

Enterprise net zero aspirations and how telcos can support

STL Partners webinar

14th December 2023

In partnership with:



Agenda

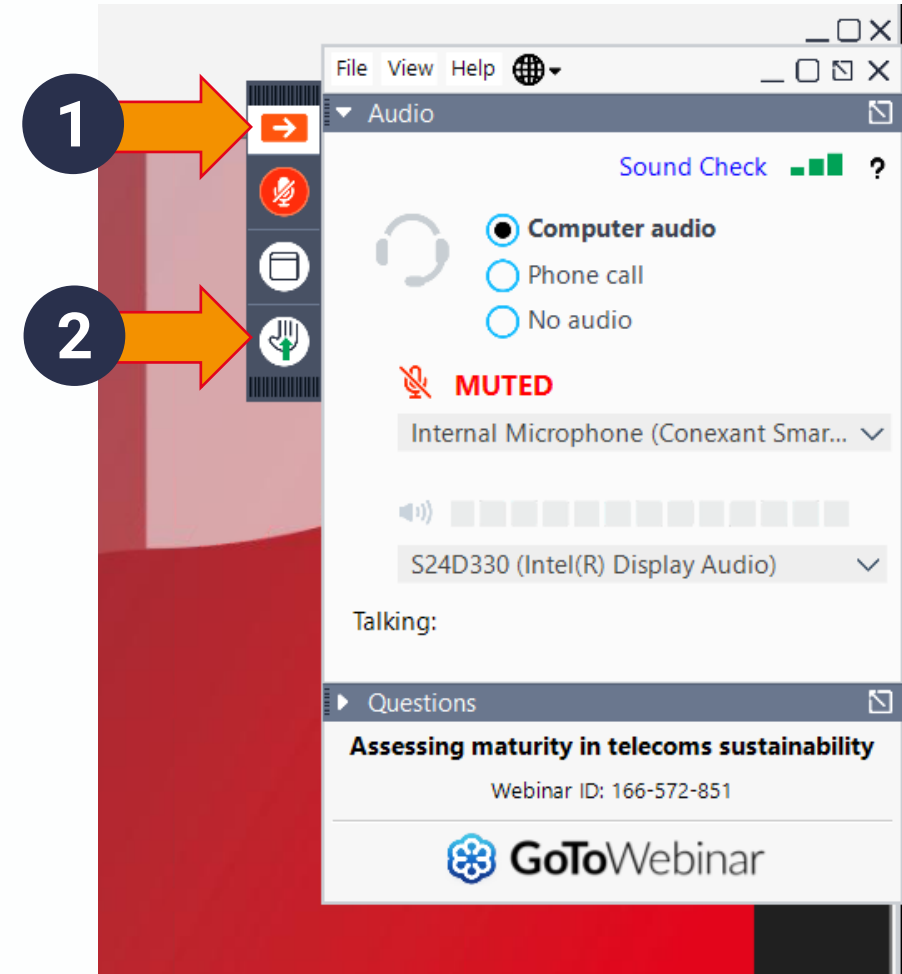
1	Introduction and housekeeping	13:00 – 13:05
2	STL Partners: How can telcos support enterprise net zero aspirations?	13:05 – 13:40
3	Red Hat: How can telcos develop low carbon products and services?	13:40 – 13:50
4	Q&A	13:50 – 14:00
5	Wrap-up	

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GoToWebinar

- You're in listen only mode
- If you need us, please type a comment
- Feel free to type questions throughout the session for the Q&A at the end
 - Any questions that we don't answer live will be answered offline and shared in a summary Q&A document
- We'll send you the slides and a recording shortly after the session, please do share with colleagues



