

A dark blue car is shown from a side-rear perspective, driving on a paved road lined with lush green trees. The scene is brightly lit, suggesting a sunny day. A large white circle is overlaid on the left side of the image, containing the main text. The car's side mirror and rear wheel are visible.

**● Sustainable development
for the automotive sector**

Your Speakers Today

- IATF 16949, ISO 9001, ISO 14001, ISO 45001, ISO 39001, ISO 50001, ISO 22301, ISO 27001, Cloud Security, TISAX
- GHG (14064-1) Verifier, Global Reporting Initiative (GRI) trainer, Sustainability Report Assurance Verifier
- ISO 28001, CTPAT Custom Trade Partner Terrorism, SEDEX-Ethical Trade Audits,
- Responsible Business Alliance (RBA)



Sumate Vavnilanon

Product Manager Automotive

Agenda

- การพัฒนาอย่างยั่งยืน Sustainable development คืออะไร
- เป้าหมาย Sustainable ประชาคมโลก UN “Sustainable Development Goals”
- ที่มาของการอธิพล การบังคับ Enforce การพัฒนาอย่างยั่งยืน
- มาตรฐานการรายงานความยั่งยืน GRI – Global Reporting Initiative
- Case study: Global Automotive Supply Chain
 - Ford
 - Mercedes Benz
- เตรียมรับกระแส Sustainable ใน Automotive industry in Thailand



การพัฒนาอย่างยั่งยืน Sustainable development คืออะไร

Brundtland report **1987** definition of sustainable development Sustainable Development (**UN**)

Humanity has the ability to make development sustainable to ensure that it **meets** the needs of the **present** without compromising the ability of **future** generations to meet their own needs.

“Our Common Future”



SUSTAINABLE DEVELOPMENT GOALS

เป้าหมายการพัฒนาอย่าง
ยั่งยืนประชาคมโลก

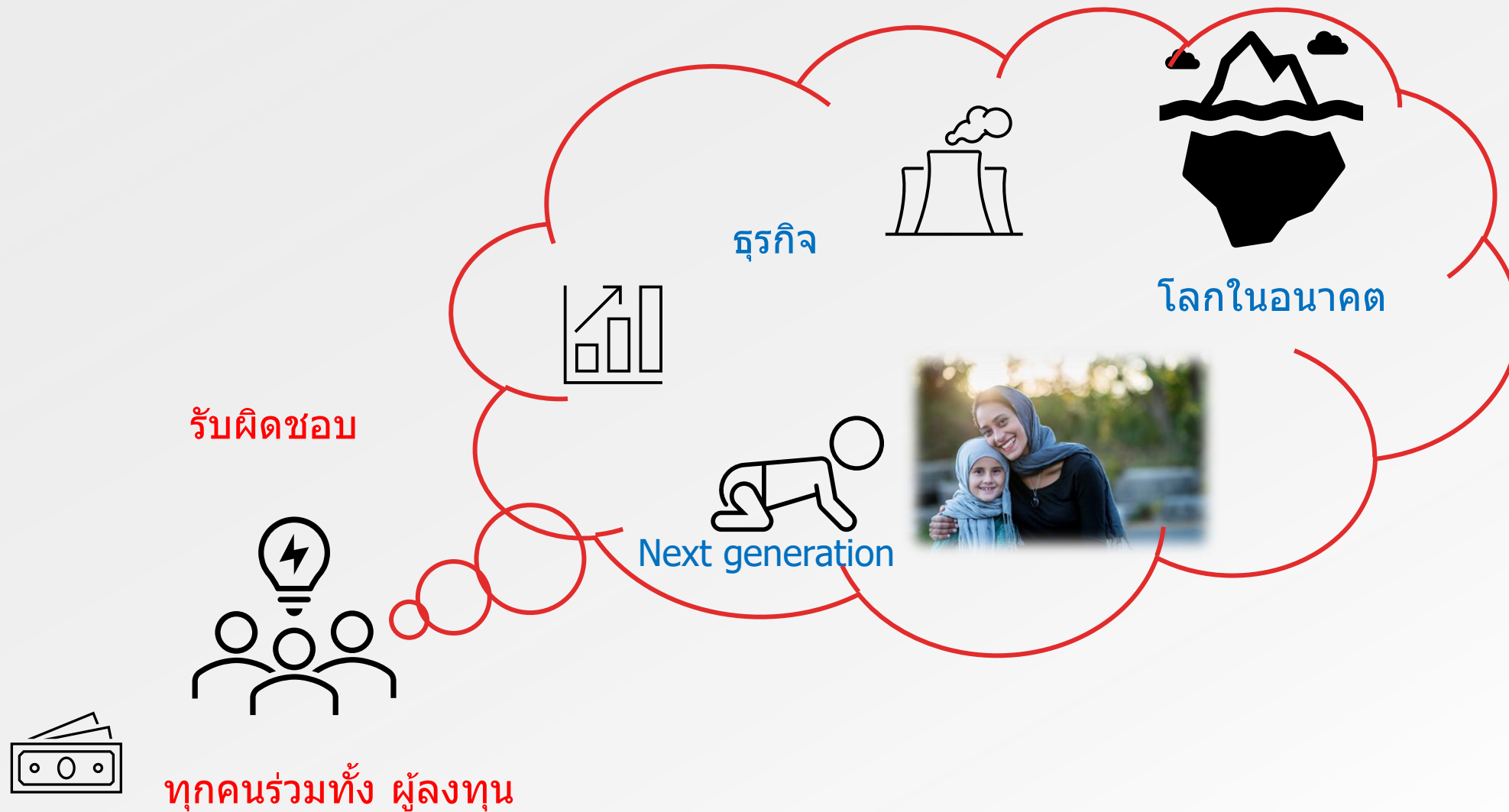
Blueprint to achieve a better and more **sustainable future** for all



