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Port Sustainable Management: Financial Considerations and Case Study

John D. Pauling, P.E., BCEE

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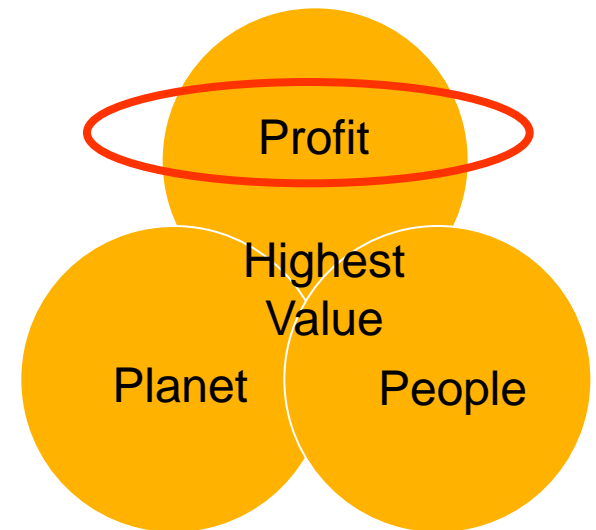
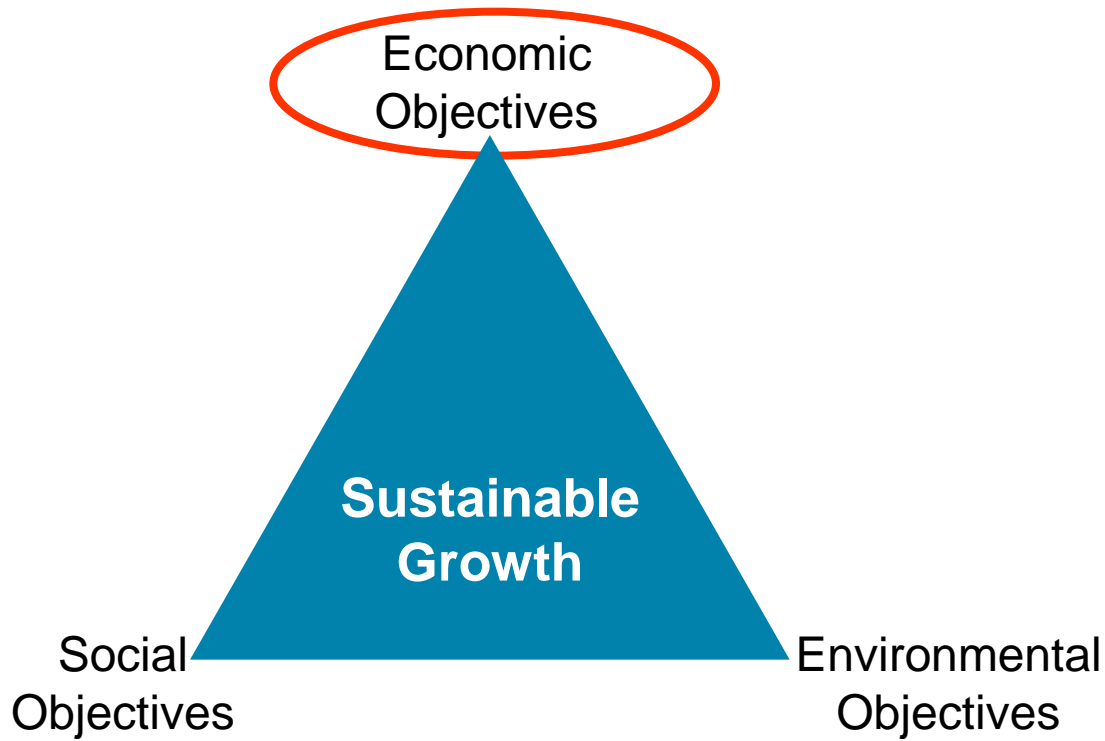
Overview of Financial Elements of Sustainability





- ▶ 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)







