

Sustainability Report

2022 (extract Annual Report Tekna Holding ASA) January 1—December 31

Sustainability Report

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Every particle counts...

Advancing the world one particle at a time...

The magic of Tekna originates in the strong drive of its employees to do better. Better for an earth that is damaged and in desperate need of a green transition.

At Tekna we make tiny particles of advanced materials that enable this transition.

It is through the **transformation** of the metal supply chain in additive manufacturing, and enabling electrification through the **miniaturization** of microelectronic components as well as **improving the characteristics** of a lithium-ion battery that these tiny particles become **magical**.

And so does the plasma technology that produces them.



TEKNA

Part 1 | This is Tekna

Introduction letter to the Sustainability Report

2022 was a challenging year across the globe. The lingering COVID19, the war in Ukraine, high inflation, off-pattern weather-events... Resilience, which we are building in our teams and in our value chain, is becoming more relevant than ever before.

We want to express our sincere gratitude to our colleagues, customers, and suppliers for their unwavering support and dedication to our mission. We firmly believe that it is only by working together that we can make progress, especially during challenging times.

In 2021, Tekna released its first Sustainability report, recognizing the importance of measuring our impacts to motivate positive change. For our second report, we have adopted a methodology that further enhances transparency. We have created separate reports for external frameworks such as GRI, GHG Protocol, i.e., carbon accounting, EU Taxonomy, and the UN Global Compact. This Sustainability Report 2022 focuses primarily on our vision and the actions we are taking to achieve it.

We have made significant strides in 2022, but we also acknowledge that some actions take longer to execute. One example is the Life-Cycle Assessment of our titanium metal powder, a customer-driven action that we are committed to completing.

However, we have a solid foundation on which to build our sustainability journey. Our manufacturing locations are based in countries where we can utilize clean energy, such as hydropower in Canada and nuclear power in France. Our vision is to expand these sites to produce each metal powder in North America and Europe, bringing us closer to the point-of-use and creating supply resilience through redundancy.

Elaborating further on the foundation of the company, at Tekna we are driven by a culture that seeks to leave the world a better place than we found it. *Advancing the world one particle at a time...* Finding solutions to use production

resources as much as possible in closed loops (water, helium and argon), and driving social change through our supply chain. We also take tangible actions in our community, such as participating in no-mow-May and spring-cleaning efforts to remove litter from a wide area. These initiatives are inspired by our Environment Committee, which comprises employees from various departments in Tekna.

Last year, we communicated our ambitions to reduce CO2 emissions in scopes 1 and 2. Although the sum of emissions in these scopes has remained stable in 2022, we have identified an opportunity to switch our natural gas heating systems to electricity, which we plan to budget for before 2030. We have also mapped additional categories in scope 3, such as Employee Commute, Business Travel, and Waste, and plan to estimate up- and downstream emissions next year to identify significant reduction potential and set a target for achieving climate-neutrality.

Furthermore, we have conducted an initial assessment of climate-related risks and have begun the process of quantifying these risks financially.

We are confident in the quality of the data presented, as Tekna's main shareholder, Arendals Fossekompani, has its (including our) CO2 emissions assured by an auditor. Our Audit Committee and Board of Directors review all ESG reporting before publication.

We are dedicated to continuing this journey with much energy and passion and will continue to report on our progress. If you have any questions, comments, or ideas on how we can improve, please do not hesitate to reach out.

Sincerely,



Luc Dionne

Luc Dionne
CEO Tekna



Arina van Oost

Arina van Oost
VP Corporate Strategic Development and Innovation (incl. Sustainability)

This is Tekna (continued)

Guidance on Tekna's ESG reporting

This year we have decided to split our ESG reporting into topic-specific in-depth reporting particularly for external frameworks. Therefore, this sustainability report focusses on our vision, our roadmap and our actions.

We present an overview of the reports you can download from our website on the right.

The relation between Tekna's material topics, our focus areas, UN Sustainable Development Goals and the GRI requirements are below.

We also included direct links to the documents.

In-depth Report (with link)	Content description
GRI Report 2022	Sustainability information provided in the structure of the GRI General Disclosures 2021. This also includes metrics from 2019-2022 per GRI definition.
Carbon Accounting Report 2022	Quantitative and Qualitative information on the CO2 emissions of the Company
Human Rights and Transparency Act Report 2022	Reporting on Supply Chain governance following the Norwegian Transparency Act
Corporate Governance Report 2022	Reporting on the Company's Governance structure following the Norwegian Code of practice for Corporate Governance
EU taxonomy Progress Report 2022	Progress report ahead of the EU taxonomy reporting requirement per 2023
TCFD progress Report 2021	Progress report on preparations following the structure of the Task Force on Climate-Related Financial Disclosures (TCFD). Keep an eye out for the update in 2023.
UN Global Compact CoP	United Nations Global Compact communication on progress. This is an online reporting in the UN system due in June 2023
Annual Report 2022	Tekna's annual report containing the Board of Directors' report and consolidated and audited financial statements among other

Material topics ¹	Focus area	SDG ²	ESG ³	in GRI ⁴ Report, item:	See also this Report
Enable customers to reach their ESG targets [4.O] Producing more with less materials [8.O]	Sustainability: Enabling customers' positive impact	SDG 7	S	201, 202, 203, 416, 417, 418	EU Taxonomy Progress Report 2022
Increased demand for circular economy innovation and solutions [1.O] Growing demand for green technology drives demand for certain raw materials [5.R]	Circularity: Strive for circular and sustainable production	SDG 12	E	301, 302, 303, 304, 305, 306	Carbon Accounting Report 2022
Achieve climate-friendly production [2.O] Rising resource scarcity worsening the increasing costs [12.R]	Resilience: Responsible and resilient supply chain	SDG 9	G	2-6, 2-13, 2-25, 3-1, 3-2, 204,308,410, 411, 413, 414	Human Rights and Transparency Act Report 2022 TCFD progress Report 2021
Hygiene area (minimum safeguard)	Society: Great place to work	SDG 8	S	2-7, 2-8, 2-16, 2-17, 2-26, 2-30, 401, 402, 403, 404, 405, 406, 407, 408, 409	
Hygiene area (minimum safeguard)	Governance: Ethical business conduct	SDG 16	G	2-1, 2-2, 2-3, 2-4, 2-5, 2-9, 2-10, 2-11, 2-12, 2-14, 2-15, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23, 2-24, 2-27, 2-28, 2-29, 205, 206, 207, 415	Corporate Governance Report 2022

1: Coding at the end of the topic relates to the map in the materiality analyses in Appendix A. "O" is opportunity and "R" is risk. 2: Global Reporting Initiative. 3: UN Strategic Development Goals. 4: Environment, Social, Governance

This is Tekna (continued)

About Tekna

Tekna is a global leader in the development, manufacturing and sales of advanced micron and nano powders as well as plasma process solutions.

Since we started in 1990, Tekna has developed a unique and proprietary plasma technology platform for manufacturing micro and nano sized powders for a range of industries. Our business model relies on two revenue streams, both with synergistic effects:

- Development and sale of plasma systems: We develop and sell plasma systems customized for the purpose of research and development.
- Development and sale of advanced powders: We develop and operate our own proprietary plasma processes to produce and sell spherical powders and nano powders.

Tekna's is developing the position of its advanced materials in three multi-billion-dollar market verticals. 

Tekna is headquartered in Québec, Canada, and has additional offices in France, China, Korea, USA, and seven distributors operating globally (Europe, Asia and North America).



Note: In India and Japan, Tekna has distribution/sales representative agreements

Additive Manufacturing:

Currently our fastest growing segment. Tekna enjoys an estimated 19 per cent market share, up by 6 per cent on main selling products. This global market is on track to outperform, in terms of growth, traditional machining due to improved environmental efficiency, for instance through resource efficiency and speed of availability of parts.

Microelectronics:

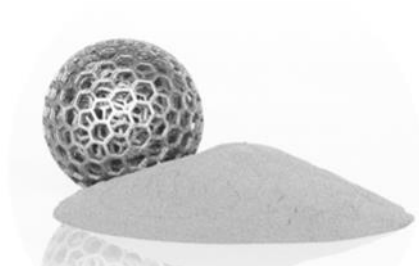
We aim to secure industrial scale supply to global tier 1 customers in the microelectronics industry. Nano powders below 100 nm are expected to become the new industry standard for high-end MLCC devices, and Tekna is one of only three producers that can deliver this.

Energy Storage:

Tekna has developed and patented its industrial process to produce high purity spherical silicon nano powder. Nano silicon used in rechargeable batteries could provide electric vehicles with 60 per cent more distance travelled on a single charge. Important industries for our powders are: batteries, electronics, medical, automotive, aerospace and satellites.

Systems | PlasmaSonic:

In the systems business we launched the PlasmaSonic Product line. This wind tunnel simulates hypersonic conditions to enable research for for instance space tourism.

This is Tekna (continued)**Sustainability highlights 2022 per focus area****Enabling customer's impact**

- * Reducing single –use plastic powder packaging by reusable transportation vessel ([page 84](#))
- * Providing Plasma system customers with guidance on “green” maintenance and end-of-life disposal ([page 84](#))
- * EU Taxonomy: Completed a progress report in preparation of 2023 reporting ([page 76](#))
- * Supported the AMGTA research on resource efficiency for AM (in peer review) ([page 85](#))

Circular and sustainable production

- * Further baseline CO2 emission assessments completed in categories of Scope 3 of GHG protocol ([page 75](#))
- * The development of the carbon reduction action plan is progressing ([page 86](#))
- * In our JV Imphytek we are initiating to recycle within our own value-chain ([page 82](#))

Resilient and responsible supply-chain

- * Powder products formally certified for REACH and RoHS. Certificates available on the website. ([page 82](#))
- * We have signed a partnership with Factlines to apply a solid and consistent approach to responsibility in Supply Chain (Transparency Act) ([page 88](#))
- * Improved governance through hiring of a full-time legal counsel. ([page 91](#))

Great place to work

- * 345 Health and safety audits and awareness interactions took place between management and personnel throughout the year. ([page 89](#))
- * We increased the skill level of our staff by training on various topics through scheduled in-house knowledge sharing program ([page 89](#))
- * Finalized and implemented the pay equity process ensuring unbiased treatment of all employees. ([page 89](#))
- * 62% of employees have passed with success the Cyber security training in 2022 ([page 90](#)).

