

BEGIN WITH THE END IN MIND

Engagement toward implementation

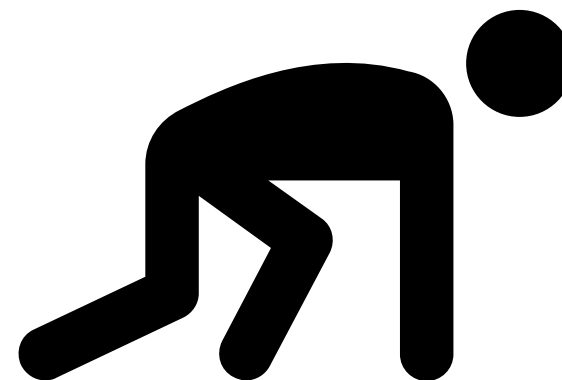
CARLY A FOSTER

NJWEA

MAY 2022



HEALTH AND SAFETY



LET'S CHECK IN BEFORE WE GET STARTED



WHO IS IN THE ROOM?

HOW LONG WILL PEOPLE EXPERIENCE WHAT YOU DESIGN?

HOW CENTRAL IS ENGAGEMENT TO YOUR DESIGN PROCESS?

WHAT IS HUMAN-CENTRIC DESIGN?

Paradigm → Process → Outcomes

If the process is sound, the solution will be sound

PARADIGMS IN ACTION

I am the expert

The science has all the answers I need. If the science and people's anecdotes disagree, go with the science

My designs only need to address the problems that have been put forward to me

People need to adapt to the design

Issues of equity in this community are not relevant to my work

The people who live, work, and play here know their needs best

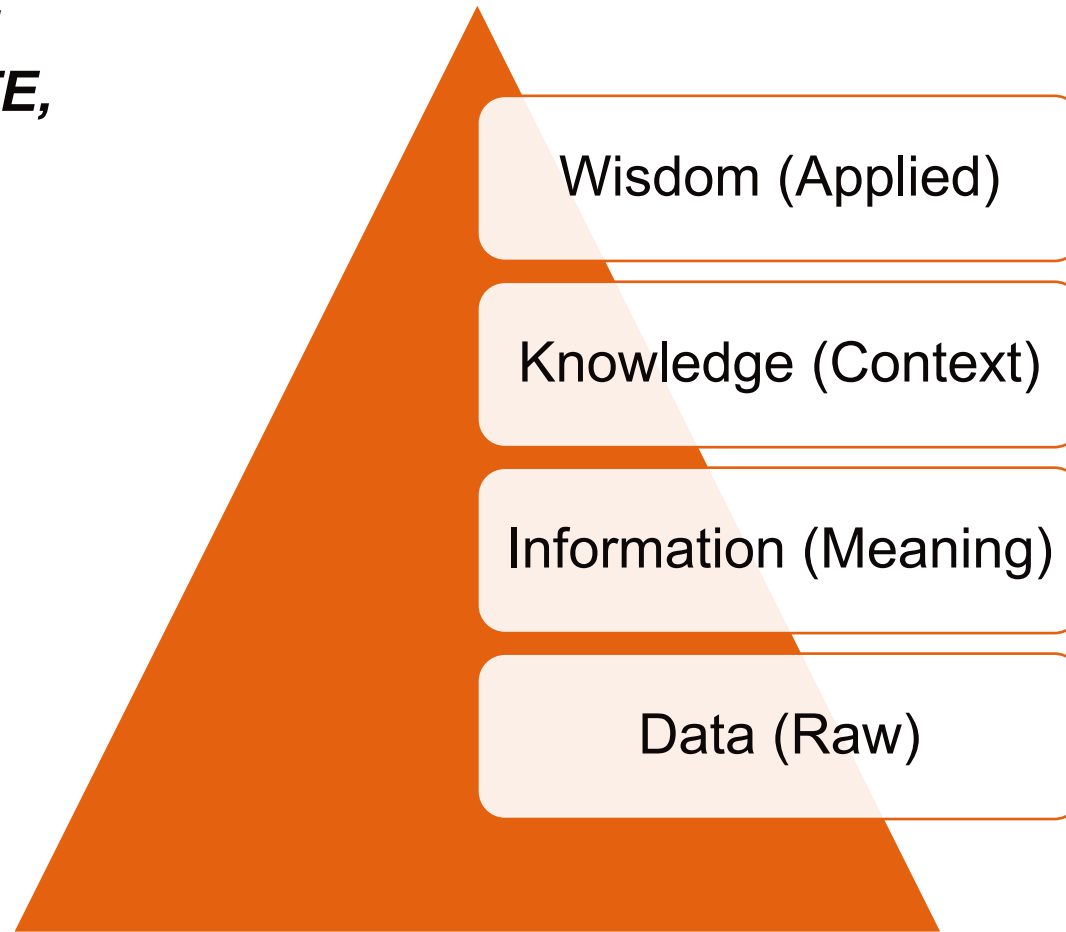
Scientific data are evolving and don't always have all the answers

I need to understand the possible unintended consequences of my decisions

My designs will affect people's lives for generations and fit within a much larger context of history and interdependencies

Equity is required to accomplish the technical integrity of any solution

***THE ROOT OF ALL WISE
DECISIONS IS COMPLETE,
ACCURATE, TIMELY
APPROPRIATE DATA***



WHAT IS DATA?

TO ACCOMPLISH



Human-centered
infrastructure



Equitable
processes and
outcomes

WE NEED TO INCREASE



Awareness of decision
makers



Opportunities for
engagement



Engagement touch points
throughout the project

OR



Our projects will not be
responsive



Our reputation will suffer

Design decisions and recommendations affect people's lives

KEY QUESTIONS

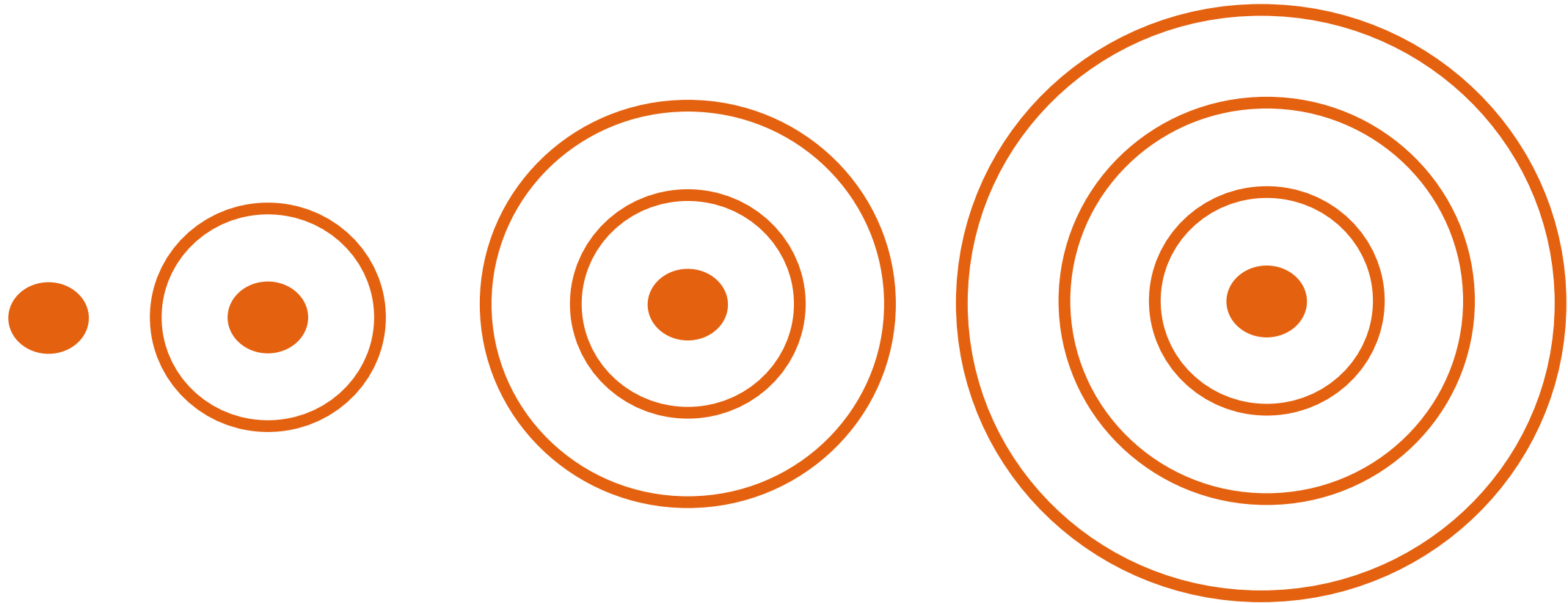
How might an engagement process be truly meaningful and yield input that integrates seamlessly into technical and design-focused analyses?

