

## Supplier Sustainability Engagement 供应商可持续合作发展

2025

**EVERY CONNECTION COUNTS** 



### GLOBAL CLIMATE ISSUES 全球气候挑战 THE KEY CHALLENGE OF OUR TIME 当今时代最重要的挑战



### THE PROBLEM



How do we make all the things the world needs, invent the things that improve our lives, *create global economic growth*...how do we do that sustainably, with fierce competitors and *price sensitive customers*?

TE makes 213 billion parts a year – As TE we are looking for suppliers that offer sustainable solutions at the right cost.







# 面对激烈的竞争和价格敏感的客户,我们如何才能以可持续的方式,既满足全球需求,又推动创新和经济增长?

## TE 年产 2130 亿个零部件,因此我们正在寻找能以合理成本提供可持续解决方案的供应商





### Sustainability with competitive advantage Our reality - fierce competitors and cost sensitive customers

- Enhance brand reputation and loyalty
- Attract investment
- Cost savings and operational efficiency
- Regulatory compliance and risk mitigation
- Innovation and market differentiation
- Increased access to sustainable supply chains
- Consumers demand for transparency
- Adapting to future market trends
- Global market opportunities



### **可持**续的竞争优势 现实情况:竞争激烈,客户对价格敏感

- ▶ 提升品牌声誉和忠诚度
- ▶ 吸引投资
- ▶ 节省成本和提高运营效率
- ➢ 符合法规并降低风险
- ▶ 创新和市场差异化
- ▶ 增加获得可持续供应链的机会
- ▶ 消费者对透明度的需求
- ▶ 适应未来市场趋势
- ▶ 全球市场机遇





#### **Our Purpose**

#### WE CREATE A SAFER, SUSTAINABLE, PRODUCTIVE AND CONNECTED FUTURE.



We've been demonstrating our commitment to sustainable business for years and our strategy is the next evolution of that.

It's proof of concept that sustainability isn't something we do, it's who we are."

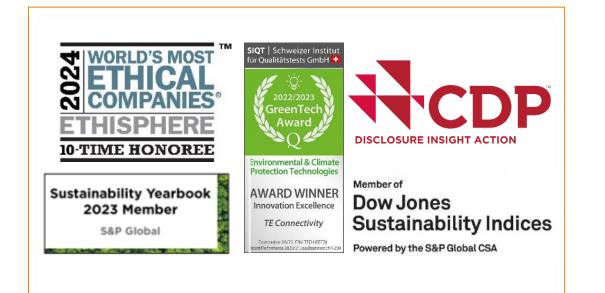
**Terrence Curtin, CEO** 

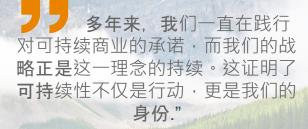
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### 我们的目标/使命/宗旨

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我们创造更安全、可持续、高效和互联互通的未来





**Terrence Curtin, CEO** 

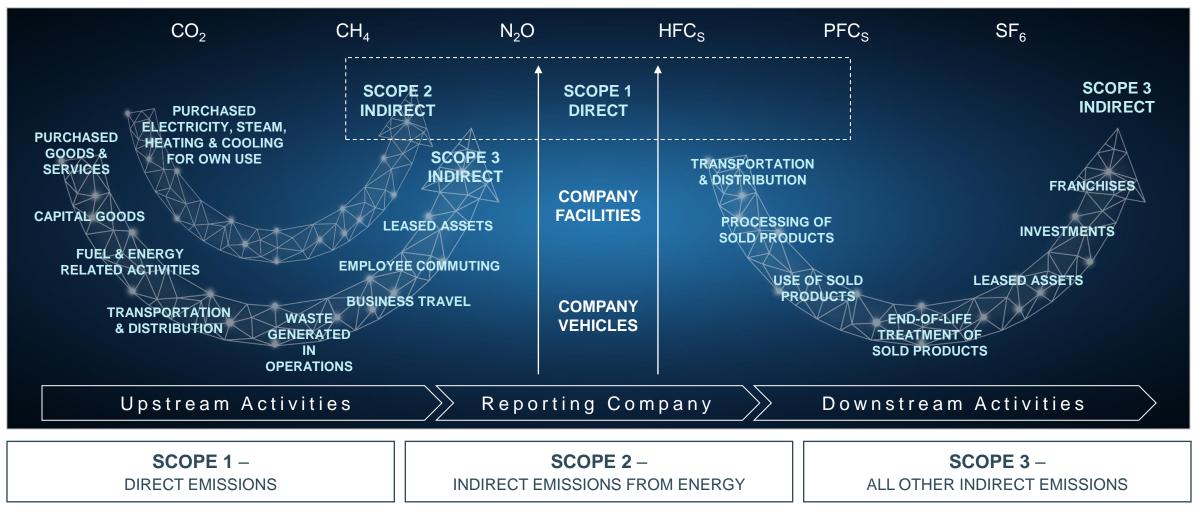
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### Carbon Footprint

