



**Politecnico
di Torino**

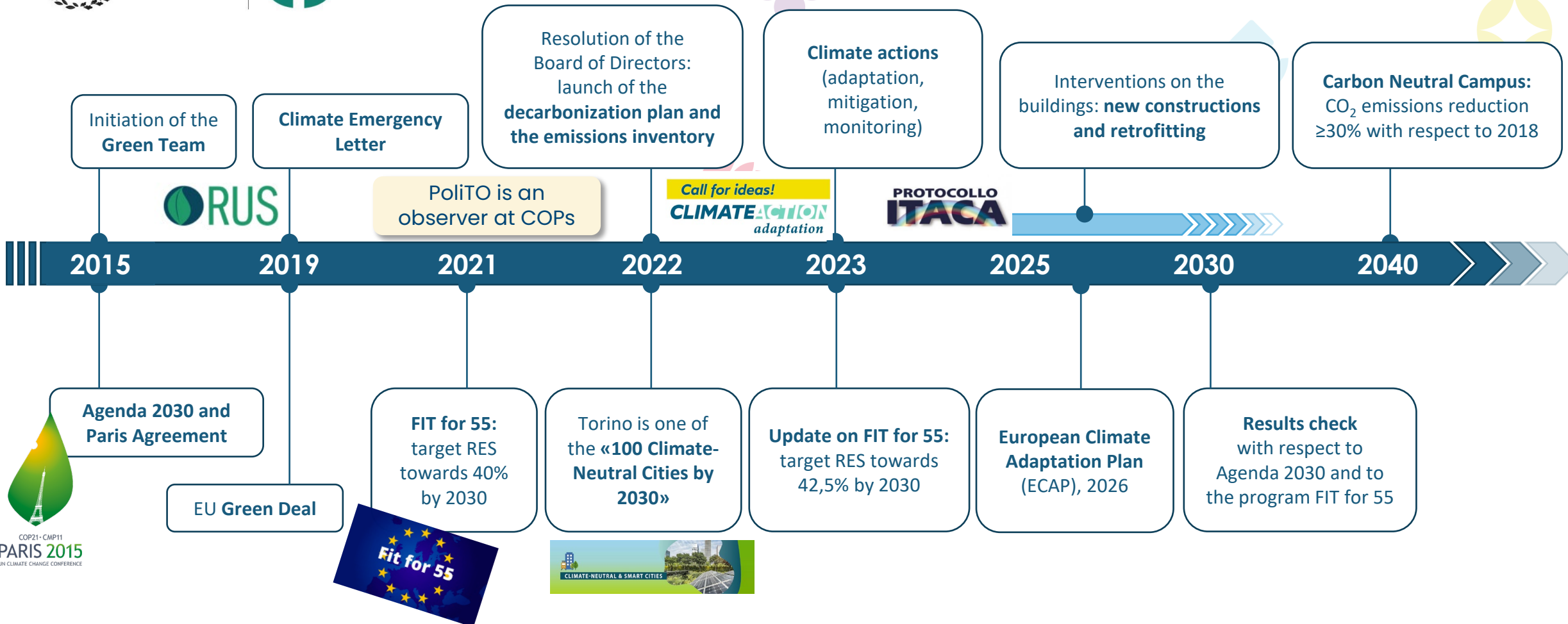
PoliTO Decarbonisation and Resilience Plan