How might design outcomes be changed if we truly allow the decision-making process to shape the solution?

How does engagement effect implementation?

SCALES AND STAKEHOLDERS

WHO COULD AFFECT OR BE AFFECTED BY THE DECISIONS YOU PLAN TO MAKE?



ISSUE EXPERIENCE

WHO HAS BEEN DIRECTLY IMPACTED BY FLOODING?

DEMOGRAPHIC RELEVANCE

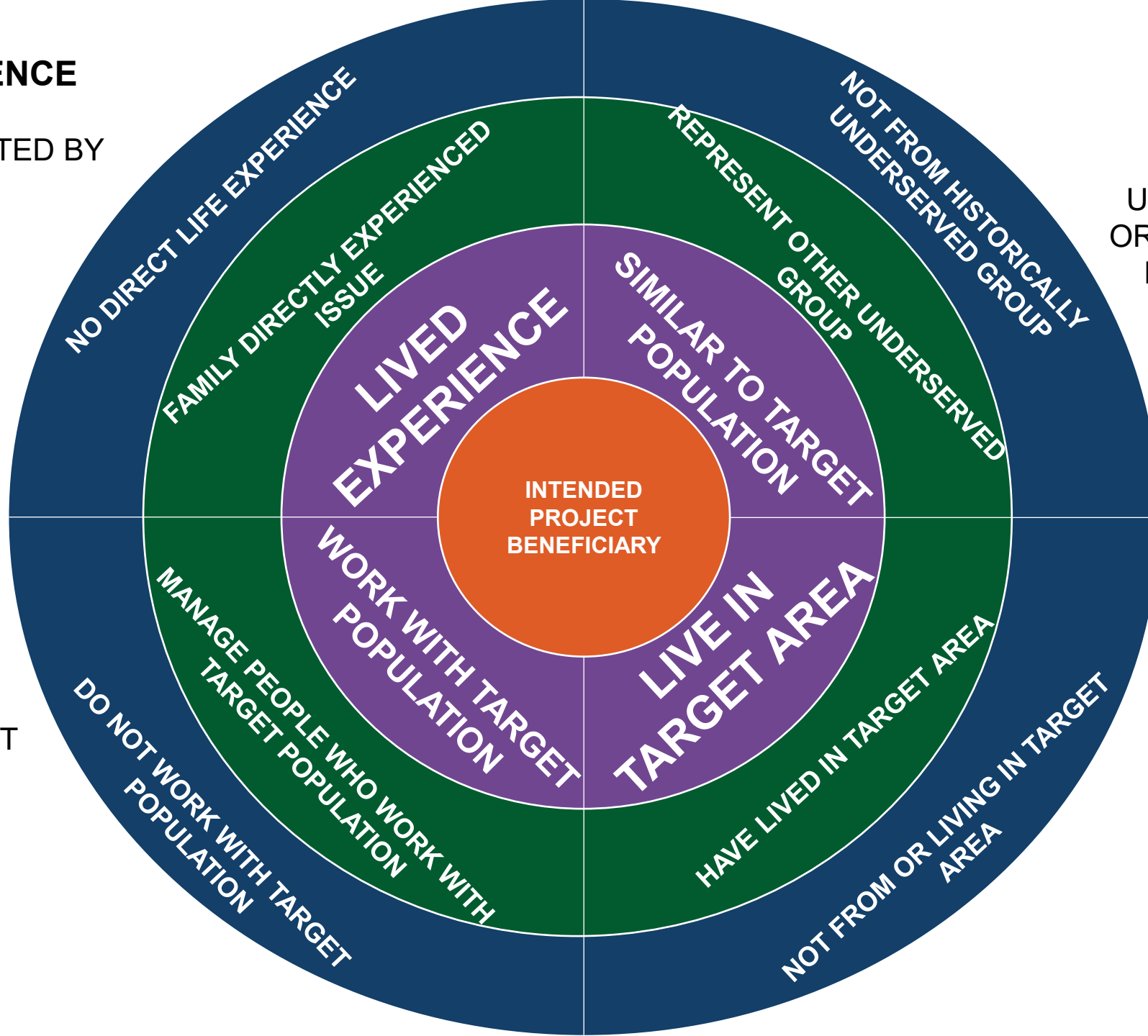
WHO HAS BEEN UNDERSERVED, HURT, OR NOT REPRESENTED BY SIMILAR EFFORTS IN THE PAST?

WHO WORKS WITH THE TARGET POPULATION?

DIRECT ENGAGEMENT

WHO LIVES IN THE AREAS MOST AFFECTED?

GEOGRAPHIC RELEVANCE



Effective engagement...



Includes those who could affect or be affected by both the outcomes and the process



Catalyzes change in the project, the process, and all parties



Builds capacity



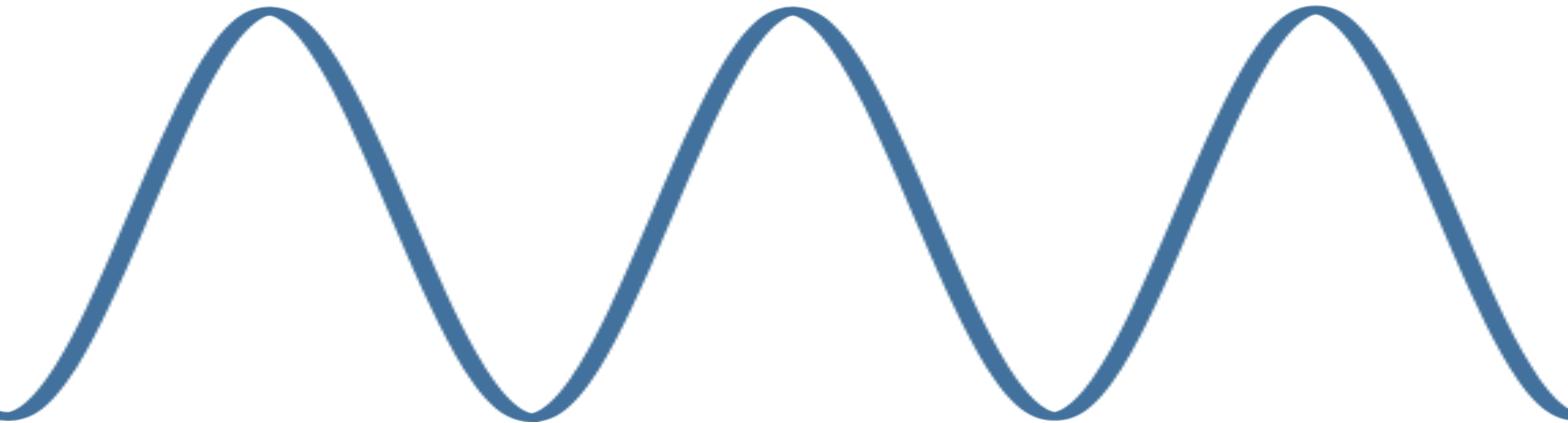
Advances implementation



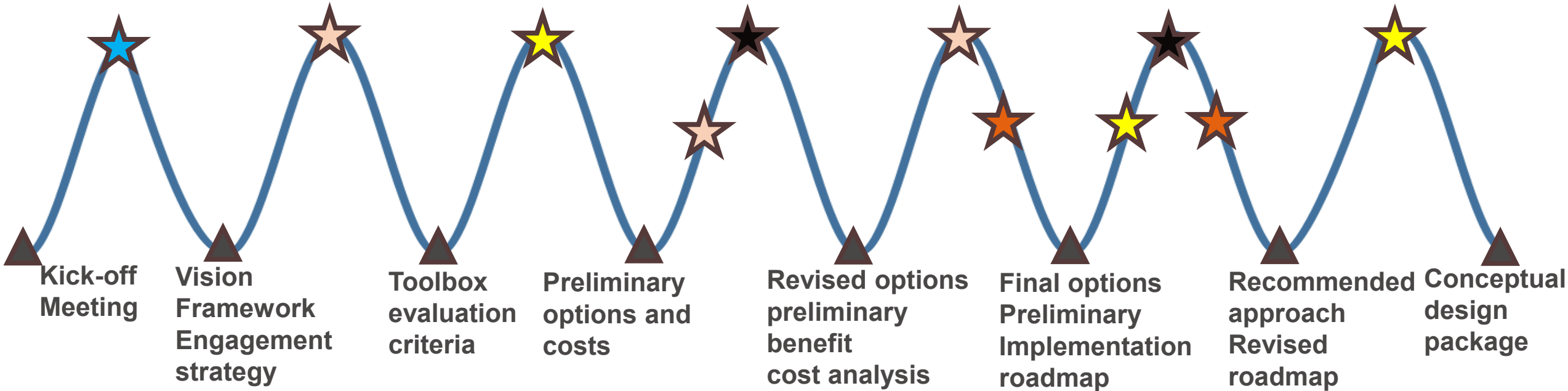
**The longer people are engaged, the more invested they become
Invested people become champions
Champions drive change**

