

Risk and Resiliency

When we think about the future....





HURRICANE CENTRAL

HURRICANE SANDY



26 Oct 2012 08:44 GMT / 26 Oct 2012 04:44 AM EDT

The Weather Channel
weather.com

But do we think about...



New Crops



Puerto Rico

DEBT



More **Heavy Rains**



Increased nutrient delivery



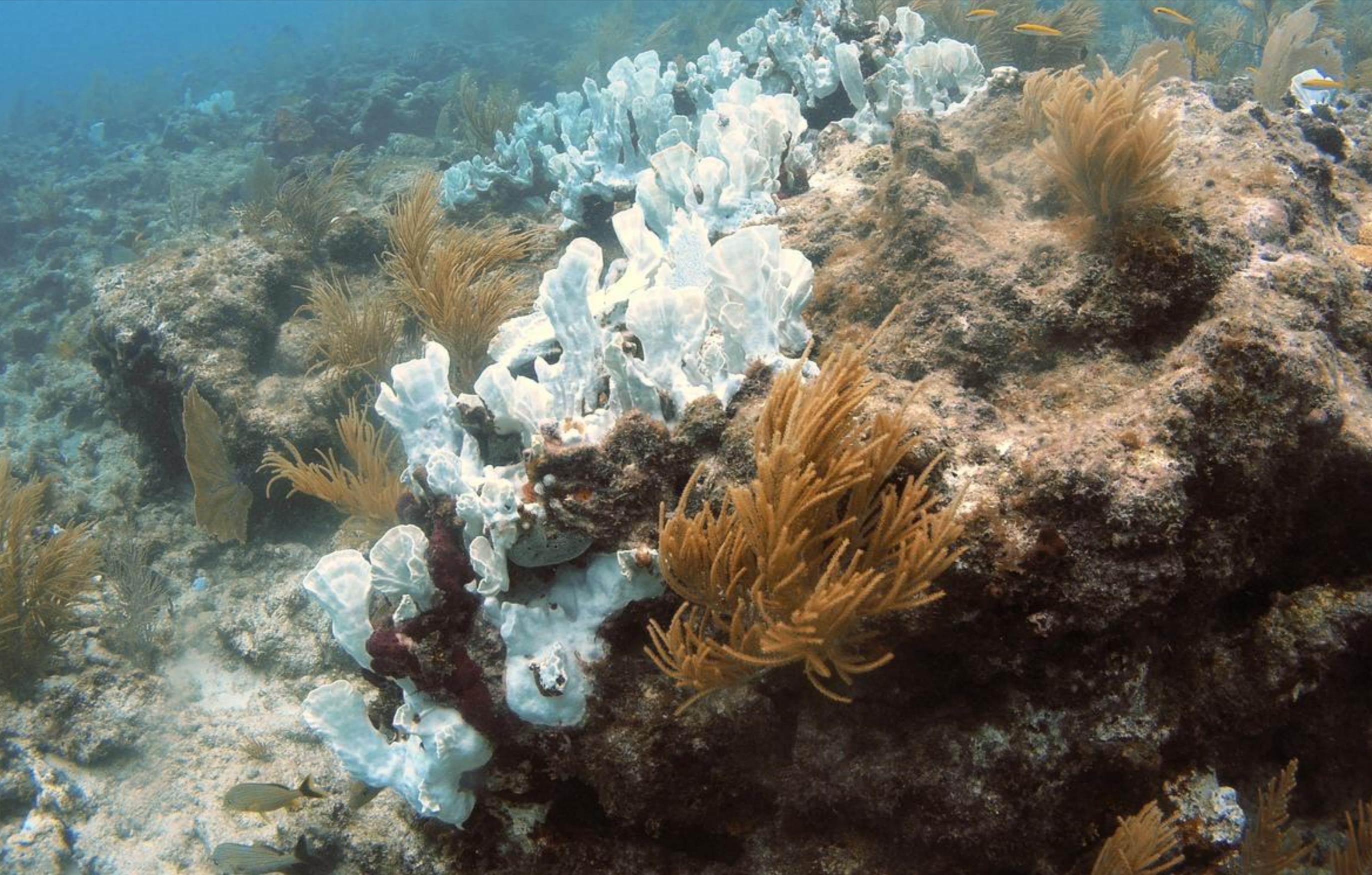
Increased eutrophication

Warmer **Ocean**

More severe hurricanes



Coral bleaching



Invasive species



Uncertainty

How can we understand the potential impacts on our communities?