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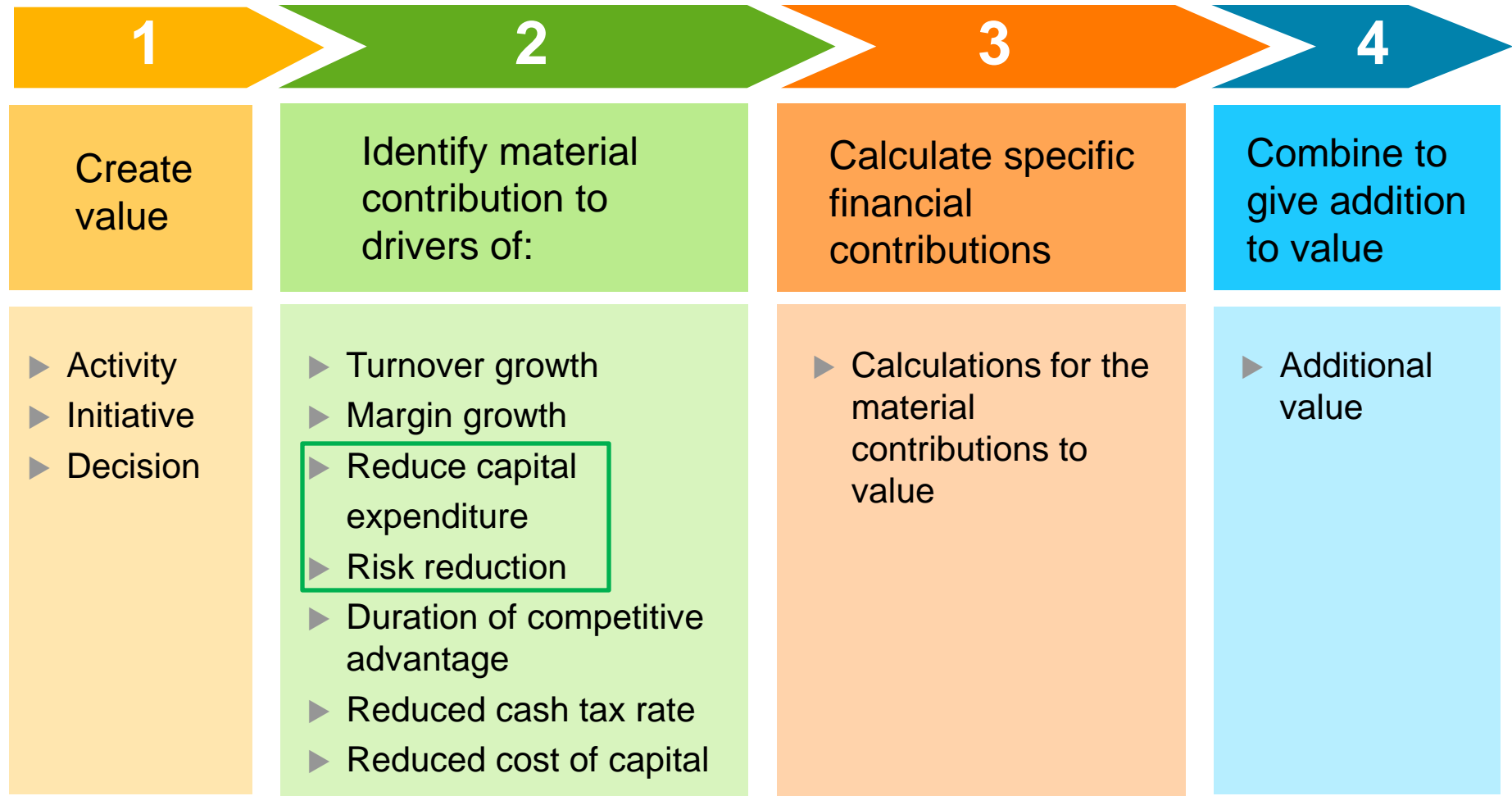
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Making the Business Case for Sustainability





How Sustainability Creates Value





Financial Drivers

- | | |
|-------------------------------------|--|
| ▶ Reduce capital expenditure | • Avoiding unnecessary demand for fixed assets |
| ▶ Duration of competitive advantage | <ul style="list-style-type: none">• 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



- ▶ See finding your business case as part of a wider change program.
 - Who are the key stakeholders? Who can be your champion in the finance function?
 - What are your consistent key messages?
- ▶ Go to the finance department with a safe pilot.
 - Identify a decision/project which won't trigger defense routines and only needs a small amount of resource to investigate.
- ▶ Use the pilot to build credibility and awareness.
 - Where possible, have the finance function do the analysis – building their capacity
 - Demonstrate you are concerned with finding the business case, not only justifying sustainability
- ▶ Keep creating a “permission and results” cycle
 - Address larger and more important areas: key decisions and financial processes (i.e. capital expenditure)
 - Keep building capacity of key individuals along the way



- ▶ Longer Term Benefits
- ▶ Lower Discount Rates
- ▶ Lower Transportation Costs
- ▶ Less Ship Delays
- ▶ Direct/Indirect Sub Job Creation
- ▶ Induces/ Supporting Jobs



