Leadit
LEADERSHIP GROUP
FOR INDUSTRY
TRANSITION

The Leadership Group for Industry Transition Report 2019 – 24

Contents

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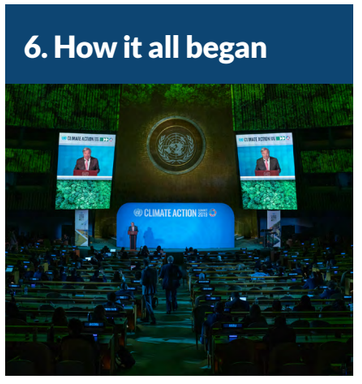
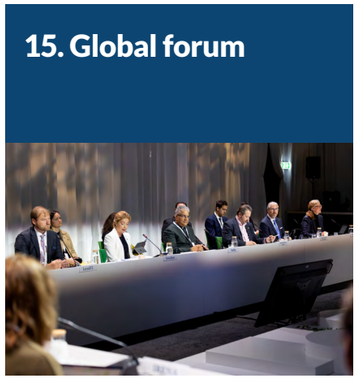




Reflections from India and Sweden

Helen Ågren

Director, Ministry of Climate and Enterprise (Government of Sweden) and LeadIT Board Member

The last five years have seen substantial shifts in the landscape of industrial policies and our common efforts to reduce carbon emissions, but the threat posed by climate change is constant. The need to meet our global climate goals and our commitments under the Paris Agreement is more pressing than ever and to achieve this means breaking our dependency on fossil fuels and replacing them with fossil-free energy sources.

LeadIT was set up in 2019 to help scale- up industry transition globally by demonstrating high-level political and private sector leadership. Sweden has been and remains at the frontier of developing and implementing scalable green solutions.

But fighting climate change cannot be done alone; it must go hand in hand with economic growth and increased welfare for people in every corner of the world.

Leaving communities or nations behind will backfire. International collaboration, the trade of green products, sharing of experiences and technologies are all vital to support a just industry transition. LeadIT as a partnership has added a new strand of work to its successful role as a global forum for governments and business to discuss and develop policies, to support and track transition plans and to mobilize resources and share experiences. The new focus on implementing innovative pilot and demonstration plants in India, bringing together key ministries, agencies, companies, trade associations and research institutes, has a key enabling and supporting role. These partnerships will continue to explore how we can speed up the global green transition. In the last five years, the conversation has changed:, we no longer see industries like steel and cement as hard to abate; we say instead that they are ready to abate. We know the challenges ahead but the pathways to net zero exist and we must follow them. The transition holds opportunities and is the only way to stay competitive in the longer term.

Ruchika Drall

Deputy Secretary, Ministry of Environment, Forests and Climate Change (Government of India), and LeadIT Board Member

Industrial development is vital for the social and economic prosperity of all countries and regions. However, considering the climate challenges the world is facing, this development needs to be sustainable and environment friendly. But the high cost of breakthrough low-carbon technologies, among other challenges, makes them unaffordable in many parts of the world. The capital needed for new or retrofitted green industrial plants can only be unlocked by working together to identify and tackle the most persistent bottlenecks to the transition.

India has always been at the forefront of climate action, in line with this approach, the Leadership Group for Industry Transition was launched in 2019 by the Governments of India and Sweden. At the UN Climate Summit 2019, the Honourable Prime Minister Narendra Modi presented a plan and roadmap for supporting the low-carbon transition of the industrial sector with a special focus on hard to abate sectors.

India has since been working with LeadIT member states and companies to spearhead partnerships and foster a globally just, orderly and fair transition for all that leaves no one behind. Despite the difficult years of the pandemic, the work did continue. We made all efforts to catch the right momentum for change and worked with private sector members to promote public-private partnerships.

The commitment to action and leadership was reaffirmed with the launch of LeadIT 2.0 in 2023. The renewed mandate gave LeadIT the role of a global forum for an equitable transition, and a facilitator of technical co-development and deepened industrial partnerships – the industry transition partnership (ITP) between Sweden and India being one of them.

Our Vision

By 2030, industry is aligned with the Paris Agreement, accelerating pathways towards a just and equitable industrial transition and net-zero emissions by 2050.

Achieving net zero in heavy industry is one of the most critical steps towards a sustainable future. Heavy industries like steel and cement helped build our modern world and still underpin critical infrastructure today. But now, in their current form, these industries pose a threat to our future. They are some of the biggest carbon polluters on the planet, accounting for around 25% of global CO2 emissions. To meet the goals of the Paris Agreement and keep global warming under 1.5°C, heavy industry must drastically and rapidly cut its emissions.

At the heart of this challenge is the fact that these industries are highly energy intensive, with a heavy reliance on fossil fuels like coal and gas. And unlike in other sectors, such as electricity generation, where renewables like solar and wind are being rapidly adopted, heavy industry has fewer obvious solutions. But while the barriers to achieving net zero are many, the mission is clear, because finding solutions to decarbonize heavy industry will be pivotal in averting the worst impacts of climate change.

LeadIT was launched by Sweden and India at the UN Climate Action Summit in 2019 to help achieve this mission. It was the first global high-level initiative aimed at reaching net zero emissions from heavy industry.

LeadIT fosters collaboration between decision-makers in the public and private sector to enable the policy environment, finance flows, and exchange of best practice that are needed to achieve net zero by 2050. It helps create the environment for this collaboration by gathering members, companies and countries aligning with our vision.

When LeadIT was launched in 2019, many considered low-carbon transitions in heavy industry to be unrealistic, but they are now happening through new partnerships between companies and governments, combined with shifts in global industrial policy. LeadIT has helped to accelerate this shift by offering guidance and political impetus for many sectoral, demand-side and innovation initiatives, specifically emphasizing the need for equitable transitions.

LeadIT also serves as a bridge between industry, governments and civil society and between higher income countries and emerging economies. In the five years since it was established, LeadIT's efforts have made several tangible impacts. And now, LeadIT has entered a second phase of its work with LeadIT 2.0 through which it will continue to drive for an accelerated just industry transition

The LeadIT Secretariat is responsible for managing the work of the Leadership Group and is hosted by Stockholm Environment Institute (SEI).

Decarbonization challenge

CO_2

2023, global carbon emissions reach a record high

At the current carbon emissions rate the world will permanently exceed the 1.5°C target before 2030

Heavy Industry accounts for 25% of global emissions

Global demand for the products of heavy industry is growing

Economies need to grow sustainably and decarbonize at the same time

LeadIT is a UN backed initiative with support from the World Economic Forum. It works within the scope of four of the global Sustainable Development Goals (SDGs)

LeadIT works with UNFCCC and collaborates with UN bodies including UNIDO and UNDP. It is also now a member of the UNFCCC Marrakech Partnership for Global Climate Action, which, under the leadership of the High-Level Champions, enables collaboration between national governments and businesses, investors and civil society.

How it all began - the launch of LeadIT

The year 2019 was marked by escalating environmental crises and heightened public demand for climate justice, as people increasingly recognized the urgent need for action to protect the planet.

The world witnessed several major environmental disasters, including widespread wildfires in the Amazon rainforest and some of the worst fires ever seen in Australia. In India excessive monsoon rain caused floods which cost the lives of more than 200 people and forced a million from their homes. The public increasingly came to understand that fires and extreme weather were linked to the impacts of climate change. And that communities in low-income countries we more vulnerable to these impacts.

Teenager Greta Thunberg became the face of global climate activism through her "Fridays for Future" movement, mobilizing millions of young people in climate strikes worldwide, and putting pressure on governments and corporations to accelerate climate action.

