



## **AGENDA**

**CITY COMMISSION WORKSHOP MEETING  
MONDAY, NOVEMBER 13, 2023, AT 5:00 P.M.**

**CITY OF ST. AUGUSTINE BEACH, 2200 A1A South, St. Augustine Beach, FL 32080**

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### **NOTICE TO THE PUBLIC**

*THE CITY COMMISSION HAS ADOPTED THE FOLLOWING PROCEDURE: PERSONS WISHING TO SPEAK ABOUT TOPICS THAT ARE ON THE AGENDA MUST FILL OUT A SPEAKER CARD IN ADVANCE AND GIVE IT TO THE RECORDING SECRETARY. THE CARDS ARE AVAILABLE AT THE BACK OF THE MEETING ROOM. THIS PROCEDURE DOES NOT APPLY TO PERSONS WHO WANT TO SPEAK TO THE COMMISSION UNDER "PUBLIC COMMENTS."*

### **RULES OF CIVILITY FOR PUBLIC PARTICIPATION**

1. The goal of Commission meetings is to accomplish the public's business in an environment that encourages fair discussion and exchange of ideas without fear of personal attacks.
2. Anger, rudeness, ridicule, impatience, and lack of respect for others is unacceptable behavior. Demonstrations to support or oppose a speaker or idea, such as clapping, cheering, booing, hissing, or the use of intimidating body language are not permitted.
3. When persons refuse to abide by reasonable rules of civility and decorum or ignore repeated requests by the Mayor to finish their remarks within the time limit adopted by the City Commission, and/or who make threats of physical violence shall be removed from the meeting room by law enforcement officers, either at the Mayor's request or by an affirmative vote of a majority of the sitting Commissioners.

**"Politeness costs so little." – ABRAHAM LINCOLN**

- I. **CALL TO ORDER**
- II. **PLEDGE OF ALLEGIANCE**
- III. **ROLL CALL**
- IV. **PRESENTATION ON THE SMART CITY CONCEPT**
- V. **DISCUSSION OF THE 2023 VISION PLAN**
- VI. **ADJOURNMENT**

### **NOTE:**

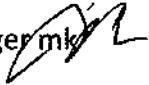
*The agenda material containing background information for this meeting is available on the City's website in pdf format or on a CD, for a \$5 fee, upon request at the City Manager's office.*

NOTICES: In accordance with Florida Statute 286.0105: "If any person decides to appeal any decision made by the City Commission with respect to any matter considered at this scheduled meeting or hearing, the person will need a record of the proceedings, and for such purpose the person may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based."

In accordance with the Americans with Disabilities act, persons needing a special accommodation to participate in this proceeding should contact the City Manager's Office not later than seven days prior to the proceeding at the address provided, or telephone 904-471-2122, or email [sabadmin@cityofsab.org](mailto:sabadmin@cityofsab.org).

# MEMORANDUM

**TO:** Mayor Samora  
Vice Mayor Rumrell  
Commissioner Morgan  
Commissioner George  
Commissioner Sweeny

**FROM:** Max Royle, City Manager 

**DATE:** October 30, 2023

**SUBJECT:** Information for Vision Plan/Smart Cities Workshop

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At your March 6, 2023, meeting, you adopted the Vision Plan, which had been developed by Margaret England when she was on the Commission and by the City Manager. In subsequent meetings, you spoke about having a workshop on the Vision Plan with the Sustainability and Environmental Planning Advisory Committee and the Comprehensive Planning and Zoning Board.

Also, at a subsequent meeting, Commissioner Morgan spoke of hearing at a Northeast Florida League of Cities' meeting a presentation about the Smart Cities concept by Mr. Clayton Levins of Smart North Florida. She suggested inviting Mr. Levins to make a presentation.

Attached is the following information:

- a. Pages 1-15, the Vision Plan.
- b. Pages 16-22, information from Mr. Levins about the Smart Cities concept. The notations on the righthand side were provided by the City Engineer as guidelines for how the City could use the Smart Cities concept.

Please note on pages 6-7 of the Vision Plan the definition of "Smart City" and the list of Smart City goals.

## ACTION REQUESTED

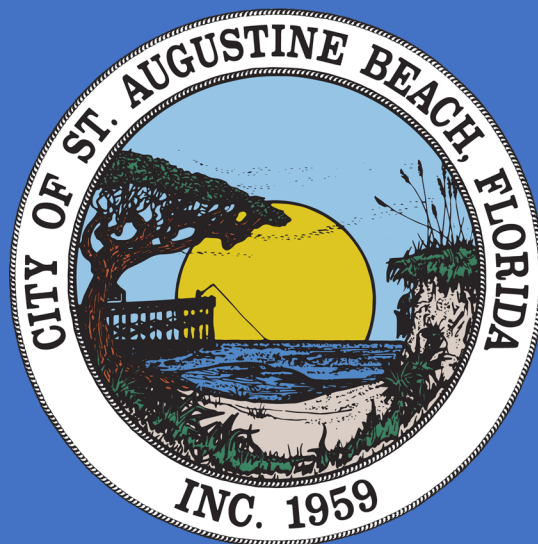
It is that you have Mr. Levins make his presentation concerning the Smart Cities concept. You can then discuss the applicability of the concept to help the City improve its operations.