Our speakers



MIRAN GILMORE

Senior Consultant &
Sustainability Lead

STL Partners

Presenter and Panellist



JACK HURLEY

Consultant

STL Partners

Presenter



HANEN GARCIA

Global Telco Solutions
Manager

Red Hat

Presenter and Panellist



CHRIS BARRACLOUGH

CEO

STL Partners

Moderator

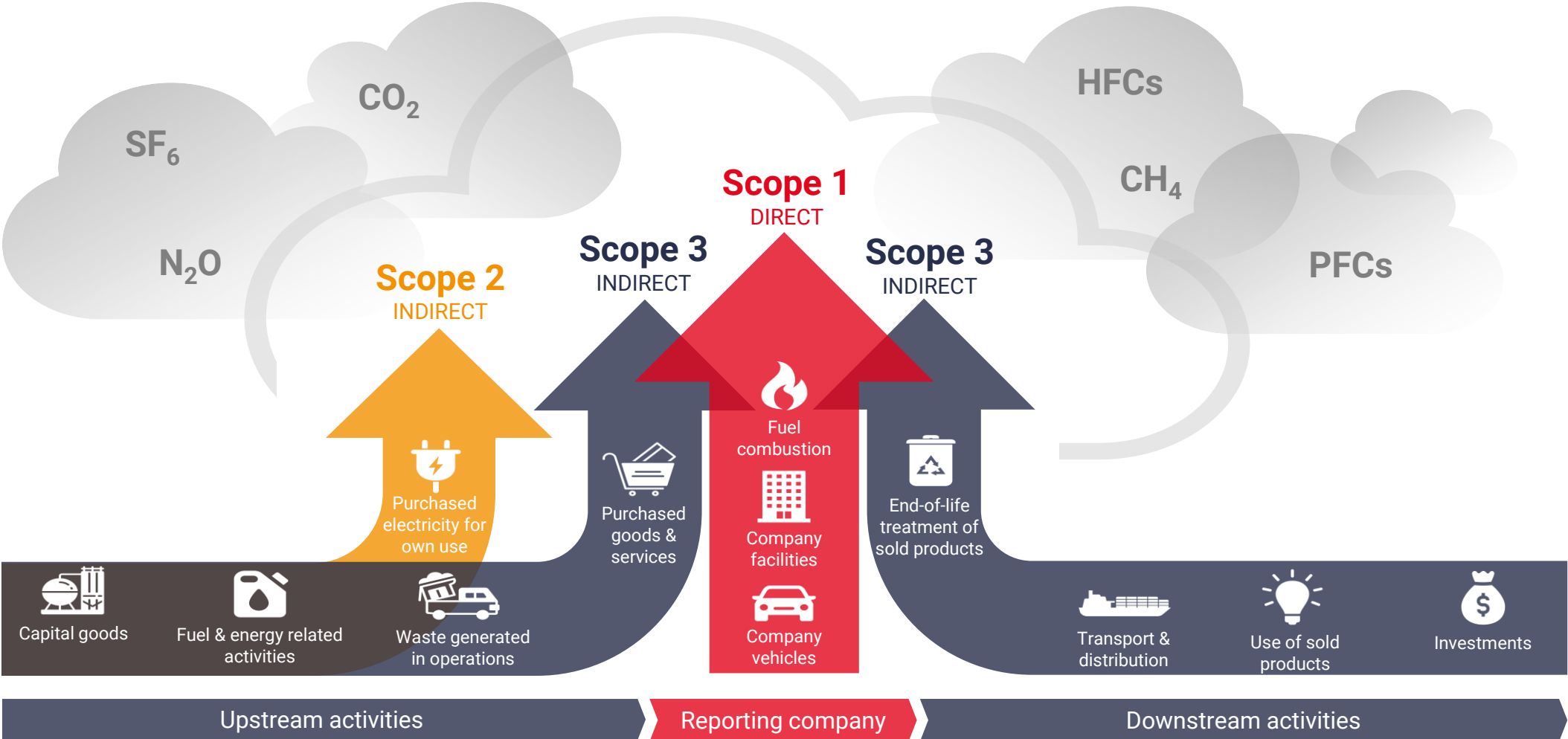
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1	Introduction and housekeeping	13:00 – 13:05
2	STL Partners: How can telcos support enterprise net zero aspirations?	13:05 – 13:40
2.1	What is scope 4, and what levels of enablement solutions can operators offer?	13:05 – 13:25
2.2	What is the enterprise demand for enablement services?	13:25 – 13:40
3	Red Hat: How can telcos develop low carbon products and services?	13:40 – 13:50
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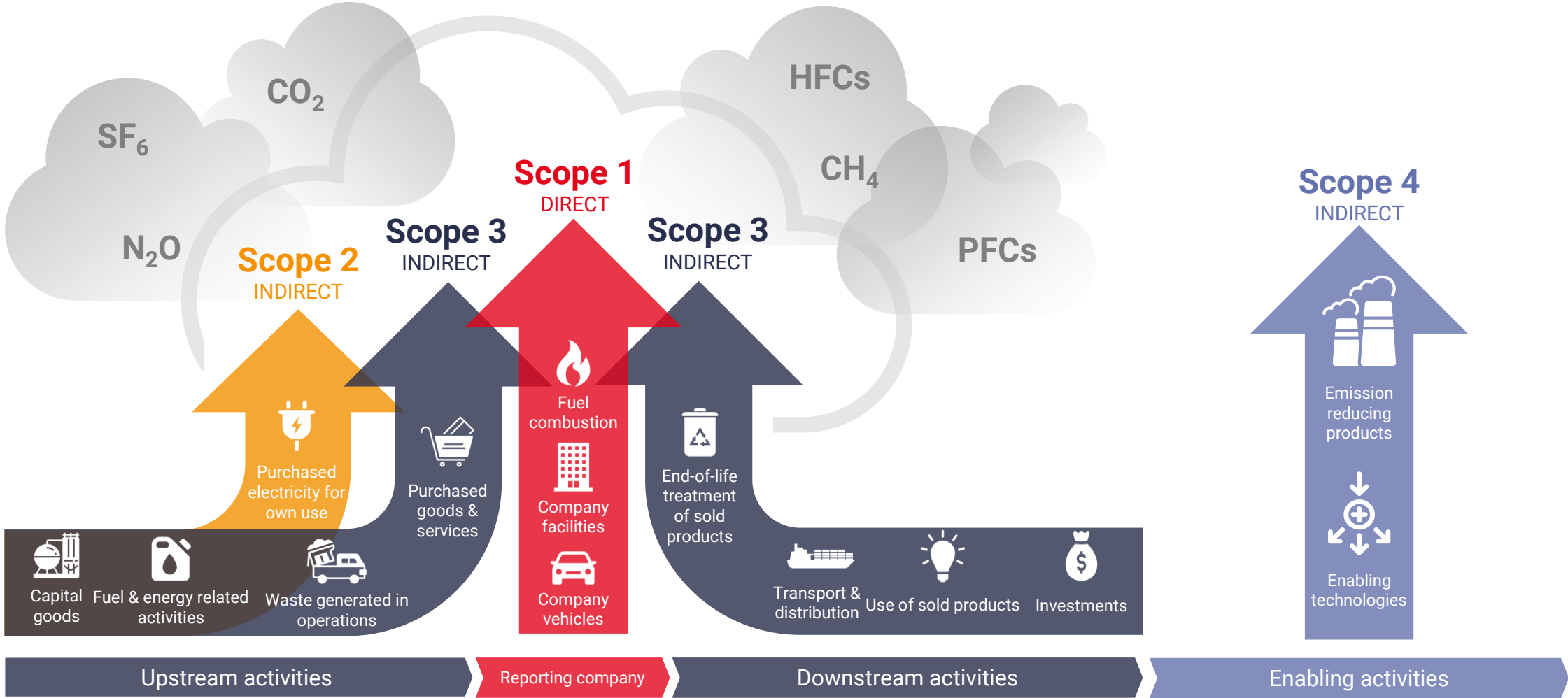
What is scope 4, and what levels of enablement solutions can operators offer?

Jack Hurley, Consultant

Enterprises are increasingly focused on how to reduce their Scope 1, 2 and 3 emissions



Enterprises are increasingly focused on how to reduce their Scope 1, 2 and 3 emissions



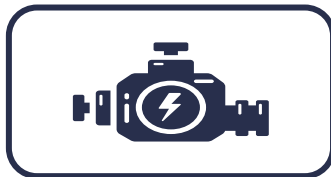
Scope 4 emissions involve the enablement of products and services to reduce emissions

What are scope 4 emissions?

Scope 4 includes emission reductions that occur outside a product's life cycle or value chain but as a result of the use of the product



Energy-efficient phone battery



Hybrid engines



Low-temperature detergents

Why are scope 4 emissions important to telcos?



