



## **INTERNAL CARBON PRICING**

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- **Anthesis is the Sustainability Activator.**
- We are the largest group of dedicated sustainability experts in the world: a team of 500+ people, working across seventeen countries, to serve more than 800 clients.
- We exist to shape a more productive and resilient world by helping organisations transition to new models of sustainable performance.
- Our team combines broad and deep sustainability expertise with the commercial and operational capabilities it takes to conceive and deliver real change.

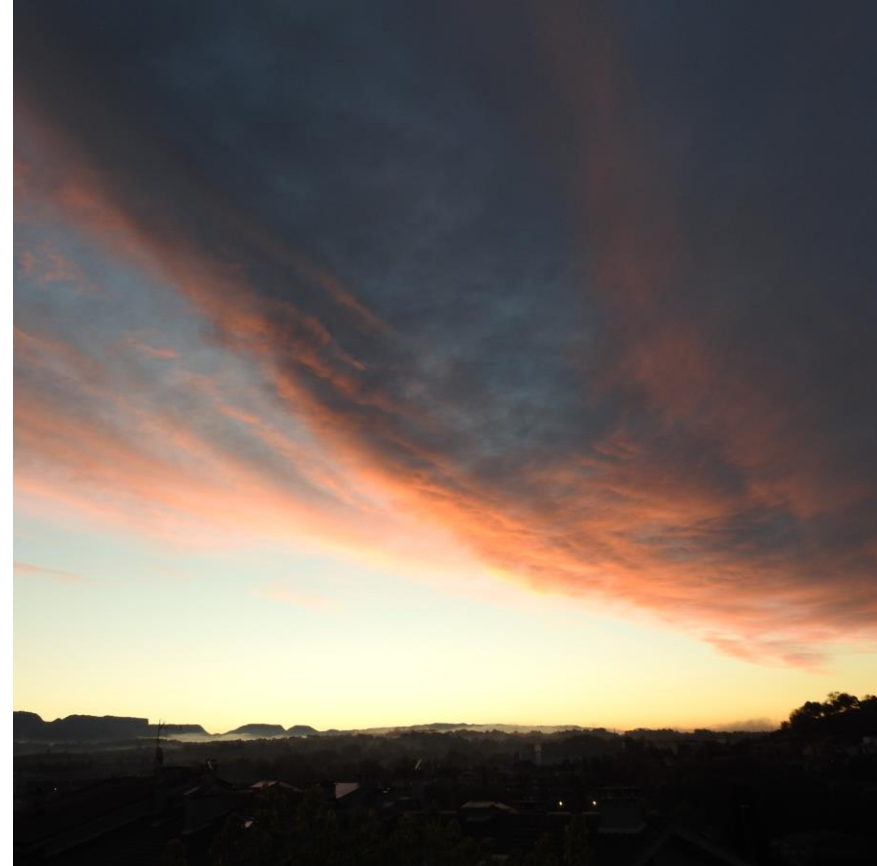
# AGENDA

Internal Carbon Pricing background & key concepts

Implementation considerations

- Drivers
- Data and process
- Price
- Change management
- Case studies

Discussion



01

# INTERNAL CARBON PRICING

# WHAT IS CARBON PRICING?

Carbon pricing places a financial value on greenhouse gas emissions.

By altering the (real or perceived) cost of products or activities based on their climate impact, carbon pricing drives:

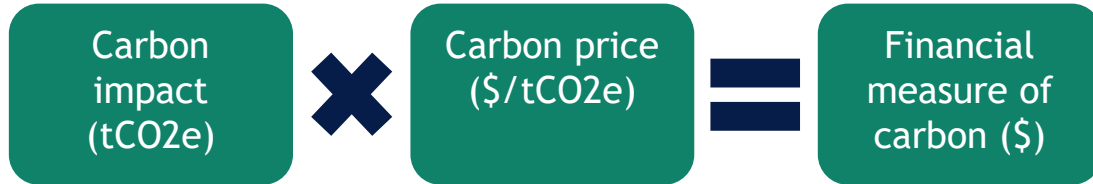
- low carbon innovation
- decision-making
- behaviour change

Due to its flexibility, simplicity and permeability, carbon pricing is **widely seen as one of the most effective ways to address the climate crisis**, and drive the transition to a resilient, low-carbon circular economy. It can also help countries and organisations take preventative actions against future climate risk.



