

**The RAS Business Model
The final hurdle?
Maybe not . . .
(Of course not!)**

RAStech 2023 - Orlando, Florida - April, 20 & 21, 2023



HTH Full Spectrum Aquaculture

Full Spectrum Planning, Design, Construction & Commissioning Services

- *Multiple Species:* amphibians, corals, crustaceans, finfish, molluscs, shellfish
- *Aquaculture Technologies:* influent & effluent water treatment, batch, flow-thru, recirculating, disinfection, heating, cooling, aeration, oxygenation
- *Facilities Engineering:* planning & logistics, site utilities & infrastructure
- *Comprehensive business, production & construction cost models*
- *Founding member and principals in Florida Marine Aquaculture Coalition*

HTH Full Spectrum Aquaculture

- Getxo, Basque Country, Spain
 - Jensen Beach, Florida
 - Tuxedo, North Carolina

www.HTHaqua.com

www.FullSpectrumAquaculture.com

www.MarineAquacultureCoalition.com



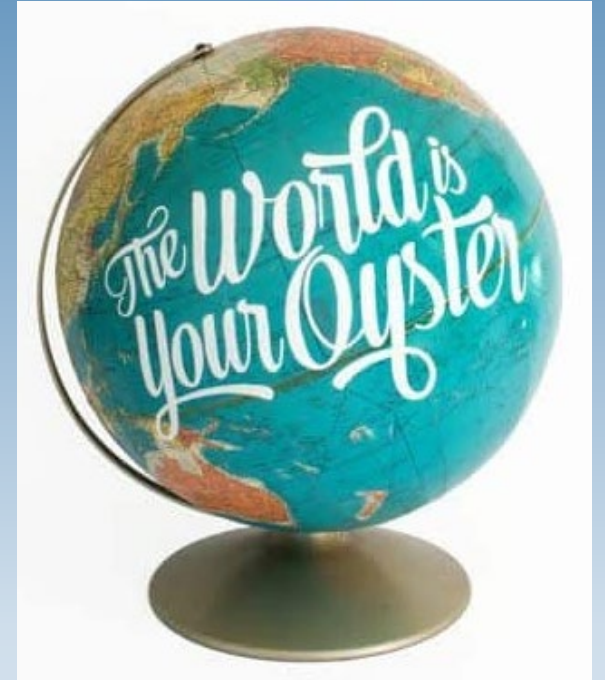
An Act of Congress: 22 (so far . . .)

Agricultural Marketing Act; Animal Health Protection Act; Animal Medicinal Use Drug Clarification Act; Coastal Zone Management Act; Endangered Species Act; Federal Food Drug and Cosmetic Act; Federal Insecticide, Fungicide, and Rodenticide Act; Fish and Wildlife Coordination Act; Federal Water Pollution Control Act (Clean Water Act); Magnuson-Stevens Fishery Conservation and Management Act; Marine Mammal Protection Act; Migratory Bird Protection Act; Minor Uses, Minor Species Act; National Environmental Policy Act; National Historic Preservation Act; National Marine Sanctuary Act; National Invasive Species Act; Non-indigenous Aquatic Nuisance Preservation and Control Act; Outer Continental Shelf Lands Act; Rivers and Harbors Act.



