

# Economics of Aquaculture

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**ENGLE-STONE**  
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To make a living from it requires attention to economics.



# Reality 1: Most aquaculture requires lots of capital.

**Buildings**

**Equipment**

**Land**

**Levees**





# Indoor hatcheries/ systems



# Sheds for size grading





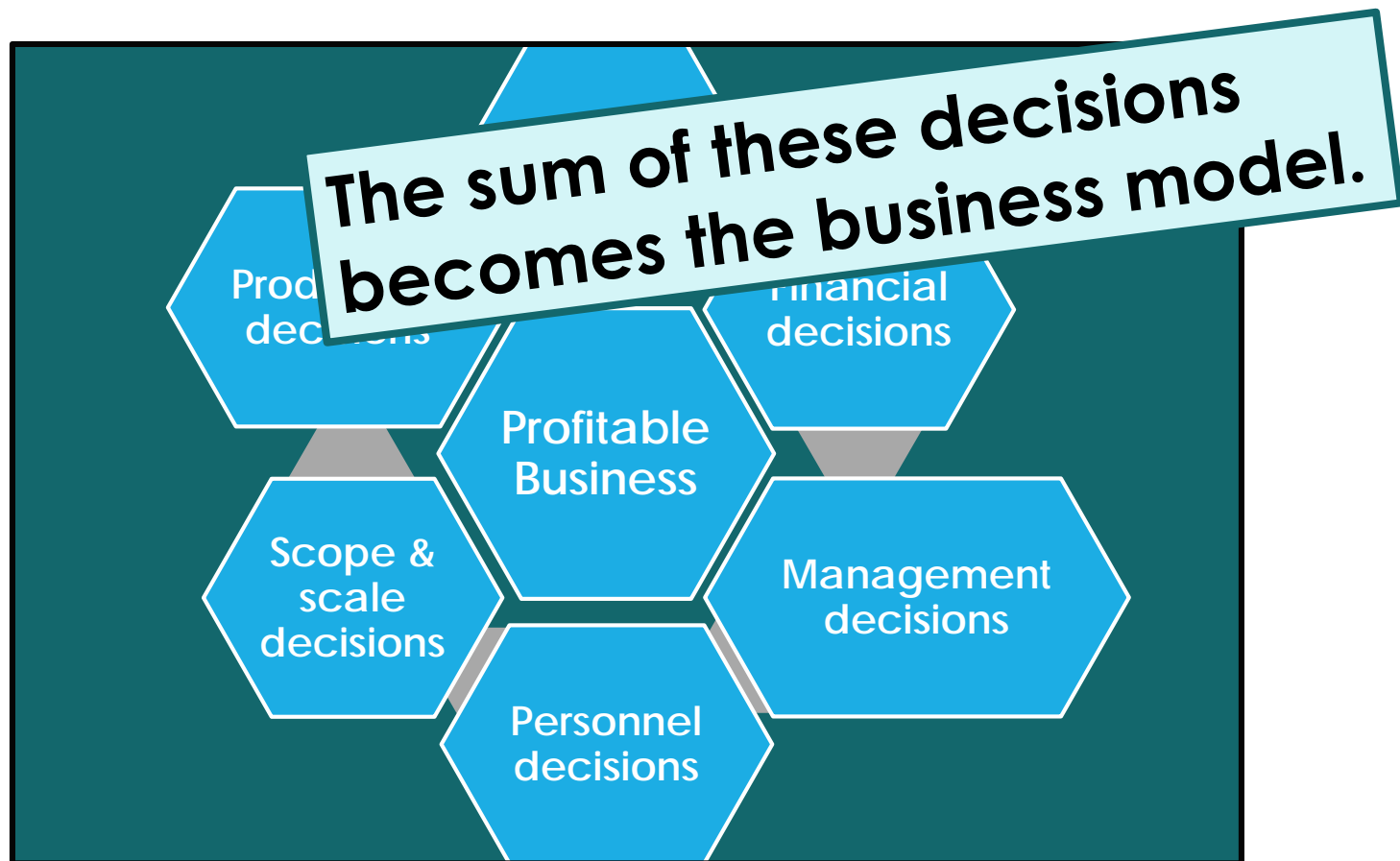
# Shipping facilities



# Fish Processing



Successful businesses are complex  
& require many good decisions.





