

A Geodesign Approach to Sustainable Development on Jekyll Island



Dan Meehan

Geodesign MPS

Capstone Proposal

Spring 2018

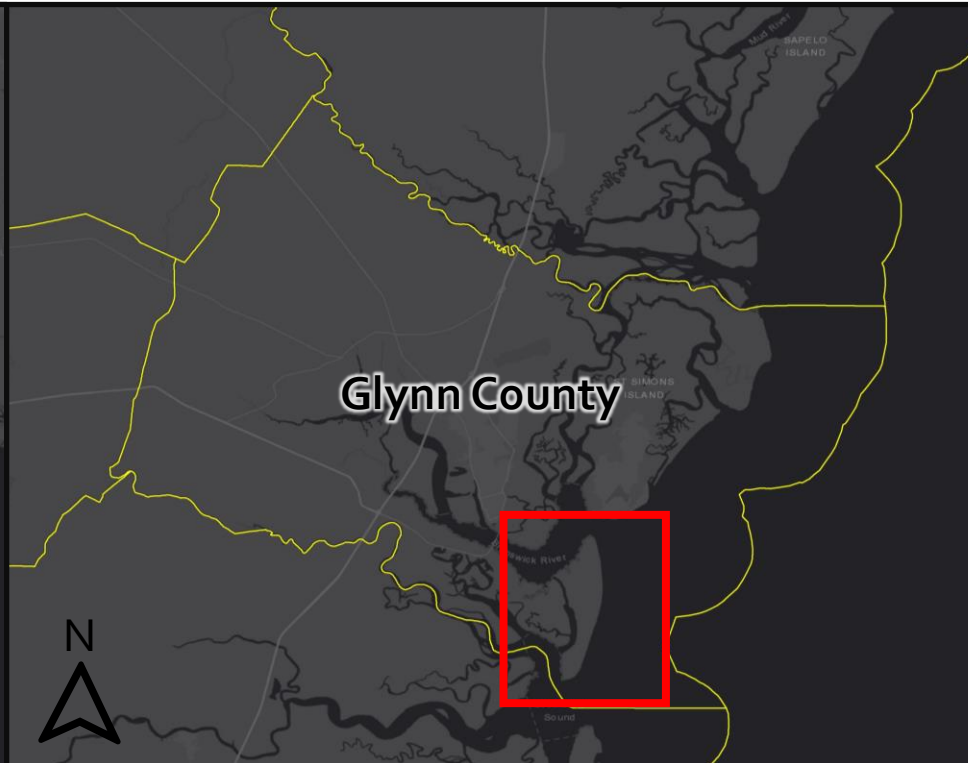
Capstone Overview

- Background & History
- Current Conditions
- Problem & Issues
- Goals & Objectives
- Strategies
- Methodology
- Timeline
- Anticipated Results





- 5,530 Acre Costal Island
- Part of the Golden Isles of GA
- Owned by State of Georgia
- Operated by Jekyll Island Authority
- Receives No Public Funding