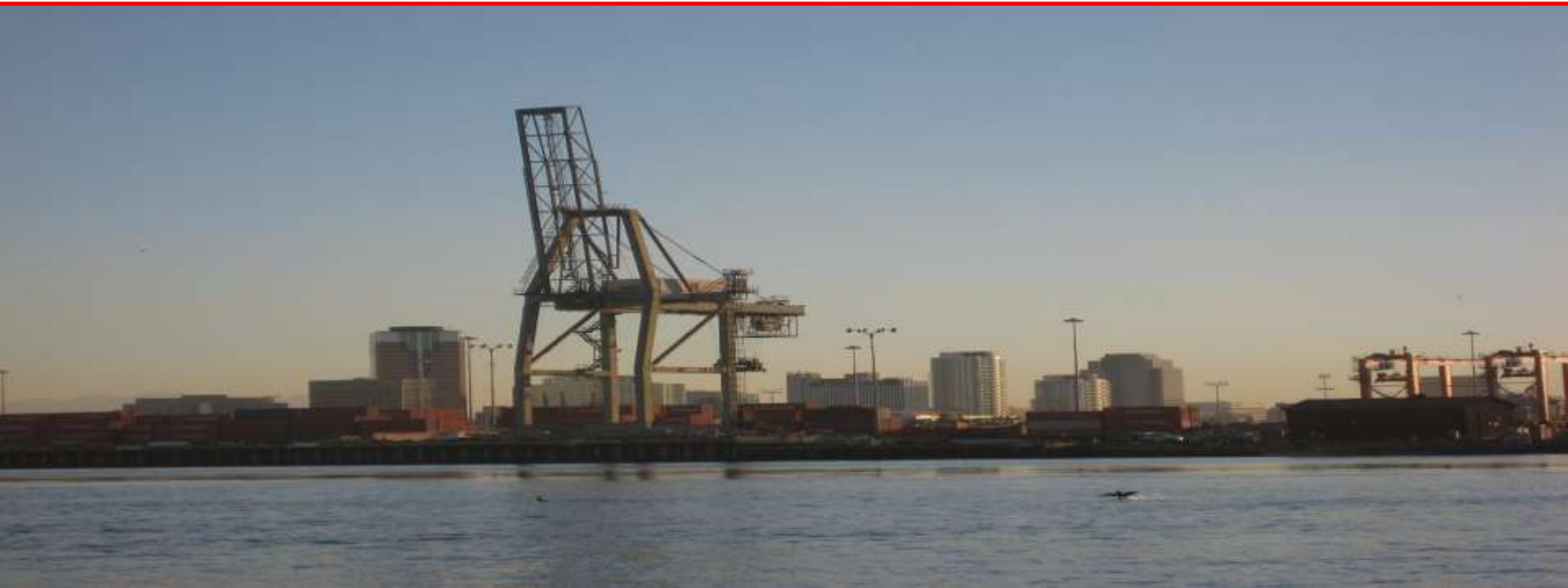
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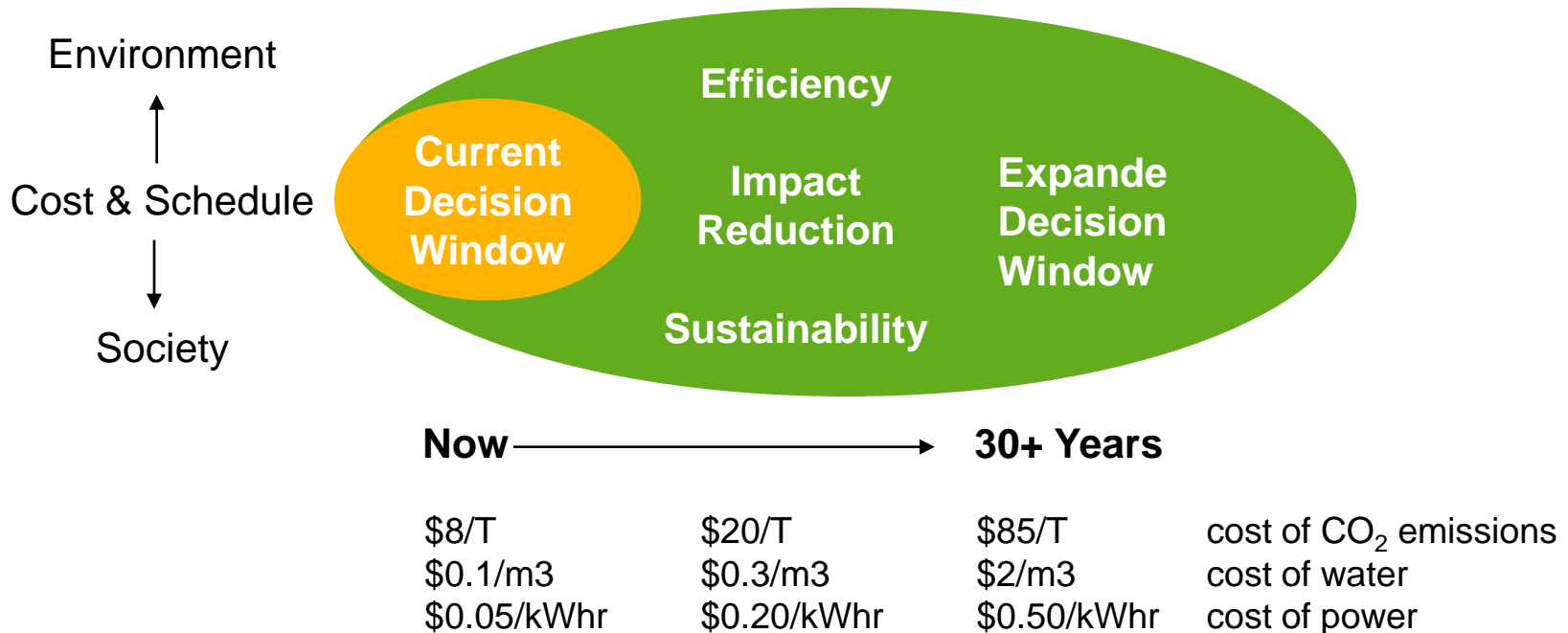
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An **Eco**Nomics™ Approach



