

Advancing ADCIRC Operations

Dr. Jason Fleming, Principal Consultant, Seahorse Coastal Consulting, LLC and Executive Chair, Scimaritan, L3C

Other Participants/Partners: Dr. Robert Twilley and Carola Kaiser (Louisiana State University), Dr. Brian Blanton (Renaissance Computing Institute), Dr. Rick Luettich (University of North Carolina at Chapel Hill); Dr. Clint Dawson (University of Texas at Austin); Dr. Casey Dietrich, (North Carolina State University), Texas Advanced Computing Center (TACC), LSU Center for Computation and Technology (LSU CCT), Katelyn Costanza (CeHydro, LLC), Brett Estrade (Coastal Computing Services, LLC), Nathan Dill (Ransom Consulting, Inc.)

SHORT DESCRIPTION

Strategic Vision: Truly informed leadership for hurricane response and recovery nationwide.

Mission: Producing proven storm surge insight to empower decision makers.

As the Transition PI team of the CRC, we have led the efforts to commercially deploy and operationalize the research products of the CRC to generate sustainable funding. To recap, in 2017, we founded Scimaritan, L3C as a not-for-profit organization and a legal vehicle to support the mission of commercial transition by bundling services into a client-centric service offering. Scimaritan is a privately owned small business, owned by the PI, domiciled in Louisiana, and it is treated as an LLC for tax purposes. It is also able to receive Program Related Investments (PRIs) from 501c3 non-profits (unlike a typical LLC). Scimaritan began collecting significant commercial revenue for real time storm surge model guidance in Louisiana immediately and has enjoyed continuously stable positive cash flow which will continue through the 2021 season.

Over the past three hurricane seasons, Scimaritan has developed strong client loyalty and a reputation for reliability and technical excellence with our State Agency client (Louisiana CPRA). In particular, last year's record breaking hurricane season with over 30 named storms, including 5 landfalls in Louisiana (also a new record) was a true test for Scimaritan and for our client, LA CPRA. We passed the test of the 2020 hurricane season with

flying colors and successfully renewed our CPRA contract for the 2021 hurricane season due to strong support and vigorous advocacy from LA CPRA personnel on our behalf.

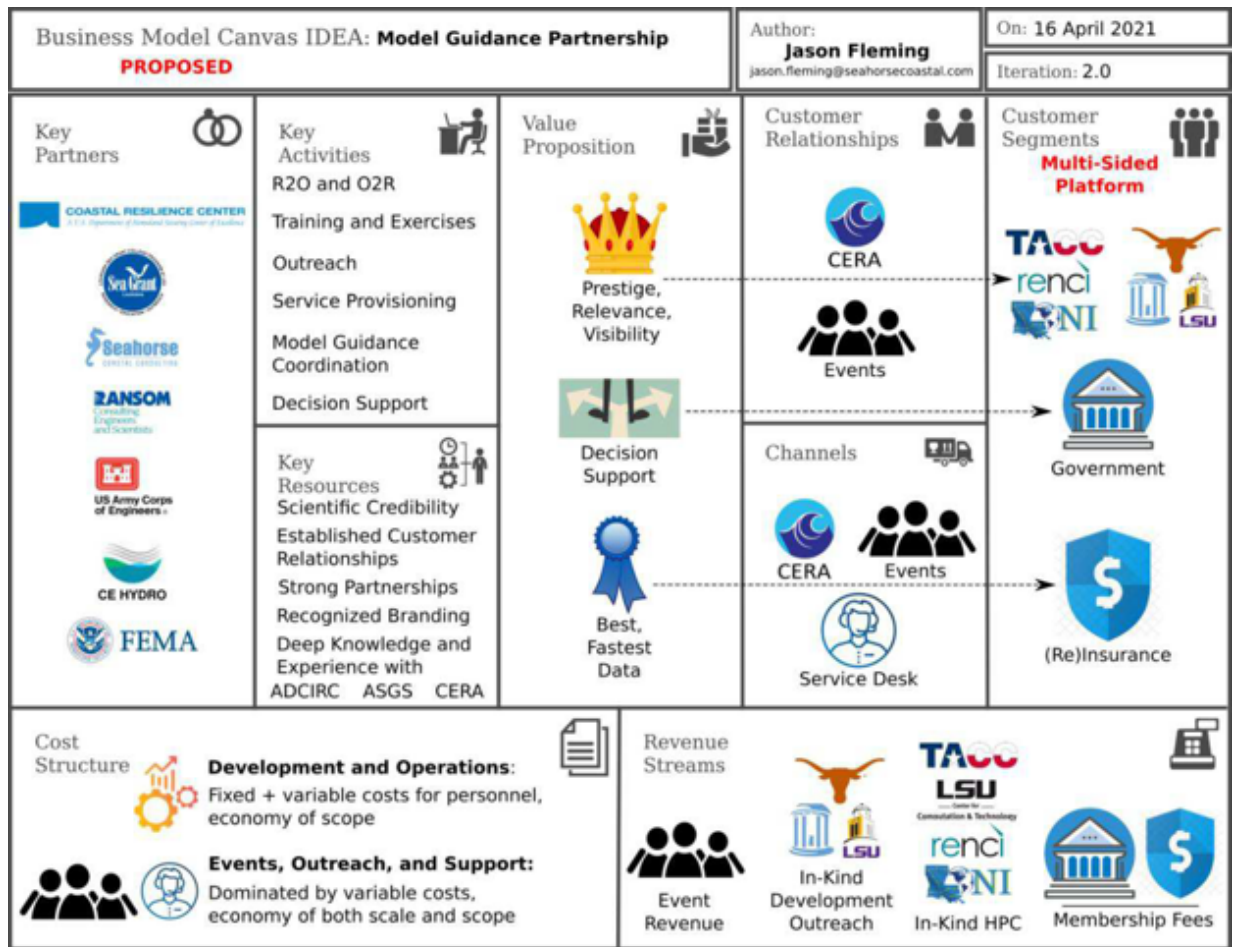
In Year 7, we propose to scale Scimaritan nationwide by launching our associated brand, **stormsurge.live**, with new technical capabilities (including inland rainfall flood guidance for the first time) and new outreach and marketing including social media, dedicated website with Salesforce integration, and outreach events. This is not a live website yet. We hired a web design company called Pixel Power to design it (as well as the new logo) back in March 2021 but it was not finished yet when we got our first hurricane in May 2021. We plan to resume the design and deployment process as soon as the worst of the hurricane season is over.

