
SOUTHWEST FLORIDA RESILIENCE COLLABORATIVE

STRENGTHENING SOUTHWEST FLORIDA

From Coastlines to the Heartland

SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL

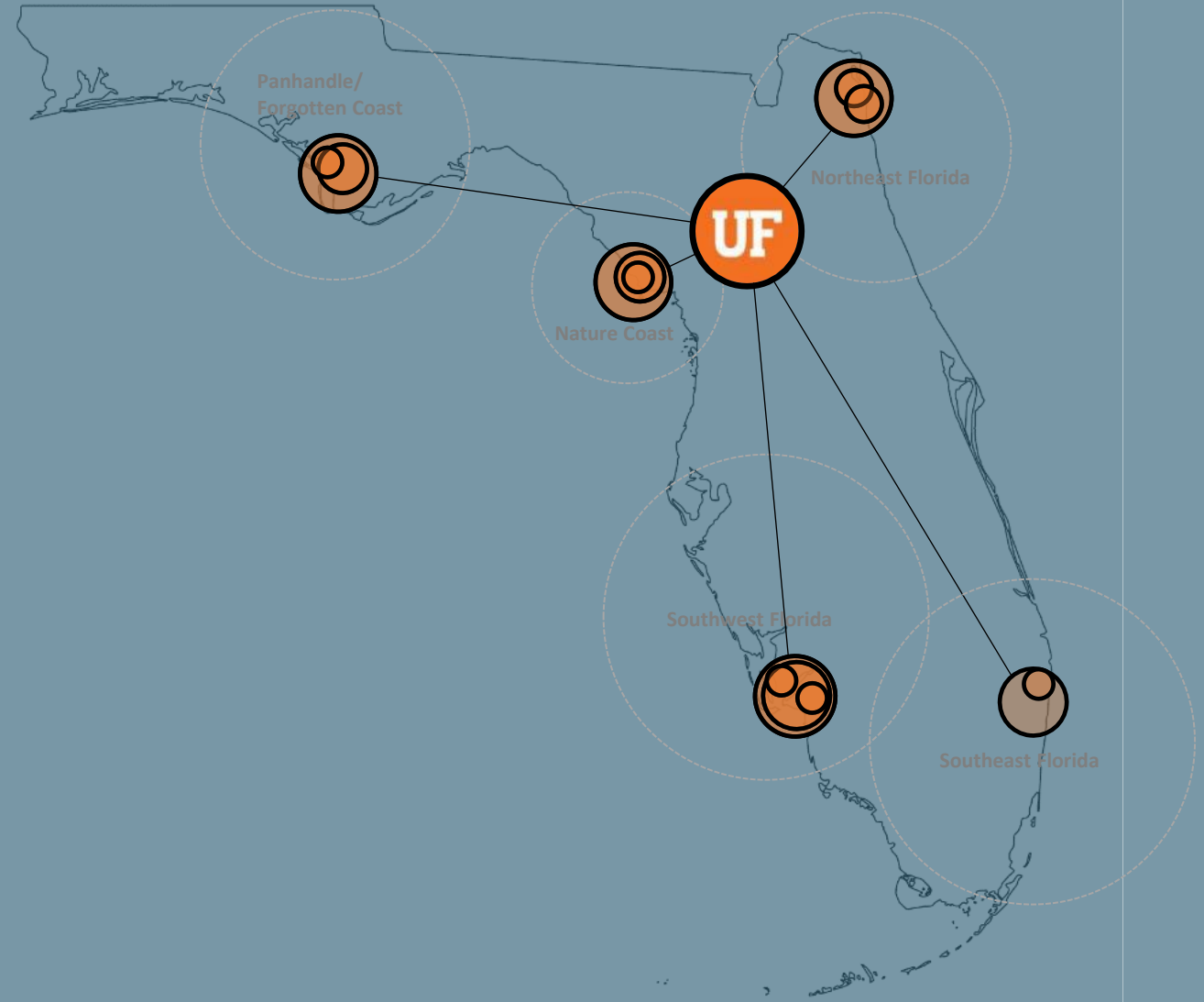


EST. 1973

SERVING CHARLOTTE, COLLIER, GLADES, HENDRY, LEE AND SARASOTA COUNTIES

Building for Change

Florida Institute for Built Environment Resilience



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Assistant Professor | School of Architecture

Applied Design Lead | Florida Institute for Built Environment Resilience (FIBER)

College of Design, Construction and Planning

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Faculty Affiliated, UF Florida Sea Grant

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Carla Brisotto



Changjie Chen



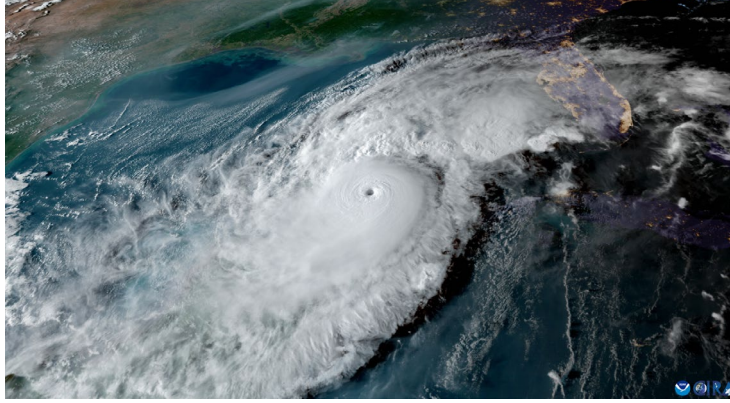
Christian Calle



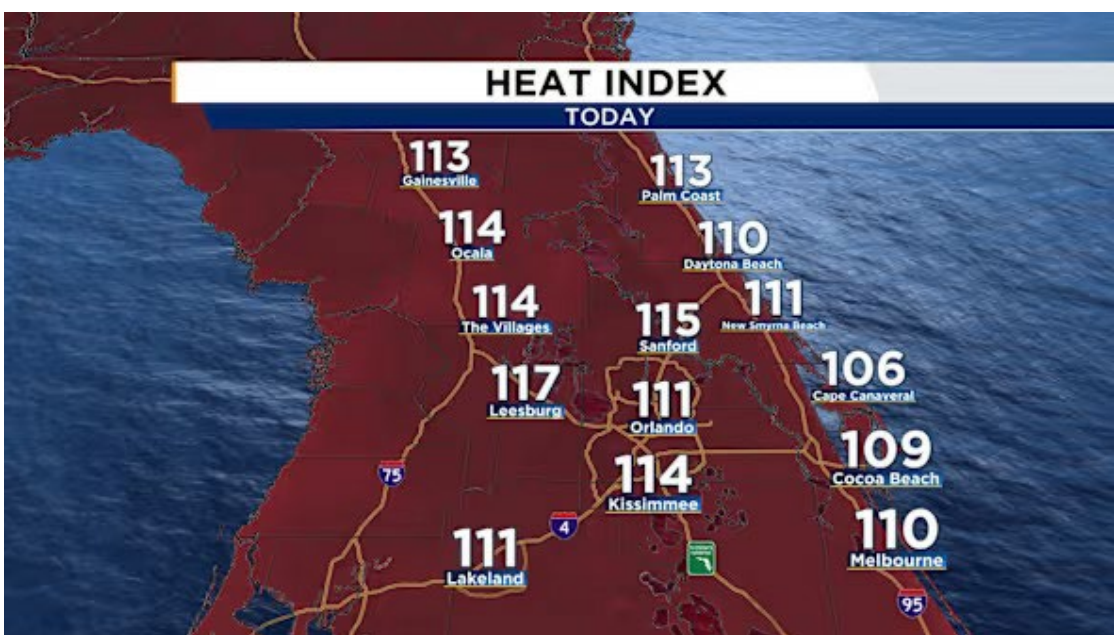
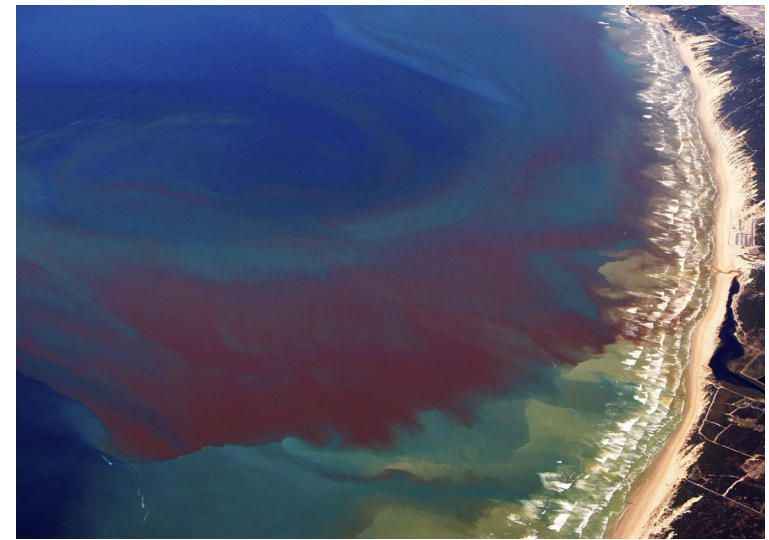
Andrea Galinski



Maria Watson



'DEVASTATION'
Irma left extensive damage in Upper and Middle Keys
Death toll unknown, but roads were blocked, houses destroyed



**GOLDEN YEARS GONE
SENIORS ON THE BRINK OF HOMELESSNESS**
LOCAL LIVE. LATE BREAKING. **WESH 2**

“At the heart of resilience thinking is a very simple notion—things change—and to ignore or resist this change is to **increase our vulnerability and forego emerging opportunities.**”

-Walker and Salt 2006

UF is driving Florida's Transformation

Explore:

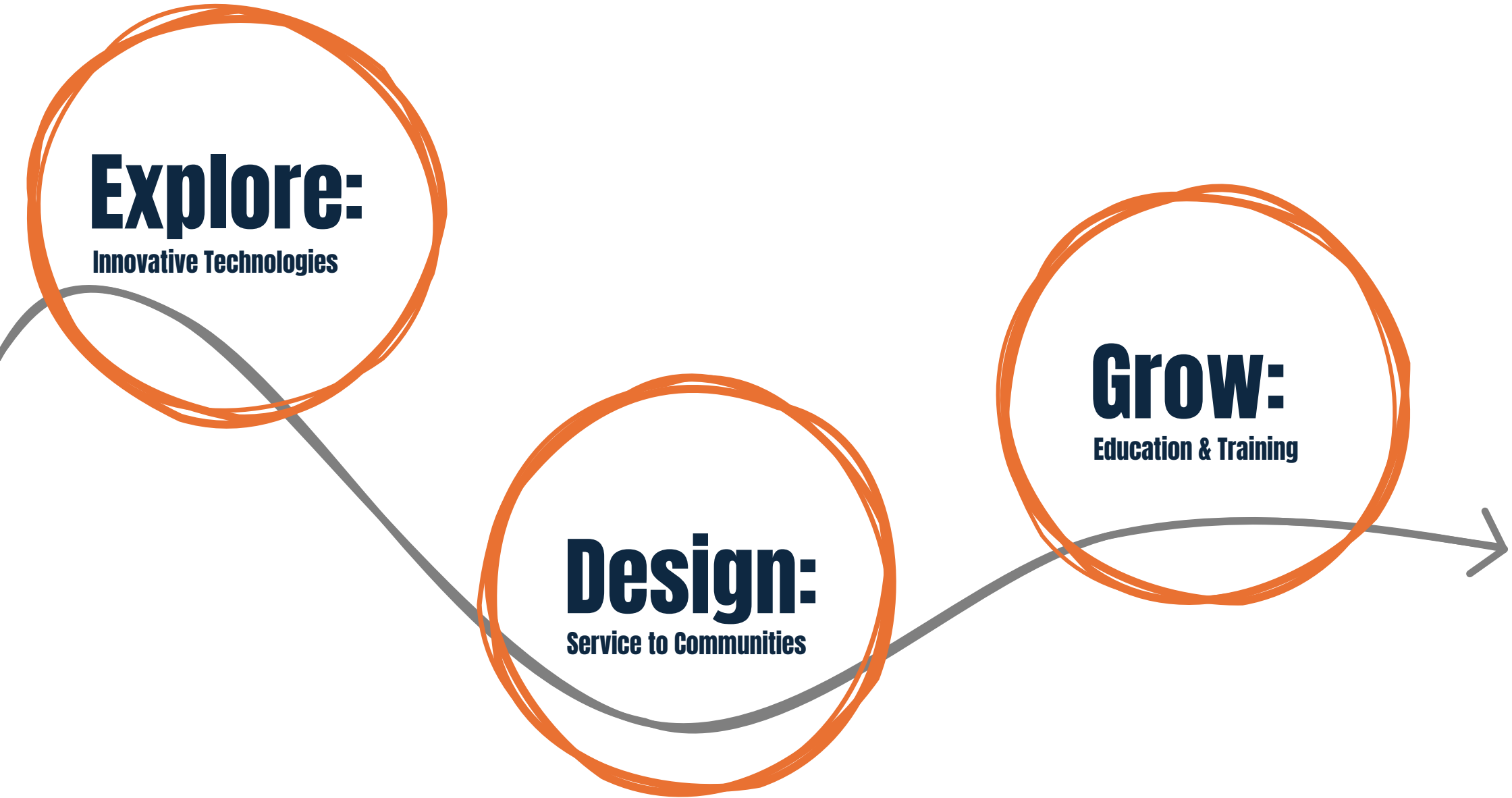
Innovative Technologies

Design:

Service to Communities

Grow:

Education & Training

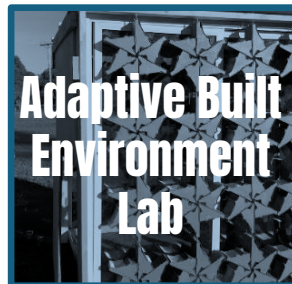
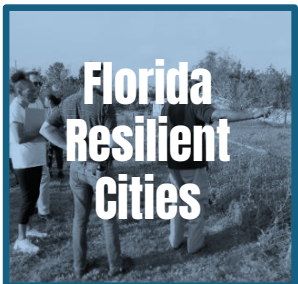


FIBER

Florida Institute for Built Environment Resilience



FIBER Research Labs and Programs:



UF is driving Florida's Transformation

Explore:
Innovative Technologies



The graphic consists of a grey wavy line that starts on the left, dips down, rises up, dips down again, and then rises to end in an arrow pointing to the right. Three orange hand-drawn circles are placed along this line. The first circle is at the first peak and contains the text 'Explore: Innovative Technologies'. The second circle is at the second dip and is empty. The third circle is at the second peak and is also empty.

Grant Support for Research:



UF Research
UNIVERSITY of FLORIDA



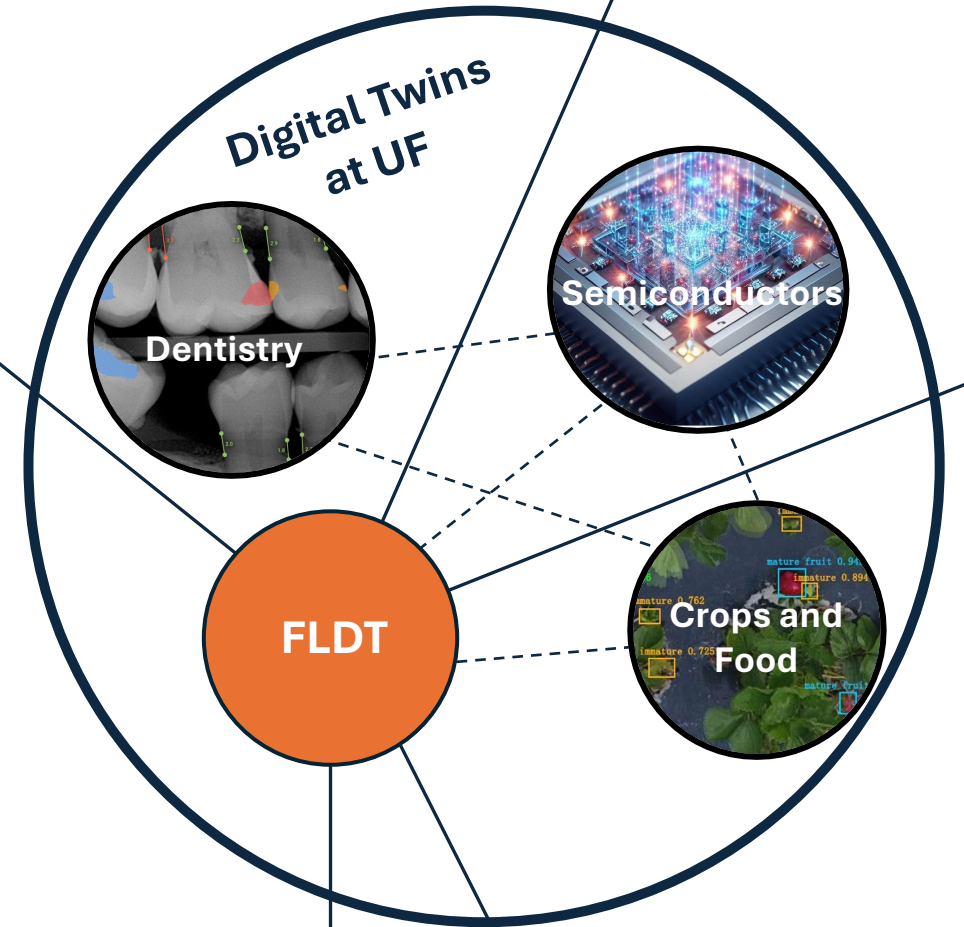
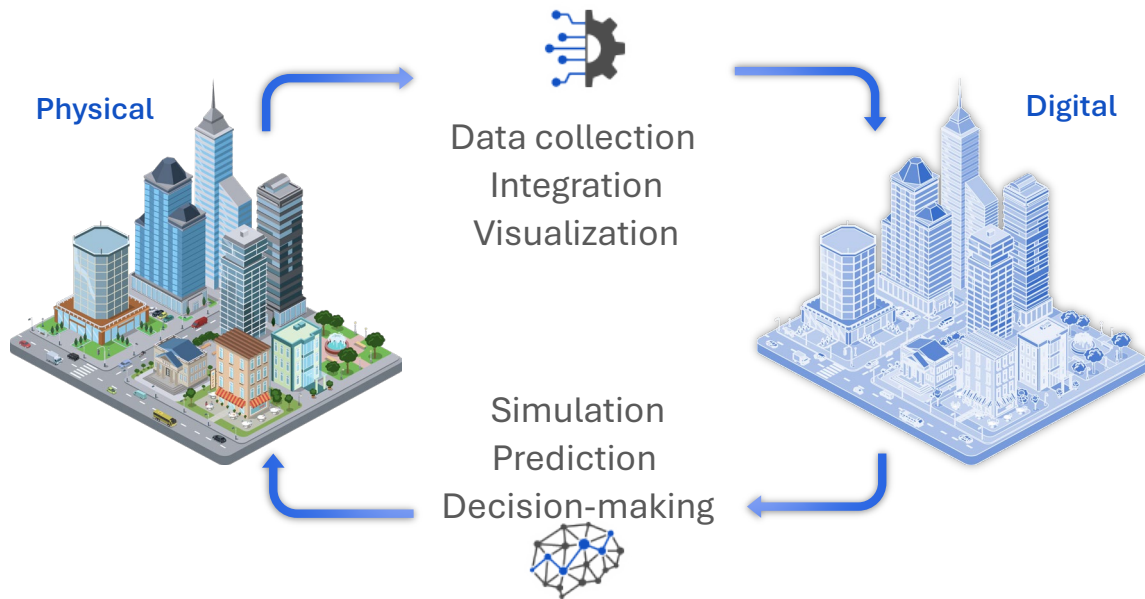
Florida Digital Twin + JaxTwin