# INTERNAL CARBON PRICING

Internal carbon pricing places a financial value on greenhouse gas emissions and recognises that decisions made in business are largely based on financial language and quantitative financial measures.



There is not one universal carbon price.

The power of ICP is in working out your specific cost of carbon

This may include:

- external carbon pricing schemes e.g. trading schemes and taxes
- external industry and country benchmarks
- the imperative to meet carbon targets
- renewable energy prices and certificates
- implementing carbon reduction initiatives relevant to your industry
- cost of credits
- tipping points for behaviour change
- reputation damage

Carbon pricing is about understanding carbon risk

Carbon emissions represent impacts that are currently externalities but can and will impact businesses over the next decade and through to 2050. The extent to which will vary by company and sector.

We use ICP to bring a fuller understanding of the potential financial risks and obligations we take on when making decisions within the business and also to more accurately represent the benefits of lower carbon innovation and investments.

**Why do businesses care about decarbonization now?...**

# CARBON EMISSIONS AS COSTS

Why do businesses care about net zero now?...

The costs associated with carbon emissions are now far more tangible.

The external financial pressures and risks related to carbon now give people who care more ammunition to act...*because caring about climate change and decarbonization can be translated into a cost impact.*

What are those costs?

- Tax risk
- Necessary investment (to achieve decarbonization target)
- Sales loss
- Regulation changes requiring investment
- Stranded assets
- Physical risks from climate change

Transition risks

\$/tCO<sub>2e</sub>

The carbon emissions in a company GHG inventory represent real costs.



# INTERNAL CARBON PRICING MODELS

(And a really useful metric)

## Implicit price

The cost of carbon reduction for that organisation

$$\frac{\text{cost of carbon reduction measure}(s)}{\text{tonnes CO2e reduced}}$$

Can be used on its own for communication and reporting, or as part of either a tax or shadow model.

Practical difference?

Carbon Price?

Typical uses?

## Carbon Tax

Money moves within the organisation

Price is typically set lower and with acceptability and impacts on behaviour change in mind.

Good for raising funds  
Awareness raising & behaviour change

## Shadow pricing

Price is used “for information”

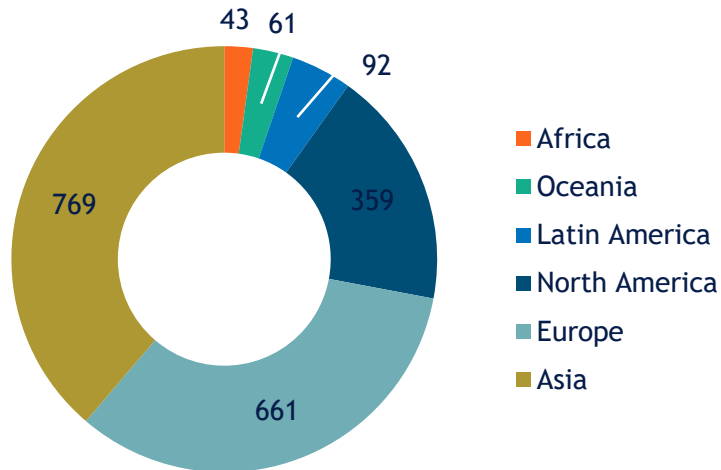
Price typically represents some risk or cost to the organisation. More likely linked to external benchmarks.