Members of SEPAC and the Planning Board have been invited to the workshop.

City of St. Augustine Beach, Florida

Approved March 6, 2023

# VISION PLAN



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## I. INTRODUCTION

The City of St. Augustine Beach is located five miles southeast of St. Augustine and is approximately 2.5 square miles in area. Its boundaries are Anastasia State Park (north), Atlantic Ocean (east), western boundary of State Road A1A, except for subdivisions and other properties west of that highway that have been annexed into the City; and the southern boundary of the Sandpiper Village subdivision. The City's main industry is tourism with numerous hotels, motels and restaurants along its main street, A1A Beach Boulevard. Though the beach and ocean are the magnets that attract thousands of overnight and day visitors from interior areas of Florida and many states for swimming, sunbathing, fishing, and surfing, the City's character is largely residential with an estimated 2023 population of 6,914.

### Illustration 1



## **II. VISION STATEMENT**

St. Augustine Beach is an ocean-front paradise committed to preserving its natural resources, inspiring a socially responsible and engaged citizenry by means of communication, transparency and accountability, and supporting a safe and exceptional quality of life for its residents and visitors.

## **III. MISSION STATEMENT**

To maintain and enhance standards and activities that will ensure an exceptional quality of life for residents and visitors through effective and efficient municipal services.

## **IV. PURPOSE OF THE 2006 VISION PLAN**

In 2006, the City Commission hired a consultant, Wallace, Roberts and Todd, to do the City's first vision plan. The Commission appointed a 14-member Vision Plan Steering Committee, to develop the plan with the consultant and the Planning Board. The 2006 Vision Plan had five basic purposes:

1. To establish a coherent long-term vision for the A1A Beach Boulevard corridor, both in the public and private realms, by identifying community aspirations and integrating prior initiatives.
2. To proactively manage the growing pressure for redevelopment and infill by determining a desirable mix of land uses, intensities, and visual character of development, and by modifying development standards and regulations accordingly.
3. To activate the corridor and create a sense of identity and community by identifying opportunities for nodes of mixed activity at key locations.
4. To maximize the utility of City-owned squares (plazas) by identifying optimal uses and potential design prototypes, in line with the vision for the corridor.
5. To enhance the overall visual aspect and functionality of the corridor by creating pedestrian and bicycle linkages, providing amenities, and enhancing parking opportunities.

## **V. RESULTS OF THE 2006 VISION PLAN**

The Vision Plan was focused on the City's "main street," A1A Beach Boulevard. Several of the actions/projects listed in the 2006 Plan have been implemented and several have not been accepted:

1. Building height limits strengthened.
2. Business sign regulations updated.
3. The mixed-use district was enacted and applies to a section of Boulevard between Pope Road and F Street. However, certain recommended modifications to the Land Development Regulations were not done.
4. Some design guidelines for buildings along the Boulevard were included in mixed-use district regulations.
5. The Comprehensive Plan was amended in 2020 to incorporate a mixed-used district as a land-use type.

6. Initiatives Not Accepted or Created:

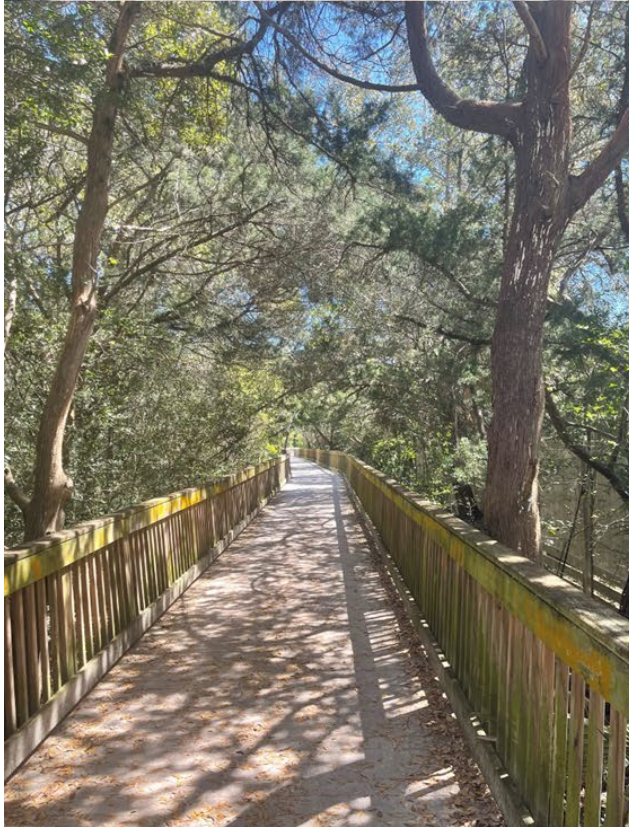
- Activity center
- A Street Town Center
- One goal in the 2006 Plan was to investigate funding/grant opportunities for parking and open space/recreation improvements for the plazas along the Boulevard. The grant sources listed were: Florida Communities Trust/Florida Forever program, Florida Land and Water Conservation Fund, Community Development Block Grant program, Florida Recreation Development Assistance Program, National Scenic Byways Program, Greenways and Recreational Trails Program, and Federal Urban Parks and Recreation Recovery Program. However, none of these applied to the very small (under a quarter acre) plazas in the City. Rather, the City sought Florida Recreation Development Assistance Program grants for the much larger Ocean Hammock Park.
- Initiate a dialogue with the County for possibly changing the name of A1A Beach Boulevard to Beach Boulevard was rejected.
- Create a logo for banners, signage, and marketing material in conjunction with creating town centers at A Street and the City's north end. As the centers weren't created, the logo wasn't created.