Last update: March 2026

Climate action policy

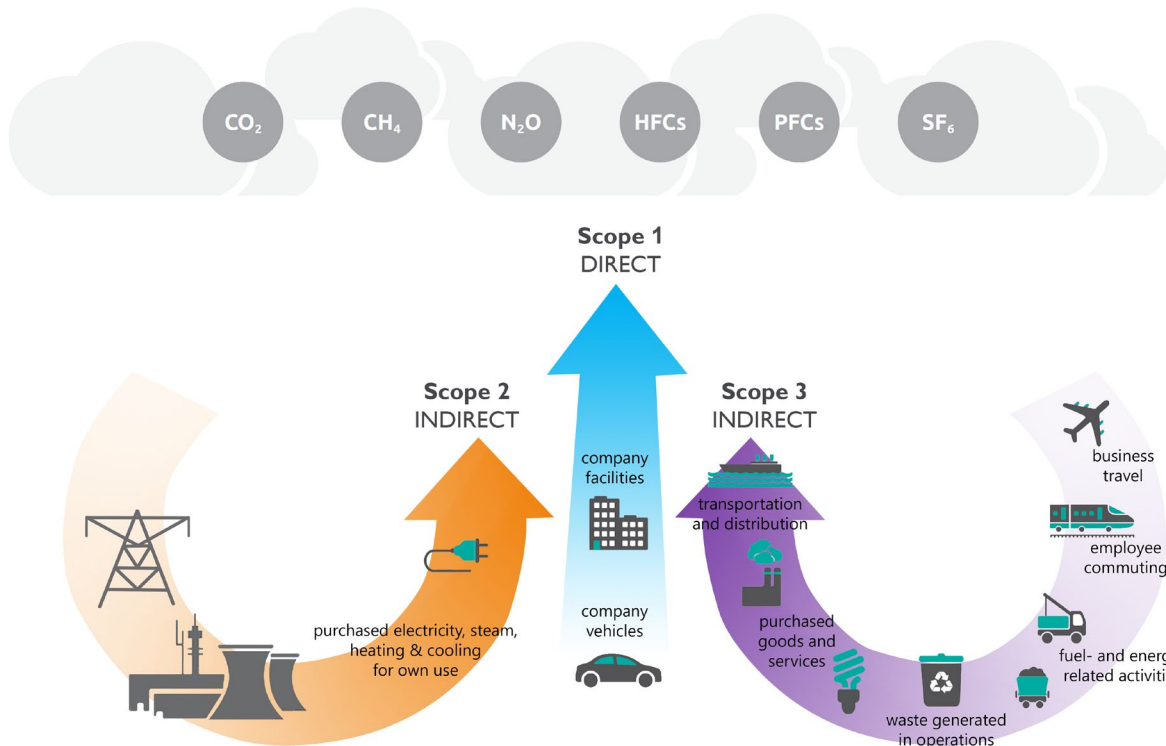


Politecnico di Torino



Emissions inventory

GHG protocol and action fields



* Figure from <https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance>

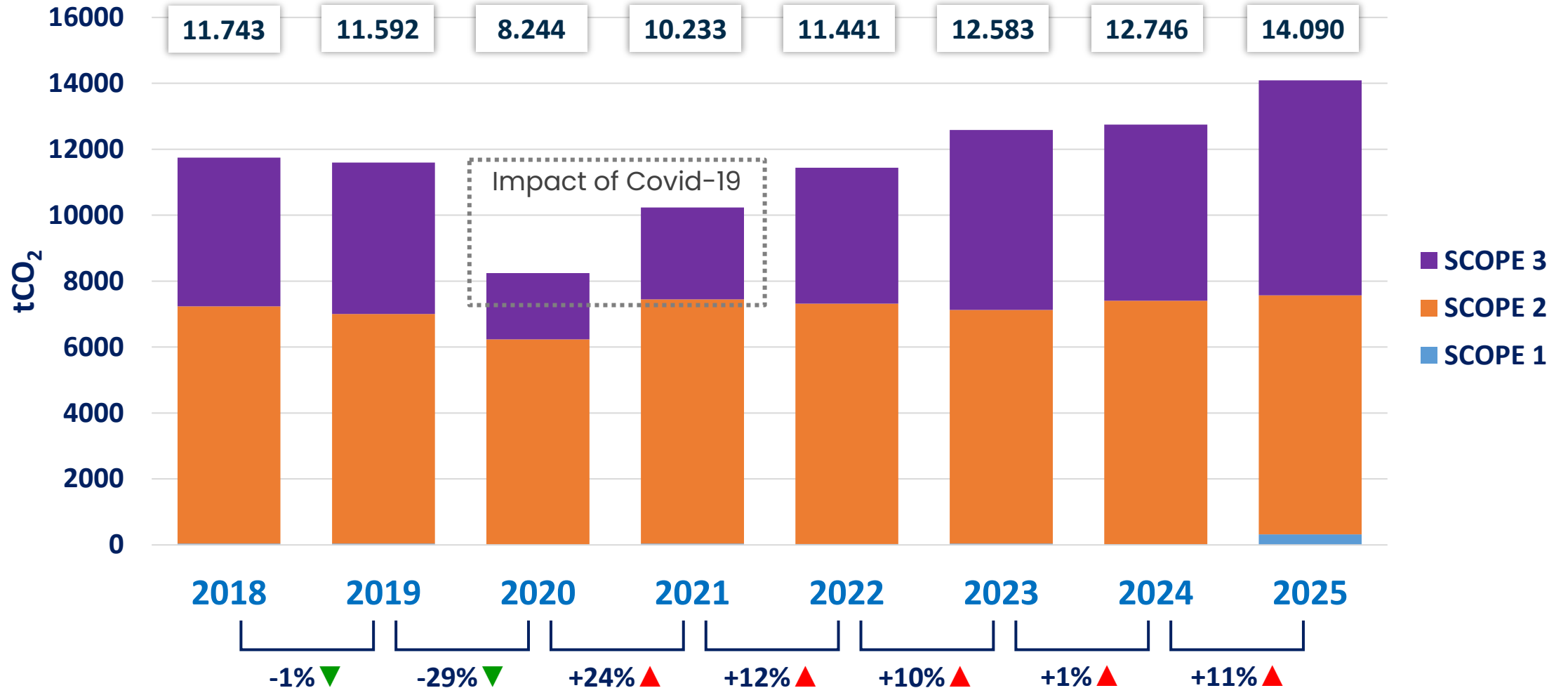
The “**GHG Protocol Corporate Accounting and Reporting Standard (2004)**” protocol establishes a standardised methodology to quantify GHG emissions.