Are we resilient?

Resiliency

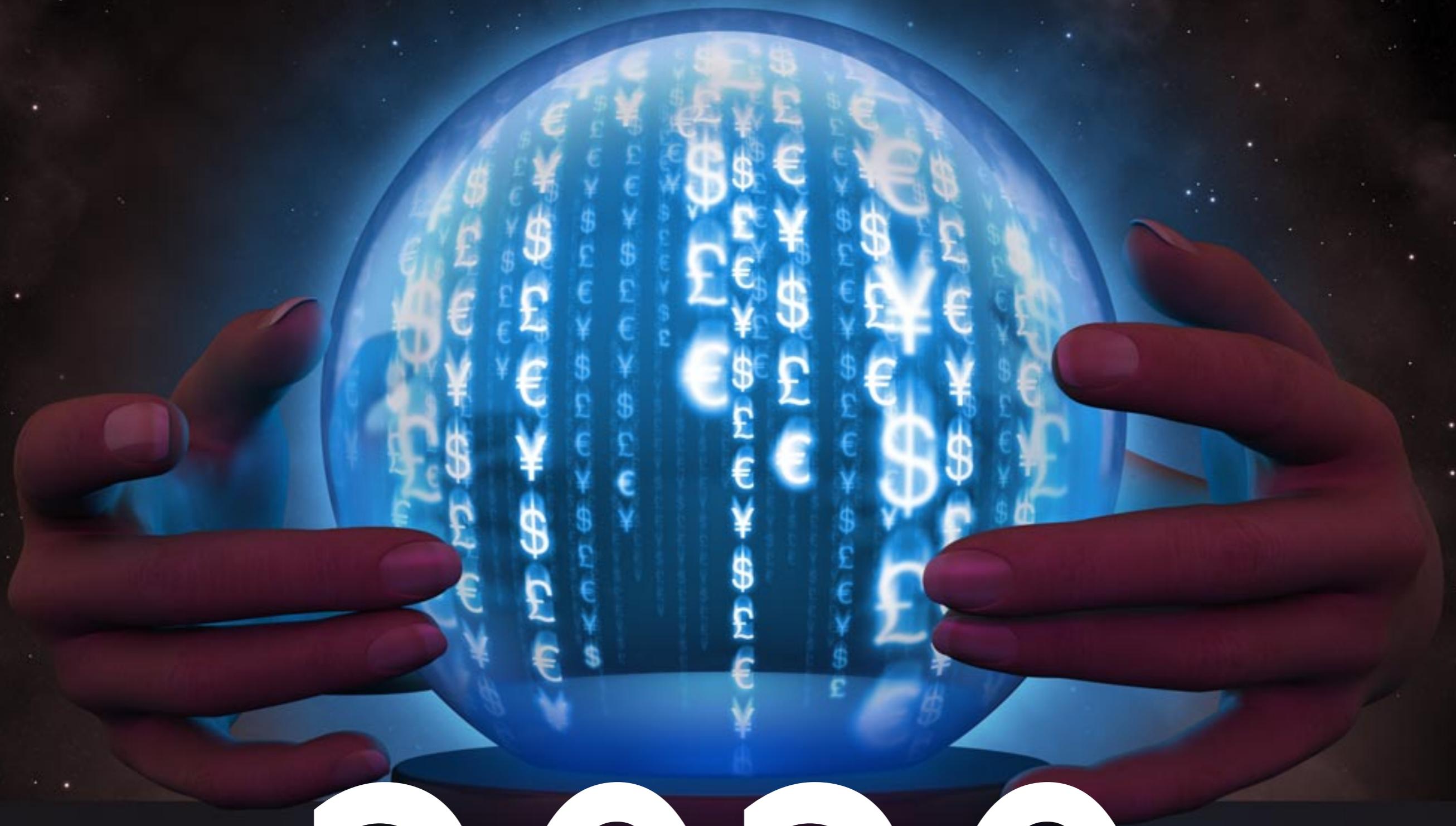
The ability of an organization to **grow, resist, absorb, respond** and/or **recover** in a timely and efficient manner, preserving or restoring its essential basic structures, functions and identity.