Powerful for decision making  
Supporting innovation

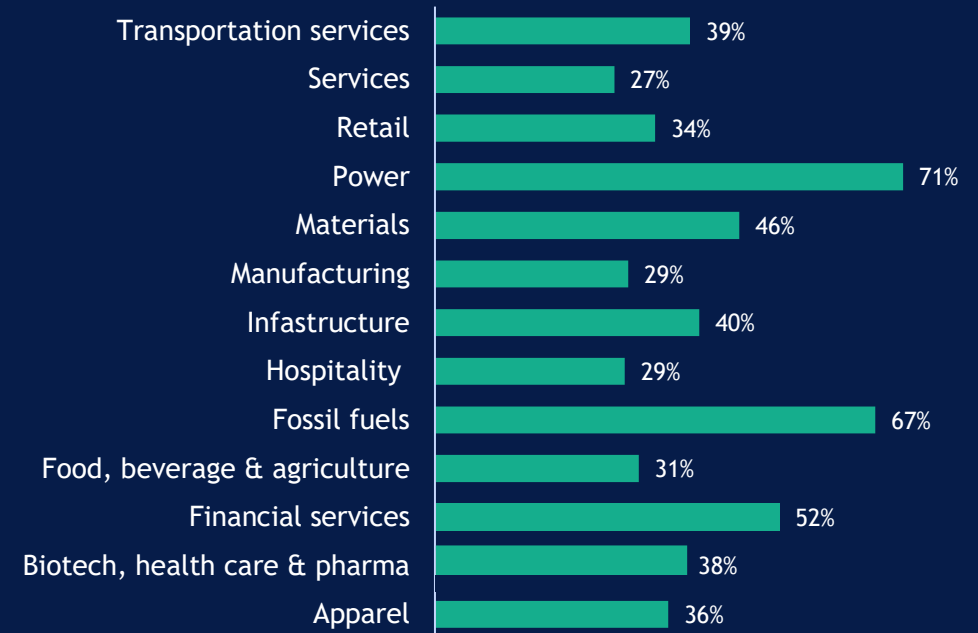
# ICP AROUND THE WORLD

- All regions, except for Africa have seen an increase in the number of companies pricing or planning to price carbon over the last 3 years.
- Europe and Asia are the largest contributors to organisations using ICP - most likely due to the normalization of carbon pricing through their respective carbon tax mechanisms.
- While North America contributes a smaller number of organisations using ICP, the U.S. is only second to China in the absolute number of organisations using or planning to use ICP.

## Number of organisations in 2020 using, or planning to use ICP:



## Share of companies in 2020 using, or planning to use ICP



Figures adapted from Putting a Price on Carbon by CDP, 2021

# CASE STUDIES



## Offsets driving the price for internal carbon tax on travel at WPP

WPP have an internal carbon tax system related to business travel. High-quality offsets are purchased and retired (1.65million carbon credits since 2007) these are charged to each of their business units to create an internal carbon cost.

(Web & marketing services)



## ICP for behaviour change, efficiency, low-carbon investment and supporting innovation.

The internal price on carbon supports purchase of offsets and renewable energy. They aim to set an internal carbon price high enough to materially affect investment decisions to drive down GHG emissions in-line with a science-based GHG reduction target.

(Software)



## Use of shadow price and tax

Use of a shadow price on business travel anticipating future carbon pricing costs.

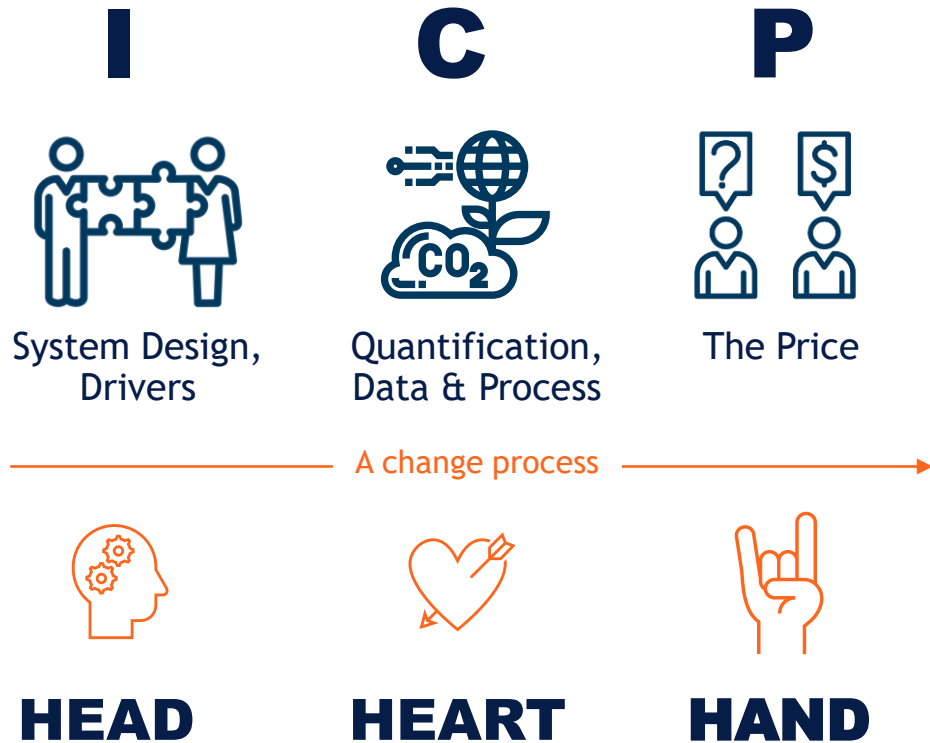
An internal carbon tax is payable by all business areas on scope 1,2, & some scope 3 emissions at a current rate of \$30/tCO2e which is set to increase over time.