Requires PLANNING,  
MONITORING, & ADJUSTING



The Agriculture, Fisheries and Small Business Planning Website

[www.AgPlan.umn.edu](http://www.AgPlan.umn.edu)

**FREE!!!**

## Reality 2: High capital costs mean high annual fixed costs.

**If facility costs \$25,000 to build & lasts  
10 years, annual fixed cost = \$2,500.**

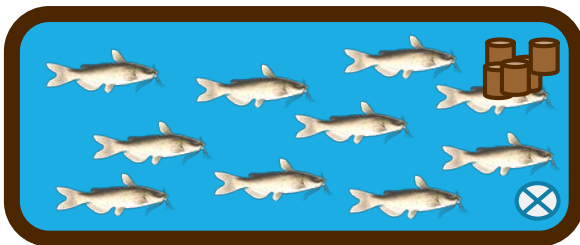


**If production = 5,000 lb,  
annual fixed cost = **\$0.50/lb.****

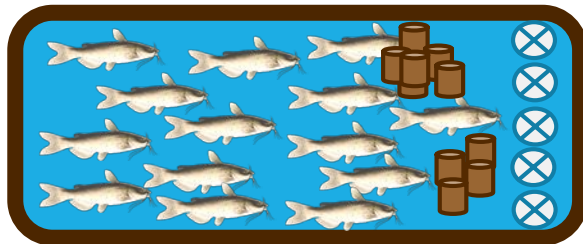


**If production = 10,000 lb,  
annual fixed cost = **\$0.25/lb.****

# But, here's the rest of the story.....

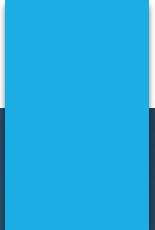


To get higher yields, more feed & aeration are required.



Feed & aeration are ***VARIABLE***, not fixed, costs.