How many Sustainable Development Goals, Targets, and Indicators are there?

- 17 goals, 150 targets, and 432 indicators
- 9 goals, 50 targets, and 99 indicators
- 19 goals, 146 targets, and 300 indicators
- 17 goals, 169 targets, and 232 indicators

ที่มาของการอธิพล การบังคับ Enforce การพัฒนาอย่างยั่งยืน



มาตรฐานการจัดทำรายงานความยั่งยืนมีอะไรบ้าง

- GRI – Global Reporting Initiative
- AAI – Accountability International
- ISO 26000 – Guidance on Social Responsibility
- One Report - SET Sustainability

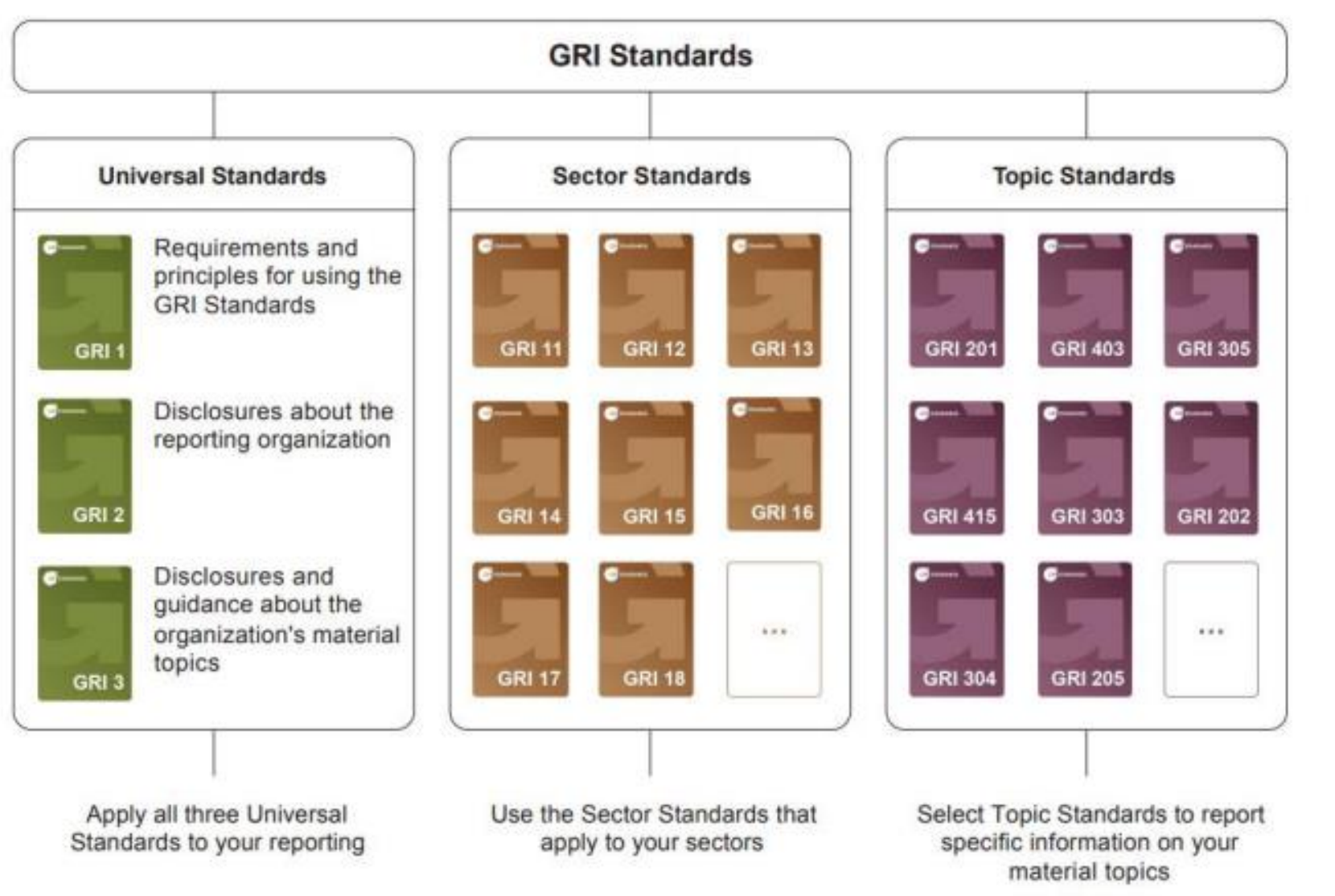
- การระรับผิดชอบ
- การประพฤติปฏิบัติอย่างมีจริยธรรม
- การเคารพต่อหลักนิติธรรม
- การเคารพสิทธิมนุษยชน
- ความโปร่งใส
- การเคารพต่อผลประโยชน์ของผู้มีส่วนได้ส่วนเสีย
- การเคารพต่อหลักปฏิบัติที่เป็นบรรทัดฐานสากล

The purpose of GRI Standards

The GRI Standards enable an organization to disclose publicly its most significant impacts on the economy, environment, and people, including impacts on their human rights.