New and large revenue opportunity

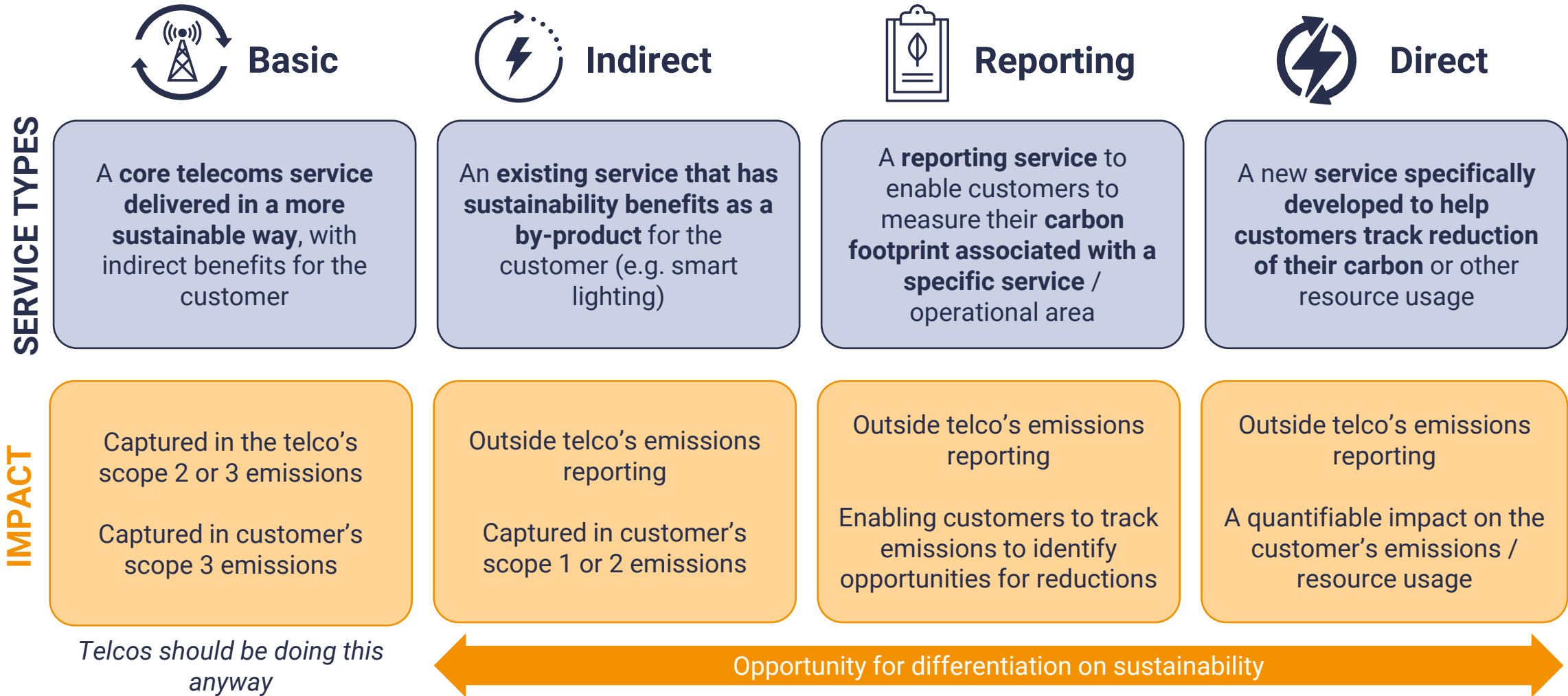


Short term: Differentiation potential



Long-term: Remain competitive

We have identified four levels of sustainability enablement services



There are multiple examples of all four in the use case directory

SERVICE TYPES



Basic



Indirect



Reporting



Direct

A core telecoms service delivered in a more sustainable way, with indirect benefits for the customer

An existing service that has sustainability benefits as a by-product for the customer (e.g. smart lighting)

A reporting service to enable customers to measure their carbon footprint associated with a specific service / operational area

A new service specifically developed to help customers track reduction of their carbon or other resource usage

Upgrade to or integrated with existing service

IoT or value added service beyond connectivity

Add-on to existing service or sold separately

New service sold separately

EXAMPLE



Engage 2025 – Recycling mobile phones



Building Management as a Service (BMaaS)