Against this backdrop, the 2019 UN Climate Action Summit was held in New York in September, convened on the theme: A Race We Can Win. A Race We Must Win. António Guterres, UN Secretary General, summed up the purpose of the summit: "Without ambitious action, the Paris Agreement is meaningless, so I'm bringing world leaders together to build the future we need."

Opening of UN Climate Action Summit 2019. UN Photo/Ariana Lindquist

Sixty countries were expected to announce steps to reduce emissions and support populations most vulnerable to the climate crisis. In the work done before the Summit, it was clear that without action on heavy industry, there would be no prospect of achieving the goals of the Paris Agreement. In February 2019, nine coalitions were established to support climate action and the portfolio for industry transition was given to India and Sweden to organize.

Robert Watt, LeadIT's Global Engagement Lead, said: "The UN Secretary General brilliantly managed to combine two countries that perhaps on the face of it seemed very different but that actually worked really well when trying to tackle the challenge of how to reduce emissions from industry sectors. He brought together Sweden, with its long tradition of innovation, and India, the fast-rising industry powerhouse and one of the largest producers of steel in the world."

Opening of UN Climate Action Summit in 2019. UN Photo/Cia Pak

The Leadership Group for Industry Transition (LeadIT) was announced on 23 September 2019 as a global initiative under the Industry Transition Track, with backing from the Prime Ministers of Sweden and India. India's Prime Minister Narendra Modi expressed hope that work under the Industry Transition Track would "facilitate early diffusion of technology and support to developing countries."

Nine countries were there from the start; : Argentina, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, South Korea and the UK, as well as companies including Dalmia Cement, DSM, LKAB, Mahindra Group, Scania, SpiceJet, SSAB, ThyssenKrupp, CarbFix and Vattenfall.

The LeadIT membership has now grown to 18 countries and 23 companies with the recent addition of Ashok Leyland and World Energy GH2. The Swedish green steel scale-up Stegra's membership was announced during Climate Week in New York by Swedish Minister for International Development Cooperation and Foreign Trade, Benjamin Dousa.

Stegra joins LeadIT. From left: Benjamin Dousa (Minister for International Development Cooperation and Foreign Trade, Sweden) Lina Håkansdotter (Sustainability and Corporate Affairs, Stegra), and Secretary Tanmaya Lal, (Ministry of External Affairs, India). Photo: Marcus Haraldsson.

LeadIT milestones: a timeline

September 2019
Launch of LeadIT.

November 2020
Industry Transition Roadmap Tracker launch, bringing transparency to the decarbonization plans of different countries and sectors.

July 2020
LeadIT members make joint ministerial statement calling for continued momentum and ambitious action to accelerate industry transition.

2021
LeadIT working groups established on:
- concrete and cement
- green hydrogen
- demand-side policies
- financing Principles on industry transitions.

December 2020
– LeadIT summit joint statement from member countries and companies committing to urgent action to decarbonize heavy industry.

April 2021
LeadIT partners with Student Energy to support Global Youth Energy Outlook.

March 2021
Prime Ministers of India and Sweden reaffirm commitment to LeadIT

April 2021
Green Steel Tracker launch, bringing transparency to the future of steel production.

April 2021
US joins LeadIT.

December 2021
Launch of a roadmap planner to support decision makers develop and implement decarbonization pathways.

November 2021
LeadIT summit at COP26 membership has grown to 16 countries and 19 companies.

November 2022
LeadIT summit at COP27 brings new commitments from 18 countries and 19 companies.

May 2022
Japan joins LeadIT.

July 2023
Launch of the Green Cement Technology Tracker.

December 2022
South Africa joins LeadIT

April 2024
Inaugural meeting of the India Sweden Industry Transition Partnership.

December 2023
LeadIT 2.0 launched by India and Sweden at COP28 in Dubai.

October 2024
LeadIT membership grows to 41.

March 2024
Expansion of the Green Cement Technology Tracker to include calcined clay kilns.

Summary of progress in LeadIT phase one

With the launch of LeadIT it was clear that the global discussion about decarbonizing heavy industry had intensified and there was a growing awareness of the need for these sectors to transition to meet climate goals. However, there was no global consensus on the specific steps or pathways needed and several barriers to achieving a consensus on specific actions persisted. Through its work, and evidenced in the high-level summit statements from member companies and countries in 2020, 2021 and 2022, LeadIT helped build agreement on the challenges that needed to be addressed on the path to decarbonization:

- The need for partnerships across value chains, industries and nations.
- The need for alignment of public policy and private finance to drive the necessary investments, especially in developing and emerging economies.
- The vital role of technology development and sharing, with a focus on infrastructure and key technologies like hydrogen production and carbon capture, utilization and storage (CCUS).
- The need for developing countries to have roadmaps, incentives and regulatory frameworks to attract private and international investments, while financial institutions should play a role in de-risking those investments.

These agreed challenges became a focus for the establishment of other industry transition initiatives and were the framework for LeadIT activities across four working groups on:

- Concrete and cement
- Green hydrogen
- Demand-side policies
- Financing principles on industry transitions.

From these working groups the cross-sectoral themes of finance and partnerships to drive change were identified as key areas for the first phase of LeadIT's work.

LeadIT summit statements

The annual LeadIT summits are high-level meetings in which members make collective calls and commitments to accelerate industry transition in the coming year.

December 2020

Members committed to urgent and collective action on supporting and realizing the business case for industry transition, building competitive green industries across the world by diffusing climate technologies and know-how, and creating stable and reliable markets for green industrial products by exploring green procurement policies, and more. LeadIT called on bilateral and multilateral financial institutions to make finance available to realize pilot decarbonization projects.

At the Summit, Sweden announced it would contribute a total of SEK 300 million to a new industry transition program within the World Bank's Climate Investment Funds (CIF).

November 2021

The summit statement identified implementation and scale as the twin challenges then facing the industry transition. To address these, LeadIT committed to working at country level to support implementation planning, and adopted finance principles for industry transition. These principles focused on the development of a policy framework to de-risk projects and improve existing match-making facilities to better target funding and enable donor coordination.

November 2022

The summit statement re-emphasized the commitment of members to pursue the low-carbon transition of industry. Members are also committed to providing technical assistance to new members and emerging economies. The statement also highlighted the importance of de-risking investments in the transition of heavy industries in emerging and developing countries.

The launch of the 2022 LeadIT Summit Statement, COP28 Egypt with Romina Pourmokhtari (Minister for the Environment, Sweden) and Bhupender Yadav, (Minister of Labour and Employment, Environment, Forest and Climate Change, India). Photo: LeadIT

Financing principles

Through its finance working group, LeadIT has supported the mobilization of finance for green industrial transitions, collaborated with private funds, national agencies, and international financial institutions to help improve the effectiveness of financial assistance for low-carbon industrial projects. Information-sharing and discussions to demonstrate how finance can contribute to decarbonizing heavy industry were facilitated by the working group in events, which brought together representatives from public and private banks and other relevant finance actors. Topics covered included international financial institutions (IFIs) and steel decarbonisation and the role of country roadmaps in supporting access to finance.

Through research and analysis, LeadIT has also played a pivotal role in highlighting the role development-oriented finance can play in industrial decarbonization in emerging and developing countries. Our work has provided valuable insights into the current landscape of financing solutions available through IFIs, and provided actionable policy recommendations for how the role of IFIs in industrial transitions can be scaled up. This research-driven approach has helped to highlight the unique challenges of low- and middle-income countries and is promoting customized solutions and coordinated international financial support.