Ethical business conduct

- * Signed the UN Global Compact. We will start communicating on progress (“CoP”) in 2023. ([page 91](#))
- * Two independent Board members started tenure and gender diversity was achieved. Furthermore, an Audit committee was established ([page 91](#))
- * 91 % of employees signed CoC ([page 76](#))

This is Tekna (continued)

Tekna's climate footprint at a glance

Energy Intensity per kg metal powder produced

Performance vs baseline FY19

Direct electricity of plasma systems within Tekna | Ti64 and AISiMg | in kWh per kg

FY19: 16.3 kWh/kg baseline

FY21: 12.0 kWh/kg⁴ -26% (vs FY19)

FY22: 13.1 kWh/kg -20x% (vs FY19)

Our capacity improvement program increases the productivity of the plasma atomization systems, ie higher output for the same energy. However, the testing to achieve the improvements has impacted our energy intensity in 2022.

Renewable energy share

69%

Scope 1

585 tCO₂e

vs 577 (+1%) in 2021. Tekna has added a third facility in Canada, increasing natural gas consumption for heating in 2022.

Scope 2

34 tCO₂e

vs 42⁴ (-19%) in 2021. At the end of 2021 Tekna has added AM production equipment in Canada increasing consumption in 2022. France and China reduced by 9 tCO₂e total.

Scope 3 (incomplete)

755 tCO₂e

The emissions compared to 2021 increased due to broader emissions mapping in scope 3 and improved data quality.

Tekna's climate footprint at different stages of the value chain

(GHG protocol¹ | in tCO₂e)

Suppliers & Resources

Fuel- and energy-related activities (scope 3)

FY21 391 baseline
FY22 385 -2% (vs FY21)

Other categories to be included for Suppliers & resources: Purchased goods and services, Capital goods, and Upstream Transportation and Distribution

Complete baseline estimations for upstream emissions (scope 3) expected in 2023.

Tekna operations

Production (scope 1 + scope 2)

FY21 619 baseline
FY22 619 0% (vs FY21)

Employees (business travel + daily commute³ - scope 3)

FY21
FY22 402 baseline

Waste² (scope 3)

FY21
FY22 19 baseline

Customers

Categories to be included for Customers: Downstream Transportation and Distribution and Processing of sold product

Baseline estimations for downstream emissions (scope 3) expected latest in 2024.

End-users & End-of-life

Categories to be included for End-users & End-of-life: Use of sold products and End-of-life treatment

Target for 2030

Reduce in absolute terms compared to baseline year

under development

-50 %

under development

under development

See also focus areas [Circularity](#) and [Society](#).

For a full breakdown of the climate footprint accounting, scope 1, 2 and 3 emissions, read the [Carbon Accounting Report 2022](#)

This is Tekna (continued)

Key indicators at a glance

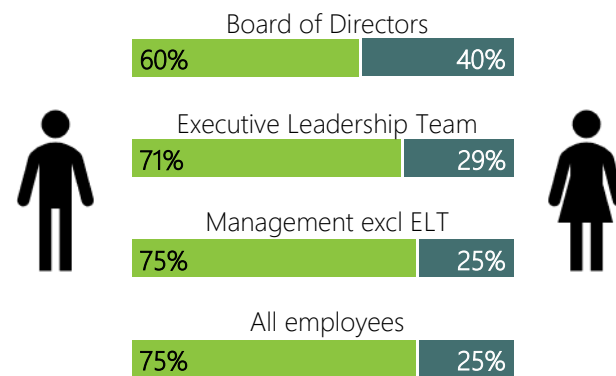
Total employees

216

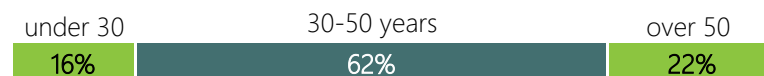
Nationalities

22

Gender diversity per 31 December 2022



Age distribution all employees excl Board of Directors



Governance

Code of Conduct signed

91%

Compliance incidents detected

1

Fatalities

0

Lost time injuries

1

Employees absence rate

2.6%

Internal Safety audits

345

Health & Safety

Reporting: Transparency Act | EU Taxonomy | GRI standards

Suppliers assessed for social impacts¹

Status as per 17 March 2023, due diligence in process

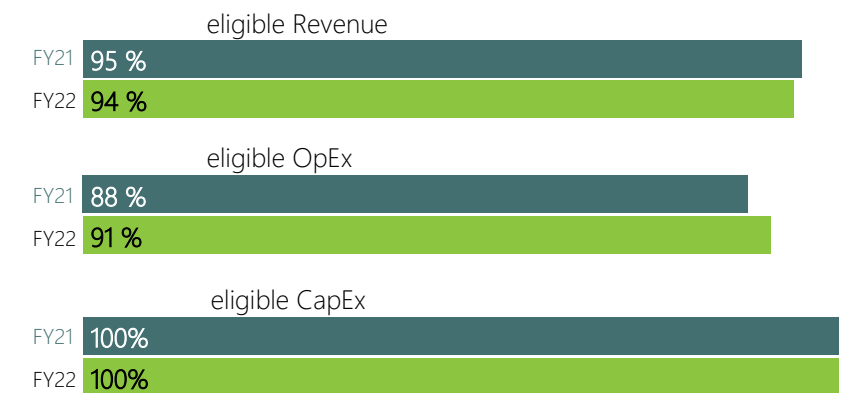
FY21 0 %

FY22 20 % targeting 100%

EU taxonomy²

High eligibility, alignment to be confirmed

3.6. Manufacture of other low carbon technologies (Climate Change Mitigation)

% completion of all GRI standards³

(GRI Standards 201: 2, 3, 20x, 30x, 40x)

FY21 19 %

FY22 47 %

Start of reporting

+150% (vs FY21)

This is Tekna (continued)

Sustainability journey

Tekna is in the process of revisiting its corporate purpose. Building on our core, sustainability will play a more explicit role in our strategy. The vision, mission and values for the corporation will integrate driving positive impact, creating sustainable value for the company as well as society.

Our Sustainability vision consists of three parts: Circularity in our value-chain, Business model resilience and Resilience across and for all stakeholders.

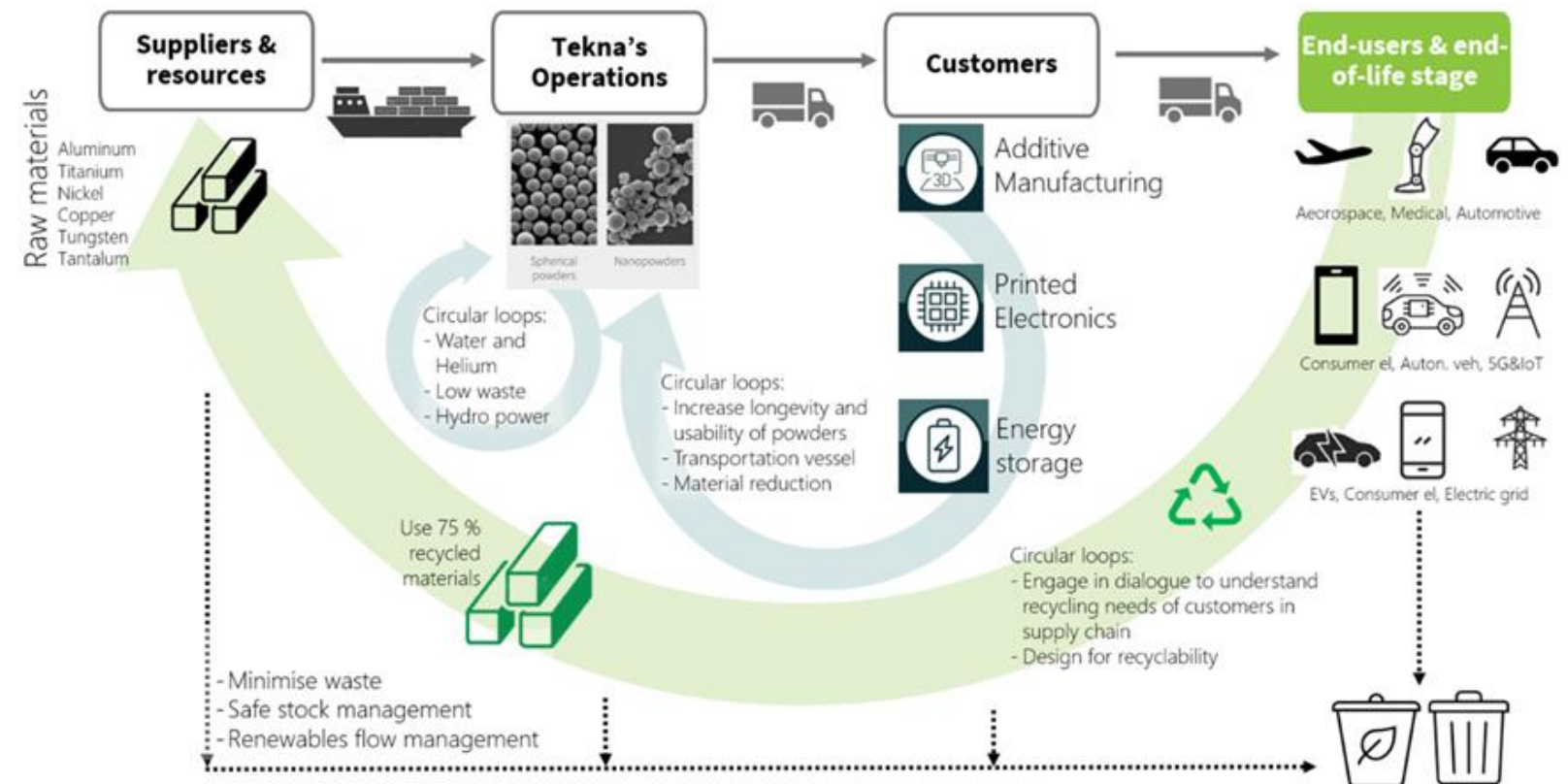
The journey towards CIRCULARITY in our value chain

The circular loops within Tekna's own operations are well-established (light blue arrow in image). We have closed loop systems for process gases and water and recycle waste. As additive manufacturing material volumes are shifting to industrialised demand, the opportunity for building sustainable loops with our customers in for instance pack-

aging and revalorising waste material, are becoming valid options. See [page 84](#) on universal and reusable container and [page 87](#) on revalorising waste material.