Carbon Network Dashboard

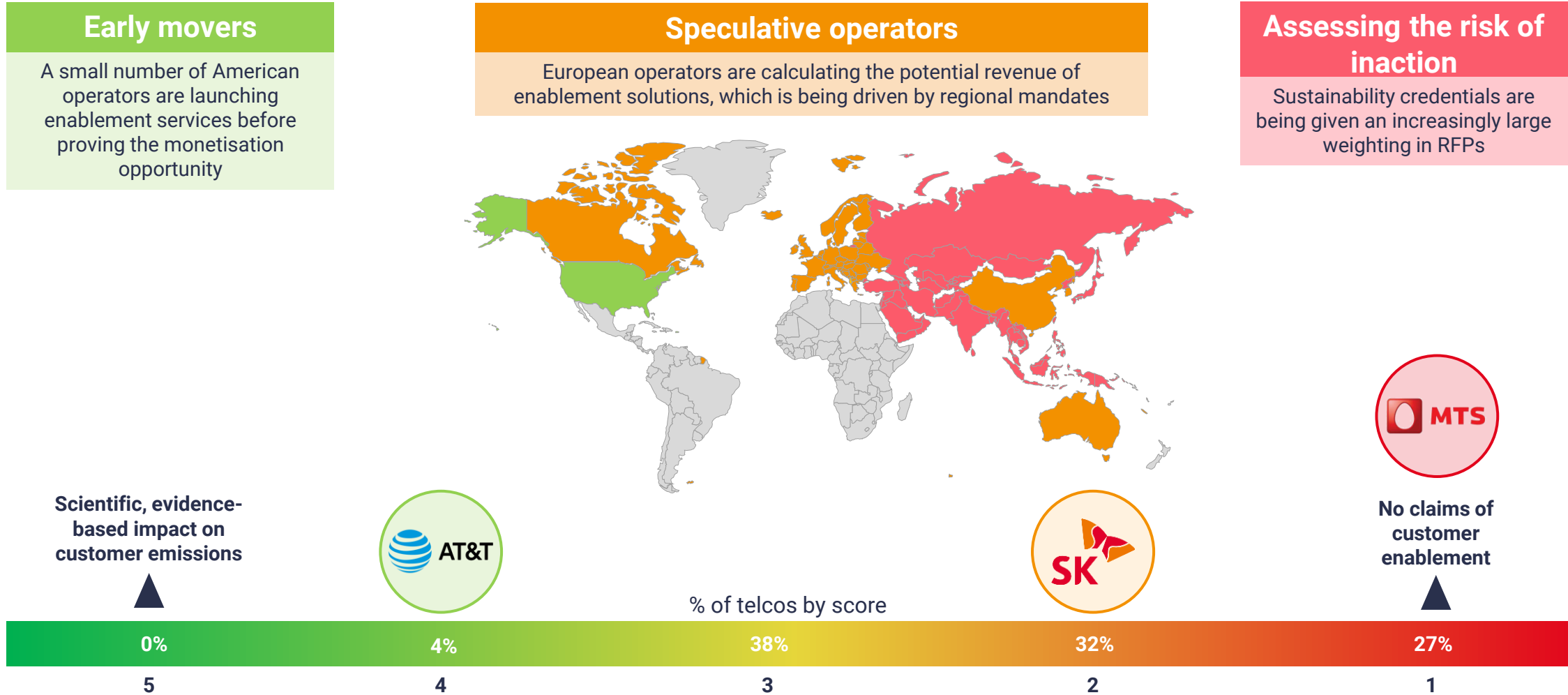


Eco-Driving

Telcos should be doing this anyway



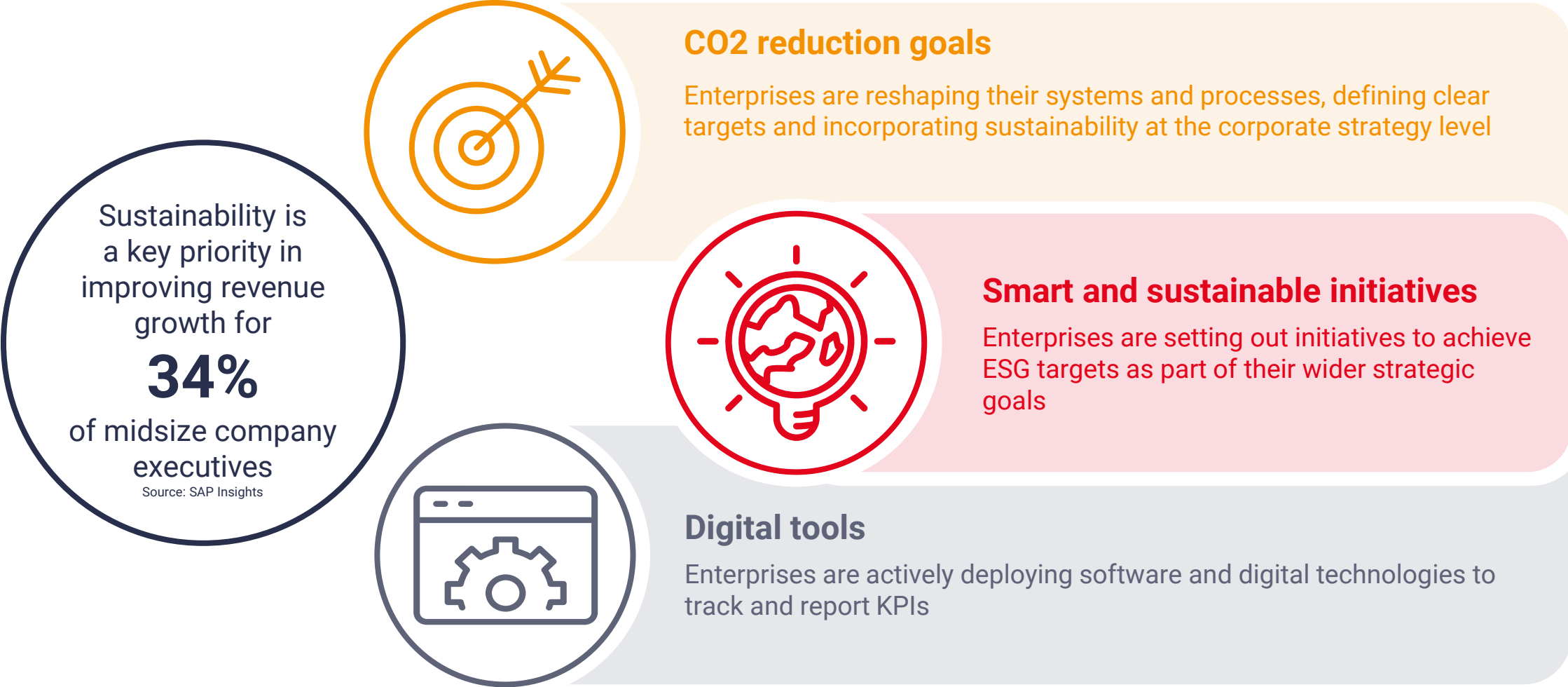
Telcos are at varied stages of their journey to enable customers in reaching net-zero



What is the enterprise demand for enablement services?

Miran Gilmore, Senior Consultant & Sustainability Lead

Enterprises are beginning to prioritise sustainability and define goals and initiatives, but progress is limited



Sustainability is a key priority in improving revenue growth for 34% of midsize company executives
Source: SAP Insights

CO2 reduction goals
Enterprises are reshaping their systems and processes, defining clear targets and incorporating sustainability at the corporate strategy level

Smart and sustainable initiatives
Enterprises are setting out initiatives to achieve ESG targets as part of their wider strategic goals

Digital tools
Enterprises are actively deploying software and digital technologies to track and report KPIs

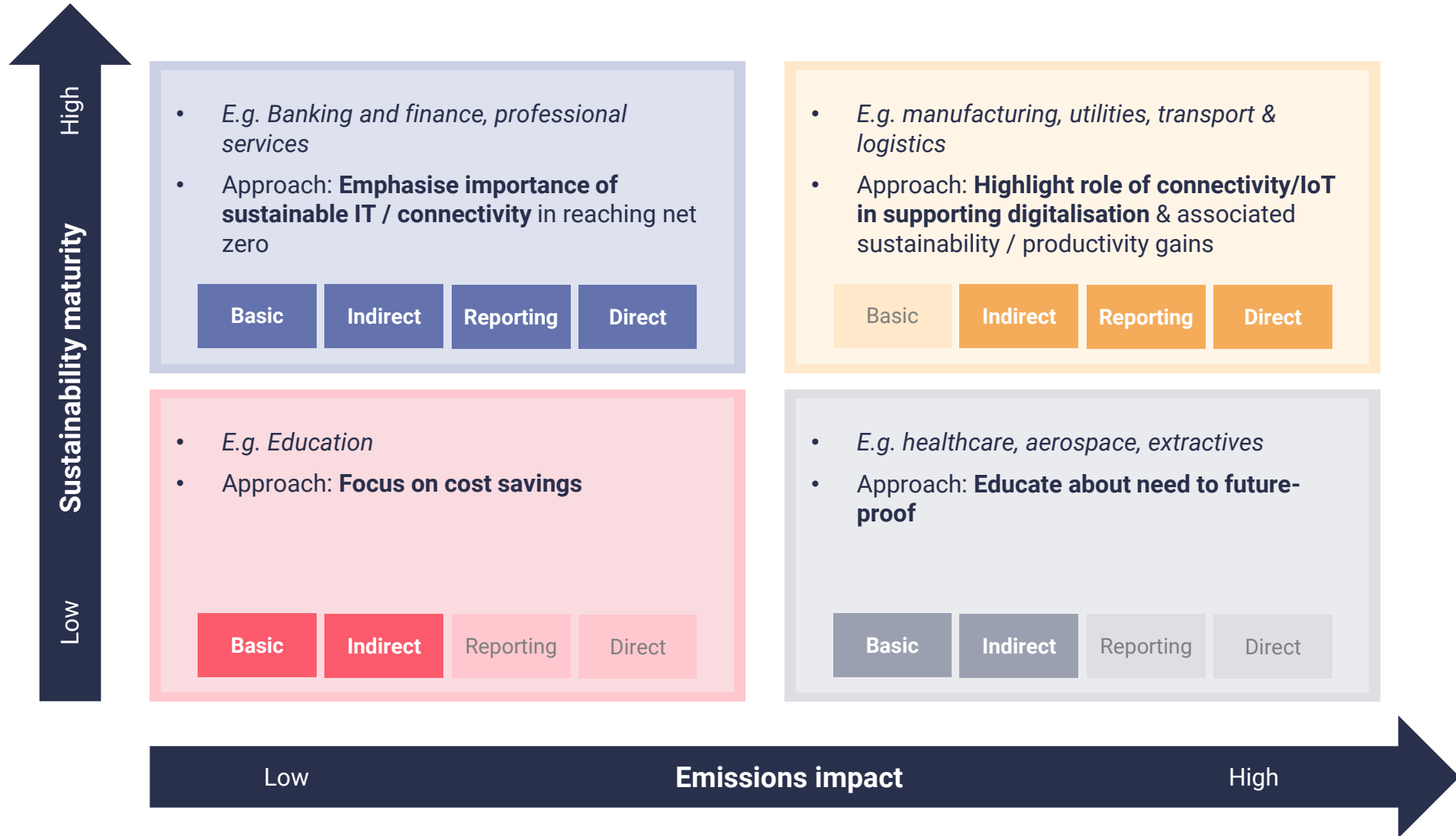
Different stakeholder groups are interested in low carbon products and services for different reasons