(Analytics tools)

# 02

# IMPLEMENTATION CONSIDERATIONS

# KEY CONSIDERATIONS



**Internal Carbon Pricing** is about pricing carbon in your business in a way that will drive change and prepare you for a carbon constrained future.

# SYSTEM DESIGN

## Drivers

Understanding “Why?” helps determine:

- which type of ICP?
- directs price setting activity

## Hotspots

- Largest sources?
- Hardest to tackle?

## Coverage

- Where to start?
- If and how to expand?

Drivers	Shadow Price	Carbon Fee/Tax	
Management of future carbon risk	✓✓✓	✓✓	Higher shadow price can reflect longer term risks
Management of specific tax risk/regulation	✓✓	✓✓✓	More likely to tie a Carbon Fee into a specific external carbon tax
Achievement of net zero	✓✓✓	✓✓	Shadow price more suited to strategic decision making, but both can be used
Awareness raising	✓✓✓	✓	The higher shadow price is a useful communication tool
Raising funds for decarbonization		✓✓✓	Shadow price use does not generate a fund
Brand risk	✓✓✓	✓	Typically, Carbon Fee systems use lower prices, lower than current cost of carbon e.g., EU ETS
Tackling problem areas of corporate footprint	✓✓✓	✓✓✓	Either can be tailored to specific requirements

# IMPLICIT PRICE

An implicit price is typically driven by a target:

Who has set a carbon reduction target?

Do you have any costings related to how you will achieve the target?

Implicit price:

$$\frac{\text{Cost to achieve the target}}{\text{carbon reduction inherent in the target}}$$

Will differ by sector, geography, timescale, and scale of ambition.

Knowing your implicit price is a solid basis for ICP.

It is a tangible measure of how decarbonisation will impact you.

It can be used to compare against other options in decision making and innovation....

- *Should we rent this slightly more expensive but lower carbon office building?*
- *Is it worth buying RECs?*
- *Should we invest in this process change as an option for decarbonisation?*
- *How is decarbonisation impacting us compared to peers?*

If you do nothing else... understand your implicit price

Implicit cost of carbon:

$$\frac{\text{cost of carbon reduction measure(s)}}{\text{tonnes CO2e reduced}}$$

## HOTSPOTS / COVERAGE

What are the largest areas of your GHG Corporate Footprint?

What areas of scope are hard to tackle?