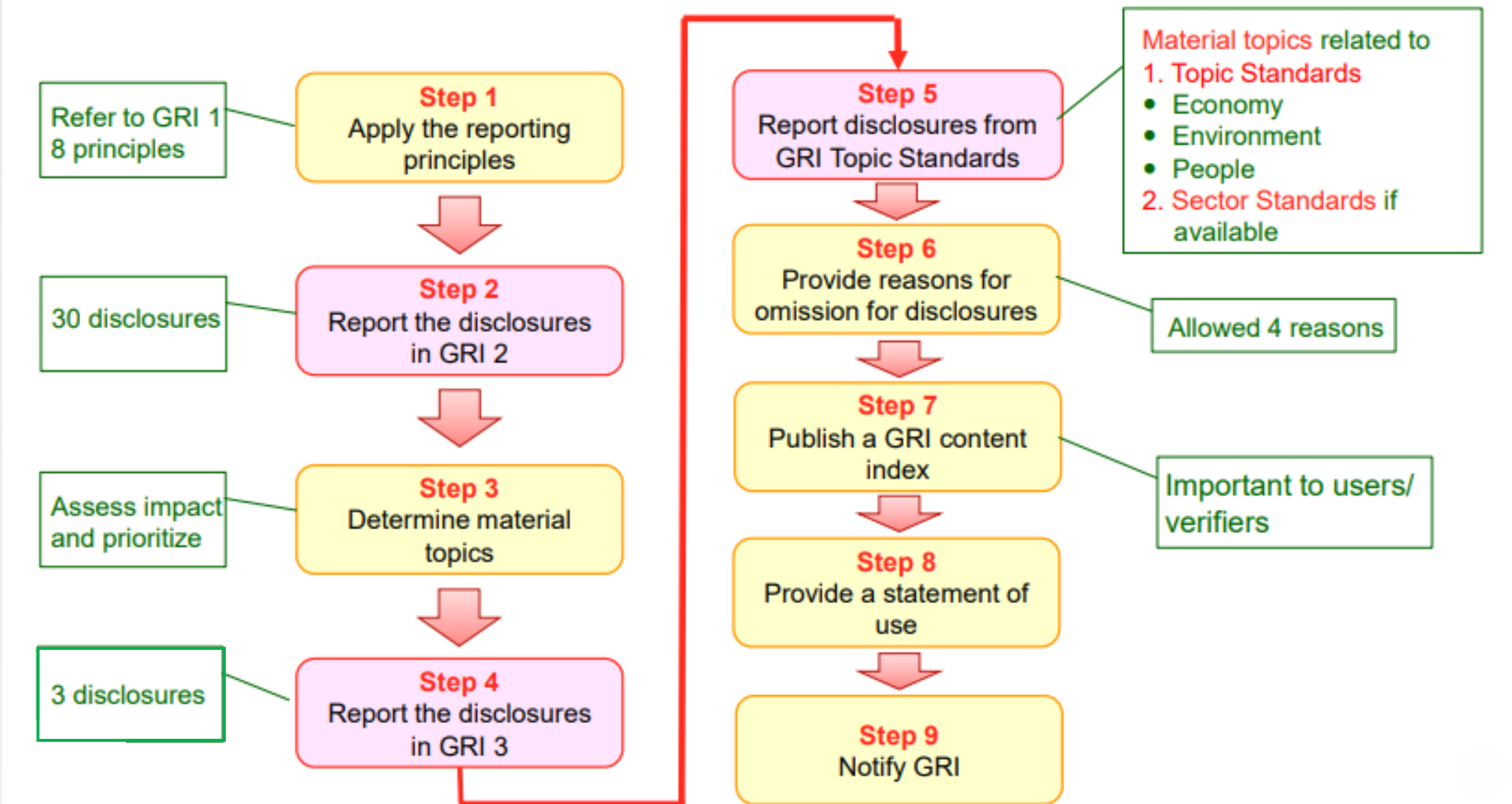
What are GRI Standards?



Note:
GRI 1, 2, 3
effective date:
1 January 2023



Reporting in accordance with the GRI Standards – 9 requirements



Case study: Global Automotive Supply Chain



OEM ผู้ผลิตรถยนต์เป็นบริษัทที่อยู่ในตลาดหลักทรัพย์ใน USA และมีโรงงานประกอบอยู่ในหลายประเทศมีหน้าที่ปฏิบัติตามระเบียบของประเทศนั้น



Automotive Supply Chain เป็น Global network

A dark blue car is shown from a side-rear perspective, driving on a paved road that is lined with tall, leafy trees. The scene is brightly lit, suggesting a sunny day, with dappled sunlight filtering through the leaves onto the road. The car's side mirror and rear wheel are visible.

