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Latin America and the United States

# Financial Sustainability

## “Can Ports Be Green in a Recession?”

**John D. Pauling, P.E., BCEE**

Harbors, Navigation and Environment Seminar & GreenPort Americas 2010  
Charleston, SC – May 4, 2010





- ▶ Overview of Financial Aspects of Sustainability
- ▶ Making the Business Case
- ▶ An **Eco**Nomics™ Approach Case Study
- ▶ Conclusion



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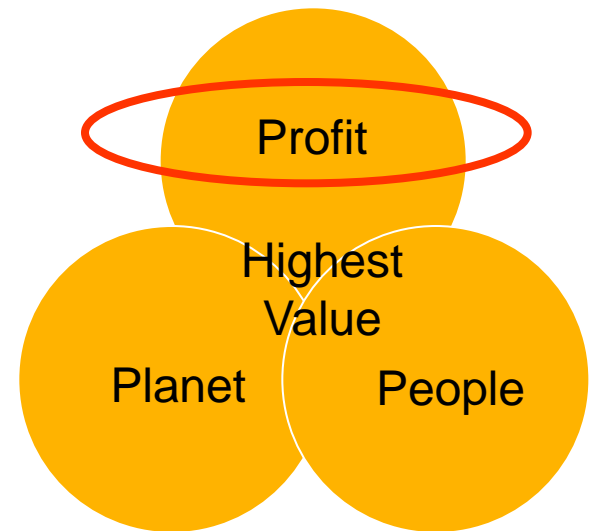
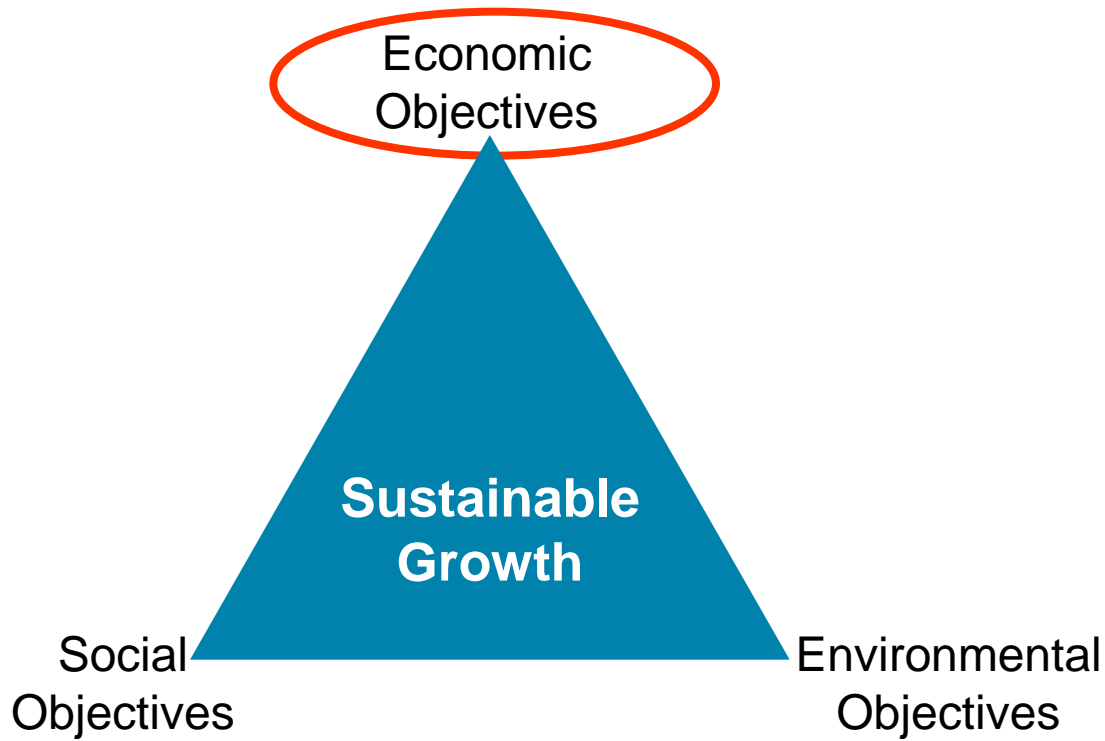
# Overview of Financial Aspects of Sustainability





- ▶ A means of configuring human activity so that society, its members, and its economies are able to meet their needs and express their greatest potential, while preserving biodiversity and natural ecosystems in the very long term
- ▶ Easily put...
- ▶ Sustainability is about thinking and acting in the future tense
- ▶ (Planning for the Future)







## **Beginner**

- ▶ Understanding of key CR issues
- ▶ Compliance systems in place

## **Performer**

- ▶ Senior-level buy-in
- ▶ Vision of sustainable future
- ▶ Systems in place to delivery