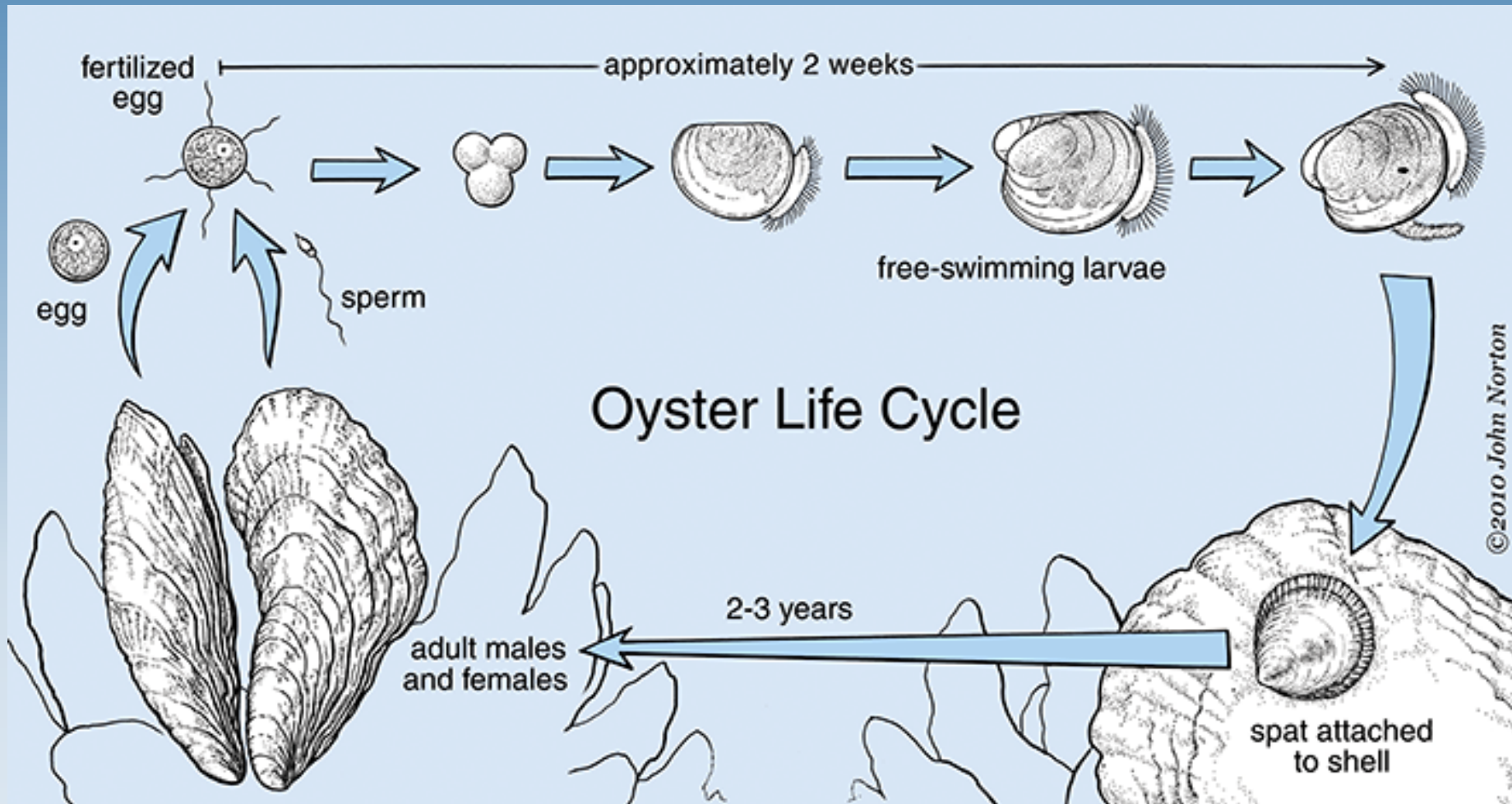
“The World is Your Oyster”

- The actual quote is Shakespeare, ‘The world’s mine oyster.’
- Shakespeare re-introduced one of his most popular characters, Sir John Falstaff, as a con man, planning to con two Windsor women out of their money. The conversation goes:
- Sir John: I will not lend thee a penny.
- Pistol: Why then **the world’s mine oyster**, which I with sword will open.
- Sr. John: Not a penny.