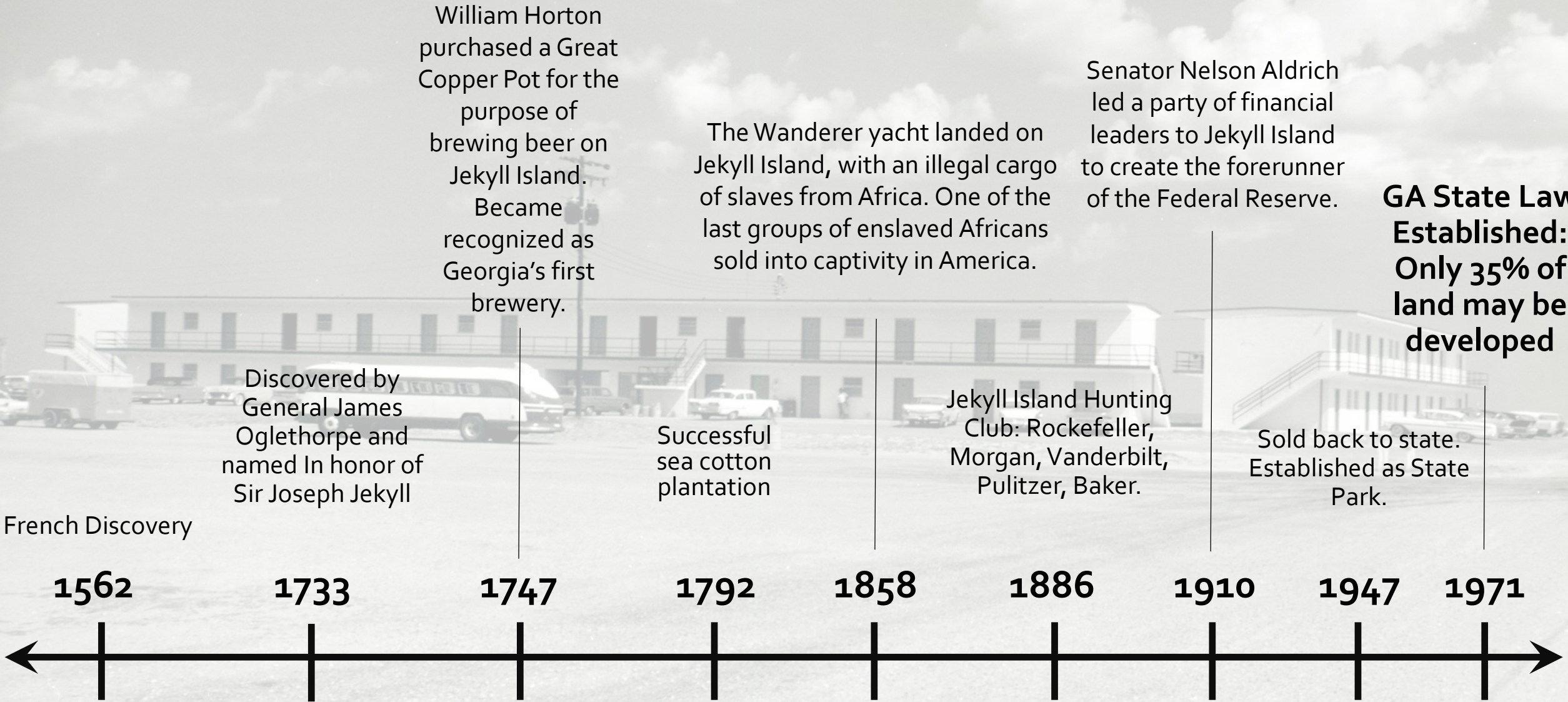




Why Jekyll?