Specifically, LeadIT helped provide political impetus through its members to the launch of the Climate Investment Funds (CIF) Industry Decarbonization Program under the Climate Investment Funds. This is the world's first multilateral investment program to help developing countries decarbonize heavy-emitting industries, with up to US$ 1 bn available. "CIF's Industry Decarbonization investment program offers unprecedented private sector engagement – encouraging governments, businesses, and multilateral development banks to work hand in hand to tackle GHG emissions reductions in some of the most challenging sectors. The program will spur innovation, provide space to pilot and prove new technologies, and advance a just transition. CIF's predictable and flexible concessional funding will be deployed through partner multilateral development banks." Daniel Morris, Clean Energy Lead, Climate Investment Funds.

Partnerships for change

LeadIT proactively builds partnerships with a focus on implementing change on the ground. We worked closely with the Clean Energy Ministerial (CEM) and the United Nations Industrial Development Organization (UNIDO) to support the Industrial Deep Decarbonization Initiative (IDDI), through a report on green public procurement (GPP) and in-depth knowledge briefs on implementing green public procurement programs.

LeadIT is a "key initiative" under the Steel Breakthrough of the Glasgow Breakthrough Agenda. The Breakthrough Agenda works with initiatives and countries to strengthen international collaboration to make clean technologies and sustainable solutions affordable, accessible and attractive in key sectors globally by 2030. LeadIT has hosted workshops, provided input into the Breakthrough Agenda Report and helped to develop the 2023 action plan, taking joint responsibility on supporting, mobilizing and coordinating finance.

In 2022, LeadIT worked with The Energy and Resources Institute (TERI), together with UNIDO, in preparing a report on decarbonisation of hard-to-abate industry sectors. The report provides an overview of technological pathways and other ways for the G20 to collaborate for rapid development and commercialization of key technologies. The report was commissioned by the Bureau of Energy Efficiency at the Ministry of Power in India and was used by the G20 Energy Transition Working Group.

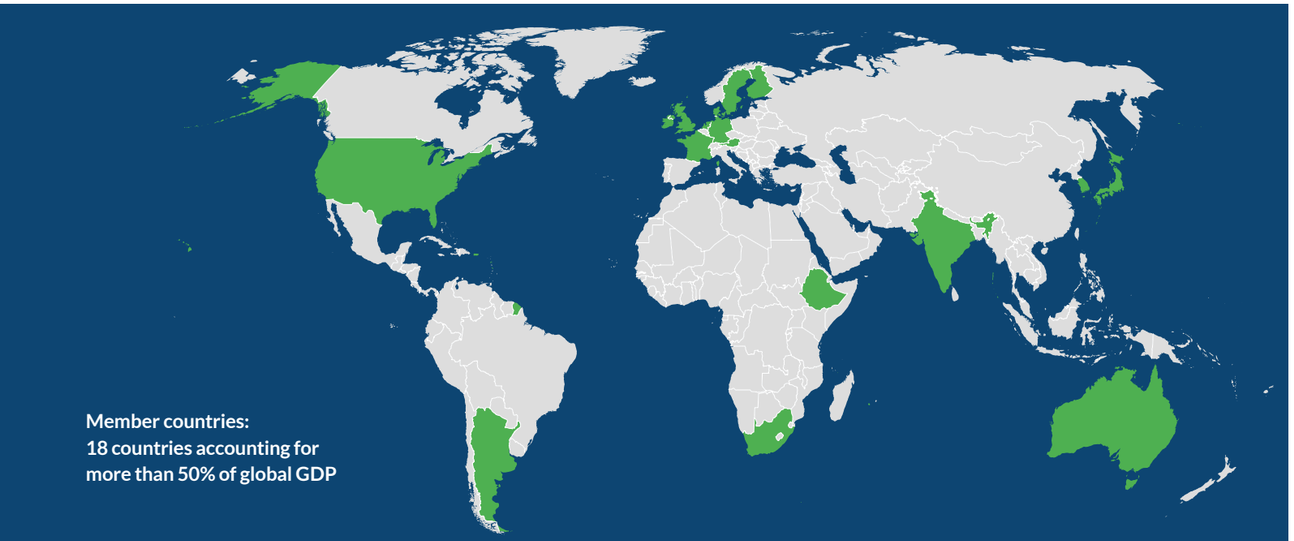
As part of the Stockholm+50 international meeting, LeadIT cooperated with the World Business Council for Sustainable Development (WBCSD) to highlight how global value chains must change to align with goals for climate and nature.

John Kerry, Special Presidential Envoy for Climate, United States, addresses the Stockholm +50 meeting. Photo: LeadIT

LeadIT membership

Bringing together policymakers and business decision-makers at the highest level is integral to our work. And as a leadership group committed to accelerating the path to industry net zero, membership is open to both countries and companies. Our members demonstrate bold and ambitious emissions reduction plans aligned with the goals of the Paris Agreement. Their commitment has come from the highest levels, with CEO level endorsement for companies and ministerial level for country members.

Our member companies are drawn from different heavy industry sectors and range from global corporations to technology scale-ups. Our country membership spans six continents. All our members believe that energy-intensive industry can and must progress on low-carbon pathways in a just and equitable way.



Member countries:
18 countries accounting for more than 50% of global GDP

Argentina
Australia
Austria
Denmark
Ethiopia
Finland
France
Germany
India
Ireland
Japan
Luxembourg
Netherlands
Republic of Korea
South Africa
Sweden
United Kingdom
United States of America

We work with our member countries in several ways to advance industry transition. These include providing global visibility through high-level events such as our Leadership Summit at the UNFCCC Conference of the Parties (COP), facilitating dialogue between policymakers, industry representatives, non-state actors and financial institutions, and by supporting the exchange of technical expertise and the development of joint strategies.

LeadIT specifically supports two country partnerships: the India-Sweden Industry Transition Partnership and the Brazil-UK Decarbonization Hub. We also work with the UK on the Steel Breakthrough work of the Glasgow Breakthrough Agenda.

"The UK Department for Energy Security and Net Zero is proud of our work with LeadIT on the Brazil-UK Industry Decarbonization and Hydrogen Hubs, which aim to mobilize and coordinate international assistance to accelerate green transitions. LeadIT has also played an instrumental role in the Steel Breakthrough, a global collaboration framework focused on priorities such as standards, demand, RD&D, trade conditions and international assistance, which aims to make near-zero emission steel the preferred choice in global markets by 2030."

—Spokesperson, Department for Energy Security and Net Zero, UK Government

Roadmapping

A core part of LeadIT's work in its first phase was to support government and industries in emerging economies to co-produce stakeholder-led roadmaps for achieving decarbonization. Decarbonization roadmaps usually start with a desirable target, and investigate the possible plans, actions and policies required to reach that point. Roadmaps are developed not to forecast the future but to serve as a platform for discussion of future challenges.

Throughout 2021 and 2022, LeadIT worked with local partners in India to initiate discussions in workshops to support the creation of sectoral roadmaps for industry transition.

A focus on steel and cement – India

With the support of India's Ministry of Environment, Forest and Climate Change (MoEFCC), LeadIT worked with local stakeholder to deliver a series of roadmapping workshops in India.

The Energy and Resources Institute (TERI) and the Strategic Partnership for the Implementation of Paris Agreement (SPIPA) were joint hosts of the events

- **December 2021**
  Roadmap Workshop for Decarbonization of Cement Sector in India
- **April 2022**
  Day one: decarbonization of the cement industry.
  Day two: decarbonization of the steel industry.

