our Region" at the 2019 Miami-Dade County League of Cities Best Management Practices Conference, with moderator Ed Santamaria (Assistant City Manager of City of Coral Gables), panelists Gladys Gonzalez (IT Director of City of Doral), Anthony Marvin (Smart Cities Research Manager of City of Miami) and Raimundo Rodulfo (IT Director / CIO of City of Coral Gables). More: event site - agenda





L-R: Ed Santamaria (Coral Gables), Anthony Marvin (Miami), Raimundo Rodulfo (Coral Gables), Gladys Gonzalez (Doral)

September 2019 – Smart City Kiosks launched in Downtown Gables – The four new smart city kiosks with the interactive IKE (short for "Interactive Kiosk Experience") platform make it easier for our residents and visitors to navigate Downtown Coral Gables, find things to do and places to shop and eat. The kiosks also provide access to city services, city mobile apps, the smart city hub public platform, plus real-time traffic and transit information. Among its fun features are cameras for selfies and interactive games. They are located along Miracle Mile, and Giralda Plaza. More: Video 1 (features) - Video 2 (launch)



September 26, 2019 – European Chambers Technology Event in Coral Gables – This technology event hosted at the Coral Gables Museum, organized by the Spain-U.S. Chamber of Commerce and the City, featured six European-American chambers and business leaders from Twitter, Amadeus, Spotify and Venture City. IT Director / CIO Raimundo Rodulfo give the welcome remarks on behalf of City of Coral Gables and talked briefly about our technology initiatives and how they foster innovation, collaboration and economic growth in our region. The panelists engaged in insightful and thoughtful conversations and gave us the rare opportunity to learn more about their businesses, their customers, and about themselves. More: <a href="Event">Event</a> - <a href="Post">Post</a>



September 11-13, 2019 – City of Coral Gables Presentation at the Smart City Expo Atlanta – IT Systems Manager Ayanes Apolinar was a speaker at the Smart City Expo Atlanta, in a panel with government officials and industry experts. Ayanes presented the Coral Gables smart city initiatives during the session "The Anatomy of Smart Connected Communities," in which he also talked about our Internet of Things (IoT) roll out in Downtown Coral Gables. More: video – event site





IT Systems Manager Ayanes Apolinar in a panel at Smart Cities Expo Atlanta

September 12, 2019 – City of Coral Gables Presentation at Tech SMART Summit and BIM Conference in Broward County – IT GIS Manager Mark Hebert did a presentation at the Tech SMART Summit and BIM Conference at the Broward County Convention Center, during the kick-off session of the Building Information Modeling (BIM) Collaboration Committee (BIMcc). The proposed purpose of the BIMcc is to bring together multiple State and local agencies to share their experiences, goals, and implementation strategies with BIM / Virtual Design and Construction (VDC) technologies to date. "Smart cities enable a better quality of life, more efficient and sustainable use of resources and create competitive, prosperous urban regions. BIM/VDC and Smart Cities put data and digital technology to work to make better decisions and to integrate working city and County systems in applications for mobility, asset, energy, water and transportation management." More: event site



IT GIS & Customer Support Manager Mark Hebert

September 10, 2019 – City of Coral Gables featured in NIST GCTC Data Supercluster's Podcast - IT Director / CIO Raimundo Rodulfo was featured in a new podcast from NIST GCTC Data Supercluster (smartcity.ai), conducted by DSC Chair Mr. Alex Huppenthal. In this conversation, he talked about how to apply new technology, gain support from stakeholders by using lean and efficient methods that free up capital and resources to apply to new initiatives. More: Podcast - NIST GCTC DSC

## NIST GCTC SUPERCLUSTER

SHARING INNOVATION IN GLOBAL CITIES/COMMUNITIES/REGIONS

August 2019 – New Smart City Data Collaboration with University of Miami - City of Coral Gables IT Department (CGIT) and University of Miami Center for Computational Science (UM-CCS) stared a new smart cities collaboration to use UM's new Triton supercomputer to analyze big data from our City (horizontally integrated enterprise systems data, crowdsourced data, IoT/CPS data, and external open data sources) to study predictive models using multi-variate and covariance analytics. The goal is to obtain insightful correlation information that will help us derive new data-driven decision models to improve operational efficiencies and effectiveness, and leverage business intelligence, computational neuroscience research and artificial intelligence for civic applications and actionable analytics. More: UM CCS News.





**2019 – CGIT Collaboration with NIST GCTC Superclusters** - The City of Coral Gables IT Department joined several superclusters work groups and collaboratives of the USDOC NIST/NTIA and DHS-S&T GCTC programs. These superclusters bring together experts from science, industry, government and academia to create frameworks, literature and action plans that assist organizations and associated decision makers and technology implementers who are considering, developing, implementing, and/or operating Smart City capabilities and solutions. Some of our City's engagement and collaborations with these programs are: *i.* IT Director / CIO Raimundo Rodulfo joined the NIST GCTC Data Supercluster (DSC) in a co-chair capacity, working with an international team that is developing the NIST smart cities data blueprint with actionable use cases and best practices; *ii.* CIO Raimundo Rodulfo and Assistant IT Director Nelson Gonzalez joined the NIST GCTC Cybersecurity and Privacy Advisory Committee (CPAC); *iii.* CIO Raimundo Rodulfo joined the Smart Regions Collaborative (SRC) led by the NTIA; *iv.* CIO Raimundo Rodulfo joined the Digital Inclusion Collaborative (DIC) led by NTIA BroadbandUSA with Census2020 & HUD.

More: NIST GCTC Superclusters - NIST GCTC Data SC - CPAC - SRC - DIC.









August 23, 2019 – City of Coral Gables Presentation at the South Florida GIS Conference – IT GIS & Customer Support Manager Mark Hebert presented at the South Florida GIS Expo & Conference in West Palm Beach. Mark's presentation was titled "City of Coral Gables – Smart City Hub and Community Engagement Initiatives". More: <a href="mailto:program">program</a>





IT GIS & Customer Support Manager Mark Hebert

August 16, 2019 – City of Coral Gables Presentation at Florida League of Cities Annual Conference – IT Director / CIO Raimundo Rodulfo was a speaker at the Florida League of Cities Annual Conference, presenting Coral Gables smart city initiatives and talking about smart cities and strategic planning with leaders from several municipalities in the session "Smart Cities: What's Your Strategy?." Thank you to the Florida League of Cities for inviting us to participate in his insightful and productive session! More: Conference program



IT Director / CIO Raimundo Rodulfo speaking in a smart cities' session at the FLC Annual Conference

#### Jul 10-12, 2019 - City of Coral Gables Presentations at NIST GCTC 2019 Smart City Conference in Washington D.C.

The National Institute of Standards and Technology (NIST) invited our City to present its smart city initiatives and accomplishments at the 2019 Smart and Secure Cities and Communities Challenge Expo & Conference in July 10-12, 2019. The City had an exhibit booth at the Expo. Assistant City Manager Ed Santamaria and IT Director / CIO Raimundo Rodulfo were speakers at the conference, and Assistant IT Director Nelson Gonzalez joined them presenting the Coral Gables smart city initiatives at the City's booth in the Expo.

In 2019, Global City Teams Challenge brought the Smart and Secure Cities and Communities Challenge (GCTC-SC3) Expo, co-hosted by NIST and U.S. Department of Homeland Security Science and Technology Directorate (DHS S&T). GCTC-SC3 brought together hundreds of municipal governments and technology innovators around the world who have established teams to address shared issues faced by cities and communities. More: <a href="Event-Post">Event-Post</a>









L-R: Assistant IT Director Nelson Gonzalez, IT Director / CIO Raimundo Rodulfo, Assistant City Manager Ed Santamaria; our presentations.

Jul 10, 2019 - City of Coral Gables Presentation at the U.S.-ASEAN Smart Cities Partnership Symposium in Washington D.C. IT Director Raimundo Rodulfo was a speaker at the U.S.-ASEAN Smart Cities Partnership Symposium in Washington D.C., during the panel "Varieties of U.S. City Approaches to 'Going Smart' and Lessons for Smart City Development in Southeast Asia". Our panel discussed best practices and lessons learned in our approaches to smart cities applications and infrastructure transformation, and their applicability in other regions. More: USASCP document



L-R: IT Director / CIO Raimundo Rodulfo and USASCP fellow panelists.

**July 9, 2019 – Coral Gables IT Awards and Recognition Presentation at City Commission Meeting –** During July 9<sup>th</sup> City Commission Meeting there was a presentation of awards and recognition received by our IT Department team from professional organizations such as ASQ, NIST, IEEE, IISE, and CDG throughout fiscal year 2019. A video produced by CGTV was shown during early presentations. Our team is grateful to all for their kindness and support! More: <u>Video post</u>





IT Department Team and City Officials (Mayor, Vice-Mayor, Commissioners, City Manager, Asst. City Manager, City Attorney, City Clerk)

Jan-July 2019 – City of Coral Gables Supported Florida International University Cyberinfrastructure NSF Project Proposal – City of Coral Gables submitted a letter of support to the National Science Foundation (NSF) for the Florida International University (FIU) project proposal "Advanced Cyber Infrastructure Training in Policy Informatics" led by smart cities research collaborator Dr. Sukumar Ganapati. In July 2019, the NSF awarded a \$1M grant for this project, which will benefit City of Coral Gables and other municipalities in the South Florida region with access to an interdisciplinary program for Cyberinfrastructure training to policy scientists, which includes engineers and social scientists (geographers, planners, public administrators, criminologists, and others.) More: FIU Announcement – NSF Award







**July 2019 – Coral Gables featured on Smart Cities White Paper:** i360Gov featured City of Coral Gables as a case study in their white paper "Smarter Moves for Smart City Planning", with content covering how Coral Gables implements new technology to change citizens' lives. More: <u>Publication site</u>.