Without resiliency there
is risk

\$INDU - 5 min Dow Jones Industrial Average US



Probe for Resiliency Against Future Scenarios



2020

Who is planning
for 2020?

What does my community look like?

What does my local/state government look like?

What does my water system look like?

What actions do I need to take?

What does my messaging look like?

3 Tools



**PESTEL for
Future Scenario
Building**

Headline Scenarios

High

High Impact
Low Probability

Plan in Place

High Impact
High Probability

Active Steps

Impact/Probability Grid

Low Probability

Does not impact you but
could impact others

High Probability

Think about larger scale
“just to be sure”

Low

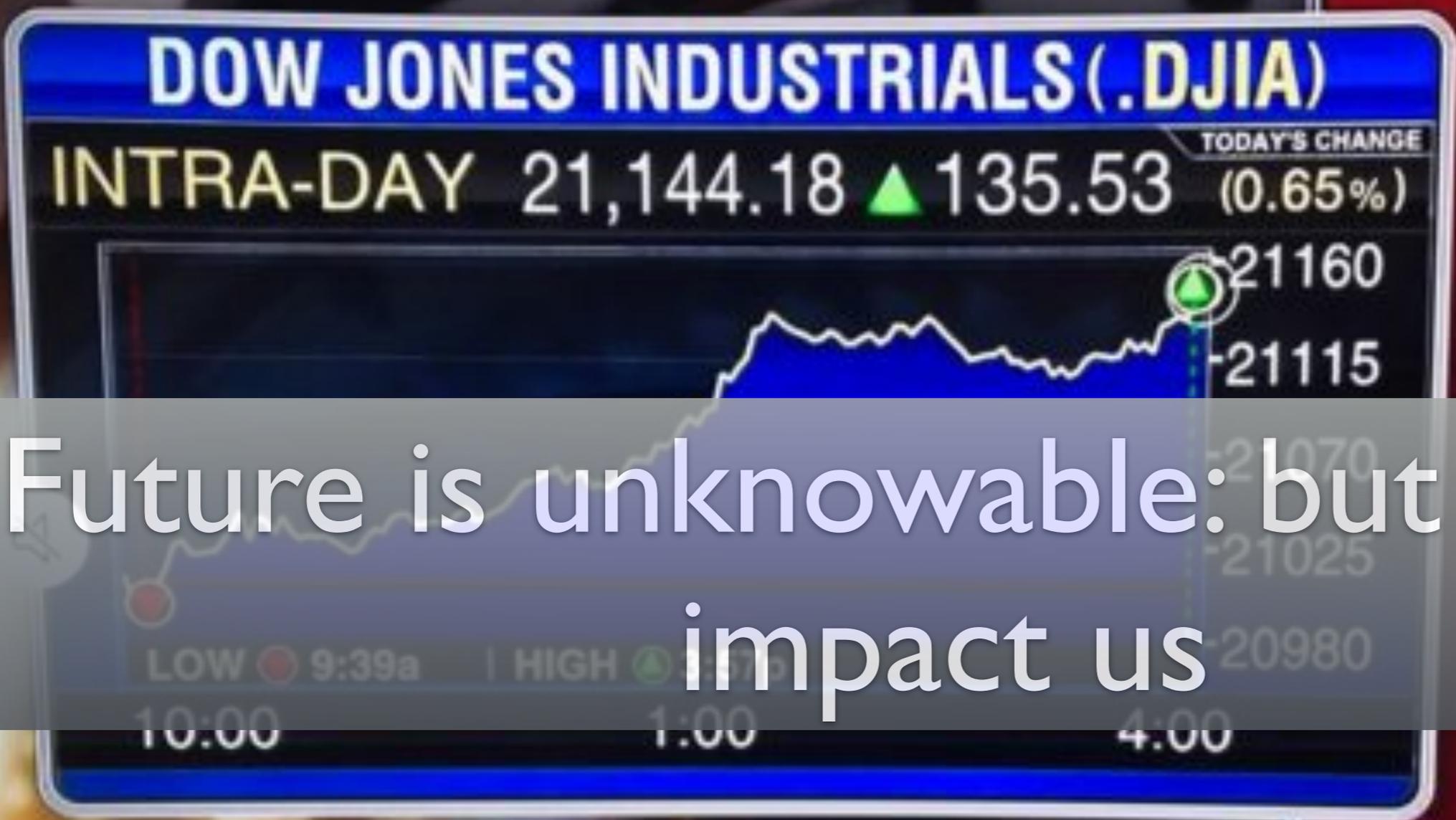
Low

Probability

High

Vulnerability Assessment





Future is unknowable: but it **WILL** impact us

LIVE FOX BUSINESS
4:10P ET

AFTER THE BELL | DOW CLOSES AT NEW RECORD HIGH AS PRES. ANNOUNCES END TO CLIMATE DEAL

S&P	2430.06 ▲ 18.26	NAS	6246.83 ▲ 48.31
3	▼ 0.0043	CAD/USD (CADUSD=)	0.7394 ▼ 0.0010



PESTEL

Political

Environmental

Social

Technological

Economic

Legal/Regulatory

Helpful
to achieving the objective

Harmful
to achieving the objective

Internal origin
(attributes of the organization)

S
Strengths

W
Weaknesses

External origin
(attributes of the environment)