Roadmap planner

The LeadIT roadmap planner was launched in December 2021 during COP26 as an interactive 'how-to' guide

The four phases in creating a roadmap

●○○○ **PHASE 1**
Preparation and scoping

●●○○ **PHASE 2**
Approach

●●●○ **PHASE 3**
Design

●●●● **PHASE 4**
Monitoring and evaluation

Roadmapping was first implemented as a futures thinking approach in technology forecasting. It is now a powerful planning technique that is integral to strategic thinking and innovation

Mumbai coastal road construction. Photo: Drone Master/Unsplash

Roadmapping for a fossil free future – South Africa

Coal mining, Witbank, South Africa.
Photo: Gulshan Khan / Climate Visuals

South Africa joined LeadIT in December 2022 and in Spring 2023 LeadIT worked with Trade & Industrial Policy Strategies (TIPS) to organize a workshop, hosted by the South African government, to advance the development of a roadmap for decarbonizing the country's steel industry. The workshop brought together more than 40 decision-makers and experts from industry, government, academia, and civil society.

The workshop supported the goals of national-level plans, including the Steel and Metal Fabrication Master Plan, which states that the South African iron and steel value chain is to achieve carbon neutrality by 2050.

The results of the Steel Decarbonization Workshop feed into a program run by the OECD to support the South African government and private sector actors to assess technological pathways, business cases, and financing solutions for implementing steel decarbonization projects. LeadIT is a member of the technical advisory group for this program.

Steel Decarbonization workshop in South Africa, April 2023. Photo: Zuko Ntshidi, The Artrepreneur

"The roadmapping event helped bring more awareness to stakeholders on the requirements, timelines and commitments needed for the hard-to-abate sectors, such as steel and aluminum, to transition to cleaner/greener energy. South Africa continues to be an active member of LeadIT and subsequent events are planned with the secretariat, especially during South Africa's upcoming G20 Presidency."

—**Mahendra Shunmoogam**,
Director, Department of Trade, Industry, and Competition, Government of South Africa

Member companies

Ashok Leyland
The second largest manufacturer of commercial vehicles in India and one of the biggest manufacturers of buses in the world.

Carbfix
An Icelandic company that scales up CO2 storage by dissolving it in water and injecting it permanently into basaltic rocks.

Cemvision
A Swedish scale-up developing cement made from recycled residual materials with kilns fueled by fossil-free energy.

Dalmia Cement
One of India's most prominent cement companies, operating across 15 cement plants and grinding units.

FLSmidth
From its headquarters in Denmark provides services to the global mining and cement industries.

Heidelberg Materials
A German company with a global footprint as one of the world's largest manufacturers of building materials and solutions.

Holcim
A Swiss multinational company, with a presence in around 60 countries, that manufactures building materials including cement, aggregates and concrete.

LKAB
This state-owned Swedish mining company mines iron ore in northern Sweden, supplying around 80% of Europe's iron ore and products to much of the world.

Mahindra
One of the largest vehicle manufacturers in India, producing cars, commercial vehicles, tractors, and motorcycles.

Steel Authority of India Limited (SAIL)
Owned by the Indian government, this is one of the longest established and largest steel producers in India.

Salzgitter AG
A German company with a global footprint as one of the biggest steel producers in Europe.

SaltX Technology
A Swedish green-tech company working to scale up electrification technology to deliver carbon neutral cement.

Scania
A Swedish company providing commercial vehicles, specifically lorries, trucks and buses, to a global market.

Skanska
One of Sweden's largest construction companies with thousands of residential, commercial and infrastructure projects every year, primarily in Europe and the US.

SpiceJet
An Indian low-cost airline operating domestically and internationally.

SSAB
A Swedish steel company present in more than 50 countries with production plants in Sweden, Finland and the US.

Stegra
A Swedish scale up, committed to industry decarbonization, that is building a large integrated green steel mill that will use hydrogen and green iron.

Tata Steel
One of the largest steel manufacturing companies in the world with operations in 26 countries, with its headquarters in India.

Tata Motors
A leading Indian multinational automotive company producing cars, trucks, vans and buses with subsidiaries including Jaguar Land Rover and Tata Daewoo.

Thyssenkrupp
A German industrial multinational active in steel, automotive technologies, marine systems and the shipbuilding sector.

Vattenfall
Owned by the Swedish state, the energy company Vattenfall generates heat and electricity across northern Europe to around 10 million customers.

Volvo
A Swedish multinational manufacturing corporation producing trucks, buses, construction equipment and supplies for marine and industrial drive systems.

World Energy GH2
A Canadian company planning to build the country's first commercial green hydrogen and ammonia production facility.

LeadIT 2.0 – a new phase

India's Prime Minister Narendra Modi (right) and Sweden's Prime Minister Ulf Kristersson (left) shake hands at COP28

At COP28 in Dubai in 2023 a new phase of LeadIT was launched by the Prime Ministers of India and Sweden. Recognizing the success of the previous years in building momentum, LeadIT 2.0 has a specific focus on translating this momentum into action on the ground. The work LeadIT carried out with country members and partners to develop roadmaps for decarbonization has helped inform this next chapter. Specifically, the outcomes of a workshop in India, (organized by the Government of India and LeadIT and supported by UNDP and Invest India) provided a framework for future bilateral cooperation in the steel sector.

A new three-year LeadIT Mission Statement, aiming to develop public-private partnerships, mobilise resources, and support knowledge-sharing for net-zero industry emissions by 2050, was adopted at the annual LeadIT Summit. LeadIT's work until the end of 2026 will be based on three pillars: global dialogue, technology collaboration and fostering Industry Transition Partnerships (ITPs), including a new ITP between India and Sweden.

"We have decided to collaborate to strengthen relevant institutions and policy frameworks to co-develop technology, to collaborate on research and innovation, and to mobilize investments in the transition".

— Prime Minister of Sweden, Ulf Kristersson

"A new chapter is beginning with the launch of LeadIT 2.0. I believe, together we will be successful in writing a new green growth story for the future generation."

— Prime Minister of India, Narendra Modi

The leaders committed to delivering clear and tangible results from the new partnership by COP30 in 2025.

How we work – the three pillars

The work of LeadIT 2.0 is organized according to three specific but cross cutting pillars.

Pillar 1: Global forum for just & equitable industry transition

Secure spaces for dialogue between governments and industry, while equipping members with insights and know-how.

Pillar 2: Technology transfer & co-development

Facilitate the formation of business-to-business collaboration to transfer and co-develop clean technologies.

Pillar 3: Industry Transition Partnerships

Establish country partnerships that support emerging economies wishing to accelerate their industry transition through co-ordinated multilateral technical and financial assistance.

Outcome areas of LeadIT 2.0

1. The momentum and knowledge on industrial decarbonization amongst public-private stakeholders from both developed and developing countries is enhanced.
2. A comprehensive assessment of global green steel and cement is publicly accessible, with information to influence decision making.
3. The public and private sectors collaboratively provide financial resources/instruments that were previously unavailable.
4. Public, private, and civil society stakeholders are provided with an unprecedented platform to jointly identify and explore technology innovation needs.
5. Technology co-development and business to business collaboration are facilitated .
6. India-Sweden ITP is formalized and operationalized with joint industry projects and adequate financial support.

Global forum

Providing a global forum for a just and equitable transition has been part of LeadIT's mission since 2019 and remains an essential pillar in LeadIT 2.0. We provide safe spaces to facilitate dialogue between governments and businesses and equip our members with insights and policy briefs. And because the LeadIT Secretariat is hosted by Stockholm Environment Institute, it means the group has ready access to research experts in the field of industry transition.

Tracking decarbonization projects

One of the most significant contributions to driving a global conversation about industry transition has been the work LeadIT does on tracking progress. This began with the launch of the Transition Tracker in 2020 which made it possible for users to find decarbonization roadmaps in one place and identify the demands in a particular country and industry sector to reach net-zero emissions. It included 29 roadmaps developed by LeadIT member countries and was later expanded with an additional 25 roadmaps, as well as features to allow direct comparison of the enabling measures needed in different countries and sectors.