- **GRI – Global Reporting Initiative**



Ford: Annual report



Sustainability Aspirations	Goals	Progress	Links to SDGs
 <h2 data-bbox="140 778 318 871">Human Rights</h2> <p data-bbox="140 899 356 978">Source only raw materials that are responsibly produced</p> <p data-bbox="140 1006 280 1049">Read more on p.65</p>	<p data-bbox="611 678 955 735">We are committed to protecting human rights and the environment</p> <p data-bbox="611 928 879 1006">Help suppliers build their capacity to manage supply chain sustainability issues</p> <p data-bbox="611 1021 930 1128">Assess Tier 1 suppliers' compliance with Ford's Supplier Code of Conduct requirements and expectations</p>	<ul data-bbox="1057 678 2229 899" style="list-style-type: none"> Published our updated We Are Committed to Protecting Human Rights and the Environment policy Integrated the new Supplier Code of Conduct within Ford's Global Production Terms and Conditions as a requirement to conduct business with Ford Published first Human Rights Report and conducted our third formal salient human rights assessment Signed the Action Pledge for the UN's International Year for the Elimination of Child Labour Just Capital rating, WBA social transformation score: #1 in auto sector and included in top 10% Since 2004, conducted more than 70 human rights audits to assess how our facilities align with our We Are Committed to Protecting Human Rights and the Environment Policy <p data-bbox="1057 928 2229 1199"> <ul style="list-style-type: none"> Expanded our Sustainability Self-Assessment Questionnaire (SAQ) program to verify supplier alignment with new Supplier Code of Conduct Achieved a 100% response rate from in-scope suppliers to submit an annual Conflict Minerals Reporting Template Initiated mica due diligence program Became the first U.S. automaker to join the Initiative for Responsible Mining Assurance (IRMA). Requested that suppliers using mined materials communicate Ford's aim to source materials originating from IRMA assessed mines Initiated supply chain mapping and auditing to understand the sources of the cobalt, nickel and lithium used in our electric vehicles (EVs) Created a cross-functional Responsible Materials Council to improve visibility to sustainable materials Launched a project to empower women artisanal cobalt miners in the Democratic Republic of the Congo (DRC) </p>	

Accelerating Progress

As we take leadership of the electric revolution, we can provide new sustainable vehicles and mobility solutions that positively impact health and safety around the world – from human rights to climate change. Below, we have summarized our progress, including examples of how we're working toward them.

Sustainability Aspirations	Goals	Progress	Links to SDGs
 <h2>Climate Change</h2> <p>Achieve carbon neutrality no later than 2050</p> <p>Read more on p.83</p>	<p>Vehicles:</p> <ul style="list-style-type: none"> Accelerate our electrification strategy Improve fuel economy across our global vehicle lineup, consistent with regulatory requirements and our commitment to the Paris Agreement Offer alternative fuel vehicles 	<p>Vehicles:</p> <ul style="list-style-type: none"> By 2024, Ford will have the global capacity to produce 600,000 electric vehicles annually By 2026, annual production of more than 2 million EVs; expect EVs to represent half of global volume by 2030 Investing \$50 billion in electric vehicles from 2022 through 2026 Joined RouteZero, a global coalition working towards 100% zero-emissions cars and vans globally in leading markets no later than 2035 Ford Maverick pickup is the first-ever standard full-hybrid pickup in America, and the most fuel-efficient truck on the market with an EPA-estimated rating of 42 miles per gallon in the city* All diesel vehicles are compatible with low-level biodiesel blends (B20 in U.S., B7 in Europe). Also in Europe certain vehicles are compatible with paraffinic diesel (EN 15940) such as HVO/E-diesel. Paraffinic diesel can be blended with standard fossil diesel fuel resulting in up to 33% renewable content. 	
	<p>Facilities:</p> <ul style="list-style-type: none"> Reduce global facility GHG emissions by 18% (2019–2023) 	<p>Facilities:</p> <ul style="list-style-type: none"> Achieved a 35% reduction in our absolute manufacturing GHG footprint since 2017 through improved energy efficiency and conservation at our facilities and in our manufacturing processes Ford and SK Innovation plan to invest \$11.4 billion and create nearly 11,000 new jobs in Tennessee and Kentucky with production of the electric vehicles and lithium-ion batteries in 2025, creating our first greenfield carbon neutral facilities Invested \$1 billion to modernize our vehicle assembly facility in Cologne to turn it into the Ford Cologne Electrification Center Joined the U.S. Department of Energy's Better Climate Challenge to reduce GHG emissions from our facilities by at least half by 2030 	
	<p>Suppliers:</p> <ul style="list-style-type: none"> Establish baseline for supplier CO₂ emissions and develop a joint roadmap for performance improvements Work with selected suppliers to reduce our collective environmental footprint through PACE 	<p>Suppliers:</p> <ul style="list-style-type: none"> Received GHG emissions data from 262 production suppliers (12% more than last year) using CDP Supply Chain program's Climate Change questionnaire Shared GHG emission reduction best practices with nearly 80 key Tier 1 suppliers through PACE Increased FastPACE participation by over 60% from 2020, sharing Ford best practices in GHG emission reduction with suppliers from China, India, Thailand, and South Africa <p><small>*2.5L Hybrid powertrain. Actual mileage will vary.</small></p>	