## **Leader**

- ▶ CR a strategic opportunity
- ▶ Sustainable innovation across business

## **Pioneer**

- ▶ Business model refocused to profit from sustainable value creation





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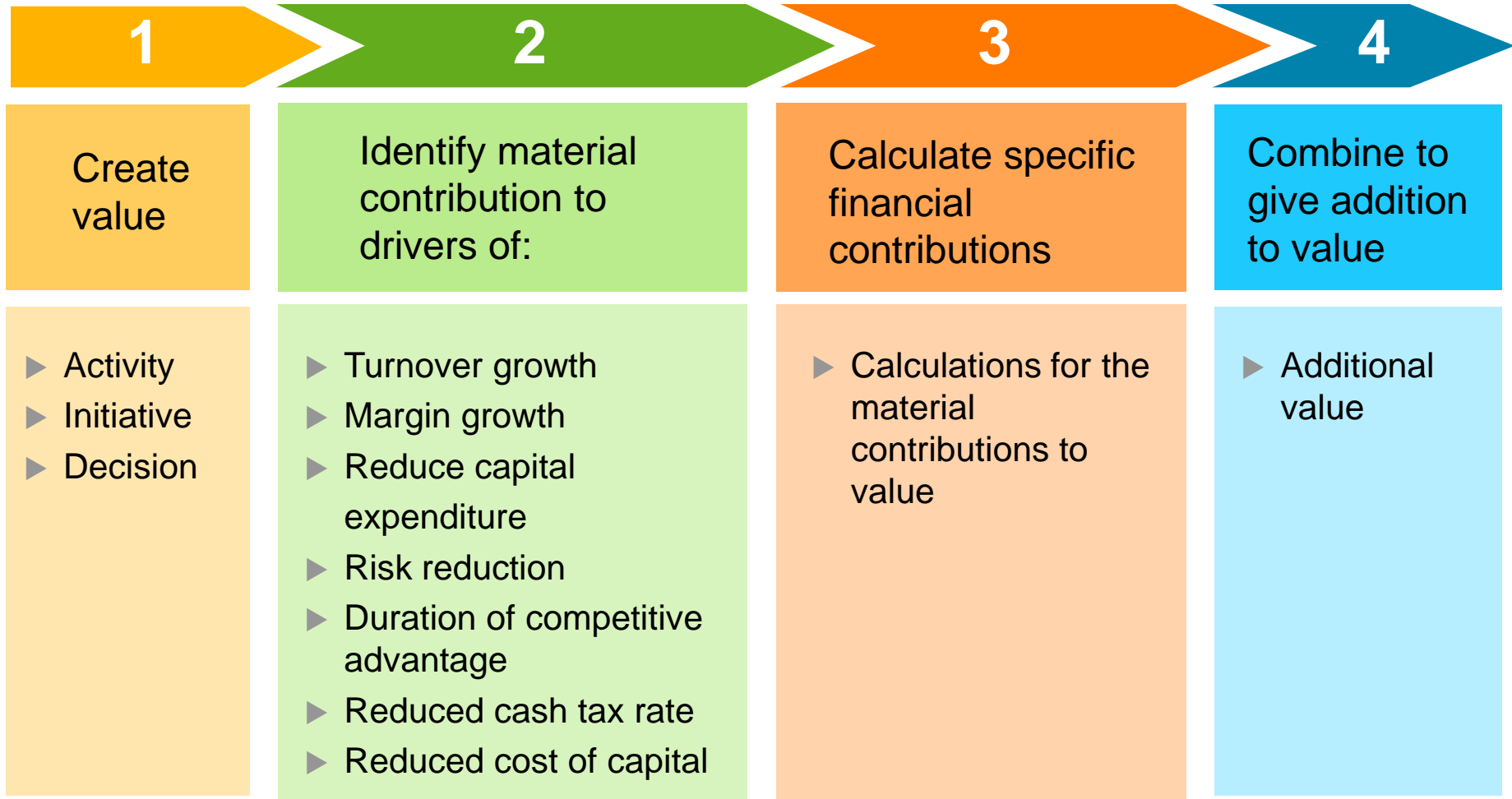
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# Making the Business Case for Sustainability









## Financial Drivers

- ▶ Reduce capital expenditure
  - Avoiding unnecessary demand for fixed assets
- ▶ Duration of competitive advantage
  - Shaping the market to the company's advantage
  - Attracting people
  - Prompt action on emerging strategic issue
  - Enhanced access to key resources
- ▶ Reduce cash tax rate
  - Reduced payments to government
- ▶ Reduced cost of capital
  - Improved access to financial capital at lower rates



## Financial Drivers

### ▶ Turnover growth

- Product differentiation
- New products
- New customers / market share / reputation / brand equity
- Innovation

### ▶ Margin growth

- Eco-efficiency
- Motivating and retaining people

### ▶ Risk reduction

- Increased security and quality of supply chains
- Reduce regulatory risk
- Reduced reputation risk
- Maintain license to operate



# Why is the Business Case so Difficult?

## Challenge

- There is no “one size fits all” business case
- The “societal case” doesn’t automatically make a business case for all situations
- People have led with “responsibility” which feels like compliance
- The more you look, the more you find
- Sustainability and finance professionals speak different languages
- The “no business case, no permission” vicious cycle

## Solution

- ➔ • Only try to find your company’s business case
- ➔ • Don’t expect a business case to exist for future things the company needs to do
- ➔ • Opportunity trumps responsibility: frame sustainability as a way of unlocking opportunity for the company now and in the long-term
- ➔ • Plan to explore how to make sustainability commercial, and how to keep improving your company’s business case
- ➔ • Frame the case for sustainability in terms your finance director will understand, ideally in drivers of shareholder value
- ➔ • Plan small steps to iteratively establish a process of permission and results



- Quantifying sustainability
- Informing, decision-making (DELTA)



- Embedding capabilities
- Delivering sustainable projects

- Identifying opportunities
- Helping forge new directions - advanced solar thermal initiative



- ▶ ‘Anything non-financial eventually becomes financial’
  - CFO Research Services report on Non-Financial Risk.
  
- ▶ Currently the global economy is accepting billions of dollars of risk annually purely due to a narrow, traditional, view of project and corporate risk.
  
- ▶ Insurance is becoming less attractive or attainable for investors for certain types of risk. Knowledge and management is required.
  
- ▶ External environmental and social costs could be tomorrow’s internal liabilities.



