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# Net Zero & Sustainability

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# Agenda

1

Climate Change

2

India's Response to  
Climate Change

3

Net Zero Journey

4

Sustainability &  
Industry Approach



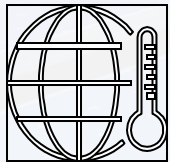
## Climate change is a defining challenge for all businesses

Climate impacts and responses will transform established sectors and provisioning systems over coming decades.

- All businesses in all sectors will be affected by this transition, and all will be expected to contribute to the solutions.

Every effective strategy to limit climate change requires a transition to net zero emissions.

- Making and implementing a credible decarbonisation strategy is challenging for businesses, particularly in emissions-intensive sectors.



Observed global warming till date is assessed to be 1.09 degrees above pre-industrial levels.

Estimated date of crossing 1.5 degree increase: early 2030's, 10 years earlier than previous estimate.





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## Global commitments to transition towards net zero emissions

800

Companies have SBTi aligned NZE targets

88%

Global GHG emissions covered  
(with country targets in policy document, proposed legislation and in law).

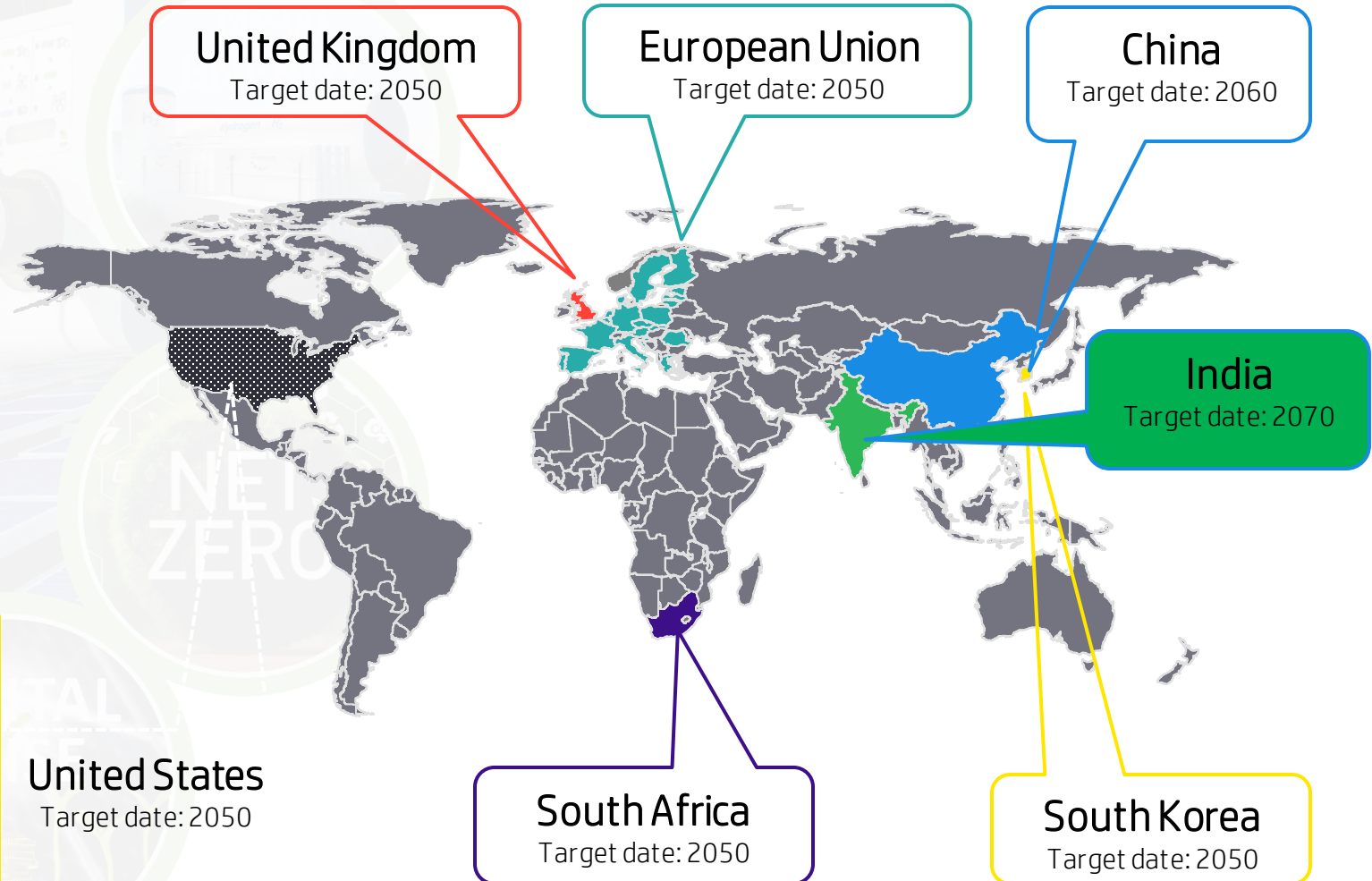
140

Countries have set Net Zero targets

Net zero targets currently cover 24.6 Giga tCO<sub>2</sub> out of global emissions of ~40 Giga tCO<sub>2</sub>. (Fossil + Land use). For 1.5 degree target, the remaining carbon budget is **400 GigatCO<sub>2</sub>**.

At current emissions levels, carbon budget will be exhausted in **10 years**.

**European Companies** are also looking at setting Value Chain (Scope 3) Emissions reduction targets



**Net Zero Timelines announced by Governments**



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## India at COP 26: 'Panchamrit' to deal with Climate Change

1

India will reach its non-fossil energy capacity to 500 GW by 2030

2

India will meet 50 percent of its energy requirements from renewable energy by 2030.