Climate Change: Achieve carbon neutrality no later than 2050

→ Read more about this Salient Human Rights issue in our Human Rights Report

Achieving Carbon Neutrality

Our climate is changing faster than the world can keep up. Rising sea levels, droughts and forest fires indicate the urgency of the situation. A comprehensive effort is needed to meet the goals of the Paris Agreement.

In fact, Ford is working to minimize its impact on climate change aligned with the United Nations Framework Convention on Climate Change (Paris Agreement). We are committed to doing our part – it's a strategic priority, one of our salient human rights issues, and integral to our purpose of helping make a better world. And it's driving our transition to electrification and our goal of achieving carbon neutrality no later than 2050.

Our Long-Term Aspirations and Near-Term Commitments

To achieve our carbon neutrality goal, we are focusing on three areas that account for approximately 95% of our CO₂ emissions – our vehicles, our operations, and our supply chain. The steps we're taking are:

- Electrifying our iconic vehicles beginning with the Mustang Mach-E, the F-150 Lightning, and the E-Transit. By 2026, we expect annual production of more than 2 million EVs. By 2030, we expect EVs to represent half of global volume. In Europe, we expect 100% of our cars to be fully electric by 2030. Two-thirds of commercial vehicle sales in Europe will be all-electric or plug-in hybrid by 2030 and all commercial vehicles in Europe will be zero emission by 2035.

- Investing in EV technology and charging infrastructure to remove obstacles to electrification. We're investing \$50 billion in electric vehicles and battery production from 2022 through 2026.
- Investing in sustainable manufacturing to create an ultra-efficient, carbon-neutral manufacturing ecosystem. Our new mega-sites in Tennessee and Kentucky are ushering in an era of sustainable electric vehicle manufacturing.
- Working with our suppliers to reduce their emissions and develop science-based emissions reduction targets in line with the Paris Agreement.

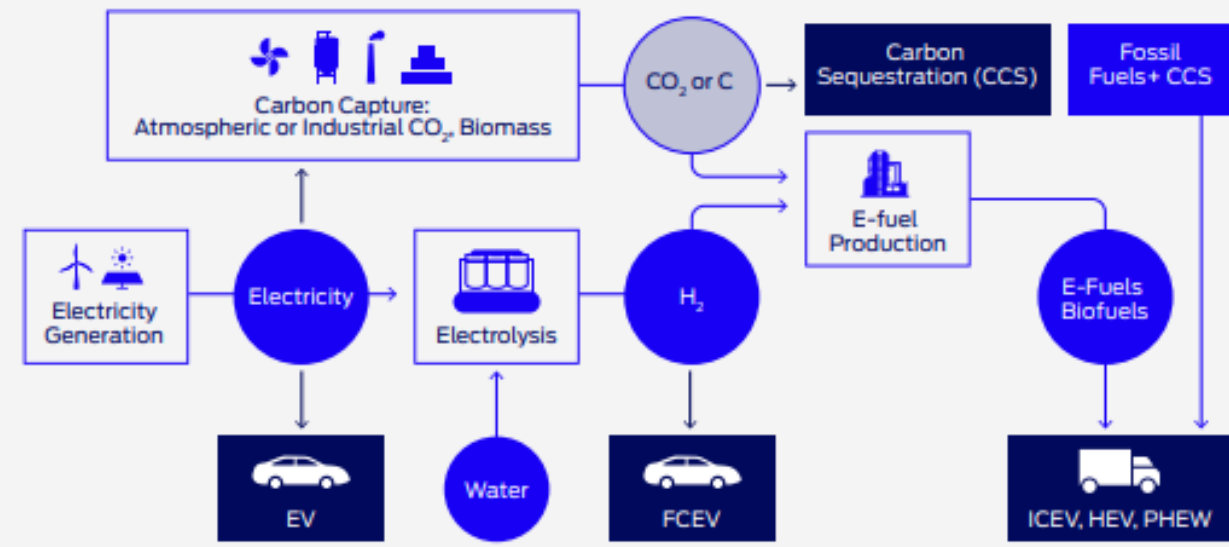
Achieving our long-term carbon neutrality goal is ambitious and complex. To ensure near-term progress, we have developed science-based interim targets and joined global coalitions working towards our common goal.

For example, Ford joined RouteZero, a global coalition working towards all sales of new cars and vans being zero-emissions globally by 2040, and no later than 2035 in leading markets.

This builds on our previous commitments to President Biden's agenda to reduce GHG emissions in the United States by 50-52% by 2030, have 50% of our global sales volume being EVs by 2030, the UN's Business Ambition Pledge for 1.5°C, and to the New Deal for Europe initiative to devise a comprehensive Sustainable Europe 2030 Strategy. We've also joined the U.S. Department of Energy's Better Climate Challenge to reduce GHG emissions from our facilities by at least half in the same timeframe.