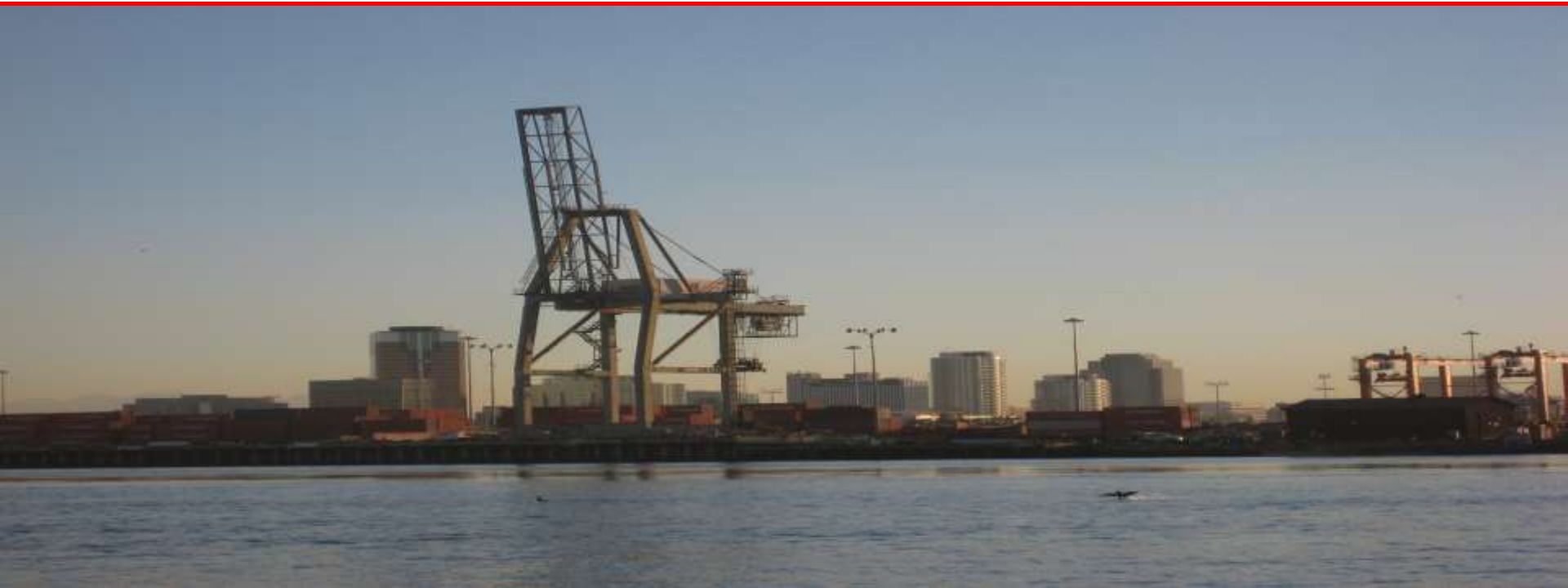
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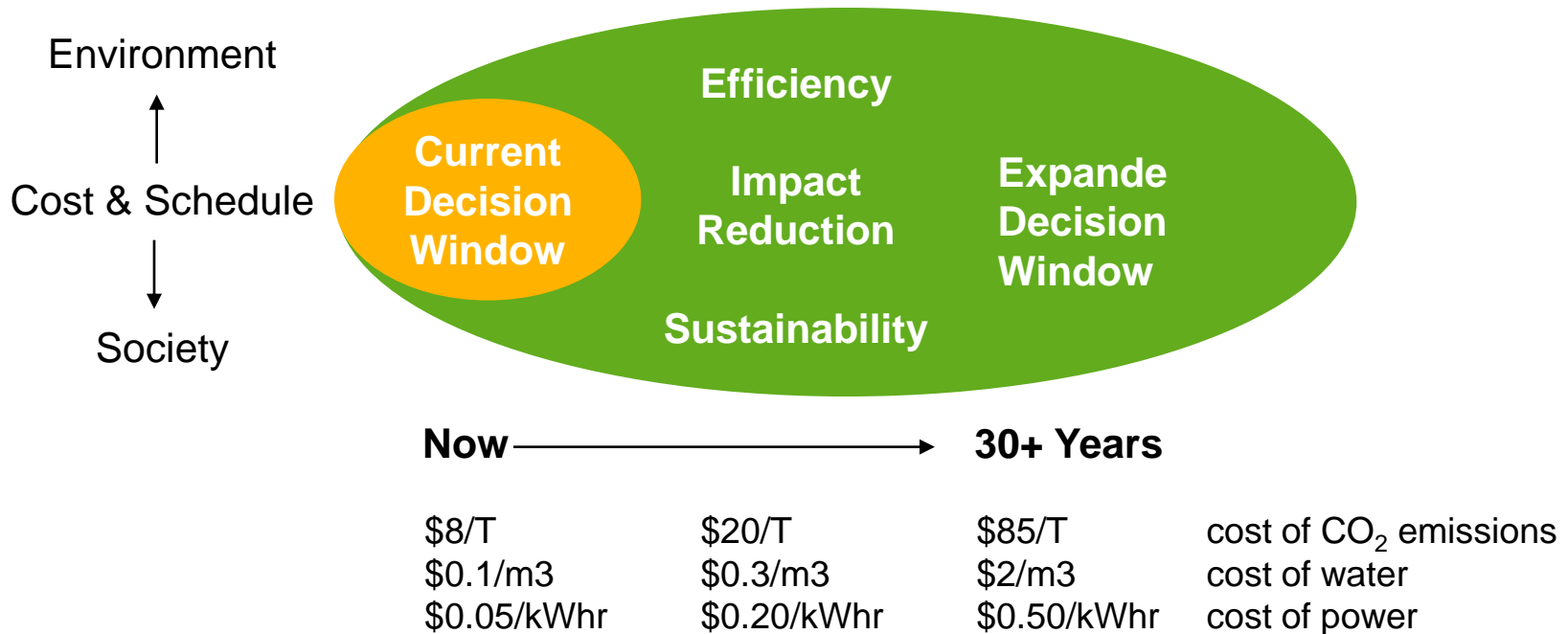
# An **Eco**Nomics™ Approach Case Study