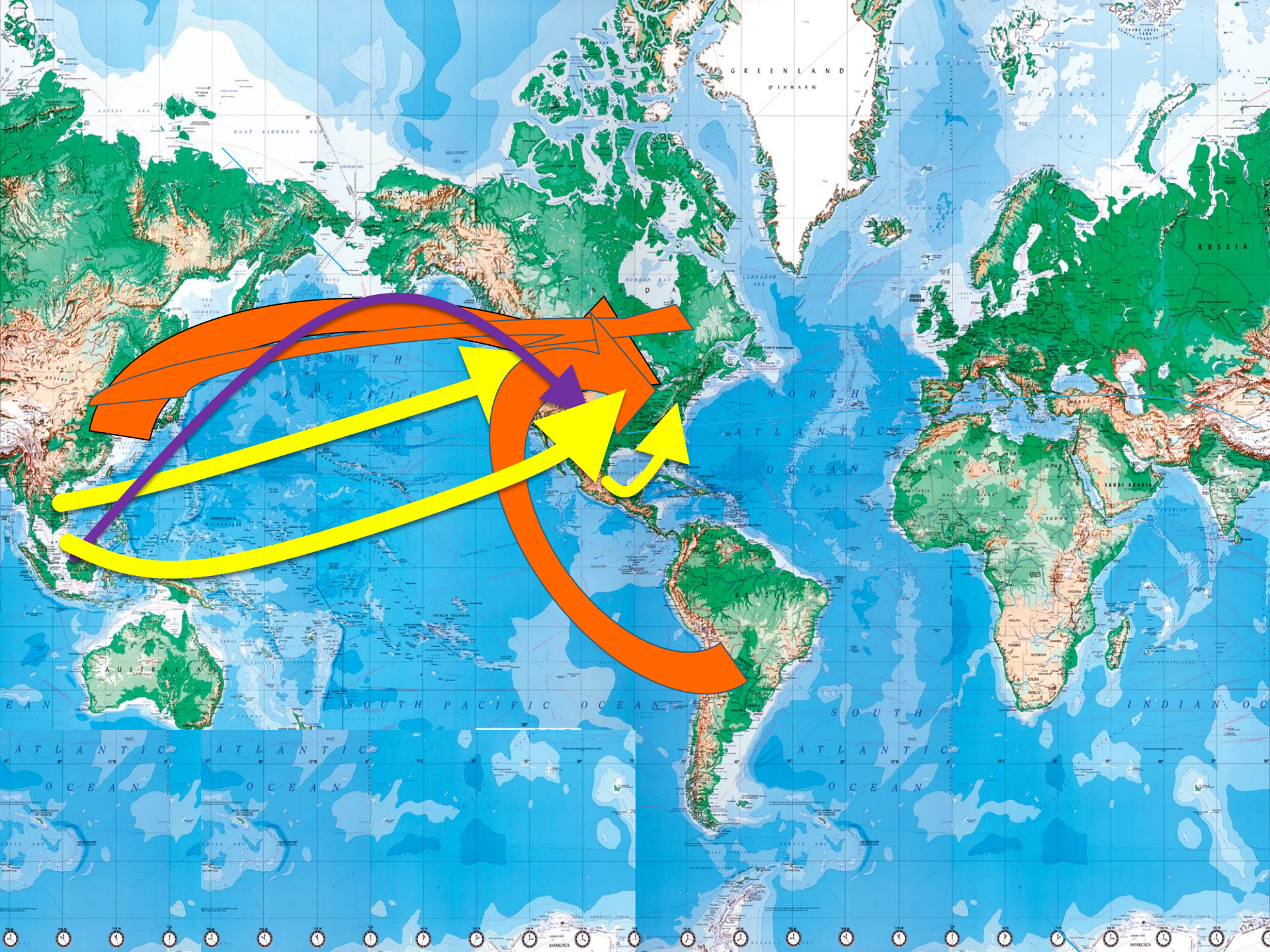




## Reality 3: Aquaculture is not new any more.

- ❖ Aquaculture has been successful.
- ❖ Success attracts competition.







Business Model 1: Compete on price: be the biggest & lowest cost supplier.



Can you compete with price of wild-caught & imported shrimp?

But, you have to receive a price that covers your costs.....



## Business Model 2: Solve your customer's needs better than anyone else.

- ❖ If not, who will pay higher prices?
- ❖ For how long & what volume will they buy at those prices?



# How do you differentiate your product, services, name?

- What size?
- When do they want to buy it?
  - Weekends?
  - July 4?
- Do they want it live? Filleted?
- Can you provide better service than anyone else?

# Use Marketing Plan to Inform Overall Business Plan



- Facilities, location
- Production system
- Permits, licenses
- Customer service
- Risk management
- Financial plan