	Drive to increase efficiencies and <u>reduce costs</u>	Increasing pressure to <u>reduce Scope 1, 2 and 3 emissions</u>	Increasing pressure to <u>report on Scope 1, 2 and 3 emissions</u>
Enterprise	● (Green)	● (Green)	● (Green)
Government	● (Green)	● (Orange-Green)	● (Orange)
SMEs	● (Green)	● (Red)	● (Red-Orange)

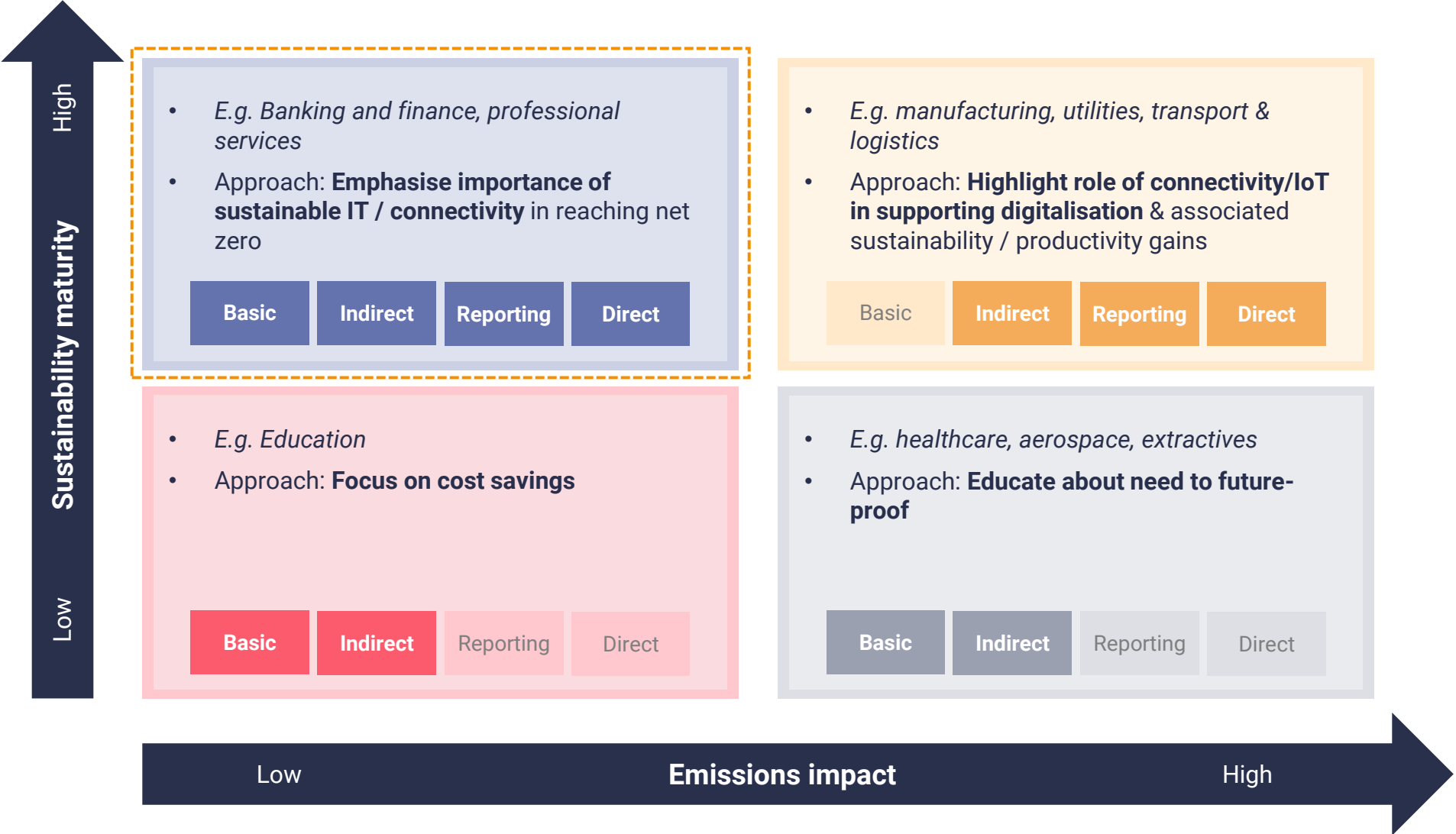
Note: Based on conversations with European, North American and APAC operators