**VI. EXISTING CONDITIONS**

- A. As part of the foundation for the development of the 2023 Vision Plan, the following are existing features or characteristics that are beneficial to the City:
1. Public beach accesses: over twenty-five (25) beach access points.
  2. Five (5) public parks.
  3. Three (3) major pedestrian walkways.
  4. Over one thousand hotel/motel rooms available to visitors, in addition to private bed-and-breakfasts and short-term rentals.
  5. Two hundred twenty (220) small businesses, including four banks, and chain and non-chain restaurants and stores.
  6. Fifty-two (52) public plazas.
  7. St. Augustine Beach Hotel and Beachfront received U.S. National Park Service "National Register of Historic Places," January 2022.



Illustration 2



B. The following are existing features in the City that are unlikely to change and thus will not be addressed in the Plan:

1. **Road network:** If no new subdivisions are created, there'll likely be no addition to the existing road network. Nearly all of the existing roads have been paved. Comprehensive network of paved roads includes arterial highways (SR A1A and A1A Beach Boulevard), plus County-owned collector streets and City-owned residential streets that provide access to all residential subdivisions.
2. **New subdivisions:** It is unlikely that there will be any significant new subdivisions because there are no large tracts remaining in the City to be developed nor are there any large, vacant tracts adjacent to the City that could be annexed and developed as new subdivisions.
3. **Water and sewer systems:** Except for upgrades, it is unlikely that the County-owned potable water system currently in place throughout the City will be changed. There is only one small area without a connection to the County-owned sewer system.
4. **Major commercial development:** Only one large commercial tract remains between 4<sup>th</sup> and 5<sup>th</sup> streets, west of A1A Beach Boulevard. However, renovation is possible in other buildings or buildings destroyed by fire or flood.
5. **Parkland:** Within its limits, the City already has five City- and County-owned parks, which are sufficient for the City's population of about 7000 residents, plus bordering the City to the north and outside its limits is the 800-plus acre Anastasia State Park. Also, because of the high level of the City's current long-term debt, the City is unlikely to incur additional debt in order to buy more parkland for recreation/open space purposes, or to provide a match for a grant to buy additional parkland.

## VII. PURPOSE OF THE 2023 VISION PLAN

Since 2006, cities have emphasized the use of technology and data to become more efficient and to prioritize planning to meet such new challenges as sustainability and climate change. Many cities now collect and make optimal use of all the interconnected data, information and communication technologies to address the issues and challenges with the goal of achieving efficient and sustainable infrastructure. Use of such technologies has created the phrase "Smart City".

"Smart City," according to Wikipedia, is defined as "...a technologically modern urban area that uses different types of electronic methods and services to collect specific data. Information gained from that data is used to manage assets, resources, and services efficiently; in return, that data is used to improve operations across the city. This includes data collected from citizens, devices, buildings, and assets that are processed and analyzed to monitor and manage traffic and transportation systems...utilities...waste, criminal investigations, information systems, schools, libraries...and other community services. Smart cities are defined both in the ways in which their governments harness technology as well as in how they monitor, analyze, plan, and govern the city."

St. Augustine Beach's Smart City goals are those which improve the quality of life for City residents by:

- Enhancing operational performance

- Optimizing resources
- Reducing waste and consumption
- Improving responsiveness
- Acting upon data collected
- Identifying funding for projects
- Identifying technology to implement Smart City projects

## **VIII. SMART CITY PROJECTS**

To meet the goals listed above, the following are suggested projects for the 2023 Smart City Vision Plan:

### **A. Zoning and Land Use Ordinances**

The City shall remain proactive in the maintenance and upkeep of its land use ordinances and Comprehensive Plan policies. Suggested improvements include:

1. Encourage desired commercial and mixed-use development and redevelopment by means of a thorough review of parking and shared parking ideas, thoughtful and realistic buffers between land uses and continued efforts to explore the use of flexible setbacks in commercial areas.
2. Develop architectural design features and restrictions for buildings along A1A Beach Boulevard, both commercial and those allowed for residential use by conditional use permits, in order to maintain the City's beach culture and character. Guidelines should be created to address the following:
  - rooflines
  - uninterrupted planes or walls
  - allowance for architectural features, such as cupolas
  - setbacks
  - parking
  - landscaping

### **B. Safe and Complete Streets**

The City is committed to providing safe and walkable streets, public parking, as well as easy access to the beach. Initiatives include:

1. Identify additional thru streets or sidewalks between F Street and Anastasia Plaza shopping center to increase the City's facilities for bicyclists and pedestrians by providing connections between A1A Beach Boulevard and State Road A1A on the south end of the City.
2. Identify streets where sidewalks are needed and budget for repair of existing sidewalks.