O
Opportunities

T
Threats

PESTEL

Opportunities & Threats

Stakeholders and Allies

Strategic and Resilience
Planning



T
H
O P P O R T U N I T Y
E
A
T

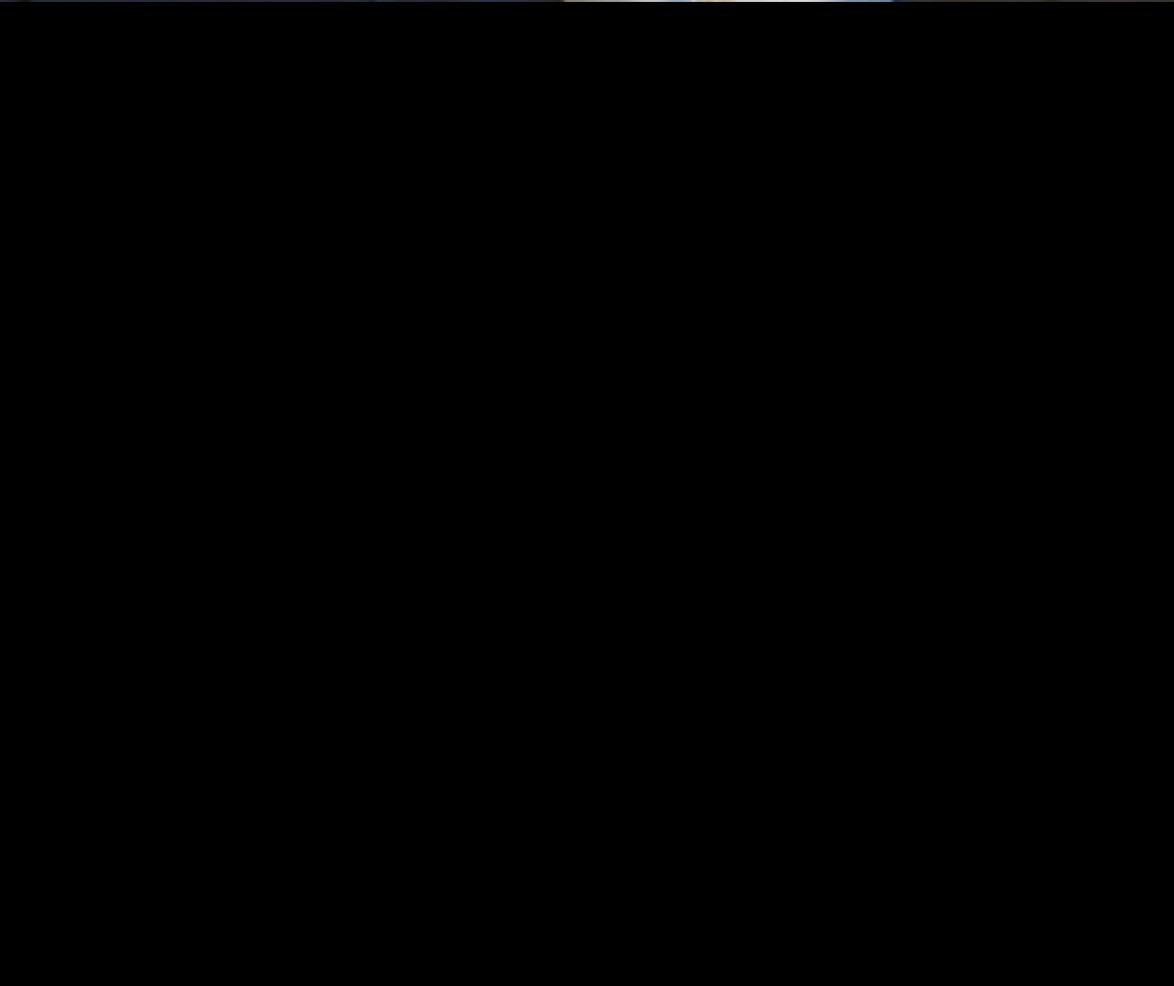
Develop
Future
Scenarios

The logo consists of five concentric circles with a color gradient from dark brown on the outside to light pink in the center. The word "PESTEL" is written in white, bold, uppercase letters across the middle of the circles.

