

# Green Accountability and Incentives:

Reflecting the Social and Economic Cost  
of CO2 in New Capital Projects

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Novelis Inc.

**#RAW2021**



# Robert D. Brown III

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- Twenty+ year career with experience in systems engineering, strategic decisions, and risk analysis
- Fortune 100 clients in petroleum, pharmaceutical, utilities, transportation, high tech, and telecommunication industries
- Project work includes facilities capital cost estimating, market evaluation, project valuation and selection, schedule risk analysis, environmental remediation, litigation strategy, new product development, IP-network architectural selection and design, and enterprise portfolio system design and support
- Author of *Business Case Analysis with R: Simulation Tutorials to Support Complex Business Decisions*, Apress (a Springer Nature company), 2018
- 1992 graduate of the school of Mechanical Engineering of the Georgia Institute of Technology

## Beverage Can



## Automotive



Mercedes-Benz



Audi



## Aerospace



## Specialties



## OUR AMBITION

Novelis

Novelis' ambition is to be the world's leading provider of low-carbon, sustainable aluminum solutions that advance our business, industry, and society toward the benefits of a circular economy.



**Net Carbon  
Neutral**  
by 2050

**30%\***  
reduction in CO2  
footprint by 2026



**10%** Reduction in  
**Energy** use by 2026



**10%** Reduction in  
**Water** use by 2026



**20%** Reduction in  
**Waste** to landfill  
by 2026



Increase representation of women to:

**30%** of women  
in leadership  
roles by 2024

**15%** of women in  
senior technical  
roles by 2024

# Putting Our Money Where Our Heart Is



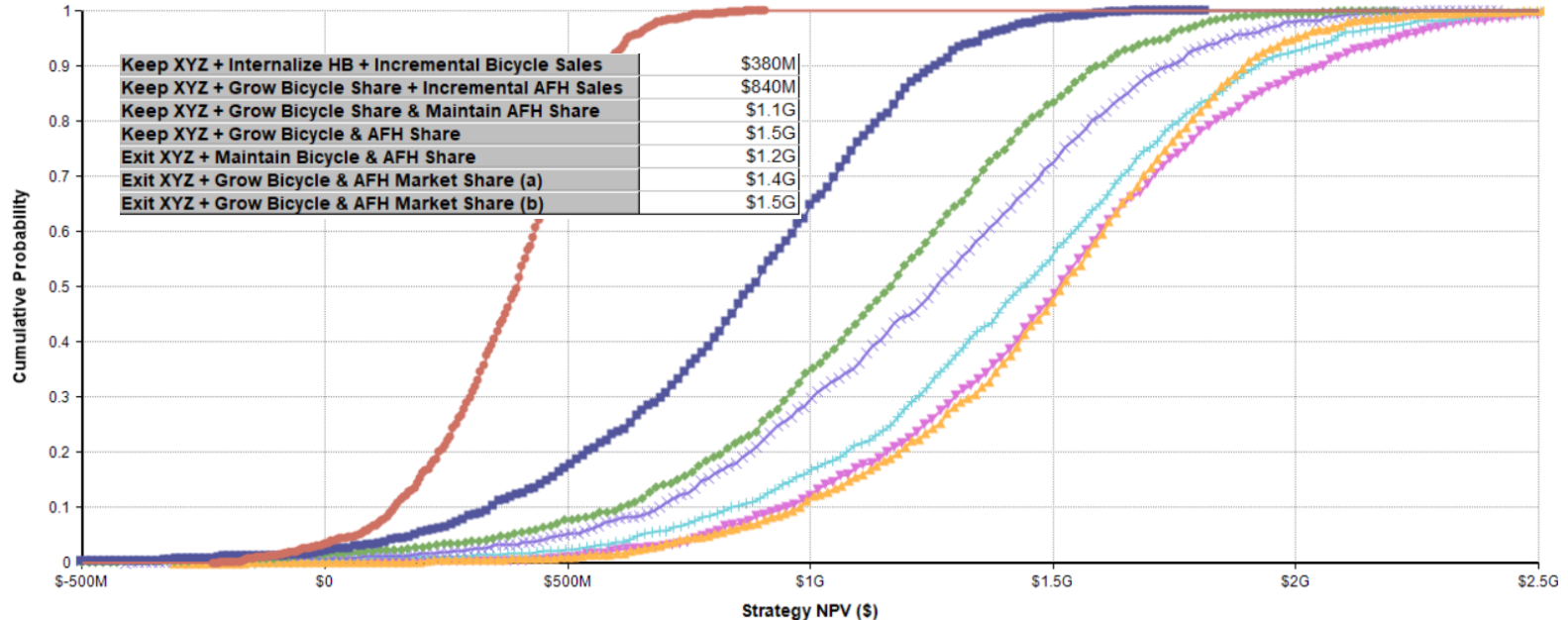
Source: Novelis

inspire other similar companies to do the same.

Through the issuance of our Green Bonds, we aim to finance a low-carbon, circular and sustainable economy through expenditures that align with our environmental and social priorities. With Novelis' Purpose of Shaping a Sustainable World Together we aim to align our strategic and business decisions, creating a true positive impact on the world. We hope the issuance of our Green Bonds will

[https://www.novelis.com/wp-content/uploads/2021/07/Novelis-Green-Bond-Framework\\_2021\\_Final.pdf](https://www.novelis.com/wp-content/uploads/2021/07/Novelis-Green-Bond-Framework_2021_Final.pdf)

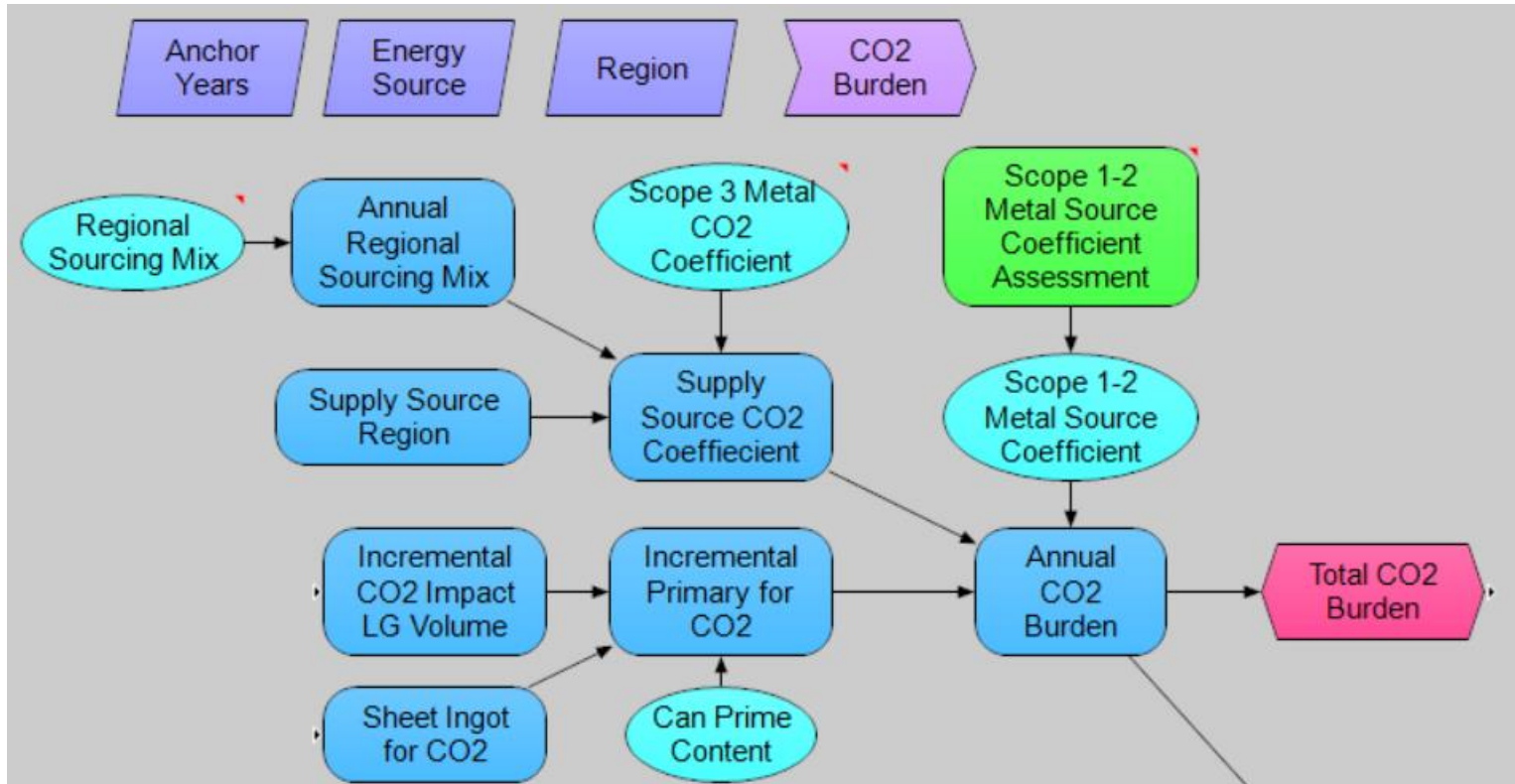
# Evaluating Capital Projects – Choose Alternative to Maximize NPV