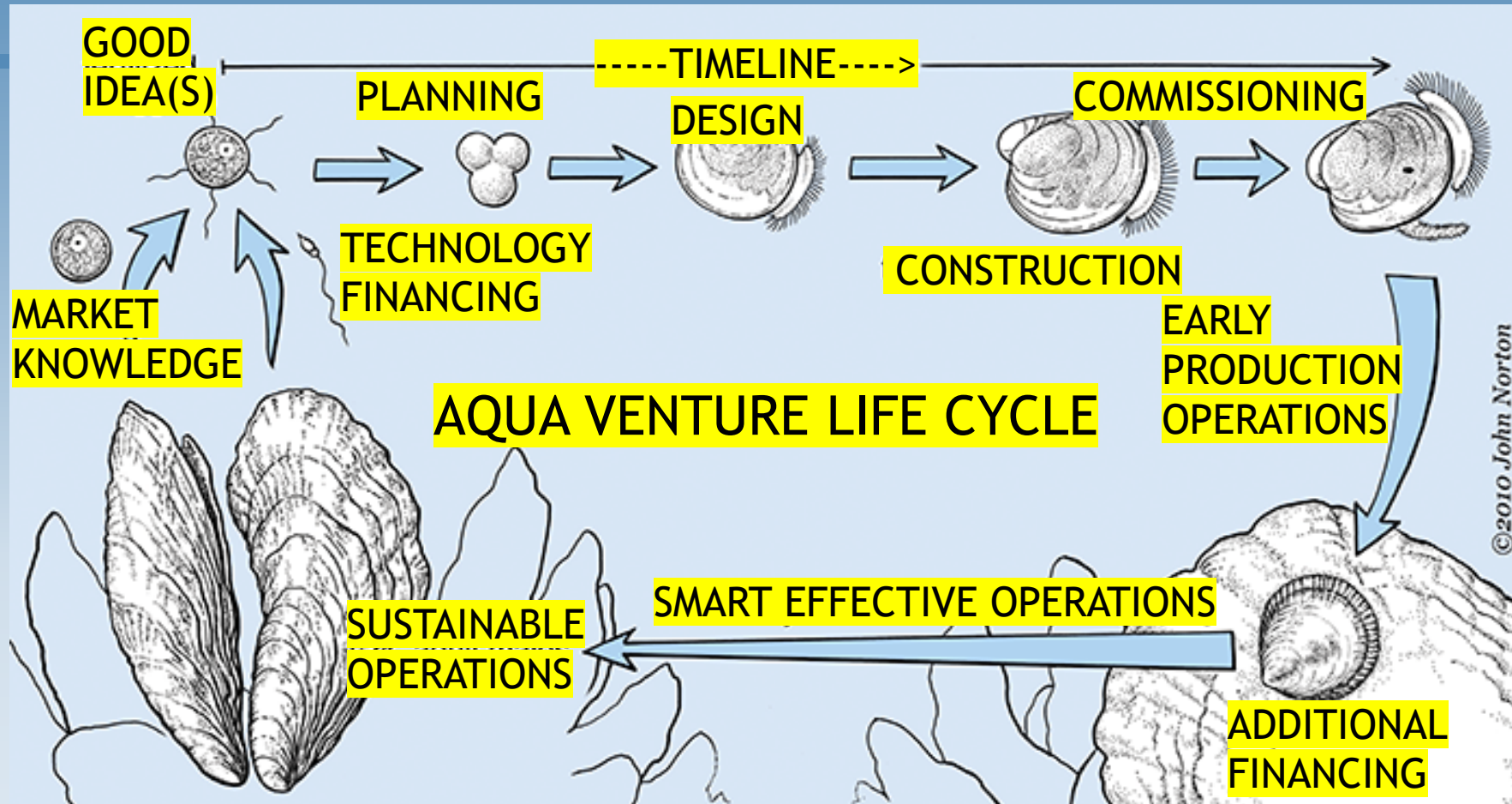


Aquaculture Venture Life Cycle

SYNONYMOUS WITH:



Aquaculture Venture Life Cycle



Aquaculture Venture Life Cycle

GOOD IDEA(S)

- *We think we have a good idea.*
- *Let's investigate, do due diligence, ascertain feasibility*



Aquaculture Venture Life Cycle

GOOD IDEA(S)

- *We think we have a good idea.*
- *Let's investigate, do due diligence, ascertain feasibility*
 - **TAKE THE TIME TO ASCERTAIN FEASIBILITY**