The Green Steel Tracker and the Green Cement Technology Tracker were subsequently developed and launched on the LeadIT website, providing details of global project announcements for the transition of the steel and cement sectors.

The trackers are based on public information only, and are updated using press releases, news outlets, company reports and other online resources. All sources for each project are listed in a free, downloadable dataset making the trackers a valuable resource for academics, journalists and other stakeholders.

Information from the LeadIT trackers has been used by The Financial Times, Carbon Pulse, Green Steel World, Global Energy Monitor and Industrious Labs. LeadIT's focus on public information promotes transparency.

The trackers in figures:

Green Steel Tracker
Launched in 2021
Baseline number project entries (2021): 63
Number of project entries today: 99, of which 61 are active.

Green Cement Technology Tracker
Launched in 2023
Baseline number project entries (2023): 44
Number of projects today: 78

The Green Cement Technology Tracker is produced in association with the Global Cement and Concrete Association and tracks carbon capture and storage projects and calcined clay kilns.

Thomas Guillot, CEO of the Global Cement and Concrete Association said:

"It is vital for Industry, governments and policymakers to all work together if we are to reach our shared goal of a net-zero world. The importance of that co-operation can be seen in the ever-strengthening partnership between the GCCA and LeadIT. Tracking and transparently reporting decarbonisation progress in our industry is an essential part of the GCCA's 2050 Net Zero Concrete Roadmap. LeadIT were instrumental in building and launching our Green Cement Technology Tracker last year, which is now providing useful data for key interested parties and the public.

Since its launch, the tracker has already been expanded, so that it is now providing data on the development of two of the key technologies helping our industry to decarbonise – carbon capture usage and storage (CCUS) and calcined clays – a lower carbon material alternative. We look forward to further close collaboration with LeadIT over the coming years, as we continue shaping the net zero journey together."

LeadIT at Climate Week NYC, 2024. From left: Annie Hills, Office of the Special Presidential Envoy for Climate, United States, Jennie Cato, Head of Public Affairs and Partnerships, Scania, Anna Åkesson, Group Environmental Manager, Skanska, and Lina Håkansdotter, Chief Sustainability and Corporate Affairs Officer, Stegra. Photo: Marcus Haraldsson.

Business-to-business: technology transfer and co-development

International cement delegation visiting Heidelberg Materials in Gotland, Sweden, October 2024. Photo: Jane Birch/LeadIT

Pillar 2 of LeadIT, the business co-development pillar, is a pivotal component of the platform's mission to accelerate industrial decarbonization through collaboration and shared innovation. A key focus of this pillar is the introduction of new technology solution providers across the value chain. By bringing together a diverse set of industries, sectors, and geographies, the aim is to foster an environment where companies can benefit from each other's advancements in technology, expertise, and innovation.

One of the core principles of this approach is recognizing that the transition to net-zero cannot happen in silos. The challenges faced by heavy industry are complex and interlinked. Thus, the collective expertise of LeadIT members, particularly when paired with cutting-edge technology solution providers, can help create the momentum needed for large-scale decarbonization. LeadIT aims to provide members with a toolkit for understanding best practices in technology transfer, intellectual property rights, and partnership development

Partnerships are essential drivers of global innovation, policy, and financial collaboration. The role of pilots and technology co-development between high, middle and, low income countries, combined with strong business-to-business partnerships, will be pivotal in translating these innovations into scalable solutions and contributing to an equitable industrial transition.

By leveraging the strengths of each member and fostering a culture of innovation, Pillar 2 aims to be a key driver of the global transition to a low-carbon industrial future.

Industry Transition Partnerships

Inaugural meeting of the ITP, NewDehli, April 2023. Photo: The Lalit

The third pillar of activity for LeadIT 2.0 involves supporting LeadIT members to establish Industry Transition Partnerships. These partnerships will help developing economies by improving the effectiveness of international assistance to deliver the enabling conditions that can build a pipeline of bankable low-carbon industrial projects.

LeadIT currently supports two country partnerships: the India-Sweden Industry Transition Partnership and the Brazil-UK Decarbonization Hub. These ITPs function as platforms that bring together ministries and agencies responsible for heavy industries, climate, innovation and science, alongside steel and cement manufacturers, technology providers and research institutions from both countries. The aim is to create the coordination and collaboration required to drive heavy industry decarbonization.

These two country partnerships will align over time to leverage mutual learning and elevate the country platform model as a powerful, innovative way to accelerate industry decarbonization in emerging markets.

The India-Sweden ITP formally started its work in April 2023 with an inaugural meeting in New Delhi, where five working groups were established: two sectoral groups, one on steel and one on cement, alongside three cross-sectoral groups covering innovation, carbon markets and finance. The cross-sectoral groups aim to foster enabling conditions for the delivery of flagship projects in the steel and cement industries. The deliverables from the ITP will be presented at COP30.

Members' impact stories

Projects from LeadIT member companies provide clear signs that industry transitions have already begun. The pace of transition varies across different locations, because barriers to action are higher in some places than others. Scaling up new technologies, raising ambitions and supporting an equitable global transition are vital next steps.

Here our members tell their own stories of the journey to decarbonization.

Dalmia Cement

With a business philosophy that revolves around "clean and green is profitable and sustainable" and with a 2040 carbon negative roadmap ambition, Dalmia Cement is championing circular economy, renewable energy transition, and advancing the use of innovative technologies in cement manufacturing. With one of the lowest carbon footprints globally and a commitment to advocacy and accountability, Dalmia Cement is a trailblazer for a heavy-industry sector.

"LeadIT motivates each member, and we are happy to be one of the founding members in a group that is led by the governments of India and Sweden for heavy industry decarbonization. It is through learning and various partnerships that we have been able to bring down our carbon footprint to nearly 50% of our 1990 baseline and become one of the lowest carbon footprint cement producers globally. But there is still work to do as process emissions, which form 55% of cement plant GHG emissions, require larger consortium and a partnership approach through platforms like LeadIT."

—**Mahendra Singhi**, Member of Board and Strategic Advisor, Dalmia Cement (Bharat) Limited

"It is collaborations and partnerships that can defeat climate change. This is why we are working with various partners like SaltX, whose solution could be one of the accelerators for bringing down CO2 emissions in heavy-industry sectors."

—**Mahendra Singhi**, Member of Board and Strategic Advisor, Dalmia Cement (Bharat) Limited

India is one of the fastest-growing economies in the world and is expected to become the third-largest construction market globally after the US and China. With this growth and expansion comes a challenge for Indian heavy industry to grow and decarbonize at the same time.

Dalmia Cement, one of India's top five cement manufacturers, has taken the lead in putting sustainable growth and decarbonization on the industry agenda.

"One of our first innovations when it comes to net-zero and carbon negative was to start thinking about climate change as early as 2015-16," says Mahendra Singhi, Member of the Board and Strategic Advisor, Dalmia Cement. "That helped us create a business philosophy which says Clean and Green is Profitable and Sustainable."

Dalmia Cement is a founding member of LeadIT and is one of the first companies globally to join RE 100, EP 100, and EV 100 bringing together commitments for significant energy, productivity, and mobility transitions by 2030. It has also committed to the Science Based Targets Initiative (SBTi) which provides companies with a defined path to reduce emissions in line with the Paris Agreement. Dalmia Cement has reduced its carbon footprint by 45% since its 1990 baseline.