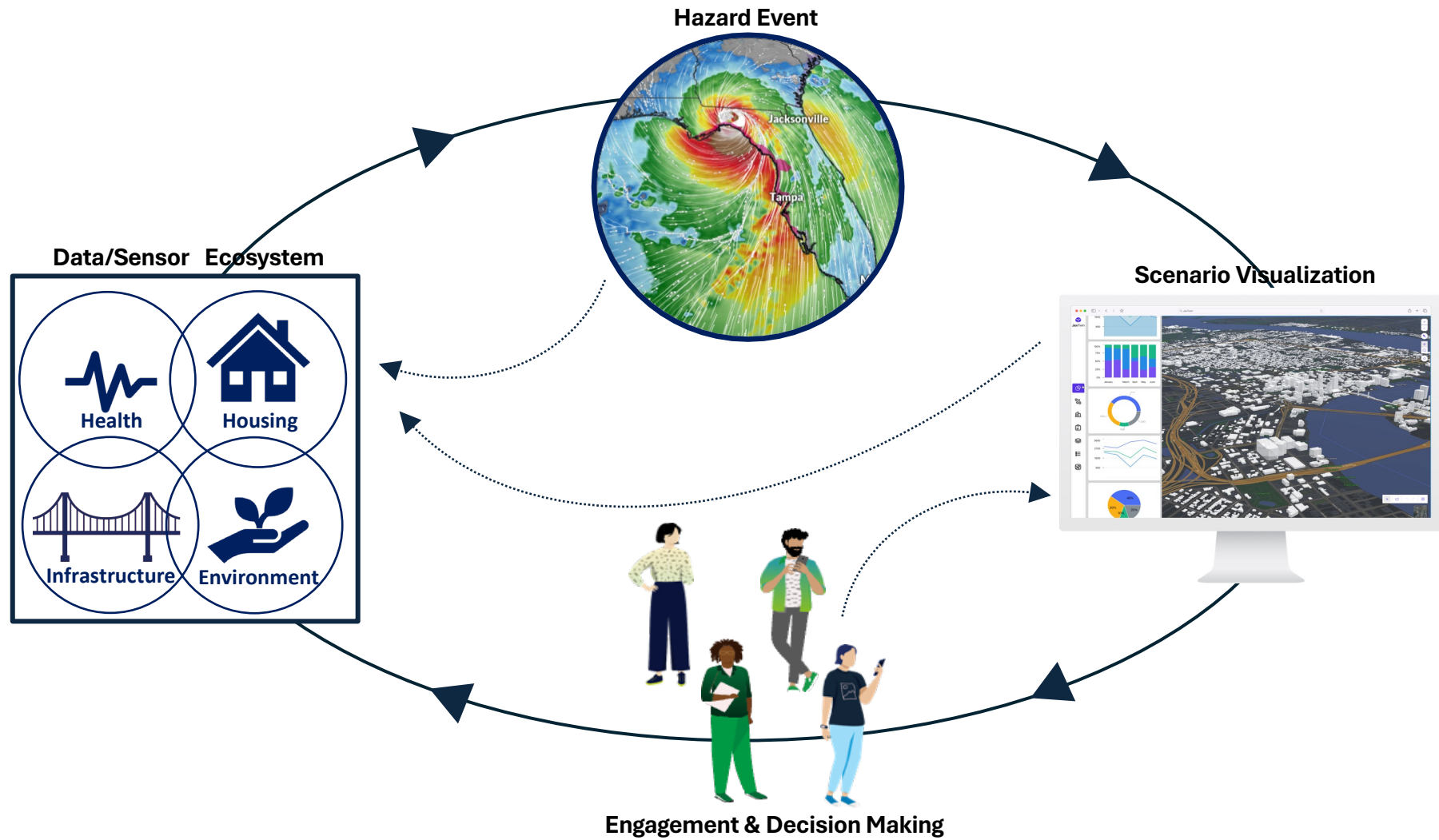
Project Partners:

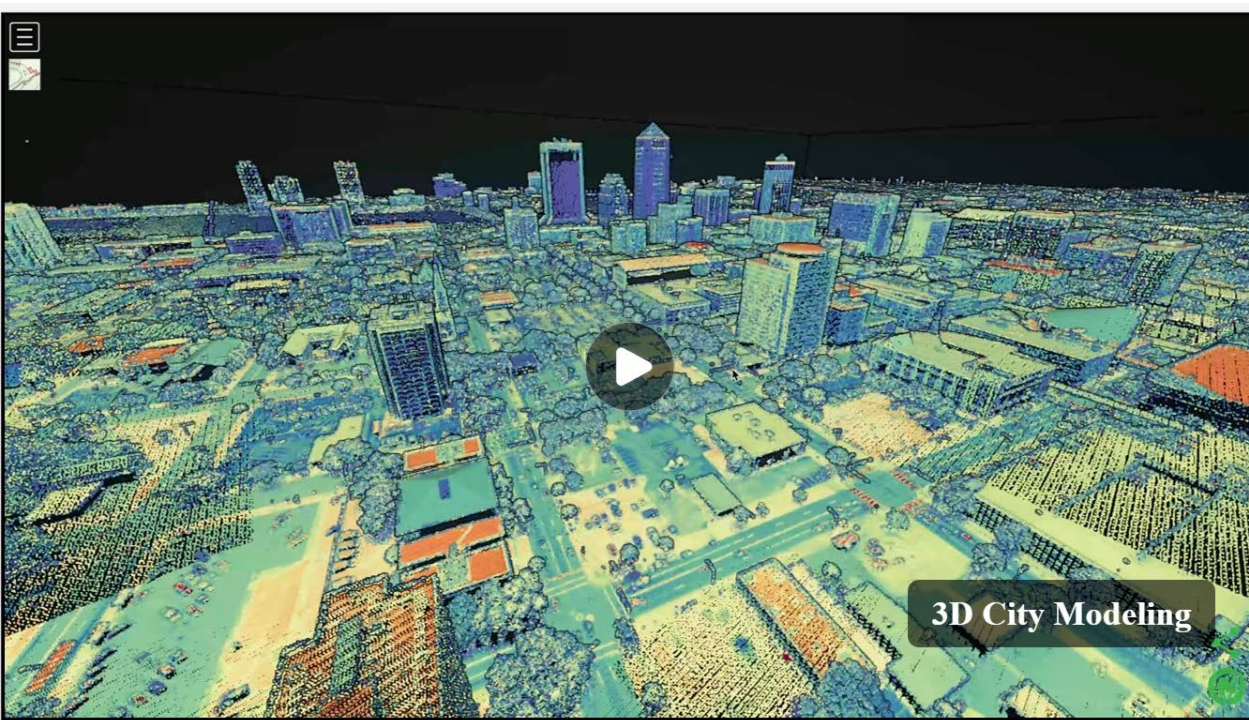


What is a Geospatial Digital Twin?



JaxTwin: Informing Hazard Decision Making





Selection Statistics
Total Buildings: 1296

Residential Commercial Industrial Other

Residential

- Residential buildings are mainly used for housing.
- Typical features: single-family homes, apartments, etc.
- This category includes all buildings used for living purposes.

Land Use (DORUC)

Housing Information

59% 13% 22%

Click to highlight a category.

Just Value (JV)

395 14

Just Value (JV)

Make a Selection

Selection Poly

- JaxTwin (Jacksonville Digital Twin)
- Points of Interest
- Neighborhoods
- Roads (AADT)
- JaxTwin Digital Twin Buildings

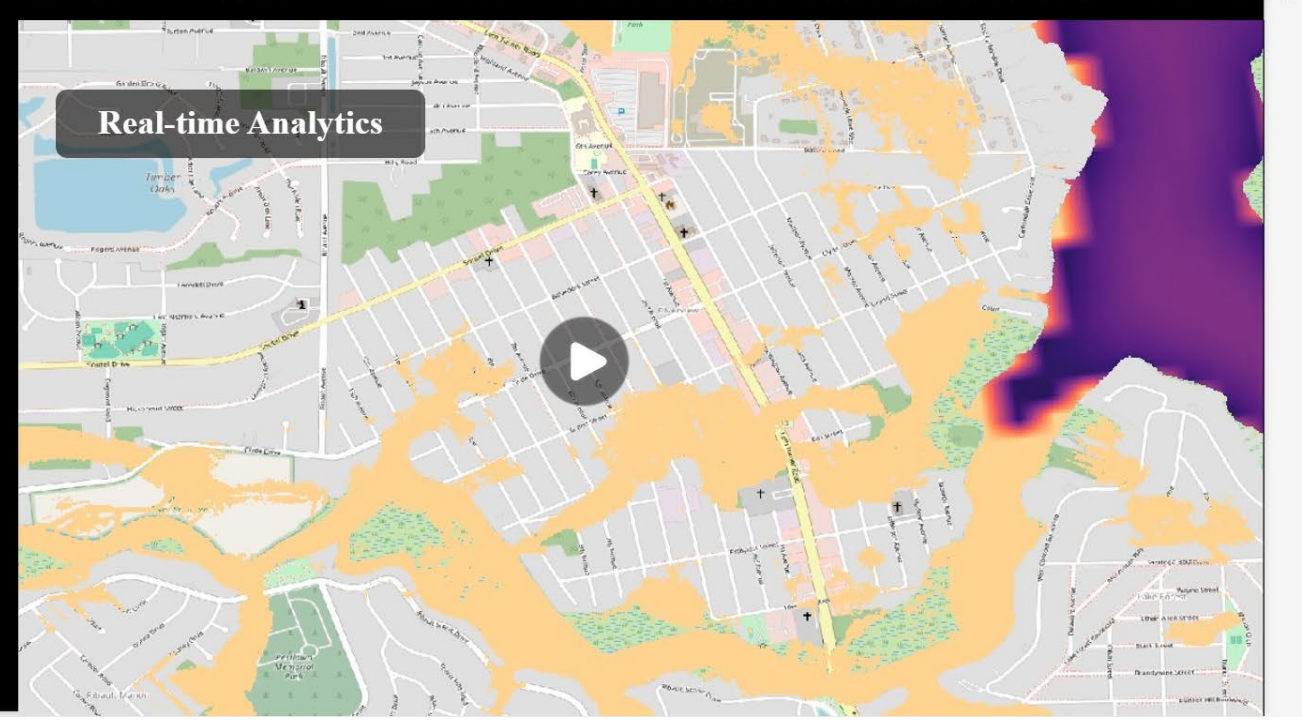
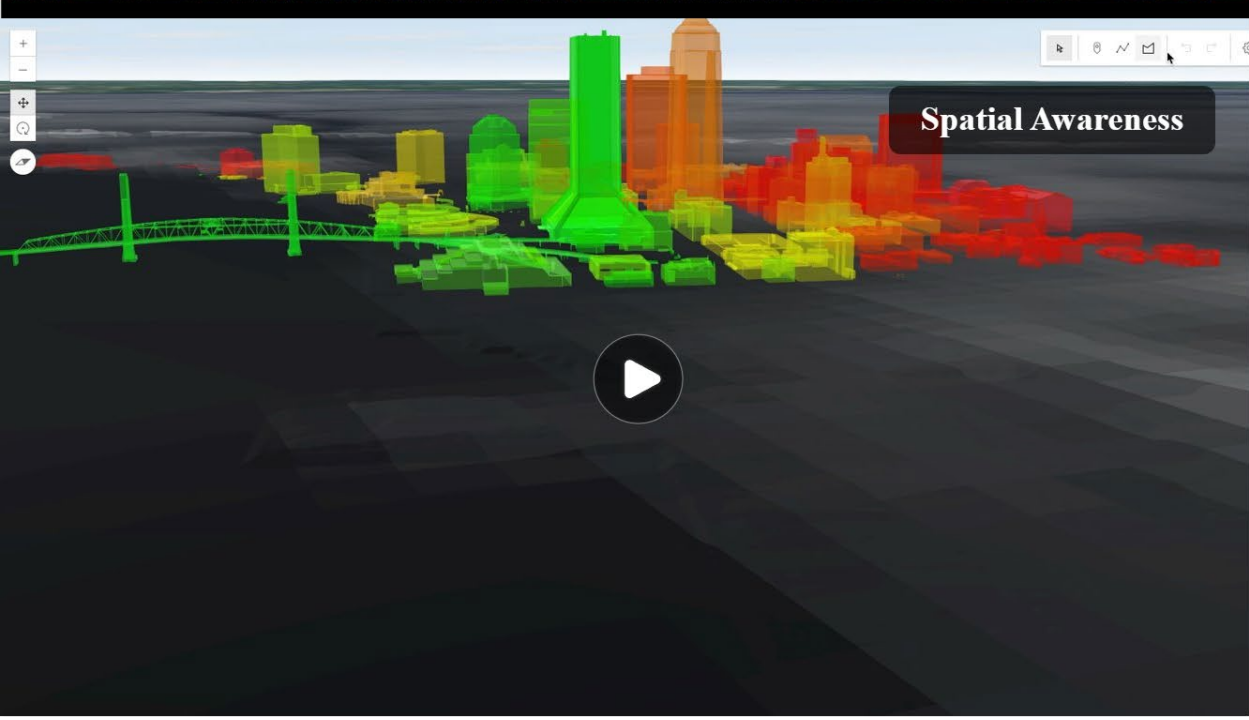
AI Assistant

Model: gpt-4o-mini

Chat: Analyze Assist

Streaming

Send Clear



Expanding the FLDT Vision



Grant Support for Research:



Home Built Resilience



Project Partners:



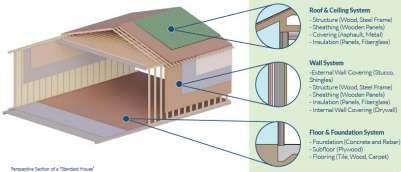
WATER INTRUSION



What is Water Intrusion?

Water intrusion refers to the seeping of water into a house or the unintentional accumulation of water within the house. It is important to note, that flooding and water intrusion are separate but can cause similar damage. The more common water intrusion however, can occur at various points in the house due to aging, ignorance, or improper construction. While, water intrusion is one of the most costly damage claims, it is also one of the easiest to remedy. This brief guide will talk about some of the ways in which water intrusion can impact the common house, the materials which are affected the most, and some quick tips on preventing costly water intrusion insurance claims.

Parts of the Whole



Risks and Damages

- Wood (Plywood, Engineered)**
 - Untreated wood around water begins to rot
 - Continuous exposure leads to warping and weakening
- Steel and Metal**
 - Uncoated steel around water begins to rust
 - Continuous exposure compromises the structural strength of steel, leading to breaks
- Interior (Drywall, Tiles, Carpet)**
 - Minimal water leaks lead to large repair jobs
 - Continuous exposure leads to mold growth and warping
- Masonry**
 - Densely resistant if water doesn't penetrate into material
 - Continuous exposure leads to cracking and structural failure
- Insulation**
 - Requires water restrictive barrier to protect it
 - Continuous exposure leads to mold growth
- Concrete (With Rebar)**
 - Permeating water can rust untreated interior structure
 - Continuous exposure leads to cracking and structural failure



FLO BY MOEN

A CASE STUDY ON SMART WATER MONITORING

Overview

The range and depth of smart home technology available for homes is quite vast. In order to better understand some of their impacts overall, a specific case study into water leakage from Flo by Moen introduces you to the potential savings and protections of water monitoring systems. It utilizes remote shut off, proactive monitoring, live notifications, automatic shut-off, and water and moisture detection.

Water Intrusion Risk

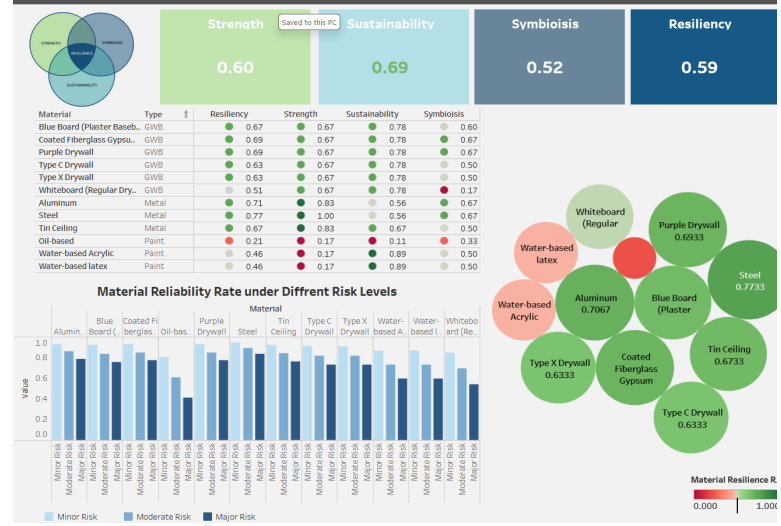
As a homeowner, it can be difficult to consider the full extent to which a leak event can occur. Unknown leaks or general degrading of the pipe system can lead to bursts within walls that go unnoticed. These unseen leaks allow water to spread not just through that wall but trickle down to ceilings, lower floors, other walls, and the foundation. This turns an isolated leak into an issue impacting the entire structure and could require a costly repair.

Water damage insurance claims are one of the most common and costly damage claims for homeowners. 40% of homeowners will file a water damage claim. In 2019 alone, insurance claims totaled \$2 billion for issues relating to non-weather related water intrusion. It is 7 times more likely that you will file and insurance claim for non-weather related water damage than it is you will file for damages due to fire and theft.