July 2019 – City of Coral Gables Case Study on ETSI Whitepaper – The European Telecommunications Standards Institute (ETSI) published a technical report that references the IEEE Standards University paper about City of Coral Gables network resilience initiatives "Connected through a disaster" (reference on Pg. 11). Also, in section "5.7.3 Experiments and Simulations" on Pg. 48 it features two case studies; one from NIST: "5.7.3.1- NIST disaster simulation (Philadelphia, USA)", and one from IEEE about Coral Gables: "5.7.3.2- Disaster-ready communication infrastructure (Coral Gables, Florida, USA)." More: Paper



June 2019 – New Citizen Engagement Hub - City of Coral Gables' new Citizen Engagement Hub launched by the Office of Communications is the online home for outreach and listening efforts to shape the future of our community. Here you can find upcoming events, initiatives, and opportunities to share your input on key topics.

More: Post - Citizen Engagement Hub



Jun 9-13, 2019 - City of Coral Gables at the 2019 Cisco Live Conference in San Diego - Assistant I.T. Director Nelson Gonzalez was a panelist at the Cisco Live technology conference in San Diego, CA, presenting our Coral Gables smart city network projects and learning from industry innovations and case studies. It was a great opportunity to collaborate with and learn from industry experts with cutting-edge knowledge and skills on the technologies of the present and the ones researched and developed for the near future. More: Event site.





Assistant IT Director Nelson Gonzalez in a roundtable session at Cisco Live 2019

June 2019 – City of Coral Gables at the AI World Government Conference in D.C. – IT Data Analyst Chris Cowen participated in the AI World Government Conference in D.C., where he studied successful use cases of artificial intelligence and machine learning in government entities in applications for cybersecurity, public safety, citizen services, and data analytics. He also had the opportunity to share experiences with colleagues and collaborate with experts in this growing field. More: <a href="Event Site">Event Site</a>



June 2019 – CGIT Team Featured as a Case Study on Lean Six Sigma for Good – Lean Six Sigma for Good, an organization that focuses on using Lean and Six Sigma to help local non-for-profit organizations achieve their mission, featured our City's IT Department team in their site as a case study titled "City of Coral Gables Looking Inward and Outward": "The City of Coral Gables (FL) IT department worked together on response times and efficiencies with a Lean Six Sigma improvement project. The process empowered their team to look inward and outward, identifying opportunities that could make a difference over a short period of time. One initiative was to dedicate assigned IT liaisons to each city department. This helped build better channels of communication and improve response times, which increased customer satisfaction.". More: Site



#### June 2019 - City of Coral Gables I.T. Team Featured by Quality Progress Magazine

Quality Progress Magazine, the official publication of the American Society for Quality, included our City Information Technology Team in their latest issue (June 2019), as part of a group of ten top-performing ITEA teams from around the world that participated in the International Team Excellence Award. We are excited and grateful to be included in their "Feats of Strength" story, and having the opportunity to share tips and ideas with their readers. We are proud of our City and our Team!

More: QP Magazine June 2019



## May 20-22, 2019 - City of Coral Gables I.T. Department Recognized by the American Society for Quality

The City of Coral Gables Information Technology Department won 3<sup>rd</sup> place in the ASQ 2019 World Conference's ITEA case study storyboard competition in Fort Worth, TX. The City's case study was about the six sigma black belt project our team submitted to the American Society for Quality (ASQ)'s International Team Excellence Award (ITEA).

CGIT was invited by ASQ to present our quality engineering project "I.T. Department Productivity and Response Times Improvement" at the 2019 World Conference on Quality and Improvement (WCQI) as part of the ITEA case studies exhibition. The project case study poster below shows how our team applied quality engineering methodologies such as Lean Six Sigma, operations research and morphological analysis in the Coral Gables I.T. Department to improve balanced scorecard metrics (productivity, financial, customer service, innovation).

We are proud of our Team, the quality improvements achieved by this project, and this recognition from the American Society for Quality.

More: ASQ Certificate of Achievement - ITEA Case Study Poster - 2019 ITEA Case Studies - CGIT ITEA Case Study - WCQI - ITEA









# May 8, 2019 – Coral Gables Smart City Technology Initiatives Featured by NIST in their list of "Amazing Smart City Projects" in Global City Teams Challenge (GCTC)/Smart and Secure Cities and Communities.

Our Team is thrilled and grateful to be recognized by the National Institute of Standards and Technology (NIST) for our smart city technology projects! We are excited to be part of NIST's Global City Teams Challenge (GCTC) with our action cluster "Coral Gables Smart City Hub Public Platform." We will present our GCTC action cluster and smart city technology projects at the NIST GCTC Expo in Washington D.C. on July 10-12. Thank you to Dr. Sokwoo Rhee and his team at NIST for inviting us to be part of this great program! More: NIST GCTC "Amazing Smart City Projects" Post





## May 2019 – Citywide Cyberinfrastructure Service Upgrades (Public Wi-Fi, GIS, PCI, etc.)

Several upgrades to the City's cyberinfrastructure services completed: i. Wi-Fi networks, including public Wi-Fi locations\*; ii. New Software-defined networks (SDN) and hyper-converged systems (HCIS) servers, storage and disaster recovery; iii. Improved and enhanced the City's cybersecurity, network and telecommunication infrastructure; iv. Geographic Information Systems (GIS) enterprise upgrade; v. Payment Card Industry (PCI) compliance program. More: IT Projects

\*The public Wi-Fi project provides complementary wireless Internet access to citizens and visitors at specific city facilities and local venues such as parks, tennis centers, Coral Gables Museum, Youth Center, Miracle Mile, Giralda Plaza and other areas of Gables Downtown. This network also allows foreign travelers and visitors with Wi-Fi devices and no data coverage to access online services such as special events, restaurants, parking, trolley, shopping, public safety alerts and online payments. Additionally, it enhances network connectivity for city employees and smart systems.

<u>Completed Public Wi-Fi Locations:</u> Downtown Gables (Miracle Mile, Giralda Plaza, Andalusia), City Hall, Planning & Zoning, Passport Office, Youth Center, Venetian Pool, Adult Activity Center, Public Safety Building, Parking Office, Facilities, Economic Development, Riviera Park, Salvador Tennis Center, Balboa Plaza, Ingraham Park, Merrick Park, Cartagena Circle.

Public Wi-Fi Locations in Progress: Museum, Art Cinema, Phillips Park, Fire Station 2, Biltmore Tennis Center.

<u>Planned Future Public Wi-Fi Locations:</u> Financial District (Alhambra Circle, LeJeune to Douglas), Fire Station 3, Ponce Circle.



#### May 2019 - New Reports: Coral Gables Innovation, Coral Gables among Top U.S. Cities to Start a Small Business, and more.

- **1.** Coral Gables Magazine dedicated its latest issue to the theme of Innovation, with a very detailed and comprehensive report covering innovation in Government, Education, Business, Entertainment and Healthcare in the City Beautiful. More: Report
- **3.** eMerge, FIU & Knight Foundation 2018 Insight report shows very promising numbers for our region, which surpassed all other U.S. Southeast markets in tech entrepreneurship and investment, totaling \$1.4B in VC deals. More: Report

#### May 2019 - Coral Gables Situational Awareness Dashboard

The City's IT Department launched the Coral Gables Waze Data Dashboard, a homegrown traffic data analysis and GIS application that leverages the data sharing partnership the City started with Waze as part of the Connected Citizens Program (CCP). The new dashboard visualizes live data and statistics from the Waze community/crowdsourcing platform, and provides valuable and actionable information for public safety staff, first responders, mobile workforce, field inspectors, traffic engineers, urban planners, technologists, researchers, businesses, and the public in general. The IT team continues working on adding more historical data analysis and predictive trend analytics to this application. You can access the new dashboard on the Smart City Hub public platform: <a href="https://www.coralgables.com/smartcity">www.coralgables.com/smartcity</a>. It can be accessed both under "Citizen Engagement" by clicking on the "Coral Gables Waze Dashboard" button, or under "Community Intelligence Center" by clicking on the "Situational Awareness Dashboard" tile. More: Live Dashboard





#### May 14, 2019 - CGIT at the 2019 NAF Mega Student Industry Conference in Miami

IT Customer Support & GIS Manager Mark Hebert spoke at the NAF Student Industry Conference, presenting the Coral Gables smart city projects to students and providing advice to those interested in a career in technology and public service. More: NAF Page - Presentation Agenda







## May 8, 2019 – CGIT at a Data Analytics and AI Panel in the Intrigue Digital Marketing Summit Miami

IT Data Analyst Christopher Cowen spoke at a panel on data and Artificial Intelligence at the Intrigue Digital Marketing Summit Miami, with experts from Industry and Academia. More: <u>Summit Page</u>