3

India will reduce the total projected carbon emissions by one billion tonnes from now onwards till 2030.

4

By 2030, India will reduce the carbon intensity of its economy by less than 45 percent.

5

By the year 2070, India will achieve the target of Net Zero. These panchamrits will be an unprecedented contribution of India to climate action.



*India is on the anvil of launching National Carbon Market in 2023*



## India's 2nd Nationally Determined Contribution to UNFCCC : Key Highlights (Aug 2022)

- India's updated NDC represents the framework for India's transition to cleaner energy for the period 2021-2030.
- Based on our national circumstances and the principle of **common but differentiated responsibilities and respective capabilities** (CBDR-RC), it reaffirms India's commitment to work towards a low carbon emission pathway, while simultaneously endeavouring to achieve SDGs.

1

Reduce emissions intensity of GDP by 45% by 2030 from 2005 levels

2

Achieve 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030

3

Emphasis on changing lifestyle for the environment (the 'LiFE'), as a key in tackling climate change

4

Create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030.



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## India at COP 27: LT – LCDS



### India's Long-term Low-Carbon Development Strategy

#### ELEMENTS OF INDIA'S LONG-TERM LOW-EMISSIONS DEVELOPMENT STRATEGY

- Low carbon development of electricity systems consistent with development.
- Develop an integrated, efficient, inclusive low-carbon transport system.
- Promote adaptation in urban design, energy and material-efficiency in buildings, and sustainable urbanisation.
- Promote economy-wide decoupling of growth from emissions and development of an efficient, innovative low-emission industrial system.
- CO<sub>2</sub> removal and related engineering solutions.
- Enhancing Forest and vegetation cover consistent with socio-economic and ecological considerations.
- Economic and financial aspects of low-carbon development.



### India's long-term low-carbon development strategy





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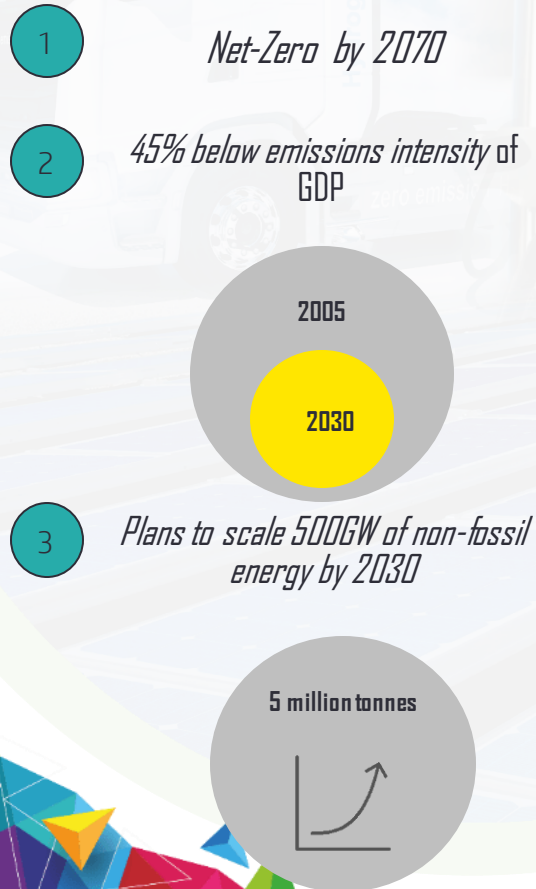
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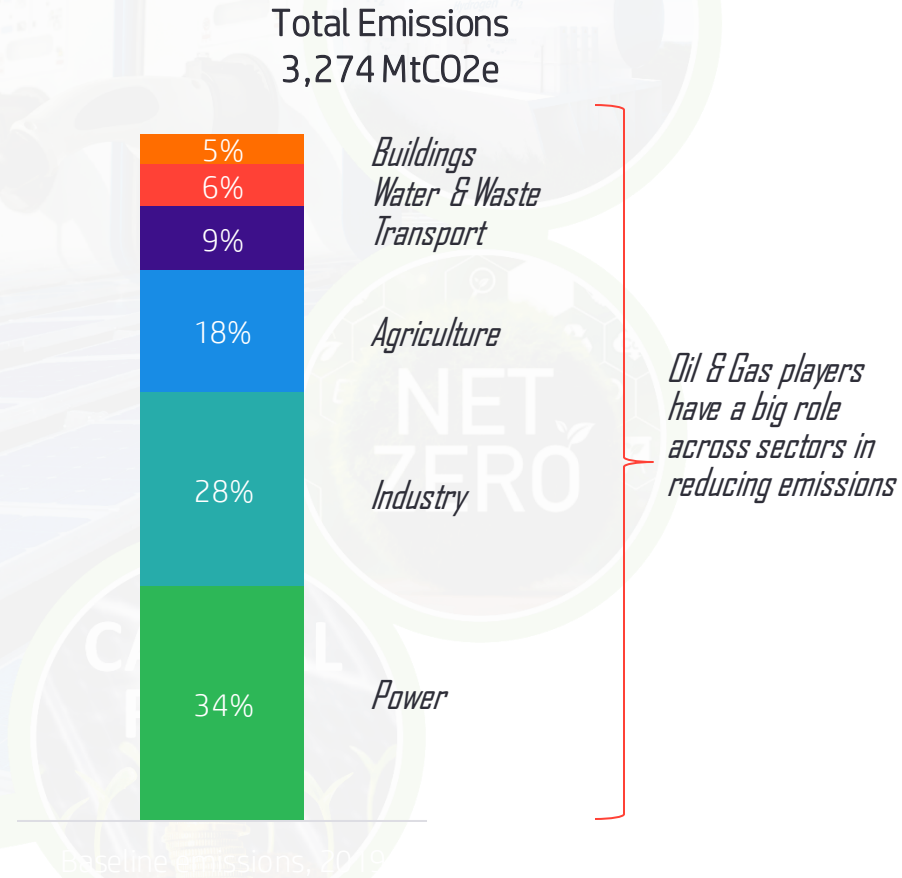
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# India's focus on Climate Change : *Ambition to Action*

