2023
**Sustainability
Report Digest**

tenova

About Tenova

Tenova, a Techint Group company, **provides sustainable, innovative, and reliable solutions in the metals and mining industries**. Headquartered in Italy with over 2,400 employees across 18 countries, Tenova's collaborative working model ensures we are **at the forefront of the industries we work in**.

Tenova partners with **global clients** to design and develop innovative technologies and services that drive **positive transformation**. To learn more about our fully integrated range of sustainable products, technologies, and services visit **tenova.com**.

In this document, any reference to **Tenova is to be intended as inclusive of Tenova S.p.A. and its fully consolidated subsidiaries operating within the framework of the Tenova metals business.** As such, the scope of this report **does not include TAKRAF and DELKOR, companies operating in the mining business.**

Where we are

18 COUNTRIES

33 LOCATIONS

● TENOVA   ● TAKRAF / DELKOR

Technologies for the Metals industries
Innovative and sustainable solutions are the core of our product offering.

Iron & Steel	**Pyrometallurgy**
Aluminum	**Grinding & Texturing**
Hydrometallurgy	**Port Equipment**

2023 Highlights

Sustainability approach

Identification of material topics through **materiality assessment** in 2022

Driving purposeful actions within our **Sustainability Framework**, including energy efficiency initiatives, circular economy solutions, and sustainable innovation

Sustainable Solutions and Innovation

Expansion of our facilities at **TenovaLAB** for the installation of a water electrolysis unit connected to **solar panels**

Successful use of an injection technology, OnlyPlastic: a process able to produce steel from the residues of **waste plastic treatment plants**

Environmental Impact of our operations

Installation of a **980 kW new-generation photovoltaic plant** for our production site in Castellanza. Our 1,781 superior performance and highly reliable high-efficiency monocrystalline silicon panels will be able to generate up to 1,000 MWh annually, which is around 30% of the Campus' annual energy consumption

Employee Engagement and Development

Rollout of **new mandatory Health and Safety training** at project sites – BU Upstream Italy as pilot project

Participation in local **Career Fairs** for attracting new high potential professionals

Implementation of **employees' wellness services** and awareness through ad hoc disseminations and programs

Compliance and Responsible Sourcing

Confirmed **zero complaints** concerning breaches of customer privacy and loss of customer data

Periodic **risk assessment** of potential hazards or risks associated with each site and work activity

Our Sustainability Strategy

Our business strategy is founded on four core commitments:

- Sustainability
- Innovation
- Reliability
- Safety

Materiality Assessment

In 2022, Tenova carried out its first **materiality assessment** to identify its **most relevant environmental, social, and governance (ESG) topics**.

Managed internally by the **Sustainability Project Team**, with support from the Operative Committee and supervised by the **Sustainability Steering Committee**, the assessment included quantitative and qualitative inputs.

Tenova will update this first assessment in the following years by performing a **double materiality assessment** as prescribed by the **CSRD** (Corporate Sustainability Reporting Directive) and **ESRS** (European Sustainability Reporting Standards).

Tenova's Sustainability Framework arranges the material topics under **three pillars** to guide the company's strategy and action planning process.

Tenova's Material Topics are:

Environment	Social	Governance and Business resilience
Energy transition	Health and safety	Business ethics, anti-corruption, and compliance
Energy efficient technologies	Product safety and quality	Transparency and reporting
Environmental impact of products and services	Employee well-being	Responsible procurement
Circular economy	Employee hiring and retention	Human rights
Climate impact of operations	Employee benefits and compensation	C-level accountability for ESG issues
Waste disposal and recycling	Employee training and development	Sustainable behavior promotion
Sustainable innovation and R&D	Diversity, inclusion, and equal opportunity	Sustainability advocacy
Digital transformation of processes		

Our Sustainability Framework

After identifying our priority issues, leaders and key internal stakeholders were involved in a participatory process to develop a **Sustainability Framework** to drive purposeful action and clearly declare our **sustainability ambitions**.

Our ambition is articulated under three main pillars:

1 **WE TRANSFORM BUSINESS**

2 **WE BUILD TRUST**

3 **WE ACT TRANSPARENTLY**

Transformation, Trust, and **Transparency** are the three concepts underpinning these three pillars. It is **no coincidence that they all start with the "T" of Tenova** – this underscores our intention to deeply embed sustainability in our business.