Key priority
 Increasing priority
 Not currently a priority

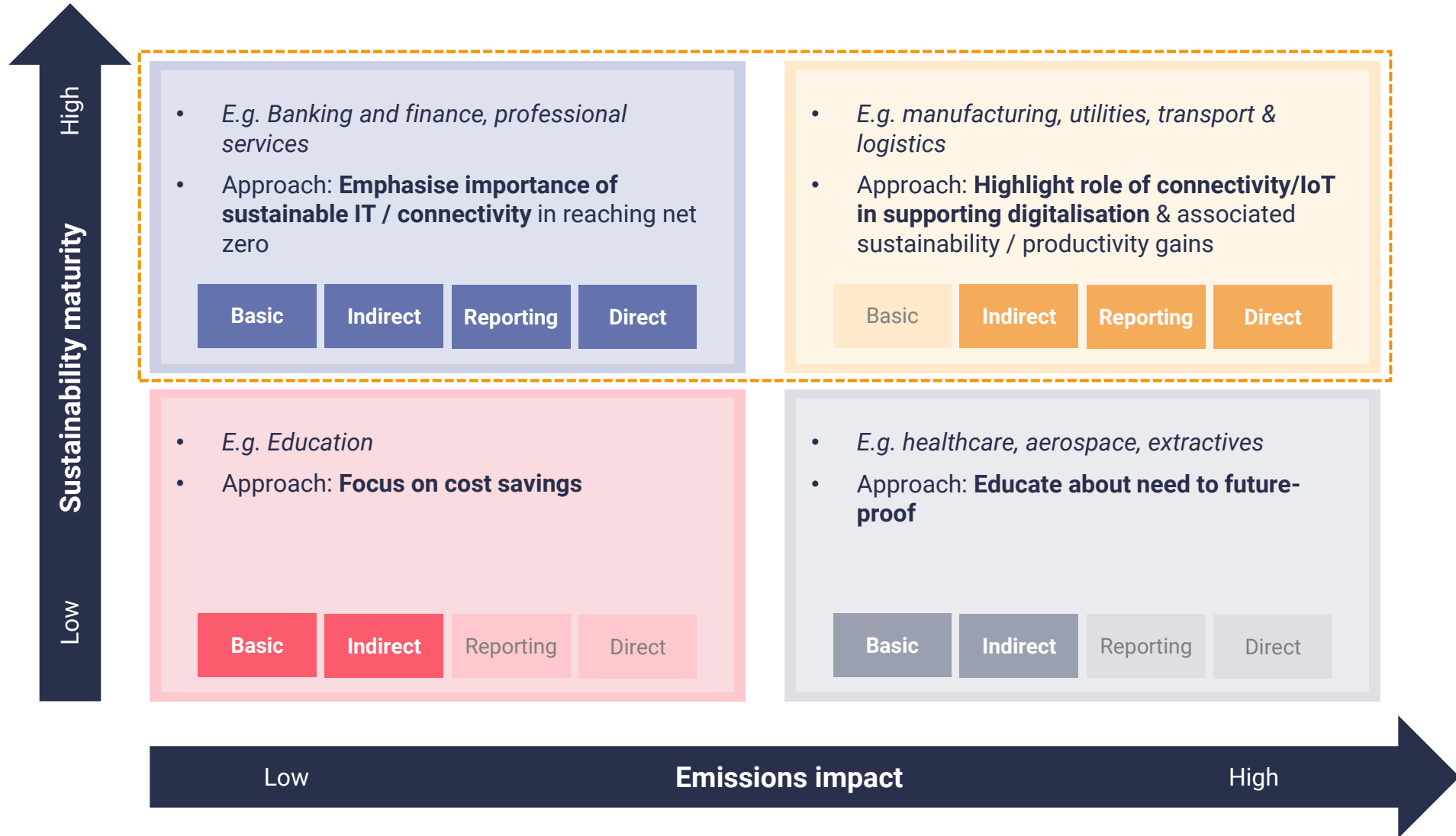
Telcos should focus enablement efforts on industries that are more mature in sustainability



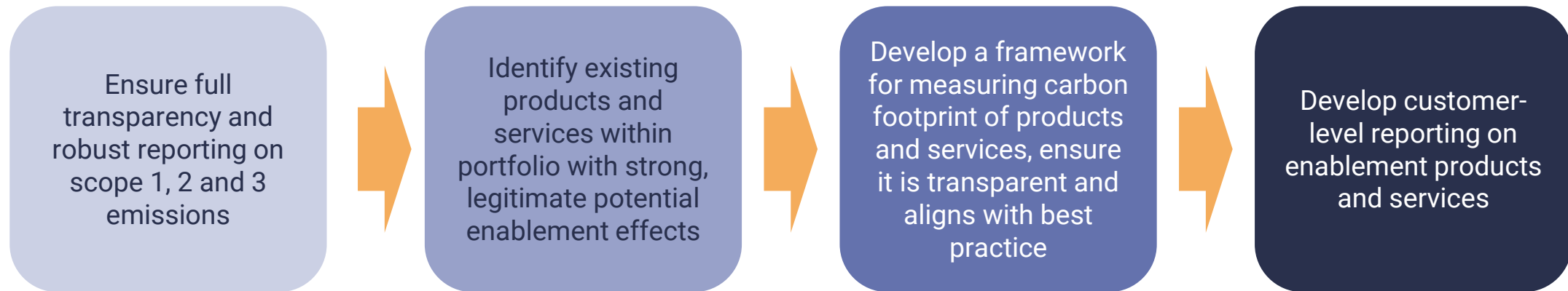
The shorter-term opportunity sits with industries where IT & networking have a tangible impact on overall emissions



Telcos can offer direct enablement services for carbon-intensive industries, but must tailor these to OT not IT



There are four key stages for telcos and ICT players developing enablement products and services



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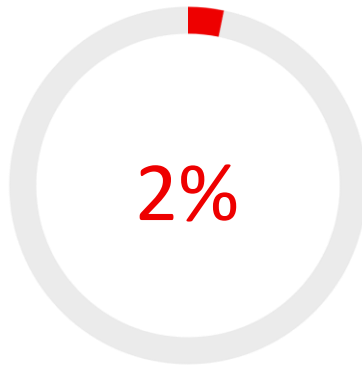
Enterprise net zero aspirations and how telcos can support

Hanen Garcia, Global Telco Solutions Manager at Red Hat



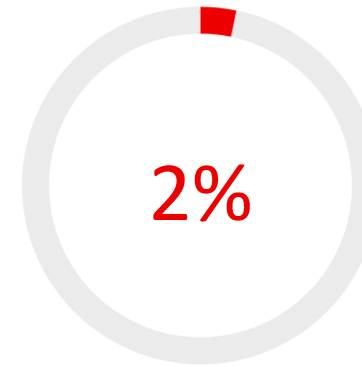
Where does the telecommunications industry stand?