One of our material topics is raw materials which we use as feedstock. Circularity, using recycled material as feedstock, is a direct improvement towards mitigating negative impacts associated with raw material extraction. Our aim is to increase the percentage of recycled material in the feedstock

we use to 75 percent. There are serious challenges to overcome in achieving that while maintaining the quality and specifications our customers prescribe. Metal recycling streams today are highly contaminated, and our advanced materials are made of alloys with a high purity and specific oxygen level. For 2023 our target is to work with the suppliers and know how much recycled material is used. From there we envision designing a joint approach to work towards the target. See the short story on [page 82](#) on how our JV Imphytek Powders is proposing to do this within France.



This is Tekna (continued)

Sustainability journey (continued)

Business model resilience: Eco-systems (ie value-chains) per continent

Let's start with the end goal: having supply eco-systems per continent that are resilient to local adversity and are dynamic enough to support each other when facing shortages or crises.

Today Tekna produces most materials in Canada and nickel alloys in France. Our vision is to set up local manufacturing ecosystems, in essence supply chains, per continent. This would make those supply chains much more resilient, with lower exposure to the climate and other risks, while leaving a smaller carbon footprint due to reduced transportation and at the same time enabling circular use of materials within our own ecosystem.

As a first step toward this vision Tekna announced in January 2022 that we are setting up a new production facility in France, Europe. The plan is for this facility to produce all products we deliver in Europe.

The realization of this ambition started with the commissioning of the Mâcon factory in France for the production of nickel alloys and will continue with the establishment of a supply chain for aluminum materials that is 100 per cent European-based, ranging from feedstock procurement to manufacturing of advanced powders, and delivery to point-of-use, with fully traceable, closed-loop material recycling.

Tekna's RESILIENCE framework

Human and climate resilience are the capacity of our ecosystem, including our society, to thrive long term. It entails sustainability by proactively planning for stability and circularity in the face of adversity.

Workforce resilience is mankind resilience, and it is the capacity of our teams to sustain their well-being by collectively coping with and responding to external stresses and disturbances from social, political, and environmental changes. Vulnerability risks are increased by climate change and require inclusive bottom-up knowledge-building and preparedness.

Tekna's supply chain resilience relies on a resilient and diverse workforce, climate resilience, and collaboration between all stakeholders to anticipate and overcome disruptions. Developing support networks help responsiveness, problem solving and resourcefulness, allowing Tekna to maintain high service levels.

With operational resilience Tekna is expanding its business continuity with initiatives focused on risk mitigation, identification and assessment, and subsequent monitoring. The adaptability of our operations through the planning of alternative stable states and teamwork flexibility is key to pursuing our vision.



We produce advanced materials that act as enablers for rapidly growing industries that are driving the green transition.

Part 2 | Material topics

Our Stakeholders

Tekna has identified four main stakeholder groups that guide our journey towards increased sustainability. We have conversations throughout the year and at various levels of the organization to ensure we focus on the topics that resonate with our stakeholders.

Investors

Tekna is proud to find amongst its major investors many that are driven by sustainability. We are thankful for the insights and support they have provided to improve our sustainability reporting and obtain a fair evaluation on our status quo and improvements.

Customers

Tekna's customer base consists mostly of large OEMs that have adopted sustainability as part of their strategies. When Tekna is qualified as a supplier sustainability is usually part of the discussion. Customers frequently enquire about the environmental footprint of our technology. Requests for CO2 emissions, cradle-to-grave, per kilogram of powder, have moved us to include a Life-Cycle Assessment for titanium powder on our roadmap.

General public and authorities

The expectations of the society-at-large are clear: a more equitable and sustainable future for all, addressing the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice. We aim to make our value-chain as sustainable as possible. As a relatively small organization we communicate our efforts and achievements mostly on LinkedIn and endeavor to engage where possible.

Employees

In 2020 Tekna created its environment committee, le Comité Environnement. A committee consisting of volunteering employees created to drive awareness and improvements on the environmental footprint both of Tekna as well as outside of work. An example of their contribution as that, early 2022, the committee inspired a large group of colleagues to collaborate on a spring-cleaning of the industrial park. Read more about it in the feature story ([page 80](#)).



Tekna thanks its Environment committee members for their ongoing drive for continuous improvement.

Material topics (continued)

An active employee Environment committee

by Andreane Laberge, Chair of the committee

The Environment Committee, le Comité Environnement, was created in 2019 to promote environmental awareness and behavioral change for Tekna and also at home.

In 2022, Tekna continued to support sustainable practices and took several actions to reduce its environmental impact. This section summarizes the environmental initiatives carried out.

During the year, Tekna introduced an on-site organic fruits and vegetables market, to promote healthy, sustainable, and local food choices among employees and reduce the carbon footprint associated with the transportation of food.

In May, we participated in the *No Mow May* campaign, which aims to promote the conservation of native plant species, natural habitats, and biodiversity by reducing lawn mowing.

Many other activities were aiming to reduce the amount of waste in the environment. We introduced washable rags for the mechanical team to replace the disposable wipes previously used. A litter pickup activity in the industrial district was organized, in which many employees participated (see images below). Tekna also placed several waste reduction awareness posters throughout our facilities and carried out a characterization of the compost in our operations. This compost initiative allowed us to identify opportunities to improve our composting practices.

Finally, Tekna's environmental committee published three environmental bulletins. These bulletins highlight different topics, such as the importance of buying local and recycling practices, and report on the progress of Tekna's sustainability strategy. The bulletins were distributed to all employees to raise awareness about environmental issues and promote sustainable practices.

This year, the committee will be supporting the ISO 14001 certification effort and working towards making the Tekna terrains in Sherbrooke (HQ) more bio-friendly (spring-cleaning, nesting boxes, less grass more native flowers).



Tekna spring-cleaning in Sherbrooke (CA) industrial park



Material topics (continued)

Materiality analyses

In the context of corporate sustainability, the concept of materiality has evolved – and broadened – to characterize issues that substantively affect the company’s ability to create, preserve, or erode value over the short, medium, and long term¹. These issues can be of an economic or environmental, social, and governance (ESG) nature.

Tekna is using double materiality, i.e. financial materiality as well as impact materiality, in its sustainability reporting.

Our material topics are selected based on two sources: stakeholder expectations and internal strategic priorities. Stakeholder expectations are mapped through interviews, and in dialogue with stakeholders as part of our daily business. We assess identified topics for the significance of their environmental, social and economic impacts. The information collected was aggregated and defined our most important ESG material topics and priorities. A topic is material if the company has an actual or potential significant impact on people or the environment connected to the topic. A topic is also material if it triggers financial effects on the company that are likely to influence its future cash flow.

Late 2021, we reviewed the value chain analysis, opportunities, risks and impacts of material topics across our supply chain and updated our materiality priorities, making sure to include items from the climate risk assessment. From the twenty identified strategic material topics, six were classified as high likelihood and high consequences. The six topics led to the creation of the top three focus areas in our sustainability pyramid, which serves as the basis for our sustainability strategy and reporting.

This year, we’re building upon last year and improving our strategy. One of the key learnings after submitting our 2021 sustainability report to the UN Global compact peer review process, was to better highlight the relationship between our material topics and the focus areas. At the base of the pyramid are hygiene areas (governance and

employees/society), vital to accomplish the top strategies. We can only achieve the top focus areas if the hygiene ones are covered. Next, the six high consequence and high likelihood material topics were used to define the top of our pyramid. Sustainability, circularity, and resilience are our response to the materiality analysis. They are at the core of our strategic focus areas. Tekna’s bottom-up approach in the pyramid ensures that all material topics are incorporated within our supply chain and topics are placed according to where the most significant potential impact occurs. A list of the top six material topics used to build our strategic focus areas is presented below:

Enable customers’ positive impact (Sustainability goal)

Enable customers to reach their ESG targets, by AM producing e.g. more resource efficient products, and by addressing vulnerability challenges (e.g. transportation disrupted by extreme weather events), and building resilience to supply chain disruptions.

Reduce costs by producing more with less materials and resources and by considering the limited availability of critical raw materials, which can spike raw material prices.

Circular and Sustainable production (Circularity goal)

Increased demand for circular economy innovation and solutions, e.g. create products with lower resource density, better resource management, more recycled materials, and a zero-waste production.

Growing demand for green technologies drives demand for certain raw materials and decreases it for others that negatively impact the environment (e.g. Titanium, Silicon)

Responsible and resilient supply chain (Resilience goal)

Achieve a climate friendly production which ensures the offering of products with lower emissions than those of our peers, offer alternatives, and aim to have a positive impact on nature and biodiversity.

Rising resource scarcity worsening the increasing costs of materials, raw materials, and energy due to restrictions, regulations and/or climate change.

Refer to [Appendix A](#) for the full materiality matrix and all topics included as per update Q4 2021.



¹: This definition is taken from the International Integrated Reporting Council (IIRC)

Material topics (continued)

Value chain

Tekna Holding ASA and its subsidiaries ("Tekna") consists of ten legal entities (including one joint venture), of which three are in Europe ("EU") (32 employees), four are in North America ("NA") (179 employees) and three are in Asia (6 employees). Manufacturing takes place in Canada and France, whereas the other entities are sales offices.

In our sustainability journey, we have focused our attention on understanding the impacts of our own operations. However, Tekna has a diversity of interactions across the value chain: suppliers, customers, our own operations and interactions related to the end user and end-of-life process. Our supply chain and geographical footprint are examples of factors that affect the value chain and our impacts, risks and opportunities. Tekna can have a positive or negative impact on the value chain. Examples of a positive impact is the enabling strength of our high-quality additive manufacturing ("AM") materials converting more customers to resource efficient AM methods. As a global business the need for business travel and the related Greenhouse gas emissions (GHG) is an example of a negative impact. Raw materials for the manufacturing of metal powders are likely to represent the main negative impact, both potential and actual, in our supply chain.

We have a general understanding of the potential impacts and risks associated with raw material extraction and refining. This may include child labor, pollution of land, soil, water and air, perilous working conditions, hazardous workplaces, exposure to hazardous chemicals, conflict and disputes in local com-

munities and GHG emissions. We need to study the impacts specifically for the feedstock materials we use, from extraction to delivery at Tekna. Only this way we can mitigate negative impacts. In 2023, we want to focus our attention to upstream impacts and continue downstream in 2024.