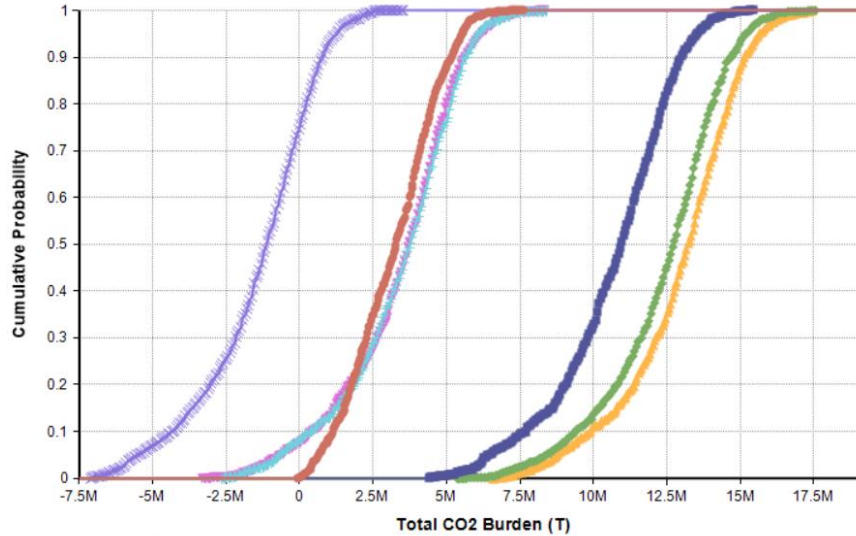
## Investment Strategies

- ◆ Keep XYZ + Internalize H...Incremental Bicycle Sales
 ◆ Keep XYZ + Grow Bicycle & AFH Share
◆ Exit XYZ + Grow Bicycle & AFH Market Share (b)
- ◆ Keep XYZ + Grow Bicycle... + Incremental AFH Sales
 ◆ Exit XYZ + Maintain Bicycle & AFH Share
- ◆ Keep XYZ + Grow Bicycle...re & Maintain AFH Share
 ◆ Exit XYZ + Grow Bicycle & AFH Market Share (a)