Dalmia employs a circular economy model with a focus on recycled inputs, alternative raw materials, and non-fossil fuels in its cement plants. The alternative raw materials used include waste materials from thermal power plants-such as fly ash and ground granulated blast furnace slag waste from the steel industry. Dalmia Cement is also exploring LC3 cement, based on a blend of limestone and calcined clay, and was one of the first companies in India to carry out plant-scale trials of LC3 cement. For fossil-free electricity transition, Dalmia is using waste heat power generation, solar, and wind capacity, contributing over 33% of their total power needs.

Dalmia Cement also recognizes that these measures alone will not deliver its vision, and the company is collaborating with organizations in research and development, as well as committing to advance technology deployment through exploring innovative technologies and processes that can further decarbonize cement production. Dalmia is specifically considering carbon capture, heat electrification, and alternative chemistry.

The collaboration between Dalmia Cement and Saltx Technology, also a LeadIt member, could see SaltX's Electric Arc Calciner technology installed at one of Dalmia's existing plants with international collaboration and support.

Solar Plant, Dalmia Cement Rohtas Plant, Bihar. Photo: Dalmia Cement

HYBRIT

The biggest change in steelmaking in 1000 years

The HYBRIT project was created by three Swedish companies, SSAB, LKAB and Vattenfall, all founding members of LeadIT, with a vision to eliminate CO2 emissions from the global steel industry. Now as LeadIT celebrates five years, HYBRIT is ready to be scaled up for industrial production. It could reduce Sweden's total CO2 emissions by more than 10%.

Steel is one of the world's most important engineering and construction materials. It is used to make our cars, bicycles, refrigerators, washing machines and furniture as well as trains, bridges, cargo ships, surgical tools and weapons. It is also essential in the building industry where it is used to make concrete reinforcing rods and beams. It has shaped our cities by making skyscrapers possible.

Steel is an easy material to recycle, and recycled steel makes up around 40% of the total steel produced each year. But with global demand for steel rising, the need to make new steel continues to grow.

An alloy of iron and carbon, the production of new steel is highly energy intensive. It relies on coal as the predominant fuel used in the blast furnaces that convert iron ore to iron. This process generates high CO2 emissions and is the reason steelmaking is one of the most carbon emission intensive industries in the world, accounting for around 7% of global carbon dioxide emissions.

The HYBRIT (Hydrogen Breakthrough Ironmaking Technology) initiative was created to find a new decarbonized process by replacing coal with hydrogen made from fossil-free electricity, primarily wind power and water.

After six years of research, the project has become the first in the world to demonstrate that the fossil-free value chain – from iron ore to steel – works on a semi-industrial scale. The results also show that direct reduced iron produced with the HYBRIT process has superior characteristics compared to iron produced with fossil fuels. So far, more than 5000 tonnes of hydrogen-reduced iron have been produced at HYBRIT's pilot plant in Luleå, Sweden.

"The groundbreaking results from the pilot phase show that the HYBRIT process works and that we are ready for the next stage, where the demonstration plant that LKAB plans to build in Gällivare in Northern Sweden will be a crucial step towards production in industrial scale," says Jenny Greberg, Vice President Technology at LKAB and board member of Hybrit Development AB.

Customers such as Volvo, Epiroc, Peab and many more have demonstrated the use of fossil-free steel in vehicles, heavy machinery, buildings and consumer products.

"The HYBRIT technology makes it possible to produce steel without the large CO2 emissions and the LeadIT network allows us to spread the word, with the aim to accelerate the decarbonization of the steel industry and deliver on the Paris Agreement," says Martin Pei, SSAB CTO and Chairman of Hybrit Development AB.

"Vattenfall is working for fossil freedom. Through partnerships such as HYBRIT, we develop solutions to decarbonize industrial value chains. During the past five years, LeadIT has been important to convey the message that impactful solutions such as HYBRIT are within reach," says Mikael Nordlander, Director Industrial Decarbonization at Vattenfall.

HYBRIT pilot plant for direct reduction, Luleå. Photo: HYBRIT

HYBRIT hydrogen storage access tunnels. Photo: HYBRIT

SaltX

Revolutionizing the world's most important building material with zero-emissions quicklime

Through innovative technology and collaboration, LeadIT member SaltX Technology is enabling zero-emission production of quicklime and cement, an achievement that could help several industries reach net-zero.

Concrete is the single most widely used material globally. It is difficult to imagine a world without it and there is no obvious substitute. It is used to make our houses, schools, offices, and in most of our key infrastructure. And as populations grow and urbanize, demand for concrete, and for the materials like cement and quicklime that are used to make it, is ever increasing. The World Cement Association forecasts that in sub-Saharan Africa alone demand will grow by 77% between 2024 and 2030, whilst India is expected to see demand grow by 42% in the same period.

And quicklime is not only an essential component in cement. It is used in steel production, all paper and pulp industries, agriculture and even to clean the water that we drink. It is in fact used by most industries, and, put simply, we cannot live without it.

These essential materials, however, come with heavy CO2 footprints. Cement production alone results in 1.6 billion metric tonnes of CO2 emissions annually, and quicklime production results in the emission of 400 million tonnes of CO2 per year. The lime and cement industry together account for roughly 8% of the world's carbon dioxide emissions.

But Swedish company SaltX has found a solution that makes quicklime and cement production completely carbon dioxide neutral, through their innovative electrification and CO2 separation technology. The technology, called Electric Arc Calciner (EAC), uses renewable energy and creates clean quicklime while separating and capturing the CO2 by-product. Set to revolutionize the industry, the technology is now ready for industrialization and the company is collaborating with customers and partners to establish a new clean standard for the sector at scale.

SaltX Technology announced its membership of LeadIT at the inauguration of the company's test and research facility, the Electric Calciner Research Center (ECRC), in Sweden in November 2023. Material tests and technical adjustments taking place at the ECRC since its inauguration are helping establish the industrial standard demanded in material quality and commercialization. The knowledge and data acquired through testing is also informing the construction of Zero Emission Quicklime (ZEQL), which will be the world's first full-scale industrial electrified lime plant. SaltX has partnered with SMA Mineral, a Swedish quicklime supplier, to begin construction of a ZEQL factory in Norway. The plant will use 100% electrified EAC production technology resulting in zero CO2 emissions from production.

SaltX Technology is also collaborating with another LeadIT member, the Indian cement producer Dalmia Cement, to integrate the EAC technology into one of their existing plants.

"The lime and cement industry faces a defining shift away from its dependence on fossil fuels. This will reveal who will shape and influence the industry's future. I am convinced that electrification will arise as an absolute necessity to make this shift happen."

—**Lina Jorheden**,
acting CEO SaltX Technology

Inauguration of the SaltX test and research facility in Hofors. Photo: SaltX Technology

Holcim

Making use of clay, one of the world's most abundant minerals, Holcim is on track to decarbonize construction with a cement with up to 50% less CO2 than the industry standard.

From its headquarters in Switzerland, Holcim has a clear net- zero strategy for its operations across 60 countries, encompassing all stages of building and driving the broadest range of decarbonization technologies in the industry.

Starting with its own production of cement and concrete, it uses many different technologies, from innovative low-emission raw materials like calcined clay and recycled decarbonized cement paste, to fossil fuel-free energy and large-scale partnerships to deploy advanced technologies such as carbon capture, utilization and storage (CCUS).

Under its ECOPact brand it already offers a concrete that has at least 30% lower emissions. And through its MAQER Ventures program, Holcim works with hundreds of startups to scale up the most innovative technologies in the built environment. Recently, Holcim announced its investment in Sublime Systems, a low-carbon cement technology startup, reinventing the full cement manufacturing process.

One of Holcim's decarbonization approaches is scaling up the production of calcined clay cements. Traditionally, limestone is heated for cement production, releasing large amounts of CO2. But when calcined clay is used instead of limestone, lower temperatures are needed and virtually no CO2 is emitted during its transformation.