Below a simplified overview of the Tekna value chain for the two business segments. We have indicated in red the part with highest impact, which materials are on the Critical raw material list, and which are potential conflict material.

Value chain Business Segments	Suppliers & Resources	Tekna Operations	Customers	End-users (& End-of-life-stage)
Advanced Materials BU's:	<i>Raw materials to feedstock:</i>	Processing feedstock by plasma atomization: heating the metals until they turn into liquids or vapor and subsequently develop the liquids or vapor into micro- and nanoscale advanced materials.	<i>Production of:</i>	<i>Utilization:</i>
Additive Manufacturing	Aluminum Alloys Nickel alloys Tantalum ^{1,2} Titanium ¹ Tungsten ^{1,2}		Tier 1 and Tier 2 Metal part manufacturers	Aerospace, medical implants, automotive and consumers (enabling additive manufacturing)
Microelectronics	Nickel		Multi-Layer Ceramic Capacitors (MLCC) Original Equipment Manufacturers	for Electronics (devices, EVs, enabling miniaturization and electrification)
Energy Storage	Silicon ¹		Material for anodes of Lithium-ion batteries: Product in development	
Systems	Parts and subassembly producers	Manufacturing, commissioning and servicing of Plasma systems	Research institutes and companies	Research and small production of (new) materials (enabling electrification)

* REACH, RoHS and potential conflict minerals

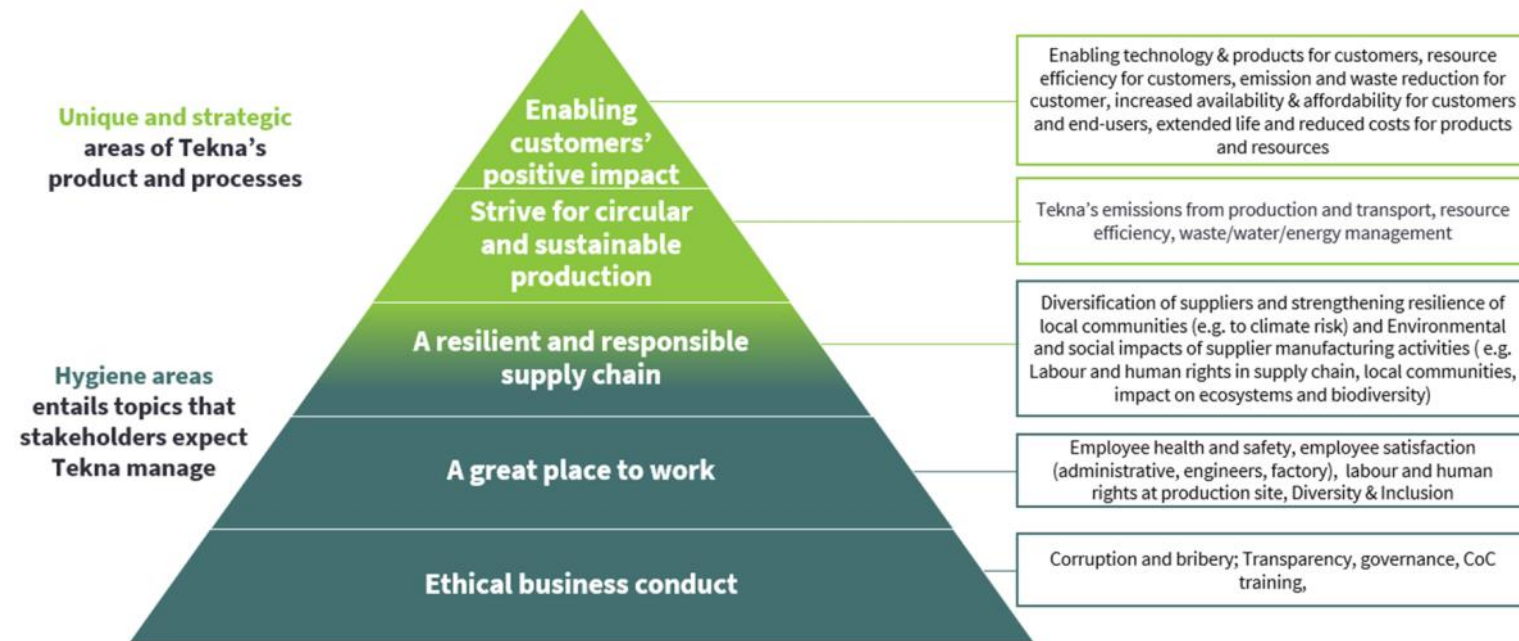
Our supply team has delivered third-party verification guaranteeing our powder products are meeting REACH (toxic chemicals) and RoHS (hazardous substances) requirements.

Tekna is following the Responsible minerals initiative (Conflict minerals reporting) for Tungsten and Tantalum. Both are sourced exclusively from Conflict-Free material based on OECD due diligence and Dodd-Frank requirements. Tekna has the declaration, which is made with all the information from partners in the entire supply-chain from smelters up to Tekna.

* Recycling nickel within our own value-chain

Imphytek Powders ("IP"), a joint venture between Tekna and Aperam, has developed a small-scale proposal to recycle nickel alloys within France. IP would buy back at fair market value unused powder, reject parts and 3D printing supports and coordinate the recycling at Aperam Imphy plant (a melt shop 175 km from Tekna's production site in France). Strict material segregation will be a success factor for this approach.

Part 3 | Focus Areas



Tekna has defined five focus areas, consisting of hygiene factor areas at the base of the sustainability pyramid and more unique and strategic areas towards the top. Hygiene areas entail topics that stakeholders expect Tekna to manage, whereas the strategic areas are calibrated to Tekna's products and processes. This part will go deeper into the various focus areas, its relevance, our impact, the achievements and its short and mid- to long term goals.

At the base of our operations are ethics and our employees. These are hygiene factors that stakeholders expect Tekna to manage well. Ethical business conduct is a focus area which aims for inclusive and cohesive growth across our value chain. Human rights are a precondition for the freedom and dignity of people, for the rule of law, as well as for the inclusive and sustainable growth on which we depend as a business. The next layer is the focus of offering "A great place to work," with the goal of attracting and retaining talent and offering a safe and healthy workplace.

Now, becoming our own ecosystem requires unique and strategic areas for our products and processes. We aim to drive the green transition by

enabling our customers' positive impact. We want to offer business continuity to our customers by maximizing resilience on all fronts, this includes having a diverse number of suppliers working with us towards a circular economy. This will guarantee our customers' positive impacts to shape society and allow innovation to take place.

The focus area of "Circular and sustainable production" supports the previous one as we aim to make our operations ecosystem friendly. This calls for a low carbon footprint and closed-loop systems. An example of the latter is our green hydrogen production for own consumption.

At the intersection between the hygiene factors and strategic areas lies the focus of a resilient and responsible supply chain, which is essential to achieve inclusive and sustainable growth. Transparency and knowledge sharing helps capacity building and sets the conditions to allow innovation to take place as more people have access to employment, education, services and skills training while working alongside our stakeholders to carefully plan for resilience according to local challenges and potential disruptions. The end goal is to have supply ecosystems per continent that are resilient to local adversity and are dynamic enough to support each other when facing shortages or crises. Our first step towards that goal is to strengthen our production facility in Mâcon, France, for our European customers.

Focus area: Sustainability

Enabling Customer / Stakeholder impact

This focus area highlights Tekna's commitment to its customers. Tekna aspires to actively contribute to the implementation of circular and resource efficient solutions and carefully plan for resilience with all stakeholders. This will not only reduce the environmental impact of the value chains it operates within, but also reduce the impact of climate change on business continuity. Enabling our customers in such ways allows them to contribute and further integrate our resilient ecosystem. Planning for adversity together guarantees that Tekna and its stakeholders can keep advancing despite climate change and other challenges. By empowering its customers in achieving their goals, Tekna can be a driving force in the transition to greener and circular materials.

* Tons of material saved

There is a common understanding that Additive Manufacturing ("AM") reduces the amount of raw material needed to make a part. Tekna estimates, based on customer inputs and depending on the industry, that 60 to 90 per cent of material is saved by applying additive manufacturing techniques versus traditional subtractive approaches like milling. Based on our AM powder sales we estimate that **200 – 1300 Tons of metal was avoided** by our customers.

* Replacing single-use packaging

Additive manufacturing ("AM") materials are typically transported in single-use packaging, with aluminum powder being shipped in 5kg plastic drums and titanium powder in metallic bottles of 2.5kg each. Unfortunately, once they have been used, the single-use packaging are left with small quantities of residual metal powder making them not easily reusable nor recyclable.

As the volumes of AM materials are increasing, the business case for returning the powder to Tekna for reconditioning will become stronger. (read also [Revalorizing powder](#)).

In order to reduce single-use packaging, Tekna is developing a Universal and Reusable CONTAINER for Additive Manufacturing powders together with industry partners. One container replaces 25 single-use plastic drums or 80 metallic bottles.

The key benefits of this solution:

- Enabling resource efficiency, circularity and GHG reduction: the sturdy containers can be reused "indefinitely" and will be used to deliver pristine powder to the customer and the customer can return degraded material back to Tekna



- Eliminate the use of single-use packaging and disposal activities
- Allow for safer handling both during transportation as well as at the point of use. 1) reducing the risk of exposure to powder; 2) the Container has wheels, eliminating the risk of dropping or injuries due to lifting; 3) easy to use, "plug and play" reducing the risk of handling mistakes
- Increased efficiency as more material is loaded to the machine per packaging unit

The prototype was certified in 2022 and is ready to be put into operation early 2023. **Given Tekna's projected volumes, the company will avoid ~1 Million tCO2e over the next 5-years.**

* Updating Systems manuals

Systems have a very long life. Of the more than 200 Systems sold, Tekna is aware of only a handful that have been dismantled. Since 2022 we included in our manuals how to dismantle a system and how the different parts can be recycled and reused. Furthermore, we have also made recommendations on good environmental practices for maintenances and cleaning.

Roadmap short and midterm

In appendix B we have included a summarizing roadmap reflecting the various activities we are working. The sustainability roadmap is [here](#).