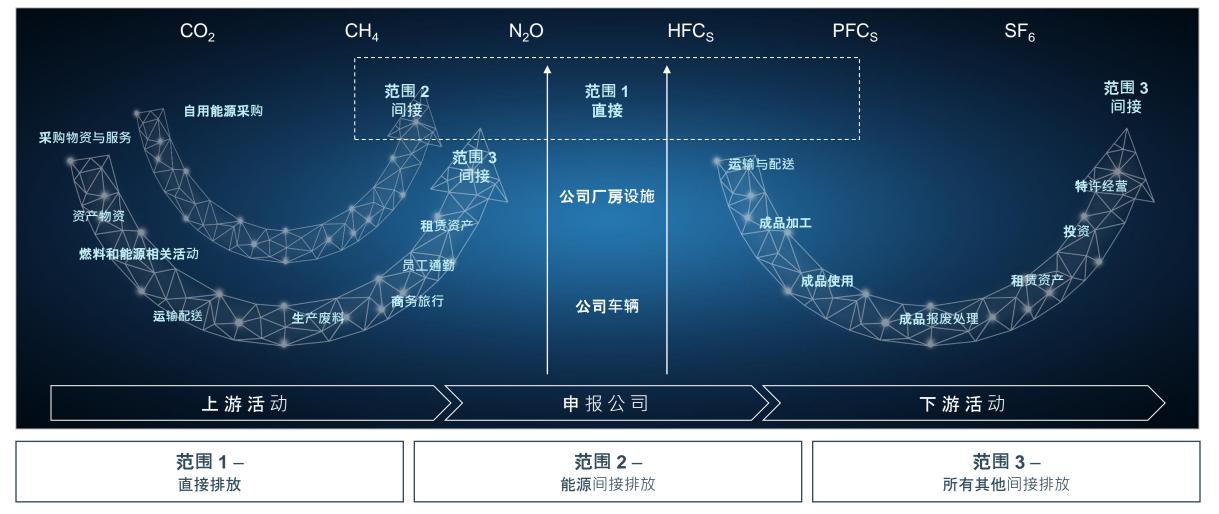
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Source Figure 1: GHG Protocol Scope3-Standard (2022)





#### Source Figure 1: GHG Protocol Scope3-Standard (2022)



### **Our Environmental Sustainability Journey**





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减少有害废弃物的处理量

2025水和有害废弃物减

排目标

减少总取水量FY2020-

**FY2023** 



### 我们的环境可持续发展之旅

Sustainability Yearbook

2023 Member

S&P Global

Member of

Dow Jones

Sustainability Indices Powered by the S&P Global CSA



30%

2032年实现绝对减

2032

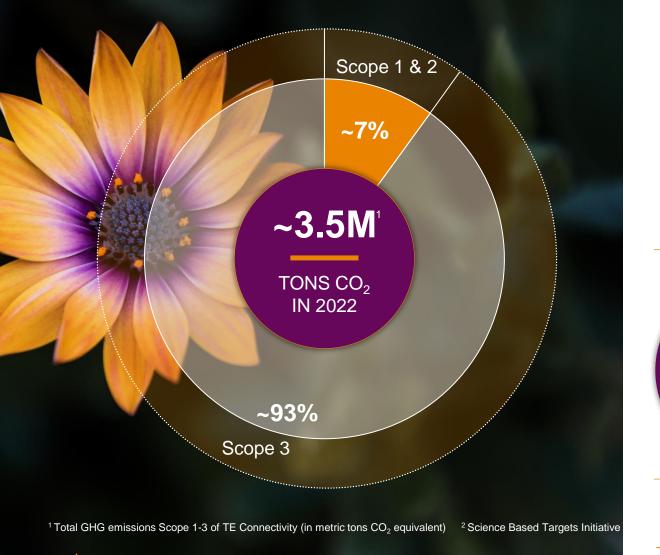
46%

减少有害废物处理

FY2021-FY2023

排

### **TE Connectivity Carbon Emission Overview**





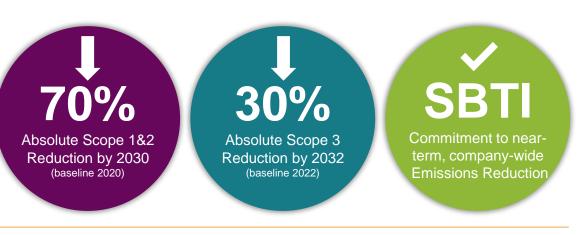
#### SCOPE 1 & 2:

Energy used in production and transportation with largest share of our carbon emissions