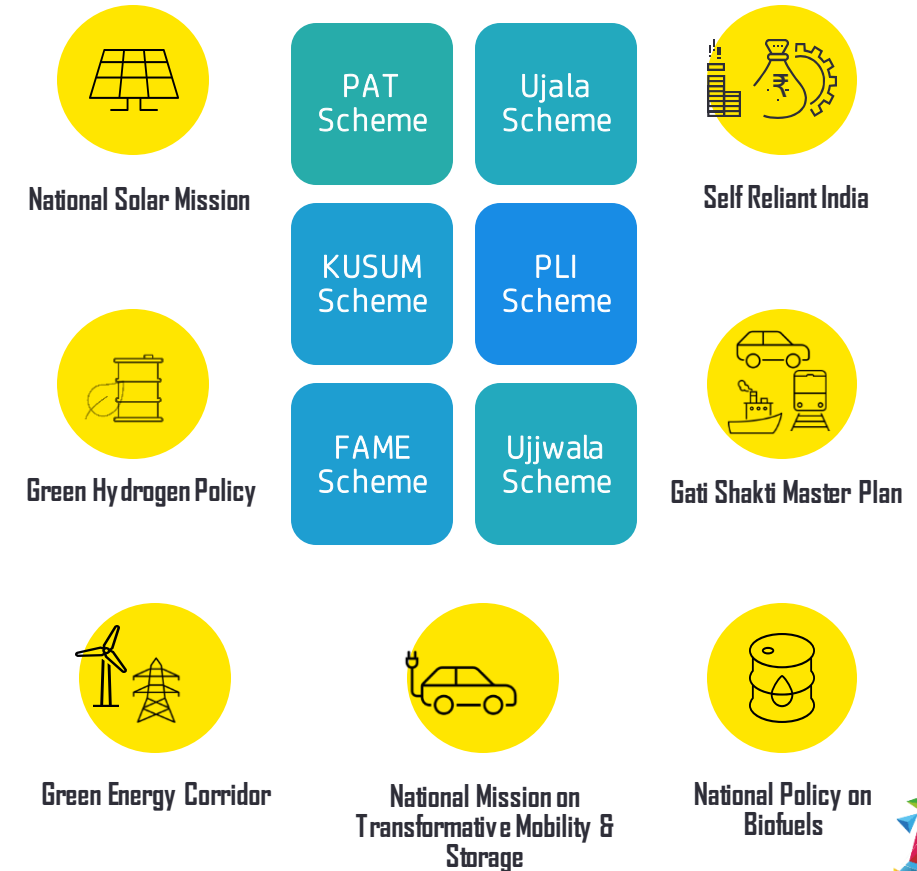
## India's Targets and Commitments



## India's current carbon emission mix



## National Initiatives, Policies Aligned with Decarbonization







## India's commitment to Net Zero

### Power

# 1

- Coal share from 74% in 2019 is expected to reduce to 30% and 5% in 2030 and 2040 under SDG scenario
- Correspondingly RE – wind share would increase from 4% to 15% in 2030 and 22% in 2040 and solar 3% in 2019 to 25% and 38% in 2030 and 2040
- Natural gas and Nuclear will have natural BAU

### Transport

# 2

- Oil shared nearly 94% of total energy consumption in 2019 and is expected to reduce to 80% in 2030 and 63% by 2040
- EV share would raise from 2% in 2019 to 5% in 2030 and 14% in 2040.
- Bio energy like ethanol and compressed biogas are also expected to raise from 1% in 2019 to 6% and 8% in 2030 and 2040 respectively

### Buildings

# 3

- Buildings are expected to grow significantly however the energy consumption is expected to be 155 and 190 mtoe in 2030 and 2040 from 218 mtoe in 2019
- Bioenergy consumption is expected to be reduced to more than half
- Solar rooftop may share 4% of energy consumption by 2040

### Industries

# 4

- Industry consumption would increase to 290 mtoe in 2030 and 360 mtoe in 2040 from 224 mtoe in 2019.
- Even in 2040, coal is expected to share 36% of under SDS scenario, followed electricity and Natural gas
- Oil shares half of current share while NG is expected to double



# India's commitment to Net Zero

The guidelines 'Foundations for Science-based net-zero target setting in the Corporate Sector' developed by CDP and Science Based Targets initiative (SBTi) provide a framework to formulate, assess, and implement science-based corporate net-zero targets.

## Different components of a net-zero roadmap

### Decarbonization

Reducing the GHG emissions emitted from the source

The companies should follow a mitigation hierarchy that priorities eliminating sources of emission within the **value chain** of the company over compensation or neutralisation measures.

### Neutralization

Carbon removal from the atmosphere from afforestation or CCS projects

Land based climate strategies should prioritize interventions that help preserve and enhance existing terrestrial carbon stocks within and beyond the value chain of the company Land-based

### Compensation

Compensate emissions with carbon credits from social projects

The compensation and neutralization measures should

- Ensure additionality
- Have measures to assure permanence of the mitigation outcomes
- Address leakages and
- Avoid double counting



# Market Dynamics of Decarbonization

## Government

### European Green Deal

The European Green Deal Investment Plan (EGDIP) is expected to mobilise

**€100b**

investments through 2021-27

Emission reductions

**114**

Countries have or plan to set more ambitious targets for cutting emissions.