Additionally, we prioritized the **Sustainable Development Goals (SDGs)** that Tenova contributes to and focuses on.

Sustainability ambition

We **lead the way** towards the sustainable **transformation** of our industry.

We **enable** our people, clients, suppliers, and stakeholders to grow and innovate **while caring** for the well-being of our planet.

We **contribute to a resilient and fair world** by operating responsibly.

The pillars

WE TRANSFORM BUSINESS
Helping our clients and suppliers transform to operate within planetary boundaries.

WE BUILD TRUST
Empowering our employees and reinforcing every day mutual trust with all our stakeholders.

WE ACT TRANSPARENTLY
Being transparent within our organisation and with our stakeholders.

The focus areas

WE TRANSFORM BUSINESS
- Developing sustainable solutions & technologies
- Investing in sustainable innovation, R&D, and Digital Transformation
- Accounting responsibly for our direct environmental impact

WE BUILD TRUST
- Providing a safe work environment
- Caring for our employees & providing equal opportunities
- Managing talent, empowering and training development
- Developing safe-by-design technologies
- Strengthening our collaboration with communities and stakeholders at large

WE ACT TRANSPARENTLY
- Operating an ethical business
- Communicating our impact openly and responsibly
- Engaging suppliers for a sustainable and resilient supply chain, and providing supply chain transparency
- Embracing sustainable finance principles

SDGs: 7 Affordable and Clean Energy, 9 Industry, Innovation and Infrastructure, 12 Responsible Consumption and Production, 13 Climate Action

SDGs: 3 Good Health and Well-Being, 5 Gender Equality, 8 Decent Work and Economic Growth, 10 Reduced Inequalities

SDGs: 16 Peace, Justice and Strong Institutions, 17 Partnerships for the Goals

We transform business

Driving value for our clients

Our portfolio of solutions is mainly dedicated to the sustainable transformation of the metal and mining industries. We create value for our clients by providing innovative technologies that boost efficiency, resulting in better performance, less waste, and lower carbon emissions.

1. Energy Transition

Tenova aims to **shift the energy paradigm** in the metals industry by **encouraging clients to adopt hydrogen-ready technologies** as substitutes for carbon-based processes, thereby driving business transformation. We are also contributing by promoting the use of **electric and hybrid vehicles**, for a significant emissions reduction, and the consequent improvement of a healthier environment for our communities and employees.

Our solutions:
- → **Electrical Steel**
- → **DRI and ENERGIRON**
- → **SAF and Open Slag Bath Furnace**
- → **iBLUE®**
- → **Combustion Systems for Furnaces**
- → **TenovaLAB**

2. Energy Efficiency

Tenova has devised a range of **technologies** to assist our clients in **maximizing the efficiency** of their current fuels or adjusting their processes where transitioning to cleaner fuels is not currently viable. The goal is the maximization of available resources while minimizing the emissions.

Our solutions:
- → **Consteel® & EMS**
- → **iRecovery®**

3. Circular Economy

Industrial processes create numerous waste byproducts. Our solutions contribute to the circular economy by **enhancing the recovery and reuse of these byproducts thanks to our technologies**.

Our solutions:
- → **Auto catalyst and battery recycling**
- → **Extracting value from black slag**
- → **EAF-LF** (Electric Arc Furnaces - Ladle Furnace)
- → **Dry Slag Granulation** (in 2023, awarded with the first contract for a LF dry slag granulation solution system)
- → **Lithium Recovery**
- → **Twin-chamber furnaces for aluminum**

4. Impact monitoring

As a responsible metallurgy company, we acknowledge the significance of **assessing our products and services'** environmental and health impacts. We pledge to enhance our processes and products by considering their impact throughout their entire **life cycle.**

Our solutions:
- → **Pomini Digital Texturing** (PDT™)

5. R&D and Sustainable Innovation

We enhance existing technologies and develop new ones to **reduce the environmental impact** of clients' facilities while boosting production efficiency. Our solutions minimize CO_2 and other harmful emissions, integrate alternative and renewable energy, and promote **circularity**.