# Accounting for Carbon Footprint

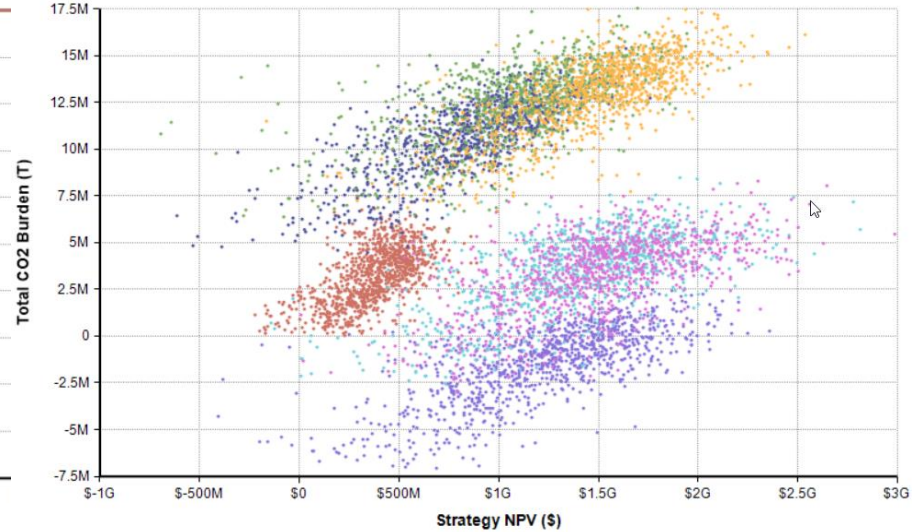


# The Tradeoffs Are Not Always Clear



## Investment Strategies

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- Keep XYZ + Grow Bicycle... + Incremental AFH Sales
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- Exit XYZ + Maintain Bicycle & AFH Share
- Exit XYZ + Grow Bicycle & AFH Market Share (a)
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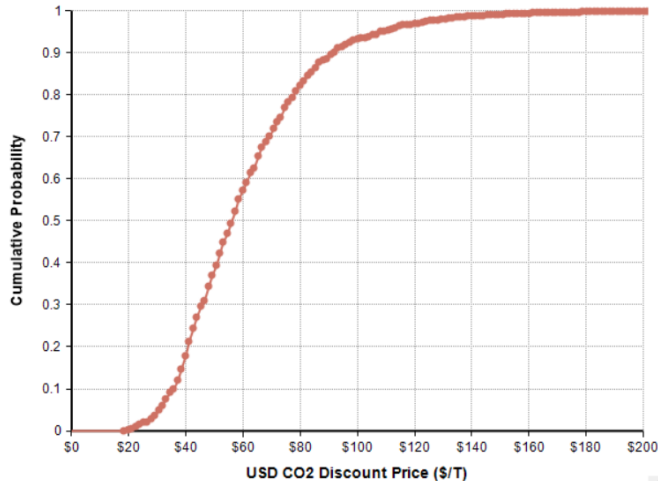
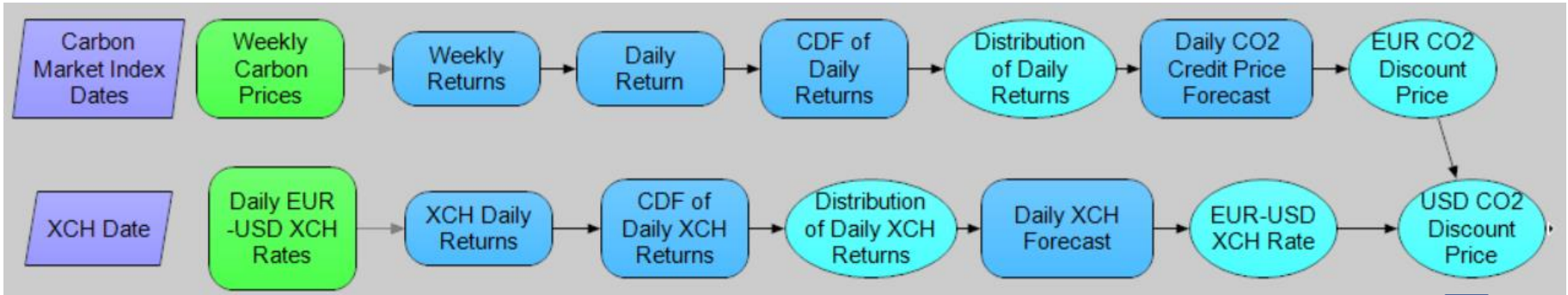