Renewables target

**250**

Cities and more, worldwide have targets for 100% renewable energy, and 10,000 have targets to reduce GHG emissions.

## Corporates

### Renewables targets

**224**

Companies globally have committed to 100% renewable energy targets.

Carbon neutral

**23%**

of Fortune 500 companies have a public commitment to be carbon neutral by 2030.

## Consumers

### Gen2050

Energy Institute has issued Generation 2050 manifesto – a strong message on Climate

Change by **1,000**

young energy professionals.

According to the manifesto,

almost **60%** of

Generation 2050 chose a career in the energy industry because they view it as a way to tackle climate change, while

**90%** believe it gives

them greater scope to address environmental issues.

## Financial Markets

### Analysts

Analysts are aggressively probing oil majors' emissions and alternative energy investments.

### Financial Results

Companies better prepared to manage energy transition risks have generated higher returns.

**Net Zero Carbon**



# India's Science based Target Initiatives (SBTi) toward Net Zero

## Emissions inventory

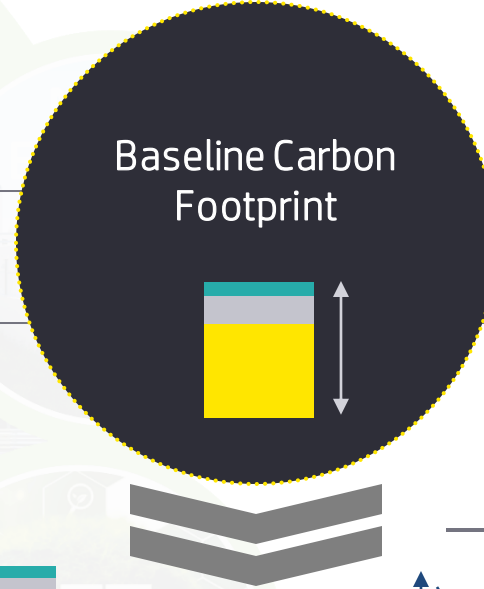
- **Scope 1** All direct emissions from the activities of an organization or those under its control

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- **Scope 2** Indirect emissions from electricity purchased and used by an organization

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- **Scope 3** All other indirect value chain emissions from activities of an organization, excluding electricity



## Emission management

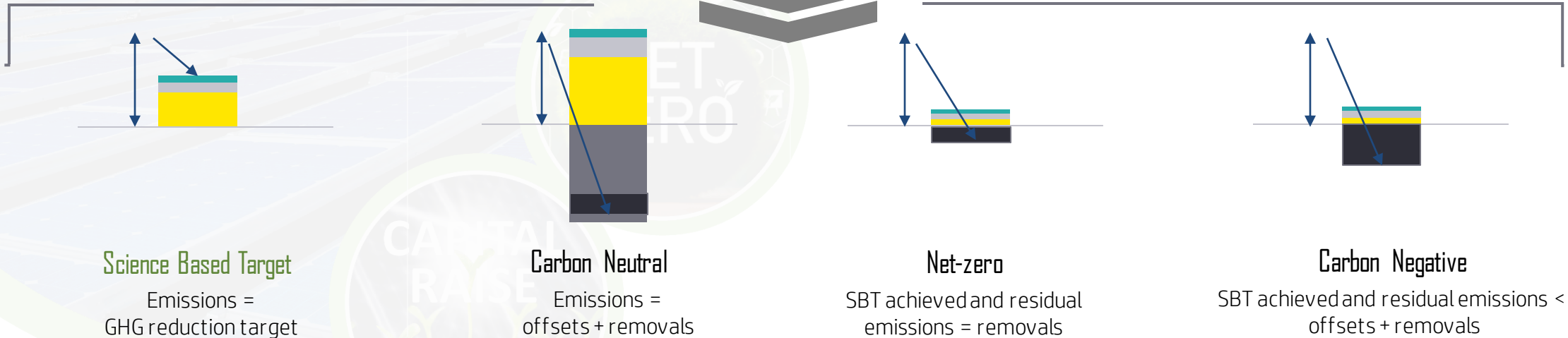
- **Reductions** Organic decreases in emissions that reduce the carbon footprint

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- **Offsets** Carbon credits purchased that help avoid equivalent emissions elsewhere

---

- **Neutralization & Removals** Long-term carbon sequestration via technical solutions (e.g., CCS) or natural carbon sink effects (e.g., biochar)



**SBTi Net-Zero Standard** defines corporate net-zero as reducing scope 1, 2, and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5°C-aligned pathways.



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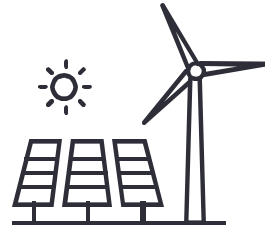
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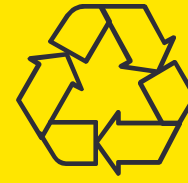
## Key decarbonisation levers for achieving Net Zero Emissions