#### May 1, 2019 - City of Coral Gables at the GIS Solutions Expo

City of Coral Gables was present at the GIS Solutions Expo & ESRI Southeast Conference in West Palm Beach, as a case study during the opening event and with presenters at two different sessions. The City's IT Customer Support & GIS Manager Mark Hebert, MGIS spoke in the afternoon at the conference about the use of GIS Data Platforms and Citizen Hubs to enhance our community initiatives with digital tools and communication. IT Director Raimundo Rodulfo was also a speaker at the Senior Executive session, where he had a great conversation with colleagues from Government (Miami-Dade County, City of Johns Creek GA) and industry (ESRI, NEMAC). The panel discussed among other topics the smart city applications of geospatial data and GIS in our organizations and how these technologies make an impact in urban resilience, sustainability and livability. Thank you to Panel Facilitator Mike Dyer and our fellow panel members for this great exchange of ideas! More: Senior Executive Breakfast - City Presentation - Video featuring City of Coral Gables - City of Coral Gables ArcNews Article - Slideshow







#### April 29-30, 2019 - City of Coral Gables at eMerge Americas 2019

For fourth year in a row, the City of Coral Gables was present and active at the eMerge Americas Technology and Innovation Expo as an exhibitor. At the City's booth, our City team presented the Coral Gables <Connected, Charming, Cultural> smart city attractions, economic development, technology and innovation programs and initiatives. Our team received good and valuable feedback about the City's smart initiatives, attractions and technology platforms from visitors, technology organizations, entrepreneurs, and members of academia attending the event. More: News Post / Video / Event Site





L-R: Francesca Valdes, Belkys Perez, Gisela Rodriguez, Rayza Collazo, Chris Cowen, Mark Hebert, Raimundo Rodulfo, Nelson Gonzalez, Pamela Fuertes, Alex Gamundi



#### April 29, 2019 - Coral Gables Smart City Solutions Competition Judging and Awarding Ceremony

University of Miami and City of Coral Gables held today at eMerge Americas the final presentations, judging and awarding ceremony of the Coral Gables Smart City Solutions Competition "Design Your Coral Gables". The event was a great success! Congratulations to Team "The Laboratory of Everyday Things" for winning 1<sup>st</sup> place, and to Team "SmartDay Coral Gables" (2<sup>nd</sup> Place) and Team "Kayros" (3<sup>rd</sup> Place)!

Thank you to all teams that participated in the competition and worked hard for several months developing and presenting their ideas to address challenges in traffic, safety and transportation. Thanks to the judges, and to our partners at University of Miami for allowing us to be part of this wonderful and impactful experience!

These solutions and ideas have already added value and started thoughtful conversations and follow-ups toward potential prototypes. More: <u>Video</u> - <u>News Post, City Commission</u> - <u>News Post, University of Miami</u> - <u>News Post, City</u> - <u>Competition Page</u>









#### April 2019 – New Articles about Coral Gables Smart City Case Studies

These are some of the new articles from several technology sites and organizations that have recently covered the Coral Gables smart city technology initiatives:

SmartCity.AI, NIST GCTC-SC3 Data Supercluster use cases: <u>Link1</u> / <u>Link2</u> - Shared Mobility: <u>Link</u>

SmartMyCity: Link1 / Link2 - Wyncode, Smart Moves in South Florida: Link

## NIST GCTC DATA SUPERCLUSTER

ACCELERATING INNOVATION IN GLOBAL CITIES/COMMUNITIES





## April 2019 - City of Coral Gables at the IEEE Spectrum Magazine and The Institute Newsletter

The Institute of Electrical and Electronics Engineers (IEEE) published an article on their Spectrum Magazine and The Institute newsletter about the Coral Gables' smart city strategy. Thank you to IEEE for sharing our story! More: Article





#### April 2019 – New Coral Gables AI Analytics Platform

Working with the Public Affairs Manager and the City's leadership, our CGIT team launched a new data analytics platform that leverages artificial intelligence and machine learning capabilities to generate actionable analytics about citizen engagement, public sentiment, marketing, public safety, incidents/anomalies, and important City topics to improve customer service, communications, situational awareness and response. More: Al Platform Site





#### Apr 17, 2019 - Coral Gables Smart City Presentation at MIT Club of South Florida

The City's IT Director Raimundo Rodulfo presented the Coral Gables smart city initiatives to the Massachusetts Institute of Technology (MIT) Club of South Florida at an event in Downtown Miami. Thank you to Mr. Bob Howard and MIT Club of South Florida for inviting us to speak at your event and share our story! More: Event Link - Event Abstract







#### April 2019 - I.T. Strategic Plan 2019 Update

Our CGIT team presented the 2019 update of our 5-year I.T. strategic plan. An actionable plan that leverages teamwork, technology and innovation to improve customer service and quality of life. More: IT Strategic Plan 2019 Update



## Mar 26, 2019 - Coral Gables IT Department Case Study in Gartner's Smart Cities Research Paper

Global IT research and advisory firm Gartner Inc. featured the City of Coral Gables IT Department in their research paper: "Smart City Funding Models: It's Time to Be Creative." The paper highlights Coral Gables' citywide continuous improvement program developed to improve effectiveness and optimize spending, and its results impacting the city with greater customer satisfaction, improved services and low costs for operating IT. More: <u>Gartner's Research Paper Abstract</u> - Gartner Symposium Videos: <u>Video 1</u> / <u>Video 2</u>

## **Gartner**

## Mar 21, 2019 - Second Checkpoint of the Coral Gables Smart City Solutions Competition

The second checkpoint of the Coral Gables Smart City Solutions Competition was as successful and exciting as the first one. It was a great experience seeing how the teams of contestants have developed and evolved their ideas with more data and research since the first checkpoint, and how the proposed solutions can potentially improve mobility and safety for our citizens. Congratulations to all the teams participating in this exciting challenge and thank you to the University of Miami and Venture Café for your partnership! Next stop: final awards ceremony at eMerge Americas in April. More: Competition Page



March 2019 – Asset Management System Expansion - Working with Public Works in their Right-of-Way Inventory project, our CGIT team supported with technical analysis and acquiring licenses and professional services to conduct a city-wide inventory of right-of-way assets using advanced LiDAR and CycloMedia 360 technology. Our team also started the expansion of the City's Asset Management enterprise system to include several additional modules for Right of Way, Waterways, Trees, Landscaping, Sanitation, and other functions on top of the Facility Management module implemented in 2016. More: Video



**Feb 21, 2019** - **First Checkpoint of the Coral Gables Smart City Solutions Competition** - The first checkpoint of the Coral Gables Smart City Solutions Competition was a big success! The contestants presented their teams' solution ideas for the first time, and we all engaged in a productive and thoughtful conversation. The presentations were very exciting and all the ideas have a big potential to make a difference in our communities, by addressing real problems in the areas of traffic and transportation. Thank you to the University of Miami for your partnership, to Venture Café for your hospitality, and to all the participating teams for your great ideas and enthusiasm! More: <u>Competition Page</u>



**Feb 9, 2019 - City of Coral Gables at the 2019 Secure Miami Conference -** The Florida International University (FIU) invited CGIT to participate at the 2019 Secure Miami conference in February 9, 2019. The City's IT Director Raimundo Rodulfo was a speaker in a smart city panel at the conference, with experts from Industry and Academia. It was an interesting conversation at the panel "Building a Smart(er) City", with topics covering CPS, IoT, cybersecurity, and other smart city challenges and opportunities. Thank you to Dr. Selcuk Uluagac from FIU department of electrical and computer engineering for inviting us to participate in this great event! More: <a href="Event site">Event site</a>.









#### January 2019 - Coral Gables Joins Waze Connected Citizens Program

The City of Coral Gables is pleased to announce a data-sharing partnership with Waze, the everyday driving platform bringing together drivers to outsmart traffic. Designed as a free, two-way data share of publicly available traffic information, the Connected Citizens Program promotes greater efficiency, deeper insights and safer roads for citizens of Coral Gables along with more than 850 other partners around the world. With this program, drivers will know what's happening on Coral Gables roads in real time, allowing them to avoid traffic jams. The Waze Connected Citizens Program provides an unprecedented look at real-time road activity, empowering partners to harness real-time driver insights to improve congestion and make better informed planning decisions. Established as a two-way data share, Waze provides partners with real-time, anonymous, Waze-generated incident and slow-down information directly from the source: drivers themselves. In exchange, the City of Coral Gables provides real-time government-reported construction, crash and road closure data to Waze to return one of the most succinct, thorough overviews of current road conditions today. "As a Smart City leader, Coral Gables is thrilled to partner with Waze to gain a deeper understanding of real-time traffic conditions that will be used by drivers commuting within our boundaries, thus making their travels a smoother experience," said Raimundo Rodulfo, the City's Information Technology Director. The Waze map evolves with every driver and data point it receives, promoting safer roads and sharing more knowledge with Wazers about potential delays to their commutes. The Connected Citizens program yields even more data, giving local citizens a greater ability to circumvent road closures and traffic jams within the app. The City of Coral Gables can also provide Wazers with advanced notice of major traffic events (such as parades) that will affect their daily routes. More: News Post - CCP Site





Jan 30, 2019 - City of Coral Gables at the Women in Technology International Summit - We are proud of our City team that represented the City of Coral Gables at the Women in Technology conference! Thank you to Dr. Sara Rushinek from the University of Miami for joining our team at the City booth, and for the partnership and inspiration! More: Site