Aquaculture Venture Life Cycle

MARKET KNOWLEDGE

- *Just because you can grow it is no reason to grow it!*
- *Local versus Commodity Markets: \$SCALE vs \$**CALE***
- *Set realistic sales prices for target form factor and packaging.*



Aquaculture Venture Life Cycle

MARKET KNOWLEDGE

- *Just because you can grow it is no reason to grow it!*
 - **FADS ARE WHAT THEY ARE, FADS (short-lived)**
- *Local versus Commodity Markets: \$SCALE vs \$CALE*
- *Set realistic sales prices for target form factor and packaging.*
 - **ECONOMY OF \$SCALE WILL NOT \$AVE YOU**



Aquaculture Venture Life Cycle

TECHNOLOGY & FINANCING

- *Technology is an important part of the story.*
- *Story sells the financing, financing sells the story.*
- *Technology can limit or mitigate the Acts of Congress in play.*



Aquaculture Venture Life Cycle

TECHNOLOGY & FINANCING

- *Technology is an important part of the story.*
 - **BUT DON'T VENTURE OUT TO THAT BLEEDING EDGE**
- *Story sells the financing, financing sells the story.*
 - **ASSURE THAT CAPITAL IS THERE TO IMPLEMENT THE RIGHT TECHNOLOGY AT THE RIGHT SCALE**
- *Technology can limit or mitigate the Acts of Congress in play.*



Aquaculture Venture Life Cycle

PLANNING - Lack of planning is number one mistake that leads to failure. If it doesn't start right, it is delusional to think it will end right.

- Five major impacts of poor planning:
 - Poor time management
 - Poor definition of objectives
 - Budget doesn't work
 - Lack of support from stakeholders
 - Exposes project to unpredicted high risks and problems



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Aqua Venture Life Cycle



DESIGN

- No amount of gloss can permanently hide fundamental cracks.
- A comprehensive, multidiscipline project delivery team is required.
- Look and feel are not going to replace desired functionality.
- “Design is not just what it looks like and feels like. Design is how it works.” (Steve Jobs)



Aquaculture Venture Life Cycle

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Aquaculture Venture Life Cycle

COMMISSIONING

- *Cx Commissioning versus Commissioning*
 - *Full Spectrum Cx vs Startup Commissioning*
- *Buy what you need. Build what you need.*
- *Assure you got what you paid for.*
- *And have a Team that knows how to drive it.*