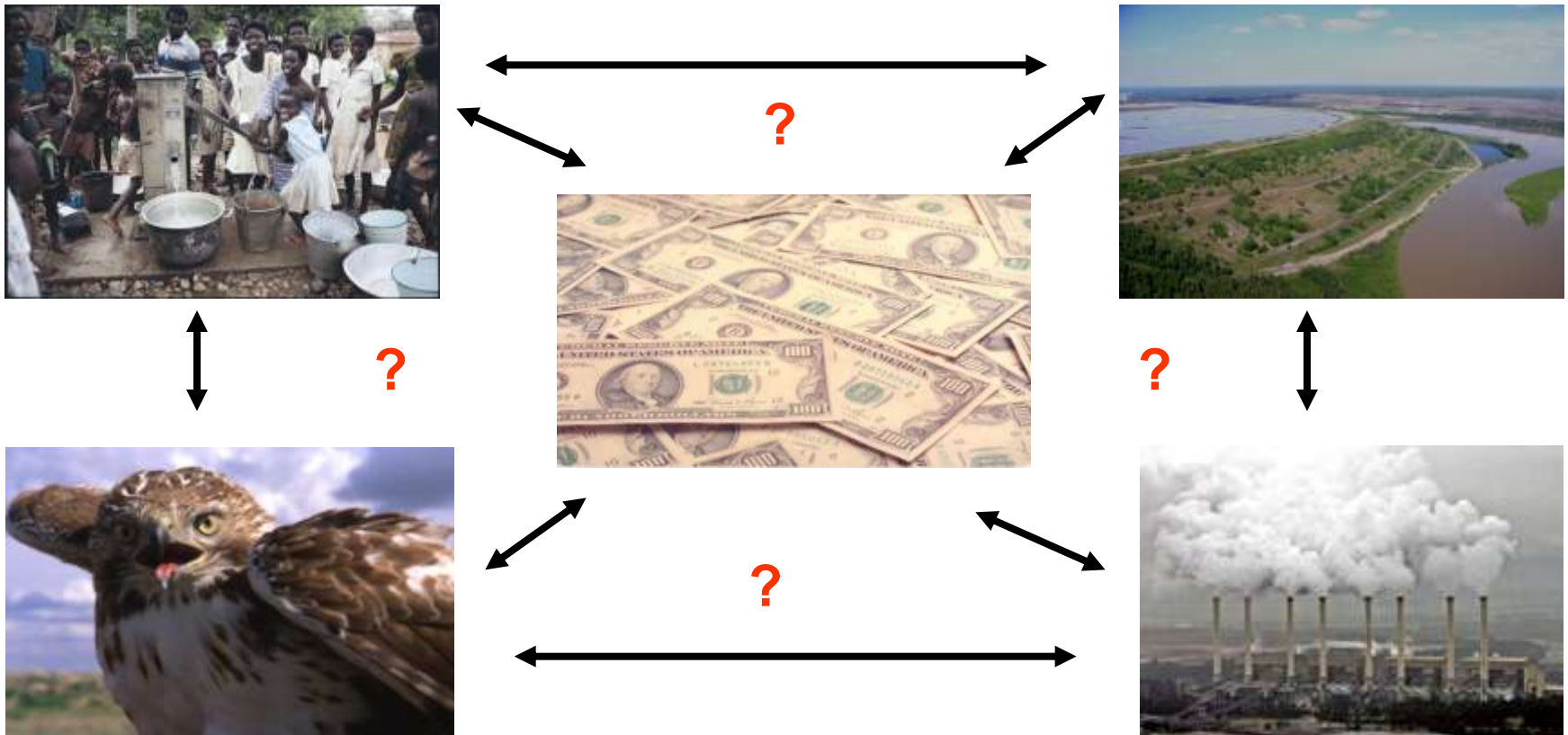


- ▶ An **EcoNomics™** approach broadens the perspective (decision window) out to the future to consider factors beyond budget and schedule.
- ▶ Projects are future-proofed





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






- ▶ An **Eco**Nomics™ project alternatives assessment develops a comprehensive accounting of all benefit, cost, and risk by monetizing ALL influencing factors

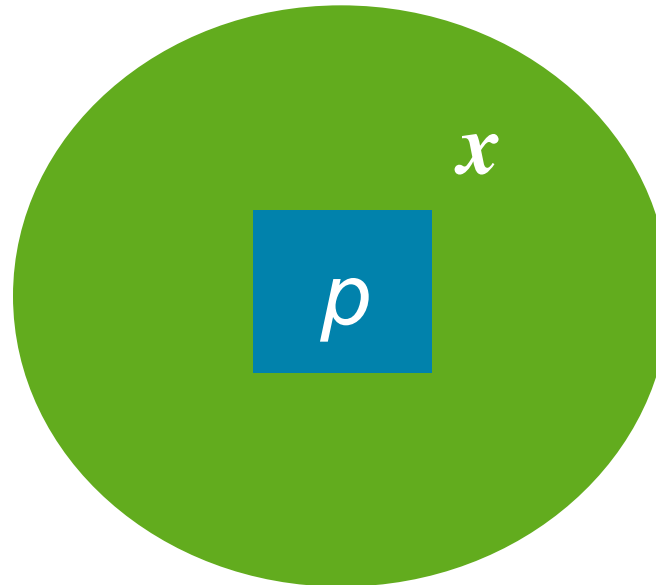
- ▶ Key features:
 - Analyzes both financial and non-financial costs, benefits, and risks through monetization
 - Process designed to support clients overall sustainability objectives
 - Built-in future-proofing so that client can see long-term effects of and to project options
 - Defensible results based on reliable, non-subjective methodologies and data input
 - Improved ability to communicate value of action to all stakeholders including regulators



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


P = project (internal)

x = society and
environment (External)







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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:**