Holcim first started production of calcined clay cement in 2021 at its existing factory in La Malle in France. It has since trialed hydrogen as an alternative fuel to heat the cement kilns to further reduce emissions. Now construction of Europe's first full-scale integrated calcined clay cement operation has begun, also in France. With calcined clay replacing limestone and utilizing biomass for heating and waste heat recovery systems, cement produced here should deliver a product with a 50% lower CO2 footprint compared to the industry standard.

Holcim is scaling up calcined clay with a new dedicated production line at its plant in Cížkovice, Czech Republic, due for completion in 2026. Powered with 100% biomass-based alternative fuels and waste heat recovery systems, the manufacturing of calcined clay is nearly carbon free and ultra-efficient, making low-carbon construction possible at scale.

Calcined clay

- **Calcined clay (or metakaolin) is made by heating kaolin .**
- **Kaolinite, mined as kaolin (clay) is one of the world's most common minerals.**
- **Kaolin can also be sourced from industrial by-products, such as paper sludge waste.**
- **The calcined clay or metakaolin is added to cement in place of clinker.**
- **Traditionally, clinker is produced from limestone, and which emits CO2 at high temperatures.**

Source: GCCA

Gioia 22 building in Milan's skyline makes use of Holcim's C85 and ECOPact concrete. Photo: Holcim

Vattenfall

Decarbonizing value chains with future supply agreements

New partnerships between Swedish energy provider Vattenfall and other LeadIT members are a win win, and demonstrate how entire value chains can be decarbonised with the help of future supply agreements.

The Swedish energy company Vattenfall is committed to building a fossil-free future. As part of this commitment, it aims to stop using any fossil fuels in its own primary electricity or heat production by 2040. And it is also striving towards making their upstream and downstream value chains fossil free.

As part of this work, Vattenfall has agreed future supply agreements for both the downstream provision of fossil-free energy to customers and the upstream supply of near-zero cement and fossil-free steel necessary for its own operations.

Fossil freedom is very much about helping the entire society become fossil free and of course then one of the key and most difficult pieces to tackle is materials and transport. So, the benefit of us engaging in these partnerships is that not only do we provide ourselves with the fossil free materials that we need, but we also provide society at large with those technologies. We help to request and pull and secure fossil free materials and transport in the market sooner rather than later and that's why we want to send these demand signals. Annika Ramsköld, Head of Sustainability, Vattenfall

One of these agreements is between Vattenfall and the German company Salzgitter, a major European steel producer. By using hydrogen instead of coal in the blast furnace process necessary for steel production, Salzgitter aims to reduce its CO2 emissions by over 95%. The production of green hydrogen however requires electricity from renewable sources. Salzgitter has therefore formed a partnership with Vattenfall for the future supply of fossil-free electricity generated by wind. In turn for Vattenfall this agreement helps it secure investment for the planned expansion of its wind energy operation. Vattenfall aims to quadruple wind and solar power production by 2030.

Vattenfall has also entered a partnership with Swedish steel producer SSAB for an upstream supply of fossil-free steel for use in its own operations. The two companies have signed a letter of intent for steel that will be produced with Hybrit technology. Vattenfall needs high-strength steel to build power line pylons, hydroelectric dams and grid stations. A third partnership with LeadIT member Cemvision, a cement scale-up, aims to secure future supplies of green cement. Cemvision develop cement made from recycled waste materials with kilns fuelled by fossil-free energy. Compared to traditional cement production it delivers a reduction of CO2 emissions of up to 95%.

"Fossil freedom is very much about helping the entire society become fossil free and of course then one of the key and most difficult pieces to tackle is materials and transport. So, the benefit of us engaging in these partnerships is that not only do we provide ourselves with the fossil free materials that we need, but we also provide society at large with those technologies. We help to request and pull and secure fossil free materials and transport in the market sooner rather than later and that is why we want to send these demand signals."

— **Annika Ramsköld**, Head of Sustainability, Vattenfall.

Cemvsion ultra low emissions cement with 80 – 100% CO2 reduction. Photo: Cemvision

"The world is now in a paradigm shift. It is changing fast now, and companies will have to adapt and completely transform to be relevant in the near future. To meet these challenges, we can't work in silos and protect old, outdated technologies. We must work strategically and cooperate in the value chains, focusing on circularity and sustainability principles. For cement and building materials we believe there will be a variety of solutions available, depending on local and regional conditions. Cemvision's mission is to accelerate this transformation and partner with those who have the same ambition."

— **Claes Kollberg,** CTO, and co-founder, Cemvision.

Wind power

At the centre of the partnership between Vattenfall and Salzgitter is the Nordlicht 1 offshore wind farm currently under construction in the North Sea.

Nordlicht I is around 85 kilometres north of the island of Borkum off the German coast and will have 68 wind turbines with a total capacity of 980 megawatts.

When the site is completed and connected to the grid, Salzgitter will purchase around 300 gigawatt hours of electricity per year for steelmaking – about the same as the annual electricity usage of 120,000 households.

Vattenfall also intends to us electricity generated by the windfarm to supply customers in Germany with fossil-free electricity.

Wind and solar power. Photo:Vattenfall

Tata Motors

From vision to action: the journey towards a sustainable supply chain

In a world where industry faces the challenge of balancing progress with responsibility, Tata Motors aspires to be an example of purpose-driven leadership. The story of Tata Motors is not merely about reducing carbon emissions – it's about redefining what it means to lead with heart and create an impact in the modern world. Through its commitment to sustainability, Tata Motors sends out a message of hope: when businesses embrace a purpose beyond profit, they can become catalysts for profound change. Every action, no matter how small, contributes to a legacy that will inspire generations to come.

At the core of Tata Motors sustainability journey is a dream that is bigger than just automobiles – it is the dream of leaving behind a greener, healthier planet. With highly ambitious goals to achieve net-zero emissions by 2040 for Passenger Vehicles (PV) and 2045 for Commercial Vehicles (CV), Tata Motors is proving that true leadership requires both courage and conviction. They are not waiting for change to arrive – they are actively shaping it.

Tata Motors understands that no dream can be fulfilled alone. Sustainability is a shared responsibility, and the company has committed to empowering its vast network of suppliers to embrace sustainable practices. It's not just a supply chain – it's a partnership of purpose, built on a foundation of trust, respect, and unity.

Tata Motor's Sustainable Supply Chain Framework:

At the heart of this vision is the Sustainable Supply Chain Framework – a bold initiative, reflecting Tata Motors' aspiration to weave sustainability into the very fabric of its supply chain. It's a step towards responsible growth for partners, stakeholders, and industries to walk together on the path of progress with purpose. It is built on four key pillars:

1. Ambition: a clear vision for sustainability

a clear and resolute vision that aligns Tata Motors' supply chain goals with its larger sustainability mission is the foundation of the framework. It establishes precise KPIs and targets, setting the stage for meaningful and measurable progress. This ambition isn't just an internal pursuit – it calls on suppliers and partners to align with the same vision, fostering collective growth.

Tata Motors, Pune manufacturing plant. Photo:Tata Motors

First meeting of Aikyam, 2021. Photo/Tata Motors

2. Policies: governance with integrity and purpose

Every movement needs a guiding compass, and Tata Motors achieves this through comprehensive policies. From an enhanced Supplier Code of Conduct to robust procurement policies, these principles ensure that every action aligns with high ethical and environmental standards. This governance framework not only mitigates risks but also creates a culture of trust and integrity, aiming to set a gold standard for the industry.