FLORIDA OFFICE OF Insurance Regulation

UF Florida Institute for Built Environment Resiliency UNIVERSITY OF FLORIDA



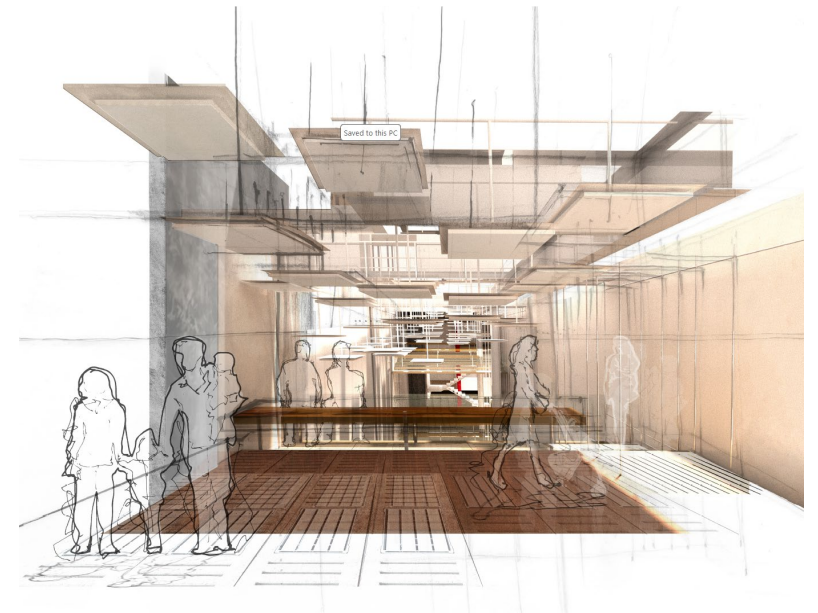
IN THE NEWS

Office of Insurance Regulation Partners with University of Florida to Promote Home Building Resiliency Materials for Water Intrusion

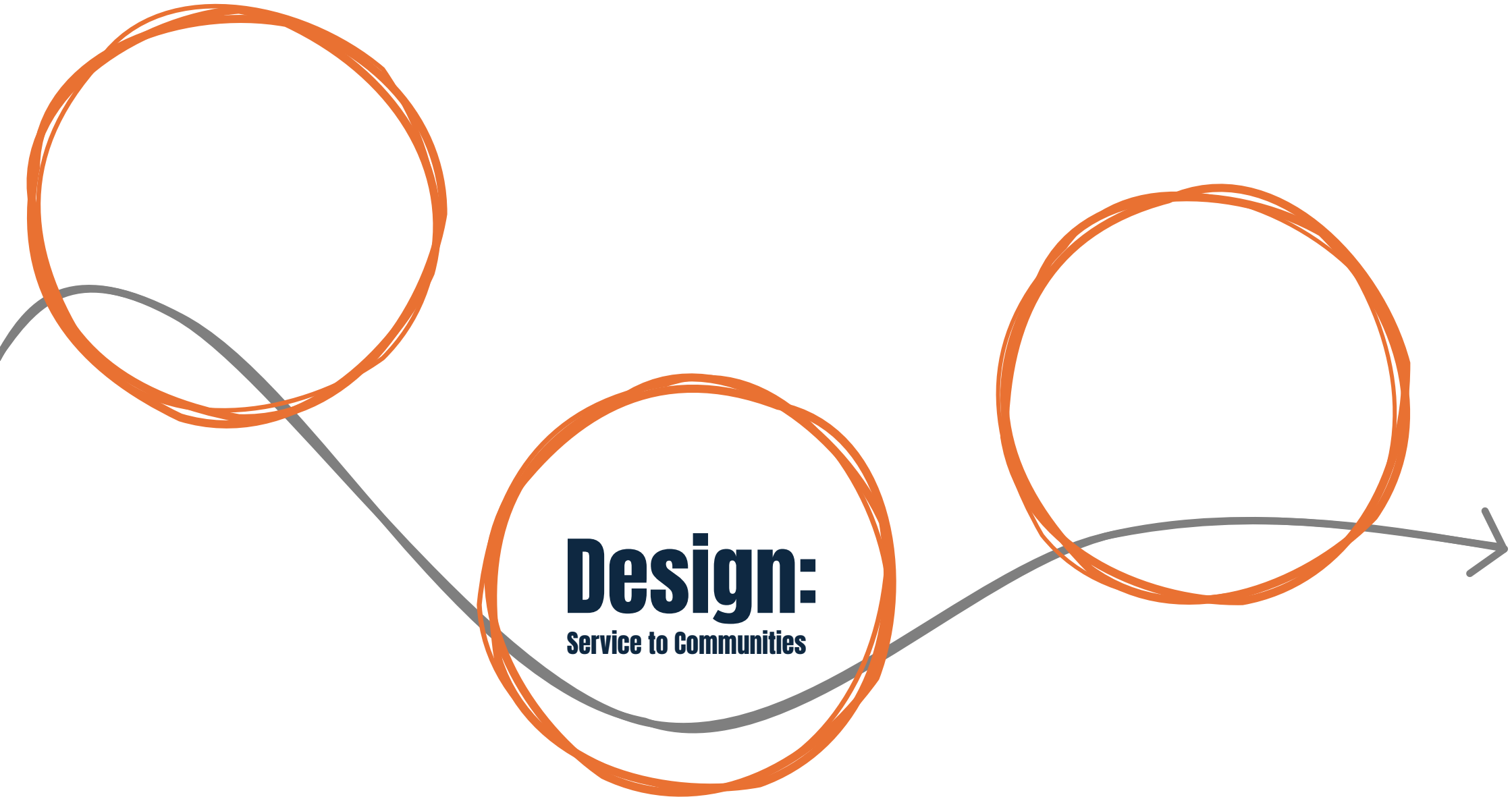
Jul 24, 2025, 10:20 by Shiloh Elliott

The just-released RIPL Report highlights material performance for consumers to mitigate water intrusion.

TALLAHASSEE, Fla.—The Office of Insurance Regulation partnered with the University of Florida to examine building materials, assemblies and smart home technologies for residential construction against water intrusion hazards. This partnership led to the production of the Resiliency Inference Performance Level (RIPL) Report that provides valuable insights for consumers to enhance home resiliency and reduce vulnerabilities against weather threats.



UF is driving Florida's Transformation



Grant Support:

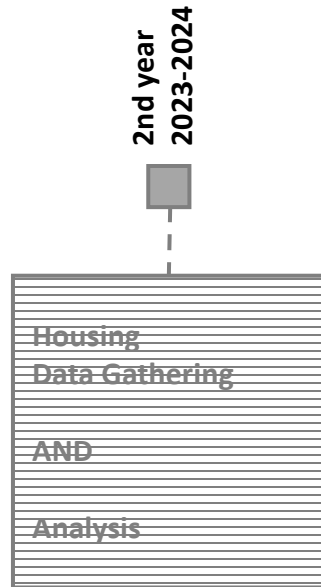
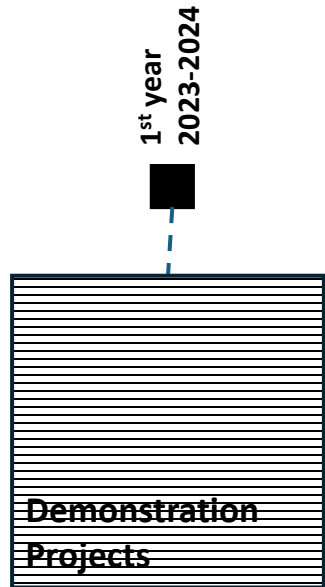


Port St. Joe Vacant to Revitalized

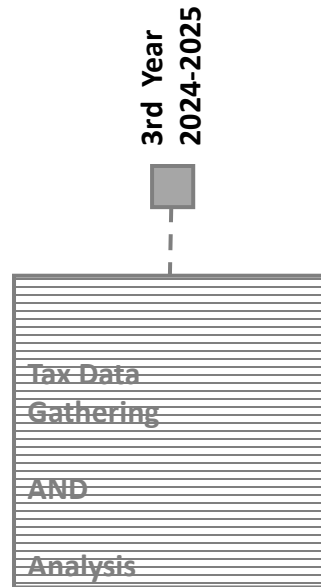


Project Partners:



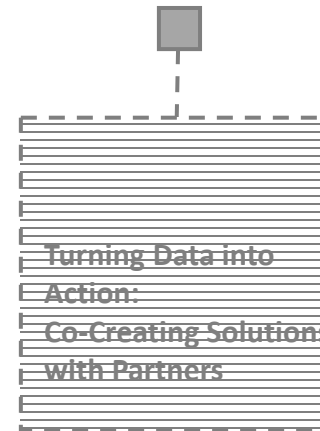


Housing data collection:
material, age, appraisal, survey
development
+
In-depth housing condition
assessment, policy review,
spatial mapping

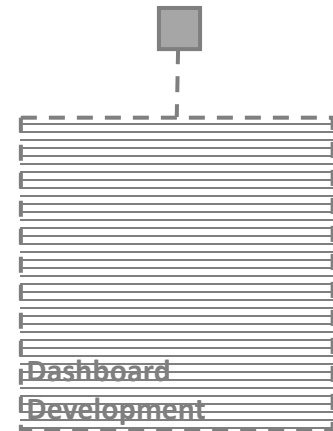


Tax delinquency trends,
ownership patterns, and parcel-
level analysis

To be continued...

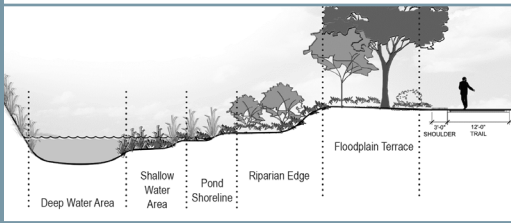
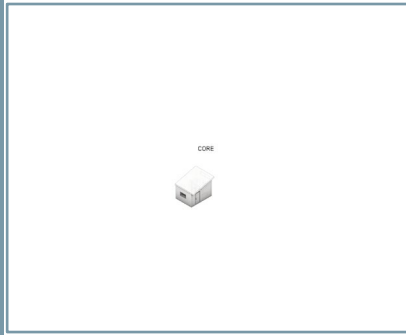


Engaging partners to shape the
dashboard, align data with
community needs, and guide
actionable strategies



Building an interactive tool to
visualize housing, tax, and deed
data for informed decision-
making





Demonstration Project 1: Housing Accessibility

Demonstration Project 2: Water Quality

Demonstration Project 3: Green Infrastructures



- Showcase project progress and updates
- Enhance community engagement and feedback
- Highlight interventions and resilience strategies
- Improve transparency and stakeholder communication



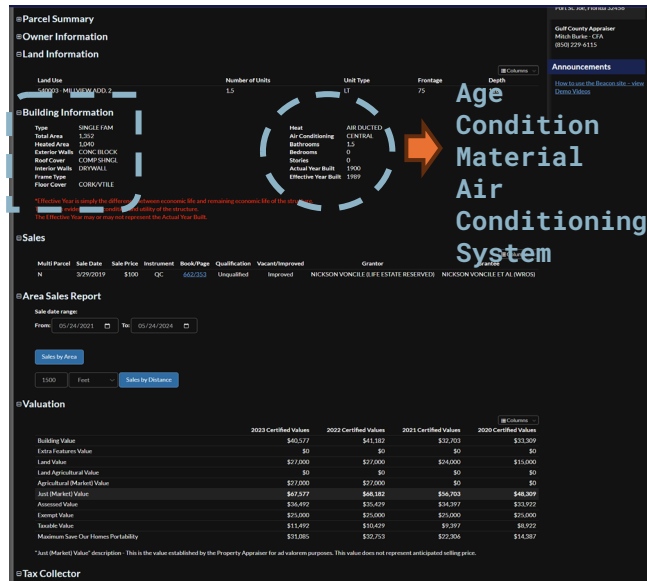
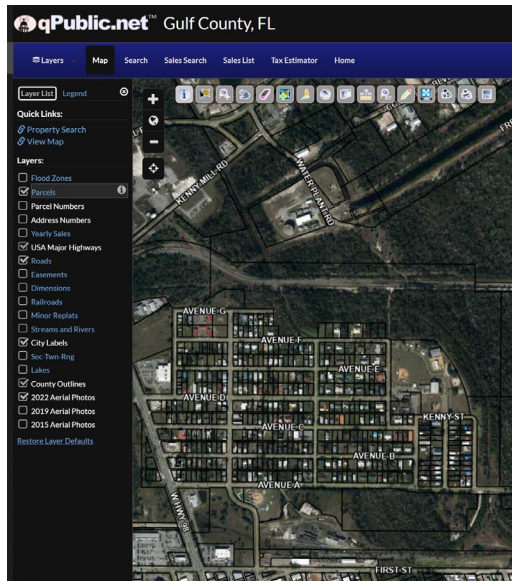
THE WAY RESILIENCE LOOKS

A Collective Approach toward Demonstrative Projects of Resilience

August 21, 2023



DATA SOURCE AND TECHNIQUE



OID	CNTYNAMELNK	PARCELID	NPARNO	DORUC	PAUC	PARUSEDE	SPASS_CD	IMPROVVAL	LNDAVAL	JV	JV_CHNG	JV_HMSTD	AV_SD	AV_NSD	AV_HMSTD	TV_SD	TV_NSD	JV_CLASS	QNAME	OADDR1	OADDR2	OCITY	OSTATE
13	GULF	33-056800	05680000F	12-045-056	0	0	VACANT RESIDENTIAL	0	254200	254200			254200	206184	254200	206184		THE ST JOE ATTN: TAX 1130 RICHA	PANAMA C FL				
14	GULF	33-056850	05685000F	12-045-056	9	99	RESIDENTIAL COMM/	0	0	0			0	0	0	0		PREFERREZ 212 WATER DRIVE	MEXICO BE FL				
15	GULF	33-056850	05685056F	12-045-056	17	0	OFFICE BUILDINGS, NK	211179	1	211179			211179	114491	211179	114491		PREFERREZ 212 WATER DRIVE	MEXICO BE FL				
16	GULF	33-056850	05685070F	12-045-056	17	0	OFFICE BUILDINGS, NK	211178	1	211179			211179	114491	211179	114491		PREFERREZ 212 WATER DRIVE	MEXICO BE FL				
18	GULF	33-045730	04573000F	12-045-045	99	0	ACREAGE NOT ZONED	0	789140	789140			789140	789140	789140	789140		APALACHIC ATTN: D 130 RICHA	PANAMA C FL				
20	GULF	33-045731	04573100F	12-045-045	0	0	VACANT RESIDENTIAL	0	32000	32000			32000	32000	0	0		CHURCH P 253 AV E	PORT ST JO FL				
22	GULF	33-045780	04578000F	12-045-045	27	0	AUTO SALES, AUTO RE	742176	486600	1226176			1226176	1226176	1226176	1226176		COOPER C 770 HWY 98 WEST	PORT ST JO FL				
87	GULF	33-045620	04562000F	12-045-045	23	0	FINANCIAL INSTITUTO	834868	979300	1614198			1614198	1614198	1614198	1614198		THE ST JOE ATTN: TAX 1130 RICHA	PANAMA C FL				
90	GULF	33-058210	05821000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		WINFIELD 1170 AVE E	PORT ST JO FL				
92	GULF	33-058210	05821003F	12-045-056	1	0	SINGLE FAMILY	10942	18000	28942			28942	23141	28942	23141		UNDERSON 143 AVENUE D	PORT ST JO FL				
93	GULF	33-058210	05821003P	12-045-056	1	0	SINGLE FAMILY	67466	18000	85466		85466	85466	85466	60496	35466		ROBINSON 164 AVENUE E	PORT ST JO FL				
94	GULF	33-058220	05822000F	12-045-056	1	0	SINGLE FAMILY	39082	18000	57082			57082	57082	57082	57082		SMILEY JR 167 AVENUE D	PORT ST JO FL				
94	GULF	33-058220	05822000F	12-045-056	1	0	SINGLE FAMILY	72209	18000	90209		90209	68746	68746	68746	0	ADDISON P PO BOX 321	PORT ST JO FL					
95	GULF	33-058340	05834000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		GREGORY 1111 LIBERTY STREET	PORT ST JO FL				
96	GULF	33-058250	05825000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		DAVIS ANTI 25662 SW 20TH AVE	NEWBERRY FL				
97	GULF	33-058260	05826000F	12-045-056	1	0	SINGLE FAMILY	94818	18000	112818			112818	112818	112818	112818		LESLIE RAV 104 BROAD ST	PORT ST JO FL				
98	GULF	33-058280	05828000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	11713	18000	11713		HARRIS SA WILLIAMS 898 AVENU	PORT ST JO FL				
99	GULF	33-058290	05829000F	12-045-056	1	0	SINGLE FAMILY	104701	18000	122701		122701	56246	56246	56246	20000	OWENS KP 163 AVE D	PORT ST JO FL					
100	GULF	33-058300	05830000F	12-045-056	1	0	SINGLE FAMILY	151752	18000	169752			169752	134355	169752	134355		CLEMONS 416 MARTIN LUTHER K	PORT ST JO FL				
101	GULF	33-058310	05831000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	13310	18000	13310		QUINN MIC HARRIS 898 AVE A	PORT ST JO FL				
102	GULF	33-058320	05832000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		MC QUEEN C/O DORA 119 EDNA !	BELVEDERE SC				
103	GULF	33-058330	05833000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000	-56911	18000	6280	6280	0	0		FISHER BR PO BOX 732	PORT ST JO FL				
104	GULF	33-058340	05834000F	12-045-056	1	0	SINGLE FAMILY	51706	18000	69706			69706	35544	0	0		CHURCH P BORN OF TI PO BOX 56	PORT ST JO FL				
105	GULF	33-058350	05835000F	12-045-056	1	0	SINGLE FAMILY	88202	18000	106202		106202	35043	35043	35043	10043	10043		QUINN BLI 227 AVE D	PORT ST JO FL			
106	GULF	33-058360	05836000F	12-045-056	71	0	CHURCHES	298925	18000	298925			298925	128976	0	0		CHURCH F OF THE LVP PO BOX 56	PORT ST JO FL				
107	GULF	33-058370	05837000F	12-045-056	1	0	SINGLE FAMILY	41058	18000	59058			59058	59058	59058	59058		LESLIE RAV 104 BROAD ST	PORT ST JO FL				
108	GULF	33-058380	05838000F	12-045-056	1	0	SINGLE FAMILY	51130	18000	69130		69130	31357	31357	31357	6357	6357		PITMAN D 285 AVENUE E	PORT ST JO FL			
109	GULF	33-058390	05839000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		LKELY MN 316 AVENUE B	PORT ST JO FL				
110	GULF	33-058390	05839000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	8586	18000	8586		FORD MAR 3411 WHIPPERWILL D	FAYETTEVILLE NC				
111	GULF	33-058780	05878000F	12-045-056	1	0	SINGLE FAMILY	69104	18000	87104		87104	56558	56558	56558	26558	0		HARRIS BE 245 AVENUE E	PORT ST JO FL			
112	GULF	33-058790	05879000F	12-045-056	1	0	SINGLE FAMILY	70345	18000	88345		88345	56145	56145	56145	26145	0		PARKER RC 246 AVENUE F	PORT ST JO FL			
113	GULF	33-058800	05880000F	12-045-056	1	0	SINGLE FAMILY	61856	18000	79856			79856	44477	79856	44477		POWELL RC C/O WILHE 2784 WADI	TALLAHAS FL				
114	GULF	33-058810	05881000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	18000	18000	18000			TERRA GLO 16215 PANAMA CITY B	PANAMA C FL			
115	GULF	33-058820	05882000F	12-045-056	1	0	SINGLE FAMILY	56991	36000	92991		92991	51141	51141	0	0		JENKINS 72 251 AVENUE E	PORT ST JO FL				
116	GULF	33-058830	05883000F	12-045-056	1	0	SINGLE FAMILY	18952	36000	54852			54852	54852	54852	54852		FARMER DV5001 LAKE I APARTM	TALLAHAS FL				
117	GULF	33-058850	05885000F	12-045-056	1	0	SINGLE FAMILY	34044	18000	52044			52044	52044	52044	52044		MC NAIR EI 905 CLIFFE APT 304	PORT ST JO FL				
118	GULF	33-058860	05886000F	12-045-056	0	0	VACANT RESIDENTIAL	0	18000	18000			18000	18000	18000	18000			TERRA GLO 16215 PANAMA CITY B	PANAMA C FL			
119	GULF	33-058870	05887000F	12-045-056	1	0	SINGLE FAMILY	22503	36000	58503			58503	26012	58503	26012		TAYLOR MI C/O CARL F 279 AVE E	PORT ST JO FL				
120	GULF	33-058880	05888000F	12-045-056	1	0	SINGLE FAMILY	17214	18000	35214		35214	17540	17540	0	0		PETERSON 113 BAY STREET	PORT ST JO FL				
121	GULF	33-058890	05889000F	12-045-056	1	0	SINGLE FAMILY	31579	18000	49579			49579	31105	49579	31105		MILLS L CRI 266 AVE F	PORT ST JO FL				
122	GULF	33-058900	05890000F	12-045-056	1	0	SINGLE FAMILY	40648	18000	58648			58648	58648	58648	58648		PITMAN D 234 AVE E	PORT ST JO FL				
123	GULF	33-058910	05891000F	12-045-056	1	0	SINGLE FAMILY	34756	18000	52756			52756	33143	52756	33143		SMILEY PE 268 AVENUE F	PORT ST JO FL				
124	GULF	33-058920	05892000F	12-045-056	1	0	SINGLE FAMILY	22239	18000	40239			40239	40239	40239	40239		PINEDA LU 308 13TH ST	PORT ST JO FL				

Appraisal

Used to extract building value, land use, and parcel boundaries as well as analyzing ownership concentration and patterns.