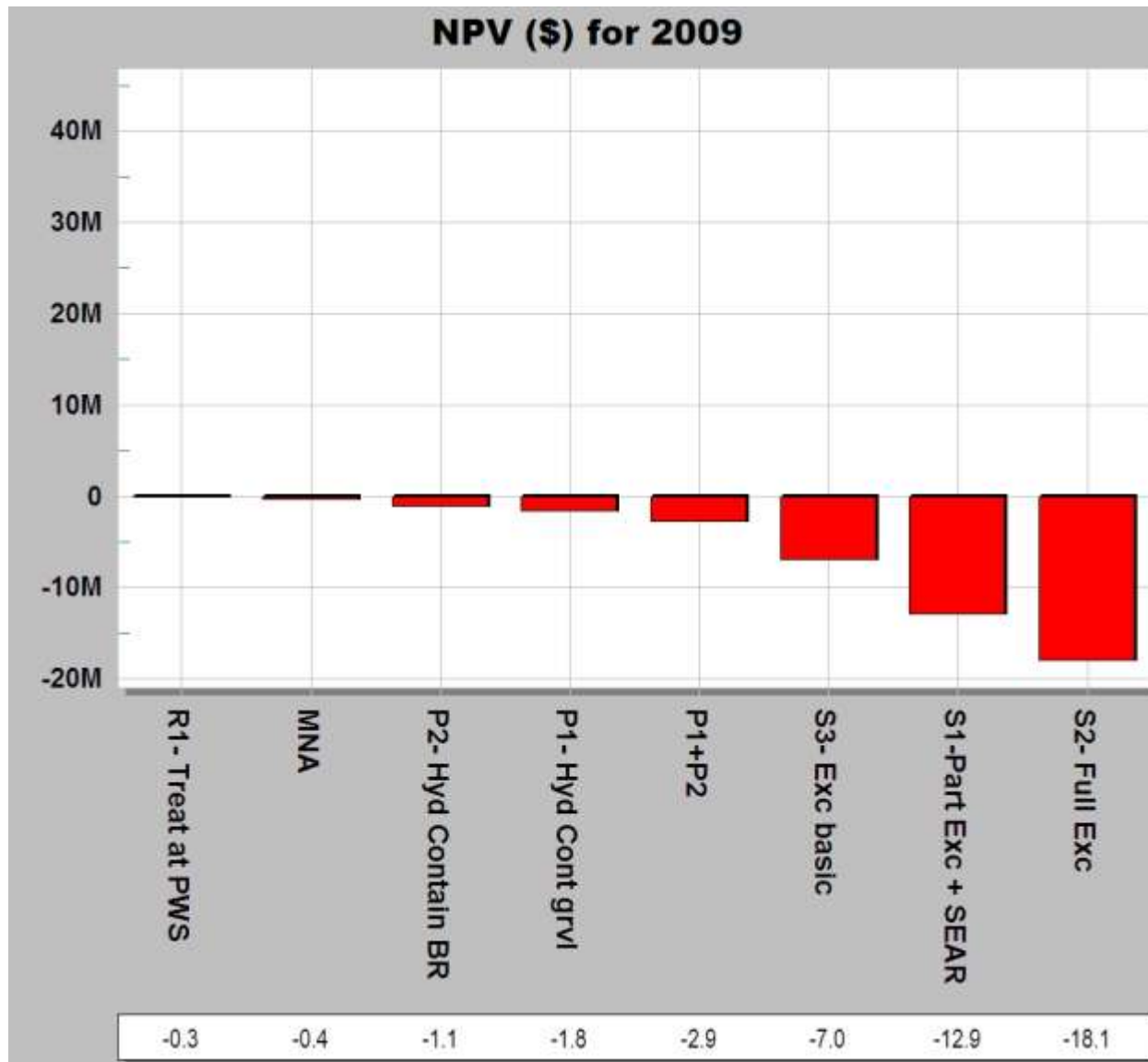
- GHG emissions during remediation
- External costs of road transport

► **Unintended Cx:**

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



CAPEX: Role in Decision Making