Energy efficiency



Renewable energy



Circular economy



Biomass as  
fuel / feedstock



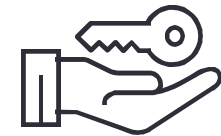
Hydrogen as  
fuel / feedstock



Carbon Capture Usage  
and Storage, CCUS



Electrification of heat



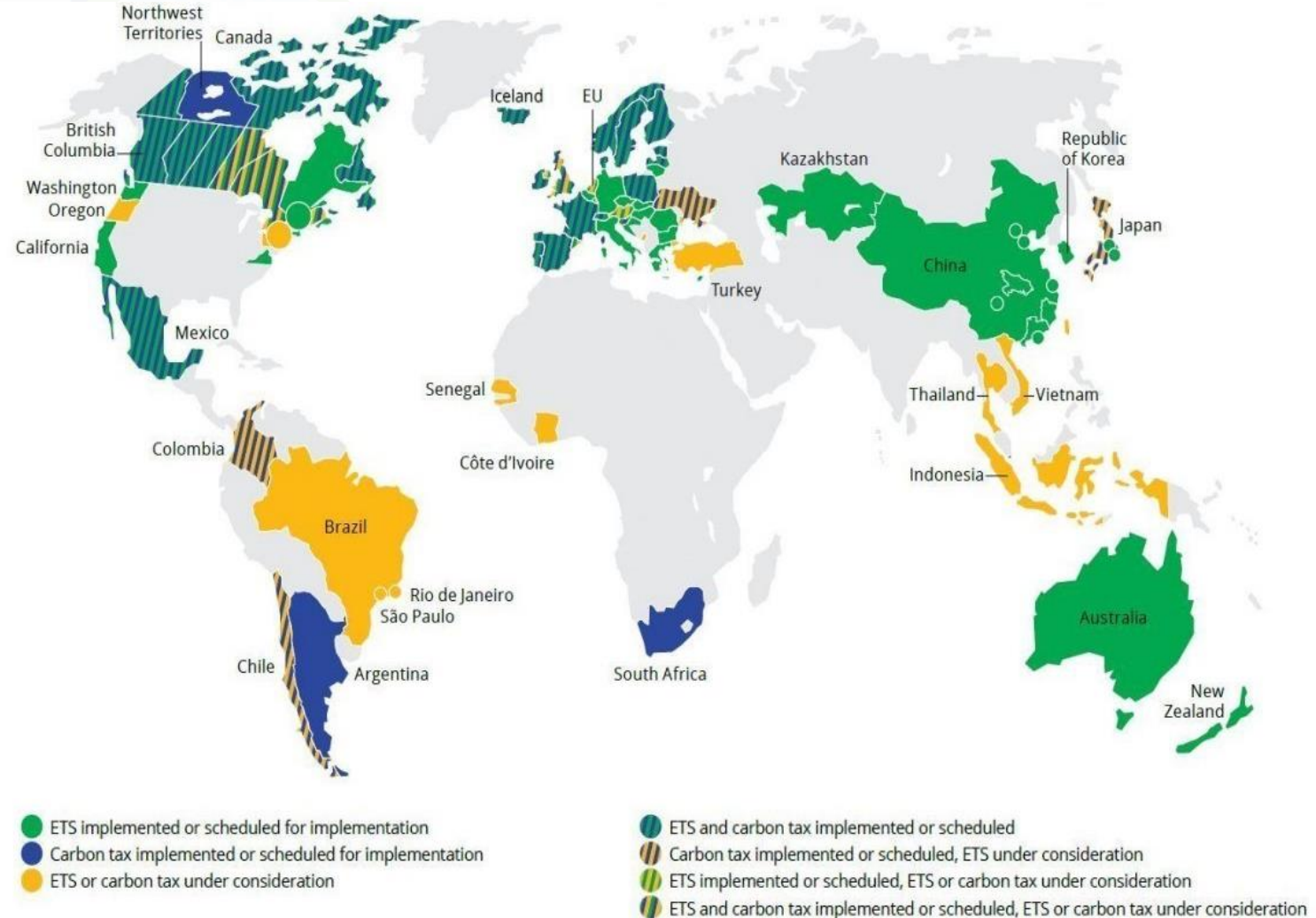
Other novel  
technologies



## Global landscape of carbon regulations and carbon markets

### Carbon Regimes

- 68 carbon pricing initiatives implemented/scheduled
- 32 ETS and 36 carbon taxes
- 46 national, and 36 subnational jurisdictions
- Covering 12 GtCO<sub>2</sub>e (23% of global GHG emissions)
- US\$45 billion raised in carbon pricing revenues in 2019
- More than 14,500+ registered crediting projects to date, generating almost 4 billion tCO<sub>2</sub>e of cumulative carbon credits
- Forestry sector credits make up 42% of all credits issued in last five year



