

January 2022 - December 2023

Impact Report

Exponential Roadmap Initiative

Exponentially scaling solutions
to halve emissions by 2030

21 February, 2024

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Our mission

We unite innovators, transformers and disruptors to drive the transformation to halve global emissions before 2030 through exponential climate action and solutions.

About the Exponential Roadmap Initiative

The Exponential Roadmap Initiative (ERI) is anchored in the latest climate science. We focus on projects with exponential scaling potential.

ERI is an accredited initiative of the UN Climate Change High-Level Champions' Race to Zero and works to advance implementation of the recommendations of the UN's high-level expert group on the net zero commitments of non-state entities (HLEG).

Our pathways to impact are:

- To **influence** the global narrative of “halving by 2030 through exponential climate action and solutions” across the world, which includes developing new frameworks and influencing standards.
- To help **implement** our member companies' strategies and capacity to cut value-chain emissions, scale climate solutions and influence policy through radical collaboration, thus driving the race to the top by proving that these changes are achievable and create a competitive advantage.
- To be at the forefront of innovation to help **scale** best practices and frameworks to maximise global impact.

We are an action-focused initiative. Our goal is to be a leader in game-changing innovation, with a “world's first” ambition in everything we do.

Our story

We unite innovators, transformers and disruptors to drive the transformation to halve global emissions before 2030 through exponential climate action and solutions.

2017

Carbon Law

Johan Rockström, Owen Gaffney and Johan Falk – the latter two of which later co-founded the Exponential Roadmap Initiative - developed the [Carbon Law](#), inspired by Moore's Law, as a simple roadmap for rapid decarbonization applicable to companies, cities, countries and citizens. The Carbon Law sets out that, from a peak in 2020, emissions need to be halved every decade – with the first halving by 2030 – until 2050 in order to limit global warming to 1.5°C. The Carbon Law thus preceded the 2018 [Special Report on Global Warming of 1.5°C](#) from the UN's Intergovernmental Panel on Climate Change (IPCC), which concluded that emissions had to decline by about 45% by 2030 in order to reach net zero around 2050, to keep global warming to a maximum of 1.5°C, and to avoid high risk of catastrophic consequences for people and the planet.

2018

Exponential Roadmap report

The world's first [Exponential Roadmap](#), lead-authored by Exponential Roadmap Initiative co-founders Johan Falk and Owen Gaffney, was launched at the Global Climate Action Summit 2018 by Johan Rockström and Christiana Figueres, former executive secretary of the UN Framework Convention on Climate Change (UNFCCC). It is the first global roadmap highlighting that there are solutions which can halve emissions by 2030 and that they need to be scaled exponentially through four forces: climate leadership, strong policy, finance and technology.

2019

Exponential Roadmap 1.5

We launched the Exponential Roadmap 1.5, a substantial iteration of the Exponential Roadmap.

Climate Index launch

Sweden's leading finance newspaper, Dagens Industri, launches the world's first [climate index](#) for stock exchange pages, developed in collaboration with Exponential Roadmap Initiative CEO Johan Falk. The index, which includes climate indicators, illustrates to readers and companies the importance of measuring and reporting own emissions and value-chain emissions as an integrated part of financial decision data.

12 in 12 report

We launched the [12 in 12](#) report, arguing that major information and communication technology companies (ICTs) must align their mission and products with the goals of ensuring a stable planet.

2020

The 1.5°C Business Playbook

The [1.5°C Business Playbook](#) aims to make the insights of the [Exponential Roadmap](#) report actionable for companies. Launched at the World Economic Forum in Davos by Johan Rockström and Christiana Figueres, the Playbook helps companies and organisations of all sizes set a 1.5°C-aligned strategy and begin to act.

1.5°C Supply Chain Leaders

The [1.5°C Supply Chain Leaders](#) founded and convened by the Exponential Roadmap Initiative drives climate action throughout global supply chains. Understanding the need to work with and support suppliers to halve emissions before 2030 and achieve net zero emissions before 2050, the 1.5°C Supply Chain Leaders support small- and medium-sized enterprises (SMEs) through the [SME Climate Hub](#) (see below).

Exponential Climate Action Summit

First hosted in April 2020, the Exponential Climate Action Summit is a collaboration between We Don't Have Time, the Exponential Roadmap Initiative and Ericsson. The summit focuses on bringing together stakeholders, experts and activists in conversation about how to scale exponential solutions to solve the climate crisis.