An organization's carbon footprint has three components (scopes), in particular:

- ▶ **Scope 1**, direct GHG emissions that occur from sources that are controlled/owned by an organization;
- ▶ **Scope 2**, indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling;
- ▶ **Scope 3**, emissions are the result of activities from assets not owned/controlled by the organization, but that it indirectly affects in its value chain.

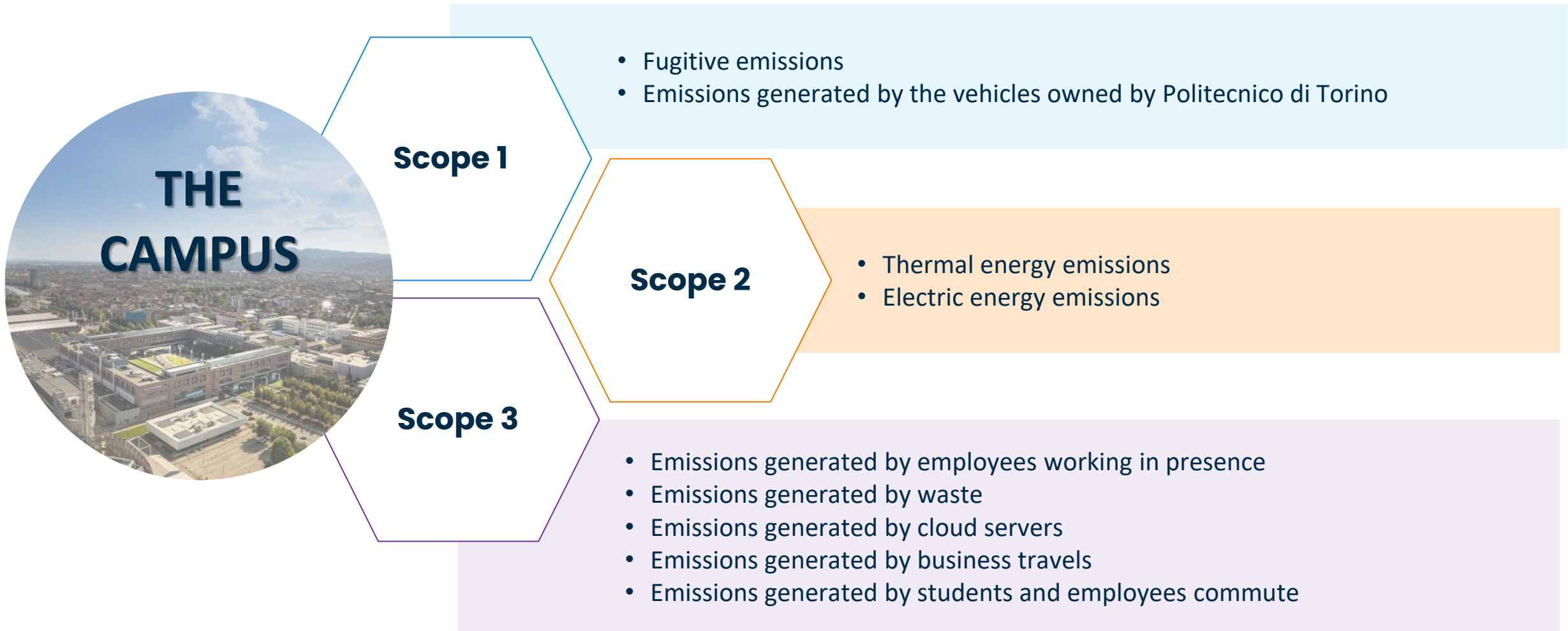
Emissions inventory

PolITO emissions from 2018 to 2025



Towards decarbonisation

The **action framework** started at Politecnico di Torino is in line with the GHG protocol:



Main focus and available levers

Areas of intervention on which the University has "direct" levers

Energy efficiency

Sustainable mobility

Resources and circular economy

Education and community engagement

Areas of intervention gained from the external context

National energy mix

FIT for 55

Regional/Metropolitan Strategy for Sustainable Development

2035 Mobility Plan

Climate change

The reduction of GHG emissions is a consequence of actions carried out both by the University and by the external context.