#### SCOPE 3:

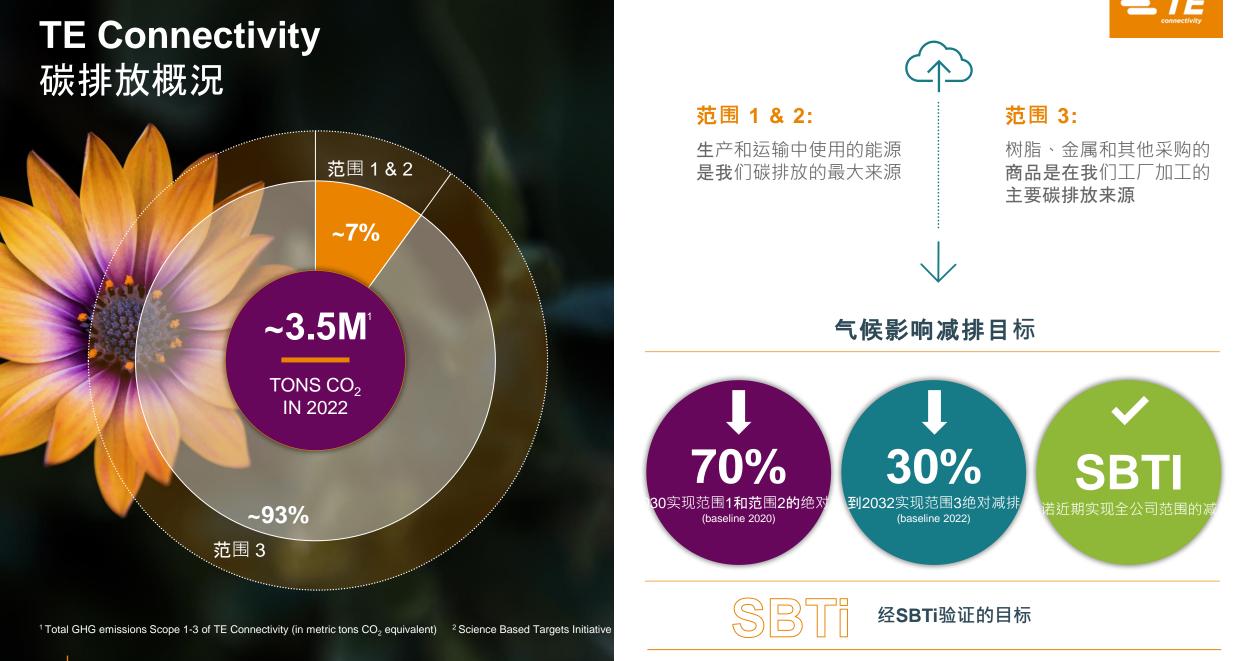
Resins, metals & other purchased commodities further processed in our plants major carbon emission contributors

#### **CLIMATE IMPACT TARGETS**





Targets validated by **SBTi** 



### **Science Based Targets Initiative**



Check

SME approach

#### SBTi

A corporate climate action organization that:

- Develops standards and guidance for greenhouse gas emissions reduction targets

- Aims for global net zero emissions by 2050

- Approved TE's emissions reduction commitments in April 2024

More than 130 countries signed on the UN commitment for carbon neutrality by 2050

SCIENCE

TARGETS

BASED







**一个致力于企**业气候行动的组织:

- 制定温室气体减排目标的相关标准和指南

- 目标是到2050年实现全球净零排放

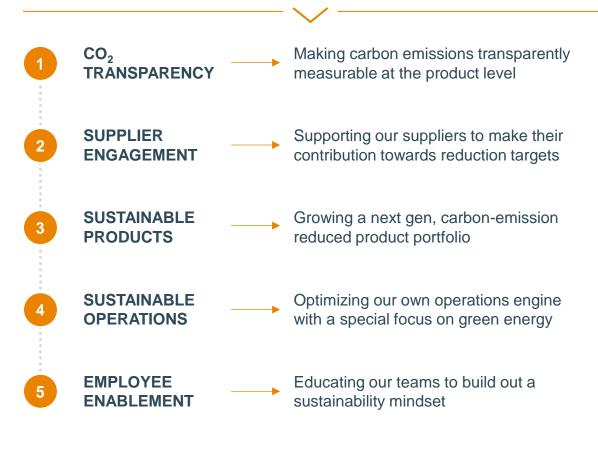
- 于2024年4月批准了TE的减排承诺

SCIENCE BASED TARGETS Check SME approach

#### 超过130个国家签署了联合国2050年实现碳中和 的承诺

### How are we going to do this?

#### TE Scope 3 Strategy





#### WE ARE COMMITTED TO PURSUING OUR KEY TARGETS THROUGHOUT ALL LIFECYCLE STAGES, WITH A CLEAR FOCUS ON SUPPLIER ENGAGEMENT AND DESIGN FOR SUSTINABILITY



### 我们要怎么做呢?

TE 范围三策略



### 我们承诺在整条产品生命周期中实现我 们的关键目标,重点关注供应商参与 和可持续设计



## Goals Roadmap for Suppliers Awareness - Timeframe: FY25-FY26

Suppliers must establish emissions baseline, evaluate hotspots and determine potential reduction levers



#### Set clear expectations

On emission reduction, Product Carbon Footprint (PCF) goals and future data requirements (i.e., product recyclability)

#### **Annual Survey**

Collect climate and product related-data (i.e., net weight, recycled content and PCF)

#### **Supplier Assessment**

Rank suppliers based on survey response and provide feedback for further improvement.