Census Data

Data was collected from Gulf County's public portals and manually compiled to cross-reference ownership, tax status, and building activity.

OBJECTIVES

A

Housing Stock and Characteristics

- Exploring the age and condition of the building stock in the area,
- Assessments of the renovation trends
- Material usage that influence housing quality and sustainability.

B

Land Use and Valuation

- Land use types within north port st. Joe,
- Property valuation dynamics.
- Identifying economic trends
- Exploring potential for future development.

C

Infrastructure and Amenities

- Assessment of the available infrastructure and amenities
- Accessibility and condition of essential services

D

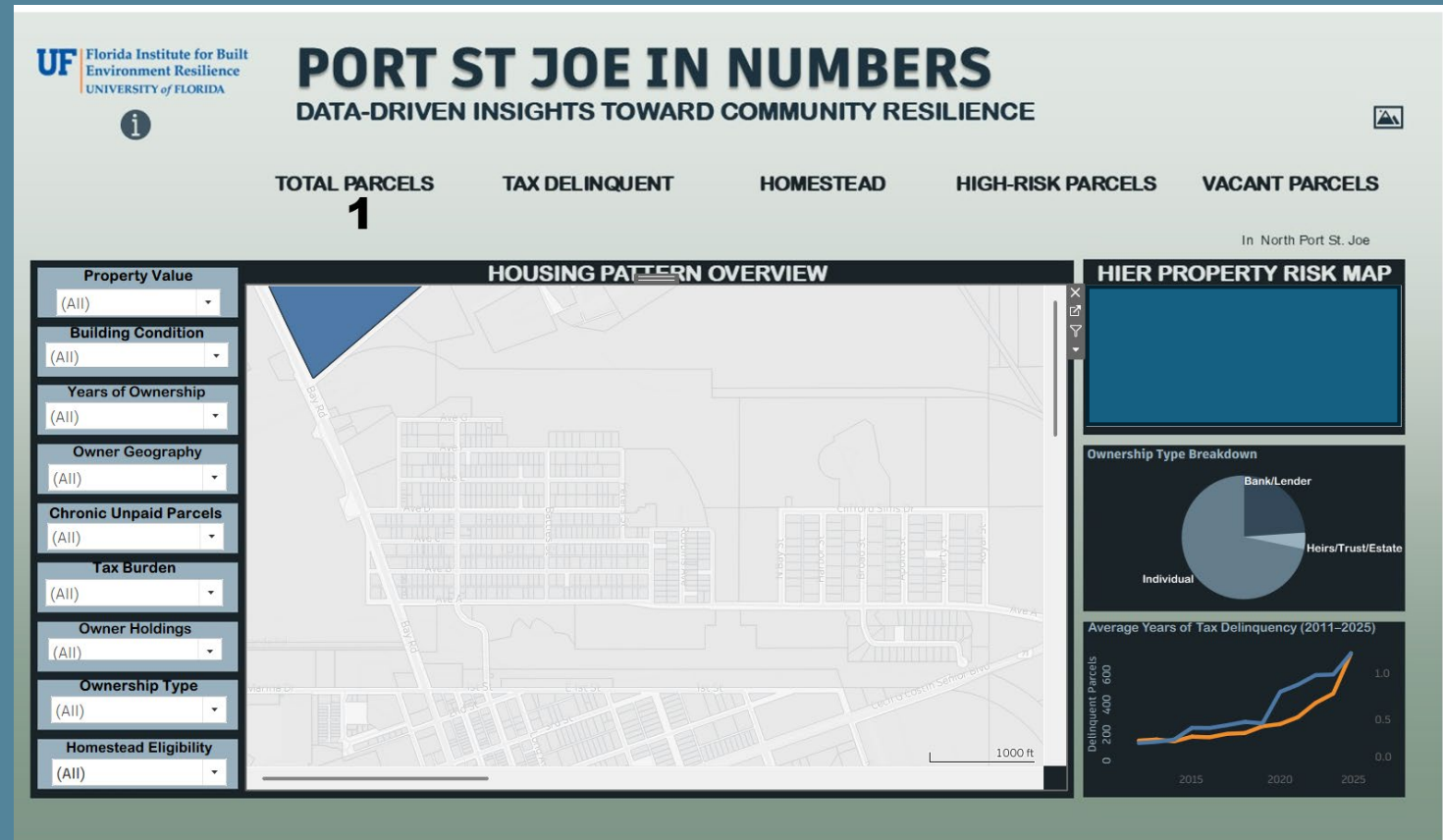
Spatial Distribution and Vacancy

- Analyzing the spatial distribution of properties and vacancy rates to
- Housing demand trends.
- Identify areas suitable for investment
- Identify areas that may require interventions to prevent further decline.

Making Decisions by Visualizing Insights

Dashboards translates the complexity of the data into clear, visual insights.

- Detect patterns such as heir property risks, tax delinquency, or ownership transfers.
- Provide a shared “map” of local property issues, accessible to all.
- Support strategic decisions in legal services, outreach, and community planning.
- Strengthen proposals and advocacy with credible, visual evidence.



Dashboard Co-Design

Filters & Layers:

Which dimensions reveal the most (e.g., ownership type, geography, tax status, time trends)?

Key Indicators:

What measures matter most for your mission (e.g., unpaid balances, heirship risks, property transfers)?

Formats & Views:

Which visuals support your communication (maps for outreach, charts for reporting, tables for casework)?

Applications:

How could dashboards support your work—community engagement, client services, program evaluation, advocacy, or funding proposals?



Grant Support:



NATIONAL ACADEMIES
Sciences
Engineering
Medicine
GULF RESEARCH PROGRAM



Cedar Key Resilience Plan



Project Partners:



UF Florida Institute for Built Environment Resilience
UNIVERSITY of FLORIDA

UF CENTER FOR LANDSCAPE CONSERVATION PLANNING

UF Shimberg Center for Housing Studies
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NATURE COAST BIOLOGICAL STATION

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FOOD & RESOURCE ECONOMICS DEPARTMENT

Action-Focused Planning Process

Assess

Communicate process and get to know concerns and priorities to reduce flood vulnerability

Map

Quantify effects of flooding

- Sea level rise
- Storm surge
- FEMA FIRM

React

Discuss results, focus areas, possible actions, funding, policies

Take Action

Resilience and Adaptation Plan

- Raise awareness about flood risk in community
- Develop ideas for actions!
- Basis to fund interventions

Collective Mapping

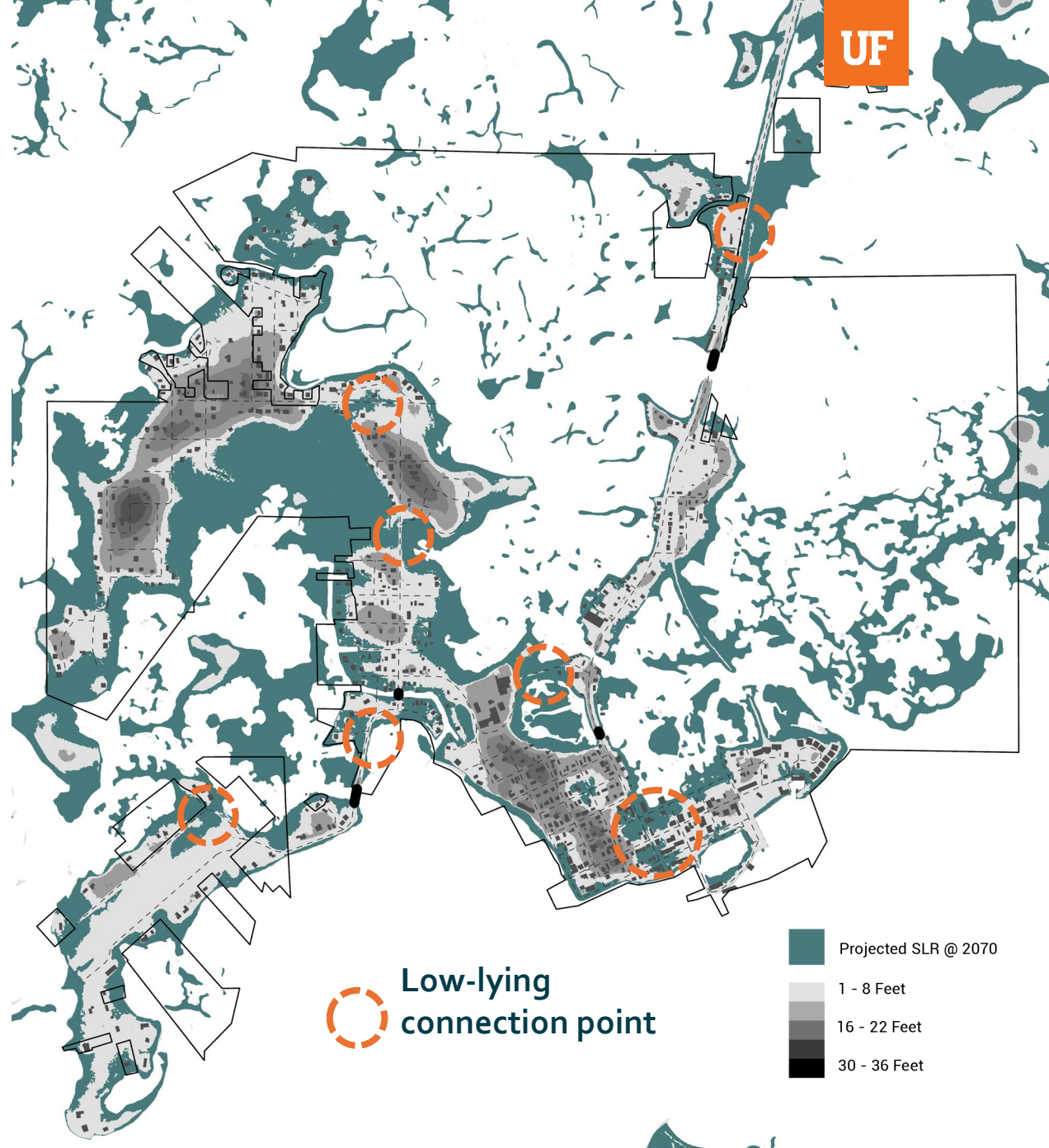
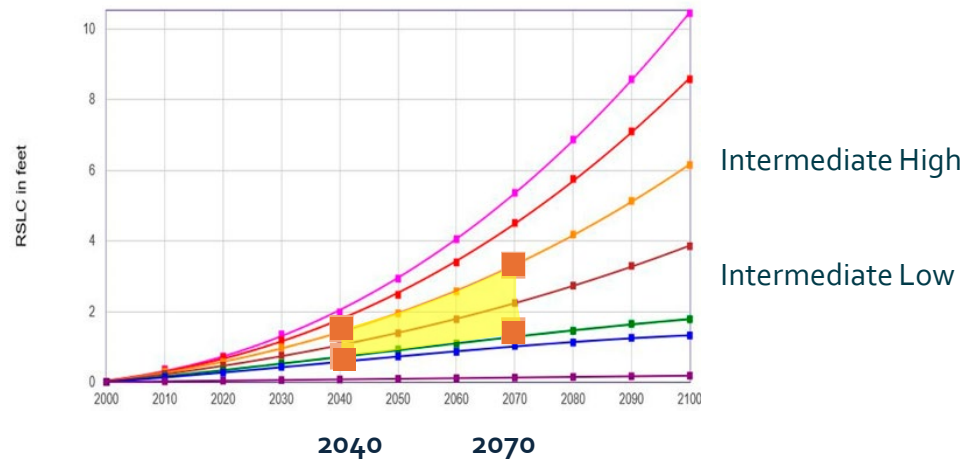
Resilient Cedar Key WebApp

Adaptation Plan Spatial Framework
Adaptation Overlays



Vulnerability Assessment

Planning Horizons (NOAA 2017)





Expanding Community & Decision Support



Themes & Community Values

Theme:
Cedar Key is an archipelago.

↓
Approach:
Restore Hydrologic Connectivity

Theme:
Cedar Key depends on its transportation network.

↓
Approach:
Strengthen Transportation Network

Theme:
Cedar Key is a collection of diverse districts.

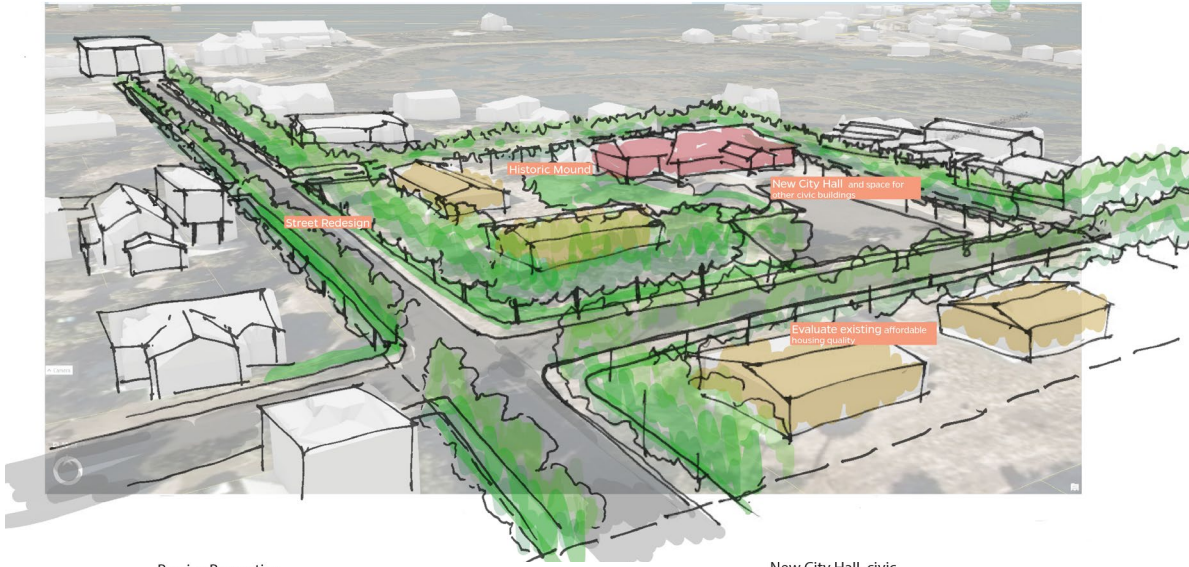
↓
Approach:
Tailor Adaptation Actions for Diverse Districts

Theme:
Cedar Key's natural systems have defined its identity and will sustain its future.

↓
Approach:
Preserve Natural Systems and Functions that Sustain the Local Economy

Adaptation Project Area 1

Redevelopment of Rec. Center/City Hall



Passive Recreation Infrastructure



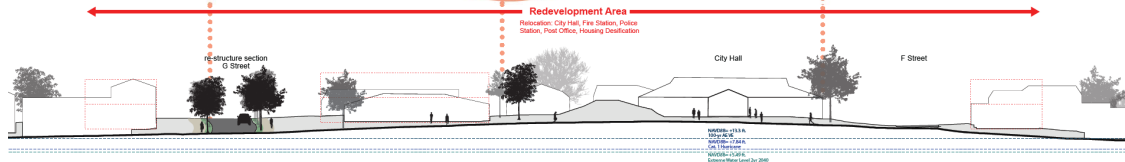
New City Hall, civic buildings and Plaza



Housing Redevelopment



Redevelopment Area
Relocation, City Hall, Fire Station, Police Station, Post Office, Housing Distribution



Relocated City Hall

Relocation Community Facilities
City Hall, Police, Fire Department, Post Office



UF is driving Florida's Transformation



Grant Support:



NATIONAL ACADEMIES Sciences Engineering Medicine

GULF RESEARCH PROGRAM

GulfSouth Studio



Project Partners:

NATIONAL ACADEMIES Sciences Engineering Medicine

GULF RESEARCH PROGRAM

UF College of Design, Construction & Planning Architecture

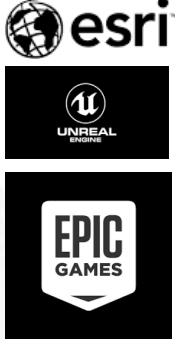
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UF Landscape Architecture UNIVERSITY of FLORIDA

Program Approach

Media: Digital Twin



esri
UNREAL ENGINE
EPIC GAMES



Method: Design Studio



Place: Gulf Coast Communities



Cape Coral FLORIDA FORT MYERS #city of palms

Collaboratory



Gulf *South* Studio Program

UF

Fall 2022, Port St. Joe

Spring 2025, Cedar Key

Fall 2022, Cedar Key

Fall 2022, Homosassa

Fall 2022, Tampa

Spring 2026, Punta Gorda

Fall 2022, St. Pete

Spring 2023, Cape Coral

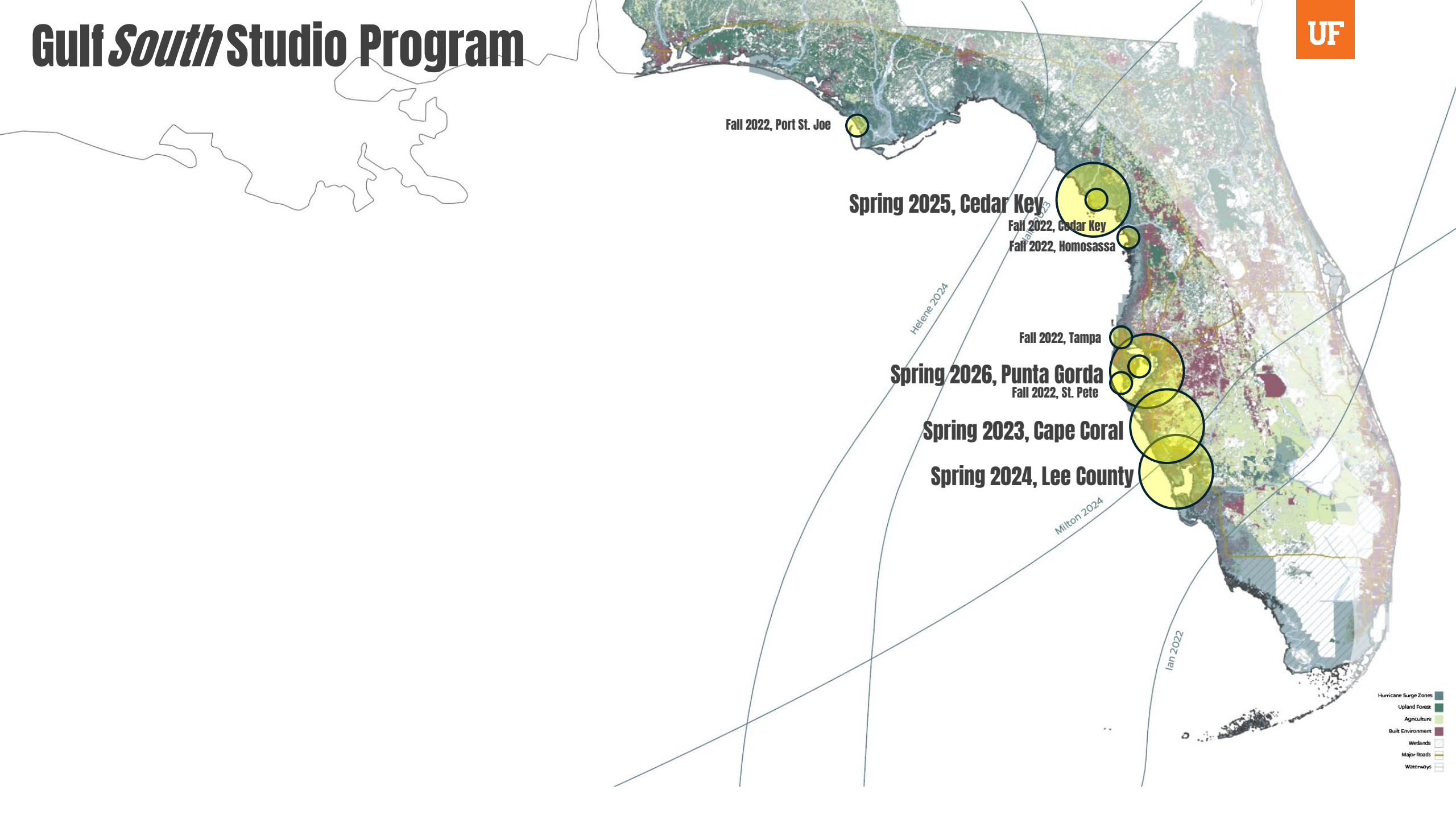
Spring 2024, Lee County

Helene 2024

Milton 2024

Ian 2022

- Hurricane Surge Zones
- Upland Forest
- Agriculture
- Built Environment
- Wetlands
- Major Roads
- Waterways