Race to Zero

The Exponential Roadmap Initiative becomes an accredited partner and entry point for businesses to join the [Race to Zero](#), a global campaign of the UN Climate Change High-Level Champions, rallying non-state actors to take rigorous and immediate action to halve global emissions by 2030 and deliver a healthier, fairer zero carbon world in time.

SME Climate Hub

The Exponential Roadmap Initiative and the We Mean Business Coalition (WMB), supported by their software partner, Normative, launched the SME Climate Hub, which enables small- and medium-sized companies to understand their emissions, make a commitment aligned with the UN Climate Change High-Level Champions' Race to Zero, take action and report their progress on climate action.

2021

1.5°C Supplier Engagement Guide

The 1.5°C Supply Chain Leaders, co-founded and convened by the Exponential Roadmap Initiative, launched the [1.5°C Supplier Engagement Guide](#), a collaborative platform to engage with suppliers to halve greenhouse gas emissions (GHG) before 2030. The platform provides practical guidance for setting 1.5°C-aligned targets and action throughout global supply chains.

2022

Climate performance review

The Exponential Roadmap Initiative launches its enhanced and more stringent climate performance review to ensure member companies' actions are aligned with the [Race to Zero criteria 3.0](#).

2023

White paper: AI for clean energy – accelerating project pipeline development globally

This [white paper](#) proposes that artificial intelligence tools be used to support the scaling-out of clean energy infrastructure globally. The authors suggest that the tool could identify \$1 trillion-worth of projects within 12 months and \$2tn within 24 months.

1.5°C Business Playbook v.3.0

The updated [1.5°C Business Playbook](#) addresses what companies can do to shift portfolios towards solutions that help customers and others to avoid and reduce emissions. It contains new sections on transition plans, setting forward-looking key performance indicators (KPIs), and on climate solutions.

The [Greening Cash Action Guide](#) sets out seven actions companies can take to reduce emissions resulting from how business cash deposits are indirectly used by banks to finance high-emission activities. By taking these actions, companies can accelerate the transformation of the financial system.

Transition plans

Exponential Roadmap Initiative supported 10 companies in developing transition plans aligned with the HLEG [recommendations](#). The UN secretary-general [recognised](#) this effort by inviting Exponential Roadmap Initiative CEO Johan Falk to his Climate Ambition Summit.

Discussion brief on climate solutions principles

A [brief](#) authored by Exponential Roadmap Initiative and Oxford Net Zero puts forward principles for defining and qualifying climate solutions and climate solutions companies. These principles are designed to incentivise businesses to develop such solutions while also offering precise and ambitious principles to avoid greenwashing.

Informing the development of the UNFCCC's net zero recognition and accountability framework

An independent consultation by the United Nations Framework Convention on Climate Change (UNFCCC) sought to better understand the barriers to the adoption of climate ambition and action by non-party stakeholders such as companies, financial institutions, and cities and regions. Exponential Roadmap Initiative [submitted views](#) on how the net zero recognition and accountability framework under development could promote greater ambition and increase transparency and comparability.

Our impact

Influencing

Our influencing objective is to ensure that global climate narratives reflect the necessity to halve emissions by 2030 as set out in the Carbon Law as well as the potential of exponentially scaling solutions to drastically reduce emissions.

- The Carbon Law is used to make climate policy:
 - Exponential Roadmap Initiative's contributions in two working groups led to Race to Zero integrating the Carbon Law and requirements to halve emissions by 2030 into their [starting line criteria and leadership practices 3.0](#).
 - We influenced the recommendations made in the report of the UN Secretary General's High-Level Expert Group on net zero emissions commitments of non-state entities, [Integrity Matters](#), through responses to stakeholder consultations.
- ERI, Conservation International (CI) and Potsdam Institute for Climate Impact Research (PIK) launched the [Exponential Roadmap for Natural Climate Solutions](#) in September 2022, a first-of-its-kind plan that quantifies and details what we must do to maximise the emissions-mitigating potential of the land sector. The report introduces three major innovations, which together provide a science-based strategy for an exponential ramping up of action and funding for this pivotal decade. First, a critical new benchmark, the Carbon Law for Nature. Second, a focus on people who live and work on the land. And third, a science-based timeline to accelerate mitigation action in the land sector.
- The Exponential Roadmap Initiative and the We Mean Business Coalition launched the [Guiding principles for corporate climate leadership on the role of nature-based solutions](#) in December 2022.
- We launched the [We Can Do It](#) campaign, which was signed by 856 business leaders, policymakers, scientists and investors

from 76 countries, representing \$183 billion in turnover and reaching 41 million people. The campaign increased the impact of an [opinion piece](#) holding the Swedish government to account on keeping its promise to invite the Swedish business community to a climate summit, which the government finally did on 16 June 2023.