PESTEL



Political





Environmental



SOCIAL



Technological

Economic



Legal/Regulatory

ALA I
TAME
PER

SOY VÍCTIMA
DE LA LEY
7
DE LUIS FORTUÑO

UNION
RGE F

EN DEFENSA
DE LA LEY



Political

Environmental

Social

Technological

Economic

Legal/Regulatory

Use **PESTEL** to
Develop Resiliency
Planning Scenarios

June 2020



P Fiscal board allows all natural reserves to be sold

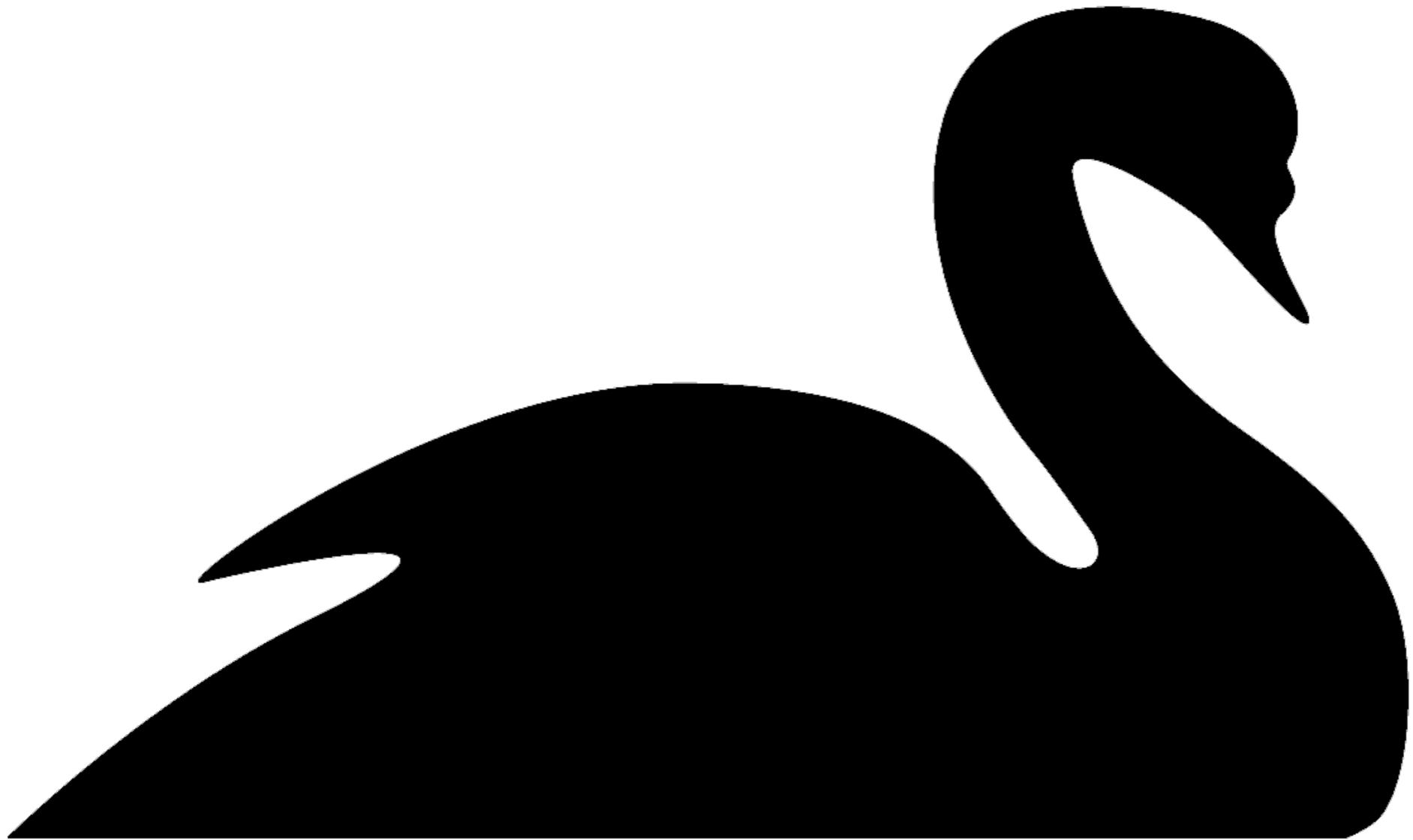
E 5-year drought hits Puerto Rico

S 30% increase in population from New York & Florida

T Virus disables 50% of computers across island