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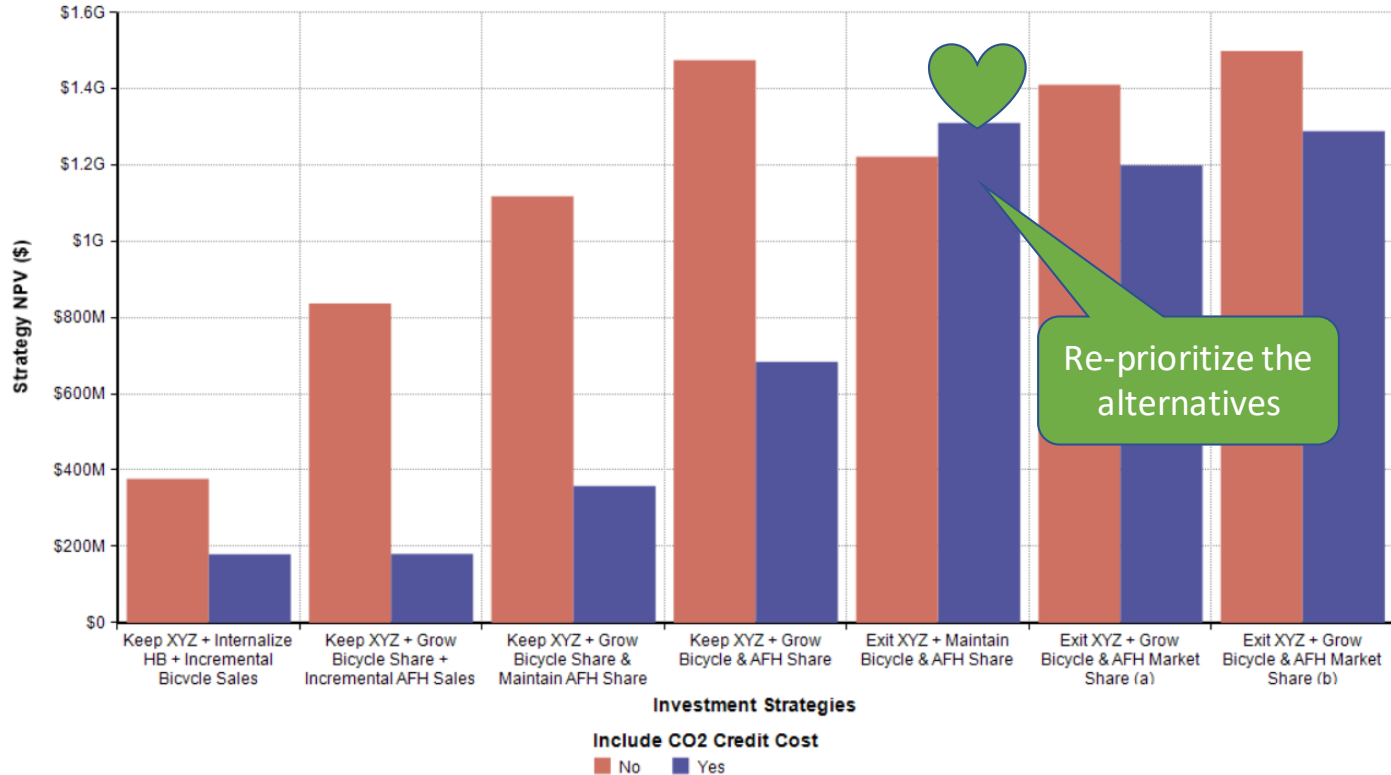


# Quantifying the Value of Carbon Emissions for Tradeoff Analysis



- Estimate a “shadow dwell price” for the social cost of CO2
- Calculate the sum of the annual CO2 tonnes multiplied by the shadow price

# The Net Effect – deduct the CO2 discount for each strategy from each strategy's NPV





# Thank You!