#### **Capacity Building**

Capacity building: provide resources and training

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01

02

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04

## 供应商目标实施规划方案 基础培训-FY25-FY26



#### **明确**设定预期要求 减排目标,碳足迹目标、未来数据要求(如产品可 回收性)

#### 年度调查

**收集气候及**产品数据, 比如:产品净重、再 生材料含量、产品碳足迹等

#### **供应商评估** 基于调查回复,对供应商排序并提供改进建议

能力建设 能力建设:提供资源和培训

供应商必须做到: 1)建立减排基线 2)评估重点领域 3)确定潜在的减排措施

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01

02

03

04



### TE PCF Policy TEC-16-03- REV B3 2024

#### Highlights

• Objective:

**1-** Standardize PCF calculations approach so that the supplier values are comparable

2- Increase the accuracy of TE Scope 3 calculations

- Timeline to submit PCF values to TE:
  - High Emissions latest end of FY 2025
  - All others CY 2026
- Required to verify the values and the calculation approach by a third-party. Suppliers without an assurance or verification report must **submit an** assurance plan to TE Connectivity.
  - DocLink link: <u>TEC-16-03 REV B.3</u>



TE CONNECTIVITY SUPPLIER REQUIREMENTS, PRODUCT CARBON FOOTPRINT (PCF) CALCULATION SPECIFICATION OF MATERIALS

**TEC-16-03** 

1 of 6

26 JULY 24 Rev B3

SCOPE This policy defines product carbon footprint (PCF)<sup>1</sup> calculation and modeling requirements for TE Connectivity's Suppliers and/or their subcontractors (collectively 'Supplier(s)' hereunder). TE Connectivity arguins all its raw material suppliers to submit a PCF value and the supporting documentation for the goods provided to TE Connectivity at the end of the calendar year 2025 boths carees, nucl, invest, prins: resim products model datastication assembly tooling, must be addecurred, TI fardware, cables, application tooling, assembly tooling, must be describes the technical requirements and the specifications of the method i. te /fecyle analysis (LCA) modeling parameters and the greenflowage and the approach, assumptions, data quality thresholds and disclosure requirements of the PCF calculation paproach.

2. GENERAL REQUIREMENTS FOR LIFE CYCLE ASSESSMENT (LCA) FOR PCF OF MATERIALS

Supplier that follows are industry standard LCA method in calculating the PCF of materials Supplier of the TE Connectivity economents the supplier to comply with the following standards to 10400, ISO 14044, ISO 14067, GHG Protocol Froduct Standard as acceptable methods? If a supplier follows a methodology standard other than those interiat in here, a justification shall be given. Supplier must submit the LCA modeling parameters, data sources, and the methodological approach, of there PCF calculation along with the direct goods they supply to TE.

Internotoxigual approach, of intel Proc. accounting and proceeding and proceeding approach and collect applies shall use primary data for the own operations, to the greatest eachert possible and collect primary data is unavailabile or unpractical to obtain, suppler may use a verified secondary data source? A list of recommended secondary data sources is given a NANEX I. Supplers may use country-specific and industry average GHG emission estimates for the components, materials, subject to change as new updated data and improve methods become available from life cycle inventory (LCI) databases and improvements in manufacturing process and supporting operations. Suppler must report its primary/secondary data and improvements.

The presence of a transparent, well-documented system – in other works an audit trail – is the basis of successful data verification. Supplier should keep 1s own audit trail records of the data sources, calculation method, and the conversion factors, including but not limited to emission factors. TE Connectivity requeres such information to be reported in the PCF document. TE Connectivity recommend its suppliers to submit a third-party data assurance/verification plan unless they have one in place already.

3. MODELLING SELECTIONS

3.1. Product description and the carbon footprint Supplier must submit the total GHG emissions intensity in weight unit of me

Supplier must submit the total GHG emissions intensity in weight unit of measure per weight of good provided to TE Connectivity (Unit of measure (UoM): kg CO<sub>2</sub>e / kg product). In addition,

1.AFCF catalities for that greenhouse (I) (CHQ) emissions generated by a product one fits invoice stages of the fload for submitting statuting nutries all capacitions, monochaming, distribution and instruments, and all end-of-line. The init in control product of the product instruments and applications, and an all statuting nutries and and an all statuting nutries and an all statuting nu

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#### Standard PCF estimation tool

Change only blue and red parameters					
			-1		
Product weight in	-		g/pc		
Product weight in			kg/pc		
Product weight in			g/pc		
Product weight in			kg/pc		
Material 1	Percentage	70			
	Emission Factor	5	kg CO2-eq/kg		
	Waste	0	%		
	Carbon footprint	0.175	kg CO2-eq/pc		
	Carbon footprint	175	g CO2-eq/pc		
Material 2	Percentage	30	%		
	Emission Factor	7	kg CO2-eq/kg		
	Waste	0	%		
	Carbon footprint	0.105	kg CO2-eq/pc		
	Carbon footprint	105	g CO2-eq/pc		
Material 3	Percentage	0	%		
	Emission Factor	0	kg CO2-eq/kg		
	Waste	0	%		
	Carbon footprint	0	kg CO2-eq/pc		
	Carbon footprint	0	g CO2-eq/pc		
Material 4	Percentage	0	%		
	Emission Factor	0	kg CO2-eq/kg		
	Waste	0	%		
	Carbon footprint	0	kg CO2-eq/pc		
	Carbon footprint	0	g CO2-eq/pc		
Additional emissic Percentage		15	%		
	Carbon footprint	0.042	kg CO2-eq/pc		
	Carbon footprint	42	g CO2-eq/pc		
Total Carbon Footprint			kg CO2-eq/pc		
			g CO2-eq/pc		
Carbon intensity			g CO2-eq/g		



# Corporate Sustainability Reporting Directive (CSRD)

Is a regulation by the European Union (EU) that aims to improve and standardize sustainability reporting for companies. It establishes a reporting framework called the European Sustainability Reporting Standards (ESRS).