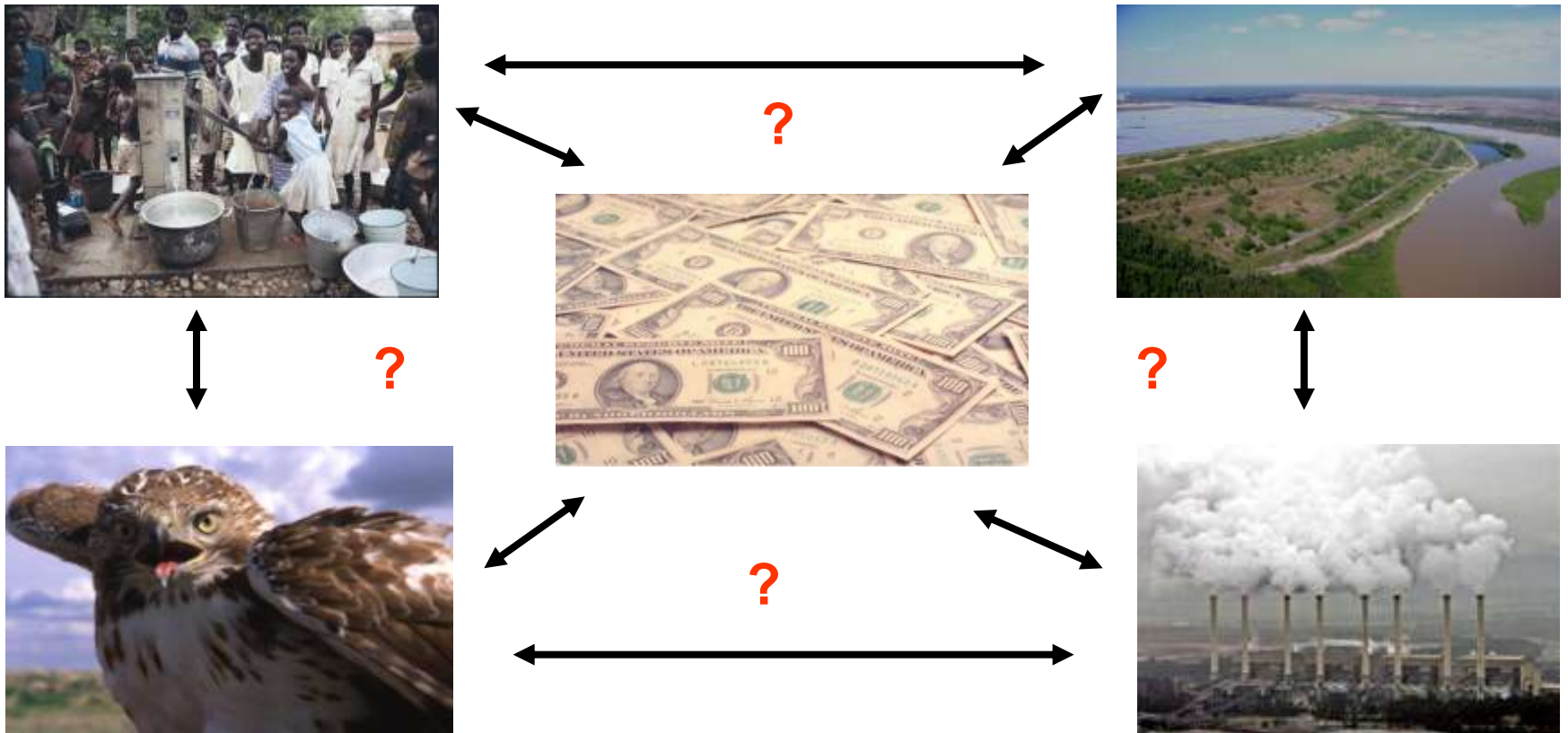


- ▶ An **EcoNomics™** approach broadens the perspective (decision window) out to the future to consider factors beyond budget and schedule.
- ▶ Projects are future-proofed





- ▶ Trade-offs:
- ▶ Risk and Value : Cost and Benefit





- ▶ An **EcoNomics™** project alternatives assessment develops a comprehensive accounting of all benefit, cost, and risk by monetizing ALL influencing factors
  
- ▶ Key features:
  - Analyzes both financial and non-financial costs, benefits, and risks through monetization
  - Process designed to support clients overall sustainability objectives
  - Built-in future-proofing so that client can see long-term effects of and to project options
  - Defensible results based on reliable, non-subjective methodologies and data input
  - Improved ability to communicate value of action to all stakeholders including regulators

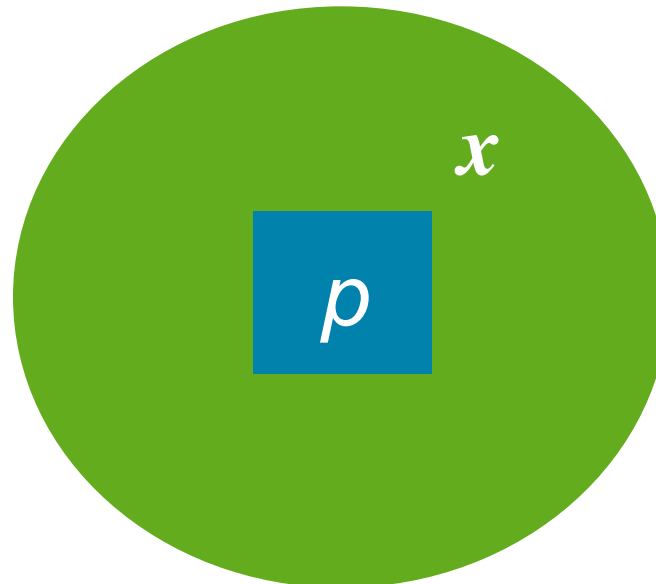


$$NPV = \sum_0^t \left[ \frac{(B_p + B_x) - (C_p + C_x)}{(1+i)^t} \right]$$

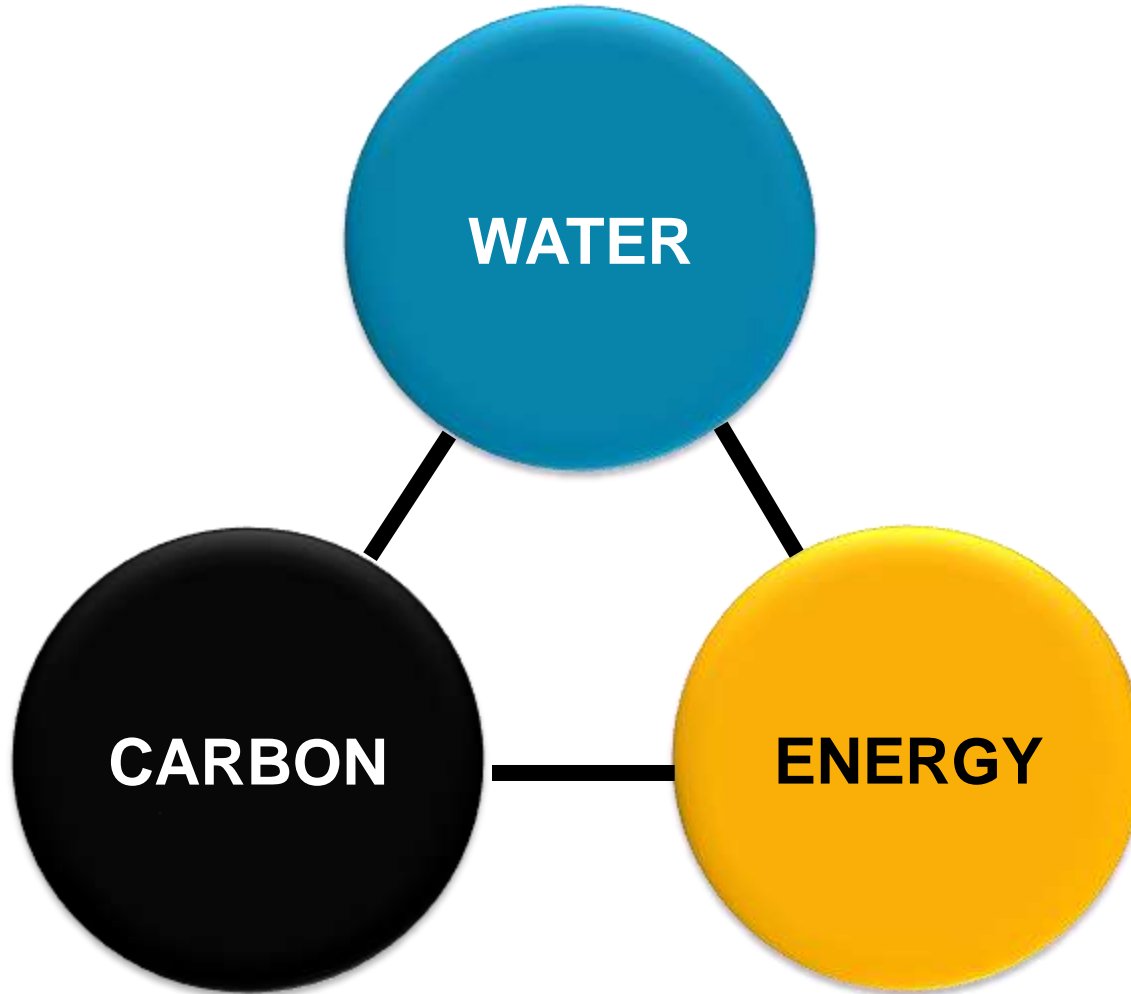
The equation is annotated with four arrows: a blue arrow pointing to  $B_p$ , a green arrow pointing to  $B_x$ , a blue arrow pointing to  $C_p$ , and a green arrow pointing to  $C_x$ .