PROJECT PLANNING IN WAVES

Honor natural project development cycles



- ★ Regulatory Focus Group
- ★ Open House
- ★ Geographic Focus Group
- ★ Implementation Focus Group
- ★ Design Thinking Workshop

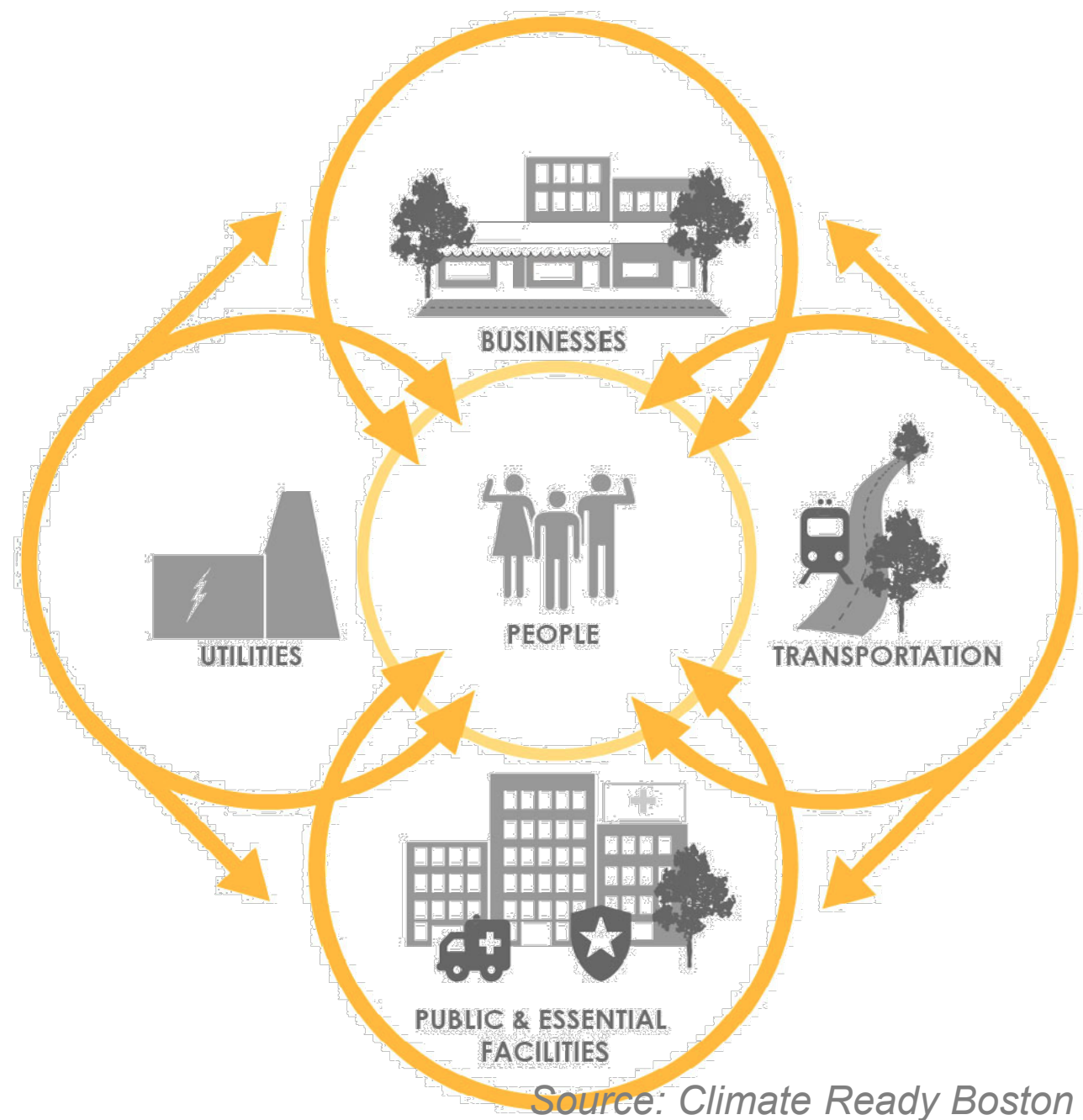


INTERDEPENDENCIES

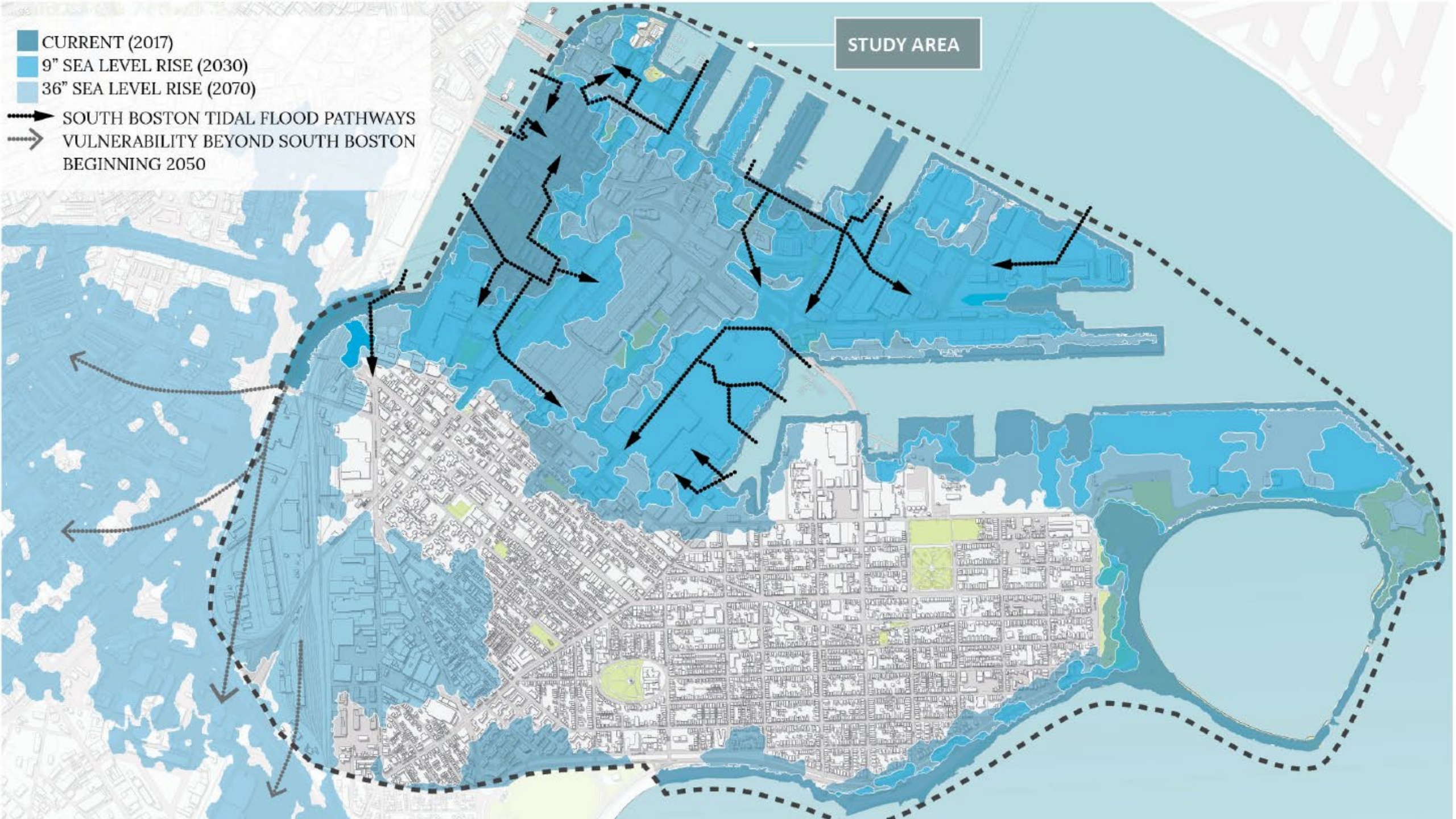
Understand and Strengthen the Chain

*by Understanding and
Strengthening the Links*

Boston's IAG



Source: Climate Ready Boston



CURRENT (2017)

9" SEA LEVEL RISE (2030)