**Revise annually & keep business fresh!**

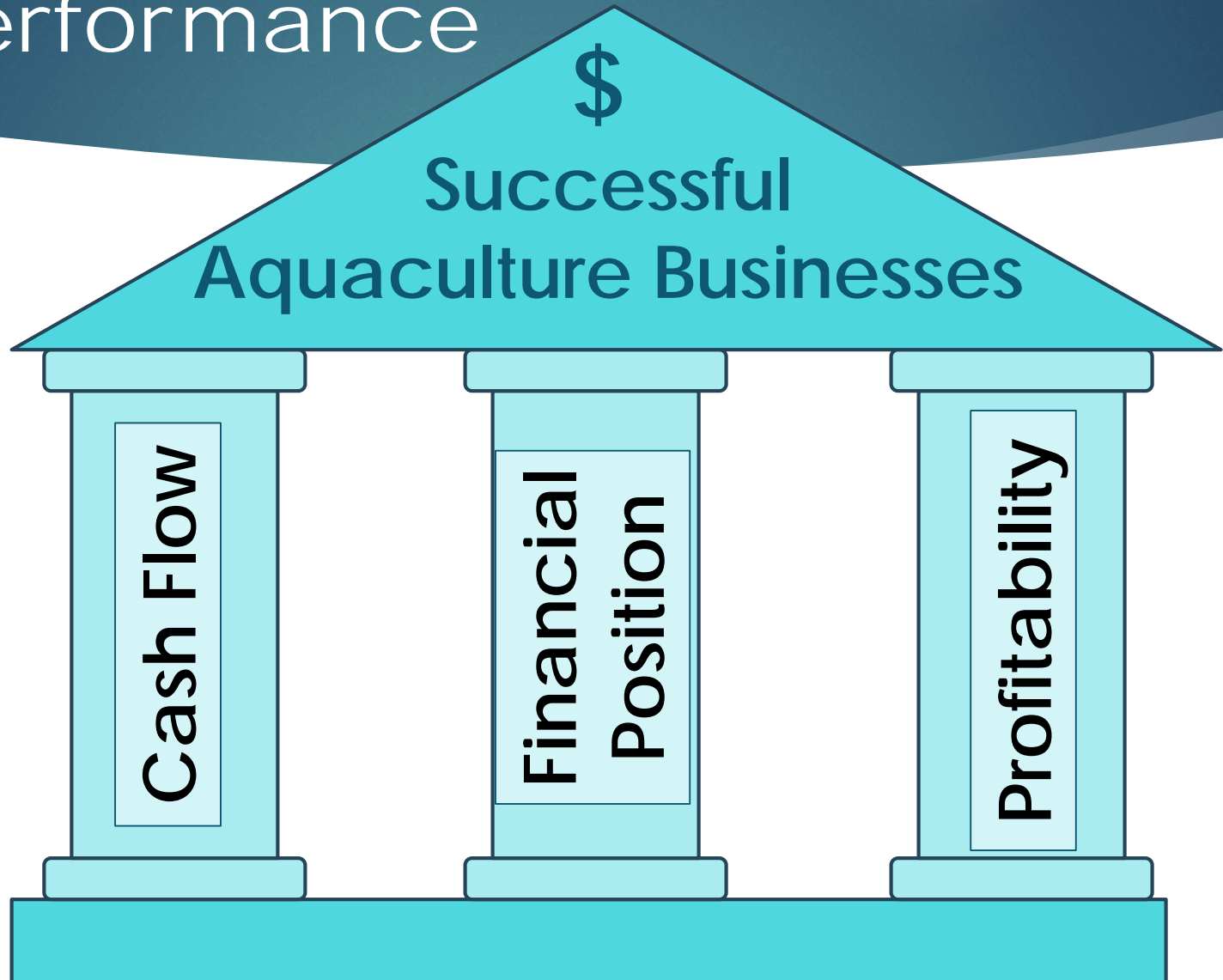


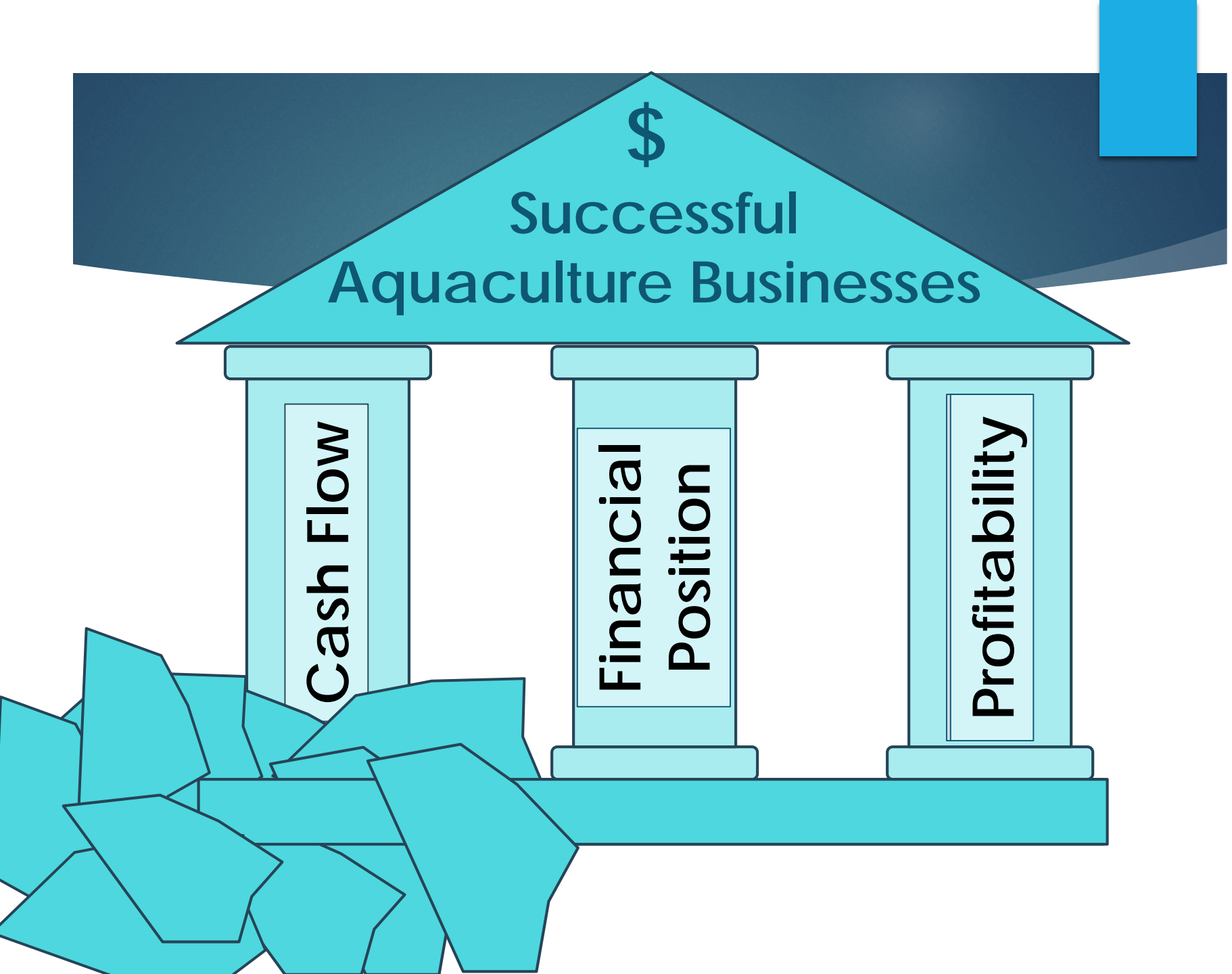