The above pledges are backed by interim targets approved by the Science Based Targets initiative (SBTi). Our emissions targets call for a 76% reduction in Scope 1 and 2 GHG emissions by 2035 from a 2017 base year, and a 50% reduction in Scope 3 GHG emission per vehicle kilometer from use of sold products by 2035 from a 2019 base year.

Future Carbon-Neutral Transportation



EV: Electric vehicle; **CCS:** carbon capture and storage; **FCEV:** fuel cell electric vehicle; **HEV:** hybrid electric vehicle; **ICEV:** internal combustion engine vehicle; **PHEV:** plug-in hybrid electric vehicle

This goes beyond tailpipe emissions, and includes reducing vehicle emissions from a fuel-cycle perspective (well-to-wheels) which include the production and consumption of fuel during vehicle use. Our Scope 1 and 2 operations target is aligned with the SBTi 1.5°C path, while our use of sold products (vehicle) target is consistent with the well-below 2°C target. These targets do not include offsets and are strictly GHG reduction targets.

Addressing climate change is a global issue that no company, industry, country, or organization can achieve on its own. It will require collaboration to drive progress.

76%

target emissions reduction in Scope 1 and 2 GHG emissions by 2035 from a 2017 base year

50%

reduction in Scope 3 GHG emission per vehicle kilometer from use of sold products by 2035 from a 2019 base year



Ford Motor Company Global Modern Slavery and Human Trafficking Transparency Statement for the Financial Year Ending on December 31, 2022

Operations	Production Suppliers	Indirect Suppliers
\$98 billion global production spend	1600+ Tier 1 supplier companies	24,000+ supplier companies
44 Ford-owned assembly and powertrain manufacturing sites*	62 countries 4,500+ supplier sites 190,000+ parts manufactured 500+ commodities sourced	800 commodities

Date: March 23, 2023



Supplier Contracts & Policies

In addition to supporting human rights within our own operations, we are committed to ensuring our suppliers do the same. Ford's Supplier Code of Conduct ("Supplier Code") outlines both our requirements and our expectations for supplier relationships in areas related to human rights, the environment, responsible material sourcing, responsible and lawful business practices, and the implementation of associated due diligence principles.

The Supplier Code applies to Ford's supplier community. Our requirements and expectations reflect applicable laws, widely accepted international human rights frameworks and charters, and Ford's own internal policies and procedures. We require suppliers to follow all applicable Ford policies and comply with or exceed all applicable laws and regulations. Incorporated into our production [Global Terms and Conditions \(GT&Cs\)](#) the Supplier Code requires that suppliers must enforce a similar code of practice and require their subcontractors do the same. We are measuring compliance with the Supplier Code using the Sustainability Self-Assessment Questionnaire (SAQ) process outlined in the following section.

Ford's GT&Cs are further supplemented by our Social Responsibility and Anti-Corruption Supplier Guide. The Supplier Guide aligns with the Supplier Code and expands on our expectations and suppliers' obligations on specific topics, including the prohibition of child labor, forced labor (including human trafficking and physical disciplinary abuse), and any infraction of the law. The Supplier Guide also outlines Ford's requirements regarding ethical recruitment, including the prohibition of recruitment fees, misleading or fraudulent practices while offering

Ford Motor Company - 2022 Global Modern Slavery and Human Trafficking Transparency Statement

We launched Sourcing for Sustainability in 2022. The first metric to be launched, the Sustainability Self-Assessment Questionnaire (SAQ) Rating, ensures that suppliers (when requested) must complete the SAQ response and share it with Ford. In addition to the SAQ Rating, the following metrics will launch in 2023:

- Carbon Neutrality Target
- Acceptance of Supplier Code of Conduct
- Sustainability Score - based on supplier compliance with sustainability reporting requirements