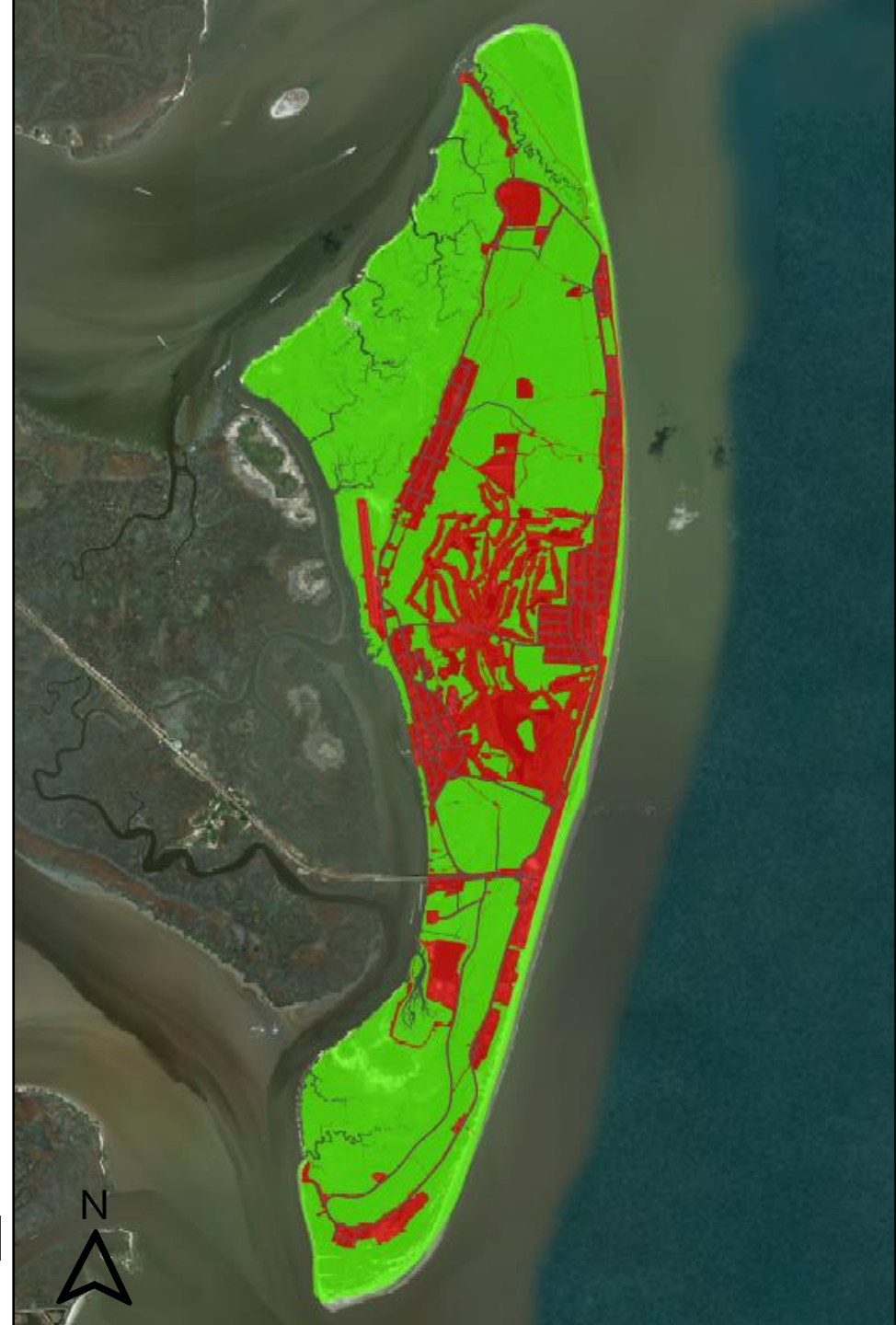
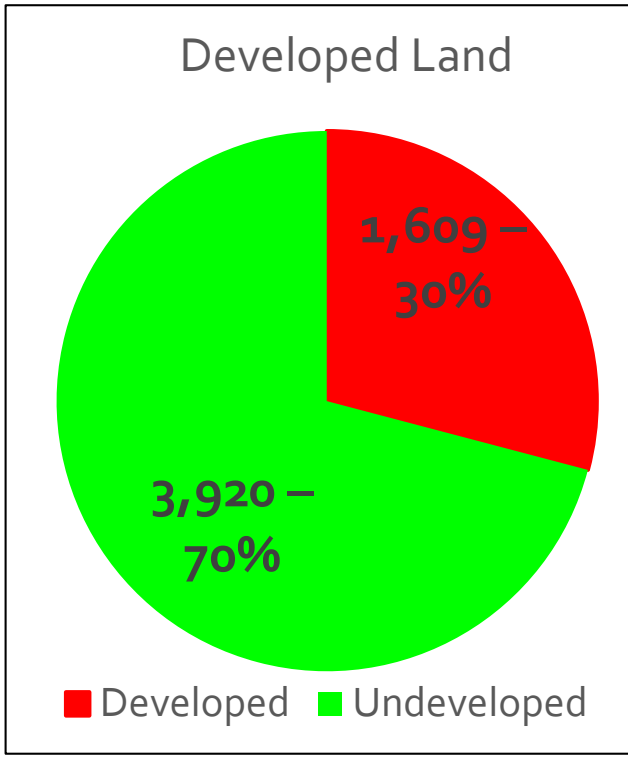
- Vibrant Natural Diversity
- Unique History
- Relax, Unwind, Disconnect
- Island Life for the Average Georgian
- Public Resource
- Conservation Heavy

Historical Timeline



Current Conditions

- 1971 Law says only 35% of the land can be developed
- Long Term Residents
- Historical District
- Conservation Groups
- Richness of Nature
- 63 Holes of Golf



- 5530 Total Acres
- 1609 Currently Developed
- 1935 Can Be Developed
- 306 Acres to be Developed

2013 Land Use

Land Use	Acres
Developed	1,609
Commercial	255
Educational	19
Maintenance	47
Recreation	707
Residential	267
Transportation	226
Pond	88
Undeveloped	3,920
Conservation	3,920
Total	5,529