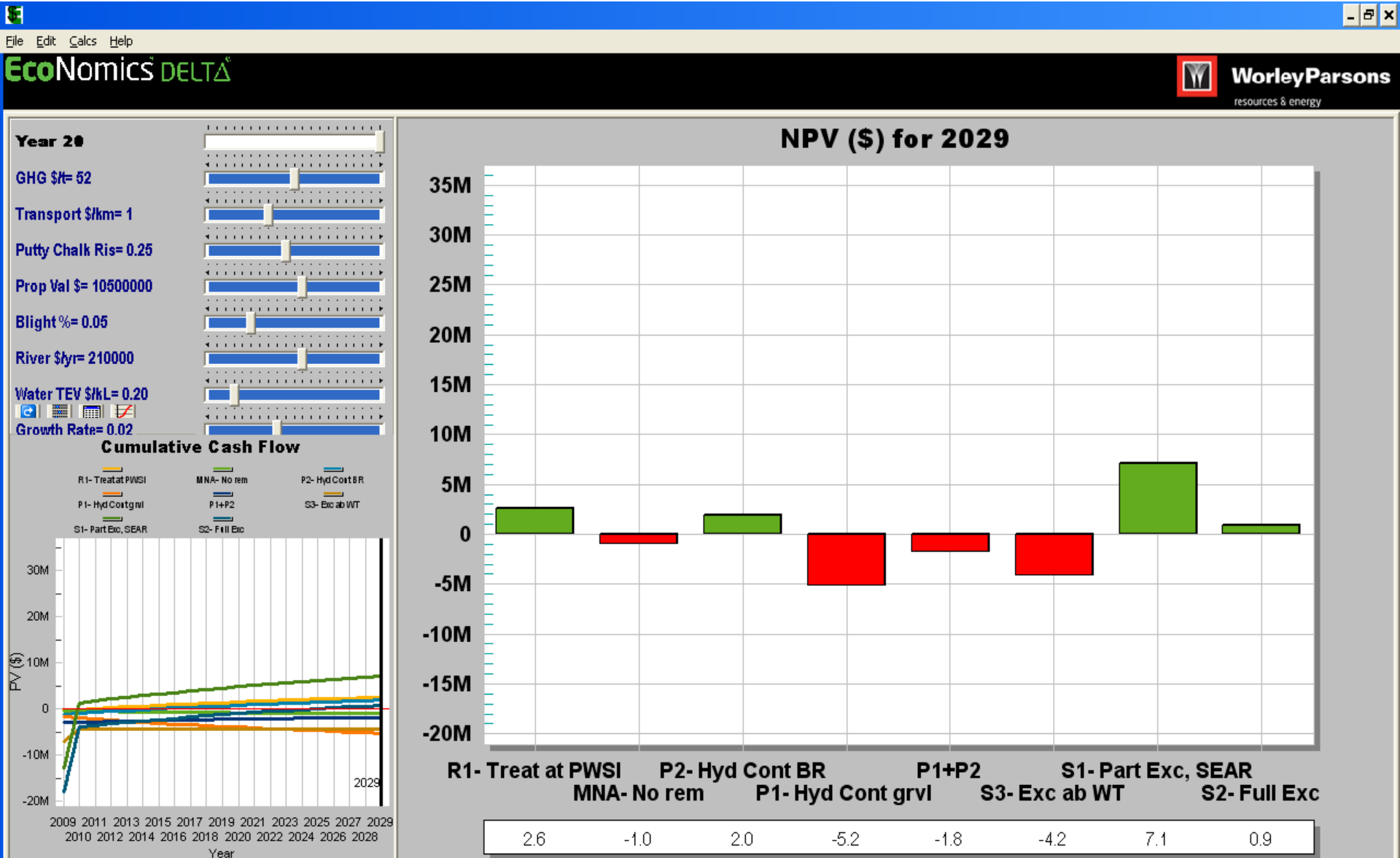
Benefit Category	20 Year Benefit (\$m)
Property value increase	10.5
Neighborhood blight reduction	3.9 (77.5 x 5% BF)
Aquifer Protection	8.1
River Protection	2.8
TOTAL (Maximum)	\$ 25.3 m