Focus area: Sustainability (continued)

Enabling Customer / Stakeholder impact

Developing advanced materials for Lithium-ion batteries



Energy Storage is one of our developing businesses units. Tekna has developed a cost and resource-efficient process to produce silicon nano powders that can be used in the manufacturing of Lithium-ion batteries (LiB). The use of silicon nano powders opens the possibility of increasing the LiB charge density and number or charging cycles and therefore improve battery

performance with the following direct benefits:

- Increases clean energy storage capability (windmills, solar cells, etc.)
- Reduces the volume of raw materials in manufacturing LiB and thus the cost;
- Increases clean energy performance as a substitute to coal and fossil-fuels;
- Reduce global consumption of fossil fuels.

Benefits of Additive Manufacturing

Many aspects of Additive Manufacturing can have a positive impact on the environment. There's plenty of anecdotal information about how companies have saved time, money, and materials by using 3D printing instead of carving foam, machining metal, molding plastic, or forming clay. Currently there is limited independent research. The Additive Manufacturer Green Trade Association (AMGTA) is working to improve this by commissioning life-cycle assessment (LCA) studies. As this report is being written the studies are in peer review and should become available soon.

A brief overview of the opportunities:

- More efficient design: 3D printers can produce parts with shapes and features unachievable with traditional manufacturing methods. One can redesign your part or product to make it more efficient, while using less material. Products that were once made of multiple sub-components can now be printed as one, reducing material use, time and labor. The knock-on effect of this more efficient part design optimization (called topology optimization) and part consolidation are products, such as cars and aircraft, that use less raw material and are lighter, and therefore are more fuel efficient and emit fewer greenhouse gases.
- Less raw material: 3D printing makes parts with only the material needed and minimal support material, instead of carving out a part from a block of material, which produces waste.
- Repairability & spare parts: 3D printers can quickly and cheaply make repair parts for unique or out-of-production equipment, keeping older machines and vehicles running, eliminating the need for new (raw material and energy)
- Make parts locally: Less environmental impact from transportation due to locally produced parts, prototypes and products. (3D printers fit into an office.)
- Inventory reduction: With 3D printers, you can print on demand or print small batches instead of having a warehouse of spare and overstock parts, many of which may never be needed.
- Smaller, quieter factories: Less manufacturing equipment makes for smaller, quieter factories and fewer emissions. 1 printer replaces multiple traditional manufacturing equipment as it can make a wide variety of materials, shapes and forms.
- Streamline manufacturing: 3D printers require fewer tools, parts, and processes than traditional manufacturing eliminating much of the labor, equipment and energy. 3D printing is often faster.



Tekna employees with a Powered Air Purifying Respirator Unit, personal protective equipment

Focus area: Circularity

Circular and sustainable production

Tekna's growth, powered by the green transition, introduces an environmental cost to the value chain. Tekna is committed to keeping this cost as low as possible, through green energy, resource efficiency and aiming for increased circularity. This simultaneously reduces our production cost and contributes to securing and improving our market positions.

Climate change and increased demand for greener materials will worsen resource scarcity. Moving forward, Tekna's decisions, where available, will be guided by life cycle assessment-based management of all resources. The sustainability and circularity of Tekna's operations become a priority because all future proof consumer activities must contribute to balancing our ecosystem.

Circular and resource efficient products through Additive Manufacturing

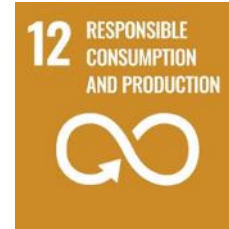
Tekna's inhouse developed manufacturing processes are low emission, resource efficient (e.g. closed-loop gas and water), green (hydro) powered systems. For over 30 years, Tekna has been a responsible manufacturer of quality, leading-edge products.

The manufacturing processes developed by Tekna have the following characteristics:

- Low carbon emissions;
- 95% of the gases involved in the manufacturing of its products are reused in the process (read also [Closed-loop manufacturing](#));
- 100% of the power used to run the facility and the processes are sourced from clean energy, i.e. hydro power plants in Canada and nuclear power in France;
- The stocks of gases are maximized with gas trailers and silos containers avoiding non-eco-friendly weekly replacement of bulk packs.
- Re-using and repurposing of material waste from ours and our customers' processes.

* CO2 reduction plan

Last year, we communicated our ambitions to reduce CO2 emissions in scopes 1 and 2. The sum of emissions in these scopes has remained stable in



2022. The key reduction opportunity we identified is to switch our natural gas heating systems to electricity. We plan to budget for this before 2030.

We have also mapped additional categories in scope 3, such as Employee Commute, Business Travel, and Waste, and plan to estimate up- and downstream emissions next year to identify significant reduction potential and set a target for achieving reductions and climate-neutrality.

* Quantifying waste

Waste is one of the first topics we focused on sustainability. We have increased our waste segregation and recycling adding organic in the offices and cafeterias and volunteers bringing Styrofoam to the eco-center recycling station. This year for the first time we have quantified our complete waste and recycling streams, including hazardous waste, in our headquarter and manufacturing sites in Canada and France. Our emissions amount to 19 tCO2e, which is our baseline from which we will start reducing. We will set a reduction target in 2023.

* Water management

We have identified one Tekna office is located in an area known to have water stress and that is a small sales office in Korea. We used 0.03 megaliter of water in that office in 2022. The water that is being withdrawn is discharged back into the ecosystem via sewerage (not measured).



Roadmap short and midterm

In appendix B we have included a summarizing roadmap reflecting the various activities we are working. The circularity roadmap is [here](#).

Focus area: Circularity (continued)

Circular and sustainable production

Closed-loop manufacturing

by Richard Dolbec (Director emerging technologies)

Climate change and other environmental concerns remind us that resources are valuable and must be managed wisely. Companies with manufacturing operations can reduce their negative impacts on resources by including sustainability in the design and manufacture of their goods. One model being implemented across many industries is closed-loop manufacturing.

In closed-loop manufacturing, waste materials are conditioned and reintroduced into the production process to create new products. Negative environmental impacts such as waste, energy consumption, transports, and packaging can thus be significantly reduced or even eliminated. The same goes for the costs they entail. Simply put, closed-loop production systems strive for sustainability by simultaneously improving economic and environmental goals.

At Tekna, we constantly innovate to improve the performances of our powder production processes. We benefit from closed-loop manufacturing in three different ways. Firstly, the pure gases required for generating the plasma are expensive. Since plasma is only a transient state of the gases (no permanent change), we have developed a gas recycling technology that collects gases at the outlet of the process and reinject them at the inlet, in a virtually infinite loop. This is a major advantage for the good control of our production cost, and for the environment as gas supply' embedded emissions are minimized. Secondly, our powder production units require high-quality cooling water. This high-quality water produced internally is recirculated in a closed loop across the manufacturing area. Water temperature is regulated with a heat exchanger connected to a second water cooling circuit that interacts with ambient conditions outside the building. Our approach minimizes freshwater consumption. It also ensures a perfect

control over cooling water properties and provides stability to our plasma processes. Finally, the wastewater generated from our industrial operations is filtered and treated in our facility. The quality level we obtain is sufficiently high to allow introducing this water back into our processes, thus closing the loop again.

In Tekna's close-loop manufacturing approach, natural resources are conserved, which is a big win for the environment. It also helps keeping a good control over production cost without compromising process stability. Those efforts positively impact sustainability not only for Tekna but also for the supply chains we are part of.

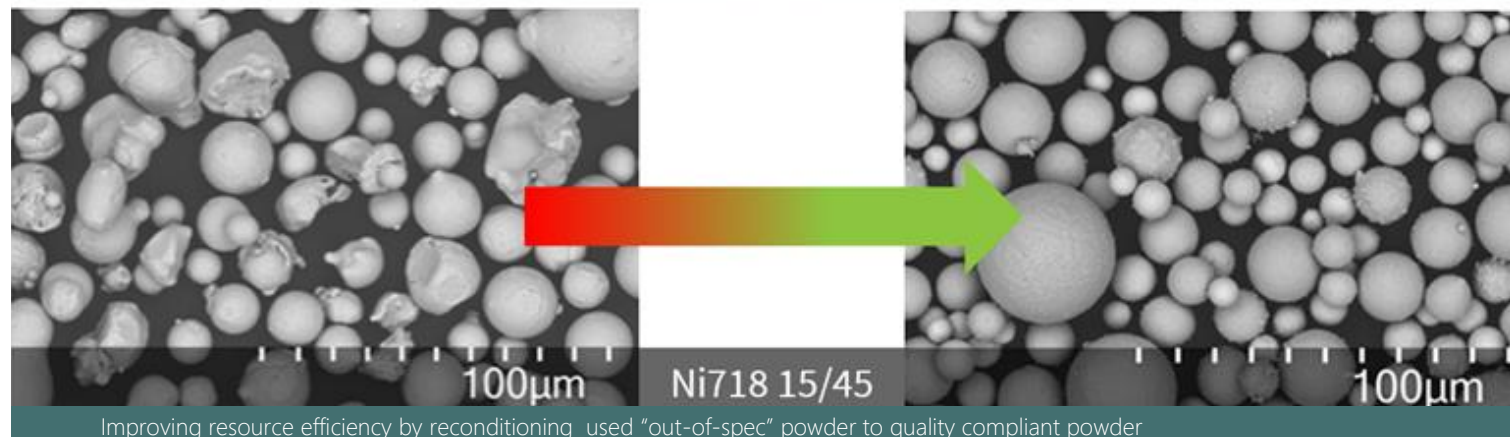
Revalorizing powder ¹

by Richard Dolbec (Director emerging technologies)

Powders used in additive manufacturing (AM) are considered at the end of their service life when their characteristics are no longer meeting the specifications imposed by the end use. Amongst other waste-reducing solutions, the plasma spheroidization technology developed by Tekna over the last 30 years is a promising solution for reconditioning AM powders.

By exposing end-of-life AM powders to plasma, altered characteristics are restored, readying those powders for a new service life. Up until now, Tekna's powder reconditioning process has been successfully demonstrated for materials including Titanium, Inconel 718 and Cobalt-chrome powders.

Note that for this to become a real solution, local capacity, close to point-of-use, is needed. Neither the ecological nor the financial business case make sense if waste material needs to be shipped over long distances to be revalorized. Tekna is selling the spheroidization equipment it produces. A solid return on investment on this equipment requires a certain volume of material.