Since TE is an EU-based company, CSRD reporting is mandatory, and we require information from suppliers to comply with this.



TE Reporting for CSRD

E1 Climate Change

- Targets related to climate change mitigation and adaption
- Energy consumption and mix
- Gross Scopes 1,2,3 and total GHG emissions
- Anticipated financial effects from material physical and transition risks and potential climate-related effects



### 企业可持续发展报告指令

**企**业可持续性报告指令 (CSRD) 是欧盟 (EU) 的一项法规,旨在改进和标准化 企业的可持续性报告。它建立了一个名为"欧洲可持续性报告标准"(ESRS) 的报告框架。

由于 TE 是一家位于欧盟的公司,因此 CSRD 报告是强制性的。为了遵守该 指令,我们需要从供应商处获取相关信息。



TE 公司 CSRD 报告 E1 气候变化 与气候变化减缓和适应相关的目标 能源消耗和结构 范围 1、2、3 的温室气体排放总量 重大物理风险和转型风险以及潜在的气候相关影响的预期 财务影响



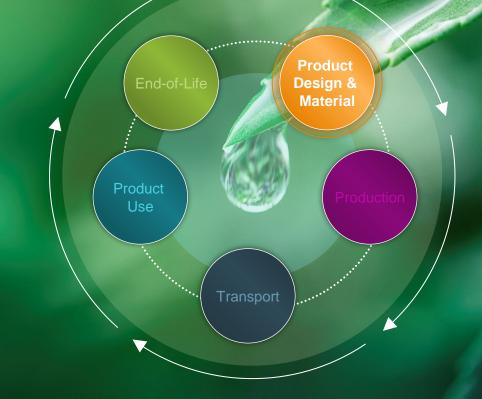
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## **PRODUCT DESIGN & MATERIAL**



Product Engineering Sustainability Vision & Mission:

"AS **PIONEERS OF SUSTAINABILITY**, WE DESIGN THE FUTURE TOWARDS THE **LOWEST EMISSION!**"









产品工程可持续发展愿景与使命: "作为可持续发展的先锋,我们以最低排放 为目标,设计未来"



### PRODUCTION

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**ENERGY TYPE** 

WATER USAGE

WASTE & SCRAP

**PRODUCE FOR** 

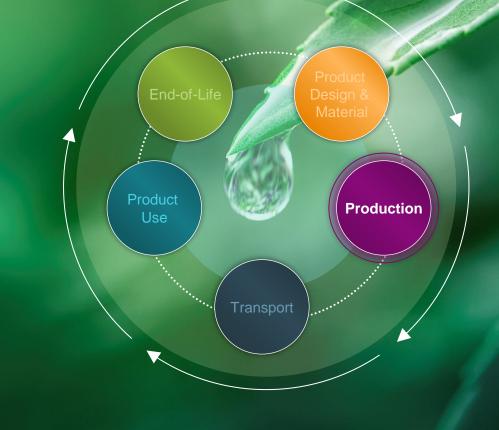
**ENERGY EFFICIENCY** 

PROCESS EFFICIENCY

SUSTAINABILITY AND COST



USING RENEWABLE ENERGY AND INCREASING ENERGY & PROCESS EFFICIENCY ACROSS ALL PLANTS; MINIMIZING WATER CONSUMPTION AND WASTE & SCRAP



生产



#### 所有工厂采用可再生能源,提高能源和工艺效率;尽 量减少用水、废料和废品





### TRANSPORT

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USING ECO-FRIENDLY MODES OF TRANSPORT, WHILE SHORTENING FREIGHT ROUTES



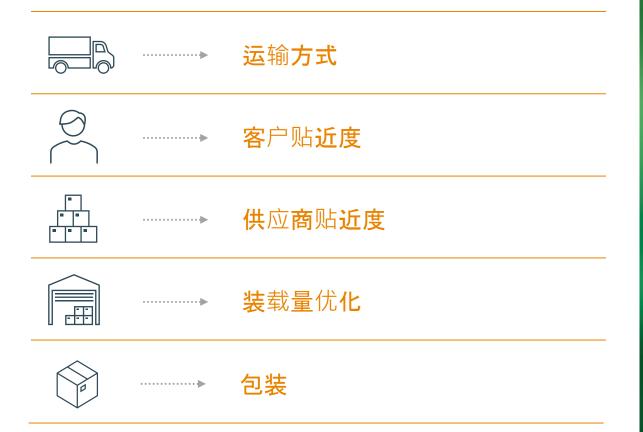


MODE OF TRANSPORT

CUSTOMER PROXIMITY

SUPPLIER PROXIMITY

运输



#### 使用绿色运输方式 · 同时缩短货运路线





### **Your Sustainability Commitment**

EMISSION REDUCTION COMMITTMENT Commitment to **reducing emissions** across all Scope 1, Scope 2 & Scope 3 in alignment with TE's reduction targets

SUSTAINABILITY PROJECTS A Reduction **project roadmap** – Identify reduction opportunities and develop strategies.

