

LEVERAGING SURVEY
TECHNOLOGY TO
RESTORE COMMUNITIES
IN THE WAKE OF
HURRICANE IAN
RESILIENCE





GRANT

FICHTER, PSM

- Survey and Mapping Manager
- Surveying runs in the Family
- 24-year career all with AIM



RESILIENCE



ABOUT AIM

Group 2

- Project Development and Environment (PD&E) Studies

Group 3

- Highway Design – Roadway

Group 7

- Traffic Operations Design

Group 8

- Surveying and Mapping

Group 10

- Construction Engineering Inspection

Group 13

- Planning

Facts and Stats

- Family owned and operated for 43 years with ties to FDOT for all 43 of those years.
- Currently 165+ professionals and administrative staff
- Successfully completed over 10,000 projects
- Served over 75 public clients and 1,200 private sector clients

OFFICE LOCATIONS



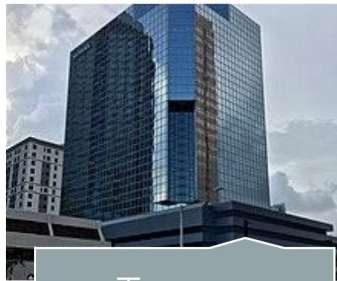
Orlando



Bartow



Fort Myers
HEADQUARTERS



Tampa



COMING SOON:
Jacksonville

RESILIENCE



SURVEY & MAPPING CAPABILITIES



- As-Built Survey
- Boundary Survey
- Construction Layout Survey
- Control Survey
- Hydrographic Survey
- Mean High Water Line Survey
- Quantity Survey
- Specific or Special Purpose Survey
- Pre and Post Construction Survey
- Topographic Survey
- Terrestrial Mobile and Static LiDAR
- Parcel / Easement Sketch and Descriptions
- Subsurface Utility Designation & Excavation
- Designating and Locating
- Maintained Right-of-Way Survey
- Expert Technical Witness
- Global Positioning System (GPS) Survey