Grant Support:



URBAN FUTURES



Project Partners:

UF | College of Design,
Construction & Planning
Architecture

UF | College of Design,
Construction & Planning
UNIVERSITY of FLORIDA

UF | Department of Urban
and Regional Planning
UNIVERSITY of FLORIDA

UF | Landscape Architecture
UNIVERSITY of FLORIDA

Urban Futures:

Discussing Resilience Growth in Small Florida

City of Perry



Town of Micanopy



City of Crystal River



City of St. Pete Beach



May 22 and May 23

Carla Brisotto Ph.D. Assistant Professor at SoA UF | FIBER
Jeff Carney Associate Professor at SoA UF and Director of FIBER



Challenges

Rural communities face particular challenges compared to urban areas, including **less diversified economies, fewer financial resources, lower population density, weak communication networks, and potentially less media coverage or inclusion in large response efforts.** The **geographic distances** in rural areas can also make developing comprehensive mitigation systems difficult.

Kapucu et al., 2013, *Disaster Preparedness and Resilience for Rural Communities*



Challenges

Over half of Florida's municipalities projected to have an average of almost **30% of their total revenues exposed to flooding**. This fiscal vulnerability is concentrated in smaller municipalities. Despite this significant exposure, the survey revealed that **lack of funding** is the biggest barrier to adaptation, and municipalities are primarily **relying on existing local revenues, particularly property taxes**, to fund their efforts.

Shi et al. 2023, Can Florida's Coast Survive Its Reliance on Development? Fiscal Vulnerability and Funding Woes Under Sea Level Rise

Rural areas rely more prominently **in** residents' economic independence resilience and traditional knowledge resilience, suggesting that where infrastructure and socio-economic backgrounds are less developed, rural **resilience depends more on the economic capacity of residents and the knowledge inherited through generations**.

Su et al. 2022, A Comparative Study of the Resilience of Urban and Rural Areas under Climate Change



Challenges

An aerial photograph of a suburban town. A central road runs north-south through the middle. On either side, there are residential houses, some larger commercial buildings with white roofs, and parking lots. The landscape is green with many trees. The overall scene depicts a typical small city or suburb.

While larger trends (like economy or migration patterns) may disadvantage small cities, the results are diverse, influenced by factors beyond size, location, institutions, and governance... **Role of small cities within urban systems, where they can be negatively impacted by policies prioritizing efficiency over local concerns.**

Grossmann & Mallach 2021, *The small city in the urban system: complex pathways of growth and decline*

Process

Call 2024



Site Visits 2025



Case studies 2025



Spatial Analysis



Process

Call 2024

- Open Call to more than **70** cities with less than 10,000 residents
- Served by Duke Energy
- **Impacted** at various level by Hurricanes Helene and Milton

- **5** site visits
- City of Perry
- City of Crystal River
- City of St. Pete Beach
- Town of Micanopy

Site Visits 2025



Case studies 2025

- Affordable Housing
- Public Building Facilities
- Infrastructure Adaptation
- CRA for infrastructure



- FEMA
- SLR
- Infrastructure
- Zoning and Future Land Use
- Waterflows
- Soil Composition
- Temperature
- Historical Landmarks

Spatial Analysis



Site Visits

“we have a lot to offer”

*“our town is beautiful,
a Florida gem”*

*“the city hall is one of the places where the
community meet”*

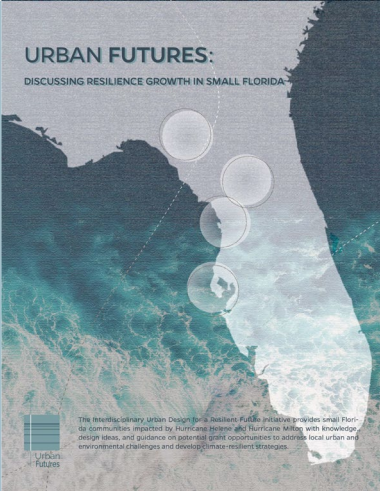
“we don’t want to be pushed out”



Final Workshop


Acknowledgment:

We are fortunate for the support of our sponsors The Duke Energy Foundation and the Florida Climate Institute. We express our gratitude to our College for their support including DCP event coordinator Brianna Fried and DCP communication staff, Joey Mazzafeno and Kyle Niblett. Finally, thanks to the GatorCorps members for their help.




**URBAN FUTURES:
DISCUSSING RESILIENCE GROWTH IN SMALL FLORIDA**

This initiative is supported with the generous support of the Duke Energy Foundation and the Florida Climate Institute.



The interdisciplinary Urban Design for a Resilient Future initiative provides small Florida communities impacted by Hurricane Idina with knowledge, energy assets, and guidance on potential grant opportunities to address local urban and environmental challenges and develop climate-resilient strategies.



AGENDA

City of Perry

The City of Perry wants to focus on the study of an industrial zone within city border to understand how it could include workforce housing. The overall purpose is to spark economic development that will support Perry attract new residents while maintaining their spatial identity.

Town of Micayno

The City of Micayno focuses on the areas of the town on the west side of Main Street. The urban area is characterized by single-family homes relying on septic systems. The study aims to explore how to rehabilitate the neighborhood while addressing stormwater management. The case study aims to understand how to redevelop the area through a CRA while also exploring other possible redevelopment strategies.


City of Crystal River

The City of Crystal River has been heavily impacted by the recent hurricanes (Idina, Helene, and Milton). The city has seen its city hall devastated after each event. The city decided to rebuild the city hall where it was hit elevated. The case study wants to investigate how to rebuild the area around city hall to become a public space and recreational center. The discussion includes reflections on resilience service returns to be efficient during and post hurricane events.

City of St. Pete Beach

The City of St. Pete Beach has seen an increase in tourism and the second home market. The effect on the city is a highly pressured public infrastructure that must serve a larger seasonal population while operating with a reduced maintenance budget due to lower homeowner tax revenue. The case study aims to understand how to redevelop the area through a CRA while also exploring other possible redevelopment strategies.

4 CITIES



15 SPECIALIZATION

May 22

1:00-1:30PM
Introduction: Carla Brutto, Assistant Director FIBER
Welcome: Jeff Carney, Director FIBER
 Brandy Woodard, UF Foundation

1:30-3:00PM
Case Studies:
Assistant Director Carla Brutto
City of Perry, Mayor Ward Kenting and City Manager John Hart
Town of Micayno, Mayor Anna Williams and Town Manager Sara Samaria
City of Crystal River, Vice-Mayor Robert Holmes and City Manager Audra Curt
City of St. Pete Beach, Mayor Adrian Postle and City Manager Frances Robustelli

COFFEE BREAK

3:00-3:30PM
3:30-4:30PM
Presentations:
Professor Stephen Bender
Associate Professor Jason Von Meiding
Assistant Professor Maria Watson
Assistant Professor Sarah Gambis

4:30-5:00PM
Discussion and Final Remarks

6:30PM
Dinner Social

May 23

8:30-9:00AM
Light Breakfast and Networking

9:00-9:15AM
Introduction: Carla Brutto, Assistant Director FIBER
Welcome:
Basil Srivastava, Associate Dean for Research and Strategic Initiatives DCP
Darryl Collins, Director Government & Community Relations, Duke Energy

9:15AM-10:15AM
Presentations:
Director Thomas Hawkins
Professor Jeff Carney and Assistant Scholar Christian Calle
Professor Jules Bruck and Research Associate Professor Mike York

10:15AM-12:15AM
Case Study Working Sessions

OPEN ACCESS COFFEE BREAK

12:15-1:15PM
LUNCH

1:15-1:30PM
Presenting the sessions results

2:15-3:15PM
Open Discussion

3:15-3:45PM
COFFEE BREAK

3:45-5:00 PM
Final Remarks moderated by Krista Syler, Assistant Vice President, Coastal Restoration Specialist, WSP. Former FDEP Planning Administrator, Seaside, Florida Program

UF FIBER

Jeff Carney
Jeff Carney is a registered and certified city planner working at the interface of housing, neighborhood, and economic with focus on diverse change equities. He is Associate Professor at the School of Architecture at the University of Florida, director of FIBER and director of the FHC program.

Carla Brutto
Carla Brutto is the Assistant Director of FIBER. She is an architect from Italy and urban theorist, as well as an Associate Scholar at UF. Her research focuses on resilient urbanism and the relations between people and their environment.

Christian Calle Figueroa
Christian Calle Figueroa is an architect and urban designer who focuses on adaptive spatial strategies and digital tools to enhance climate resilience and public life in vulnerable coastal communities.

Stephan Bender
Stephan Bender is the program director of CityLab-Orlando and an Instructional Associate Professor at the School of Architecture. His specializations focus on housing and urban issues, teaching for modular construction, and innovative practices. He works across the design and fabrication of buildings, policy, and community design.

Sarah Gambis
Sarah Gambis is a registered architect and Assistant Professor. Her work spans public interest design, focusing on how environmental justice design at Florida State, she worked extensively in public and non-profit sectors.

UF DCP Architecture

Stephen Bender

Sarah Gambis

UF DCP Landscape Architecture

Jules Bruck
Jules Bruck is the Director of the School of Landscape Architecture and Planning. She co-founded the award-winning Coastal Resilience Design Studio (CRDS) in 2016. Her research interests are coastal resilience, green infrastructure, and public engagement of sustainable landscape practices.

Mike York
Michael York is a Research Associate Professor in the Department of Landscape Architecture and the Associate Director of the UF Center for Landscape Conservation Planning. His work includes applied research with conservation partners on urban green infrastructure, the impacts of sea level rise on natural resources, and climate change adaptation strategies.

WSP USA

Krista Syler
Krista Syler is a Coastal Restoration Specialist with WSP USA, Inc. She has a B.S. in Marine Biology from the University of South Florida and worked for the Florida Department of Environmental Protection where she focused on public engagement, state permitting, and providing local governments with grant funding for flood resilience.

4 CITIES

15 SPECIALIZATION

UF College of Law Environmental and Community Development Clinic

Thomas Hawkins
Professor Thomas Hawkins is the UF Levin College of Law Environmental and Community Development Clinic. This clinic prepares students for the practice of law through environmental, land use, and historical law, bringing public interest-oriented clients. He is a member of the Florida Bar and an ACPJ-certified partner.

UF DCP Construction Management

Maria Watson
Maria Watson is an Assistant Professor and affiliated researcher with the Shengrong Center for Housing Studies. Her research focuses on the factors impacting community recovery after disaster events, particularly interdependencies between infrastructure, housing, and businesses.

Jason von Meiding
Jason von Meiding is an Associate Professor in Baker School and a founding faculty member of the Florida Institute for Built Environment Resilience (FIBER). His research is primarily community-oriented, focusing on the fundamental drivers of risk in society, and therefore place-shaping impacts.

Ravi Srivastava
Dr. Ravi Srivastava is an ASCE Fellow and Professor with expertise in building, energy, and energy systems. He directs the Energy Lab, has authored books, holds eight patents, and received major research grants from the Association of American Engineers. He is the Director for Research and Strategic Initiatives at the College of Design, Construction, and Planning.

UF Gulf Program

Rebecca Burton
Rebecca Burton is the program coordinator for the UF Gulf Scholars Program, which supports the Gulf region institutions in preparing undergraduate students as the next generation to address critical challenges in the region.

UF Foundation

Brandy Woodard
An Assistant Director of Development for Corporate and Foundations Relations at UF, Brandy Woodard collaborates with key stakeholders to secure strategic funding. Working closely with Duke Energy and the UF FIBER Urban Futures project, Brandy Woodard has worked to foster partnerships to drive resilience and growth initiatives on small Florida communities.

Duke Energy

Darryl Collins
As the Director of Government & Community Relations for Duke Energy Florida, Darryl Collins works with local government and nonprofit organizations across Florida. He is a native of Monticello and a graduate of the University of Florida.

City of Perry

Mayor Ward Kenting
Ward Kenting, elected to the City of Perry council in August of 2020, elected Mayor in November of 2022. Married to Emily, dad to John Kenting, Corrina Kenting and August Kenting. Graduated to Boston, Boston and Andover. Also managed the Perry Fibre plant and was an airport services business.

City Manager John Hart
John Hart, City Manager of Perry, FL, holds mechanical and industrial engineering degrees from the University of Florida. He was a maintenance manager at a food supermarket but found a wholesale nursery, and became City Manager in 2022, bringing technical expertise and business experience to the position.

Town of Micayno

Mayor Anna Williams
Mayor Anna Williams is the first female Mayor of Micayno, Florida. A lifelong resident and member of the Florida Bar, she currently is the first female Commissioner. She is a member of the Florida League of Mayors, serves on the Alachua County Board of Supervisors, and chairs the Alachua County Community Revitalization Project (ACCRP) Micayno subcommittee. She is dedicated to preserving Micayno's historical heritage while advancing infrastructure and expanding access to services.

Town Manager Sara Samaria
Sara Samaria is the Town Manager of Micayno, Florida's Town Administrator since June 2021. Following 10 years as Finance Director and Deputy City Manager in Lake Butler, she holds a BA in Business Administration from Saint Leo University with an emphasis on Public Administration and an MBA in Construction Management and Construction Law. She has 15 years of professional public administration, infrastructure planning, and economic development. She is active in the Florida City and County Management Association and serves on regional Florida leagues as well as being a certified mediator.

Vice Mayor Robert Holmes
Born and raised in Florida, moved to Crystal River in 2006. Graduated Crystal River High School in 1975. Served in the US Coast Guard 1975-1982, 20 years with Florida Power, Progress Energy. Duke to 2022. Married to Diana, six children, three daughters, Michael, and Lauren. Elected to City Council 2016 and served on staff for 20 years. Professional Engineer.

City Manager Audra Curt
Audra Curt is the City Manager of Crystal River, Florida's City Manager since September 2024. With 20 years in local government (20 in school districts), she managed government, she's known for her Florida expertise and collaborative community engagement. Previously Assistant City Manager in Santa Rosa Beach, she worked in public works, finance, IT and transportation.

City of Crystal River

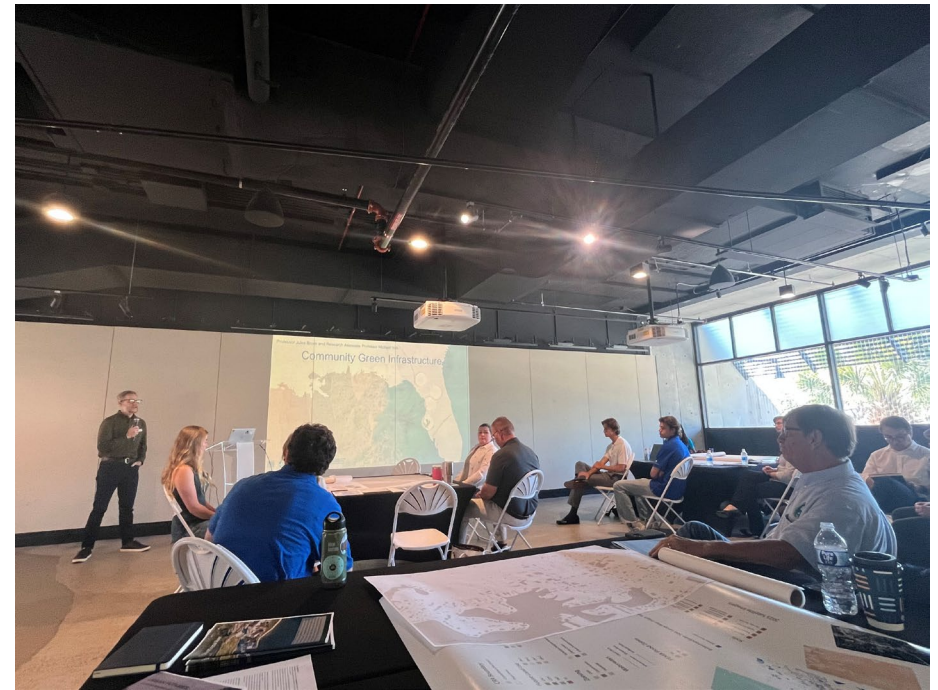
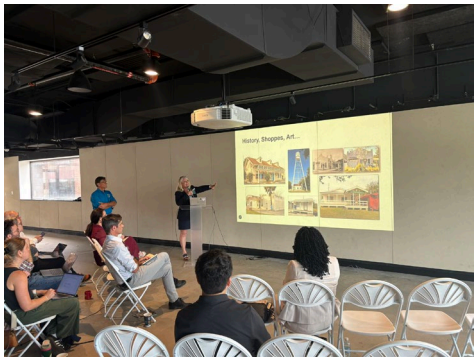
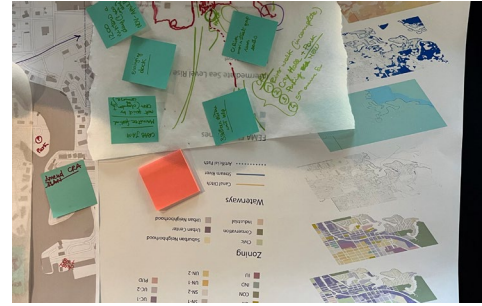
City Manager Audra Curt

City of St. Pete Beach

Mayor Adrian Postle
Adrian Postle is currently the Mayor of St. Pete Beach, since... Born in Romania, he immigrated to the United States in 1991 and arrived in St. Pete Beach in 1995 after the completion of South Florida College and his wife, Krista, have made St. Pete Beach their home since 2003. With more than 20 years in real estate, he has owned and managed several properties. Mayor Postle is deeply involved in the community, as the founder of the Historic St. Pete Beach Seaside, demonstrating his commitment to preserving and enhancing the city's heritage.