¹: Source: J.Pollak, O.Bailly and R.Dolbec (Tekna employees), Production of spherical metallic powders dedicated to additive manufacturing, Proceedings of the 2017 International Conference on Powder Metallurgy & Particulate Materials (POWDERMET 2017) pp.436-443.

Focus area: Resilience

Resilient and responsible supply

The global supply chain faces many risks and can be vulnerable to the adverse effects of climate change. As part of our resilience goal, we therefore want to encourage capacity-building initiatives aimed at strengthening local supply chains. In order to stay ahead of disruptions and shortages Tekna will focus on more inclusive planning and a circular and sustainable management of resources. Being capable of quickly responding and adapting to events is key to resilience and a better management of resources. All on the basis of a solid due diligence on who we partner with and their willingness to improve.



Developing resource efficient production processes

Tekna is a global leader in manufacturing powders for Additive Manufacturing ("AM"). Tekna's involvement goes beyond the manufacturing

of powders up to assisting the industry in developing standards and product requirements that will, in the end, accelerate the technology adoption. By being a leader in its field and promoting the development and adoption of AM as an alternative solution to traditional manufacturing methods Tekna directly contributes to these UN SDG targets. (9.2; 9.4; 9.5)

* Business partner sustainability due diligence process

Tekna is in the process of performing the due diligence to identify, measure and understand the most important risks in our supply chain. This is conducted with assistance from Factlines, a company that provides a corporate social responsibility self-reporting form based on the ten principles of UN Global Compact, OECDs guidelines for responsible business conduct, and the Transparency Act law. The form covers topics such as supply chain, risk assessment, management systems, working conditions, social responsibility, environment, anti-corruption, and conflict minerals. See the Human Rights and Transparency Act Report 2022



Luc Dionne (CEO) in a panel discussion on Sustainability Innovation

* Producing hydrogen for Tekna's own consumption

Hydrogen is a hot topic. Since around 2010 Tekna has produced hydrogen (H₂) for use in our plasma processes by means of water hydrolysis. We use renewable energy (hydroelectricity) for the hydrolysis process. By doing so, we avoid using H₂ derived from fossil fuels. Currently, most hydrogen is produced from fossil fuels, specifically natural gas. By producing H₂ on-demand, we avoid storing bulk quantities of H₂ on-site, which is a big plus for the safety of our workers on the plant. The same goes for community safety as we contribute to reducing the volume of flammable gas transported on the roads.

* Using our voice for good

In cooperation with the Additive Manufacturing Green Trade Association ("AMGTA"), we have participated in panel discussions. Luc Dionne (CEO) discussed on Sustainability Innovation in Metal Additive Manufacturing Powder at the RAPID conference, North America's largest and Additive Manufacturing event (Detroit, May 2022). Arina van Oost (VP) discussed the making of a first ESG report at the TIPE conference, a Women in 3D Printing event, (virtual, January 2022).

Roadmap short and midterm

In appendix B we have included a summarizing roadmap reflecting the various activities we are working. The resilience roadmap is [here](#).

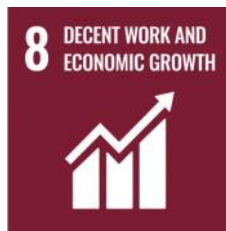
Focus area: Society

Great place to work

Tekna believes in the strength of diversity as proof shows that more diverse teams make better decisions. As a high-tech company Tekna is driven to keep and attract exceptional talent to drive innovations, as our employees are our most important resource. Continued focus on the health, safety and well-being of our people is considered critical to the resilience of the ongoing operations.

SDG 8 Decent work and economic growth

SDG 8 is at the core of our focus area 'Great place to work'. As such, we want to achieve higher levels of economic productivity through diversification, technological upgrading, and innovation (target 8.2). Target 8.8 highlights the importance of protecting labor rights and promote safe and secure working environments for all workers.



* Health, Safety (OHS) and Well-being

Tekna continues to focus on this very important topic. 345 health and safety audits and awareness inter-

actions took place between management and personnel throughout the year. 19 major and 47 minor OHS actions were identified and resolved during the year. In the GRI Report 2022 you will find an extensive description of our OHS system and metrics. We had 4 recordable work-related injuries, which based on 200,000 worked hours gives an injury rate of 10.7.

* Pay equity program fully implemented

Tekna has developed and transitioned its workers compensation system to ensure equality, based on an objective job evaluation method that positions employees on the relative value of their jobs. This system is compliant with the legal requirements prescribed by the Commission for labor standards, pay equity and occupational health and safety (CNESST) of the Province of Quebec. Therefore, the average pay for men and women vary due to differences in job categories and years of service, not because of gender.

* Raising competence level in Lean six sigma

Starting in April 2022, internal training has been given by our Master Black Belt at Tekna on Lean six sigma to gain common understanding over quality and continuous improvement initiatives. Over a year, 40 people completed successfully white belt level certification, 7 reached yellow belt level and 18 others are in process of achieving that goal. Training sessions include usage of tools and

In 2022, we had zero fatalities and one injury that required time off. We believe ZERO is the only acceptable number.



Focus area: Society (continued)

Great place to work

practical sessions over real-life situations and challenges we face as a company on a demanding market driven by high quality standards.

As Tekna has a tremendous amount of talent in-house we use this to raise the skill level on many more topics, e.g. Cyber security, Project Management and a Sustainability training is planned.

* Cyber Security high priority

In 2022 Tekna did not experience any data breaches. We have a thorough risk assessment process on cyber security, of which we inform the Board of Directors twice a year, once in-depth and once as part of the general risk management.

As a philosophy, the IT team itself is working under the zero-trust model, using least privileged access and multifactor authentication to secure our environment and access levels within the team. We do not host customer-facing applications at Tekna.

As any enterprise, we are vulnerable to social engineering tactics, but phishing awareness campaigns in addition to an internal security conference, elevates our staff's knowledge and reduces the inherent risk we face. 143 (62%) users have passed with success the Cyber training from the service provider Knowbe4 during 2022 and efforts will continue increase this to +90%. As a metric, every new employee is assigned basic cybersecurity training and are made aware of the cybersecurity conference video as part of the new IT orientation in 2023. The aim is to complete ISO 27001 on information security in the course of 2023.

* Remuneration

The average remuneration in the company was 90k CAD. The total compensation ratio of CEO to the median of all employees was 5.4¹, which is within range for midsize Canadian companies.

* Employee Commute and Electrical Vehicles

This year we mapped the CO2 emissions from employees commuting to Tekna facilities around the globe. The emissions amounted to 236 tCO2e, which will be our baseline for 216 employees. The number of employees with electrical vehicles is rising year after year. With 100 per cent electricity from hydro power this is a clean means of transportation in Quebec. Tekna provides free charging to its employees at its four charging stations. In 2022 this equaled 9,205 kWh (439 charging sessions) and negligible emissions.

* Business travel back to pre-covid level

Creating strong relations is considered a strong success factor for the company as we are developing business across the globe. In 2021 we looked at our emissions from our business travel, which we knew would not reflect a true picture due Covid travel restrictions skewing the trips. For 2022 we tripled 155 tCO2e (40) emissions and take this as the realistic baseline to start from. The employees were requested to complete a form per business trip, including km travelled by car (incl taxi), train, flights, and hotel nights.

Social engagement: Le Grand défi Pierre Lavoie

by Etienne Villeneuve (VP Operations)

What is it: Cycling 1,000 km end-to-end within 60 hours, across several Quebec regions, with major stops in several of Québec's cities along the way: that is "The 1,000 KM" event.

What is the ultimate goal: The Grand défi Pierre Lavoie distributes millions of dollars every year to promote healthy life habits among young people and to support research on rare genetic diseases. This was done by means of scholarships and grants awarded by the Fondation du Grand défi Pierre Lavoie and through the school sponsorships of the teams in the 1,000 KM.

How does it work: Each cycling team is invited to partner with one or more elementary schools of their choice and to encourage its pupils to enroll in the Energy Cubes Challenge that requires them to practice physical activities on a daily basis alone and with their family. Additionally, all the surplus donations raised by the teams enabled more than 325 elementary schools to pay for projects that promote healthy life habits. The profits generated by *The 1,000 KM* are given to the Fondation du Grand défi Pierre Lavoie to support research of rare genetic diseases and projects promoting healthy life habits.

In 2022, we are proud to mention the Tekna team has raised more than 16,000\$ in our fund raise to

support medical research and one local school here in Sherbrooke. With our donation, the school has been able to buy specific sporting equipment for some students with physical handicap as well as playing modules installed in their backyard for the benefits of all students. In 2023, we are repeating the experience with a more ambitious target of 20,000\$.

Etienne Villeneuve, the team captain and VP Operations at Tekna: "I'm proud to be part of this social movement since 2012. We have raised, along with my teammates, more than 200,000\$ to promote healthy life habits among young people in the past twelve years. What is my motivation? I really think I make a real difference for some of these students leading by example. If I can influence some of them to start doing sporting activities more regularly and having better lifestyle habits, it makes me feel I reached a personal goal".



Tekna team at Le Grand défi Pierre Lavoie

Focus area: Governance

Ethical business conduct

It is Tekna's belief that it has a social responsibility to the communities reached through its operations, as they are key stakeholders to achieve green, circular, inclusive, transparent, and fair business practices that can succeed in the long-term.

Respect for human rights is rooted in our values and key to our license to operate from employees, customers, investors, communities, governments and other stakeholders.



Tekna supports the local cycling team ¹

A human centered business with respect for the individual and which recognizes the fundamental human rights for everyone is essential as there can be no climate resilience without social resilience. Vulnerability and injustices are exacerbated by climate change and its many adverse effects. Accountability of actions through better and transparent reporting can effectively tackle corruption and vulnerability challenges, supporting the development of local capacity-building and resilience: both necessary for an inclusive and sustainable global growth.

Making sure we do things right

Supporting our pyramid and supply chain is our 'Ethical business conduct' focus area. SDG 16 inspired its direction as we aim to substantially reduce corruption and bribery in all their forms (16.5), and ensure responsive, inclusive, participatory, and representative decision-making at all levels (16.7). Furthermore, we aim to develop an effective, accountable and transparent business (16.6) and actively work to ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements (16.10).