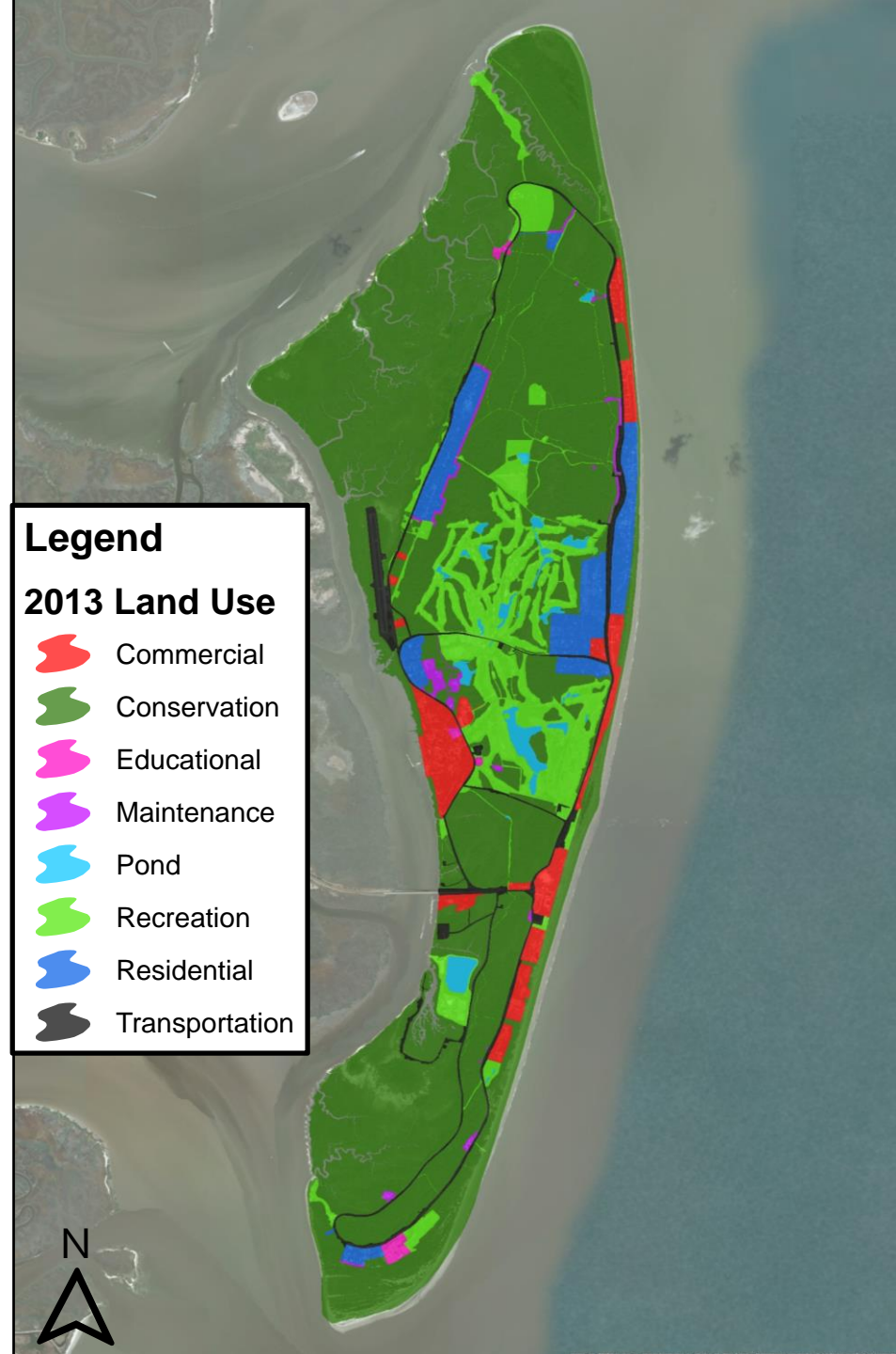
480
Acres
of Golf

Dune
Wetland
Natural
Forest
Marsh

Legend

2013 Land Use

- Commercial
- Conservation
- Educational
- Maintenance
- Pond
- Recreation
- Residential
- Transportation



Loving the
island to
death

Pressure to
increase visitor
accommodation
and revenue

Demands on
infrastructure

Increased
development
threatens
environmental
resources

Responsible
stewards of
the land

Enjoyment for
future
generations

***Find a way to protect unique resources while
allowing for limited sustainable development.***

Stakeholders

- Jekyll Island Authority
- Full Time Residents (300 or so)
- Historical, Natural and Conservation Groups
- Wildlife – Flora and Fauna
- Glynn County and State of GA
- Hotel & Business Owners
- Tourists