E New company re-locates - 100,000 new jobs coming

L All government services are privatized



Black Swans



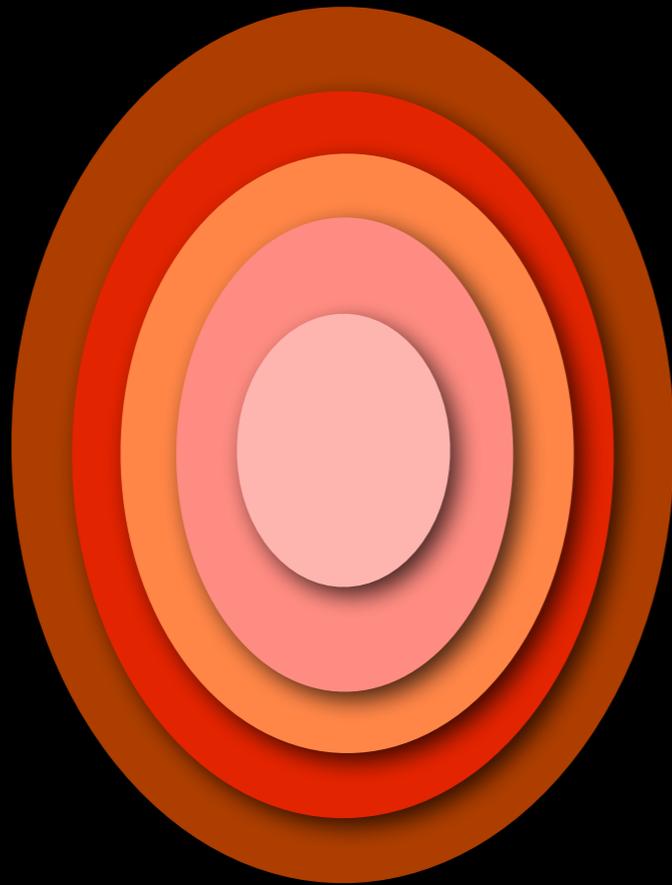


Team Activity

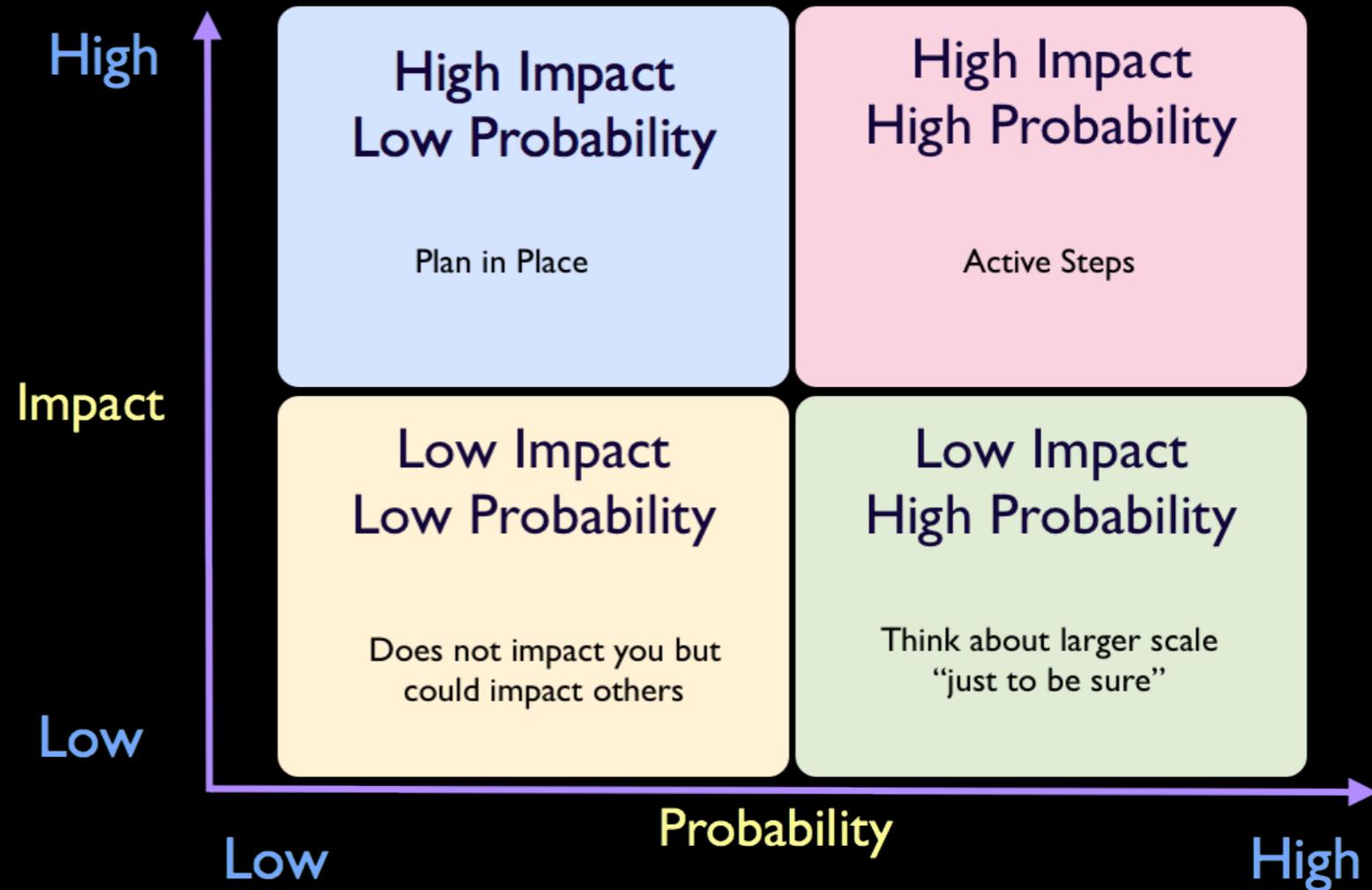


1. Each team develops 2 scenarios for:

(P)
(E)
(S)
(T)
(E)
(L)