ADMINISTRATIVE/
MANAGEMENT
ACTIVITIES

RESEARCH
ACTIVITIES AND
LABORATORIES

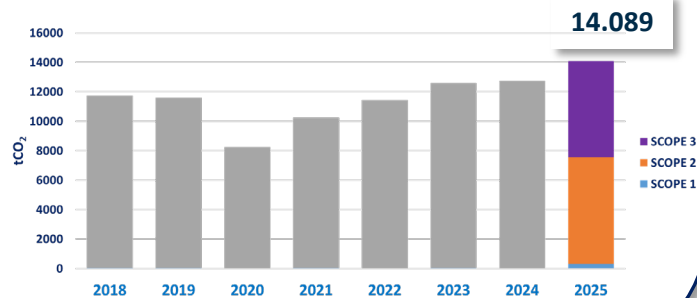
Direct levers to reduce our emissions

2025 emissions
[tCO₂]

SCOPE 2
7254,3

SCOPE 3
6517,8

SCOPE 1
317,6



Areas of intervention on which the University has "direct levers"

Energy efficiency

Sustainable mobility

Resources and circular economy

Education and community engagement

Decarbonisation Plan

- Consumptions (electricity and heat)
- Self-production (PV)
- Tuning e alerting actions

- Campus fleet
- Business travel
- Commute of the community
- Sustainable mobility services

- Waste
- Water consumptions
- Food supply chain
- Procurement of materials

- Awareness
- Capacity building
- Training and education

MITIGATION + RESILIENCE ACTIONS

Direct levers: our actions

Areas of intervention on which the University has "direct" levers

Energy efficiency

Sustainable mobility

Resources and circular economy

Education and community engagement

Energy efficiency

Sustainability protocol for university buildings with a focus on new constructions and maintenance (iiSBE)

Three-year work program 2026-2028: building retrofiting (insulation, window and door replacement, LED, PV implementation)

Learning spaces and their optimization (ToExpo retrofiting, construction of Digital Revolution House, Learning Center, Spina della Didattica)

Application of a **new monitoring model** designed to account for the Campus consumptions and emissions

Widening of the monitoring net throughout the Campus buildings and sites

Data Management dashboard (**Dash4Campus**)

Definition of strategies to enhance **systems control and fine tuning**, especially with respect to heating/cooling and lighting systems

Automatic fault detection in PV plants

Definition of strategies to increase **Data Center efficiency** and implementation of a related dashboard

Direct levers: our actions

Areas of intervention on which the University has "direct" levers

Energy efficiency

Sustainable mobility

Resources and circular economy

Education and community engagement

Sustainable mobility

Business travels: guidelines for low impact business travels

Everiday mobility: mandatory update of the Home–University Commuting Plan

Politecnico community awareness through practical actions towards sustainable mobility

Electricity grid and charging stations for plug-in vehicles

Fleet renewal with low-impact vehicles (BEV / Plug-in Hybrid / Full Hybrid)

Fleet integration with soft mobility vehicles (bicycles/pedal-assisted bicycles) **or low-impact vehicles** (electric scooters)

Central management and dematerialized **booking service** for University vehicles

MaaS sperimentation (Mobilità as a Service)

Direct levers: our actions

Areas of intervention on which the University has "direct" levers

Energy efficiency

Sustainable mobility

Resources and circular economy

Education and community engagement

Resources and circular economy

Waste, circular economy, and single-use plastic reduction:

- Testing and implementation of a waste production monitoring system
- Distribution of water bottles to new students and staff
- Plastic-free cafeterias and bars
- Guidelines for responsible use of paper resources
- Recycling of equipment according to circular economy principles
- Awareness-raising initiatives on the topic of the circular economy (collaborations for cigarette butt recycling, WEEE collection, repairs)

Food:

- Awareness-raising and communication efforts on the impact of food
- Experiments on the water-food-energy nexus

Water:

- Water quality increase and water consumption reduction
- Increase in water points (vending machines and departments)
- Pilot project for greywater recovery in sanitary facilities

Direct levers: our actions

Gli ambiti di intervento su cui l'Ateneo ha leve «dirette»

Energia e efficientamento

Mobilità sostenibile

Risorse e economia circolare

Educazione e coinvolgimento della comunità

Education and community engagement

Community engagement and awareness-raising on sustainability issues (e.g., call for ideas/contest, green team, student sustainability hub, SDG mapping for teaching/research/third mission)

Collaborations with PoliTo research groups to test research-based solutions on university campuses, including NbS and the ITACA protocol application

Defining **guidelines for sustainable and inclusive events**

Collaborations with companies, public bodies and associations



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