Existing Studies

- 2011 – Conservation Study
- 2014 – Master Plan Study
- 2016 – Transportation Study
- 2017 – National Golf Foundation, Golf Study
- 2018 – Infrastructure & Carrying Capacity Assessment
- 2018 – Updated Conservation Study



Goals and Objectives

- Devise plan to conserve environment and encourage sustainability
- Accurately measure existing conditions by understanding systems
- Identify redevelopment opportunities
- Determine suitability of proposed changes
- Generate re/development scenarios for long term plans

Strategies For Redevelopment

Land Use

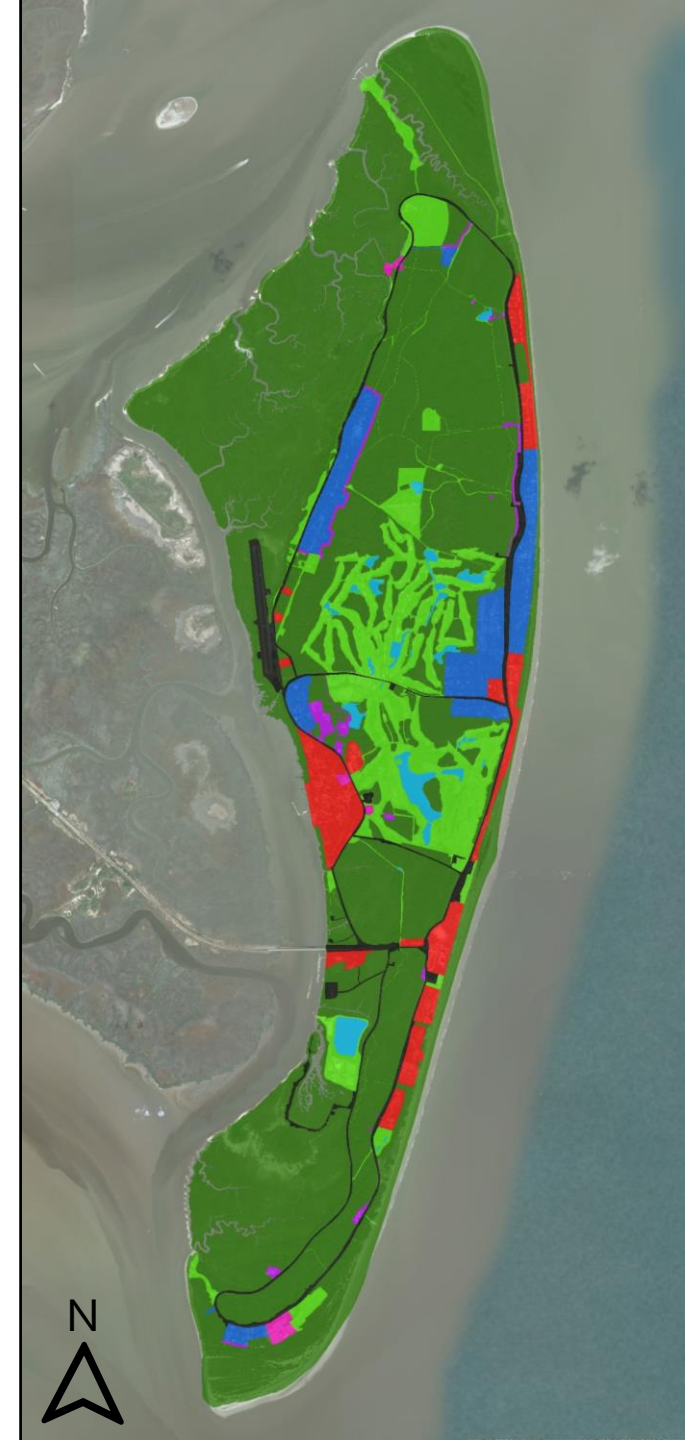
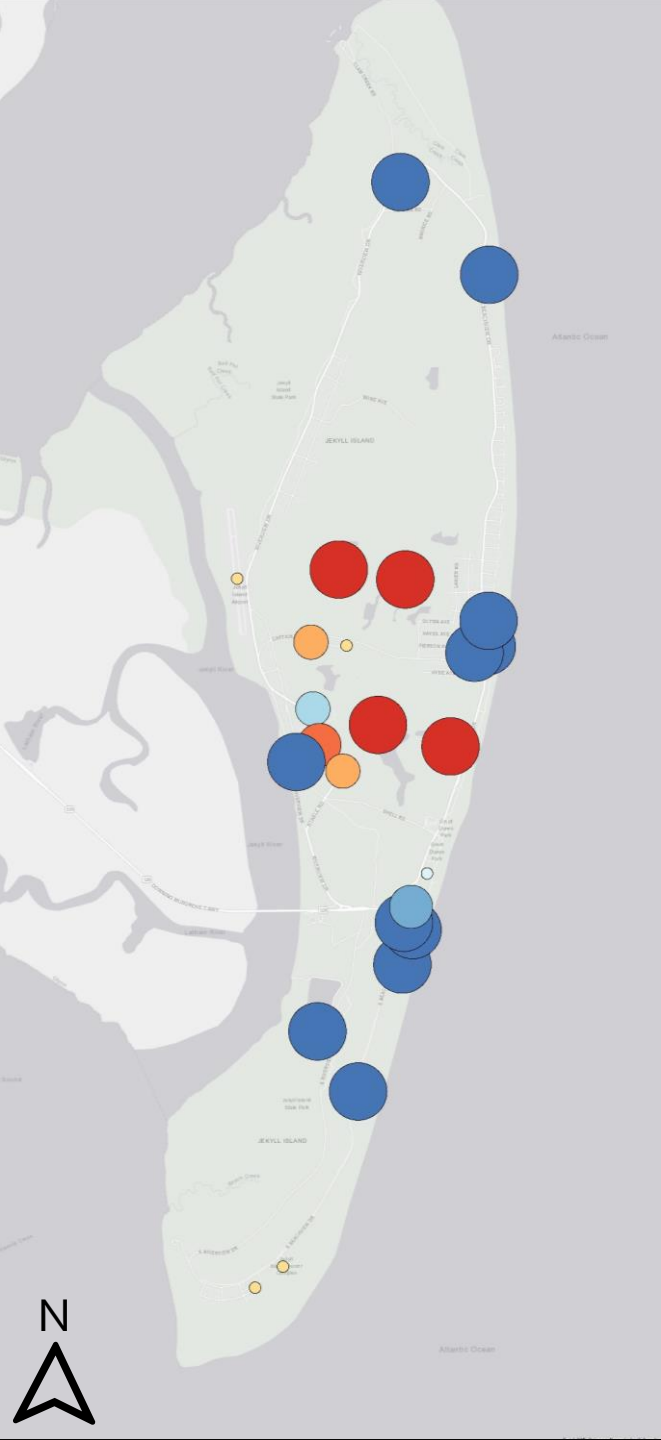
- Available Land
- Existing Infrastructure Capacity
- Environmental protection