# Indian Carbon Market (ICM): Operational set-up and a Phased approach

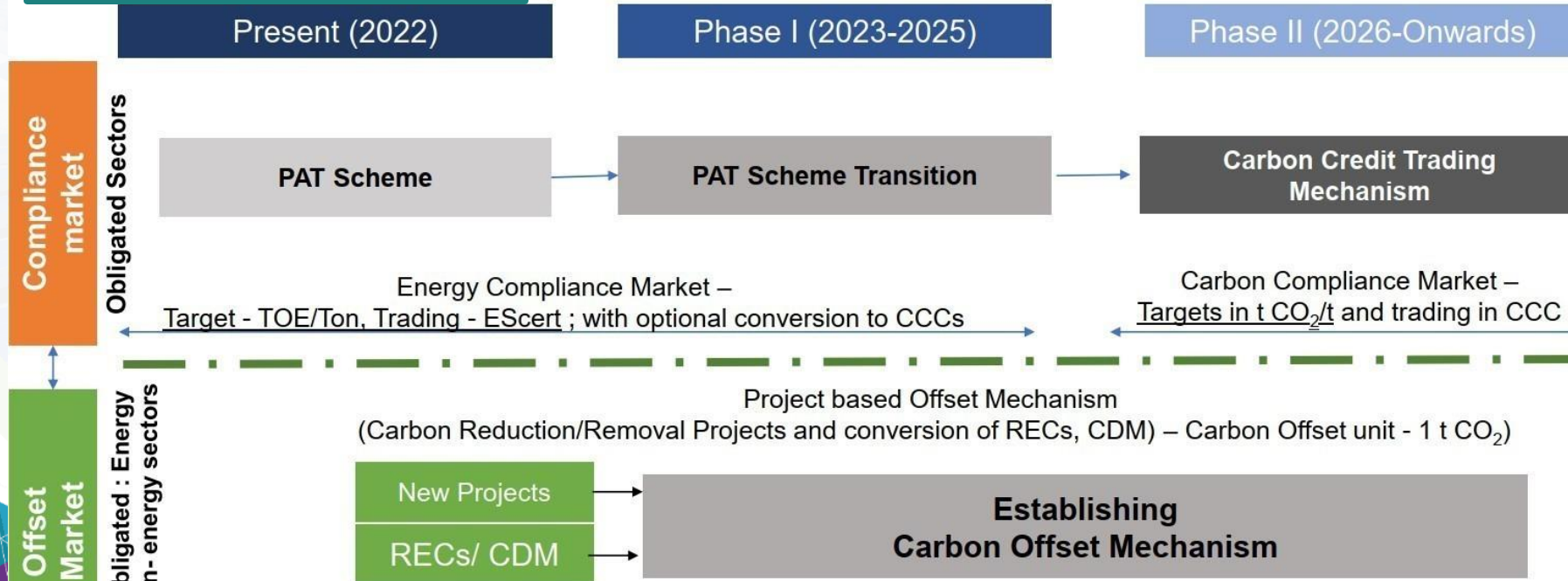
## Supply of credits

**Perform Achieve and Trade (PAT) Scheme:** 14+ Million t CO<sub>2</sub> based on approx. 5 million unsold ESCerts  
 Conversion 1 ESCert (1 toe ~ 3.1 t CO<sub>2</sub>)

**Renewable Energy Certificate (REC):** 10 Million t CO<sub>2</sub> based on a closing balance of 13 million REC (30th Sept'22)  
 Conversion- 1 REC (1 MWh ~ 0.79 t CO<sub>2</sub>)

**Clean Development Mechanism (CDM):** 15 Million unused CERs based on issuance by 2020

## Proposed structure of the ICM



## Type of Carbon Credit Certificates (CCCs)

- Mandatory- Carbon Credit Certificates (M-CCC)
- Converted CCCs (C-CCC)
- Offset Carbon Credit Certificates (O-CCC)

The offset mechanism will focus on incentivizing carbon reduction projects from non obligated –energy/non-energy sectors



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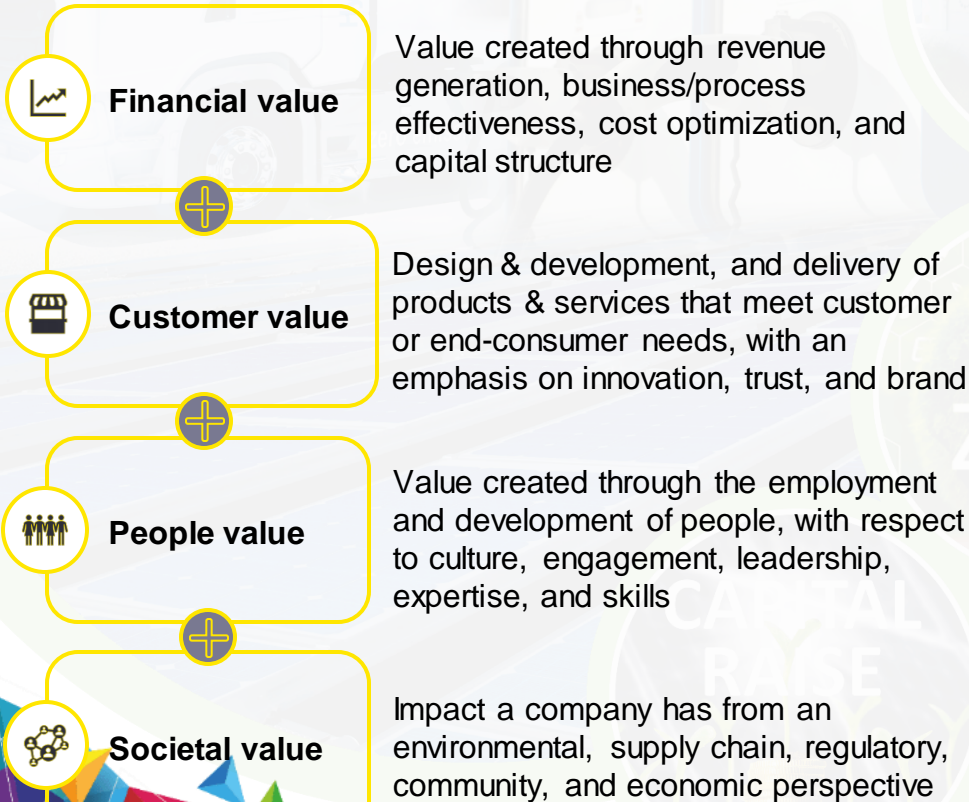


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# Long-Term Value (LTV) & Sustainability as fundamental interlinked disruptors changing the competitive landscape and decision-making processes of organizations