3. Process: building resilience with robust processes:

Sustainability is not an afterthought it is embedded into every decision and at all stages of the supplier life cycle it is integrated into the framework. It starts from the Request for Quotation (RFQ) and with Manufacturing Site Assessments through to an exhaustive annual Supplier Assessment Questionnaire(SAQ) for existing suppliers, helping Tata Motors identify those leading the way and encouraging those who need to improve. By carefully evaluating supplier partners at every step, Tata Motors ensures only those who share its commitment to sustainability become long-term partners. Risk Management Frameworks are also being incorporated to proactively identify and mitigate risks, ensuring seamless governance and continuous improvement.

4. Enablers: Aikyam: "a dream fuelled by vision and unity"

At the heart of Tata Motors' Supply Chain Sustainability strategy is Aikyam, a Sanskrit word that means "unity." This isn't just a platform – it's a movement that binds suppliers, employees, and stakeholders under a single vision: creating a sustainable future, together. Aikyam serves as the bridge between ambition and action, fostering collaboration through workshops, knowledge-sharing sessions, collective learning, and high impact projects.

Tata Motors has also incubated a Transition Advisory Services to assist their suppliers (and other ecosystem partners) with hands-on support to guide them step by step on their sustainability journeys.

To turn the Tata Motor vision into reality, it has embarked on four transformative lighthouse projects:

1. 101 RE 100 – aims to secure a commitment from 101 suppliers to adopt renewable electricity.
2. D.R.O.P. – Dependency Reduction & Optimization Program – Ensuring responsible water usage.
3. Zero Waste to Landfill – Reducing environmental impact.
4. Supplier Take back systems – Driving a closed-loop economy.

These projects are more than just initiatives – they are milestones on a journey of collective change, inspiring everyone involved to think collectively and act responsibly. Tata Motors doesn't just want to meet industry standards – it aims to set them.

The future: closing remarks from Per Andersson, Head of Secretariat, LeadIT

Per Andersson, Head of Secretariat – LeadIT. Photo:LeadIT

This report highlights the first five years of LeadIT and its members – a great testimony to what has been achieved so far and an opportunity to celebrate our successes.

On the positive side, the awareness of the necessity of industrial decarbonization and technological progress has increased substantially. However, global industry transition is not a success story everywhere, all the time, and not for everyone. Carbon emissions from industry are not declining globally and it is increasingly a multi-speed societal transformation. What is a fair and just transition is debated and viewed differently depending on where you are in the world and society, and which walk of life you're in.

It is a fact that interdependence is a defining feature of industrial decarbonization: not only do we share the same planet, climate, and future, but industrial policies and technological progress in one region affect others. The transition is a story of technological, economic, societal, and political change into something new. It is a must, and it is shifting the fortunes and destinies of many.

There are many untold stories of failures, misfortune and procrastination; less optimal, and uninformed decisions; and of acting without consideration of others. It is not easy. The frontier of industry transition is truly complex. Full of high risks, whether betting on an investment decision on green breakthrough technology or making an unpopular decision, or unselfishly joining hands in making the most of joint research and innovation. Only through our failures can we truly learn. But we need to learn fast and keep our belief in global cooperation.

What will determine the next five years – up to 2030? What does a second phase of the industry transition look like? After the first movers have moved - then what?

LeadIT and its members have had a good first innings. As we go out to bat in the second, the challenges will be different. To reach our 2030 commitments much work remains to be done by all. The competition for leading the second phase of the transition is, between companies and countries. While a healthy dose of competition can be beneficial, the balance between companies and countries, and how dialogue, cooperation, and partnerships are managed, may be central to how carbon reductions are ultimately made.

What does this mean for leaders and LeadIT members?

It will take courage to lead in the next phase of the industry transition. To be globally successful it will take genuine partnerships, mutual understanding and sheer willpower to overcome obstacles.

From the individual LeadIT member it will take ambition, creativity and a strong will to work with others to achieve tangible results.

In short, it will take guts.

Find selected LeadIT publications on our website: https://www.industrytransition.org

2019

Industry transitions: a critical gap in national climate commitments.
An "NDC Industry Scorecard" studying the extent to which industry is reflected in decarbonization commitments across 134 countries.

2020

Shaping a sustainable and low-carbon recovery that spurs industry transition.
A LeadIT briefing considering the policy options needed to support decarbonization.

Five ways to finance the industry transition - Analysis of 30 industry transition roadmaps in 10 countries
An analysis of the policy levers necessary to overcome barriers to financing the transition.

Accelerating industry transition in developing countries. A comparative analysis of the industry transition potential in developing countries, synthesizing the barriers and challenges they face focusing on three case studies: Indonesia, Mexico and South Africa.

Youth perspectives on industry transition - four dialogues on the role and perspectives of youth in the industry transition focusing on Southeast Asia, Europe, Canada and Latin America written in collaboration with Student Energy. Insights from the dialogues contributed to Student Energy's Global Youth Energy Outlook.

Creating lead markets for green industrial products – examining the role of green public procurement, Carbon contracts for difference (CCfD) and Carbon border adjustment.

2021

Is industry transition now a priority in the latest round of NDCs?
Updates LeadIT's 2019 NDC Industry Scorecard and conducts a second analysis of industry transition measures in the latest round of Nationally Determined Contributions.

United States industry transition.
A background brief and fact sheet on industry transition initiatives and decision-making framework in the US.

Fostering industry transition through green public procurement: A how to guide in the cement & steel sectors.
Produced with UNIDO/Clean Energy Ministerial as a background study for the CEM procurement alliance work presented at the CEM Ministerial examining target setting, standards and evaluation guidelines.

Reaching net-zero industry through public-private partnerships. A Green Technology Centre, South Korea and LeadIT co-produced study presented at the P4G Summit.

Green steel production: How G7 countries can help change the global landscape insights from sustainability experts on how G7 governments can make their contributions toward industrial decarbonization impactful.

Tipping points in sight for the industry transition examines demand side policies that can turn emerging tipping points into a domino effect .

2022

The Secretariat provided input to the OECD's Framework for industry's net-zero transition.

A brief on preventing the risks of carbon leakage was produced ahead of the dialogue. A cross-sectoral policy dialogue on carbon leakage prevention measures and their impact on industry transition globally.

During Stockholm+50
A window of opportunity: five ways IFIs can support the transition to green steel in emerging and developing economies.
Published during Stockholm +50 collaboration with SEI and partly funded by ECF. The full report was launched at COP27.

Steel and cement can drive the decade of action on climate change. This is how.
An opinion piece produced with UNIDO and WEF, published UNIDO's Industrial Analytics Platform (IAP)

An updated assessment of NDCs inclusion of industry in the scope was made ahead of COP27.

Towards a sustainable global construction and buildings value chain.
A synthesis of three influential reports with analysis and insights about transforming the global construction value chain.

2023

Unlocking the G20's green public procurement potential.
T20 report on green public procurement, produced with colleagues UNIDO's IDDI and SEI.

LeadIT Green Steel Tracker shows top 50 producers lag on emission targets.
An analysis of the emissions reduction targets produced in conjunction with US based Global Energy Monitor.

Building a stronger steel transition. Global cooperation and procurement in construction a journal article in One Earth produced with SEI.

IFIs and heavy industry decarbonization in emerging and developing economies.
An overview of the technical and financial assistance that IFIs currently provide to heavy industry decarbonization in EDEs.

2024

Global shift in green steel projects as major investments move beyond Europe into Asia.
An analysis from data in the LeadIT Green Steel Tracker

Article 6 and Carbon Markets – the opportunities and the challenges.

Financing green industrial transitions: a swedish case study.
The research considers five industrial sectors in Sweden and is based on interviews with senior representatives from the largest industrial actors, large banks, and asset managers. Published in Energy and Climate Change.Volume 5

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