36" SEA LEVEL RISE (2070)

STUDY AREA

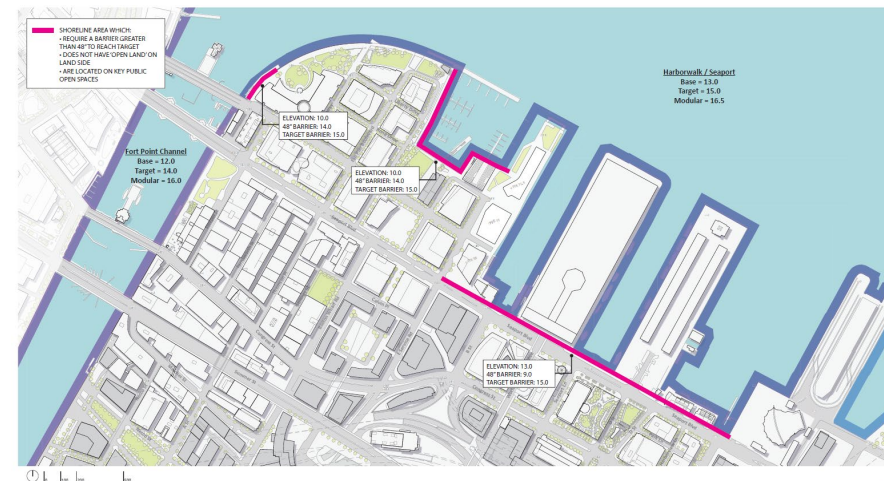
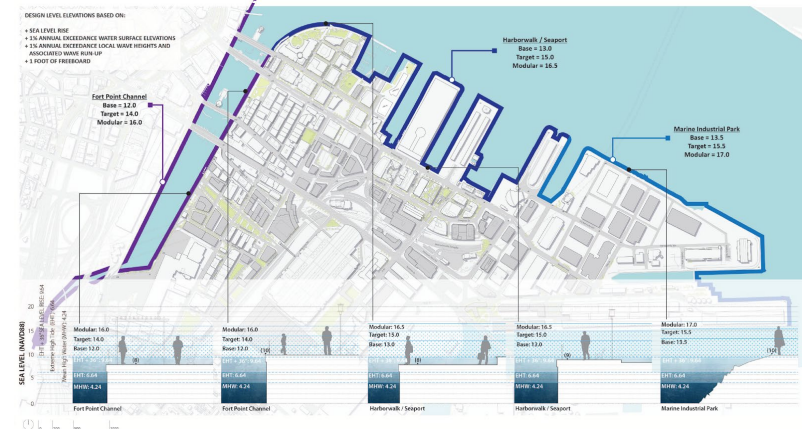
SOUTH BOSTON TIDAL FLOOD PATHWAYS

VULNERABILITY BEYOND SOUTH BOSTON BEGINNING 2050

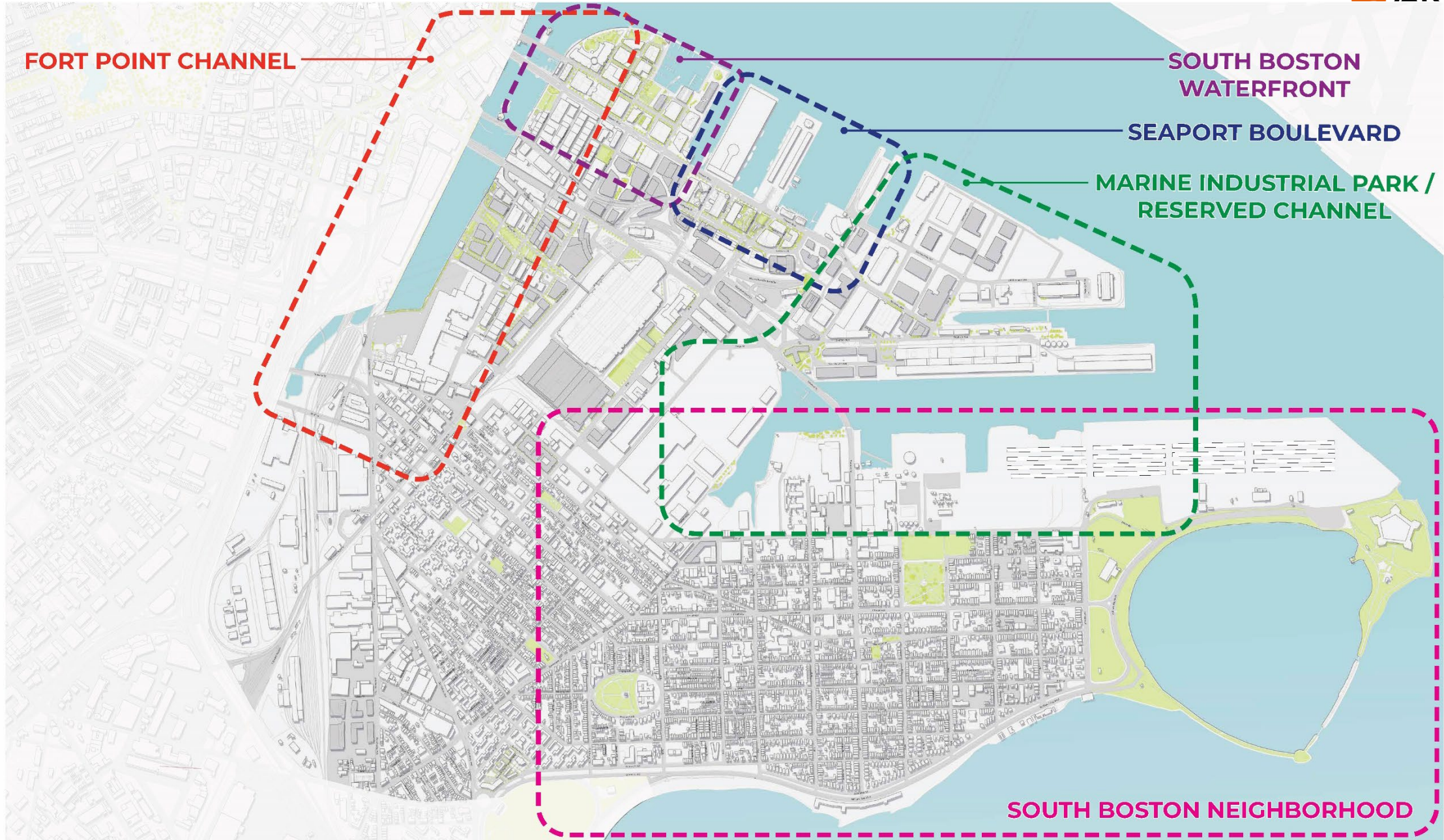
Engage stakeholders in problem solving around trade-offs

EXAMPLE QUESTIONS

- If you were king / queen for a day, what would affect your decision making around intervention height?
- How often might you be willing to have water on and around your property?
- Are there places you believe it is critical to maintain or enhance public access to the water?
- Are there places where aesthetics are less important?



PROJECT PLANNING ZONES



Seek Out Voices That Are Not 'In The Room'