P = project (internal)

x = society and environment (External)



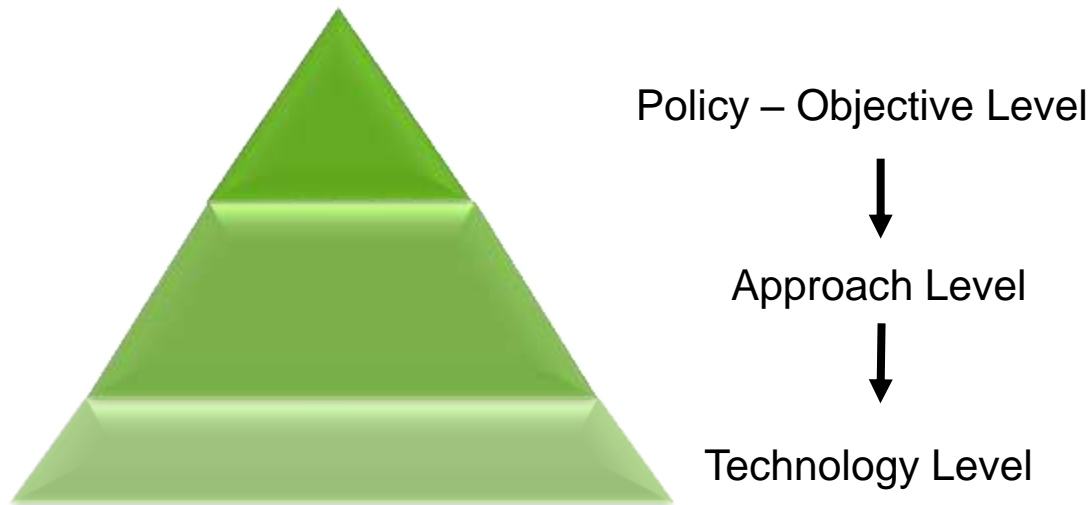


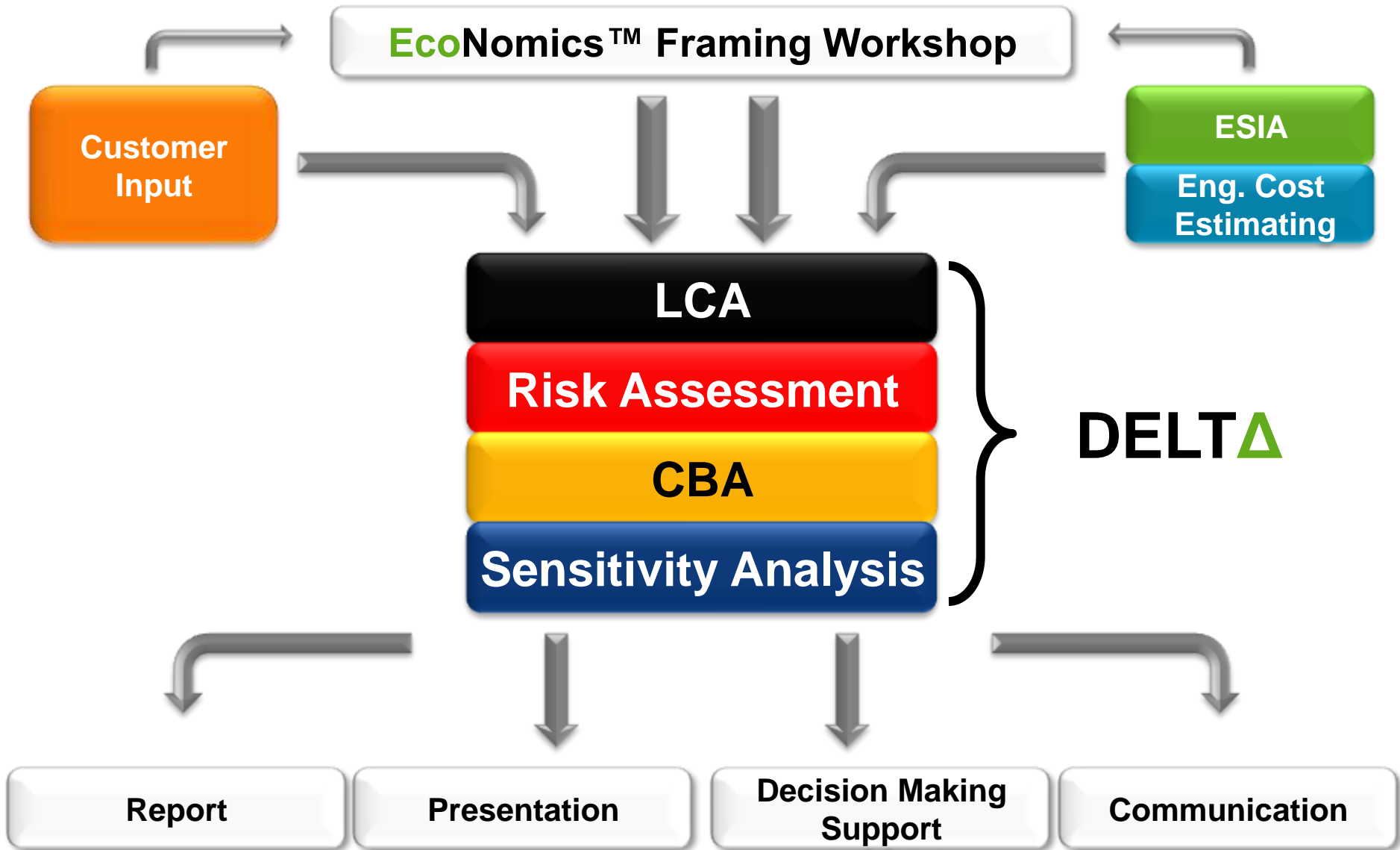






- ▶ What level of assessment is appropriate?
- ▶ Comparison of options at which level?