Economic Viability

- Water Park & Camp Ground
- Hotel Operations
- Golf Courses are negative

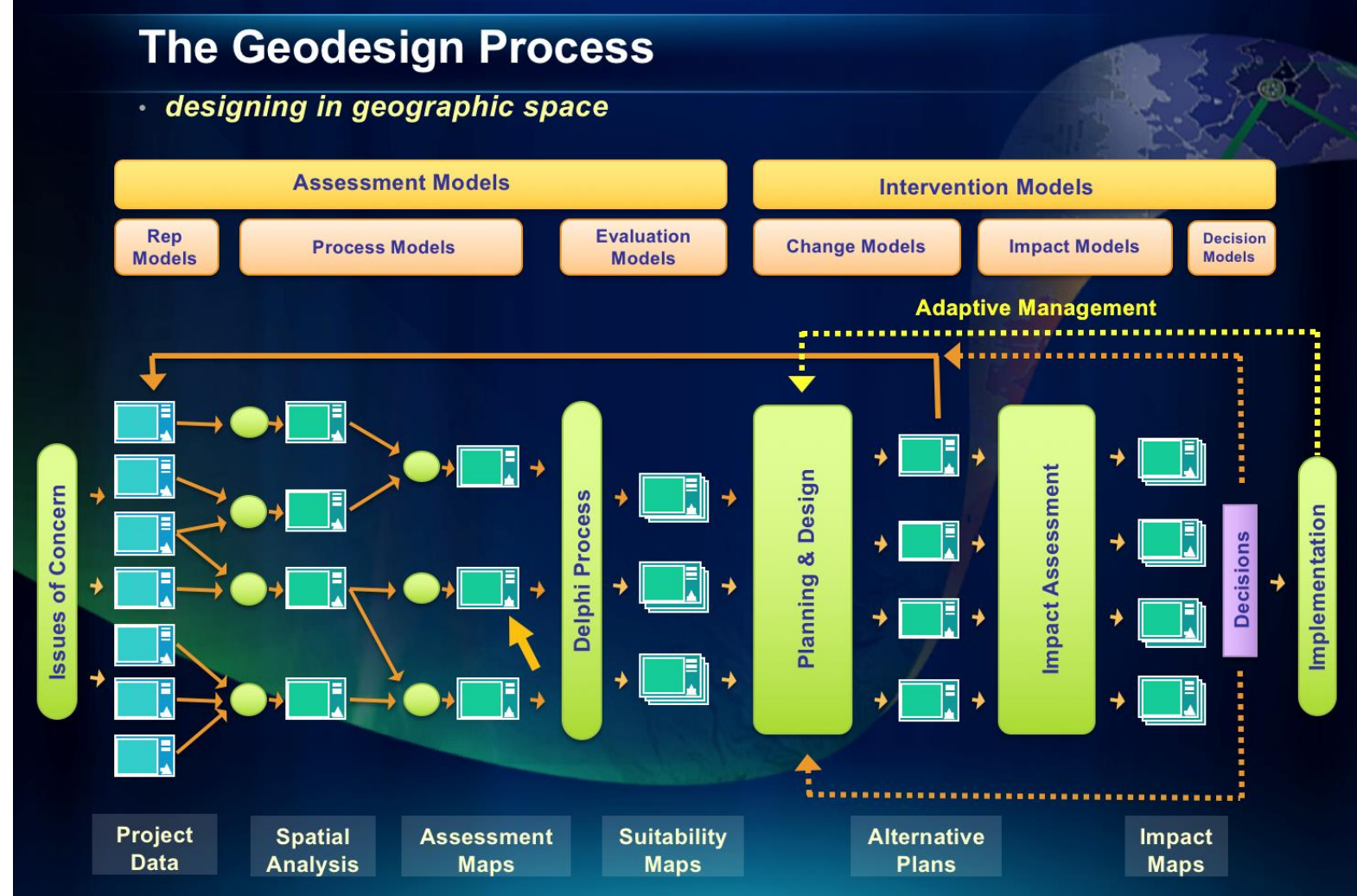
Other Trends To Consider

- Vulnerabilities due to Climate Change
- Sea Level Rise
- Storm Surge and Flooding



What is Geodesign

- Long term land use planning
- Framework for solving wicked problems
- Data Driven Decisions
- Communities should influence change toward desired conditions
- Not Tools