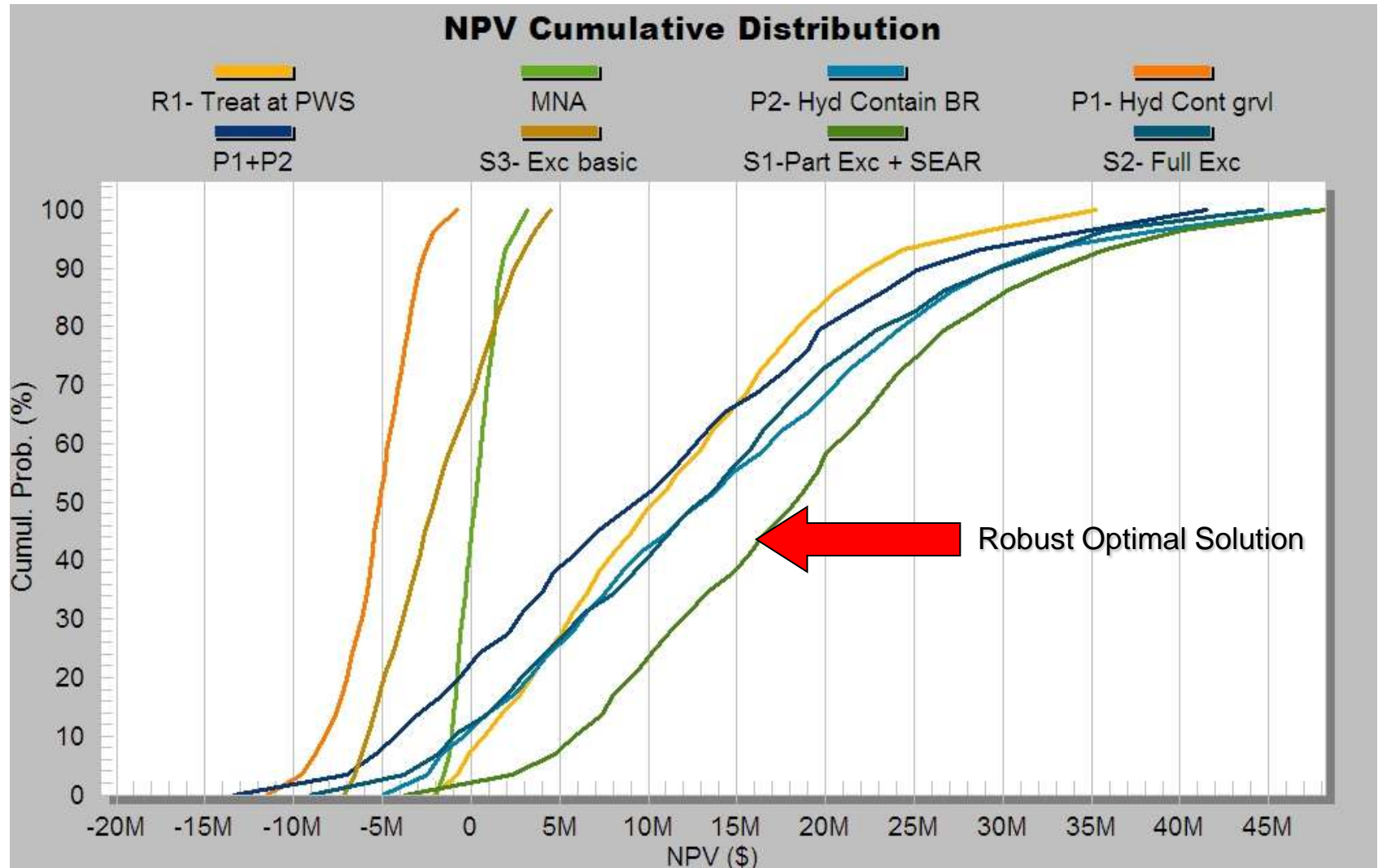


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Base Case NPVs







- ▶ Good for complex, high value issues
- ▶ Good when outside forces are pushing for expensive solutions
- ▶ Good for helping determine course of action when multiple stakeholders involved
- ▶ Good when perspective is needed
- ▶ Good when multiple risks and tradeoffs are evident
- ▶ Sustainability issues important
- ▶ Significant external assets at risk
- ▶ Regulatory or public scrutiny
- ▶ Reputation issues
- ▶ Decision-making challenge



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Case Study

Sustainable Port Management





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Sustainability Solutions

Port of Santa Marta

Colombia, South America



Sociedad Portuaria
de Santa Marta



SOCIEDAD PORTUARIA
DEL NORTE S.A.



SMITCO



Fundación
Sociedad Portuaria
de Santa Marta





QUIENES SOMOS?: Who Are We?

- La Sociedad Portuaria de Santa Marta inició sus operaciones en el año 1993. El estado colombiano le otorgó una concesión por 20 y posteriormente aumentó el periodo a 40 años, es decir hasta el año 2033. Es una sociedad de economía mixta mayoritariamente de capital privado.
- La Sociedad Portuaria ha invertido en el Terminal Marítimo de Santa Marta y en la Sociedad Portuaria del Norte, una suma que supera los US\$ 59 millones.

Sociedad Portuaria
de Santa Marta



USD 15 MM



USD 9 MM



USD 20 MM



USD 10 MM



USD 2.0 MM



USD 3.0 MM

Puerto de Santa Marta, 1993



Puerto de Santa Marta, 2009

16 años después...: 16 Years Later





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SPSM, PUERTO CERTIFICADO.

Model of Environmental Sustainability: ISO 9001: in 2000 AND ISO 14001 Certified: in 2004



CO06/1546