3. Underground utilities wherever street construction is done.
4. Provide additional and improved streetlighting.
5. Participate with St. Augustine on studies to increase mobility between the two cities.
6. Provide speed calming devices in certain high-traffic streets.
7. Work with the County on providing measures for safety of pedestrians using the crosswalks on A1A Beach Boulevard and other County Roads in the City.
8. Actively participate in the proposed River-to-Sea Loop.
9. Develop a bicycle-friendly map using a network of existing roads and trails.

### **C. Parking**

The demand for more parking by out-of-town visitors, the need to encourage tourism and stimulate the economy and the desire of residents to maintain the laid-back and safe, pedestrian-oriented beach community creates a conflict for the use of City property. However, the following guidelines may assist in the development of improved parking:

1. Restrict the use of plaza for improved parking to commercial areas along A1A Beach Boulevard.
2. Review and update City parking requirements in commercial land use districts. Take into consideration pedestrian, bicycle traffic, recent trends in parking requirements for urban areas, shared parking, and the need to encourage commercial and mixed use along A1A Beach Boulevard.
3. Designate by a numbering system the improved and unimproved parking spaces in the City and through the use of technology enable visitors to find open or unused parking spaces.
4. Encourage St. Johns County to provide improved parking spaces along County-owned property in the City, such as Pope Road and the Pier Park. By letter dated August 26, 2021, the City officially requested additional public parking on Pope Road.
5. Keep paid parking as a viable option in conjunction with decisions by the County concerning having paid parking in areas it owns that are in the City's limits.
6. Investigate having possible parallel parking spaces along (adjacent to) commercial property and the side streets east of A1A Beach Boulevard.
7. Encourage parking areas to be beautified and well landscaped.
8. Advocate for new alternative transit options, such as an intercity circulator with St. Augustine or park and ride options to the beach and the pier.

### **D. Use of Plazas**

The City is blessed with 52 plazas that can be used as landscaped areas to beautify A1A Beach Boulevard and the community, or utilized as appropriate and necessary in commercial zones. Illustration 3 shows



the locations of the plazas: nine are used for parking, eight are currently landscaped park areas, and 35 are currently undeveloped.

The following guidelines may assist in deciding the future uses of the plazas:

1. Restrict the use of the plazas for improved parking to commercial plaza areas along A1A Beach Boulevard.
2. Create a plan to develop the unimproved plazas with examples of native plants or as rain gardens to educate the public about sustainable gardens.
3. Use some of the plazas for displays of public art.

**Illustration 3**



## E. Beach-Related Matters

The pristine beach within the City is one of its most beautiful assets. It attracts tourists, contributes to the economy, and creates a paradise-like atmosphere for residents. Therefore, it is imperative that the City give high priority to the following beach-related matters:

1. Work with County for periodic beach restoration projects to restore sand to eroded sections of the beach.
2. Continue to advocate for more improved beach walkovers for public access to the beach.
3. Participate in sea oats planting projects to strengthen dunes that protect the beach from erosion.

Illustration 4



## **F. Sustainability and Resiliency**

Sustainability is most commonly referred to as the ability to maintain the quality of living standards and to avoid depletion of the earth's natural resources so that they may be passed on from one generation to the next. The impacts of climate change and sea level rise present an eminent threat to the City's sustainability.

Resiliency means the ability to withstand efficiently and economically a changing environment and climate. Resiliency indicates how quickly a city can recover from an unusual event, be it economic- or weather-related.

As part of its ongoing efforts to strengthen its sustainability and resilience, the City has completed a Vulnerability Study and is in the process of revising its Master Stormwater Drainage Plan.

### **Sustainability Goals and Policies**

1. Maintain and Restore Urban Tree Canopy
  - a. Will maintain its Annual Arbor Day celebration with a free-tree giveaway program and will encourage residents to plant trees on their property.
  - b. Will establish an "Urban Tree Farm" on Public Works facility property.
  - c. Will adopt the Urban Forestry Management Plan as an official City document.
  - d. Will improve tree protection regulatory codes by updating the Land Development Regulations to incorporate tree protection policies.
2. Reduce Stormwater Runoff and Downstream Water Pollution
  - a. Adopt a right-of-way ordinance that requires roadside swales on all residential streets and allow for the dry retention of the first half (1/2) inch of rainfall runoff.
  - b. Public Works Department and the Sustainability and Environmental Protection Advisory Committee (SEPAC) should identify, design and where feasible add dry retention areas in City-owned plazas and appropriate street right-of-way locations to provide for the natural retention of stormwater runoff and to protect at-risk neighborhoods from flooding during periods of extensive rainfall.
  - c. Encourage commercial properties to retain the first half (1/2) inch of stormwater runoff from their properties, using rain gardens or rain storage barrels.
  - d. Encourage residential properties to retain the first half (1/2) inch of stormwater runoff from their properties using rain gardens or storage barrels.
3. Adopt Climate Change Initiatives to Reduce the Use of Fossil Fuels
  - a. Implement climate change initiatives to reduce the City's use of fossil fuels, such as purchasing electric vehicles and retrofitting City buildings to make them more energy efficient.