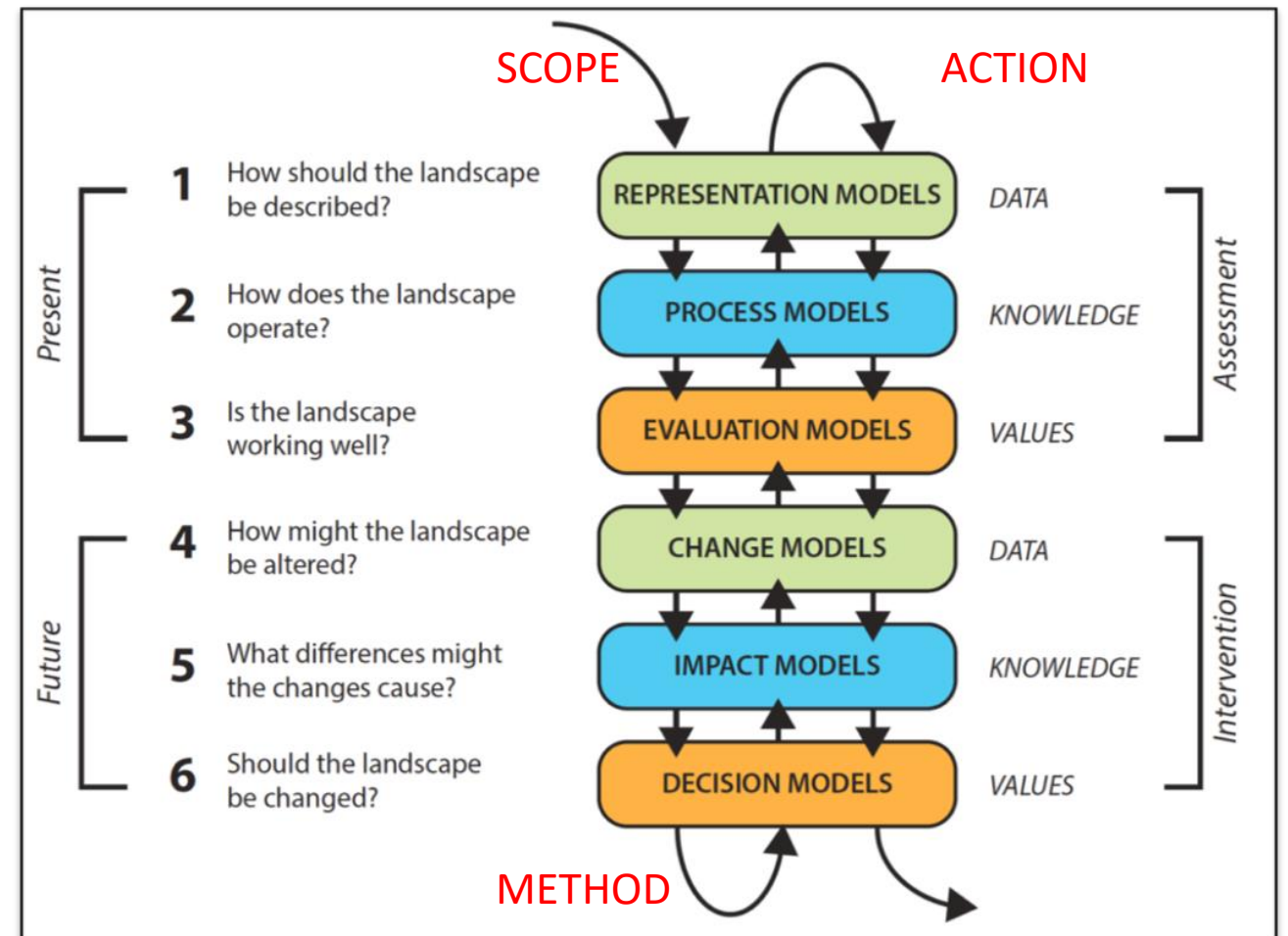
“Geodesign is a design and planning method which tightly couples the creation of design proposal with impact simulations informed by geographic contexts.”

- Dr. Michael Flaxman



Proposed Methodology

- Steinitz Geodesign framework
- Understand the Place
- What systems are involved
- What is and is not working
- Identify and Prioritize opportunities
- Determine Impact of Changes
- How do these relate to stakeholders?
- Criteria for success?



GEODESIGN HUB



A yellow bicycle is lying on its side on a sandy beach. The background features coastal vegetation, including tall grasses and trees with sparse green leaves, under a clear blue sky. The bicycle has a yellow frame, black tires, and a black seat. The scene is brightly lit, suggesting a sunny day.

Project Timeline

- Complete Initial Assessment – August 2018
- Build and run geospatial analysis and other models – October 2018
- Present Findings
 - JAN 2019 - ESRI Geodesign Summit
 - March 2019 - ESRI Federal UC
 - Spring 2019 – Local ASLA Chapter

Anticipated Results

- Update the current land use inaccuracies
- Detailed report of current conditions
- Provide viable options for future development scenarios
- Identify Prioritized Redevelopment Options
- Create example for other coastal areas



Sources

- S1: Jekyll Island Foundation
- S2: Jim Remlin – Sherwood Design Engineers
- S3: JIA, Esri, Glynn County GIS
- S4: Jim Remlin – Sherwood Design Engineers
- S5: JIA, Wikipedia
- S6: JIA, Esri, Glynn County GIS
- S7: 2014 JIA Master Plan , Esri, Glynn County GIS
- S8: Jim Remlin – Sherwood Design Engineers
- S9: JIA, IPJI, Westin, 2014 Master Plan
- S10: Remlin, JIA, UGA, AECOM, NGF, Sand County Studios
- S11: Flickr – Joe Marcone
- S12: 2014 JIA Master Plan , Esri, Glynn County GIS
- S13: Bill Miller, Carl Steinitz
- S14: Carl Steinitz, David Godlberg, ESRI, Geodesign HUB, Adobe
- S15: Flickr: Tom Driggers
- S16: Jim Remlin – Sherwood Design Engineers

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