City Manager Frances Robustelli
Frances Robustelli has been working in local government for over 30 years. She has extensive experience in public works, engineering, and planning. During her career, she has worked in infrastructure and facilities management, utility and parking management, and emergency management. Her specialty is in organizational development, community building, high performance organizations and the best outcomes for a community. She received a Bachelor's degree in Biology with a minor in Psychology from the University of Florida and a Master's in Public Affairs from the University of Missouri.

Final Workshop



Final Workshop

- Shared Challenges Across Communities: aging grey infrastructure at critical points, insufficient affordable housing and aged housing, limited economic diversification overrelying on tourism, transportation issues, insufficient funding, and cultural identity preservation.
- Need for Collaboration: Communities expressed strong interest in learning from each other's experiences.
- Need for Ongoing Support: Complex urban challenges require sustained long-term assistance, not just one-time consultations.
- Resource Leverage Opportunities: Small cities can amplify their impact through coordinated approaches to funding, shared best practices, and resource pooling.

Grant Support:



NATIONAL ACADEMIES Sciences Engineering Medicine

GULF RESEARCH PROGRAM

GatorCorps



Project Partners:

NATIONAL ACADEMIES Sciences Engineering Medicine

GULF RESEARCH PROGRAM

UF College of Design, Construction & Planning Architecture

UF College of Design, Construction & Planning UNIVERSITY of FLORIDA

UF Department of Urban and Regional Planning UNIVERSITY of FLORIDA

UF Landscape Architecture UNIVERSITY of FLORIDA

Grant Support:



NATIONAL ACADEMIES Sciences Engineering Medicine

GULF RESEARCH PROGRAM

EARTHA'S FARM AND MARKET
A CLARA WHITE MISSION INITIATIVE
JACKSONVILLE, FLORIDA

- Urban Agriculture
- Environmental Stewardship
- Resilience Education
- Training Opportunities

THE PERFORMER'S ACADEMY
JACKSONVILLE, FLORIDA

- Performing Arts
- Career Development
- Resilience Education
- Training Opportunities

FIBER
FLORIDA INSTITUTE FOR BUILT ENVIRONMENTAL RESILIENCE
GAINESVILLE, FLORIDA

- Disaster Relief
- Community Repurpose Projects
- Resilience Education
- Training Opportunities

NATURE COAST BIOLOGICAL STATION
CEDAR KEY, FLORIDA

- Marine Research
- Shoreline Restoration
- Resilience Education
- Training Opportunities

MISSION OF THE DIRT ROAD
KEYSTONE HEIGHTS, FLORIDA

- Community Engagement
- Neighborhood Empowerment
- Resilience Education
- Training Opportunities

Project Partners:

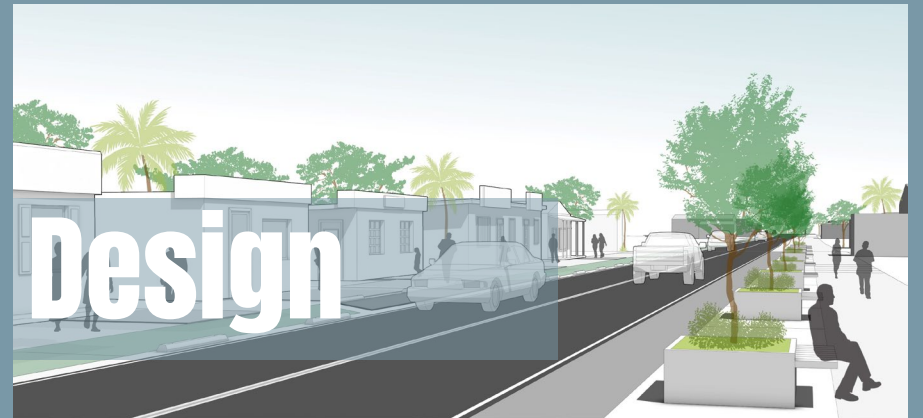


GULF RESEARCH PROGRAM



Building for Change

Florida Institute for Built Environment Resilience



Building for Change

The Bruno E. and Maritza F. Ramos Collaboratory



Thank you!

FIBER Team:



Jeff Carney



Jason von Meding



Yan Wang



Ryan Sharston



Lisa Platt



Jiayang Li



Carla Brisotto



Changjie Chen



Christian Calle



Andrea Galinski



Maria Watson

Carla Brisotto, PhD

Assistant Professor | School of Architecture

Applied Design Lead | Florida Institute for Built Environment Resilience (FIBER)

College of Design, Construction and Planning

Faculty Advisory Committee member, UF Water Institute

Faculty Affiliated, UF Florida Sea Grant

University of Florida

c.brisotto@ufl.edu



FIBER Website



Programs and research

Southwest Regional Planning Council

1/21/2026



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mail:
U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410; or
fax:
(833) 256-1665 or (202) 690-7442;
email:
program.intake@usda.gov.

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correo postal:
U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410; o
fax:
(833) 256-1665 o (202) 690-7442;
correo electrónico:
program.intake@usda.gov.

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What is Extension?

Southwest Regional Planning Council

David Outerbridge and Jessica Ryals
1/21/2026

Background and History



- 20 years prior to the introduction of the Land Grant Bill in 1857, there was a political movement for the creation of agriculture colleges in the US.
- On February 12, 1855, Michigan Governor Kinsley S. Bingham signed a bill establishing the United States' first agriculture college, known today as Michigan State University
- In 1861, Representative Justin Morrill (Vermont) submitted a bill which proposed institutions should teach engineering and agriculture
- Land Grant Act (AKA Morrill Act) was signed into law in 1862 by President Abraham Lincoln
- MSU became the model for the Land Grant Act

“to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life” (Transcript of Morrill Act 1862)

Purpose of the Land Grant College

Origins of Extension

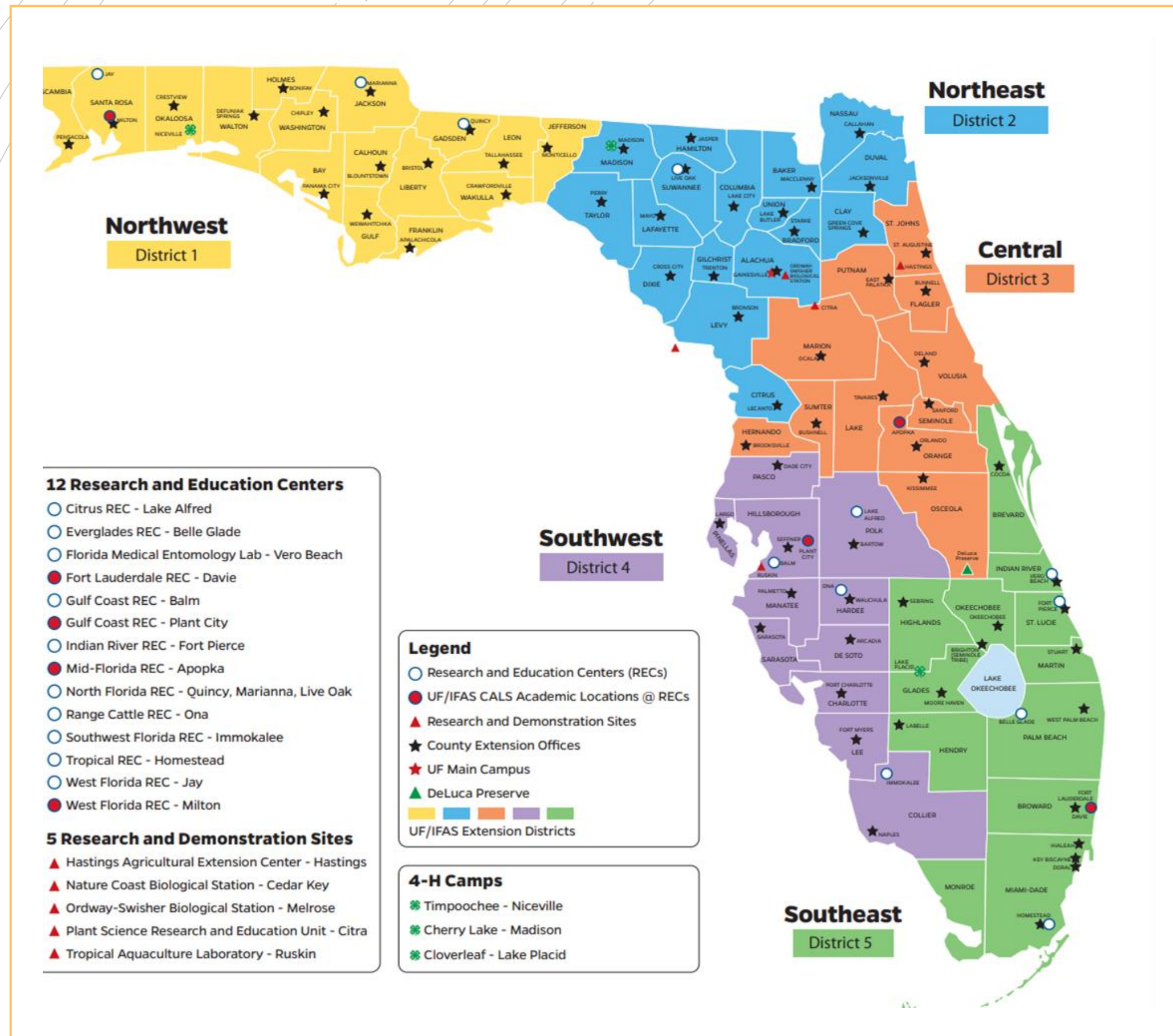
Extension provides non-formal education and learning activities to people throughout the country – to residents of rural communities as well as to people living in urban areas. It emphasizes taking knowledge gained through research and education and bringing it directly to the people to create positive changes.



PARTNERSHIP
BETWEEN
FEDERAL, STATE AND
COUNTY
GOVERNMENTS

PURPOSE

- Reliable and Practical Information Delivery
- Local Issue Driven
- Science Based Education and Expertise (non-biased)
 - Agriculture/Natural Resources
 - Horticulture
 - Family & Consumer Sciences/Family Nutrition Program
 - 4-H Youth Development
 - Sea Grant/Marine Science
 - Family Nutrition Program
 - 4-H Youth Development
 - Sea Grant/Marine Science
 - Community Resource Development



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UNIVERSITY of FLORIDA

Food Systems and Agriculture

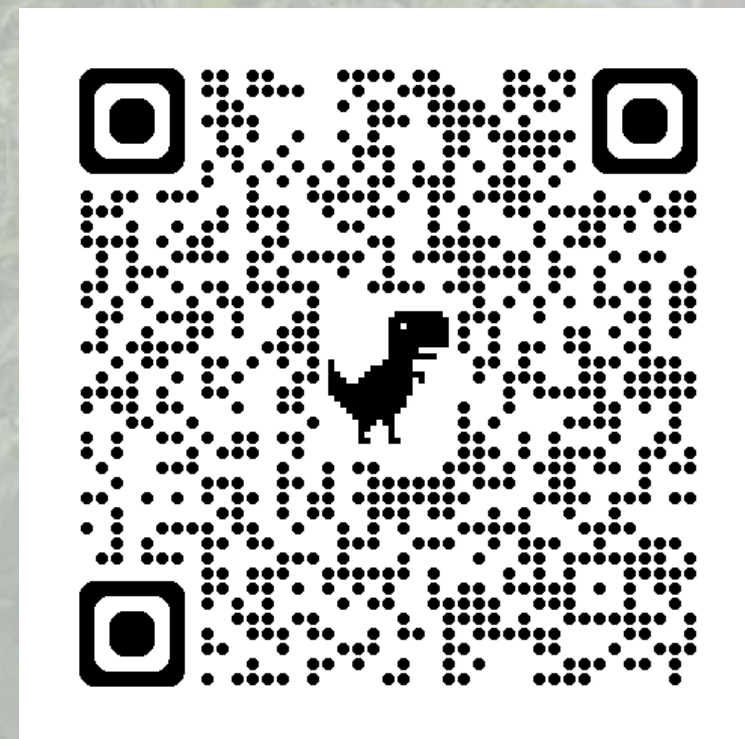
Southwest Regional Planning Council

Jessica Ryals and David Outerbridge
1/21/2026

Agricultural contributions to the local economy

- Economic Impacts (2019)
- Agricultural and related industries generate 86,644 jobs (22.1% of total) in Lee County.
- \$4.89 billion in Gross Regional Product.
- 15.0% contribution to Gross Regional Product.
- Based on an annual UF study It is estimated that for every to the community. \$1 invested in agricultural research and Extension, there is a return of \$20 Alston, Andersen et al. (2010)

Florida's Agricultural and Food System Fast Facts 



AGRICULTURE/ NATURAL RESOURCES

- Small Farm and Agri-Business Development
- Best Management Practices (BMPs)
- Agroecology
- On farm food safety training and certificates
- Local food system evaluation
- Food Policy
- Water Conservation/Quality Issues
- Production methods
- Pest and disease monitoring and evaluation
- Livestock production
- Master Naturalist Program
- SWFL Small Farmers Network



How We Do It?

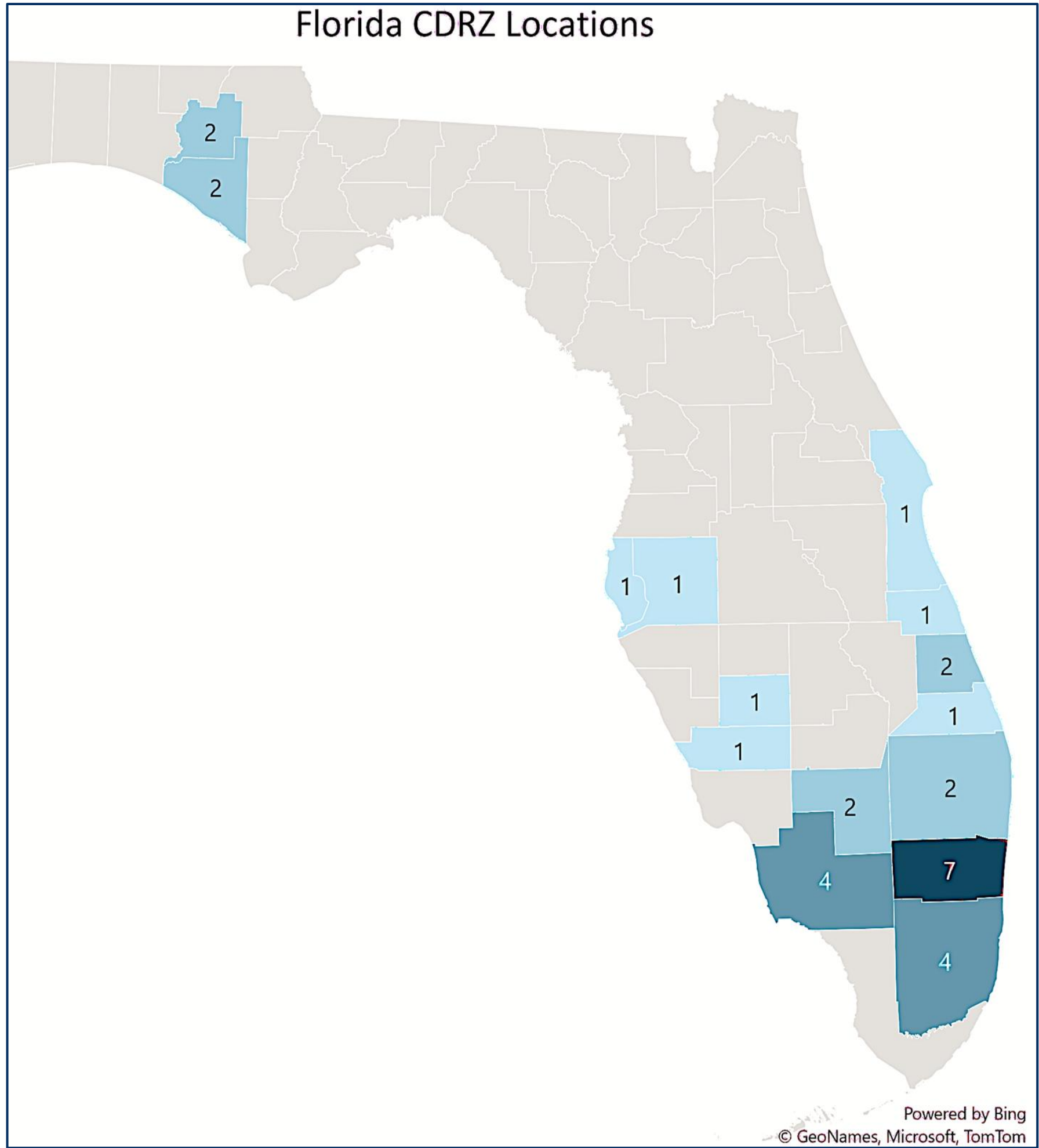
- Connectors, educators & problem-solvers
- Start with local needs
- One-on-one field consultations
- Phone, text, email consultations
- Workshops, classes & field days
- Virtual programming
- Publications, social media, newsletters
- Community events
- *Translate research into practice that is hands-on and relevant*
- Leverage connections and partners in schools, non-profits, local government and industry
- Train volunteers and youth, multiplying impact
- Work to support behavior change



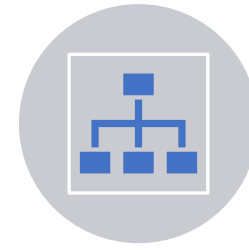
The Florida Navigator Program

Southwest Regional Planning Council

Ramona Madhosingh-Hector, Monica Wilson and Armando Ubeda
1/21/2026



CDRZ = Community Disaster Resilience Zone



Project Background & Process



TA partners



Resilience Projects



What's Next?



Questions

OVERVIEW

2023 designation by FEMA

A CDRZ falls into the geographical boundaries of multiple local governments (county, municipal, and/or township governments).