- The Exponential Roadmap Initiative's CEO Johan Falk and research fellow Pernilla Bergmark were part of the advisory group providing feedback on the [Guidance on Avoided Emissions](#), launched by the World Business Council for Sustainable Development (WBCSD) and Carbone 4's Net Zero Initiative.
- The Exponential Roadmap report and 1.5°C Business Playbook are referenced throughout chapter 5 ("Transformations needed to achieve the Paris Agreement") of the [UN Emissions Gap Report 2022](#).
- The UN Emissions Gap Report and the UN Race to Zero [2030 Breakthroughs](#) reference the Exponential Roadmap and highlight exponential transformation and disruption.
- Exponential Roadmap Initiative supported and shaped efforts to increase the credibility of net zero pledges by companies. It did so by supporting 11 companies in developing transition plans aligned with the recommendations of the UN secretary general's HLEG on the net zero emissions commitments of non-state entities and submitting the plans to the secretary general's climate action team. Exponential Roadmap Initiative member Icebug was the first company to [publish](#) such a transition plan. The secretary general's office recognised the commitment of Exponential Roadmap Initiative CEO Johan Falk by inviting him to the Climate Ambition Summit on 20 September 2023, as well as to an invite-only roundtable to share knowledge among companies who had submitted transition plans. Exponential Roadmap Initiative also [submitted views](#) to an independent consultation by the UNFCCC seeking to better understand barriers to climate ambition adoption and action by non-party stakeholders such as companies, financial institutions, and cities and regions.

- The discussion brief [Climate solutions principles: defining and qualifying climate solutions and climate solutions companies](#), co-authored with Oxford Net Zero, contributes further to the corporate climate action governance and accountability space. It provides principles that, with a limited use of resources, are simple enough to be applied rapidly and at scale while being precise and ambitious enough to avoid greenwashing. The brief launched in December 2023 when a consultation was kicked off to elicit stakeholder comment and feedback on the proposed principles. At a roundtable held on the sidelines of COP28, representatives from policy, business, academia and civil society further discussed the topic.
- The white paper [A.I. for clean energy: accelerating project pipeline development globally](#), launched in September 2023, seeks to support the scaling-out of clean energy infrastructure globally by exploring the potential use of artificial intelligence tools to reduce the time, cost and complexity of the initial project-development phase of clean energy projects.
- In 2023, with the help of Accenture Sweden and Microsoft Sweden, Exponential Roadmap Initiative launched a pilot phase of the [Energy Edge accelerator programme](#). The project aims to promote energy efficiency by scaling digital and disruptive energy innovations; it focuses on accelerating digital solutions across the energy value chain, from generation to distribution to consumption. Five promising EnTech companies participated in the pilot phase.
- Exponential Roadmap Initiative contributed to the Race to Zero working group “Net-zero for professional service providers”, developing an [assessment framework](#) that professional service providers may use to assess their clients’ and project portfolios’ alignment with climate solutions.
- Johan Falk served as technical expert on the second global dialogue under the [Sharm el-Sheikh mitigation ambition and implementation work programme](#), which highlighted ways to scale up policies and solutions in order to halve transport emissions by 2030.

Implementing

As of December 2023, the Exponential Roadmap Initiative brought together companies representing over \$1.2 trillion in combined annual revenue and just above 2 million employees (2,147,821).

Since January 2023, the enhanced Exponential Roadmap Initiative's Climate Performance Review – which assesses companies against 60 key actions outlined in the 1.5°C Business Playbook including developing targets, reducing one's own emissions and those in one's value chain, influencing society, and reporting – has helped members publicly disclose net zero targets, write and publish transition plans, and report emissions more transparently.

1.5°C Supply Chain Leaders:

The companies gathered in the 1.5°C Supply Chain Leaders group founded and convened by Exponential Roadmap Initiative grew from 12 to 14 in the reporting period and had 15 meetings under Chatham House rules. The group focuses on discussing and working out solutions to challenges related to rapid emissions reductions throughout the value chain, including through accelerated deployment of renewable energies and engaging suppliers. Knowledge and lesson-sharing is integral to the 1.5°C Supply Chain Leaders, and outputs are shared globally.