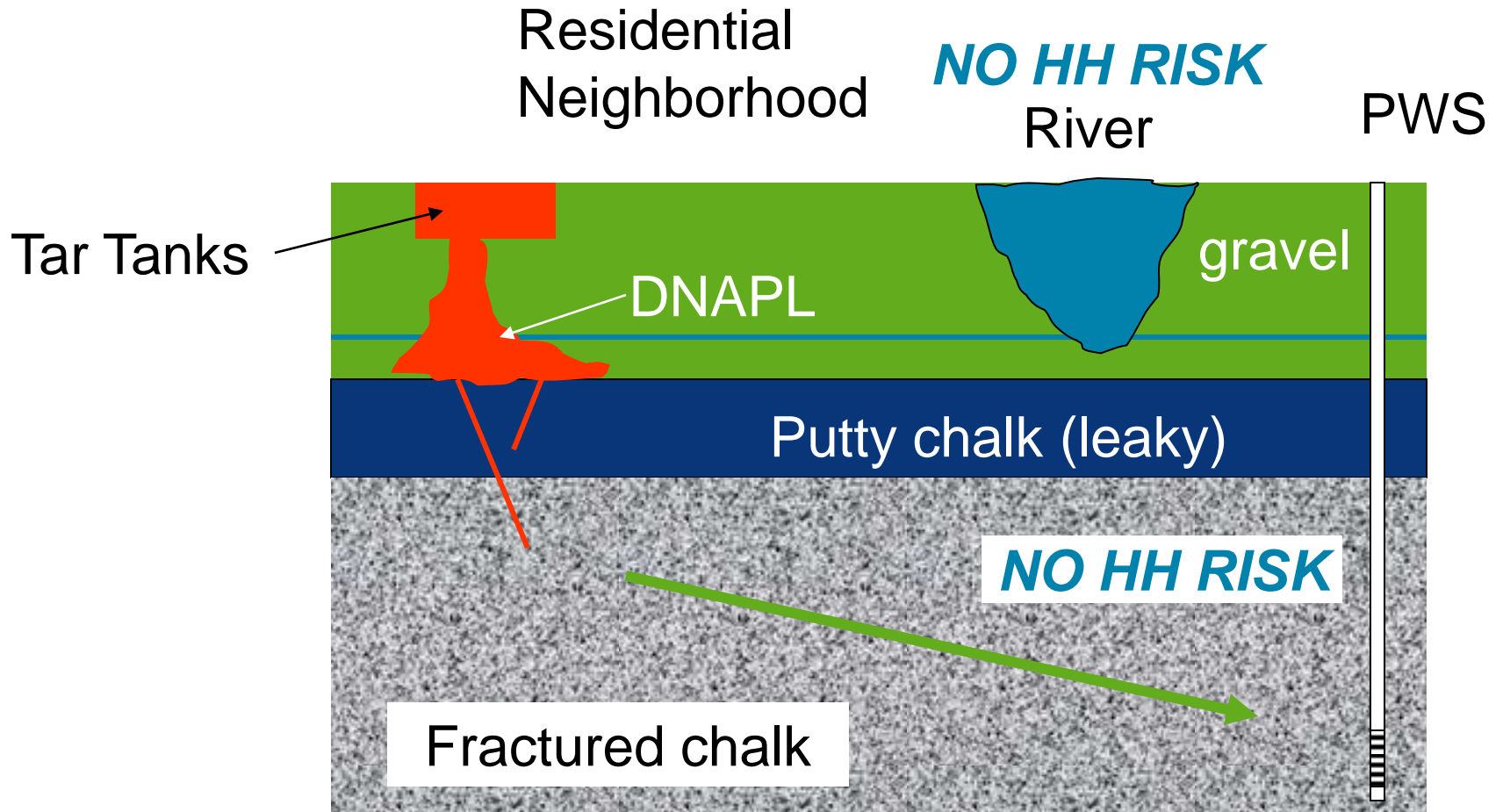


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# ENA Example 2: Former MGP Site Remediation







- ▶ What should I do at this site?
- ▶ Most sustainable method of remediation and how much should I spend?
  - Nature and extent of contamination
  - Risk (Human Health, Controlled Waters, Resources, Environment, Property)
  - Regulations
  - Stakeholder views





▶ Possible Objectives:

- Eliminate Human Health Risk
- Make site fit for redevelopment – **Property Holder**
- Protect the Public Water Supply (PWS) by preventing vertical migration – **Water Utility**
- Protect the River – **Environment Agency**
- Remediate the aquifer itself – **Environment Agency**

▶ Which one is best??





- ▶ R1: Treat water at Public Water Supply Well (PWS)
- ▶ Monitored Natural Attenuation (MNA)
- ▶ P1: Hydraulic containment in bedrock (**Agency + WCo favored**)
- ▶ P2: Hydraulic containment in gravel
- ▶ P1 and P2
- ▶ S3: Excavation above WT, ex-situ treatment (**PH favored**)
- ▶ S1: Partial excavation + In-Situ Chemical Oxidation
- ▶ S2: Full excavation (with piling), ex-situ treatment (**Local Government favored**)