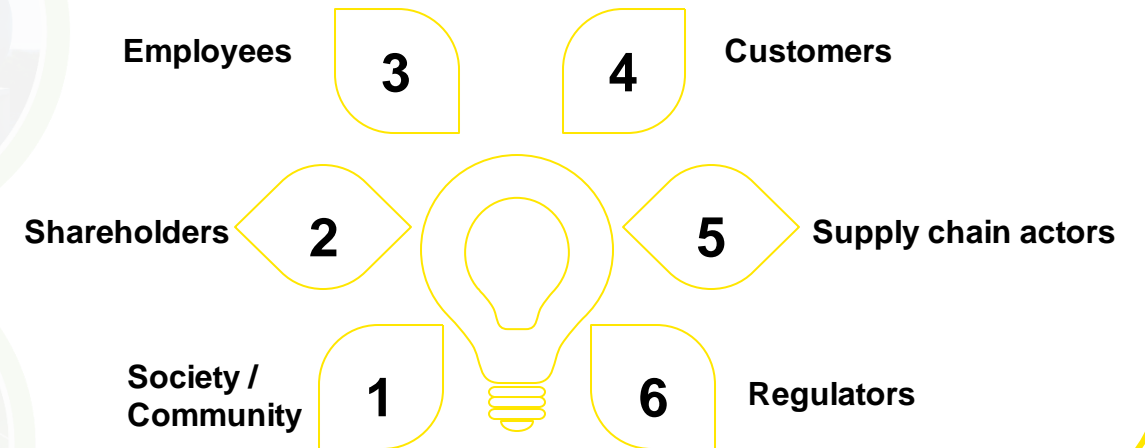
## Long-term value (LTV) dimensions

What value is generated now and how will this change in the future?

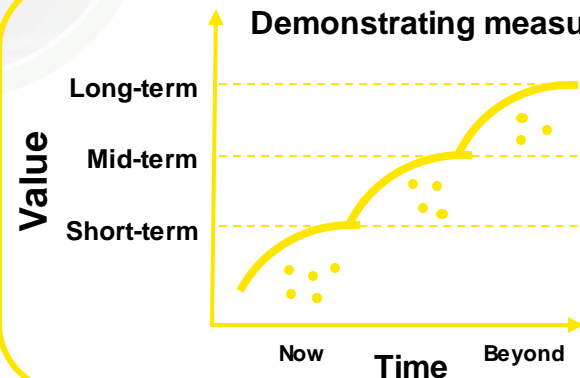


## ESG / Sustainability stakeholder ecosystem

Will your stakeholders and the outcomes they expect change in the future?



## Demonstrating measurable value across time horizons



- ▶ Delivering and demonstrating value across time horizons is critical to EY's long-term value approach
- ▶ Purpose serves as a guiding "north star" for organizations on this journey
- ▶ CEOs and business leaders must manage the "duality" of short-term survival and the creation of long-term value





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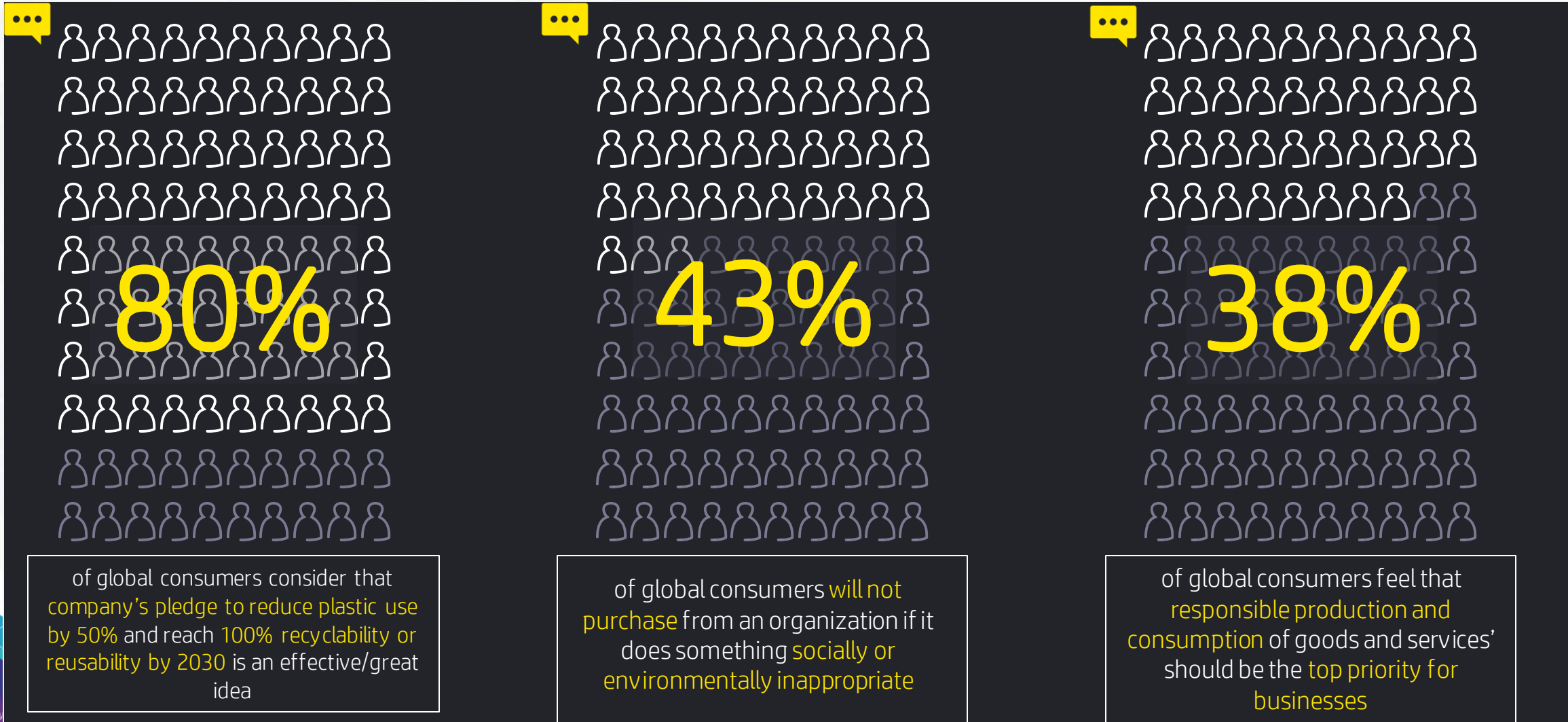