# Monitoring Financial Performance

# Monitoring Financial Performance





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# Successful Aquaculture Businesses

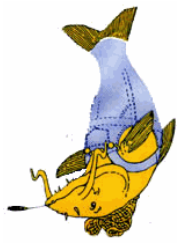
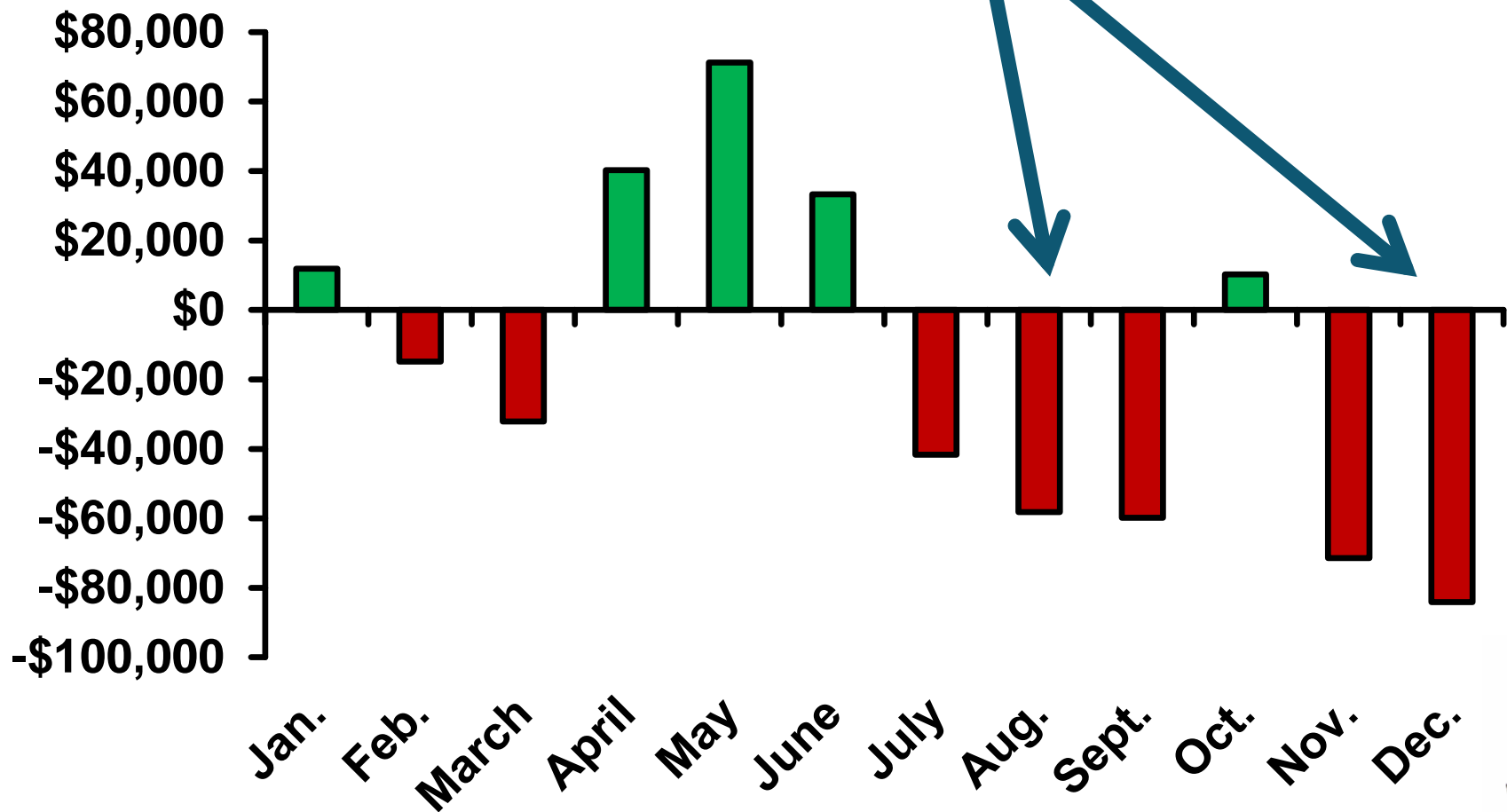
Cash Flow