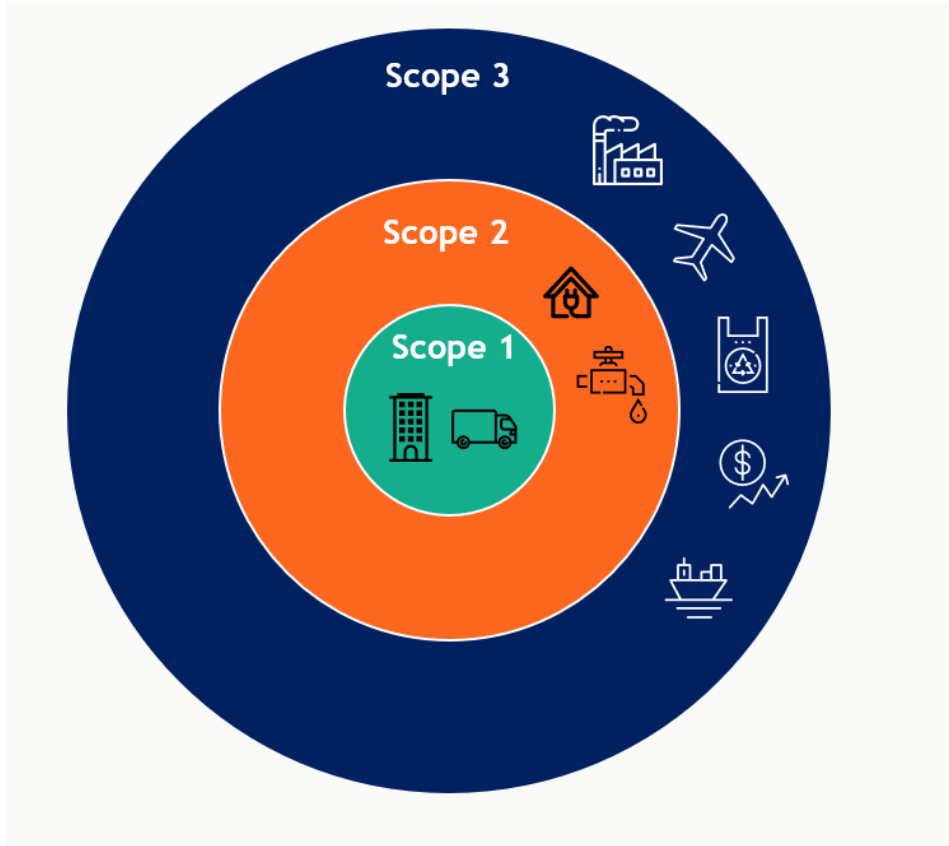
Where are decisions made that may contradict/conflict with your sustainability aims and carbon targets?

### Scope 3 categories as defined by the GHG Protocol

1. Purchased goods and services
2. Capital goods
3. Fuel and energy related activities
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets
9. Downstream transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investments



# QUANTIFICATION



Where do we want to apply ICP? Investigate processes in more detail.

What carbon do we need to quantify? How regularly?

What data is available?

Balance between ease and accuracy of quantification process

Can we expand and improve accuracy/frequency/accessibility of available data?

Understanding users

Processes, tools and training.

# THE PRICE

## Start with the drivers:

- Specific tax or regulation risk?
- Costing the impact of choices that result in growth in our CO2 footprint?
- Creating an internal fund?
- Incentivizing particular behaviours or choices?
- Calculate implicit price as a starting point

What to factor in when setting your price?



# THE COST OF CARBON TO YOUR BUSINESS

The cost of carbon will vary across organisations. There is not one universal measure of that cost. The cost relevant to you will be influenced by:

External factors:

- Risk of legislation
- Carbon taxes, trading schemes, and benchmarks in relevant geographies
- Market factors: costs of credits, removal certificates, purchasing renewable energy etc.

Internal factors:

- Your implicit cost of carbon historically
- Your implicit cost of carbon for future reductions
- Costs required to create behavior change
- Scope of application

Implicit cost of carbon:

$$\frac{\text{cost of carbon reduction measure(s)}}{\text{tonnes CO2e reduced}}$$

Knowing the cost of carbon to you is a powerful metric to apply to decision making.



# A CHANGE PROCESS

## Cultural criteria for durable change



### HEAD

- ☐ I understand what I am supposed to do
- ☐ I understand rationally why it is valuable



### HEART

- ☐ I am emotionally motivated to do it



### HAND

- ☐ I understand how to do it
- ☐ I have the tools and resources to make it easy
- ☐ My incentives are aligned to encourage it

# SUMMARY

Pointers on fuller implementation (see box)

Light touch version:

- Consider drivers and engage with stakeholders
- Calculate Implicit Price
- Consider how this can affect existing decision making processes
- Consider how you might update and expand - is the implicit price useful - is there another measure of carbon as an important externality?
- Remember the human factors and importance of change management / coms as much as possible.