ABSTRACT

For over a decade, our network of researchers has helped build and deploy real time flood decision support using highly specialized and well-integrated technology solutions needed for best available guidance. Our team specializes in deploying the latest models for real time decisions at scales where success requires a results-oriented mindset and the commitment to do whatever it takes to support the client. During the challenging 2020 hurricane season, our results were universally praised by the decision makers who were relying on our analysis to protect lives and property from the risks associated with flooding caused by extreme weather events.

We are at a crossroads. The Department of Homeland Security, Science and Technology Directorate has invested in us at the Coastal Resilience Center for over ten years. We have produced numerous high-profile successes and built momentum. The time has now come to scale up our DHS-supported victories into long term sustainable and diversified revenue.

The strength of our decision support is in the collaborative work of the network of researchers. To create a sustainable path for growth and development, we must diversify our revenue sources by creating a formal organization where we all work toward the same goal. Our stormsurge.live brand and website will represent the dedicated not-for-profit consortium that our team can work within to continue deploying supercomputer-powered models to rapidly inform critical decisions.



© <http://www.businessmodelgeneration.com> from <http://www.flaticon.com>

Proposed Consortium

The proposed consortium is a new model guidance partnership that is designed to capture the best parts of the way we currently do business. Each of the existing players, who may currently define themselves as researchers, financial sponsors, users, or stakeholders, will become members of a new partnership. We are developing bylaws and board members

Structural Value Proposition

Each member of the partnership would provide something of value to the group annually, and receives something of value in return. For each member, the value gained from membership is much greater than the value contributed, making the partnership sustainable.

Solutions

- Live Storm Surge Visualization
- Real-Time Hindcast
- Web Mapping Services
- Historical Storms

- 24/7 Help Desk Support
- Trainings
- GIS-compatible Data Export
- Subdomain Modeling Marketing
- Website and branding
- Sales lead tracking with Salesforce
- Social media Sales
- Subscription-based membership
- Fee-based products and services Collaboration
- In-kind contributions and joint proposals
- Produces revenue for academic partners to incentivize their participation and to financially compensate academic collaborators for their in-kind contributions.
- We provide a conduit to deliver academic research innovations into operations.
- Data sharing agreements Support

A unified Help Desk software package allows us to create and maintain a single starting reference point of contact for inquiries, requests, comments and feedback from our members as well as the public overall. This system allows us to route requests to the right person to answer them as well as track, measure, and control the customer experience.

Issue escalation and response procedures will be codified to relate the level of member access and request priority with membership financial buy-in level.