Understand that prerequisite needs may affect the process



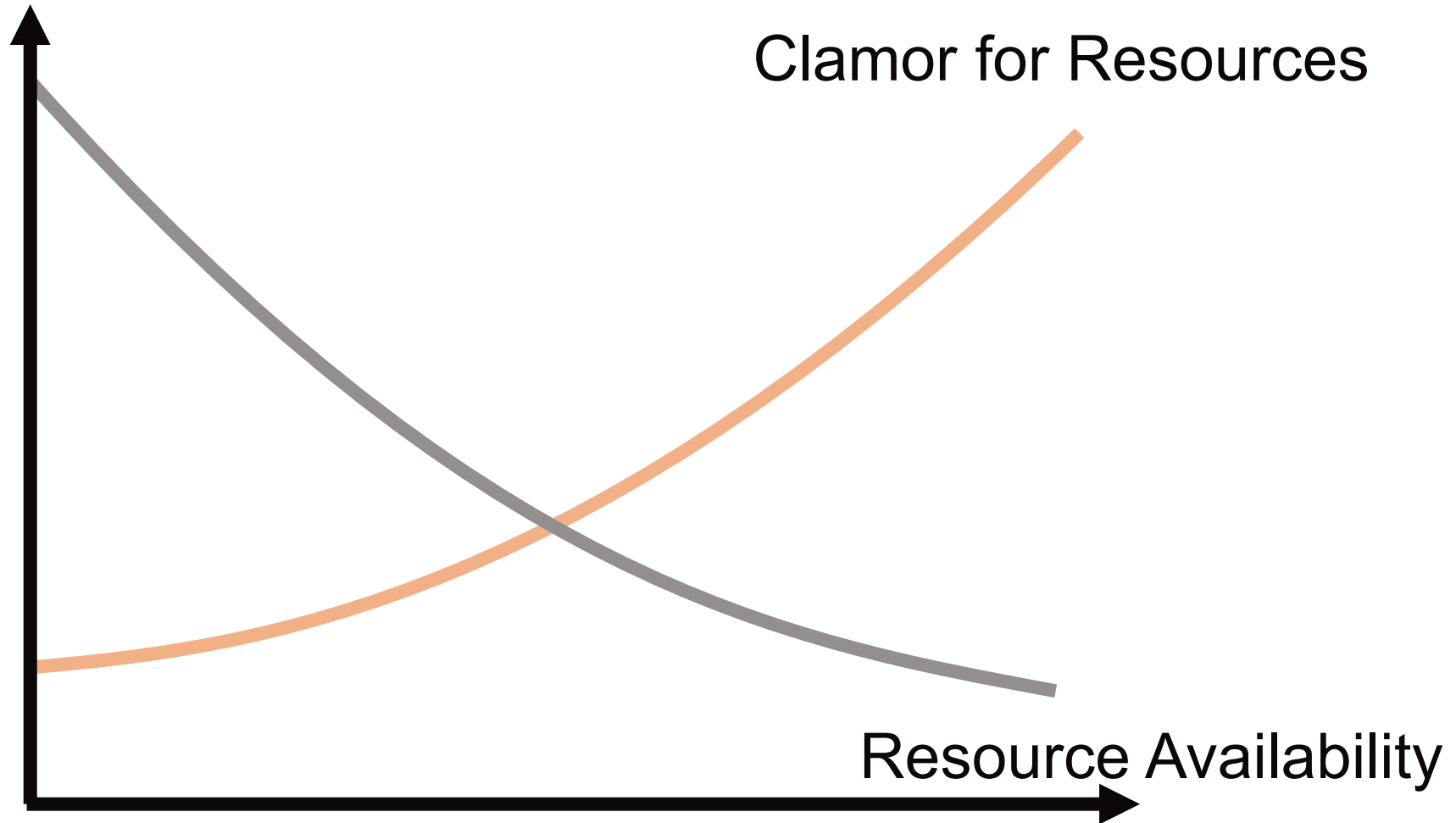


Identify the hurdles you'll have to overcome to move from understanding to action



Identify your catalysts: The context is always changing. Think and act on your feet.

SIMPLE REALITIES



Understand and Communicate Your Story

Problem Alleviating / Objective

What are we changing? (Existing conditions)

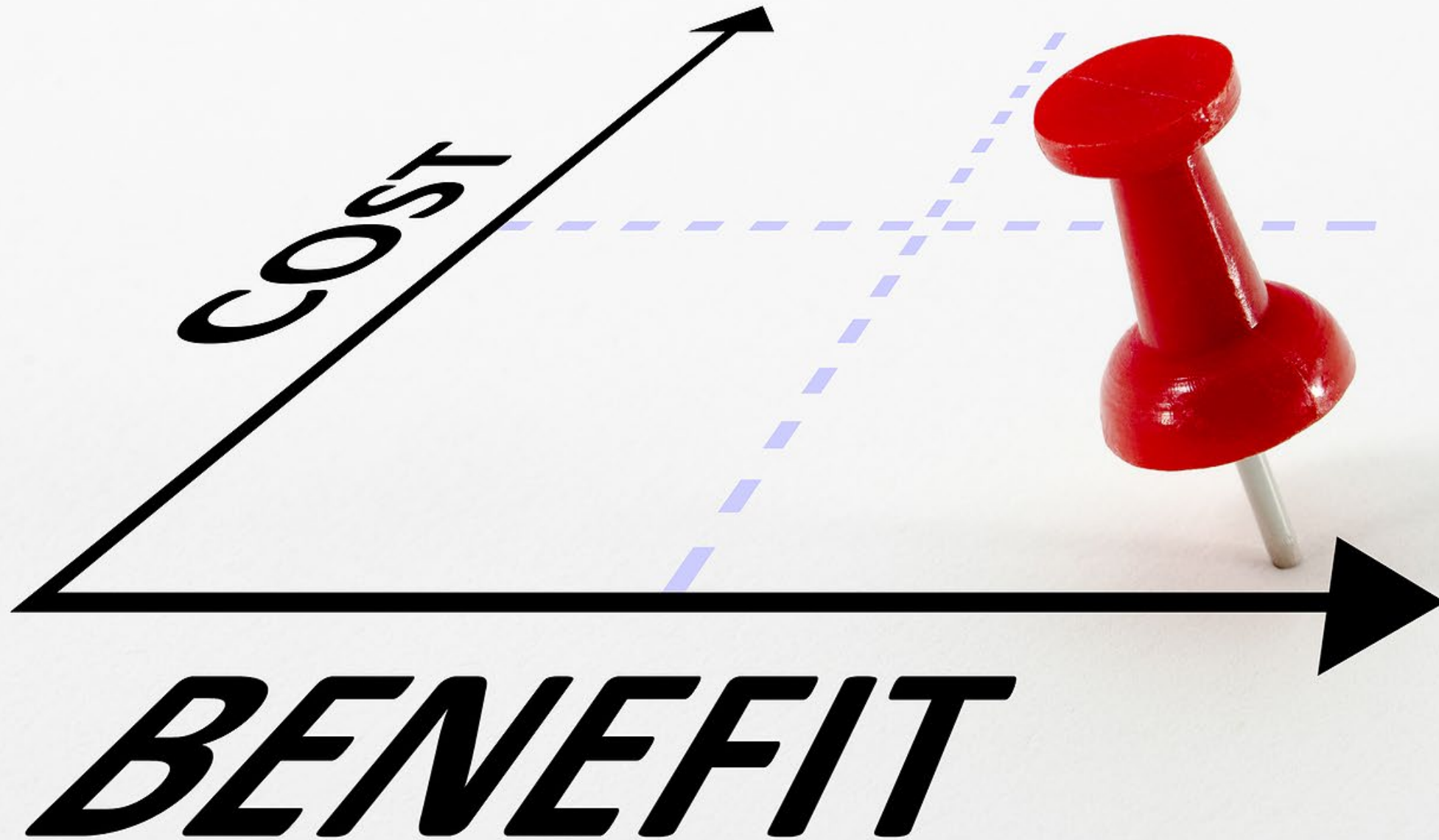
How much and what kind of change? (Project scope)

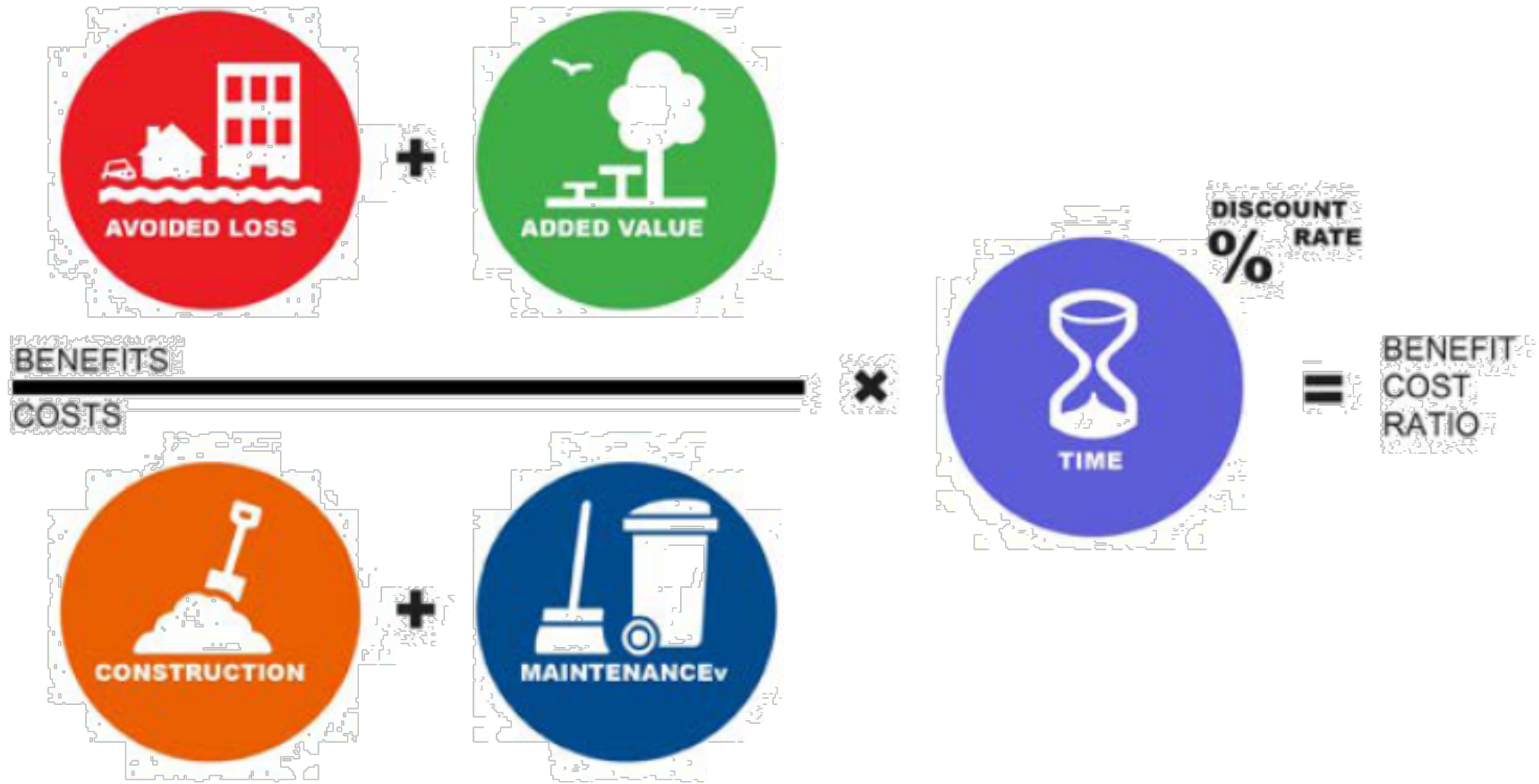
Who will benefit and how?