CO03/483



ISPS



Business Alliance for Secure Commerce



**Contamos con Certificado ISO 9001:2000 y 14001:2004
parte de SGS, PBIP por parte de la OMI y BASC.**



Nuestras operaciones, ambientalmente controladas, han permitido combinar amigablemente el turismo y las exportaciones de carbón debido al riguroso cumplimiento de los requisitos de calidad exigidos.

The Port's operations, through environmental controls, allowed to combine friendly tourism and coal exports due to strict compliance with sustainable development and quality requirements.





International recognition for implementing technology and processes that ensure a clean operation by AAPA in 2007 and Inter American Commission on Ports in 2009

CORAL REEF PROTECTION

Los corales se constituyen en refugio de peces pequeños que posteriormente, cuando se han desarrollado, favorecen las actividades de los pescadores en la Bahía.





Con inversiones en tecnología, logramos conciliar las actividades turísticas paralelas al desarrollo portuario: With investments in sustainable and clean technologies, tourism activities and port operations and development can symbiotically co-exist



Delivery of 1,000 school kits



2010: Entrega de 1.000 kits escolares





**2010: Entrega del Centro Integral Comunitario en Zona de Influencia Directa:
Creating Community Centers in
Surrounding Port Communities**





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Conclusions





- ▶ Sustainability solutions are universal (US, Latin America, Europe) in scope and nature
- ▶ However, what is different: is their applications as they depend on:
 - Cultural and socioeconomic make up of the communities that surround them
 - Programmatic and business priorities at the port
 - Political drivers
 - Other drivers/factors