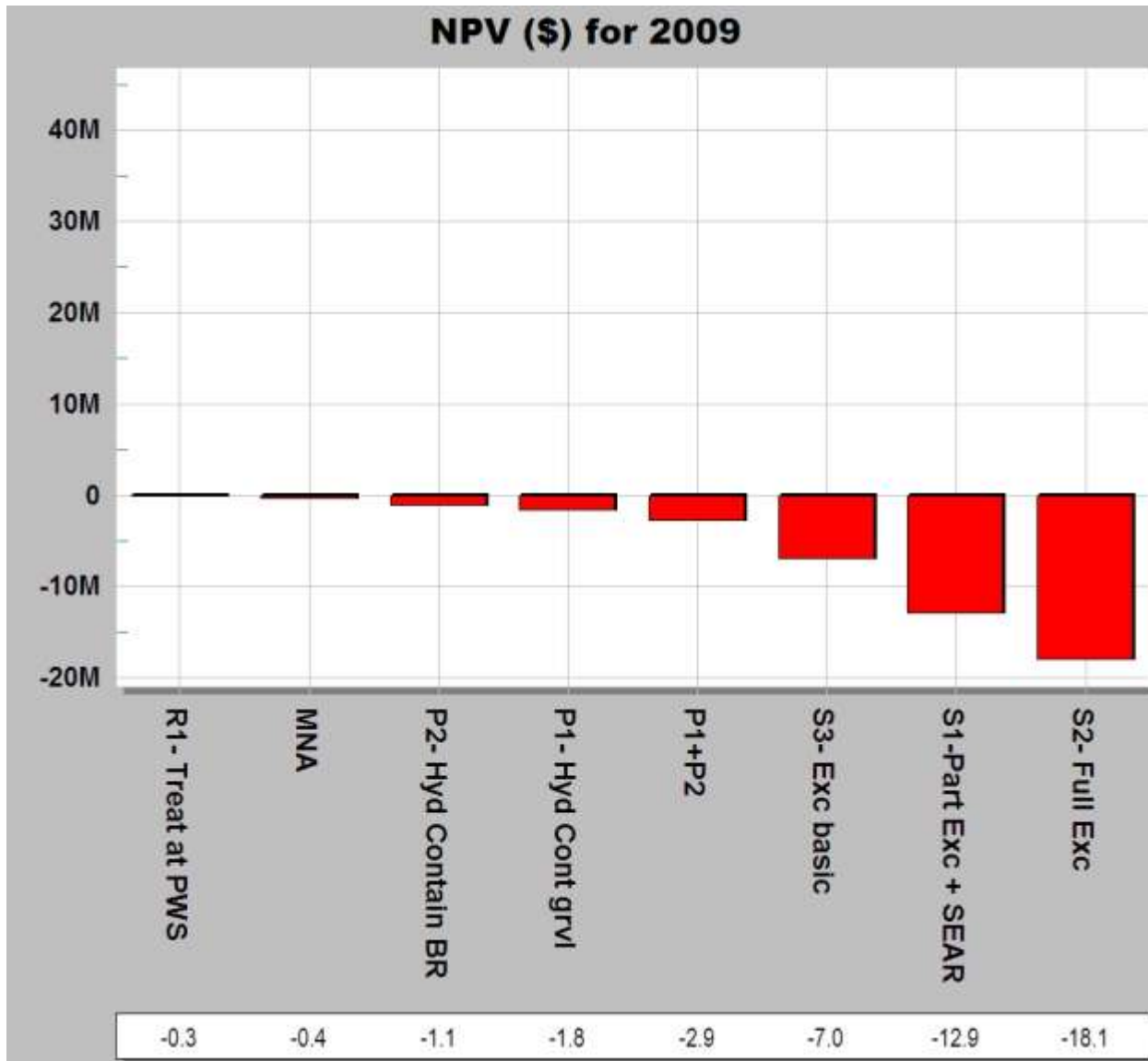


▶ **Intended Cx:**

- GHG emissions during remediation
- External costs of road transport

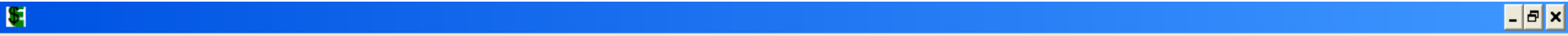
▶ **Unintended Cx:**

- Introduction of contaminant to bedrock via piling (putty chalk risk)





<b>Benefit Category</b>	<b>20 Year Benefit (\$m)</b>
Property value increase	10.5
Neighborhood blight reduction	3.9 (77.5 x 5% BF)
Aquifer Protection	8.1
River Protection	2.8
<b>TOTAL (Maximum)</b>	<b>\$ 25.3 m</b>



File Edit Calcs Help

EcoNomics DELTA



**Year 20**

GHG \$/t= 52

Transport \$/km= 1

Putty Chalk Ris= 0.25

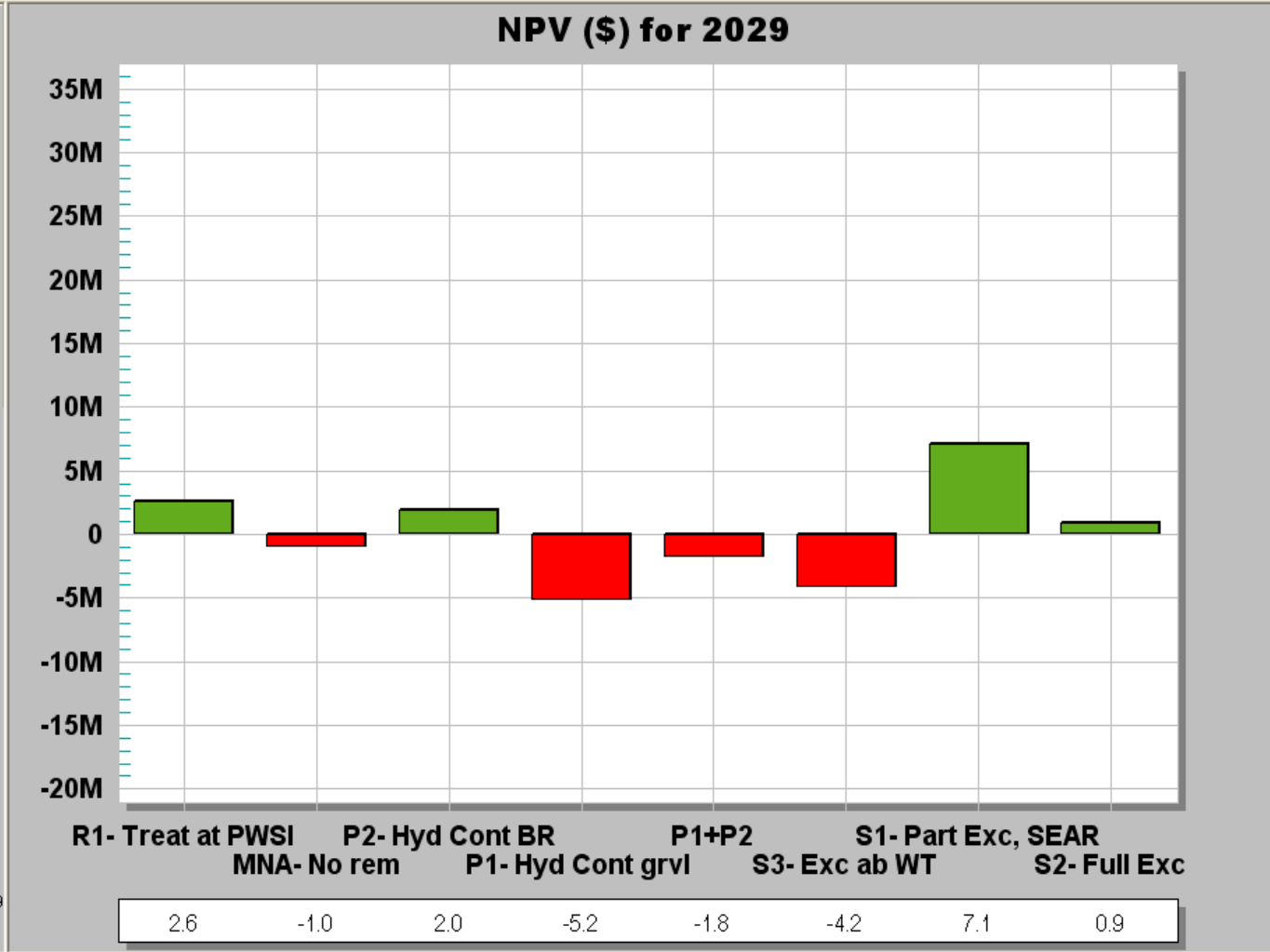
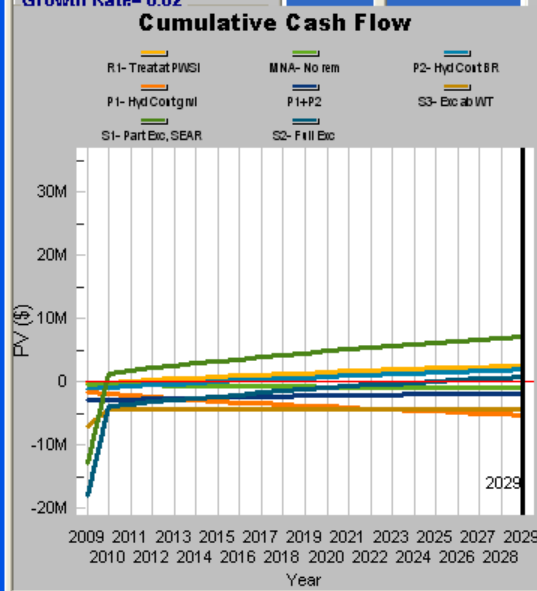
Prop Val \$= 10500000