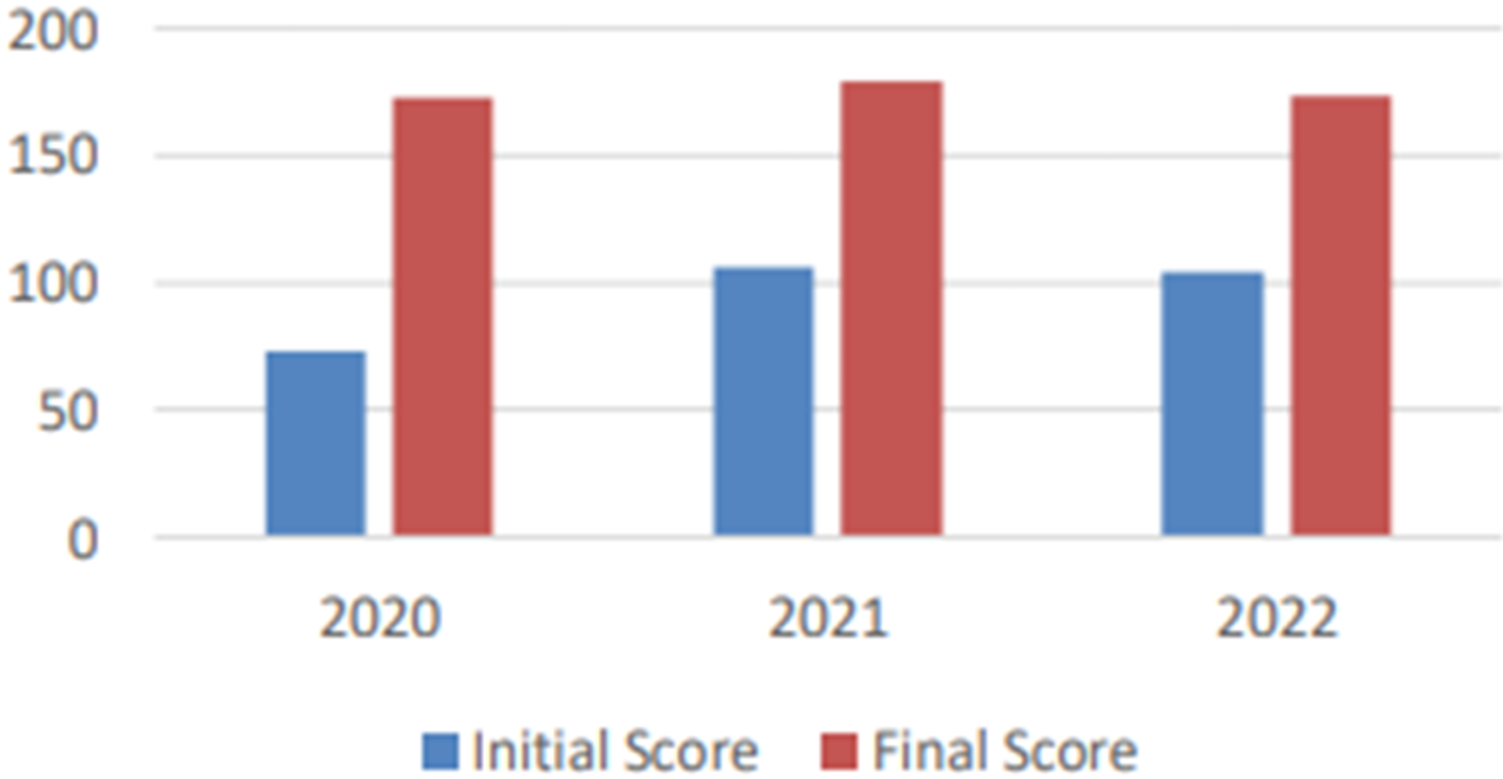
Supplier Audits & Effectiveness

We regularly conduct social responsibility audits of at-risk Tier 1 supplier factories. These audits evaluate supplier compliance with both local law and Ford's human rights expectations as communicated in our Supplier Code. These audits are performed through the independent [RBA Validated Assessment Program](#) (VAP v7.0). As in previous years, 100% of Ford's 2022 audits were externally validated and certified by the RBA. Ford's auditee list includes suppliers representing a broad range of commodity groupings from all regions of the world that were identified using our risk assessment process. Audits include worker interviews and can be either announced or unannounced.

Per the RBA VAP, our audits of suppliers evaluate for 43 Conformance Requirements, including the following:

- All work must be voluntary
- Workers must not be under the age of 15, or under the supplier policy minimum age, or under the legal minimum age for employment, whichever of these is greatest
- Working hours do not exceed the maximum set by local law, and a workweek should not be more than 60 hours per week, including overtime, except in emergency or unusual situations
- Workers must be provided with understandable wage statements that include sufficient information to verify accurate compensation for work performed
- No harsh and inhumane treatment of workers
- No harassment of or discrimination against workers
- All workers have the right to form and join trade unions, to bargain collectively, and to engage in peaceful assembly
- All required permits, licenses and test reports for occupational safety are in place
- Potential for worker exposure to health and safety hazards is controlled
- Process to cascade VAP code conformance requirements to company's own suppliers and to monitor their compliance to the code

Supplier Audit Scores (Average)



A dark blue car is shown from a side-rear perspective, driving on a paved road that is lined with tall, leafy trees. The scene is brightly lit, suggesting a sunny day, with dappled sunlight filtering through the leaves onto the road. The car's side mirror and rear wheel are visible.

● CSR— Customer Specific Requirements

Ford Motor Company: Customer-Specific Requirements

5 Leadership

5.1 Leadership and commitment

5.1.1 General

No Ford Customer-Specific Requirement for this section.



5.1.1.1 Corporate Responsibility

The organization shall comply with Basic Working Conditions in the Global Terms and Conditions and the related Supplier Social Responsibility and Anti-Corruption Requirements Web-Guide <https://web.fsp.ford.com/gtc/docs/hrandwc.pdf>. The organization is also encouraged to adopt and enforce a similar code with Ford's Policy Letter #24 available through <http://sustainability.ford.com> (go to "downloads" at the bottom of the page, then search for "Code of Basic Working Conditions" in the list of downloads).