## Implementing Internal Carbon Pricing

Consider the drivers and stakeholder requirements?

Where to start? Can be used for hotspots and hard to tackle areas of GHG inventory.

Look at how processes would need to be adapted to include a carbon price. Key time to address human factors.

Is data available? Balance between ease and accuracy.

Consider price, think about drivers and what prices already exist relating to those drivers (e.g. taxes, costs of carbon calculated in key geographies)

Calculate implicit price

Consider training and engagement coms, think about how to pilot and test price.

Consider governance and how to update

## GLOBAL MANUFACTURER AND INTERNATIONAL BRAND

The client have ambitious sustainability aims and a strong drive for innovation. We have helped them implement an Internal Carbon Pricing system that will materially impact business investment decisions to help them achieve their Science Based Target (SBT) and Net Zero goals. The aim was to start with internal projects and innovations, working towards exploring investment decisions related to the wider value chain and scope 3 emissions. A key motivation for the Internal Carbon Pricing system was to drive behaviour change across the organisation.



### Key elements:

- Internal Carbon Pricing - scoping, piloting and implementation
- Shadow Price applied to Business Case process
- Carbon quantification
- Bespoke tool development
- Change Management, comms worked through with dedicated team - fireside chat with VP, client branded video separate to training comms.

### Key takeaways:

- Process started with looking at drivers, decision making processes, carbon footprint hotspots & areas of challenge
- Intention to continue to roll out across more areas of the business
- System designed so that the outputs of the business case process (an implicit price for each project) can be fed back into review and update of carbon price
- Was owned by strategic finance and a key benefit was the transformation of that team into sustainability champions.



# PHARMACEUTICAL

Exploring application of Shadow Carbon & Circularity Price to packaging design process.

Exploring case studies relating to the packaging process in order to understand the carbon & circularity impacts, implicit prices, and the supporting data and processes available.

This information was then used to identify a suitable carbon & circularity price and system design. The next steps are to consider where else in the business can benefit.



## Key elements:

- Shadow price applied to packaging innovation process
- Monetisation of carbon & circularity (with intention to expand to further metrics)
- Avoid an LCA level of assessment at innovation stage - balance of ease & accuracy

## Key takeaways:

- Consideration of wider elements beyond carbon, but through using a financial metric there was the ability to bring consistency to judgement process.
- Key driver were first mover opportunities and financial benefits from sustainability, not just risks and penalties
- Co-ordination with data systems across the group a key challenge

# UTILITY COMPANY

Supporting client in how they can address their scope 3 targets using ICP after successful application to scope 1.

A particular challenge was construction emissions and how their gCO<sub>2</sub>e/kWh KPI would be breached in years of construction of new projects (even if renewables projects).



## Key elements:

- Shadow price applied to construction stage gate process
- Interaction with contractors for construction projects and how to use a carbon price in contracts.
- Implicit prices tied back to costs relating to achieving carbon targets & KPIs

## Key takeaways:

- A stable, easy to communicate carbon price valued over a more accurate project specific carbon price
- Focus on cement, steel, & fossil fuel in construction decarbonization efforts



# SOFTWARE COMPANY

Support to development of Corporate Carbon Tax system and ICP for Business Travel

Supporting calculation of carbon price based on understanding of implicit price of actions required to meet targets.

This was differentiated from work to explore a business travel ICP system to support behaviour change in this hard to tackle area of the client scope.



## Key elements:

- Carbon tax system applied to carbon budget of whole organization (by department)
- Tax level set based on implicit price of achieving targets

## Key takeaways:

- Phasing in introduction of tax a key element
- Assessment as to how implicit prices will change over timescale of target achievement
- Important to make link between achievement of SBTs as a non-static issue and use of ICP to senior decision makers



## Discussion

Has anyone explored using ICP?  
Does an implicit price make sense to you?  
What are your drivers for ICP?

# CONTACT DETAILS

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Internal Carbon Pricing



Find out more

- [A guide to internal carbon pricing, Anthesis \(2021\)](#)
- [Putting a price on carbon, CDP \(2021\)](#)