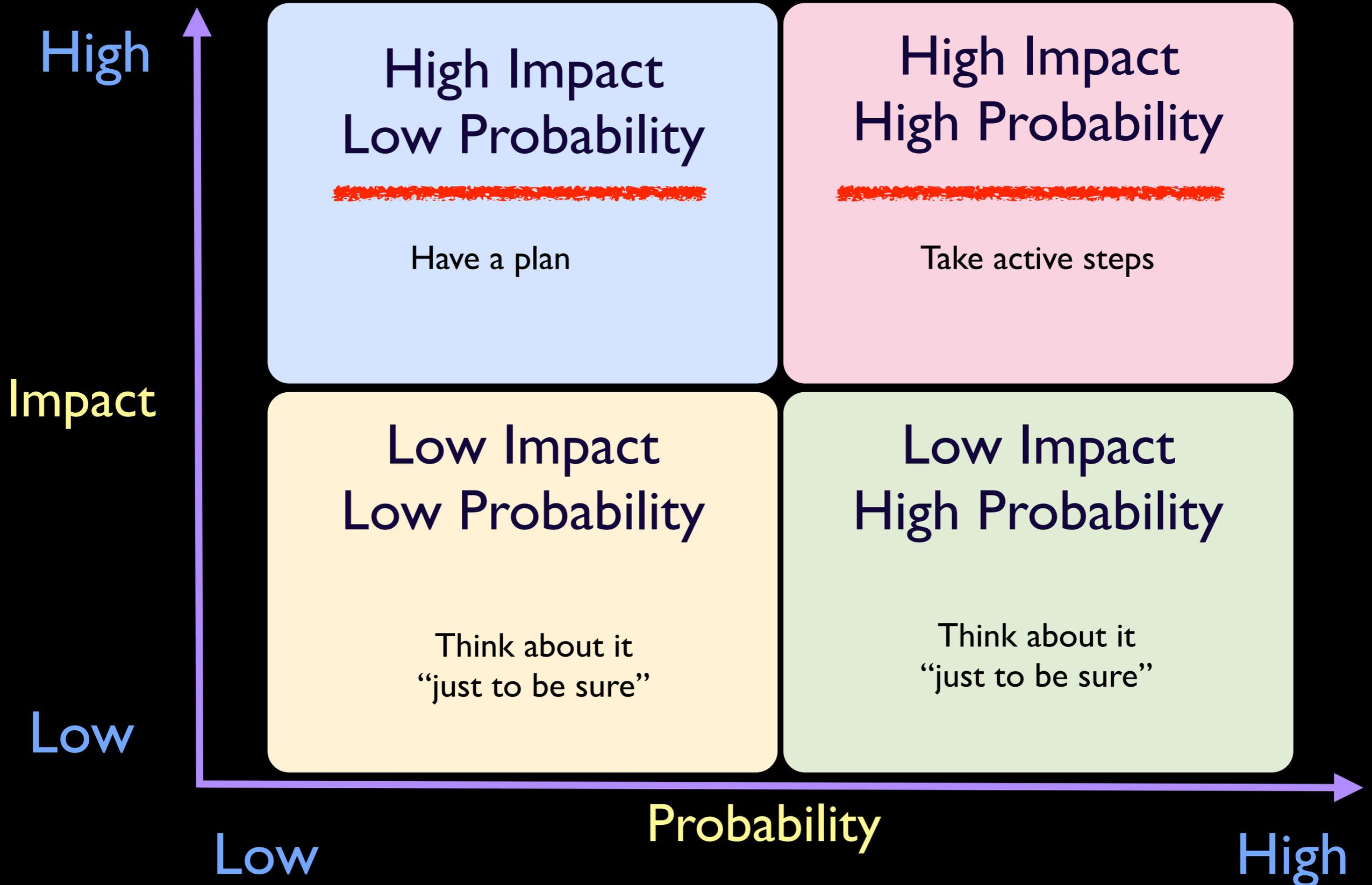
Headline Scenarios



2. Black Swan?

3. Prioritize all scenarios

Headline Scenarios



Vulnerability Assessment



Scenarios

Pipeline severed for one month

Daily flooding throughout the Keys

Waterborne disease causes sterility

Housing median rises to \$1 million

FKAA

Emergency Services

Locals

Utilities

Tourism Industry

Other Business

Your assets

**Pipeline
severed for
one month**

**Waterborne
disease
causes
sterility**

What does **organization** look like
under various futures?

Pipeline Severed

\$1 Million Housing

FKAA

Calling in National Guard

Emergency water rationing

Can't hire - housing too expensive

Transporting staff from mainland

Tourism

Tourists not coming

Businesses shutting down

Tourism is booming

Business water demand is growing

2026

P P S E E L

Mayor's Office

Utilities

Community Residents

Businesses

Emergency Services

You may not need to test a full PESTEL

	Pipeline severed for one month	Daily flooding throughout the Keys	Waterborne disease causes sterility	Housing median rises to \$1 million
FKAA				
Emergency Services				
Locals				
Utilities				
Tourism Industry				
Other Business				

Identify
Stakeholders



PESTEL