Overall energy usage by the telecoms industry needs to come down as the industry consumes between 2% and 3% of global energy currently



Telecommunications

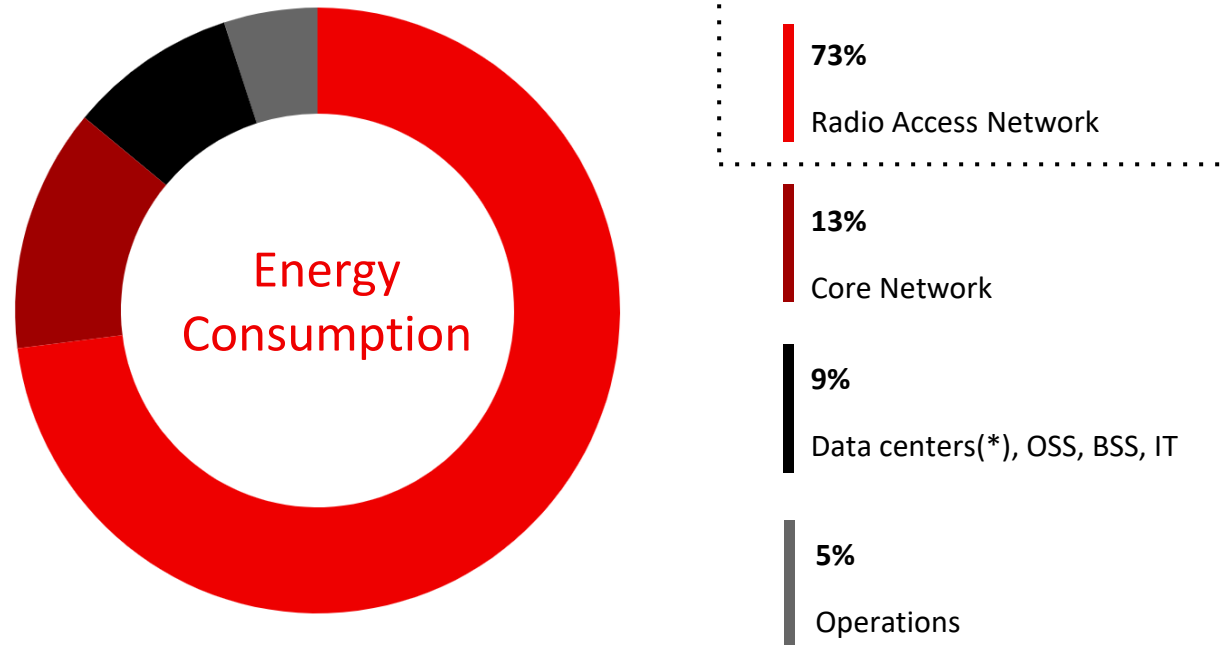
The telecoms industry uses a staggering 2% to 3% of the total power consumption of humanity



Data Centers

Every compute resource accessible, are currently using 2% of the world's energy

Where mobile operators use energy in their network operations?



Net-Zero operational GHG emissions by 2030



“We will reduce the impact we have on the environment and preserve the planet for generations to come. We all play a role in reducing our carbon footprint and this is just one of the many ways that Red Hat is doing our part.”



—
Matt Hicks
President and Chief Executive Officer, Red Hat

What is Red Hat doing?



Open Source

Supporting the creation of open source tools and scientific methodologies.



Energy efficiency

Combining tools and features to reduce power consumption on mobile networks.



Reporting

Enabling organizations to report the impact of software in CO2 emissions.

Dimensions of Optimizations

For Power Saving and Energy Efficiency



Node-Level Optimizations

Hardware and OS optimizations.



System-Level Optimizations

Multi-Cluster workload placement & scheduling.



Cluster-Level Optimizations

Scheduling, scaling and load optimizations.



Domain-Level Optimizations

RAN, 5GC, MEC optimizations.

Upstream collaborations

A sneak peak of projects



KEPLER

Kubernetes-based Efficient Power Level Exporter (KEPLER) is one of the tools for the accurate identification of energy consumption on pods.



CLEVER

Container Level Energy-efficient VPA recommender to enable energy consumption metrics to be used for the vertical pod autoscaling for an application.



KEDA

Native CO2 and energy aware auto scaling capabilities to Kubernetes event-driven autoscaling.



PEAKS

Power Efficiency Aware Kubernetes Scheduler (PEAKS) on a Kubernetes scheduler that will take power metrics into consideration for the scheduling of an application.

Sources:

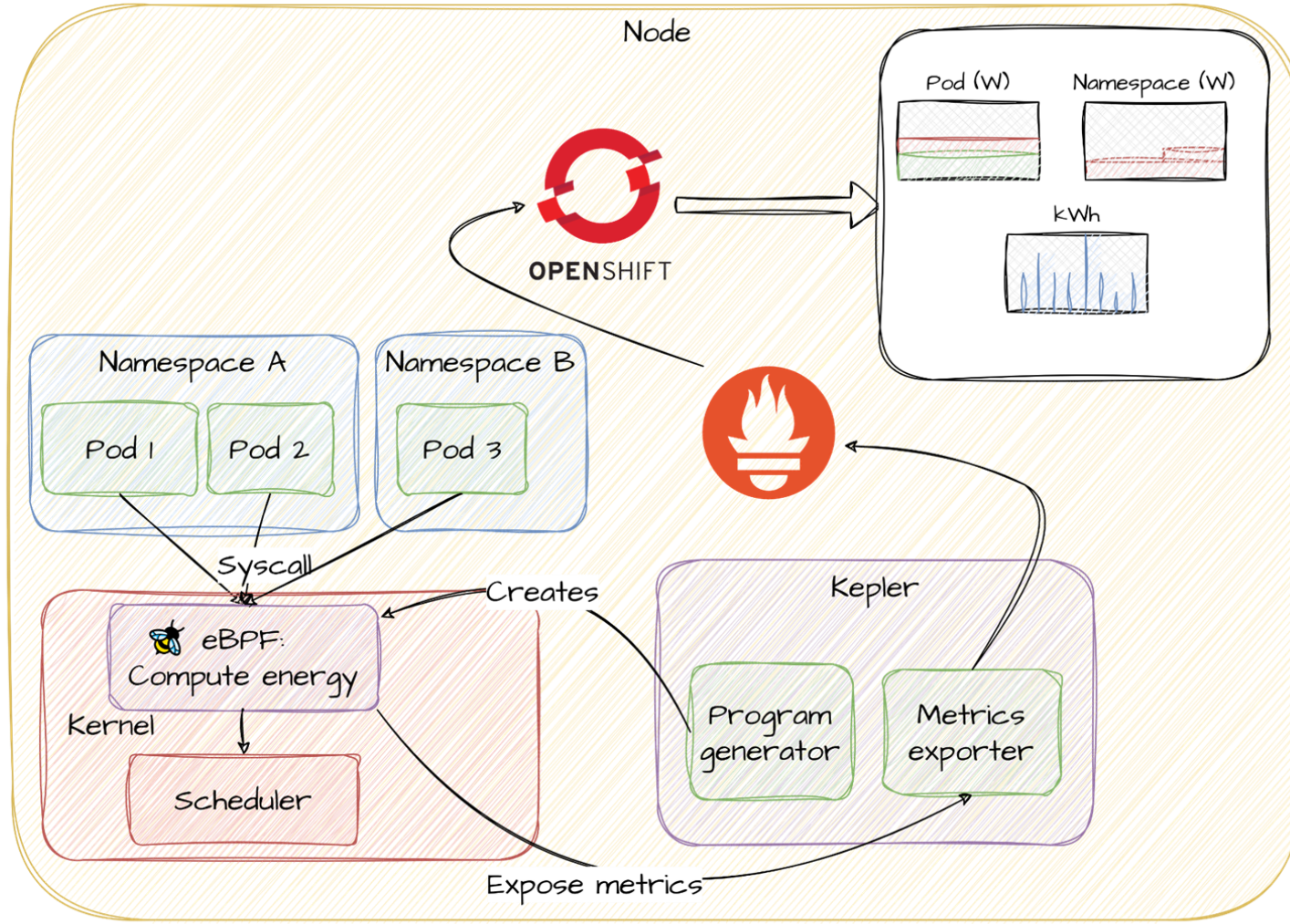
<https://sustainable-computing.io>

<https://www.cncf.io/projects/keda/>

<https://github.com/sustainable-computing-io/clever>

<https://github.com/sustainable-computing-io/peaks>

OpenShift Power Monitoring Architecture



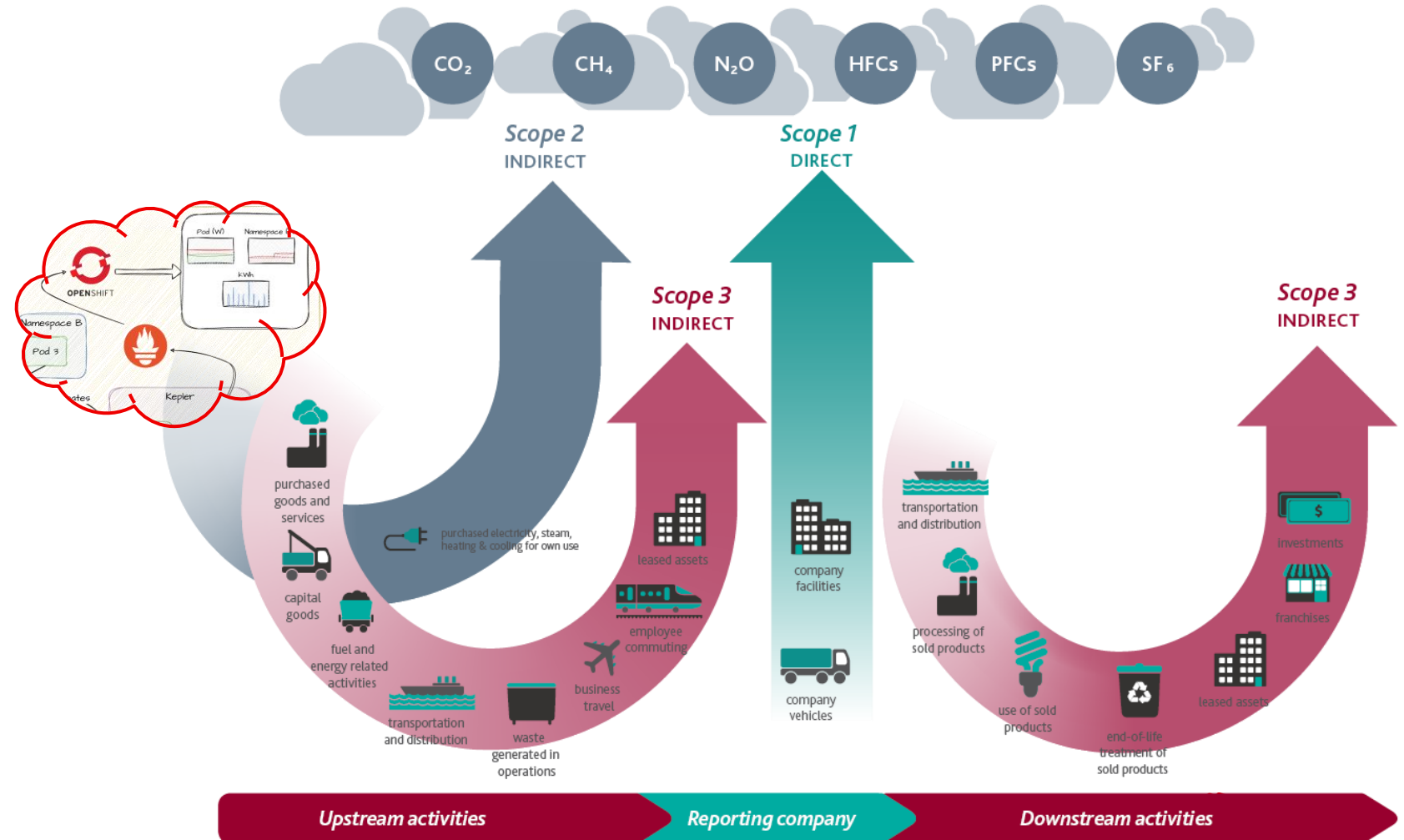
Improving GHG protocol scope reports



Provide tools and features to optimize power consumption for the IT infrastructure



Enable organizations to report the impact of software in CO2 emissions.



Thank you

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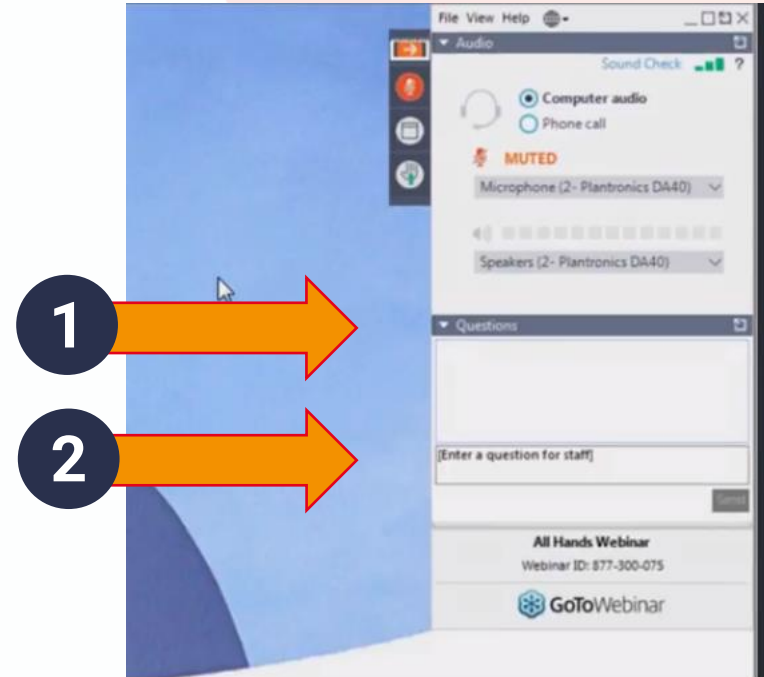
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For our Q&A...

Please submit any questions using the GoToWebinar control panel



Our panel discussion

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Thank you for joining!

Please visit our website for more

www.stlpartners.com

For any further questions, please reach out to:

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STL PARTNERS

Backup: New Agenda