OPTIMISATION OF ENTIRE SUPPLY CHAIN Increase **recycling content** & use of **renewable energy** – Optimize **transportation** and **packaging** 

PCF CALCULATIONS & RECYCLED CONTENT

We need the current **PCF & recycled content** of parts supplied to TE – Yearly update on values to see improvements

DESIGN FOR SUSTAINABILITY

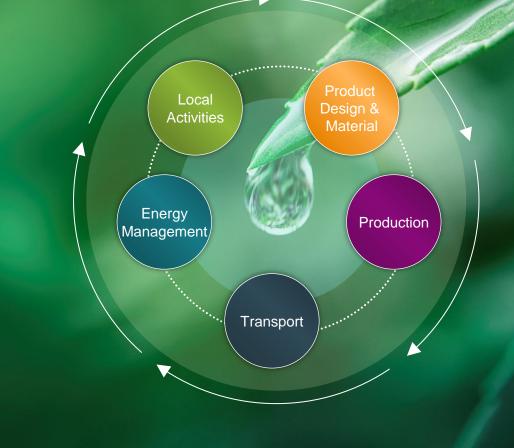
LET US TOGETHER ACHIEVE THE 2032

**AMBITIONS** 

Further margin improvements by lowresource production processes and **circular design– lower PCF** is expected annually

> FIRST MILESTONE ON OUR SCIENCED BASED JOURNEY

TOGETHER WE NEED TO CONTINUE OUR SUSTAINABLE JOURNEY ONLY WHEN WE WORK TOGETHER, WE CAN ACHIEVE THE ULTIMATE EMISSION GOALS