4. Reduce solid waste and increase recycling.
  - a. Continue to explore ways to explore ways to recycle, such as the recycling of glass containers, and encourage residents to compost waste by having a compost site on City property.
5. Have the Sustainability and Environmental Planning Advisory Committee do a yearly assessment of the City's sustainability projects and programs.

#### **G. Public Safety**

The City is characterized by a very active pedestrian and bicyclist community. There are several major pedestrian corridors, such as Mickler Boulevard, 2<sup>nd</sup> Avenue and A1A Beach Boulevard. These corridors shall be preserved, protected, and improved as much as possible for pedestrians, bicyclists, and types of micro-mobility, as appropriate.

Other initiatives for Public Safety improvements include:

1. Improve crosswalks on A1A Beach Boulevard by means of technology, lights, and audio.
2. Continually evaluate the need for additional traffic safety measures to ensure safe and fluid travel within the City.
3. Educate citizens on road safety for pedestrians, bicyclists and vehicles.
4. Evaluate the need for adoption of new technology and equipment for more efficient and transparent policing.

#### **H. Parks/Recreation**

There are five (5) parks in the City, either City- or County-owned:

1. Pier Park (County)
2. Ron Parker Park (County)
3. Lakeside Park (City)
4. Ocean Hammock Park (City)
5. Hammock Dunes Park (City)

Also, the beach could be considered a park because it offers areas for such recreation activities as swimming, fishing, volleyball, jogging, surfing and the numerous games, such as horseshoe throwing, that persons bring to the beach.

These parks provide sufficient park and recreation space for a city the size of St. Augustine Beach (2.5 square miles in area with about 7,000 residents). It is unlikely that any future parkland will be available.



Illustration 5



Therefore, it is advisable that the City adopt policies and pursues initiatives to ensure the highest and best use of these properties.

1. **Pier Park** (four acres): Both the City and the County own parcels within this Park, which is a critical destination point for beach access, recreational activities, and special events. The City is actively working with St. Johns County to maximize the Park's highest and best use. The County has agreed to move the fire station to another location near the City. This relocation will provide an opportunity to demolish or repurpose outdated buildings to better utilize the property. Some ideas include creating more parking and to obtain grants to build a community center on the fire station site close to A1A Beach Boulevard.
2. **Ron Parker Park** (four acres): The City will work with the County to maintain existing sports-related facilities, such as paddle tennis courts, and to create new ones.
3. **Lakeside Park** (one acre): It is located on the north side of 11<sup>th</sup> Street adjacent to the City's Police Department. It currently contains a veterans' memorial, sculpture garden, walk/bicycle path, picnic area and a dock by the lake.
4. **Ocean Hammock Park** (18 acres): The City has obtained grants and having design and permitting work done for certain amenities, such as restrooms, trails, and an overlook. Other grants will also be sought. The grants will enable the City to complete the management plan that it agreed to do as a condition of the grants from the Florida Communities Trust to purchase the property.
5. **Hammock Dunes Park** (six acres): It is located on the west side of A1A Beach Boulevard and north of the shopping center. It has no trails, walkways, or other amenities for the public. A long-range park use plan should be developed and then grant funding sought to construct the amenities that the residents and Commission decide the Park should have.

#### **I. Historic Preservation and Best Use of Pier Park**

Pier Park is a major destination for both residents and visitors to St. Augustine Beach. It provides beach access, a place for events, such as the weekly farmers' market, music-by-the-sea summer concerts, weddings, and any more special and seasonal events. Some suggestions to improve this Park, preserve the historical civil rights significance and provide additional parking include but are not limited to the following:

1. Relocate the County fire station. The fire station is outdated and St. Johns County has listed its relocation (possibly to the Anastasia Mosquito Control District property) in its five-year capital improvements plan.
2. Create a Civil Rights memorial to commemorate the "Wade Ins" which occurred on the segregated St. Augustine Beach during the summer of 1964.
3. Investigate the possibility of renovation of the second floor of the old city hall (St. Augustine Beach Hotel and Beachfront) and further preservation. Working with the St. Johns Cultural Council explore available grants to preserve the property, improve its economic usefulness and highlight its historical significance. Anticipate and prepare for Cultural Council lease expiration in 2026.



4. Investigate and discuss possible other uses of the property in a public forum, such as a community center on A1A Beach Boulevard, a raised boardwalk or raise retail buildings with parking underneath and/or storage for the St. Augustine Beach Police Department, County Marine Rescue, and vendors.
5. Maintain citizen engagement through current special events at Pier Park and throughout the City, and continually improve communication with residents through the City's Communications and Events Coordinator.

Illustration 6



## — DEVELOPING SMART COMMUNITIES

The Smart Cities movement has had its share of challenges in developing since its early inception around 2014. Lofty projects, poor measurables, and other challenges have plagued the industry since its inception. The core focus of a "smart city" should be to use technology or data to do one of the following four things:

- Create savings for organizational operating budgets
- Assist public sector labor in their day-to-day jobs.
- Improve services offered by the community where applicable.
- Easily scalable to small to medium size cities/counties.