Our solutions:
- → **OnlyPlastic**
- → **Cyberman 4.0**
- → **Burner 4.0**
- → **HyTecHeat**
- → **Insoluble Anode Tin Coating and Chromium-Free Passivation**

2022–2024 R&D&I Focus Areas and SDGs

Energy Transition			Raw materials / Residual valorization	
Local Environment			Safety	
Process Flexibility / Efficiency (OPEX)			Quality of final product	

Digital Transformation

Tenova's **digital transformation strategy** leverages technologies like machine learning, data analytics, and artificial intelligence (AI) to **increase efficiency and reduce environmental impacts for clients**.
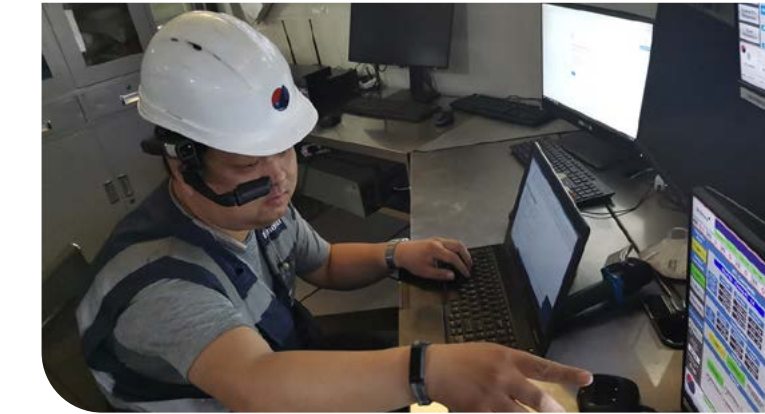
Adopting a digital mindset

Tenova promotes a **digital mindset** by embracing cutting-edge technologies: we encourage employees to familiarize and deploy tools and technologies for education, awareness, and remote collaboration, such as the **Project Collaboration Portal** and the **Supplier Portal**. We have also successfully realized the **first pilot project using GenAI** (generative artificial intelligence) to optimize employees' activities.

Support Client Engagement

Tenova aims to provide excellent service to clients by offering a **Customer Portal** for support requests and spare parts ordering, which is updated on an ongoing basis with new features. We have also developed digital client-oriented tools, including:

→ **Tenova IIoT Platform**
→ **Tenova EDGE**
→ **Tenova adVisor**
→ **Tenova Catalog Creator**

Environmental Impact from our operations

Tenova is deeply committed to **mitigating the harmful impacts of climate change** on the environment. That is why the core of our business is helping clients **reduce their environmental impact** with our products, technologies, and services.

In addition to helping its clients, we are also taking steps to **reduce our own environmental footprint**.

Our 2023 primary energy consumption and direct CO_2 emissions disclosed below are related to our main Italian offices, located in **Castellanza** and **Genoa**, as well as the **production location in Castellanza**:

2024 Goal

Reduction of Scope 2 emissions (market-based) of **450 tCO$_2$e** by 2024 (*)

⬇ **26%**

(*) equivalent to a 26% reduction (baseline 2022)

Total energy consumption: 27,981 GJ
- of which natural gas: 14,183 GJ
- of which electricity: 13,631 GJ

Scope 1 Emissions: 248 tCO$_2$eq
Scope 2 Emissions: (market-based): 1,160 tCO$_2$eq

We build Trust

At Tenova, we believe trust is our license to operate. Trust is established through safe and reliable technology that fosters long-lasting client relationships and a thriving workplace for our employees.

Our commitment to safety comprises two **focus areas**:

- **"Safety First"** — promoting a **culture of safety among employees**
- **"Safety by Design"** — focusing on **integrating robust safeguards into technologies**.

1,534	Tenova employees as of Dec 31, 2023
95%	Permanent employees

✓	Tenova Spa ISO 45001 certified
1.3	Rate of employees recordable work-related injuries
☂	New health & safety procedure in 2023

15	Average hours of training per employee
📈	Leadership Mentorship and Reverse Mentoring programs
79%	Response rate to our Pulse Survey (Employee opinions)

SAFETY FIRST

1. Occupational Health and Safety

At Tenova, **safety is a top priority** for the well-being of our people. We invested in new safety devices for our employees, with training sessions focused on specific topics and on the use of specialized tools. Additionally, we've enhanced our welfare services and increased awareness initiatives, including educational sessions on skin pathologies.

2. Talent

We consider ourselves a **learning company**: we upskill and reskill our employees through on-the-job training, cultural exposure, and education programs. Tenova is also working on attracting **new high potential professionals** through local Career Fairs in Universities and sector associations, like AIST.