* Ambitious compliance program for 2023

In 2022, we rolled out the Employee Code of Conduct ("CoC") and 91% has already signed the code. We will reach 100% in Q1. In 2023 we put compliance on the agenda. We have planned an employee training on the CoC. We look to expand our Supplier CoC to include Business Partners. Towards the end of the year, we should have the Anti-Corruption Policy and training done in line with principle 10 of the UN Global Compact. And in order to also push our sustainability vision we look to educate our employees on Sustainability and back it up with an updated Environment Policy.

* UN Global Compact

We completed our submission to join the UN Global Compact in 2021 and we are a confirmed member since January 31, 2022. We will start communicating on progress ("CoP"), which is due in June 2023. ([link](#))

* Progress in the Board of Directors and Executive Leadership Team

Currently, Tekna has four Board members, none of whom are members of the company's management. Two Board members are independent of company management and significant business partners. Two Board members, including its Chair Dag Teigland elected in 2022, have an affiliation with Arendals Fossekompagni ASA, Tekna's main shareholder. An Audit Committee was established

consisting of one dependent and one independent Board member. Tekna is in the process of creating a Nomination Committee.

In 2022 Tekna expanded its executive team to include a VP for legal affairs.

Two new board members are female increasing the diversity ratio to 50% (0%). The VP Legal Affairs is also female increasing the ratio of females in the Executive Leadership Team to 29% (17%).

Read more in the Corporate Governance Report.

* Business ethics

Tekna has no revenue in countries with the 50% lowest rankings in the Transparency International's Corruption Perception Index. The index includes 180 countries.

[2022 Corruption Perceptions Index: Explore the... - Transparency.org](#)

Roadmap short and midterm

In appendix B we have included a summarizing roadmap reflecting the various activities we are working. The governance roadmap is [here](#).

Part 4 | Restatements and Assurances

Restatements

1. CO2 Scope 2

2019-2021 Corrected for Canada TPS and TAM facilities. The supplier, Hydro Sherbrooke, published its emissions, which are slightly higher than the default setting of zero emissions for hydro power in CEMAsys. 2021 is the baseline.

For more information see the Carbon Accounting Report 2022 on www.tekna.com/esg

2. Energy intensity

2021 was restated due to incomplete electricity data taken in the calculation.

2021 Published 10.9 kwh / kg powder produced

2021 Correction 12.0 kwh / kg powder produced

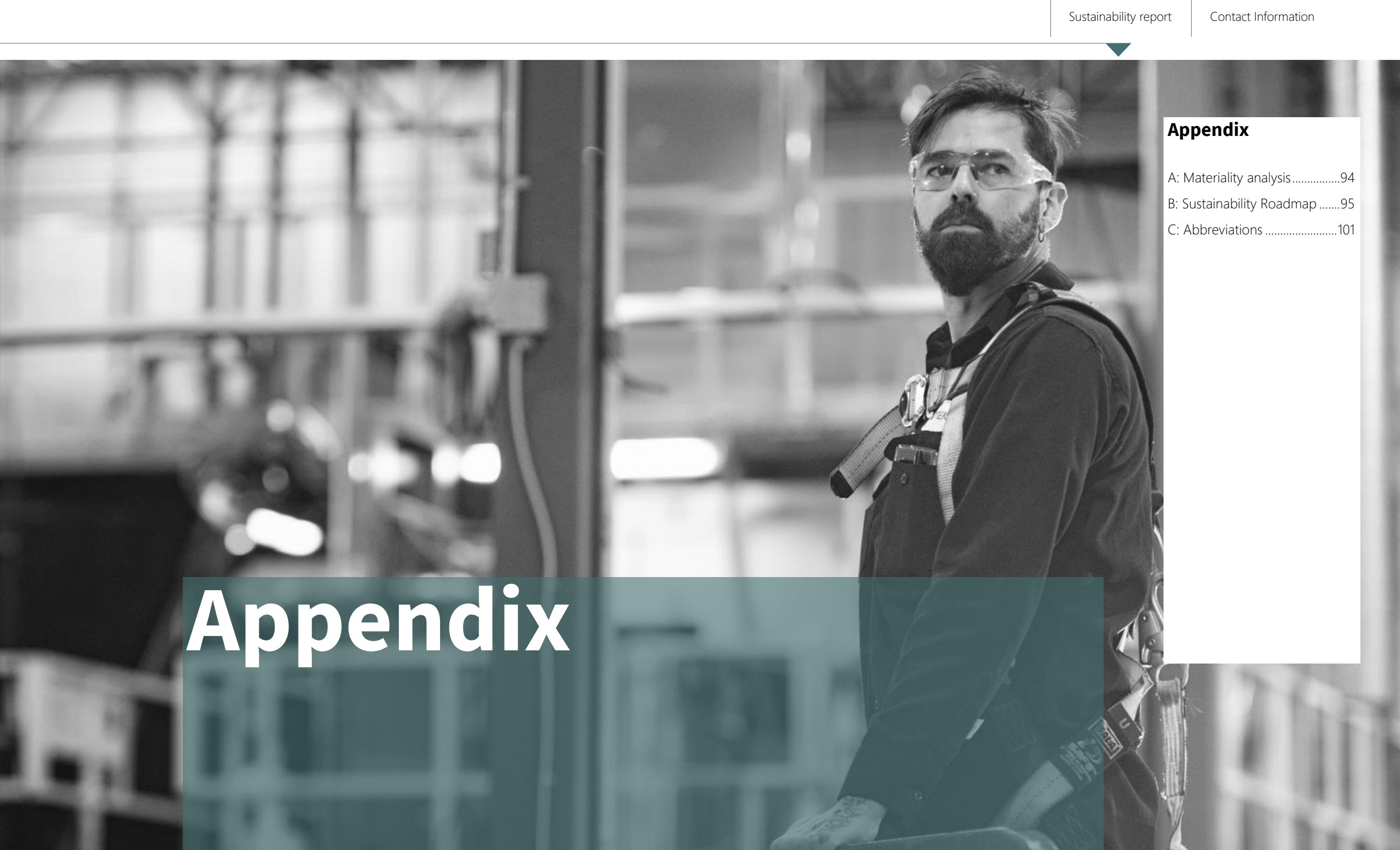
(See page 75)

Independent assurance of this report

This report was not independently reviewed or assured.

Category	Description	Unit	2019	2020	2021	2022	% change from previous year
Electricity Green		tCO₂e	3.0	2.9	4.1	4.7	14.6%
Hydropower, Quebec	Canada TPS - Hydro Sherbrooke	tCO ₂ e	0.7	0.6	0.9	0.9	
Hydropower, Quebec	Canada TAM - Hydro Sherbrooke	tCO ₂ e	2.3	2.3	3.2	3.8	
Hydropower, Quebec	Canada TMC - Hydro Sherbrooke	tCO ₂ e	-	-	-	0.1	

Screen capture of relevant section of the Carbon Accounting Report 2022.



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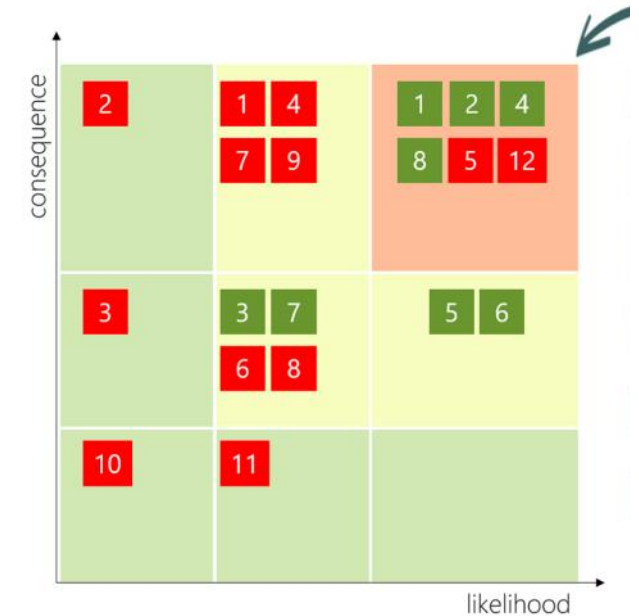
Appendix

Appendices

A: Materiality analysis 2021

Explanation to numbers in matrix on the right. In bold the items we deem of high materiality.

Categories	Opportunity	Risk
Market	<ol style="list-style-type: none"> Increased demand for circular economy innovation and solutions, e.g. create products with lower resource density, better resource management, more recycled materials, and a zero-waste production. Achieve a climate friendly production which ensures the offering of products with lower emissions than those of our peers, offer alternatives, and aim to have a positive impact on nature and biodiversity. Increase customer interest by having a transparent and resilient focus on ESG targets (e.g. adapting new production sites in Japan and Korea by integrating relevant regulations). Enable customers to reach their ESG targets, by AM producing e.g. more resource efficient products, and by addressing vulnerability challenges (e.g. transportation disrupted by extreme weather events), and building resilience to supply chain disruptions. 	<ol style="list-style-type: none"> Increased competition and expectations on sustainability (targets, transparency, reporting, awareness) Not meeting the sustainability targets of customers by driving GHG emissions, fuel consumption and waste (packaging, single-use & hazardous) production. Rising energy prices and regulation taxes, such as EU import tax on carbon intensive raw materials (e.g. aluminum), increases costs of materials and high energy production. Growing demand for green technologies drives demand for certain raw materials and decreases it for others that negatively impact the environment (e.g. Titanium, Silicon).
Climate	<ol style="list-style-type: none"> Integrate climate change assessment into Tekna's strategy and risk management in order to harness climate opportunities, mitigate climate risks and build resilience of operations. TCFD disclosures provides opportunities to drive green transition and for positive attention from stakeholders (e.g. investors) 	<ol style="list-style-type: none"> Supplier and production sites exposed to extreme weather events, causing power outages and disrupting deliveries (e.g. flood & wildfire risks in France; flood & storm risks with tier one Chinese suppliers of titanium and nickel). Mining sector can permanently cause biodiversity damage, water stress and deforestation, impacting negatively the reputation of those involved and losing the confidence of stakeholders. Conflict materials and higher temperatures puts workers' HSE at risk (e.g. workers in China and heat waves, ultimately reducing resilience and disrupting production).
Financial	<ol style="list-style-type: none"> Increase investor and other stakeholder confidence by increasing transparency through reliable non-financial disclosures. Reduce costs by producing more with less materials and by considering the limited availability of critical raw materials, which can spike raw material prices. 	<ol style="list-style-type: none"> Unfavorable financing terms due to lack of ESG reporting and/or lack of reliable non-financial data, reducing the advantage for low-carbon solutions. Fail to properly account for climate change and nature related risks and regulations, leading to financial consequences (e.g. fines & added costs) or losing customers. Rising resource scarcity worsening the increasing costs of materials, raw materials, and energy due to restrictions, regulations and/or climate change.
Internal	<ol style="list-style-type: none"> Opportunity to attract, recruit and retain talent by building a strong people culture and offering jobs with a greater purpose contributing to a more sustainable future. 	<ol style="list-style-type: none"> Increased labor costs and failing to attract talents due to lack of sustainability focus
Reputational		<ol style="list-style-type: none"> Negative reputation risk if suppliers and customers have negative environmental or social impact.