L-R: IT Analysts Adriana Mendoza, Rayza Collazo and Monica Conde; Dr. Sara Rushinek (UM); Asst. Director of Parks & Rec Carolina Vester, IT Network Manager Gisela Rodriguez / Rayza, Adriana, Monica, Dr. Rushinek, Gisela; IT Analysts Chris Cowen and Ben Thomas

#### Jan 30, 2019 - City of Coral Gables at the Connected Cities Tour Summit

I.T. Director Raimundo Rodulfo joined leaders from Technology, Government, Academia, and Enterprise as a speaker at the Connected Cities Tour summit in Miami Beach. They had thoughtful conversations and insightful exchanges with experts from various sectors. Topics included how 5G and small cells will impact our cities, from IoT to real estate to smart/connected/autonomous vehicles; smart city technologies, and resilient networks. We learned from others and shared our own experience at a panel. More: Site







January 2019 - Academic Research Paper Publication - Coral Gables I.T. Data Analyst Christopher Cowen published a paper with researchers from the University of Miami, analyzing the relationship between land use, walkability and crime in Miami-Dade County. This study is relevant to Coral Gables not only as geographically part of the County but also for its characteristics of walkability and land use as a planned community. The findings of this study are useful to our City from an economic development, public safety and urban planning standpoint. Link to the paper: <a href="https://rdcu.be/bdXaH/">https://rdcu.be/bdXaH/</a>

A previous paper co-authored by Chris and UM researchers studied spatial patters of focus crime in the County: Link



I.T. Data Analyst Christopher Cowen

Jan 2019 - City of Coral Gables IT Strategic Plan on the CIO Applications Magazine and Gov CIO Outlook Magazine
CIO Applications and Gov CIO Outlook highlighted the City of Coral Gables Information Technology strategic plan in their
article "IoT as the Game Changer in Smart Cities". More: CIO Applications Article / Gov CIO Article



January 2019 - Coral Gables in the Bloomberg Challenge Creative Cities Report - The Creative City report highlights what each of the 35 Champion Cities learned during the Bloomberg Challenge competition's 6-month "Test & Learn" phase - which may have been the largest public-sector prototyping experiment in history. Coral Gables was one of 35 Champion Cities finalists in the Country, partnering with University of Miami to build a Resilient Energy System prototype. More: Report.



## January 2019 - City of Coral Gables and University of Miami "Design your Coral Gables" Smart City Solutions Competition

The City of Coral Gables and the University of Miami have partnered organizing and launching the "Design Your Coral Gables" Smart City Solutions Competition, which invites participants to bring their ideas to life by prototyping technology solutions on one of five transportation and traffic challenges. On January 25, 2019, we launched with our UM partners the Coral Gables Smart City Solutions Competition, with good participation from the attendees. During the launch event our City team presented the Coral Gables smart city initiatives and some of the top traffic and transportation challenges. It was a successful event and a big learning experience for all of us. Thank you to the University of Miami for the partnership, to our City leaders who attended and supported the event, and to all who participated and registered for the competition!

Do you have ideas on how to improve the quality of life for those who live, visit, study, or work in the City of Coral Gables? Please click here to learn more about how to participate: Register here











L-R: IT Director Raimundo Rodulfo, Sr. Multimodal Transportation Engineer Mark Brown, IT GIS Manager Mark Hebert

## Jan 25, 2019 - City of Coral Gables at the University of Miami 2019 Smart Cities Conference

The City of Coral Gables was exhibitor and presenter at the University of Miami 2019 Smart Cities Conference. I.T. Department staff was at the City's booth in the exhibit hall showcasing the Coral Gables smart city initiatives and the Coral Gables Smart City Hub public platform. More: Event Link







L-R: IT Analysts Chris Cowen, Rayza Collazo, Ben Thomas, and Paulson Jean; IT Director Raimundo Rodulfo, Visitors, IT GIS Manager Mark Hebert

#### Jan 2019 - City of Coral Gables in the ArcNews GIS Winter Publication

The ArcNews GIS journal published an article by our I.T. GIS Manager Mark Hebert, titled "Smart City Hub Meets the Needs of Modern Citizens". More: Article - Publication.





I.T. GIS Manager Mark Hebert

#### Jan 19, 2019 - Future Cities Competition

I.T. Director Raimundo Rodulfo was invited to be a judge at the Future Cities Competition at Florida International University. The competition featured bright young minds in action with impressive ideas on how to make future cities smarter, more resilient and sustainable. The prototypes, the innovative and creative solutions and the school student team presentations were thought-provoking and inspiring. Thank you to the Florida Engineering Society and IEEE for the invitation to be part of this great event, and thanks to FIU for the hospitality. More: <a href="Site">Site</a>







#### January 2019 - City of Coral Gables I.T. at CES 2019

I.T. Systems Analyst Alex Gamundi attended the CES 2019 technology expo and its smart city sessions to research urban and consumer electronics technology trends, and to meet with experts from industry and academia. More: <a href="CES Site">CES Site</a>.







L-R: IT Systems Analyst Alex Gamundi, Dr. Sara Rushinek and Dr. Avi Rushinek (University of Miami); Alex Gamundi.

Nov-December, 2018 - City of Coral Gables Wins First Place in the 2018 Digital Cities Award, Up to 75K Population Category

City of Coral Gables won first place nationally in the Digital Cities 2018 awards, in the category of Up to 75K population. This is an annual recognition of city performance and innovation in "using technology to align with city goals; promote citizen inclusion in important government processes and share government data with the public; proactively address citizen expectations; and boost cybersecurity and increase efficiency." Thank you to the Center for Digital Government and e-Republic/Govtech for this recognition! Our information technology team is happy and highly motivated to continue moving forward; working together with City leaders, all departments and our partners; improving citizen services, and advancing smart city technologies and innovation. IT Director Raimundo Rodulfo received the award on behalf of the City at the National League of Cities annual conference on November 8<sup>th</sup>, 2018. More: Award Site - News Post - Article - Article











#### December 2018 - GovTech Magazine 2018 Year in Review Special Issue Features City of Coral Gables

The GovTech Magazine 2018 Year in Review issue features City of Coral Gables as the winner of the first place nationwide in our population category in the Digital Cities Awards: Page 14: "Winning Cities"; and Page 46: "They're No. 1". This special issue features great articles with 2018's biggest trends, analysis and news in government technology. More: Magazine Issue



#### December 6, 2018 - City of Coral Gables at the University of Miami Big Data Conference

I.T. Director Raimundo Rodulfo was a speaker at the UM Big Data Conference on December 6<sup>th</sup>, 2018. More: Event Site.





3rd Annual BIG DATA Conference Thursday 12/6/2018 December 2018 - Kick-off Sessions of the New e-Permitting, Land Management & Licensing Enterprise System

The City started the implementation of the new electronic permitting enterprise system. This system provides a
comprehensive civic services solution for planning, permitting, and licensing to asset management and citizen requests, with
a platform that uses GIS to automate and connect critical processes, horizontally integrate city functions, streamline
workflows, improve communication, and increase productivity from desk to field.







#### November 2018 - Electronic Plan Review Stations

As part of the implementation of the new Electronic Permitting Enterprise System, several electronic plan review stations are being installed in different City departments. The stations have large format digital tables and engineering software to allow paperless plan review process, collaboration and workflow efficiency, and digital annotation with markup tools.





## November 8, 2018 - City of Coral Gables at the Miami Tech Summit.

The City of Coral Gables was an exhibitor at the Miami Tech Summit. More: Event site







L-R: IT Data Analyst Chris Cowen, IT Network Manager Gisela Rodriguez, Chris Cowen, IT Network Analyst Efrain Fleites

#### November 2018 - GovTech Features the CGIT Strategic Plan in Article

The CGIT Strategic Plan document has been featured by GovTech in this article, in which the City has been highlighted for its use of IoT. GovTech featured the article in their GovTech 100 and their Biz Data Visualization newsletter. More: Article



#### November 8, 2018 - City of Coral Gables at the Government Innovation Awards.

The City of Coral Gables was invited to present its smart city and innovation initiatives at the Government Innovation Awards, an annual celebration of government IT's disruptors, innovators and emerging leaders. Assistant IT Director Nelson Gonzalez presented the Coral Gables smart city initiatives at the Innovation Arcade area of the event. More: Event site







## October 30-31 2018 - City of Coral Gables at Unbound Miami Innovation and Entrepreneurship Conference

The City team was at the Unbound Miami innovation and entrepreneurship event. We were at the City's booth with Economic Development Director Pamela Fuertes and IT Applications Manager Lemay Ramos, showcasing the Coral Gables smart city innovation and economic growth initiatives. Director Pamela Fuertes was part of a great panel with regional leaders discussing the topic of breaking innovation barriers in South Florida. More: <a href="Event Site">Event Site</a>





L to R: IT Applications Manager Lemay Ramos, Economic Development Director Pamela Fuertes, IT Director Raimundo Rodulfo

October 25, 2018 - City of Coral Gables Presentation at the Smart Cities Connect and Defense TechConnect Conferences
The City of Coral Gables I.T. Director participated in two panels at Smart Cities Connect and Defense TechConnect conferences
in Tampa, with NIST SC3 supercluster on data and DITAC innovation challenge. The panel discussions and presentations
covered topics such as data-driven smart city initiatives and strategic mobility solutions. More: Agenda 1 - Agenda 2