When one to all of those criteria are met, it becomes important to then follow an implementation approach to ensure that the technology meets the needs of the implementor

### The Smart North Florida Approach

#### 1. Define

Begin with the problem statement of your city or county's technology need. Not every problem needs the "shiny" object in the room. Focusing intently on the critical needs of the community and city/county staff will lead to appropriate technology identification and data needs

#### 2. Deploy

The best smart technology results come from solving real-world problems in real-time. The key to smart technology is to start with problems that create the biggest impact close to home. Determine the core, shared, and scalable problem statements and work to tackle them head-on

#### 3. Measure

Impact is everything. Over the long term, the plan must ensure that measurements and data collection can draw other correlations. For instance, can pavement assessment data and standing water/stormwater drainage data be stacked to drive further insight?

#### 4. Report

After measuring, report the lessons to the stakeholders and partners involved in the process and plan future actions

#### 5. Champion

Use the momentum generated from early deployments to coalesce and tell the story

Utilizing this methodology has allowed for us to successfully work through problem statements in many communities across Northeast Florida. You can reference several of these deployments below.

**Commented [J51]:** Manage City owned and maintained asset: Pipes/Culverts, Inlets/catch basins, Roads, Buildings, Parks, Street Signs, vehicles, GreenSpaces/Trees, Parking spaces, Mizell Weir and Pump Station, ditches/swales, Splash Park, mowing, trash pickup, etc.

**Commented [J52]:** Smart NFI can help populate CSAB datasets at a lower cost to better align CSAB for building out an asset and work management platform.

## — OUR CORE SMART NORTH FLORIDA

**OUR MISSION** / Democratize Innovation

**WE BELIEVE** / Communities that add SMART tech and data, prosper.

**HOW WE DO IT** / Understand thoroughly. Communicate simply. Solve pragmatically

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## HOW WE'RE DOING IT

**DATA COORDINATION** / Structuring the unstructured data for those in need and for data focused policies.

**SMART TECHNOLOGY** / Speeding up technology adoption, no matter the size, agency, or community.

**REGIONAL COLLABORATION** / Sharing best practices to sustain the movement in the region.

## BY DEMOCRATIZING INNOVATION

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**ROADBOTICS**  
**FILLING REAL POTHOLES**  
**WITH ARTIFICIAL INTELLIGENCE (A.I.)**

Pilot - Clay Co  
20-year plan - Nassau Co  
Deploying - St. Augustine, Keystone Heights,  
Bunnell, Neptune Beach



**TRAININFO**  
**SAVING LIVES WITH**  
**EARLY TRAIN DETECTORS**

Pilot - FDOT District 2  
Approved - FDOT Innovation Product List (IPL)  
Sole Source Contract



**STORM SENSOR**  
**STOPPING STREET FLOODS**  
**WITH DRAIN DATA**

Pilot - Neptune Beach Efficiency Lab  
Scale Deployment - Neptune Beach



**MOBI**  
**USING DIGITAL TWINS**  
**TO SIMPLIFY PARKING**

Deployed in City of St. Augustine  
Integrating All Parking Data Sources  
Accessible Public Dashboard

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## SO GET IN TOUCH

CLAYTON LEVINS, EXECUTIVE DIRECTOR

904.588.3452

Clevins@SmartNorthFlorida.com

## Tech Deployment Examples

Smart City technology deployments can be implemented in a variety of departments to support operational efficiencies or strategic decisions for policymakers. Some of the more commonly requested technology implementations in the market include:

### Digital Twin Technology:

The digital twin concept is merely a digital representation of a physical asset or system. In the case of cities, digital twin technology is used from parking to stormwater drainage. Smart North Florida has deployed the digital twin concept in the following way:

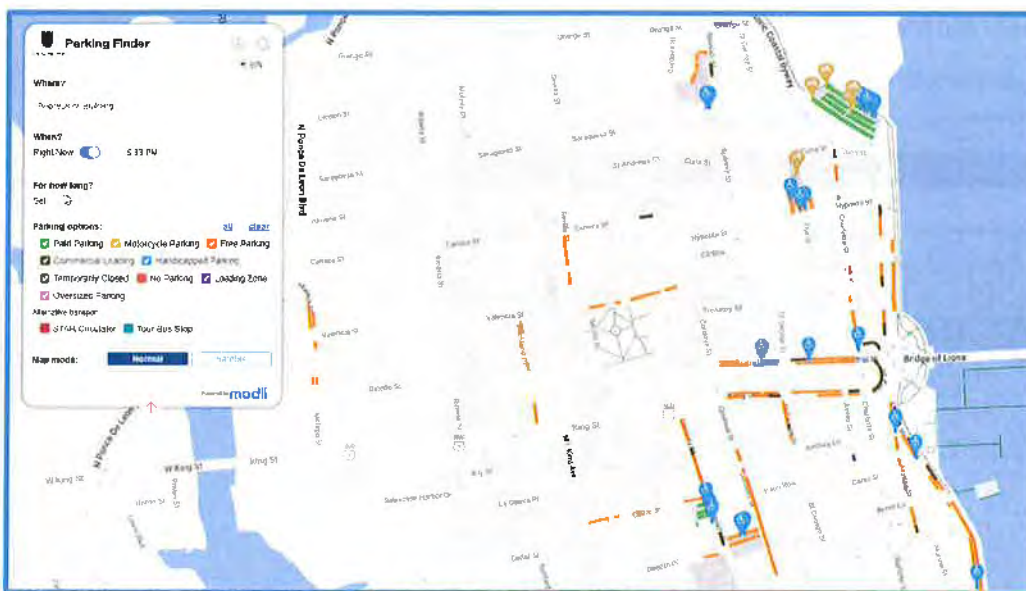
Commented [JS3]: Current CSAB challenges

**Company:** Modii

**Location of Deployment:** City of St. Augustine

**Problem Statement:** Cities have a variety of rules and data for their parking with little way of showing real-time information to commuters/tourists.