SURVEY AND MAPPING

Hydrographic Survey

RESILIENCE

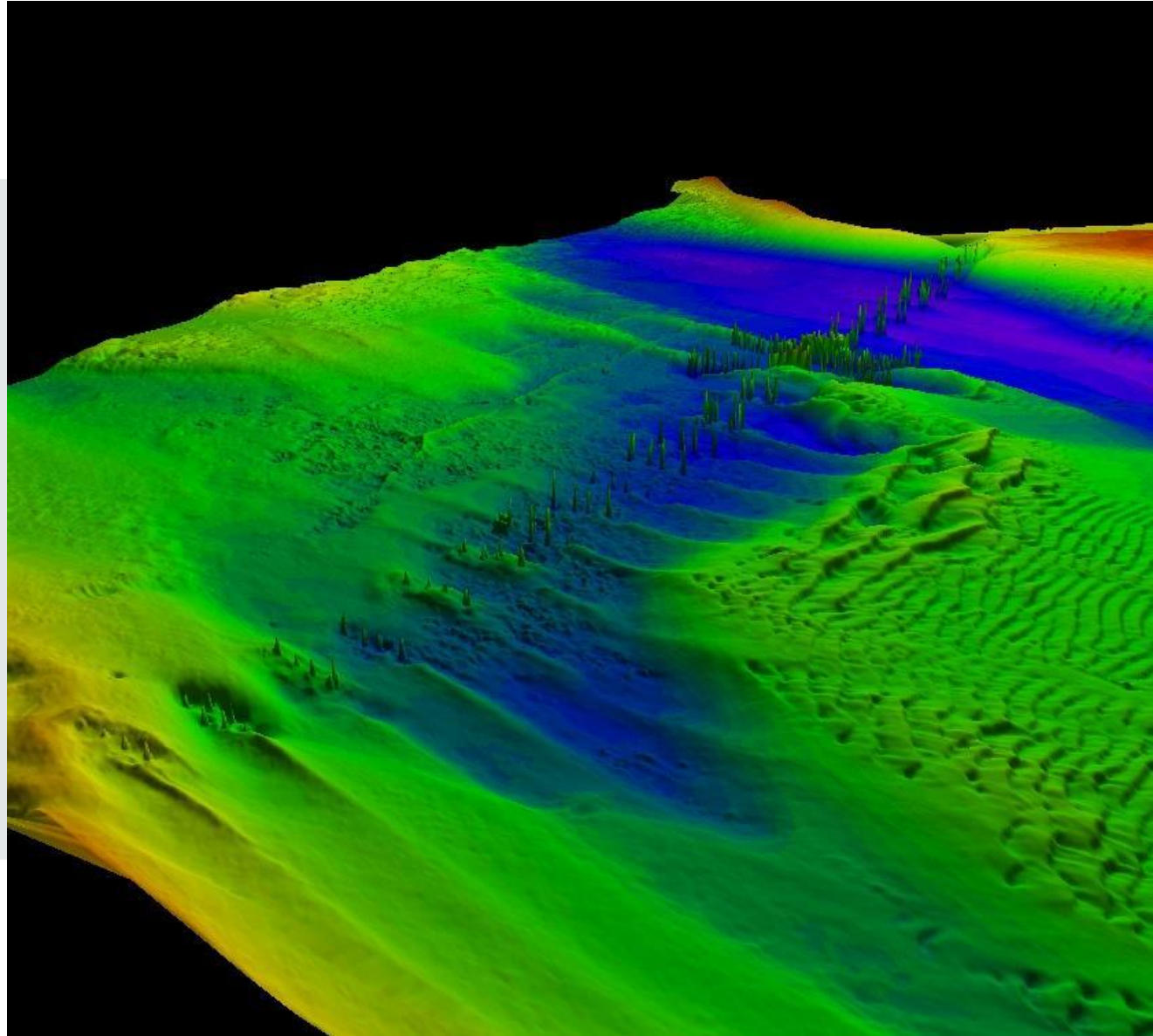
HYDROGRAPHIC SURVEY

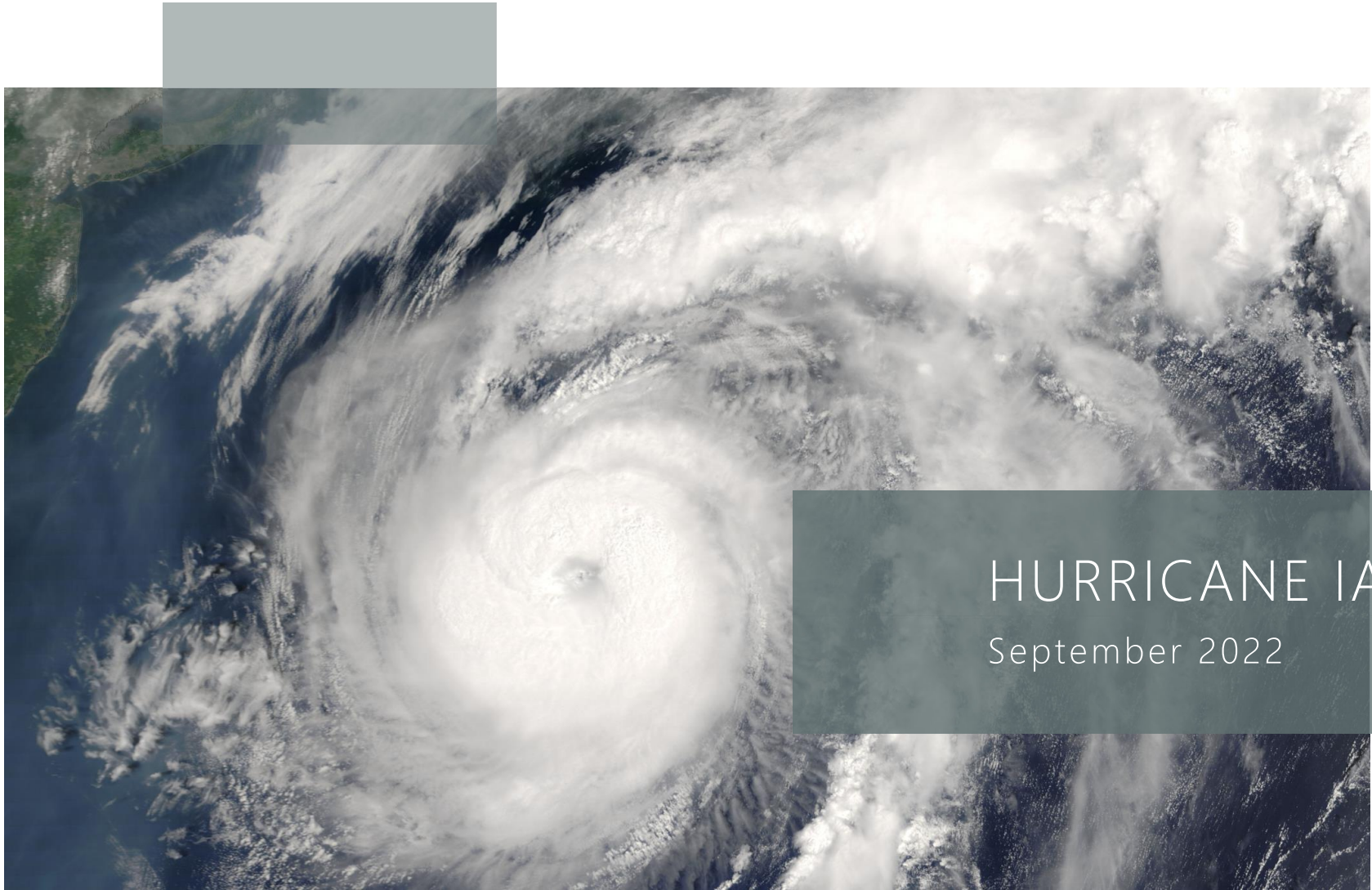
- Multibeam Hydrographic Survey
- Bathymetric Mapping
- Magnetometry
- Side Scan
- Pre & Post Dredge Survey
- Dredging Volume Calculations
- Turbidity Testing
- Port/Harbor Maintenance Survey
- Beach Nourishment Survey
- River & Estuary Survey
- Beach & Canal Survey
- Navigation Condition Survey
- Emergency Post Storm Survey