你们的可持续发展承诺



#### 我们需要携手并肩,继续我们的可持续发展之旅。 **唯有同心**协力,方能实现最终的排放目标



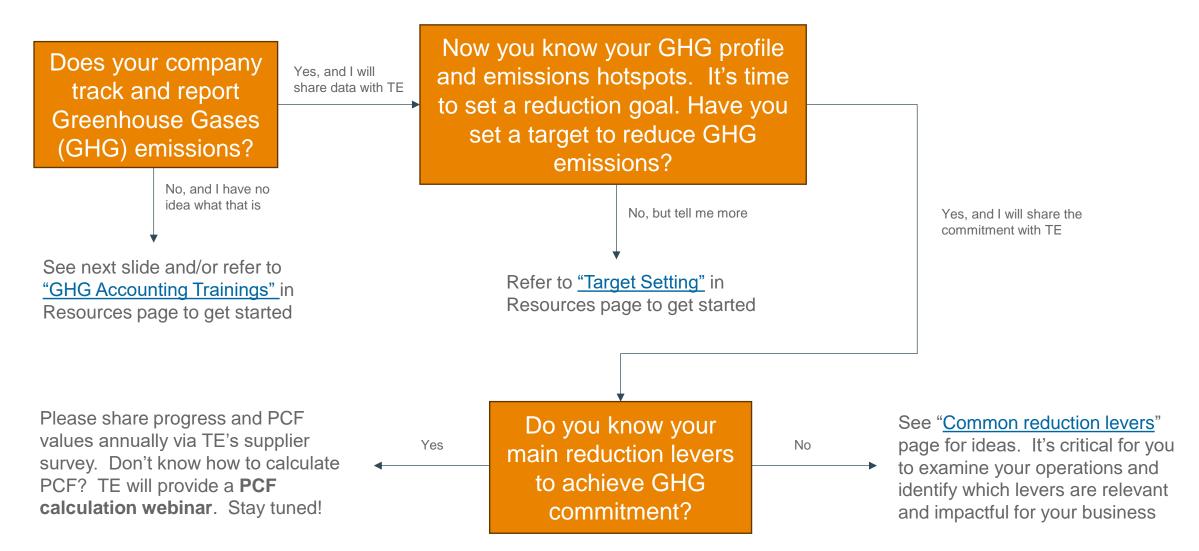


# Resources to get started

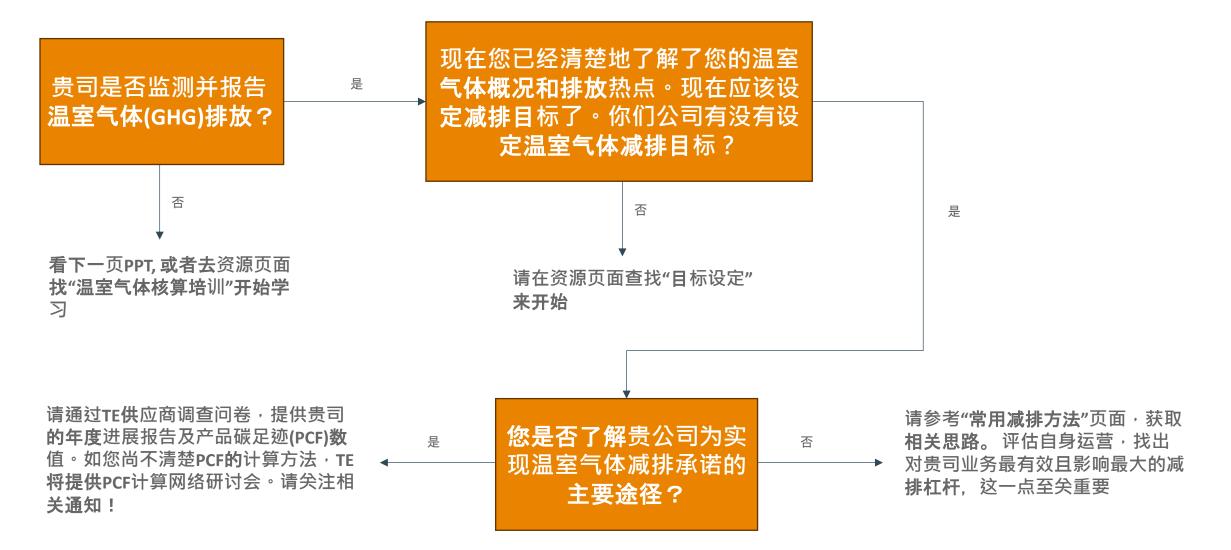
**EVERY CONNECTION COUNTS** 



### Sustainability can be intimidating, but TE is here to help



### 可持续发展听起来有点不知所措?别担心,TE来帮你





## Measure carbon footprint for your business



#### What gets measured gets managed

Here are steps to identify emissions hotspots for your business:

- 1. Assess business operations to find sources of emissions:
- Begin by reviewing any environmental permits your business holds
- Look for any areas that use fuel, natural gas or electricity
- 2. Collect and measure emissions data
  - Examine electricity bills and fuel invoices for consumption data
  - Look for emission factors (most are publicly available) to calculate emissions
- Emissions = Consumption x Emissions Factor
- 3. Identify key emission sources
- Prioritize top emissions sources and create a plan to reduce them



### 开始测量贵公司的碳足迹吧!

#### 通过测量实现控制/测量是控制的前提

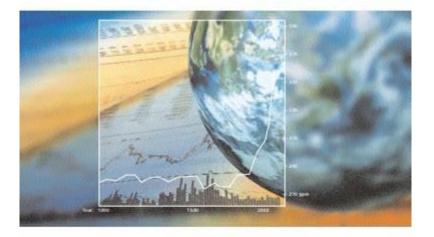
**以下是**识别您企业排放热点的步骤:

 1. 评估业务运营,找出排放源:
 首先,审查贵企业持有的任何环境许可证: 查找任何使用燃料、天然气或电力区域:

2. 收集和测量排放数据:
检查电费账单和燃料发票,获取消耗数据:
查找排放因子(大多数是公开的)来计算排放量:
排放量 = 消耗量 x 排放因子

3. 识别主要排放源 优先考虑主要排放源,并制定减少排放的计划

#### The Greenhouse Gas Protocol



A Corporate Accounting and Reporting Standard



WORLD RESOURCES INSTITUTE

#### **Resources**<sup>\*</sup>



#### **GHG** Accounting Trainings:

Greenhouse Gas Protocol: <u>Corporate Standard Training Webinar</u> (free)

Greenhouse Gas Protocol: <u>A Corporate Accounting and Reporting</u> <u>Standard</u> (free)

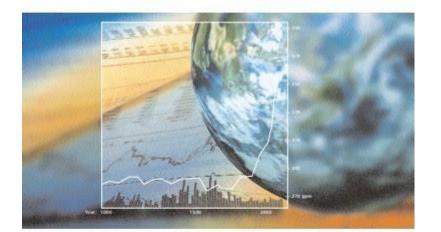
Greenhouse Gas Protocol: Scope 2 Recorded Webinar (free)

US EPA: <u>Scope 1, 2 and 3 Emissions Inventorying and Guidance</u> (free)

Additional training suggestions:

<u>12 training resources for measuring and managing greenhouse gas</u> <u>emissions (article by Trellis)</u>

You may also search "GHG accounting" or "carbon accounting" online for additional information



A Corporate Accounting and Reporting Standard



WORLD RESOURCES INSTITUTE

### **Resources in Mandarin**

Greenhouse Gas Protocol https://ghgprotocol.org/sites/default/files/2022-12/Chinese\_small.pdf

Government and Official Resources : The MEE: <u>中华人民共和国生态环境部</u> CCICED:中国环境与发展国际合作委员会 CNTAC: <u>中国纺织工业联合会</u> US EPA: <u>中国电子仪器行业协会网站</u> 中国质量认证中心 WRI China | Making Big Ideas Happen | WRI China 首页世界自然基金会(WWF) China | United Nations Development Programme



### **Resources in Mandarin**

← → C 😁 ibm.com/cn-zh/think/topics/scope-1-2-3-emissions

 Think
 人工智能 (AI)
 云
 安全性
 视频 ∨
 报告 ∨
 播客 ∨
 活动 ∨
 更多 ∨

https://www.ibm.com/cnzh/think/topics/scope-1-2-3emissions

减少温室气体排放为何重要?