How will we know we've succeeded? (metrics – may or may not be quantified)

Why should _____ care?

Benefits = Avoided Loss + Added Value







Capital Costs

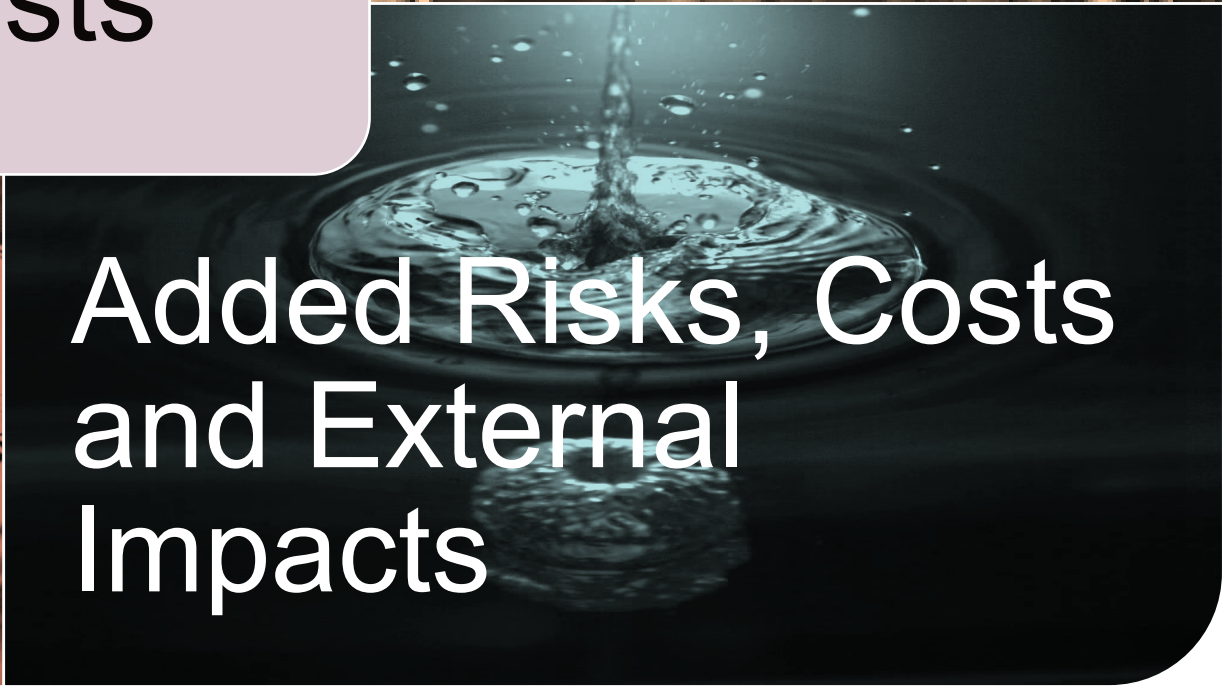


Maintenance and
Operations

Costs



Duplicated Benefits

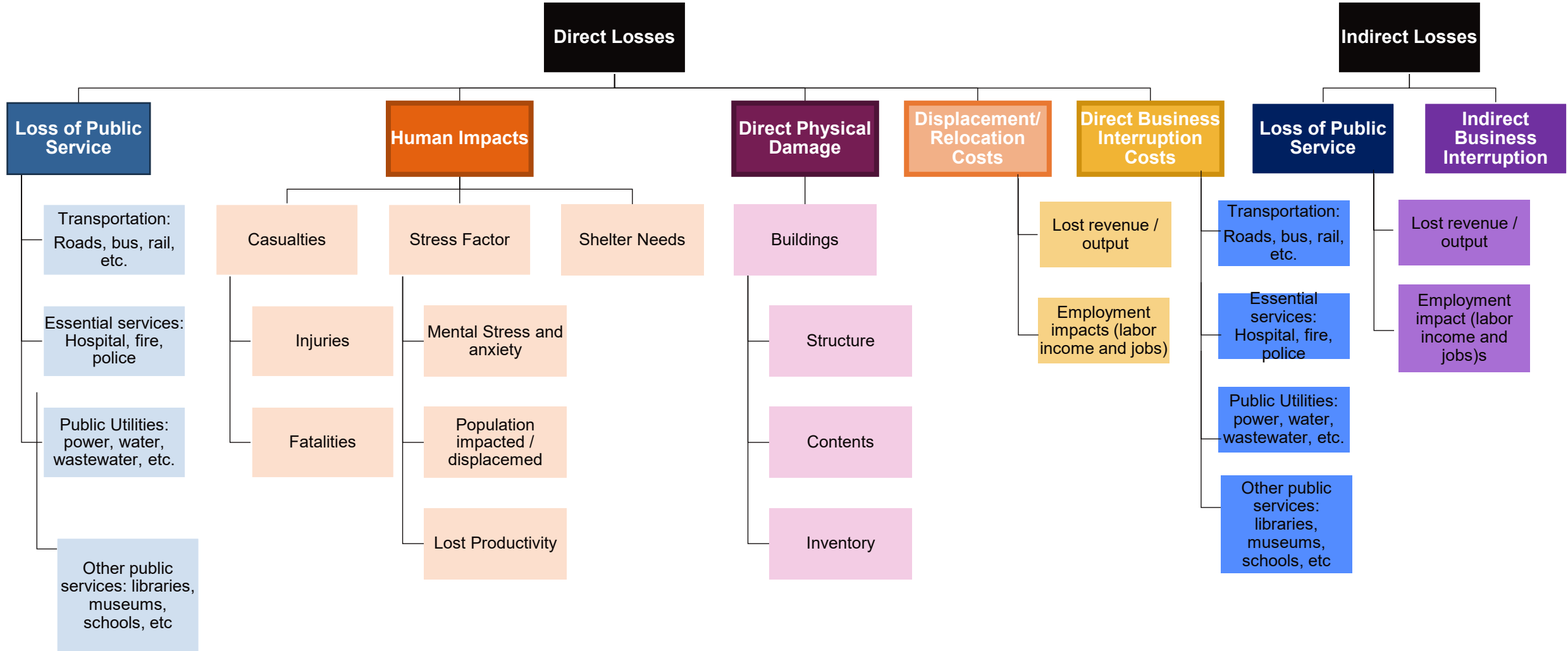


Added Risks, Costs
and External
Impacts

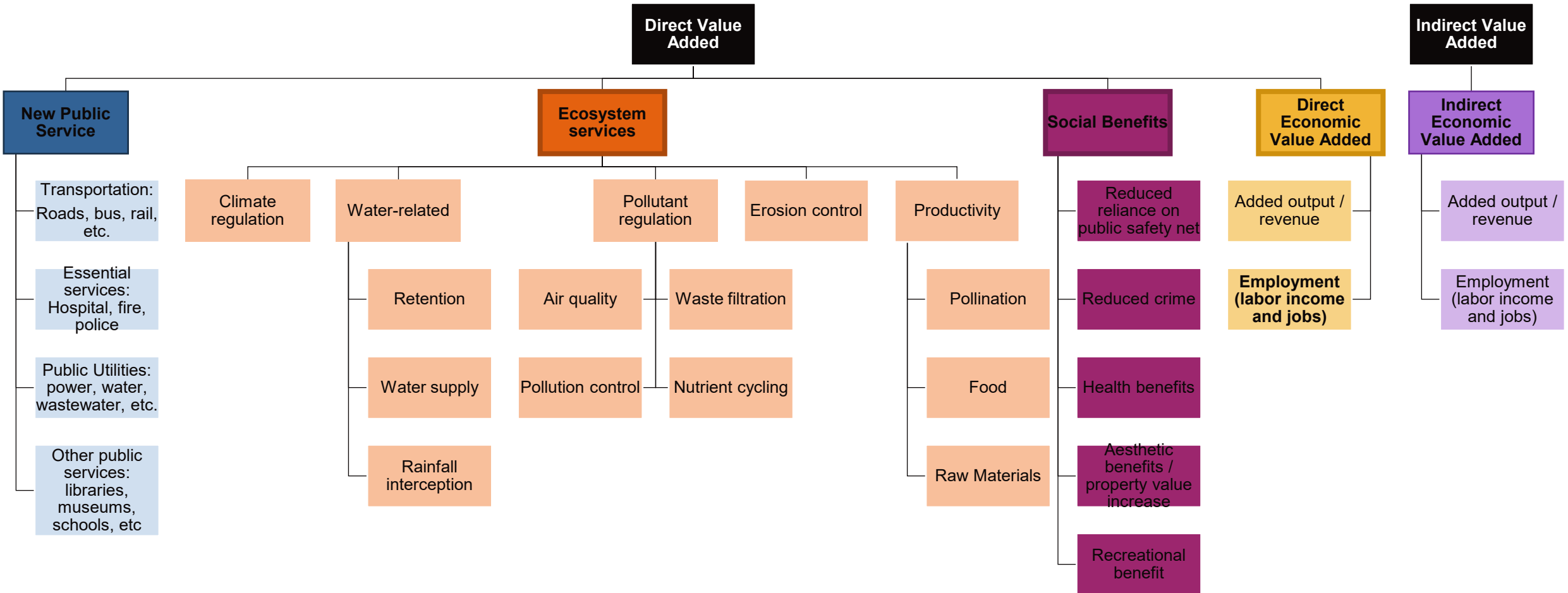
Historical Loss Documentation

- Provides an historical reference for understanding risk
- Reveals key vulnerabilities
- Provides insight into potential consequences of inaction
- Helps justify public expenditure for resiliency measures later on (e.g., Benefit Cost Analysis)

Example losses and losses avoided that can be calculated



Example value added that can be calculated



BENEFITS AND COSTS CAN BE EXPRESSED AS...

As one time benefits