Mercedes-Benz Special Terms 2020: Sustainability and Environmental Protection

I. Working Conditions/Labor Standards

1. Wages and Benefits, Working Hours

II. Business Ethics Standards

1. Anti-Corruption and Compliance

III. Duty to take due care in the context of human rights

1. Implementation of precautionary measures in the context of human

IV. General Environmental Standards and Environmental Sustainability

1. General Environmental Responsibility, Environmental Performance of Production Activities and of Products

V. Animal protection

The Partner is obligated to comply with the applicable laws and regulations for animal protection as a part of its business relationship with Daimler.

VI. Forwarding of Standards I -V in the Supply Chain

The Partner will forward the content of these sustainability standards (see section I-V) to its suppliers, placing them under the corresponding obligations, and will monitor and check compliance with sustainability standards in the supply chain.

● **One Report - SET Sustainability**



[sd2564_stanly_th_online-1.pdf \(thaistanley.com\)](https://www.stanley.com/TH/SD2564)

bsi.

ดัชนี GRI Content Index

GRI Indicator	Descriptions	Page	
		Annual Report	SD Report
GRI 102	General Disclosures		
GRI 302	Energy		
GRI 302 - 1	Energy consumption within the organization		53
GRI 302 - 3	Energy intensity		
GRI 302 - 4	Reduction of energy consumption		53
GRI 302 - 5	Reductions in energy requirements of products and services		53



ติดตั้งแผง Solar cell

ลดการใช้พลังงานไฟฟ้าในปี 2564
1,190,896 kWh/Year

ปัจจุบัน บริษัทได้ติดตั้งแผง Solar cell บนพื้นที่หลังคาโรงงานผลิต Lamp 7 และ หลังคาอาคารเอนกประสงค์ PQC ซึ่งเป็นอาคารที่ประกอบด้วยโรงอาหาร ห้องสมุด ห้องออกกำลังกาย และพื้นที่สำหรับงานด้านวิศวกรรม



ลดการปล่อย
CO2 Emission
708.58 TonCO2/Year

สนับสนุนการผลิตและมีกิจกรรมทดลองพนักงานฝ่ายผลิต ก่อนเข้าสู่โรงงานการผลิตจริง มีกำลังการผลิตไฟฟ้า (Capacity) : 1.2 MW โดยสามารถลดการใช้พลังงานไฟฟ้าในปี 2564 (Produced Energy) : 1,190,896 kWh/Year สามารถลดการปล่อย CO2 Emission : 708.58 TonCO2/Year และช่วยลดค่าไฟฟ้าได้ (Reduce Electric Consumption) : 5,013,672.79 บาท/ปี และบริษัทมีแผนการขยายกำลังการผลิต Solar Cell ในอนาคตที่อาคารโรงงานผลิต Lamp 7 ส่วนต่อขยาย และอาคารโรงงานผลิต Lamp 8



ลดค่าไฟฟ้าได้
5,013,672.79 บาท/ปี

บริษัทยังมีกิจกรรมลดการใช้พลังงานไฟฟ้า โดยมีเป้าหมาย ลดลง 1% จากปี 2562 ซึ่งมีค่าการใช้ไฟฟ้าเท่ากับ 8.9377 TonCO2/MTHB โดยมีกิจกรรมลดการใช้พลังงานเพื่อให้บรรลุตามเป้าหมายที่ตั้งไว้ ดังนี้



หยุดกระบวนการผลิตในวันอาทิตย์ เดือนละ 1 วัน
ใช้ไฟฟ้าเท่ากับ **8.9377 TonCO2/MTHB**

- การติดตั้ง Power Meter และนำข้อมูลการใช้ไฟฟ้ามาทำการวิเคราะห์ในจุดที่บกพร่อง
- โครงการลดการใช้พลังงานในวันหยุด ซึ่งจะรณรงค์ให้หยุดกระบวนการผลิตในวันอาทิตย์ เดือนละ 1 วัน โดยผลลัพธ์ที่เกิดขึ้น ทำให้สามารถลดการใช้ไฟฟ้าเกือบได้ตามเป้าหมาย โดยมีค่าการใช้ไฟฟ้าเท่ากับ 8.9377 TonCO2/MTHB

เตรียมรับกระแส Sustainable ใน Automotive industry in Thailand

- **Automotive OEM**

- เข้าใจข้อกำหนดเฉพาะลูกค้า
- ทำตาม บางกรณีร่วมรายงานหรือร่วมประเมินผล

- **SET Thailand**

- รายงานตลาดหลักทรัพย์ One report เปิด Global opportunity marketing อาจอ้างอิง GRI

- **General**

- สร้างภาพลักษณ์ ตามกระแส ตามความคาดหวังลูกค้า พนักงาน ชุมชน

"เพื่อประโยชน์ เพื่อความสุข ทั้งปัจจุบันและคนรุ่นถัดไป"


● Training



- หลักสูตรฝึกอบรมเกี่ยวกับ Global Reporting Initiative (GRI)



● Sustainability Report Assurance



AA1000
Licensed Assurance Provider
000-4



- AA1000 Licensed Assurance Provider



● Contact us



www.bsigroup.com/th-TH/



BSI Thailand



@bsithailand