Benefits:

- Provides geographic focus for financial and technical assistance
- Increased federal cost share
- Eligibility in federal technical assistance programs (e.g., BRIC DTA, EPA Community Change TA)

Statewide

32 CDRZs in 15 counties

Southwest

8 CDRZs

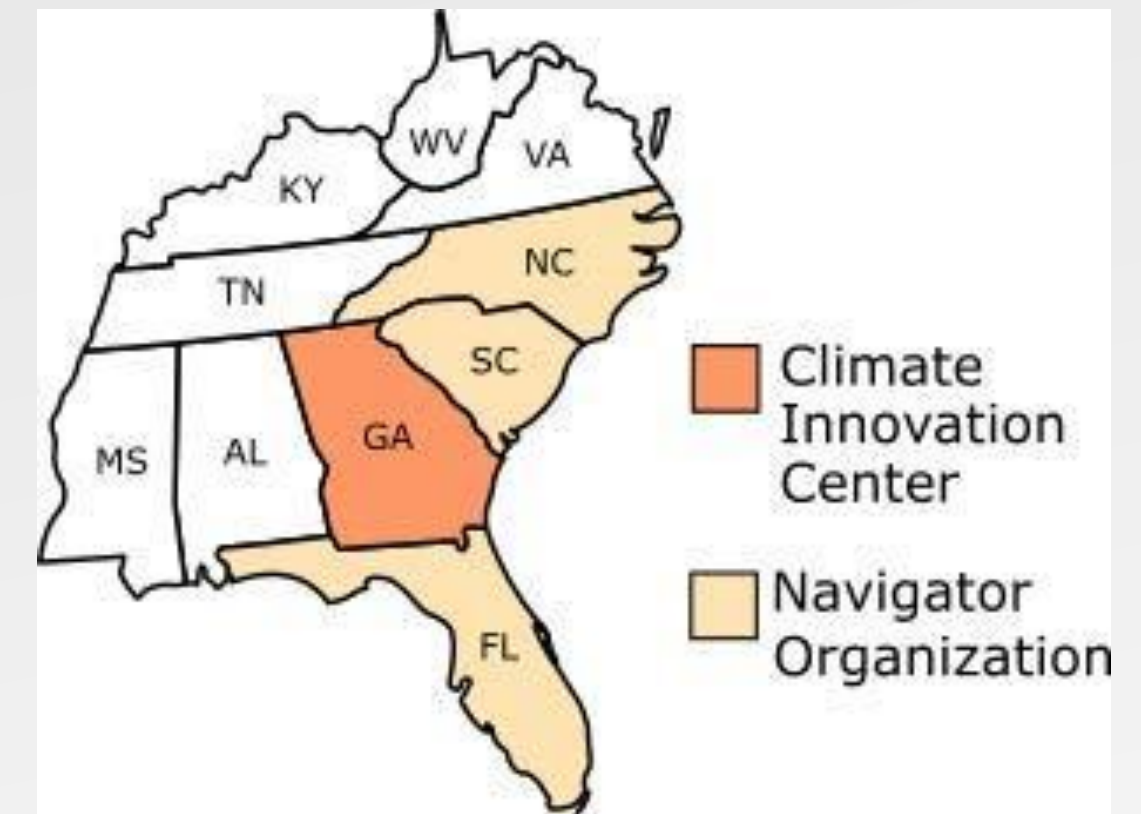
CDRZ Project Background

Project Launch: 10/2023

Florida Launch: 1/2024

Project Timeline: 10/2023 – present

Navigators in **four** states to serve as partners to CDRZ communities and help them take advantage of funding, identify capacity-building opportunities, and secure the technical support necessary to create tangible resilience benefits.



CDRZ Network & Partners

CLIMATE READY AMERICA®

GEOS INSTITUTE

Provide system integrity, standards, and national learning



Regional Collaboratives

Centers inform regional needs and share solutions

Navigators use and inform Center resources, leverage regional expertise, and share local needs

Climate Innovation Centers



All communities can access Center resources and help inform offerings



Navigators

Navigators serve under-resourced communities



Local Communities

Navigator Mission Statement

- Navigators work alongside communities to address their current and future climate challenges, prioritizing under-resourced communities.

Goal

- Navigators will engage with the goal of activating forward momentum toward achieving long term resilience to climate change impacts and decarbonization.

<https://geosinstitute.org/climate-ready-america/>

MISSION AND GOAL



CDRZ Process

Year 1

- Contact/engage all communities
- Meet other state navigators
- Meet with FDEM/other partners
- Meet with TA providers
- Assess community needs
- Provide education/training
- Assess CDRZ fit
- Develop metrics

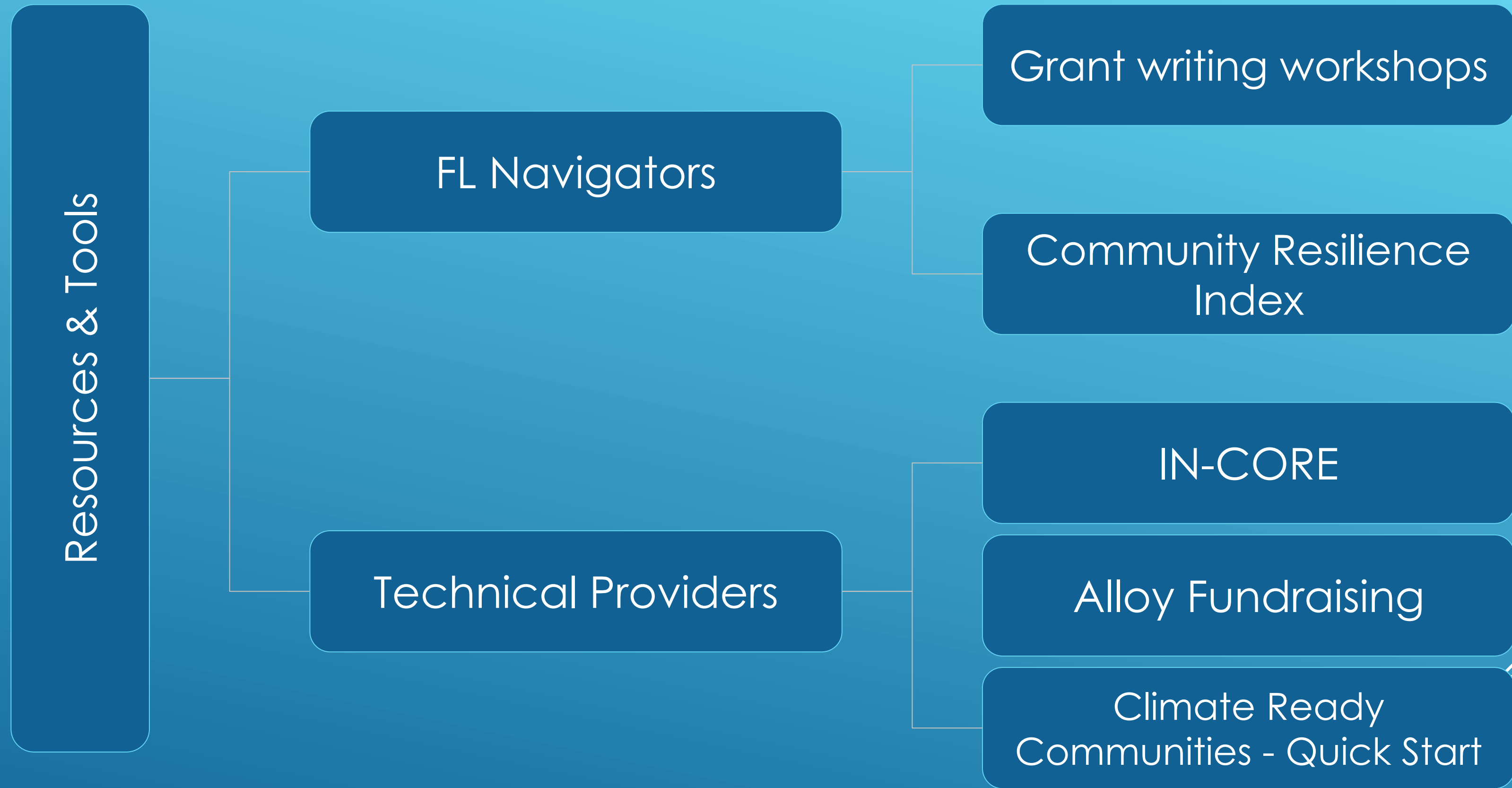
Year 2

- Use feedback to prioritize needs across the network based on CDRZ fit and community readiness
- Assess and build capacity
- Offer new services/TA
- Document impact
- Refine communications

Year 3

- Update service menu
- CDRZ adjacent communities
- Complexity

FL Navigator Project Timeline/Tasks



Resources & Tools Available

- 24 total CDRZ Community Action Plans
- Four CDRZ communities successfully secured FEMA Building Resilient Infrastructure and Communities Direct Technical Assistance (BRIC DTA)
- Two CDRZ communities received flood modeling assistance from Project IN-CORE

Year 1 Review

- IN-CORE Modeling for communities
 - Comprehensive flood resilience analysis
 - Homestead and Fellsmere
- Alloy Fundraising
 - Grant prospecting & proposal review
 - Clearwater, Bay County, Homestead
 - Resilience hubs, septic to sewer conversion

Year 2 Review

- Newsletter
- Virtual webinars

- Workshops
 - Grant writing
 - Community Resilience Index
 - Community Rating System

- Engagement with Community Based Organizations

FLORIDA RESILIENCE CONFERENCE RECAP



The Florida Navigators spent a week in Charlotte Harbor at the Southwest Florida Resiliency Summit and the Florida Resilience Conference. This was a great experience having conversations with community partners, hearing about resilience work happening throughout the state, and learning about new opportunities.

The navigators presented a summary of the Florida Navigator Program including the resources and tools that are available for communities, progress of resilience projects, and the lessons learned from two years of the program. Additionally, Dr. Emily Powell presented a “Florida Climate Review: A Look at Past Events and What to Expect in the Next Year” as part of the closing general session.

You can view a [PDF of the Navigators’ presentation slides here](#) and a [PDF of the Florida Climate Review slides here](#).

UPCOMING WORKSHOP OPPORTUNITY

GRANT WRITING WORKSHOP: TIPS AND TRICKS
OCTOBER 28 & NOVEMBER 4



Year 2 – Resilience Support

FL Navigator program serves as an entry point for discussions with vulnerable communities

Statewide team shares ideas, successes, and lessons learned

With changing federal priorities, private funding sources and partnerships

Shift focus to CDRZ adjacent and/or “ready communities”

Wrap up/What's Next?



Alicia Betancourt



Holly Abeels



Ramona Madhosingh-Hector



Carrie Stevenson



Armando Ubeda



Monica Wilson



Emily Powell
Co-Coordinator, FCI at FSU



Andrew
Medhurst



Qiyamah
Williams

Florida Navigator Team

Florida Story

<https://vimeo.com/1058674326>

Contact:

ramona.m.hector@ufl.edu

Questions?



Photo credit: R. Hector



Research and partnership

Southwest Regional Planning Council

Kim Morgan and Jessica Ryals
1/21/2026

SITUATION & OUTLOOK: FARM TO FORK

Introducing The New Pyramid



“Eat vegetables and fruits throughout the day, focusing on whole forms.”

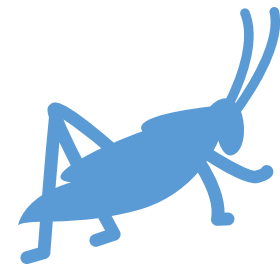
<https://www.hhs.gov/press-room/historic-reset-federal-nutrition-policy.html> 7 January 2026

SWOT for SW Florida Specialty Crops



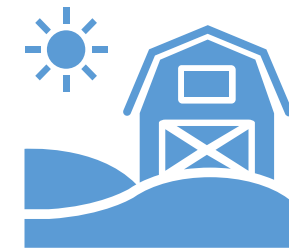
Strengths

Long-term success in production and marketing
Access to credit markets



Weaknesses

Limited public investment in production/post-harvest research
Increasing pest and disease pressure
Little to no incentivization of local food systems



Threats

Increased international acreage/operations
Lack of access to affordable farm labor
Continued food safety concerns



Opportunities

Improved access to crop insurance
New varieties
Alternative production methods (organic, irrigated)
Growing global demand for fresh produce

Customers are....

.....driven by higher level of concerns about the safety of US foods, NOT US food price trends

...searching for food relationships in response to diet-related disease incidences in themselves and their family members

Repeat Customers are also....

...immigrants

...prepare more meals at home

...obesity of respondent and/or spouse/kids increase likelihood of purchasing at farm stands and number of purchases at farmers market

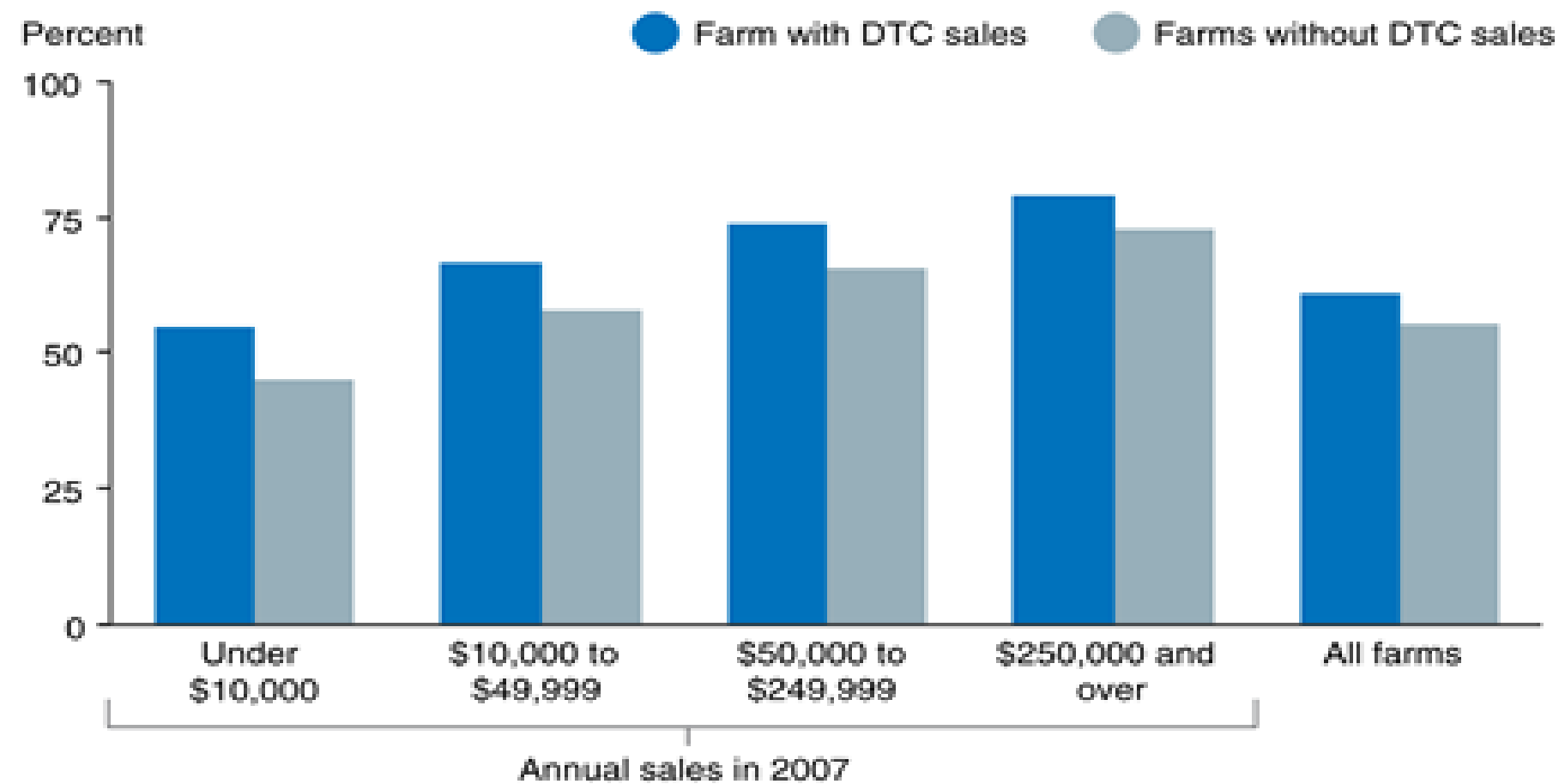


SOLUTIONS:

RESILIENCY DRIVES DECISION-MAKING

: ability to recover from disruptions & adapt to changing circumstances.

61% vs. 55.7% farm survival



Note: The survival rate is defined as the share of Census respondents with positive sales in 2007 who also reported positive sales in the 2012 Census; DTC status and sales size class are determined by sales in 2007. Source: USDA, Economic Research Service using data from USDA, National Agricultural Service, Census of Agriculture, 2007 and 2012.



Monitor financial metrics



Diversify supply chain and monitor inventory



Improve soil health & water efficiency



Workforce adaptability



Greater connection with local community and brand awareness

**Find
YOUR
“WHY”**





Economic Importance of Agriculture to Southwest Florida



Kimberly L. Morgan
Barbara Hyman

University of Florida
Southwest Florida Research & Education Center
2685 State Road 29 North
Immokalee, FL 34142

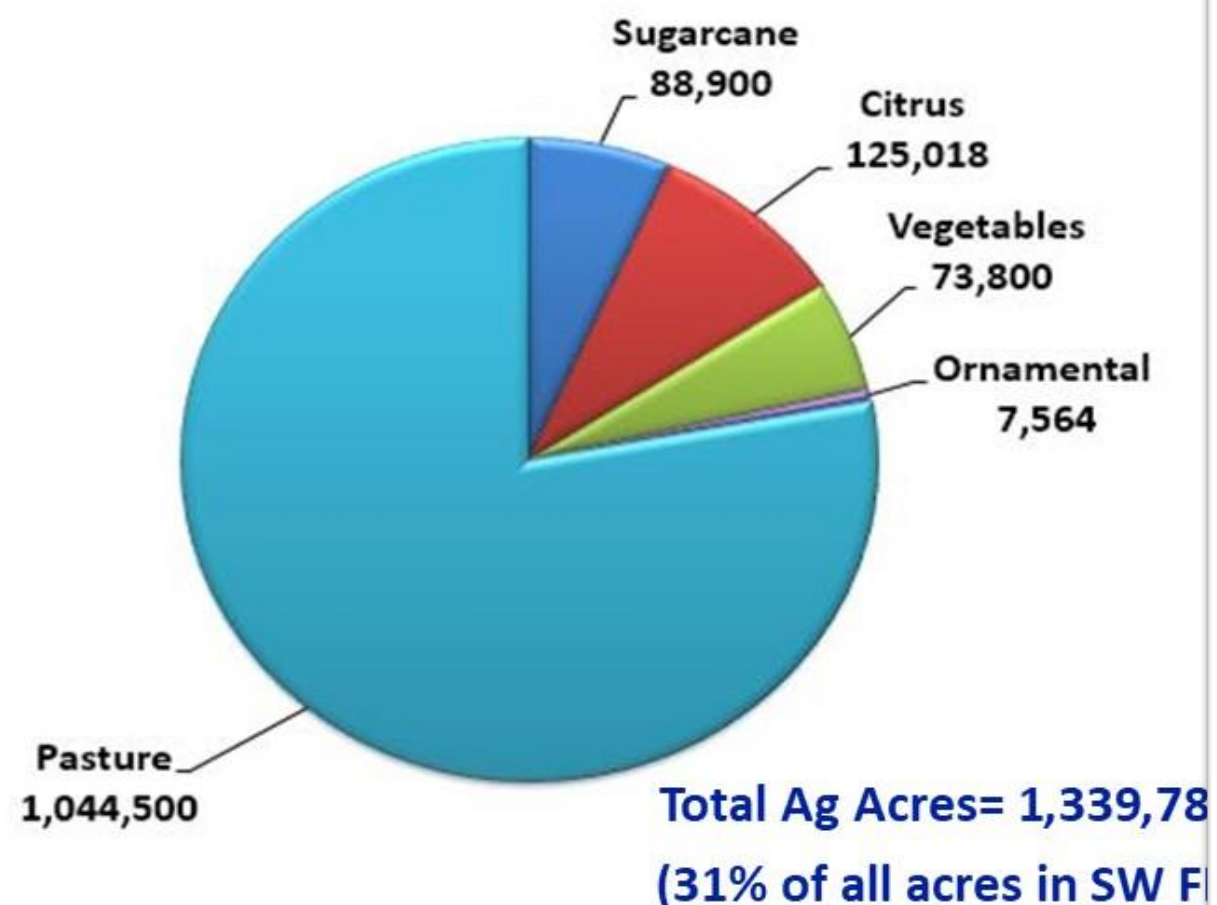
Issues Important to Southwest Florida Agriculture:

- Exotic pests & diseases (Citrus Greening)
- Farm worker health and access to labor
- Global competition and trade policies
- Water quality and management issues
- Food safety regulations

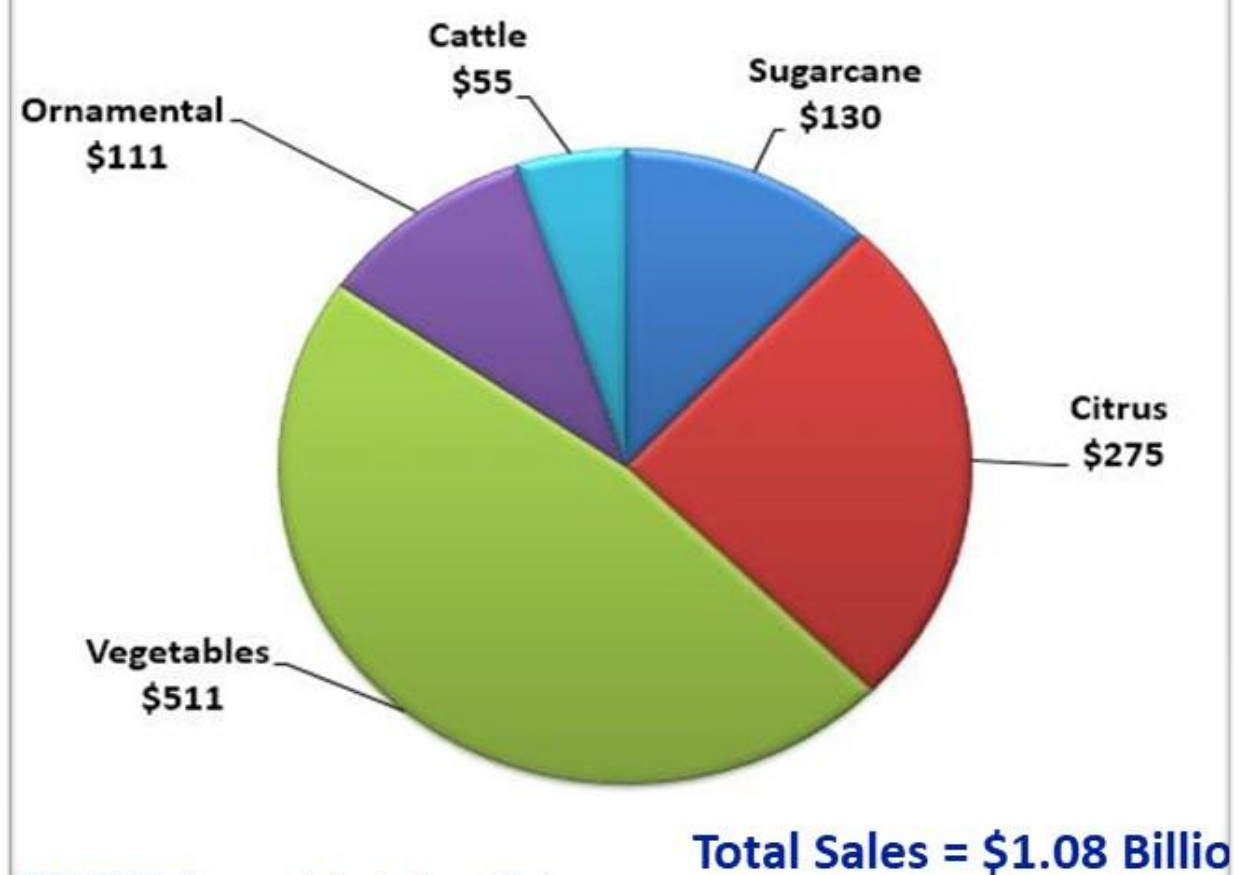
Southwest Florida— Charlotte, Collier, Glades, Hendry, and Lee

Updated July 2022

Southwest Florida Agricultural Acreage*, 2017



Farm-Gate Sales*, 2017 (M\$)



2017 USDA Census of Agriculture (Note: acreage and products NOT included)

SW FL Production Costs and Yields, 2021-22

	Annual Costs (including harvesting)	Yields (Units/Acre)
Oranges (processed) ¹	\$1,883/Acre	154 (90 lb-bx)
Tomatoes, round	\$16,863/Acre	1,700 (25 lb-ctn)
Bell Peppers	\$18,399/Acre	1,100 (28 lb-bu)
Iowa Field Corn	\$771/Acre	201 bu

SW FL Grower Prices, 2020-21

		Price	Price Range	Break-Even Price
Oranges (processed, delivered-in mid-price) Early-Midseason Valencia	Bx	\$13.08 ¹	\$12.04—\$16.58	@ 150 boxes/acre \$15.89 ²
	Bx	\$15.33 ¹		\$16.00 ²
Tomatoes	Ctn	\$18.99	\$7.00—\$18.99	\$9.92/25 lb-ctn
Bell Peppers	Bu	\$18.43	\$14.17—\$18.43	\$16.73/28 lb-bu

1/ Florida Processor Statistics database

2/ Singerman, A. 2022, Feb 7. "Cost of production for Processed Oranges in SW FL in 2020/21." doi.org/10.32473/edis-FE1111-2022

3/ Wade, T., B. Hyman, and E. McAvoy. 2020, Nov 9. "Constructing a SW FL Bell Peppers Enterprise Budget." edis.ifas.ufl.edu/publication/FE1088

4/ Wade, T., B. Hyman, E. McAvoy, and J VanSickle. 2020, Dec 16. "Constructing a SW FL Tomato Enterprise Budget." edis.ifas.ufl.edu/publication/

Summary of Economic Contributions of Agriculture, Natural Resources, and Food Industries in SW FL, 2018

County	Employment		Industry Output		Value Added	Labor	Other	Tax
	Direct (Jobs)	Contrib. (Jobs)	Direct (M\$)	Contrib. (Jobs)	Contrib. (Jobs)	Income Contrib. (M\$)	Property (M\$)	(M\$)
Glades	1,695	2,235	217	317	164	98	54	6
Hendry	9,548	12,357	931	1,458	761	620	75	36
Charlotte	11,331	15,214	841	1,486	943	576	161	85
Collier	40,276	54,352	3,273	5,841	3,294	2,205	762	275
Lee	59,230	81,038	4,964	8,796	4,745	3,019	1,209	458

Court, C.D., J-P. Ferreira, 2020, May 15. "2018 Economic Contributions of Agriculture, Natural Resource, and Food Industries in Florida." UF/IFAS Economic Impact Analysis Program.

Agricultural production is a business. Significant financial resources are required to grow crops. Land will remain in agriculture so long as growers receive a long-run return on investments.



it
ain't easy
being
green

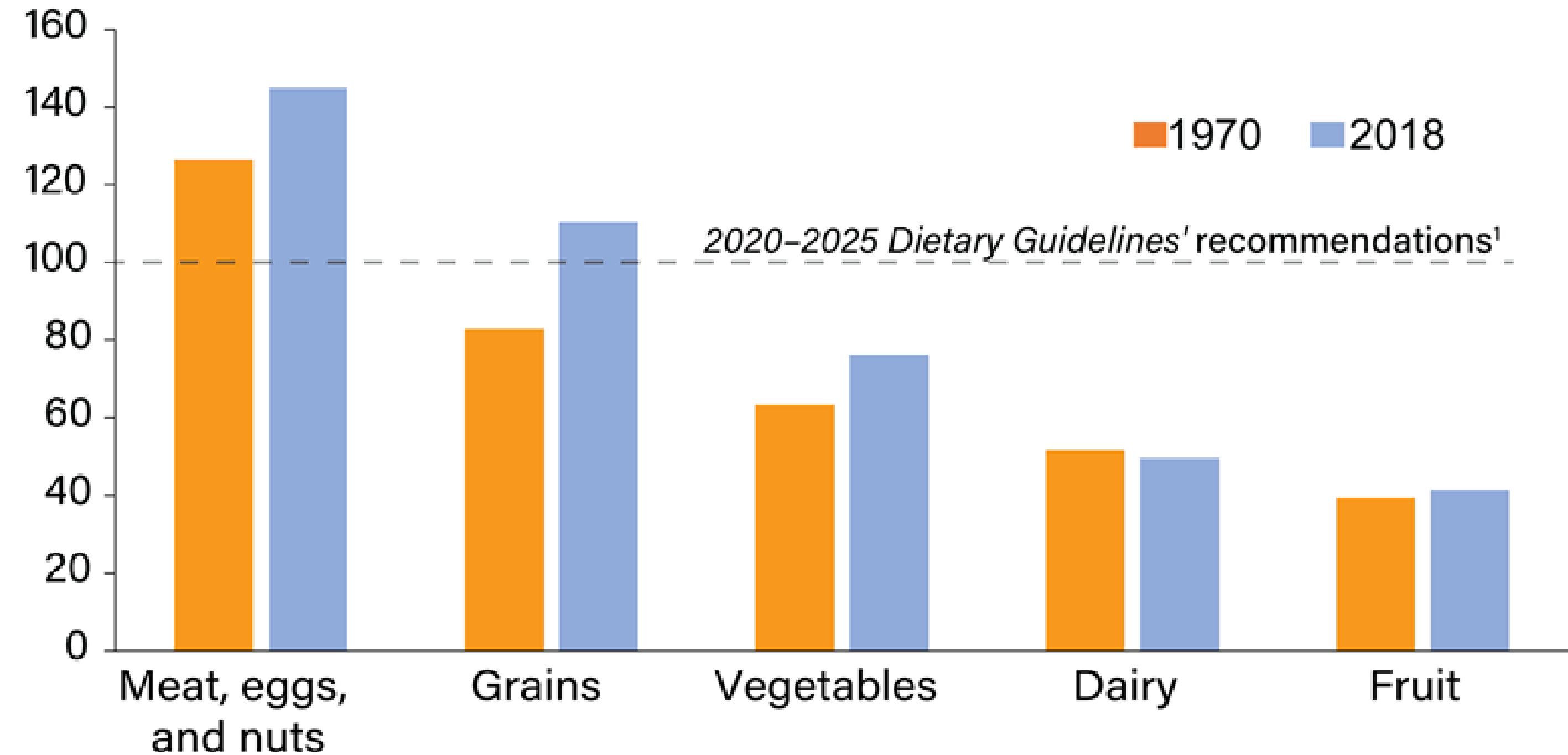


Out of Balance

In 2019, 12.3% and 10.0% of surveyed adults met fruit and vegetable intake recommendations, respectively (CDC)

Estimated average U.S. consumption compared to recommendations, 1970 and 2018

Percent of *2020-2025 Dietary Guidelines'* recommendations



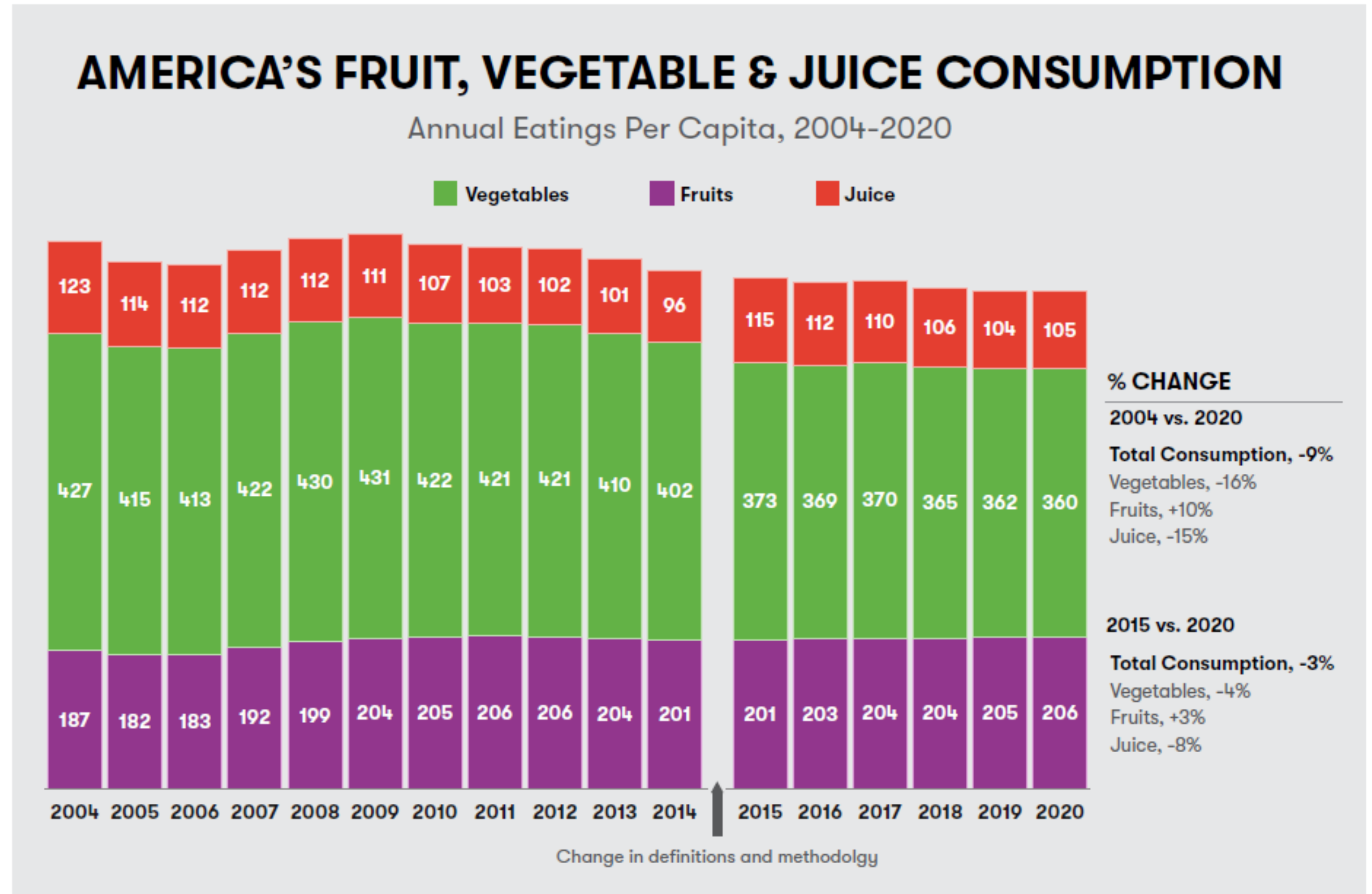
¹Based on a 2,000 calorie-per-day diet.

Notes: Loss-adjusted food availability data are proxies for consumption. Rice availability data were discontinued in 2010 and thus are not included in the grains group.

Source: USDA, Economic Research Service, Loss-Adjusted Food Availability Data and *2020-2025 Dietary Guidelines*.

Out of Balance

The 2020 Produce for Better Health State of the Plate research shows that Americans decreased their fruit and vegetable eating by nearly 10% since 2004.



Direct marketing strategy



Choose Local, Choose Fresh

Focus on engagement

Cost effectiveness of sale promotions to influence expenditure levels and frequency of existing customers are related to consumer willingness to engage with product

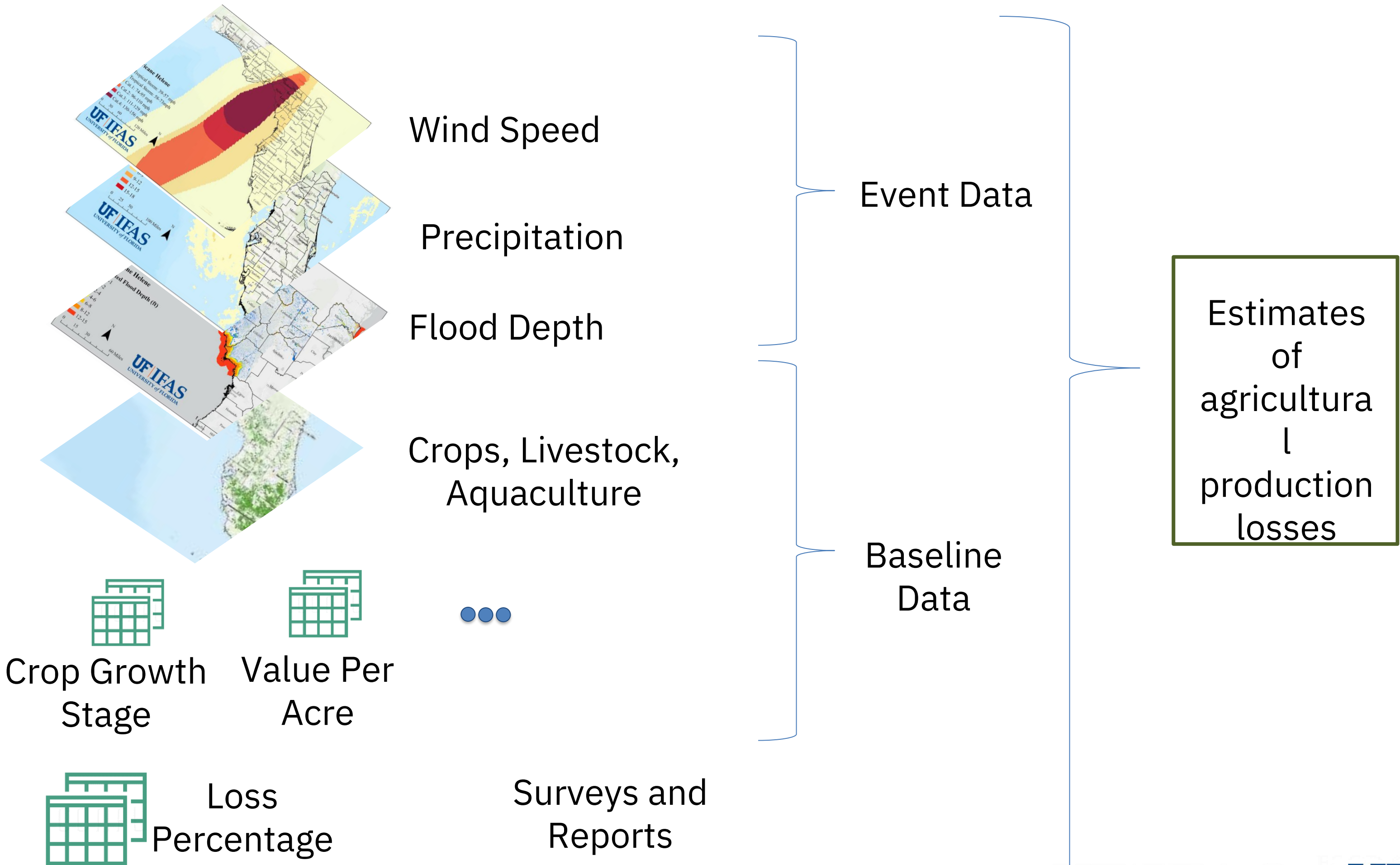
Direct marketing strategy



Three-way promotion

- Attract new consumers
- Adopt sales promotion tools that encourage existing customers to purchase more frequently
- Encourage consumers to spend more per visit

UF/IFAS EIAP Methodology for Estimating Agricultural Production Losses



<https://go.ufl.edu/heleneagimpacts2024>

Next Steps

Webinar #2 Preparing for Rising Waters

Wednesday, March 25, 2026 10:00am

Thank you!!!

SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL



EST. 1973

SERVING CHARLOTTE, COLLIER, GLADES, HENDRY, LEE AND SARASOTA COUNTIES