At recurrence intervals based on probability

Annually

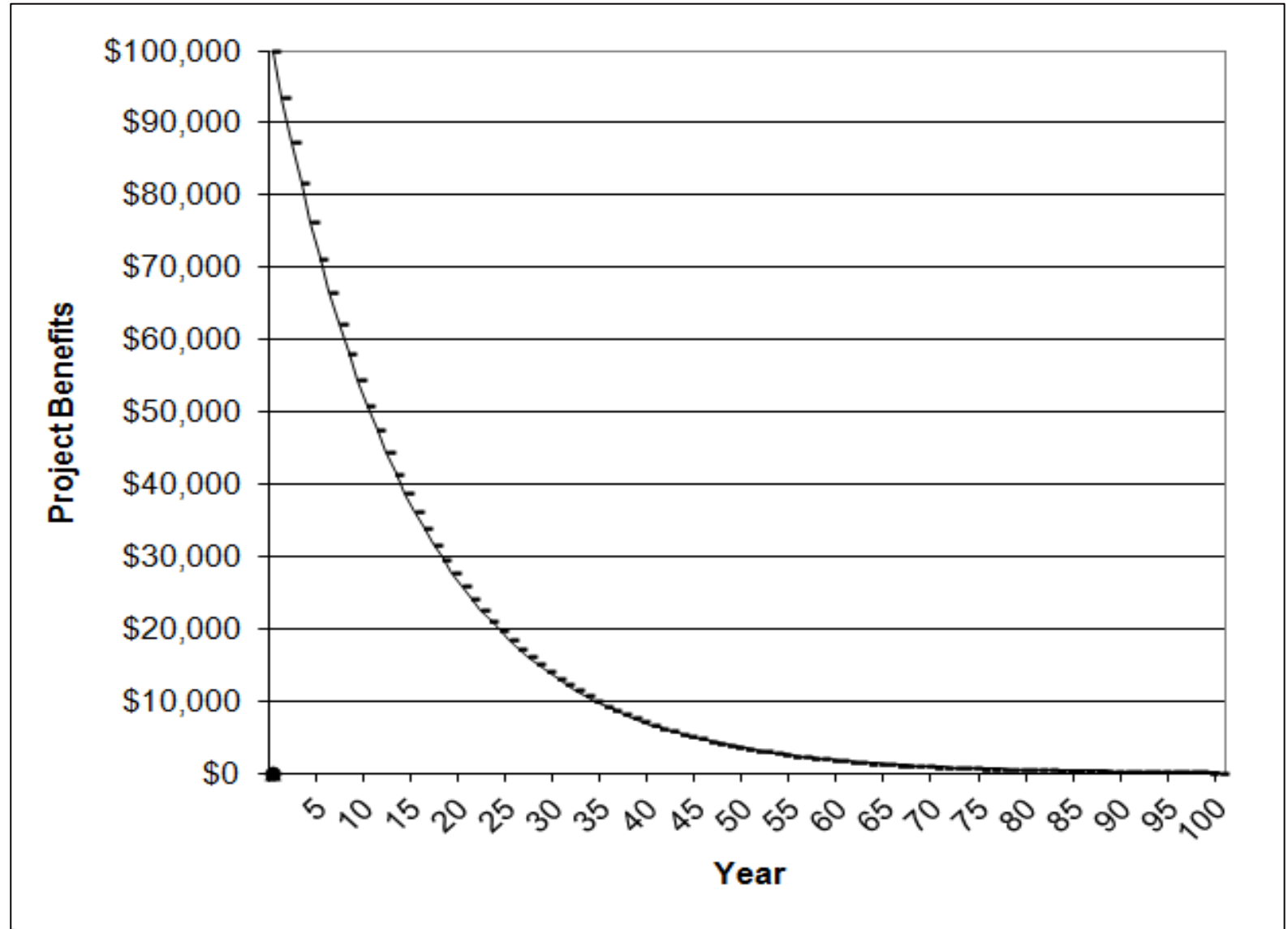
As net present value over the life of the project

The Benefit Cost Ratio is based on the NET PRESENT VALUE of life cycle benefits over life cycle costs

Time Value of Money

The amount of goods that can be purchased with a given amount of money decreases over time

Value of \$100,000 over 100 years; Discount rate: 7%



The Value of

**CRITICAL
INFRASTRUCTURE**

lies in the

SERVICE

it provides to

THE PUBLIC.

Example:

What is wastewater treatment worth?

FEMA values wastewater treatment at \$58 per person, per day

That's service population X \$58 X days





PROJECTS HAVE MULTIPLE PERSONALITIES



Holland Tunnel

NYCT - Subway

Hospital

Power Generation

Telecommunication

High Rise Offices

Data center

IS THIS AN INFRASTRUCTURE PROTECTION PROJECT?