The total reported scope 3 emissions of companies gathered in the 1.5°C Supply Chain Leaders group have been reduced by 9% between 2020 and 2022.

SME Climate Hub

3,816 small-to medium-sized enterprises (SMEs) newly committed to halving emissions by 2030 through the SME Climate Hub in the reporting period, with numbers of committed SMEs increasing from 3,341 in January 2022 to 7,157 in December 2023.

A new [reporting tool](#) on the SME Climate Hub allows SMEs to report their emissions based on a simplified disclosure framework. Businesses can use the public and downloadable

report to share their climate action progress with customers, financiers and other stakeholders.

A new [Action Guides](#) page introduces nine guides that provide SMEs with practical guidance and actionable steps to implement effective climate action strategies.

A 2023 milestone was the launch of the Net-Zero Commitment Loan by Nordea, one of the largest Nordic banks. This pilot programme offers businesses that commit to and report their climate actions through the SME Climate Hub favourable loan terms in Denmark and Sweden.

Updated 1.5°C Business Playbook and Action Guides

To give business leaders the most up-to-date guidance, we launched version 3.0 of the 1.5°C Business Playbook. Updates include sections on transition plans, setting forward-looking KPIs and climate solutions.

To give concrete and actionable guidance to implement the 1.5°C Business Playbook, we updated our Supplier Action Guide. New guides included the [Transportation Action Guide](#) and [Greening Cash Action Guide](#). The latter specifically presents actions companies can take to reduce the emissions indirectly financed by their cash holdings in the bank as well as to accelerate the transformation of the financial system.

Scaling

- Sessions and live broadcasts in April, September and December 2023 engaged a wide global audience in discussions and narratives around exponentially scaling climate solutions.
 - 4.1 million unique viewers watched the live-broadcasts from the Exponential Solutions Day during the first-ever Stockholm Climate Week in April 2023, co-organised by Exponential Roadmap Initiative and We Don't Have Time.
 - During Climate Week NYC 2023, Exponential Roadmap Initiative co-organised Solutions House with Futerra and Google. More than 4,000 people attended the sessions in person, with more than 2,200 joining online. A total of 37 sessions featured 132 speakers.
 - Exponential Roadmap Initiative's session broadcast via the We Don't Have Time COP28 Climate Hub ranked among the top three most popular sessions of those days that were broadcast. More than 73,000 people were registered to this hub and more than 15 million people were reached via social media. Business was very well represented in the audience, as were NGOs and governments, academia, media and investors.
- In 2022, the broadcast from the UN meeting Stockholm+50 had more than 16 million unique viewers. The broadcast from Climate Week New York City reached 15 million unique viewers. Exponential Solution sessions from the UN climate conference COP27 had 4.4 million unique viewers.
- The online [Supplier Engagement Guide](#) launched in November 2021 by the 1.5°C Supply Chain Leaders ranked among the three most visited pages on the Exponential Roadmap Initiative's website and had 13,307 unique page views (Jan 2022–December 2023), with visitors spending an average time of 2min 38sec on the page.
- The [Supplier Action Guide](#) launched in April 2023 and updated in November 2023 similarly seeks to support companies in engaging their supply chains to halve emissions by 2030.

- The Exponential Roadmap Initiative's 1.5°C Supply Chain Leaders together with Climate Group and RE100 members held two workshops with four companies to explore whether they could work together to scale clean energy through supply chains by collaborating in key markets and sharing best practices with a broader audience of companies. The four [case studies](#) resulting from the workshops provide a good starting point for understanding the main obstacles companies are currently facing when dealing with renewable energy access throughout supply chains.
- 70 companies and organisations with more than \$1 trillion in combined annual revenue have supported the updated [1.5° Business Playbook](#) (v. 2.1), launched in September 2022.

How we are organised

The Exponential Roadmap Initiative is a program implemented through two legal entities with identical missions: the climate enterprise Internet of Planet AB and the nonprofit Exponential Roadmap Association.

The mission of both entities is to facilitate the halving of global greenhouse gas emissions by 2030 through exponential climate action by companies. Profits from Internet of Planet are reinvested in new workstreams and projects that will contribute to the company's mission. In the reporting period, income to Internet of Planet came from member companies (c. 70%) and from the We Mean Business Coalition (c. 30%) for work related to the SME Climate Hub.

The Exponential Roadmap Association received project funding from the Accenture Foundation and the Carbon Disclosure Project. The Association is also a [1% for the Planet](#) Environmental Partner.