**Solution:** Modii is the digital twin of parking that pulls in all relevant parking rules and data to visualize for commuters/tourists in real time.



The City of St. Augustine Parking Finder displays real time parking and mobility accessibility as shown above

### Steps to Implementation:

1. Determine the locations to digitize can be the following
  - a. Striped Surface lots
  - b. Un-Striped Surface lots
  - c. Parking garages
  - d. Public transportation locations
2. Assess systems in place for tracking parking, i.e.
  - a. Paid parking applications

Commented [JS4]: CSAB Roadside Parking, Parkettes



- b. Manual paid parking locations
  - c. In-ground or above ground sensors
3. Determine parking rules and regulations to be implemented into the system
  - a. Free parking timing
  - b. Paid parking timing
  - c. Commercial loading zones, etc.
4. Determine zones that tourists and commuters are not allowed to park in.
5. After determining parking rules, Modii will process and implement between 3 and 5 months.
6. Determine marketing plan for rollout and deploy.

### Asset Management Technology

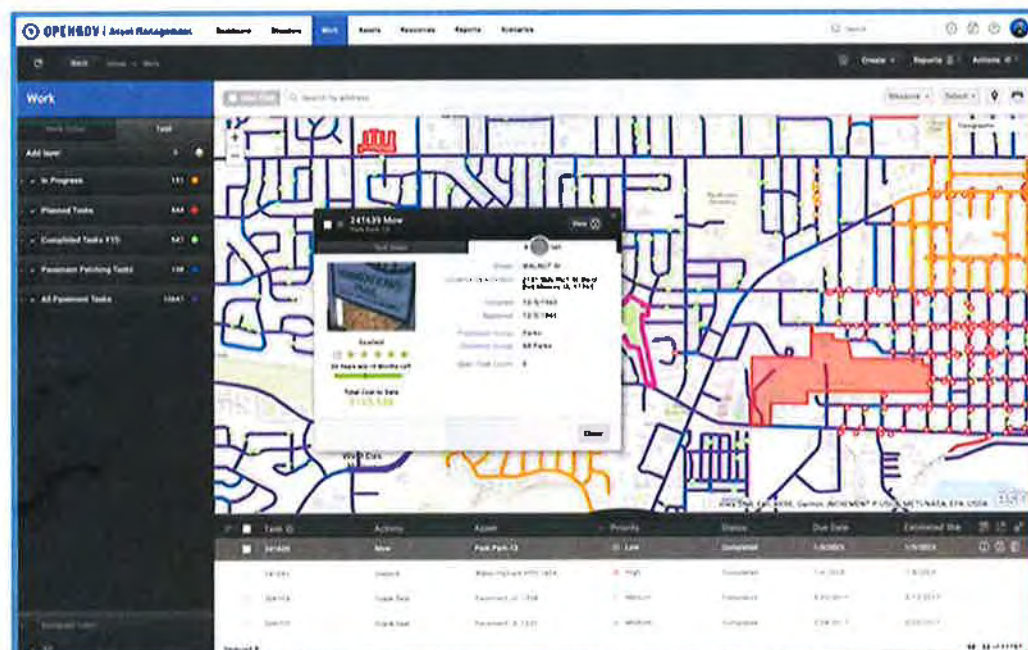
Similar to the digital twin concept, asset management technology is using digital representation of physical assets in cities to monitor the health and functionality of these assets. In addition, these asset management systems are serving as centralized operating systems for many cities to better house their legacy data. Smart North Florida has deployed an asset management system pilot in the following way:

**Company:** ETM

**Location of Deployment:** City of Keystone Heights

**Problem Statement:** Cities have disparate assets that often require time consuming manual update and tracking

**Solution:** Use data based solutions to better visualize and track asset functionality across a community.



The City of Keystone Heights is utilizing a real-time asset tracker to manage their physical assets from road signs to larger facilities.

**Steps to Implementation:**

1. Determine city assets to map and manage.
  - a. Though straightforward, this requires strategy to implement. Important to dedicate time to this effort.
2. Determine data gaps and collect needed data to map city assets.
3. Implement solution and monitor.

**Infrastructure Data and Monitoring**

Digital twins and asset management are effective tools for the smart city effort, but sometimes communities can start smaller to eventually work up to these deployments. Cities everywhere are using IoT sensor solutions and emerging software to better understand their critical infrastructure (stormwater, pavement, etc.). Smart North Florida has deployed these types of solutions in the following ways:

**Company:** StormSensor

**Location of Deployment:** City of Neptune Beach

**Problem Statement:** Many cities, small to mid-size in particular, have never tracked the capacity and vulnerabilities of their stormwater drainage systems.