3. Benefits and Well-being

We know that attracting and retaining the right talent includes creating a **package of benefits** that proves our commitment to creating an **equitable and supportive workplace.**

To ensure our employees' satisfaction, Tenova regularly carries out an **internal feedback survey**, a tradition established by the Techint Group.

4. Diversity, Equity and Inclusion

Tenova is committed to fostering a **respectful and fair environment** for all employees, irrespective of their gender, religion, origin, nationality, age, sexual orientation, or disability while tailoring diversity and inclusion programs. Diversity is not only respected but also actively promoted, with ongoing efforts to narrow the gender gap.

→ **November 25, 2023:** our third campaign in honor of the **International Day for the Elimination of Violence Against Women**

→ In 2023, we organized a **two-day training program on Female Leadership** for Tenova S.p.A.'s women employees

→ In 2023 we participated in the **Women in Steel conference in Pittsburgh**, organized by AIST – Association for Iron & Steel, supporting the **professional development of women** in the global steel industry

→ In 2023, Tenova supported the **Women's Center & Shelter of Greater Pittsburgh** (WC&S)

SAFETY BY DESIGN

5. Safe Technology for Clients

Our commitment to eliminating potential dangers begins at the **design stage**, where we harness the experience, know-how, and innovative thinking of our experts and engineers to **integrate safety into our products, systems, and facilities from the outset**.

We take a tech-forward approach, leveraging digital technologies, data gathering, data analysis, and dedicated training to deliver products with significant safety advantages. To provide real-time and predictive analytics for our clients, we incorporate advanced monitoring features, including robotics, smart sensors, and AI directly into our products.

This empowers clients to **prevent accidents before they happen** and reduce potential harm to their employees.

Our solutions:

→ **iBOF Intelligent ISDSR Slop Detection**
→ **Water Detection System (WDS)**
→ **Platinum Group Metals (PGM)**
→ **Submerged Arc Furnaces (SAF)**
→ **MEGtec™**
→ **Pomini Digital Texturing™ (PDT™)**
→ **Safe Plus (SAFE+)**
→ **SafeForPorts**

We Act Transparently

Governance and ESG Management

At Tenova, we are committed to leading by example in the metals industry. Recognizing our responsibilities, we strive to be a reliable partner for stakeholders and promote exceptional conduct within the sector. To achieve this, we have implemented extensive internal policies governing employee behavior and external relationships.

We focus on advancing transparency within our top governance bodies and policies, ensuring that our employees act ethically and in accordance with our company values, thanks to e-learning courses on specific matters, such as anti-corruption and compliance.

Compliance and Ethics

We prioritize adherence to regulations and foster a **culture of compliance**:

- Our employees are expected to follow **Code of Conduct**, ethics, and integrity values;
- Our **Code of Conduct** covers interactions with clients, suppliers, and third parties;
- We put in place an **Anti-Bribery Policy** and;
- We are compliant with **international conventions and acts**;
- We have set a goal of 100% completion for **conflict-of-interest declarations**; we estimate 95% have completed the declaration to date;
- We put in place an anonymous **whistleblowing procedure** available for personnel and external parties;
- We adhere to **data privacy and security standards**, including GDPR;
- We implemented a **cybersecurity roadmap** to identify and mitigate potential risks.

Sustainability Governance

Tenova has created three management bodies to benchmark our sustainability progress, create goals, monitor progress:

- The **Sustainability Steering Committee**, which devises overall strategy and goals;
- The **Sustainability Project Team**, which manages projects and monitors progress;
- The **Operative Committee**, which communicates strategy and goals throughout the organization.
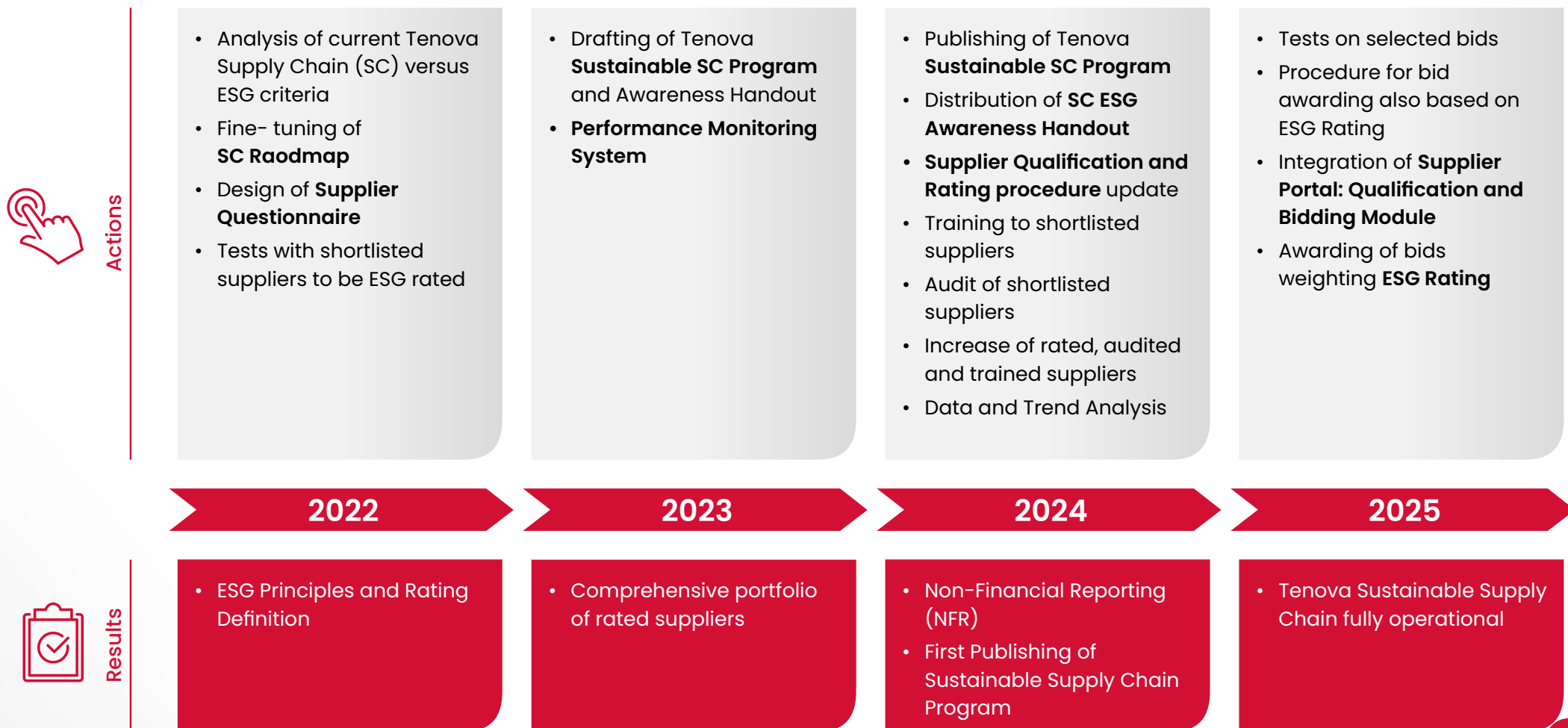
Supply Chain

Our Supply Chain Roadmap to 2025

At Tenova, we are committed to maintaining a **sustainable and responsible global supply chain**. To that end, we ensure compliance with all legal regulations in the countries where we operate and purchase from, and expect the same from our supply chain partners.

Our commitment to a stronger, more responsible supply chain is outlined in our **Supply Chain Roadmap to 2025**, which aims to identify and implement annual, actionable steps to enhance our supply chain with best practices in environmental, social, and governance.

Actions

2022
- Analysis of current Tenova Supply Chain (SC) versus ESG criteria
- Fine- tuning of **SC Raodmap**
- Design of **Supplier Questionnaire**
- Tests with shortlisted suppliers to be ESG rated

2023
- Drafting of Tenova **Sustainable SC Program** and Awareness Handout
- **Performance Monitoring System**

2024
- Publishing of Tenova **Sustainable SC Program**
- Distribution of **SC ESG Awareness Handout**
- **Supplier Qualification and Rating procedure** update
- Training to shortlisted suppliers
- Audit of shortlisted suppliers
- Increase of rated, audited and trained suppliers
- Data and Trend Analysis

2025
- Tests on selected bids
- Procedure for bid awarding also based on ESG Rating
- Integration of **Supplier Portal: Qualification and Bidding Module**
- Awarding of bids weighting **ESG Rating**

Results

2022
- ESG Principles and Rating Definition

2023
- Comprehensive portfolio of rated suppliers

2024
- Non-Financial Reporting (NFR)
- First Publishing of Sustainable Supply Chain Program

2025
- Tenova Sustainable Supply Chain fully operational

2023

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