- 1** Increased demand for circular economy innovation and solutions
- 2** Achieve a climate friendly production
- 4** Enable customers to reach their ESG targets, by AM producing
- 8** Producing more with less materials
- 5** Growing demand for green technologies drives demand for certain raw materials
- 12** Rising resource scarcity worsening the increasing costs

Appendices (continued)

B. Roadmap 1/6: Strategy, reporting and carbon accounting

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
	2019-2021 Status Quo	2022 1st report	2023 Transparency	2024-2026 Change	2030 Impact
Strategy	Materiality analyses based on stakeholder interviews and value chain analyses Enhancing understanding and Measuring Sharpened Focus areas	Vision toward circularity in supply chain Vision on resilience Vision to produce close(r) to point-of-use	Update company vision and values to include sustainability Further integrate Environment in decision-making		Circularity in production and value-chain Resilient Supply-chains per continent
Reporting	Content in 2019 + 2020 Sustainability Report AFK	2021 Sustainability Report	2022 reporting: -Sustainability Report -Carbon Accounting Report -GRI Report -Human Rights and Transparency Act report	2023 reporting: -Sustainability Report -Carbon Accounting Report -GRI Report -Human Rights and Transparency Act report EU taxonomy - evaluate opportunities to increase aligned activities	Continued enhancement of transparency
<i>Transparency Act (also in focus area)</i>	EU taxonomy eligibility assessment	EU taxonomy alignment preparations and Report	EU taxonomy - full reporting (legal req.)		
<i>EU taxonomy (also in focus area)</i>	Website & Social media	Website & Social media AMGTA panels Quarterly ESG reporting	Website & Social media Quarterly ESG reporting		the Tekna "voice" promotes sustainable (corp.) behaviour
<i>Communication</i>	UN Strategic Development Goals (SDG) selection 7, 9, 12	Signatory UN Global Compact (UNGCC)	UNGCC Communication on Progress (Report)	SDG target reporting	Delivery on SDG 7, 9, 12

Appendices (continued)

B. Roadmap 2/6: Enabling Customer / Stakeholder impact

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
<i>Packaging</i>	Powder transportation container - design	Powder transportation container - certify	Powder transportation container - in operation		We focus on: 1) Enabling technology & products for customers 2) Resource efficiency for customers 3) Emission and waste reduction for customers 4) Increased availability & affordability for customers and end-users 5) Extended life, recyclability and reduced costs for products and resources
<i>Life-cycle assessments</i>		Life-Cycle Assessment titanium powder- start	Life-Cycle Assessment titanium powder		
<i>Manuals</i>		System manuals - green maintenance / disposal			
<i>AMGTA</i>	AMGTA membership	AMGTA panels	analyse AMGTA research publication		
<i>EU taxonomy</i>			EU taxonomy: 1) Substantial Contribution Assessment 2) DNSH Environmental Impact assessments 3) Minimum Safeguards 4) Financial Reporting		
<i>R&D</i>			Powder reconditioning titanium	Find development partner to improve LiB capacity	
<i>Certifications</i>			ISO 27001 Information Security	ISO 14001 Environmental Management System ISO 31000 Risk Management	

Appendices (continued)

B. Roadmap 3/6: Circular and sustainable production

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
<i>Resources and Production</i>	Improvement process gasses, reduction 20%	Energy conservation through improved output	Energy conservation in production	Water conservation TPS plant	We focus on: 1) Tekna's emissions from production and transport 2) Resource efficiency 3) Waste/water/energy management
	"Ici on recycle+" certification TPS (CA) Relighting mercury lights and fluorescents to LED (Canada)	"Ici on recycle+" certification TAM (CA)	Map upstream impacts; raw material extraction Measure recycled material in feedstock	Increase recycled material in feedstock Map downstream impacts and opportunities	
<i>Responsible Packaging</i>	Hololens Factory Acceptance Testing		Imphytek: Recycling within nickel value-chain	Improve inbound and outbound packaging	

Appendices (continued)

B. Roadmap 4/6: Resilient and responsible supply

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
<i>Transparency Act ("TA") (business Partners)</i>	Roll out SCoC	Roll out SCoC (continued)	Transparency Act Supplier audits Routine for requests for information Re T.A. Factlines Due Diligence top 25 suppliers Follow-up after DD External Whistleblowing system	Update New supplier Assessment process	We focus on: 1) Diversification of suppliers and strengthening resilience of local communities 2) Improving environmental and social impacts of supplier manufacturing activities 3) Understanding exposure to climate- related risks and ensure the development of mitigation plans.
<i>TCFD Climate-related risk</i>	Climate-related risk analyses	TCFD roadmap	Quantification of climate- related risk Supplier interviews for mitigation	Supplier mitigation plans Mitigate risks in transport routes	
<i>Product compliance</i>		REACH and RoHS certificates powders Completed responsible minerals initiative for potential conflict materials			

Appendices (continued)

B. Roadmap 5/6: Great place to work

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
<i>Occupational Health & Safety (GRI 403)</i>	430 OHS audits	345 OHS audits	OHS audits OHS system in GRI report	expand on OHS in GRI	We focus on: 1) Employee health, safety and security. 2) Employee satisfaction and development in all levels (administrative, engineers, factory). 3) Labour and human rights, particularly at production sites. 4) Diversity & Inclusion
<i>Employee satisfaction</i>	eSAT: 76% eNPS: 22 Employee Survey Anchored virtual collaboration in Work-from-Home policy	eSAT: 76% eNPS: -3 CORE employee representative team	Measure eSAT and eNPS		
<i>Competence improvement (GRI 404)</i>	Competences: inhouse training	Competences: inhouse training Cyber security training	Competences: Inhouse training and budget Cyber security training		
<i>Diversity and equality (GRI 405)</i>	Pay equity process design Diversity: measure status quo	Pay equity process implementation Diversity: increase board and exec team	Diversity: Improve at all levels Disability Accessibility Assessment		

Appendices (continued)

B. Roadmap 6/6: Ethical business conduct

	2019-2021 Status Quo	2022 1 st report	2023 Transparency	2024-'26 Change	2030 Impact
<i>Policy and training</i>	Code of Conduct Supplier Code of Conduct	Roll out CoC	CoC training Business Partner CoC Environment Policy Sustainability Training Anti-Corruption Policy and Training		We focus on: 1) Zero tolerance on corruption and bribery 2) Increasing transparency 3) Best practice governance 4) Training our employees
<i>Board of Directors</i>		Board of Directors: improve independence Board of Directors: Audit Committee	Board of Directors: Nomination Committee Board of Directors: Remuneration Committee	Board of Directors: Sustainability Committee	
<i>Governance Assessments</i>		Hire inhouse Legal Council	Governance assessment: Audit of activity in China		
<i>Certifications</i>				Sustainability report assurance B-Corporation certified ISO 26000 Social Responsibility ISO 37001 Governance of Organisations FTSE4Good index	

Appendices (continued)

C. Abbreviations

Abbreviation	Clarification	Useful link	Abbreviation	Clarification	Useful link
AFK	Arendals Fossekompani ASA	Home - Arendals Fossekompani	IR	Injury Rate	
AM	Additive Manufacturing		ISO	International Organisation for Standardisation	ISO - International Organization for Standardization
AMGTA	Additive Manufacturer Green Trade Association	Home - AMGTA	IT	Information Technology	
AR	Absentee Rate		KPI	Key Performance Indicator	
BoD	Board of Directors	investors/governance (tekna.com)	LCA	Life Cycle Assessment	Life-cycle assessment - Wikipedia
CoC	Code of Conduct		LDA	Lost Day Rate	
CoP	Communication on Progress (Re: UN Global Compact)		LiB	Lithium-ion Battery	
CSR	Corporate Social Responsibility		LTI	Lost Time Injury Rate	
eCoC	employee Code of Conduct	esg (tekna.com)	NACE	Nomenclature of Economic Activities	
eNPS	employee Net Promotor Score		NGO	Non-Governmental Organisations	
ERP	Enterprise Resource Planning		NPS	Net Promoter Score	
eSAT	employee Satisfaction Score		OECD	The Organisation for Economic Co-operation and Development	Home page - OECD
ESG	Environmental, Social and Governance	esg (tekna.com)	OEM	Original Equipment Manufacturer	
EU taxonomy	an European tool to help investors understand whether an economic activity is environmentally sustainable, and to navigate the transition	EU taxonomy for sustainable activities European Commission (europa.eu)	OHS	Occupational Health and Safety	
EY	Ernst & Young		R&D	Research & Development	
FTE	Full-time Employees		SASB	Sustainability Accounting Standards Boards	SASB
GDPR	General Data Protection Regulation		sCoC	Supplier Conduct of Conduct	esg (tekna.com)
GHG	Greenhouse Gas		SDG	Sustainable Development Goals	THE 17 GOALS Sustainable Development (un.org)
GRI	Global Reporting Initiative	GRI - Home (globalreporting.org)	TCFD	Task Force on Climate-related Financial Disclosures	Task Force on Climate-Related Financial Disclosures TCFD) (fsb-tcfid.org)
HSSE	Health, Safety, Security and Environment		TAM	Tekna Advanced Materials	
HR	Human Resources		TPE	Tekna Plasma Europe	
IoT	Internet of Things		TPS	Tekna Plasma Systems	
IPCC	Intergovernmental Panel on Climate Change	IPCC — Intergovernmental Panel on Climate Change	UN	United Nations	Homepage UN Global Compact

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