October 24-25, 2018 - City of Coral Gables in the Southeast Florida Regional Climate Summit Coral Gables Employees participated in the Southeast Florida Regional Climate Summit. More: Site



L to R: IT Customer Support & GIS Manager Mark Hebert and Public Works Senior Sustainability Analyst Matt Anderson

October 2018 - Forbes Magazine Published an Article about City of Coral Gables Smart Initiatives and Network Resiliency Click here to read the article: Article



October 2018 - Smart Cities Dive Published an Article about City of Coral Gables Smart Initiatives and Network Resiliency Click here to read the case study, titled "How Coral Gables, FL, Uses Smart Tech to Prepare for Hurricane Season": Article



## October 18, 2018 - City of Coral Gables at the Miami-Dade County League of Cities Best Practices Conference

Our City team showcased the Coral Gables smart city initiatives at the Miami Dade County League of Cities annual best practices conference. Coral Gables city officials and staff participated and spoke at various sessions on important topics such as resilience, sustainability and hurricane response operations. More: MDCLC BPC Site





L to R: IT Network Analyst II Paulson Jean, IT Director Raimundo Rodulfo, Assistant IT Director Nelson Gonzalez

#### October 3, 2018 - CGIT participated in a Roundtable at FIU Office in Washington D.C.

During Smart Cities Week in Washington, D.C., last week, FIU hosted an intimate roundtable discussion with local, congressional and federal officials in conjunction with the university's leading researchers in Washington, D.C. The luncheon focused on immediate opportunities to advance successful deployment of technologies. More: FIU in D.C. Site - Video





Washington, D.C.

L-R: 1. CGIT Director Raimundo Rodulfo, Dr. A. Selcuk Uluagac (FIU) / 2. Federal, Congressional, City of Coral Gables and FIU representatives

#### October 3, 2018 - City of Coral Gables at the Smart Cities Week Conference in Washington D.C.

The City of Coral Gables I.T. Director was invited to be a speaker at the Smart Cities Week conference in Washington D.C. in October 2018. His presentation was on 8/3 at the session "The Secure Smart City of Tomorrow (and why you need it today)." This annual conference was organized by the Smart Cities Council, and brought together those who are actively deploying smart technologies in cities around the globe, leading-edge organizations and cutting-edge solutions. Coral Gables also had an exhibition booth at the event. More: Event Site - Article - Presentation









#### 10/1/2018 - Beginning Phase IV of the CCTV/ALPR Project

In this phase, the City is implementing smart lights with CCTV cameras and sensors at 8<sup>th</sup> Street, Granada, Craft Neighborhood / Douglas Road proximity area, LPR at Bird Road and Red Road, CCTV cameras at Waterways and Parks, CCTV/ALPR/Speed trailers, software integration features, and related network infrastructure upgrades.

More: Press Release / eNews / City Beautiful Magazine



## September 2018 - IISE ISE Magazine Published a Case Study about Coral Gables Smart City Initiatives

The Industrial and Systems Engineering (ISE) magazine published a case study article titled "Smart City, USA" about Coral Gables smart city initiatives and quality engineering efforts in the IT Department to continuously improve processes citywide with methodologies such as Lean Six Sigma. More: <a href="https://example.com/real-title-">Article - Website</a>



## September 2018 - State Tech Magazine Published a Case Study about Coral Gables Smart City Initiatives

Click here to read the case study article, titled "Successful Smart City Projects Emphasize Citizen Rewards Now, Growth for Future": Case Study



## August 2018 - City of Coral Gables Smart City Article on the American Planning Association Technology Newsletter

The City of Coral Gables I.T. Director contributed with an article for the Summer 2018 issue of the American Planning Association (APA) Technology Newsletter.

More: Article - Issue - Website



American Planning Association

Making Great Communities Happen

## August 2018 - Assistant IT Director Participates in the Global Security and Public Policy (GSPP) Executive Program

Assistant IT Director Nelson Gonzalez, CISSP, Participated in the Jack D. Gordon Institute's Global Security and Public Policy (GSPP) Executive Certificate Program. This executive program engages participants by placing them in direct contact with public policy and security experts as they discuss, debate, and develop strategic solutions to global security threats in the 21<sup>st</sup> century; and brings together an international cohort of policy and security professionals dedicated to advancing their expertise in threat analysis, policy innovation, and decision-making practices.

More: <u>Site</u>







#### August 2018 - City of Coral Gables in the National Institute of Science and Technology (NIST) Smart City Program

The National Institute of Science and Technology (NIST) included the Coral Gables smart city initiatives into the NIST's Global City Teams Challenge "Smart and Secure Cities and Communities Challenge" (GCTC). The Global City Teams Challenge (GCTC) program is a collaborative platform for the development of smart cities and communities, led by National Institute of Standards and Technology, a bureau of U.S. Department of Commerce, in partnership with other U.S. federal agencies including U.S. Department of Homeland Security Science and Technology Directorate (DHS S&T), National Science Foundation, International Trade Administration, and National Telecommunications and Information Administration. It enables local governments, nonprofit organizations, academic institutions, technologists, and corporations from all over the world to form project teams, or "action clusters," and "SuperClusters," to work on groundbreaking Internet of Things (IoT) and Cyber-Physical Systems (CPS) applications within the city and community environment. The National Institute of Standards and Technology (NIST) launched the Global City Teams Challenge (GCTC) to encourage collaboration and the development of standards. GCTC's long-term goal is "to establish and demonstrate replicable, scalable, and sustainable models for incubation and deployment of interoperable, standard-based solutions using advanced technologies such as IoT and CPS, and demonstrate their measurable benefits in communities and cities."

More: Visit the City's GCTC page at NIST, and the complete list of action cluster projects here.





## August 23-24 2018 - City of Coral Gables at the South Florida GIS Expo

I.T. GIS Manager Mark Hebert was a presenter at the upcoming South Florida GIS Expo in West Palm Beach on August 23-24. He presented on our Smart City Hub public platform and related GIS projects and initiatives. Mark and IT Analysts Chris Cowen and Rayza Collazo also met with Dr. Jack Dangermond and other GIS industry experts at the event to discuss new technologies.

More: Event Agenda







L to R: IT Customer Support & GIS Manager Mark Hebert, Dr. Jack Dandermond, IT Analysts Rayza Collazo and Chris Cowen; Mark Hebert

#### August 16 2018 - IEEE Webinar about Coral Gables Smart City Initiatives

The Institute of Electrical and Electronics Engineers (IEEE) held a webinar titled: "Coral Gables Smart City Success Story" on August 16, 2018 at 2 pm ET. More: Webinar Site



#### July 2018 - New City Website - Beta Launch and Go-Live

The official City of Coral Gables website has a fresh, new look! Test out the beta version today and tell us what you think at <a href="mailto:feedback@coralgables.com">feedback@coralgables.com</a>! This new site is built on a new technology platform with improved functionalities, design, and mobile features. Update: The new website <a href="https://www.coralgables.com">www.coralgables.com</a> went live in September 2018. More: <a href="https://www.coralgables.com">Video - Beta Site</a>





IT Customer Support & GIS Team (L to R): GIS Manager Mark Hebert, Analyst Rayza Collazo, IT Technicians Neil Rodriguez, Mike Lopez

## July 2018 - New Mobile App - Beta Launch and Go-Live

The official City of Coral Gables mobile app has also been revamped with a fresh, new look! The new version has been redesigned to make it easier to use, more responsive, and enhanced with better access to other City services. More: App



## 7/30/2018 - City of Coral Gables Presentation at the FLGISA 2018 Annual Conference

The City's IT Director Raimundo Rodulfo presented the City's smart city technology and innovation initiatives at the Florida Local Government Information Systems Association (FLGISA) 2018 Annual Conference in Boca Raton, FL. More: Event Site



## July 2018 - The IEEE Standards University Magazine Published an Article about City of Coral Gables

The IEEE Standards Magazine published an article about Coral Gables in their July edition, dedicated to Disaster Recovery. "As we deploy technology-based infrastructure to assist us in all three phases of a disaster, it is important to recognize the role technical standards play in such infrastructure... 'Connected Through a Disaster' tells us the role IEEE 802 standards played in creating a resistant, reliable communications network to safeguard the City of Coral Gables' infrastructure and ensure uptime of critical services." More: Coral Gables Article – Magazine site – Magazine Issue – IEEE Paper



## 7/25/2018 - City of Coral Gables at Beacon Council's "One Community One Goal" Economic Development Event

The City of Coral Gables was at Beacon Council's "One Community One Goal" event in Marlins Park, promoting the City Beautiful to businesses and entrepreneurs, and showcasing our smart city technology and innovation that benefits residents, visitors and businesses. Our presence says loud and clear that we're a team player in helping shape the future of Miami-Dade County Government, side-by-side with other local organizations. More: News Post