Financial  
Position

Profitability



# Cash Flow Problems Most Common Cause of Failure



# Common mistakes

Overly optimistic yields



Overly optimistic sales

Under-estimating expenses

Omitting capital replacement items

Omitting loan interest & principal payments

# Cash Flow: Checklist

## Southern Regional Aquaculture Center Fact Sheets

Indicator	Interpretation	Good	Marginal	Problem
Ending cash balance	Higher or lower than beginning balance?	Green	Red	Red
Outstanding oper. loan	Higher or lower than beginning of year?	Green	Red	Red



# Cash Flow: Checklist (Cont.)

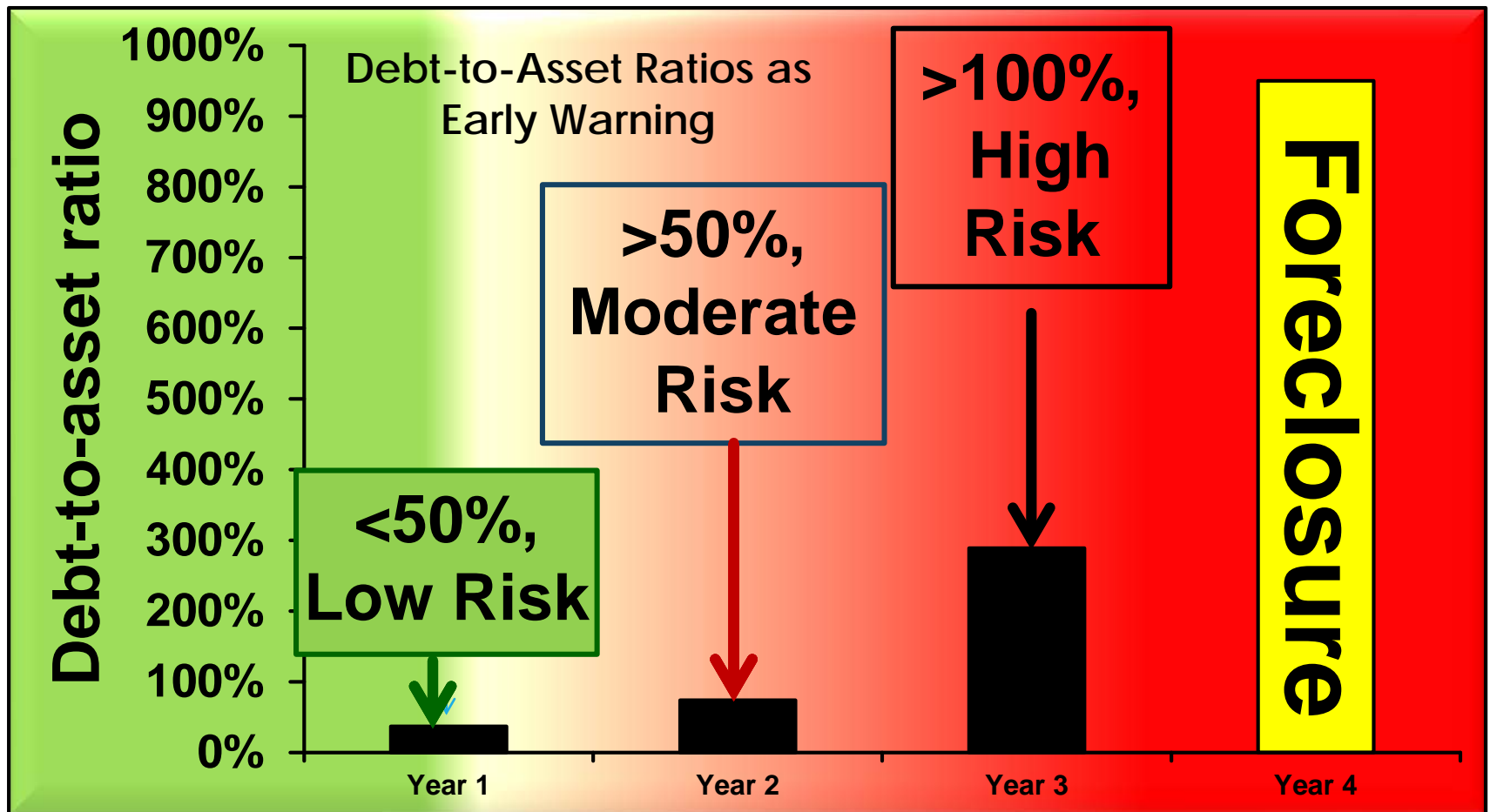
Indicator	Interpretation	Good	Marginal	Problem
<b>Cash flow risk</b>				
<b>% revenue can decline &amp; meet cash flow</b>	<b>Higher or lower than 10-25%</b>			
<b>% op. expenses can increase &amp; cash flow</b>	<b>Higher or lower than 10-25%</b>			

# Financial Position: Checklist

## Southern Regional Aquaculture Center Fact Sheets

Indicator	Interpretation	Good	Marginal	Problem
Current ratio	Greater than 1.5; lower than 1?			
Debt-to-asset ratio	< 40%; > 65%?			
Net worth	Positive? Increasing?			

# Debt-to-Asset Ratio & Financial Risk





# Profitability: Checklist

## Southern Regional Aquaculture Center Fact Sheets

Indicator	Interpretation	Good	Marginal	Problem
Net farm income	Positive or negative?	Green	Red	Red

Keys to economic success:  
Make sure you have adequate capital.



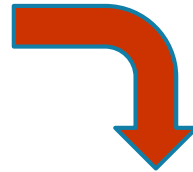
Debt payment

New equipment

Receivables

Inventory

**Business**



Unexpected expenses

- Well pump goes out
- Vehicle repair
- Renovations to meet codes

# Keys to economic success

- Farmer must earn enough to compensate for his/her time.
- Or, will quit farming fish to do something else.



# Nathan Stone's Wal-Mart Test

- ▶ We should be asking people if they can make as much money from small-scale aquaculture as they can as a greeter at Wal-Mart.
- ▶ Otherwise, they are better off working at Wal-Mart, where they can stay warm.
- ▶ Even hobby farmers need to make money.

# Keys to economic success

- Monitor cash flow monthly!
- Do a Financial Checkup at the end of every year.
- Identify & prioritize weaknesses
- Set goals & plans to improve weaknesses.
- Make adjustments every year.

# *Questions?*

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