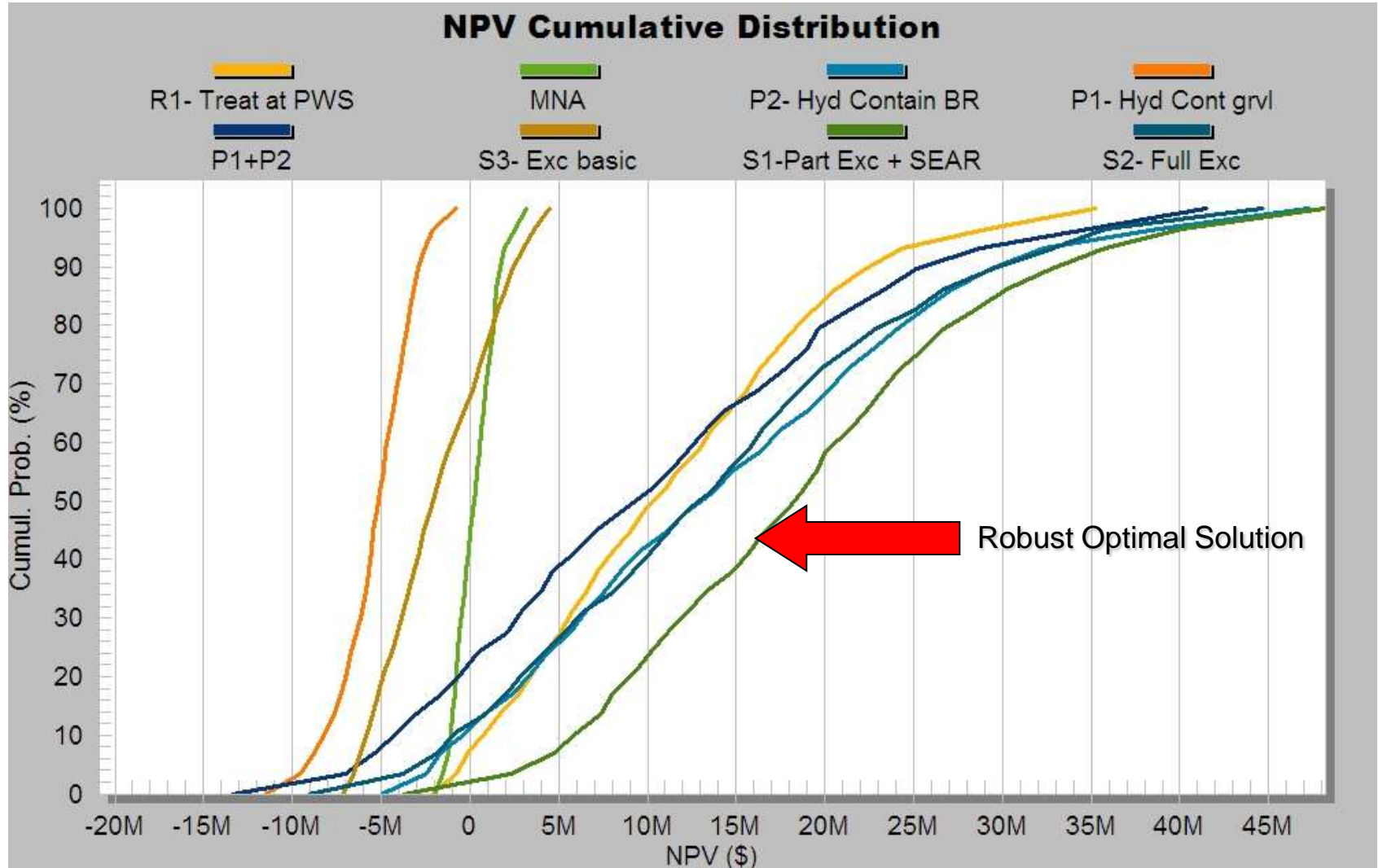
Blight %= 0.05

River \$/yr= 210000

Water TEV \$/kL= 0.20

Growth Rate= 0.02









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# Conclusions





▶ **Sustainability does pay**

“Most executives (57%) say that the benefits of pursuing sustainable practices outweighs the costs” ...involves “a shift away from defensive behavior towards more active exploration of the opportunities sustainability can present”

▶ **Execution is problematic**

“On a range of environmental and social outcomes less than 10% of respondents rated their efforts as outstanding on each, barring public relations”

Source: Economist Intelligence Unit (2008) Doing good: Business and the sustainability challenge, p.5