HYDROGRAPHIC MULTI BEAM

Big Carlos Pass,
Fort Myers Beach





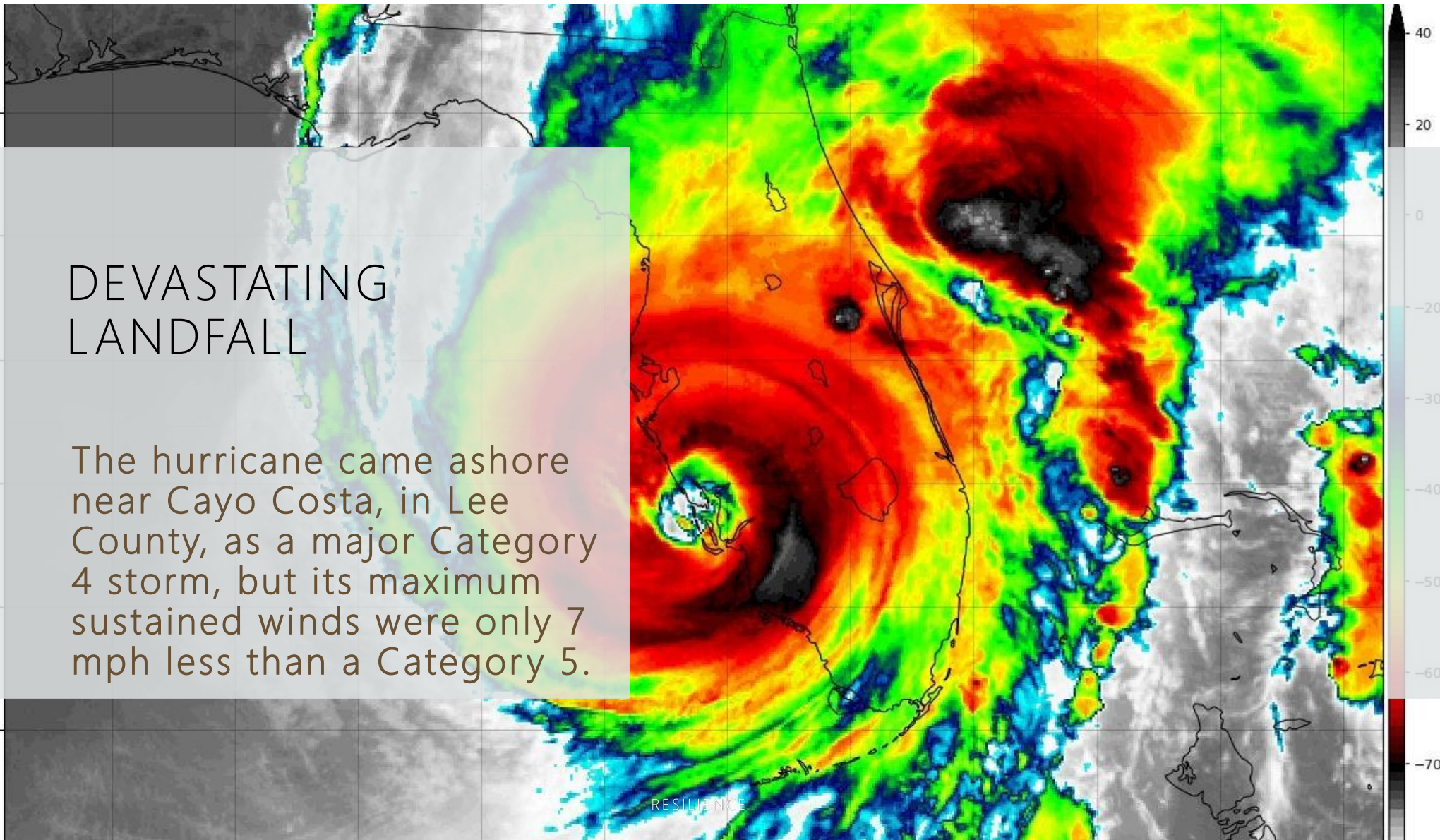
HURRICANE IAN

September 2022



DEVASTATING LANDFALL

The hurricane came ashore near Cayo Costa, in Lee County, as a major Category 4 storm, but its maximum sustained winds were only 7 mph less than a Category 5.



POST STORM



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POST STORM



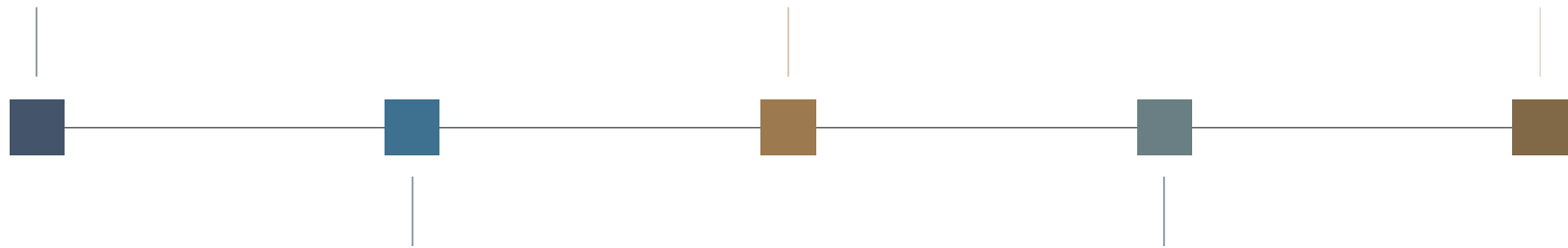
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SURVEY RESPONSE TIMELINE

IAN LANDFALL
September 28, 2022

CREW ON SANIBEL
October 2, 2022

SURVEY RESULTS
Bridge piling report and
scour analysis
October 24, 2022



**CALL FROM EMERGENCY
CONTRACT CONSULTANT**
October 1, 2022

SEE BOTTOM
On the water
October 5, 2022



TASK OBJECTIVES

- Targets & control points
- Shoot components of bridge, still stable?
- Use See Bottom to assess channels for boat and barge access
- Use See Bottom to determine cracks, breaks or severed pilings in water, not visible to divers

CHALLENGES FACED

- Communication
 - Cell lines were down
 - Was able to communicate by email
 - Collecting data by use of radio signal rather than cell
- Mobilization risky
 - Debris on roads
 - Lack of gas
 - Boat ramps destroyed
 - Channel markers missing





WHAT WE LEARNED FOR FUTURE

- Purchase equipment with radio communication
- Fuel up vehicles and boats
- Don't leave critical equipment on the floor

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THANK YOU

Grant Fichter, PSM

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