L to R: IT Systems Analyst II Alex Gamundi, IT Director Raimundo Rodulfo

#### June 2018 - Smart & Resilient Published a Case Study about the Coral Gables Smart City Hub Public Platform

"Smart City Hub Unveiled by Coral Gables, Florida. One of the nation's first fully-planned communities, Coral Gables, Florida is making news by making good on its founders' mission. When George Merrick created the south Florida city in 1925, he envisioned a city that would offer every amenity to its residents, while at the same time would become a center for international business. In every respect, Merrick's dream has come true. A Smart City Hub was launched on the City's website in May, allowing Coral Gables to share the success of its artificial intelligence and open data with students, engineers, developers and others who see a benefit in collaborating. Considering its historical appreciation of architecture, culture and connectivity among its people, it's hardly surprising the city would find new ways to connect people with information. The Hub is a public platform for exploring and downloading open data; for discovering and building apps; and for engaging to solve important local issues. Collaborators and the public can access convenient city services, analyze and combine Open Datasets using maps and graphs, as well as develop new web and mobile applications. History meet hi-tech." More: Case Study



#### June 2018 - National League of Cities features Coral Gables Smart City Initiatives

Throughout June, National League of Cities are celebrating the innovation and forward-thinking attitude that keeps America's small cities and towns ready for the future. Their first #smallcityoftheday is Coral Gables, Florida: "Their recently-launched Smart City Hub is a public collaboration and open data platform that supports a beautiful and smart city. It aggregates in one place many elements... Together these interconnected and interoperable elements foster transparency, value creation, open data and analytics, actionable information, efficiencies, citizen engagement, mobility, accessibility, crowdsourcing, inclusion, and collaboration. Visit the Coral Gables Smart City Hub public platform at <a href="https://www.coralgables.com/smartcity">www.coralgables.com/smartcity</a>". More: <a href="https://www.coralgables.com/smartcity">NLC Post</a>



#### May 19-22 2018 - City of Coral Gables at the IISE 2018 Annual Conference

I.T. Director Raimundo Rodulfo was a presenter at the 2018 annual conference of the Institute of Industrial and Systems Engineers (IISE). He presented the content of a paper he coauthored with Dr. Karen Schmahl from Florida International University (FIU), titled "Continuous Improvement in Municipal Information Technology Department" and based on six sigma black belt projects completed at the City's I.T. Department. More: Event Site



### April 2018 - Information Technology Strategic Plan Update 2018

The I.T. Department presented its strategic plan 2018 update document, with accomplishments and updates on enterprise projects and initiatives previously documented on the 2017 plan. This plan includes our new posters that visualize our smart city vision, roadmap and engineering conceptual design. Through these strategies, the City of Coral Gables promotes the development of a smart city ecosystem that fosters innovation by bringing together through technology People; Businesses, Organizations; Things, and Systems. By leveraging strategic planning and innovation, the City's digital transformation and smart initiatives benefit the citizens with continuous improvement of customer service and quality of life. Our smart city roadmap is defined by the components of transparency, value creation; open data and analytics; actionable information, efficiencies; citizen engagement, mobility, accessibility; crowdsourcing; inclusion and collaboration. This roadmap implements several interconnected and interoperable elements that include a Smart City Hub public platform, a Data Marketplace, an Application Store, Transparency Portals, a Crime Intelligence Center; Data Platforms, Internet of Things, and a robust and resilient technology infrastructure with high-speed communications. More: IT Strategic Plan 2018 Update







L to R: Assistant IT Director Nelson Gonzalez, IT Customer Support & GIS Manager Mark Hebert, IT Network Manager Gisela Rodriguez, IT Director Raimundo Rodulfo, IT Applications Manager Lemay Ramos, IT Systems Manager Ayanes Apolinar

## April 2018 - Launch of the Coral Gables Smart City Hub Public Platform

This is a collaboration and open data platform for a beautiful and smart city. It aggregates in one place many interconnected and interoperable elements that include a Data Marketplace, an Application Store, Transparency Portals, Citizen Engagement tools, Enterprise Systems and e-Gov City Services, Internet of Things sensor data and dashboards, a Crime Intelligence Center; Data Platforms, GIS applications and open data, APIs and developer tools, and many more features and functionalities that foster transparency, value creation; open data and analytics; actionable information, efficiencies; citizen engagement, mobility, accessibility; crowdsourcing; inclusion, collaboration. More: <a href="https://www.coralgables.com/smartcity">www.coralgables.com/smartcity</a> / News Post / Video





L to R: Applications Manager Lemay Ramos, Network Manager Gisela Rodriguez, Systems Analyst Rayza Collazo, IT Director Raimundo Rodulfo, IT Assistant Director Nelson Gonzalez, Customer Support & GIS Manager Mark Hebert, Systems Manager Ayanes Apolinar

#### April 23-24, 2018 - City of Coral Gables at eMerge Americas 2018

For third year in a row, the Coral Gables Information Technology Department represented the City Beautiful at the eMerge Americas 2018 Technology and Innovation Expo as an exhibitor. At exhibitor booth 1137, we presented our smart city and innovation initiatives, including the new Smart City Hub public platform. Our team received good feedback about the City's smart initiatives and new platforms from visitors, technology organizations, and members of academia attending the event.

More: News Post / Event Site













L-R: Chris Cowen, Rayza Collazo, Alex Gamundi, Monica Conde, Paulson Jean, Alex G., Nelson Gonzalez, Ayanes Apolinar, Mark Hebert

## 4/17/2018 - IEEE Published a Smart City Case Study about Coral Gables

The Institute of Electrical and Electronics Engineers (IEEE) published a smart city case study about Coral Gables, as a follow up to our winning of their world standards contest prize earlier this year. Their article is titled "Connected through a Disaster" and talks about how the City of Coral Gables developed a robust network and system infrastructure based on engineering standards and best practices that enables residents and first responders to stay connected even when Mother Nature strikes at her hardest. More: Article



## 4/6/2018 - Free Wi-Fi Available at Giralda Plaza

Pedestrians shopping or sitting down for a meal on Giralda Plaza and Miracle Mile can now connect to the City of Coral Gables public Wi-Fi network to access the internet, free of charge. A "CG\_Guest" prompt will show up on all mobile devices. This new public Wi-Fi network in Downtown Gables also provides usage statistics through sensor data, which provide pedestrian and visitor counts. Free Wi-Fi is already available at the following frequently visited City facilities: City Hall, War Memorial Youth Center, Venetian Pool, Salvadore Tennis Center, Riviera Park, Adult Activity Center, Passport Office, Public Safety Building, 427 Biltmore Way and 72<sup>nd</sup> Avenue. Other locations coming soon (Phillips Park, Ingraham Park, Cartagena Circle).

More: Video / eNews

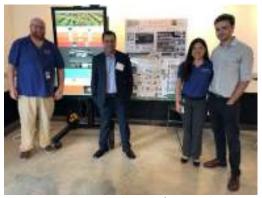




IT Network Team (L to R): Analyst Paulson Jean, Network Manager Gisela Rodriguez, Analysts Roger Rodriguez, Jose Bellas, Efrain Fleites

#### 4/5/2018 - City of Coral Gables Exhibition at the University of Miami's Smart Cities Conference

City of Coral Gables was at University of Miami's Smart Cities Miami Conference, presenting our own Coral Gables' smart city and innovation initiatives and plans, including the new Smart City Hub public platform. More: <a href="News Post">News Post</a> / <a href="Event Page">Event Page</a>



L to R: IT Analyst Ben Thomas, IT Director Raimundo Rodulfo, IT Analysts Rayza Collazo and Chris Cowen

#### 4/6/2018 - Best Concept Design Award at University of Miami's Smart City Conference Workshop

Coral Gables IT Systems Analyst I Benjamin Thomas won the prize for "Best Concept Design" at the University of Miami Smart City Conference, during the workshop "Hacking Main Street: How can technology enhance public space?" Ben's idea of leveraging Internet of Things sensors and analytics to enhance visitor experience at the County's Underline Project park spaces received the "Best Concept Design" from the UM faculty and event organizers, and was also praised for being the most actionable idea. More: Event Page



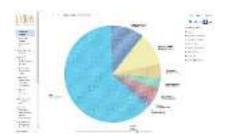
#### 4/6/2018 - City of Coral Gables Presentation at Florida International University's GIS Day Conference

The City's IT Customer Support and GIS Manager, Mark Hebert, was a guest speaker at GIS Day Conference, hosted by FIU, showcasing our own geographic information system's work and the new Smart City Hub public platform. Thank you to all professors, researchers and students for their involved participation. More: News Post



#### 4/6/2018 - Launch of the City's new Transparency Portal: Increasing Public Trust with Financial Transparency

The City of Coral Gables is committed to increasing public trust by promoting a more accountable and open government. A Financial Transparency Portal is now available, transforming complex financial information into simple-to-understand charts that answer common questions about tax dollars spending. The City of Coral Gables has partnered with OpenGov, a platform that allows users to manipulate data in a number of ways using filters and drill down options for easy reading. If you're interested in knowing what the City spends money on, how much money is spent on Public Safety, or where the general fund revenues come from. More: Video / eNews



## 3/22/2018 - Coral Gables Champion City Core Team at Bloomberg Philanthropies Ideas Camp

Our Coral Gables Core Team (Commission Liaison Chelsea Granell, Dr. Nurcin Celik (University of Miami), Information Technology Director Raimundo Rodulfo, and Sr. Sustainability Specialist Matthew Anderson) were in New York City to participate in the Bloomberg Philanthropies Mayors Challenge Ideas Camp. They are representing Coral Gables as one of 35 finalist champion cities in this nationwide competition, brainstorming on how to build a smart energy micro-grids prototype. This idea will prioritize power distribution during emergencies to ensure public safety operations in Coral Gables can continue after a hurricane. The Bloomberg Challenge's goal was to encourage city leaders to uncover bold, inventive ideas that confront the toughest problems cities currently face. More:

News Post 1 / News Post 2 / Article





1. L to R: Matt Anderson, Dr. Nurcin Celik (UM), Chelsea Granell, Raimundo Rodulfo - 2. Bloomberg Mayors Challenge group photo

## 3/6/2018 - Free Wi-Fi Available at Miracle Mile

Pedestrians shopping or sitting down for a meal on Miracle Mile can now connect to the City of Coral Gables public Wi-Fi network to access the internet, free of charge. A "CG\_Guest" prompt will show up on all mobile devices. This new public Wi-Fi network in Downtown Gables also provides usage statistics through sensor data, which include pedestrian counts. Free Wi-Fi is already available at the following frequently visited City facilities: City Hall, War Memorial Youth Center, Venetian Pool, Salvadore Tennis Center, Riviera Park, Adult Activity Center, Passport Office, Public Safety Building, 427 Biltmore Way and 72<sup>nd</sup> Avenue Facilities. More: Video / eNews



#### 3/1/2018 - City of Coral Gables Submitted Proposal for Smart City Traffic Technology Infrastructure Expansion

The City submitted a proposal to the TPO UPWP Municipal Participation SMART Moves Program for an expansion of Smart City Traffic Technology Infrastructure; and Personal Commute Connection, to streamline the City of Coral Gables downtown transportation matrix; and improve mobility, traffic and safety with smart city technologies. More: <u>Site</u>



## 2/21/2018 - Coral Gables is one of 35 Champion Cities selected today as finalists in the 2018 U.S. Mayors Challenge

Coral Gables is one of 35 Champion Cities selected today as finalists in the 2018 U.S. Mayors Challenge, a nationwide competition that encourages city leaders to uncover bold, inventive ideas that confront the toughest problems cities face. The City of Coral Gables generated an idea to make its existing critical infrastructure more resilient to natural disasters and other events that may impair emergency response services by integrating smart energy micro-grids. These 35 urban innovations rose to the top of a competitive pool of more than 320 applications. Coral Gables now advances to the six-month "Test, Learn, and Adapt" phase of the competition. Cities will refine their ideas during this process with up to \$100,000, as well as personalized support from innovation experts, to test and begin building support for their urban innovations and submit a new application in August 2018. In October, four cities will receive \$1 million awards and one will receive a grand prize of \$5 million to bring their ideas to life. More: News Post / Press Release / Site / Video



## 1/25/2018 - Launch of the Coral Gables Traffix App: A Homegrown App that Helps Report Traffic Issues

The City of Coral Gables is introducing a new app designed by the IT Department in-house to enhance citizen engagement and improve public safety. Coral Gables Traffix is the official reporting app to let officials know about chronic traffic issues within our city boundaries. It is available for free downloading on Apple or Android (Google) App Stores by searching "Coral Gables Traffix." Users can take photographs and report recurring traffic issues such as blocking the box, speeding, illegal parking, speeding in a school zone, pedestrian issues, running a red light or a stop sign. More: App / Presentation / Story / Video





IT Applications Team (L to R): Analysts Sean Meadows, Chris Cowen, Monica Conde, Adriana Mendoza, Applications Manager Lemay Ramos

#### 2/21/2018 - City Partners with University of Miami for GIS Civic Engagement Program

The City of Coral Gables and the University of Miami are collaborating on a new program that puts the lessons learned in the classroom into public practice. The City's Information Technology Department is collaborating this Spring semester with UM's Director of Geospatial Technology Program Professor Diana Ter- Ghazaryan in a GIS course to guide students on geospatial technology projects, offering practical internships in local government. In turn, the City will have access to the ideas of more than 20 engaged students who will work in teams to identify opportunities and create new City projects. More: eNews



IT GIS Analyst Rayza Collazo and IT GIS Manager Mark Hebert

## 1/25/2018 - City Wins IEEE 2017 World Standard Day Smart City Video Contest Prize

In celebration of World Standards Day, the Institute of Electrical and Electronics Engineers (IEEE) Standards Association held a contest exploring the 2017 theme of "standards make cities smarter." Contestants submitted videos exploring how standards are helping to create the smart city of today and tomorrow. Each winner's video included references to Smart Cities standards and how they address a problem. Entries were judged on their relevance to Smart Cities, creativity, originality, and quality of production. The City of Coral Gables winning submission was about how the City developed a robust network and system infrastructure based on engineering standards and best practices that enables residents and first responders to stay connected even when Mother Nature strikes at her hardest. The IEEE, originated in 1884, is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

More: Announcement / Presentation / Video



#### 1/25/2018: Energy and Sustainability Collaboration Program with Miami-Dade College

The City of Coral Gables started a collaboration program with Miami Dade College for mentorships and development support of energy efficiency and sustainability plans. More: <u>Site</u>



#### 12/15/2017 - Launch of the New Parks and Recreation Enterprise System

The new PlayGables system is designed and developed specifically for municipal and county government recreation and parks departments, golf courses, park districts, and park maintenance operations. The applications contain complete financial accounting and point-of-sale capabilities, as well as integration with a full range of point-of-sale hardware products and complementary software products. Provides staff and customers with real-time internet access to the application for self-service inquiries and transaction processing, such as online registrations, online membership, online membership renewals, and online facility registrations. It offers customers easy and convenient Internet access to our Parks and Recreations services - 24 hours per day, 7 days per week. More: www.PlayGables.com



## 12/15/2017 - New Conference Paper: "Continuous Improvement in Municipal Information Technology Department"

The I.T. Director Raimundo Rodulfo coauthored a paper with Dr. Karen Schmahl, quality engineering professor at FIU, based on six sigma black belt projects at the City's I.T. Department (improving citywide I.T. infrastructure, processes, performance, customer services, cost-efficiency, and innovation). An abstract of their paper "Continuous Improvement in Municipal Information Technology Department" was submitted to the Institute of Industrial and Systems Engineers (IISE), to be presented at their Annual Conference in Orlando in May 2018. The IISE, founded in 1948, is a professional society dedicated to the support of the industrial and systems engineering profession and individuals involved with improving quality and productivity. More: Conference



#### 12/10/2017 - New Internet of Things (IoT) Portal Went Live.

The new IoT portal was launched on the City's website. It started showing the IoT pedestrian eco-counter sensors implemented on Giralda Plaza. The data and analytics from these pedestrian counters is visible and accessible to the public via the City's new smart city IoT platform. This sensor data is very useful to City departments, businesses, researchers, academia, and the public in general. An open data platform with visibility and analytics from live IoT sensors is one of the milestones in our smart city roadmap. The IT Department will continue enhancing the City's smart city platforms with data from more IoT sensors to come in the next months, including smart lights and sensors in Miracle Mile (vehicle/bikes/pedestrian traffic, parking spaces, environmental, air quality, and acoustic sensors). These smart city platforms continue improving and adding value and insight to the City's strategies in technology, economic development, public safety, traffic/transportation, sustainability, citizen engagement and other key areas. More: IoT Portal



#### 12/10/2017 - The City Submitted a proposal for Smart City Telecommunications Infrastructure Expansion

The City submitted a proposal and grant application to Enterprise Florida and the Department of Economic Opportunity to expand the fiber-optics network buildout in Downtown Gables for smart city, public safety, and economic development projects. The proposal includes technical analysis and design, and economic impact studies of smart city and smart safety infrastructure. More: Site



#### 11/15/2017 - City of Coral Gables Presentation at University of Miami GIS Day Conference 2017

IT Crime Data Analyst Christopher Cowen and IT GIS Analyst I Rayza Collazo did a presentation at University of Miami's GIS Day Conference. Their presentation was on smart city and public safety GIS methodologies, projects and initiatives, including GIS applications for emergency operations, used by City workers during Hurricane Irma. More: News Post / Event Site



L to R: IT GIS Analyst Rayza Collazo, IT Crime Data Analyst Chris Cowen

**11/1/2017** - City of Coral Gables Joined University of Miami in Support of Proposal to the National Science Foundation The City of Coral Gables joined University of Miami in support of their proposal to the National Science Foundation for funding of an innovative research project by Dr. Nurcin Celik on smart energy microgrids.



## 10/10/2017 - New IoT Pedestrian Counter Sensors on Giralda Plaza

New Internet of Things IoT Pedestrian Counter sensors went live on Giralda Plaza before its opening. They started providing valuable data for city planners, public safety, event coordinators, businesses, researchers and public in general, with real-time actionable data and analytics.





IT Systems Team (L to R): Anna Vall, Systems Analysts Brenda Delgado, Ben Thomas, Alex Gamundi, Systems Manager Ayanes Apolinar

#### 10/1/2017 - Beginning Phase III of the CCTV/ALPR Project

In this phase, the City is implementing 6 smart lights with CCTV cameras and sensors at 8<sup>th</sup> Street and Craft Neighborhood / Douglas Road proximity area, plus 8 CCTV cameras at Waterways and Parks, plus 4 CCTV/ALPR/Speed trailers.