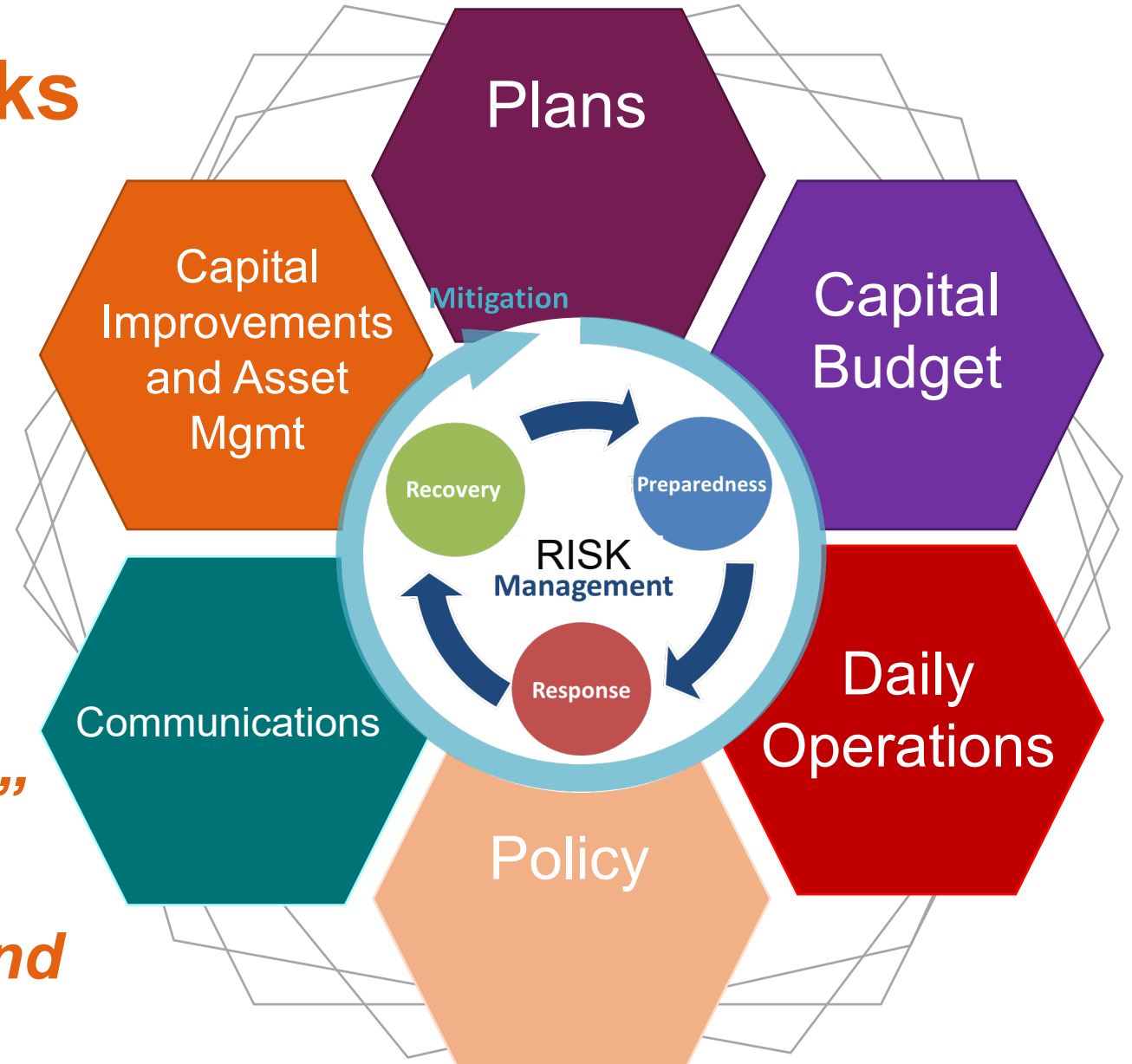
EXISTING COMMUNITY RECREATIONAL FACILITY

- A- Coleman Square Playground
- B- Murry Bergtraum Softball Field
- C- Alfred E. Smith Recreation Center
- D- Martin F. Tanamey Playground
- E- Cherry Clinton Playground
- F- Rutgers Park
- G- Little Flower Playground
- H- Basketball City
- J- NYCMA Two Bridge Community Center

PROPOSED COMMUNITY RECREATIONAL FACILITY

OR COMMUNITY ENRICHMENT?

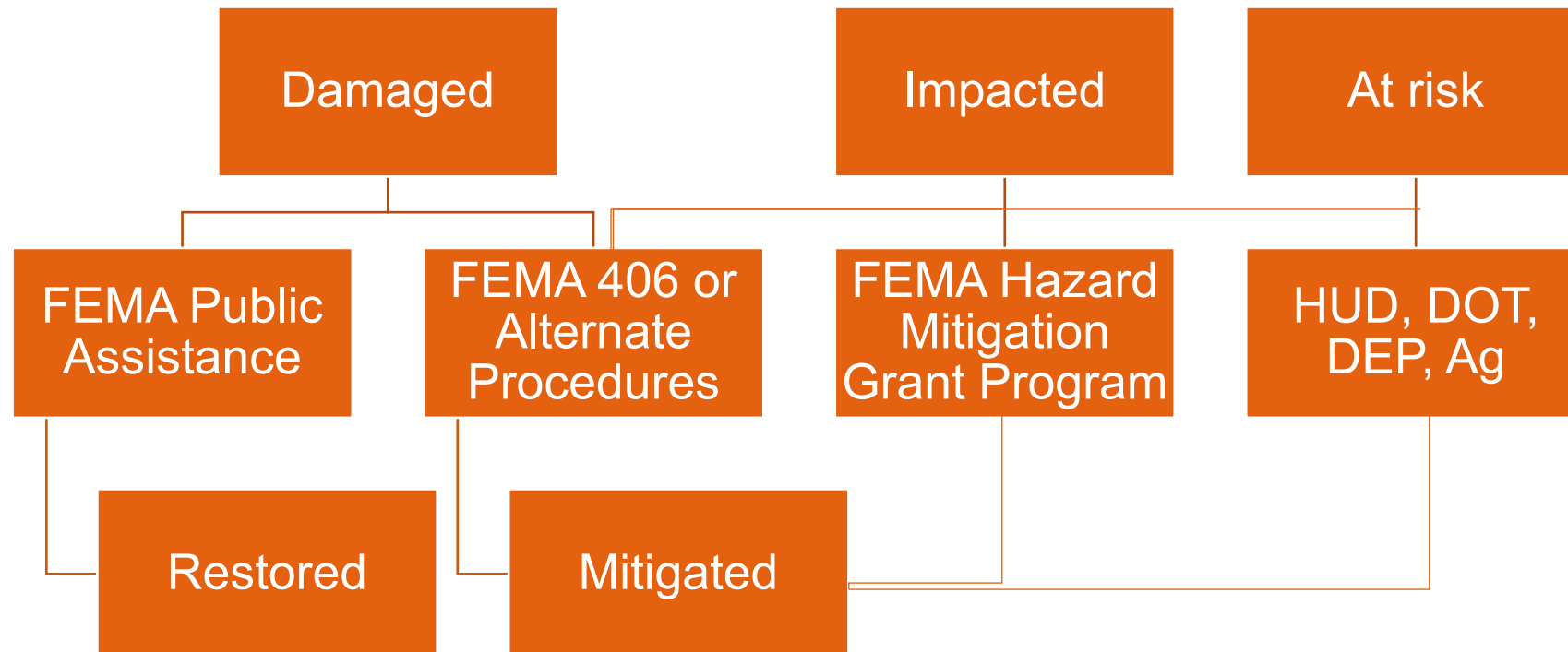
Alignment across all links in the chain and all time horizons



“Whose responsibility is this?”

“Yours and yours and yours and yours...”

Federal Funding post-disaster



Federal funding in a post-disaster context



**LEARN THE
PROGRAMS**



**UNDERSTAND
YOUR ELIGIBILITY**



SELF-ADVOCATE

Funding in a Pre-Disaster Context



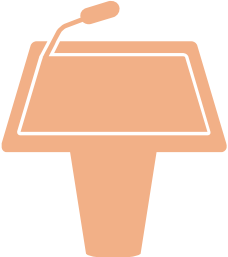
Fund Source and Policy Tracking



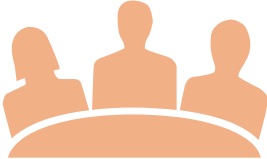
Stakeholder Engagement



Strategic submittals and application backbones to maximize ROI



Know the programs



Active Communication with Gatekeepers

The Local Hazard Mitigation Plan Working Group

- Take a look at your existing state and local plan
- Contact local emergency management agency
- Participate in the hazard mitigation working group
- Submit projects and help prioritize these projects



Key Takeaways

1. If the decision making process is sound, the action will be sound
2. Resilience is everyone's responsibility. Make sure they know it.
3. Start with the end in mind – there must be a unified and integrated vision. Identify interdependencies and foster collective action
4. Understanding is the prerequisite to all meaningful action
5. Risk management actions can be a catalyst for even greater short and long term desired change

THANK YOU

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Dress appropriately in Antarctica

Check the weather before a business trip



Plan WITH the people you plan FOR

I'm Still Hungry

Arcadis color use

Primary Colors



Heritage



Confidence



Wisdom



These are our primary and secondary brand colors, including three tints.



PowerPoint auto-generates additional tints and shades. These are not Arcadis-approved colors and should not be used.



Arcadis tints have been added in the *Custom Colors* palette. These can be used for charts and graphics; however, we should always lead with our primary color palette. Refer to Arcadis Color guidelines on the [BrandHub](#) for more information.



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