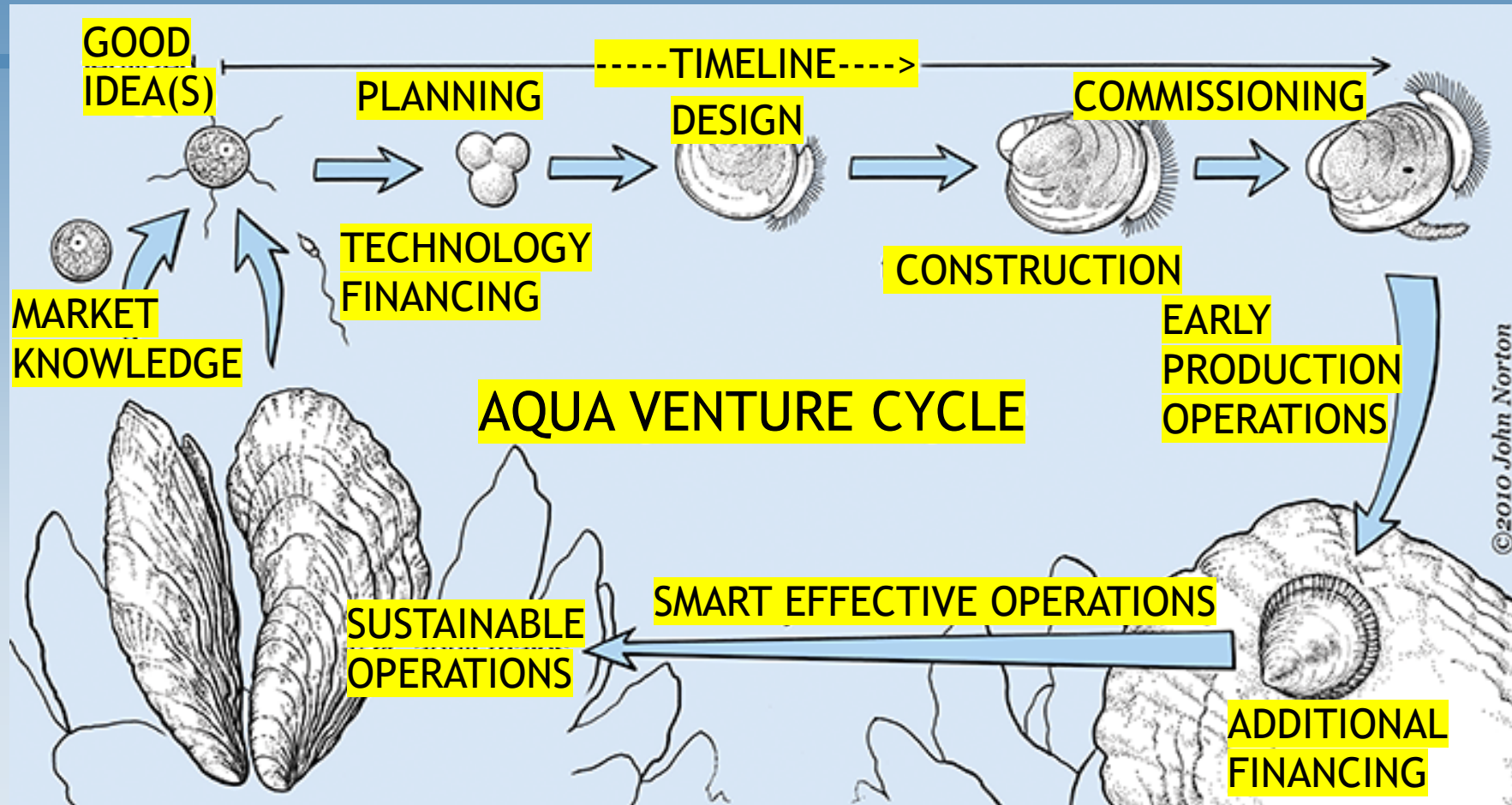
Aquaculture Venture Life Cycle

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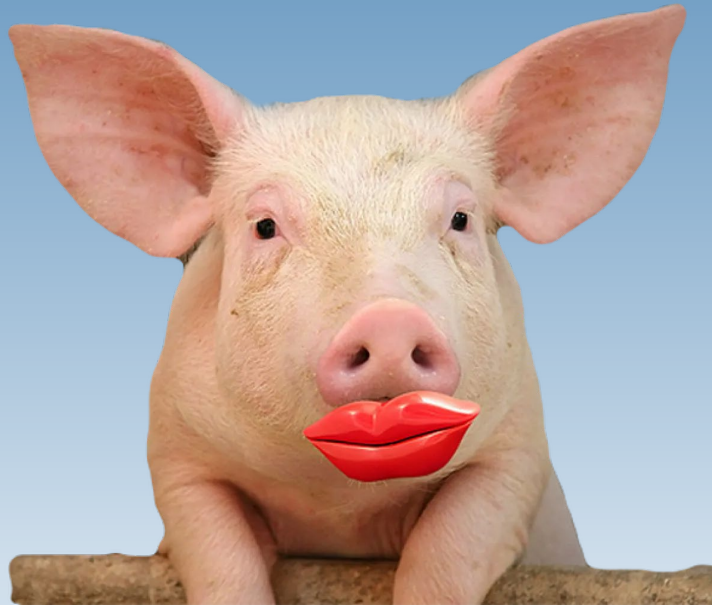
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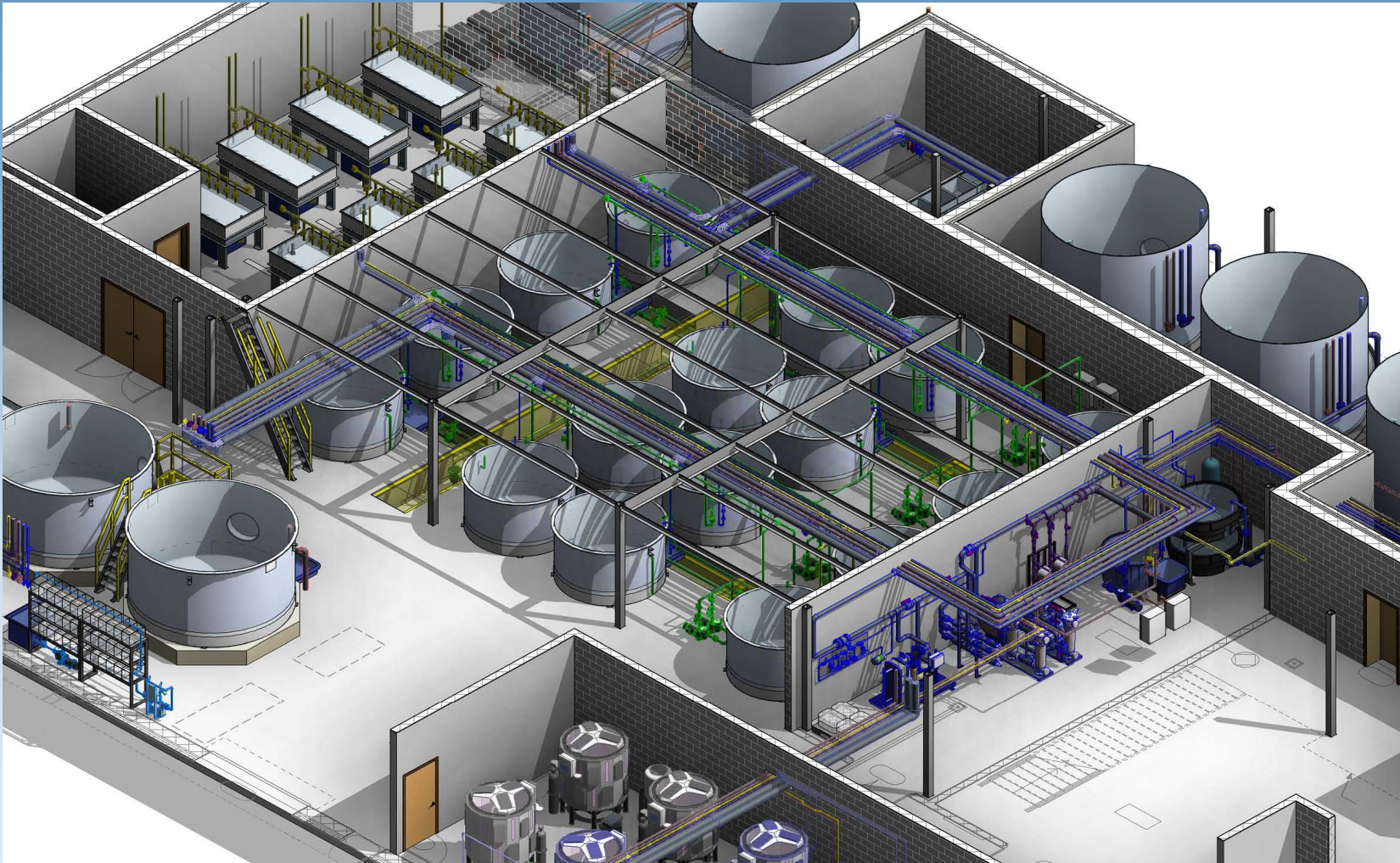
Aquaculture Venture Life Cycle



The Choice is Yours . . .



Desired Results . . . Smart, Effective, Sustainable Operations





**THANK YOU FOR
YOUR ATTENTION**



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