More: Press Release / eNews / City Beautiful Magazine



## 9/1/2017 - Launch of Parking Permit Online Renewal System

The City now offers the service to renew parking permits online. Customers can manage their account information by editing name, address, phone number and adding vehicle information and assigning a vehicle(s) to each permit before proceeding to checkout. More: Parking Permit Renewal Portal



### 8/13/2017 - CGIT at Singularity University Global Summit 2017

At the SU Global Summit, the I.T. Director Raimundo Rodulfo met with leaders in smart cities and exponential organizations; and later refined strategies with IT staff to accelerate innovation and action plans, add more value, advanced technology, and quicker results for the City and its constituents, with an open mind for change and innovative approaches. More: <u>Event Site</u>.



## 8/1/2017 - ICMA Published Book with Smart City Case Study about Coral Gables

ICMA published their "Smart Solutions: Technology Serving Communities" book with a smart city case study about Coral Gables, featuring interviews to staff from the Information Technology Department and the Public Works Sustainability Division. Formed in 1914, ICMA is the leading association of local government professionals dedicated to creating and sustaining thriving communities throughout the world. With over 10000 members, the organization advances professional local government through leadership, management, innovation, and ethics. More: Book and smart city case study / eNews



#### 7/11/2017 - City Commission Passed a Resolution to Create an Innovation Council

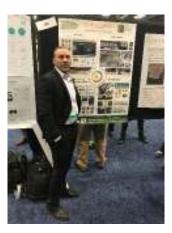
The City's Innovation Council is an informal think-tank with qualified members appointed by the Mayor, with input from Commissioners, Academia, City Manager's Office, Economic Development and Information Technology directors. Its mission is to partner with innovative technology organizations to make the City of Coral Gables a smarter and more advanced community and the Innovation Center of the Americas.



Members of the City's Innovation Council

#### 6/11/2017 - City of Coral Gables Presentation at Smart Cities Connect 2017 Conference

IT Systems Manager Ayanes Apolinar presented the Coral Gables smart city initiatives at the Smart Cities Connect 2017 Conference in Houston. More: <a href="Event Site">Event Site</a>



## 6/12/2017 - eMerge Americas 2017 CGIT Smart City Initiatives Exhibition

For second year in a row, the Coral Gables Information Technology Department represented the City Beautiful at the eMerge Americas 2017 Technology and Innovation Expo as an exhibitor. CGIT presented our smart city and innovation initiatives. More: News Post / Video



IT Network Analyst Paulson Jean, IT Director Raimundo Rodulfo, IT Analysts Chris Cowen and Eric Machado

#### April 2017 - New Trolley App went Live

The City launched its new Trolley Mobile App which provides real-time tracking of the city trolleys on an interactive map with trolley routes and stops, providing value and convenience for Coral Gables residents, workers and visitors. This app is integrated with the City's mobile app. More: App - Web



#### 6/21/2017 - Launch of FreeBee Service and Mobile App

Freebee Offers Free Rides in Downtown Coral Gables. You can get a quick drive around Downtown Coral Gables thanks to a new partnership between the City of Coral Gables and Freebee, a green transportation service that will offer free door-to-door rides around your favorite destinations. It's a fun and convenient way to get around the Streetscape construction and get Downtown customers to where they need to go – fast and stress-free. Friendly drivers in sleek electric vehicles will be on the street from 11 a.m. to 11 p.m. seven days a week. All you need to do is request this service on your smart phone through the Ride Freebee app. More: Webpage / Video



#### 6/28/2017 - Launch of In-telligent Mobile App

The City of Coral Gables partnered with In-Telligent to provide real-time community alerts to inform citizens and keep them safe in times of emergencies. If you download the free In-telligent app you'll get life safety alerts on your mobile device, informing you immediately of what's going on around you. The In-telligent app is free to anyone.

More: News Release / Video



#### 11/16/2016 - City of Coral Gables Presentation at University of Miami GIS Day Conference 2016

The University of Miami hosted a series of seminars at the Richter Library to celebrate the GIS Day, and members of the City's Information Technology Department, including Mark Hebert, Rayza Collazo, and Lourdes Ginart, were invited to explain how GIS plays an important role in our daily operations. Mark Hebert made a presentation explaining the City's various GIS projects and initiatives that they are working on, as well as industry trends. More: <a href="News Story">News Story</a>



L to R: 1. IT Technician Lourdes Ginard, IT Analyst Rayza Collazo, IT GIS Manager Mark Hebert - 2. Mark Hebert

## 10/1/2016 - Beginning Phase II of the CCTV/ALPR Project

In this phase, the City implemented 26 CCTV cameras at the City's Downtown Streetscape area (Miracle Mile, City Hall, Giralda Plaza, Douglas and Coral Way), Old Cutler Road and Journey's End/Matheson Hammock entrance, and Parking Garages (PG 2 and 6.) Also, implemented BriefCam at the Crime Intelligence Center, and 15 emergency call boxes at street public areas and garages in Downtown Gables. More: Press Release



#### 4/18/2016 - eMerge Americas 2016 CGIT Smart City Initiatives Exhibition

The Coral Gables Information Technology Department represented the City Beautiful at the eMerge Americas 2016 Technology and Innovation Expo as an exhibitor. CGIT presented our smart city and innovation initiatives. More: <u>Event Site</u>



L to R: IT Analyst Lucas Christopher, IT Director Raimundo Rodulfo, IT GIS Manager Mark Hebert, IT Analyst Alex Gamundi

## 10/31/2015 – Beginning Phase I of the CCTV/ALPR Project

In this phase, the City implemented a Crime Intelligence Center with video walls and workstations with public safety applications, a CrimeView crime data analysis system, geospatial data analysis systems, a wireless backbone, 24 License Plate Readers and 3 CCTV cameras at 12 locations, including sites at the City's geofence and public safety sensitive locations such as: US-1, Riviera, Country Club Prado at Red Rd. and 8th Street, Granada and Bird Rd., Douglas and Coral Way, Coral Way and Red Rd., Ingraham/Cocoplum Park, and Old Cutler Rd.; and 1 CCTV portable trailer "Sky Eye" unit. CCTV Cameras are placed in strategically selected locations of high traffic and pedestrian areas to provide a geo-fence around the City of Coral Gables. Crime Intelligence Center is a new state-of-the art command center in Police headquarters that receives video feeds from all City-owned cameras and private cameras where owners have given permission for their use. License Plate Readers are located at key intersections throughout Coral Gables to identify persons or vehicles whose license plates are connected to criminal activity or infractions. New Crime Analysis Technology: Introduction of Crime View software technology to enhance situational awareness and crime analysis capabilities. More: Press Release







## 10/23/2015 - City of Coral Gables I.T. Department at the FIU Cybersecurity Conference

Asst. CIO Raimundo Rodulfo participated as a panelist at the Florida International University Cybersecurity Conference "Trends in Cybersecurity - Security of Smart Things: From cards to wearables", during the session "Panel 3: Smart City". More: Conference Program - Site



## 1/15/2015 - CGIT Published the Document "Glossary of Smart Cities and Urban Computing Terms"

The Coral Gables I.T. Department published the document "Glossary of Smart Cities and Urban Computing Terms", compiling terms and definitions extracted from several science and technology papers, essays and articles. More: <a href="Document">Document</a>





## 12/2/2014 - Launch of Coral Gables Mobile App

City of Coral Gables launched a new mobile app that provides anytime, anywhere access to the City's programs and services. Make a service request and track it, report a pothole or light outage - and include a photo and location. The app also makes it convenient to find the nearest parking spot, or search one of the hundreds of places in the City to dine, shop or catch a show - plus much more: Video - Download App



## 10/1/2014 - Launch of ParkMe Smart Parking App

The City of Coral Gables started a partnership with ParkMe, a free app that helps you find and reserve the closest and cheapest parking around, saving money and time. ParkMe shows how much you should expect to pay for parking before you arrive. With prices laid out on the interactive map, you can easily compare parking options. In City of Coral Gables, ParkMe also shows you real-time available parking. That way you can avoid circling the block for hours, and get on with your day faster. The City in partnership with Inrix/ParkMe, a provider of smart parking systems, has built integration between this app and the City's parking garage systems, to provide real-time hourly rates, occupancy/availability, and GPS navigation. More: Site



#### More Information at:

- I.T. Department: <u>www.coralgables.com/IT</u>
- I.T. Smart City Digital Library: <u>www.coralgables.com/ITDocs</u>
- Smart City Hub: www.coralgables.com/smartcity
- Innovation & Technology Strategic Plan: http://www.coralgables.com/ITStrategicPlan
- Strategic Management Frameworks: <a href="https://www.coralgables.com/media/IT/CGIT\_SmartCityPoster2020.png">https://www.coralgables.com/media/IT/CGIT\_SmartCityPoster2020.png</a>
- Engineering Poster: http://cggisw.coralgables.com/images/gisweb/CGIT SmartCityPoster 2018 mid resized.png
- Smart City Plan Poster: <a href="http://cggisw.coralgables.com/images/gisweb/cgit-smartcityposter-2017.png">http://cggisw.coralgables.com/images/gisweb/cgit-smartcityposter-2017.png</a>
- Coral Gables NIST GCTC AC site: https://gctc.opencommons.org/Coral Gables Smart City Hub Public Platform

**Electronic Version:** www.CoralGables.com/TechStories