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# Consumers are increasingly demanding corporations to take urgent actions on sustainability



## Benefits of integrating ESG in business



Achieving a sustainable economy



Living within environmental limits

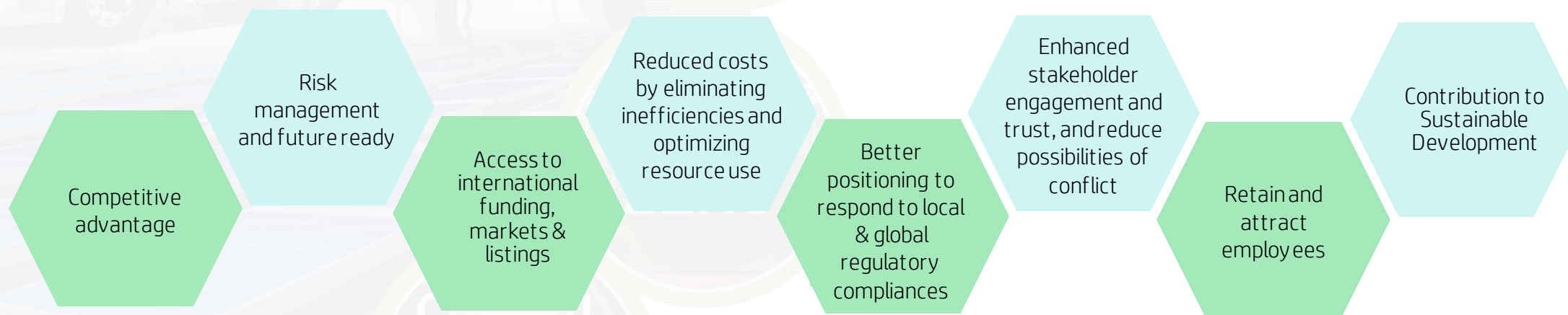


Ensuring a strong, healthy & just society



Promoting good governance

### Creating shared value and fostering innovation



### Achieving significant cost reduction

*"Since 1994, Dow has invested nearly \$2 billion in improving resource efficiency and has saved \$9.8 billion from reduced energy and wastewater consumption in manufacturing. In 2013, GE had reduced greenhouse gas emissions by 32% and water use by 45% compared to 2004 and 2006 baselines, respectively, resulting in \$300 million in savings"*

*~Harvard Business Review*

## Regulatory landscape in India: Shift of BRR to BRSR by SEBI & BRSR scoring by Institute of Chartered Accountants of India

With ESG reporting gaining traction in India, SEBI defined ESG disclosures in a standardised manner for listed companies basis which Business Responsibility and Sustainability Reporting (BRSR) guidelines were issued

SEBI introduced **Business Responsibility Report (BRR)** in 2011

BRR was mandated for top listed companies

- 100 in 2012
- 500 in 2015
- 1000 in 2019

Scope of BRR was expanded in 2020 to introduce BRSR

Applicable for Top 1000 listed companies  
 - Voluntary for FY22  
 - Mandatory from FY23

### ICAI's BRSR Scoring Methodology

Maturity stage	BRSR Score (% of Total Score)
Formative	Up to 25%
Emerging	> 25% and Up to 50%
Established	> 50% and Up to 75%
Leading	> 75%



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# RBI emphasize banks and lenders to develop strategy to address climate change risks : micro-prudential view

## Climate Related Risks



### Thrust Area 1 - Risks

Physical and transitional risks - climate related and environment risks

## Governance



### Thrust Area 2 -Governance

Establish governance and develop policy & procedures framework

## Vulnerabilities Assessment



### Thrust Area 3 - Stress Testing

Stress testing and climate scenario analysis to assess vulnerabilities



*RBI sought public stakeholders' comments on 6 key questions on these Thrust Areas*

## Climate Financial Disclosure



### Thrust Area 4 - TCFD

Explore on aligning with Task Force on Climate-related Financial Disclosures

## Capacity Building



### Thrust Area 5-Capacity Building

Capacity building programmes, webinars, conferences, etc. be organised for FIs

## Voluntary Target



### Thrust Area 6-Voluntary Target

FIs to set a voluntary green funding target



## Next steps for the C-suite

### CEOs

- Recognize that achieving net zero will require **total transformation**.
- Understand what this will mean for the **business model** over the next 5, 10 and 15 years
- Develop a fully funded **transformation strategy** and communicate this to stakeholders.

### CROs

- Assess the **resilience of the business** to a range of physical and transition risk scenarios.
- Understand how **risk appetites** need to change and how the organization can build resilience.

### CSOs

- Tailored to the firm's capabilities and strategy, continue to **drive climate ambition and action**.
- Develop the **talent and expertise** in climate change to truly align with climate science, while making business sense

### CFOs

- Dissect **reporting changes and prepare for ISSB/ CSRD**, ensuring the firm is ready to report on people and planetary value, not just financial value.
- Aligning **structures and processes** around new disclosures will take time and effort – *Now is the time for action.*



## Way Forward

# 1

Maximum engagement by  
Domestic Financing  
Institutions - *risks  
assessment & ratings*

# 3

Easing access to capital  
through innovative  
instruments - *donors &  
foreign investors*

# 2

Long-term & consistent enabling  
ecosystem (policy & regulatory  
regime) - *Less Government More  
Governance*

# 4

Embrace new & emerging  
technologies & markets -  
*preparedness is key*



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# Thank You

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