**Solution:** StormSensor uses a network of sensors to aggregate standing and lagging water in stormwater drainage systems. They have a proprietary software that tracks pipe capacity over time and uses weather data to track the health of the system over time.

**Steps to Implementation:**

1. Determine locations for installation: storm water drains, man holes, and culverts
2. Depending on vendor, install is done by the company or could be easily done by city team. In the case of StormSensor install was done by the company.
3. Collect data and monitor results.
4. Interpret results, implement needed changes, use data to finance needed infrastructure improvement.
5. An example of the above, City of Neptune Beach received two culvert replacements from City of Jacksonville/Duval County.

**Company:** RoadBotics

**Location of Deployment:** Nassau County

**Problem Statement:** Cities often have an ad-hoc way of collecting their pavement health and roadside asset data. Or they pay expensive consultants to do it.

**Solution:** Roadbotics uses dashcam footage to collect and process road quality and roadside asset health using backend AI.

**Steps to Implementation:**

1. Determine centerline miles to analyze.
2. Install cell phone on dash of public vehicle.
3. Collect data.
4. Send data to Roadbotics for processing.
5. Analyze results and implement strategic improvement plan.
6. An example of the above, Nassau County used the results to create a 20 year pavement management plan.

**Company:** Street Simplified

**Location of Deployment:** Clay County

**Problem Statement:** Traffic studies are often lengthy processes involving expensive consultants. Cities need faster analysis and strong recommendations for proper planning.

**Solution:** Street Simplified uses a proprietary camera and AI software to produce a traffic report in less than a month's time.



#### Steps to Implementation:

1. Determine intersections for analysis.
2. StreetSimplified performs installation, analyzes data, and produces report.
3. Assess report and determine needed changes.
4. An example of the above, Street Simplified found that area of analysis needed roadway restriping. Clay County implemented roadway restriping this year.

#### Data Project Examples

In tandem with technology use, smart communities are increasingly using data to better their processes and provide better service to constituents. The amount of data is not the issue for communities. The two most significant problem statements for cities and their data use are access to talent and structuring the data so that better decisions can be made.

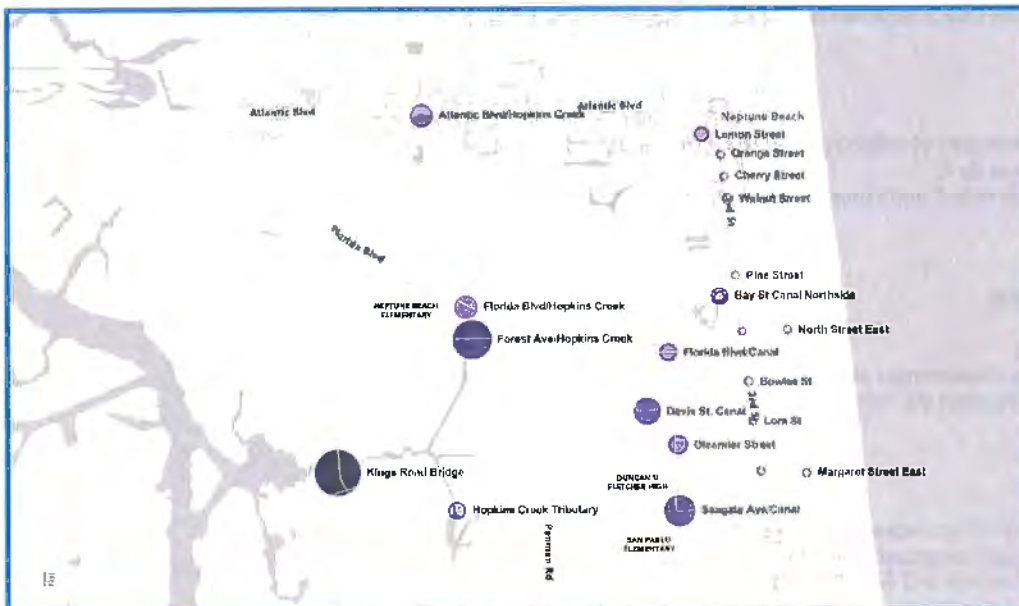
The Bureau of Labor Statistics puts an entry level salary for a data analyst at approximately \$80,000 a year. The increasing cost of labor for such a position makes scaled hiring difficult for most public sector entities. From a structuring side, we know that data is everywhere but, in public sector, it tends to be siloed and disorganized such that current public sector staff don't have the time to dedicate making sense of it all.

For Smart North Florida, we work to fill those gaps so that smart communities can be realized. A few examples of our work include:

**Project:** City of Neptune Beach Infrastructure Analysis

**Partner:** City of Neptune Beach

**Approach:** Built a GIS based Storyboard for the City of Neptune Beach to use as supplemental analysis for grants and other financing opportunities for infrastructure projects.



Above is an example of a visualization of average stormwater depth at sensor locations used for the storyboard.

**Project:** First Coast Wellbeing Index  
**Partner:** Northeast Florida Regional Council  
**Approach:** Build a dashboard analyzing macro trends for NEFRC partners across the region.



**Project:** Keystone Heights Economic Development  
**Partner:** Lake Region Economic Development Corporation  
**Approach:** Helped LREDC understand their assets for economic development opportunities.