什么是范围一、范围二和范围三排

什么是温室气体核算体系?

什么是范围一排放?

放?

什么是范围二排放?

什么是范围三排放?

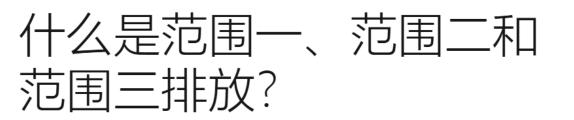
测量和报告范围一、范围二和范围 三排放

限制和减少范围一、范围二和范围 三的排放

相关解决方案

资源

后续步骤



范围一、范围二和范围三排放是根据组织的温室气体 (GHG) 排放的来源点来描述其排放的类别。

温室气体核算体系 (GHG 核算体系) 是一项国际认可的标准,它创建了这三个范围,以全面了解企业或组织的环境影响。

- 范围一排放是公司直接产生的。
- 范围二排放是通过购买能源间接产生的。
- 范围三排放是公司价值链中发生的间接排放。

对温室气体排放进行分类有助于企业识别排放来源,并随后制定有效的减排策略。它还可以进行跨行业和跨部门的基准分析和比较,提高企业可持续发展工作的透明度和责任感。



### **Resources**<sup>\*</sup>



#### **Target Setting:**

US EPA: Target setting

Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Chapter 11

Science Based Targets: How it works

#### United Nations Global Compact Academy: Setting Science-Based Targets to Achieve Net-Zero

\* TE is not affiliated with any training providers. However, TE strongly recommends that suppliers who are not well-versed in sustainability/esg topics dedicate time and resources to learning about these topics. Suppliers have the freedom to choose how they will familiarize themselves with these topics

COURSE Self-paced e-learning	COURSE Blended learning 1 Feb 2025	RESOURCE Platform	COURSE Facilitated e-learning	Course Self-paced e-learning	RESOURCE Recorded webinar
E-waste challenge	MSc in Sustainability Management UNITAR, Schiller	Global Industrial Park Knowledge Platform United Nations Industrial Development Organization UNIDO	Become a Player in the Energy Transition ITC	The Net-Zero Standard UNGCA	Climate Action: Uniting Business and Governments to Recover Better UNGCA
🎇 SDG 13, SDG 17, SDG 17: Technology	🏶 2030 Agenda, SDG 13	🏶 SDG 2, SDG 8, SDG 9, SDG 13	SDG 7, SDG 9, SDG 11, SDG 12, SDG 13, SDG 17, SDG 17: Capacity-building	🗱 SDG 11, SDG 12, SDG 13	SDG 3, SDG 13, SDG 17, SDG 17: Systemic Issues

### Additional useful resources\*

United Nation SDG Learn: Introduction to Standards and Sustainability (free) Introduction to Corporate Social Responsibility (free) Competitiveness Through Enterprise Sustainability (free) Resource Efficiency (free) More courses from UN can be found here

Coursera: <u>Sustainability Courses Online</u> (some free) CSRD Institute: <u>CSRD Fundamentals</u> (free) Greenomy Academy: <u>ESG Reporting & Training courses</u> (free)

You may also search "sustainability training" or "ESG training" online for additional information



\* TE is not affiliated with any training providers. However, TE strongly recommends that suppliers who are not well-versed in Sustainability/ESG topics dedicate time and resources to learning about these topics. Suppliers have the freedom to choose how they will familiarize themselves with these topics





### Additional useful resources<sup>\*</sup>

Govermental Ressources:

Umweltbundesamt

42

Umwelttechnik BW (publciations)

Deutsche Nachhaltigkeitsstrategie

Environmental Footprint Methods (EU) Energy, Climate change, Environment (European Comission)

Standards, tools and lables (European Commission)

ं	European Commission	
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Home	About us $\lor$	Our priorities $ {\scriptstyle \lor}$	News and media $ \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $	Topics $\checkmark$	Europe and you $ \sim$
Home > Energy, Climate change, Environment					

### Energy, Climate change, Environment

EU policy protects the environment and seeks to minimise risks to climate, human health and biodiversity. The European Green Deal aims to make Europe the world's first climate-neutral continent.

Overall targets and reporting 2030 targets 2040 targets 2050 targets EU contribution to international goals EU environment action programme to 2020 Climate and energy targets 2020 Energy strategy

Implementation in EU countries Energy and climate governance and reporting Environmental compliance assurance The Aarbus Convention and the EU Standards, tools and labels

Product labelling, environmental impact assessment and certification procedures

⊕ EN

Assessment of environmental impact Assessment of plans, programmes and projects Participation

**Environmental performance** management and certification

EU environmental technology verification Eco-management and audit scheme (EMAS) Ecolabel for ecofriendly tourist accommodation Organisation environmental footprint

Energy

Climate change

Environment

International cooperation

Products - labelling rules and requirements CO<sub>2</sub> emission limit targets for road vehicles Chemicals Ecodesign for Sustainable Products Regulation Ecolabel for eco friendly products and services Efficiency of energy-related products Fuel consumption labelling for passenger cars Product environmental footprint

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