Summary

We are pleased to present our Second Sustainability Report, which highlights our principal achievements in this field through 2024. Our approach to sustainable management is organized around eight core pillars that guide the assessment of our performance:

- Anti-bribery and anti-corruption
- Environment
- Human and labor rights
- Health and safety
- Quality and customer satisfaction
- Financial sustainability
- Technology and Innovation
- Stakeholders

The selection of these pillars not only reflects our organizational philosophy and values but also demonstrates our commitment to the United Nations Sustainable Development Goals and the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct.

This report, grounded in our organizational culture, values, and specific performance indicators, documents tangible progress in our sustainability efforts. These results reinforce TAMA's position as a sustainability leader within Peru's metal-mechanical sector and establish a robust foundation for future initiatives.

In this edition, we have included the results of our second carbon footprint assessment, reaffirming our commitment to the Peruvian Ministry of the Environment and the Science Based Targets initiative (SBTi). The results show a 14.9% reduction in CO_2 emissions compared to the previous year. The full report will be available as of May 2025 in the sustainability section of our website: www.tamaingenieros.pe.

Table of contents

1. Introduction

This report covers the activities carried out by TAMA INGENIEROS S.A.C. from September 2004 to December 2024. TAMA is a company in the metalworking industry that designs and develops engineering to transform steel and special alloys into equipment and machinery. In addition, we manufacture components used in various productive sectors. In TAMA we are in the "business of continuity of operations of our customers", and we are mainly oriented to the supply of critical components or spare parts, ensuring quality and reliable delivery deadlines. Our mission and vision are to develop technology for a better quality of life and all the actions we develop along these lines lead us to publish this sustainability report.

To transform the steel raw material, TAMA develops the following processes: engineering with original software (designs, shop drawings, etc.), raw material qualification, assembly, and welding, forming, pre-assembly and mechanical assembly, machining, finishing (shot blasting, painting, and packaging) and handling. For more information, please visit our website www.tamaingenieros.pe.

The information contained in this report is supported by our integrated quality, health, safety, environmental, anti-bribery, and information security management system, in addition to our SAP Business One management software.

2. Anthropological and Philosophical Basis

Next, we describe the foundations for TAMA's business development, which recognize that we belong to the Western culture, based on Greek and Christian ethics. In this sense we define the following: The pillars of society, the social categories, the categories of law, and at the operational level, the criteria for decision making.

2.1. The pillars of society

Figure 1 shows the three pillars of society that forge the character and therefore a large part of the personality of the human being: family, work (economy, business) and culture (academia, knowledge) as we have defined them in our normative document **T-GG- CA-01 Pillars of Society**. We also consider a fourth pillar which is the purpose of life, i.e. the personal vision and mission of each individual that helps him/her to maintain balance in the face of adversities in some of the other three pillars. However, today there is a high risk of being influenced by the media.

.

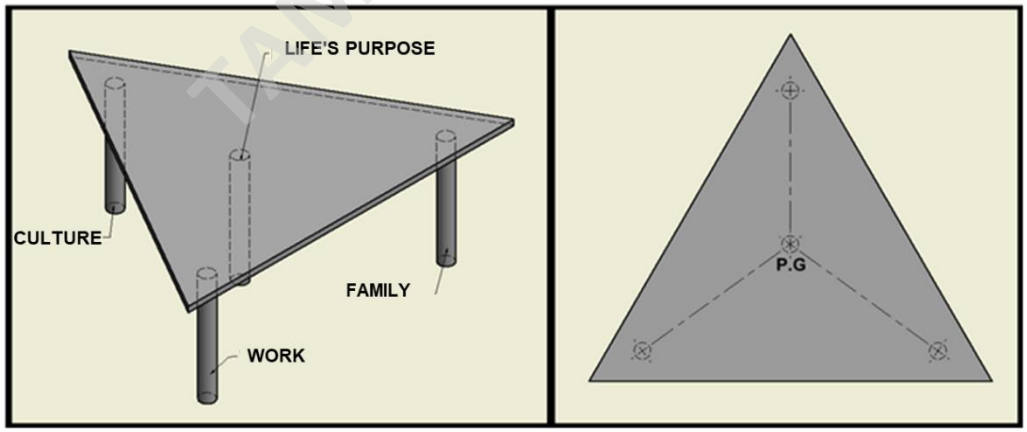


Figure 1. The pillars of society T-GG-CA-01.

In that sense, at TAMA we have defined our purpose through a **Life plan T-GG-PL-03**, which is shared in Figure 2.

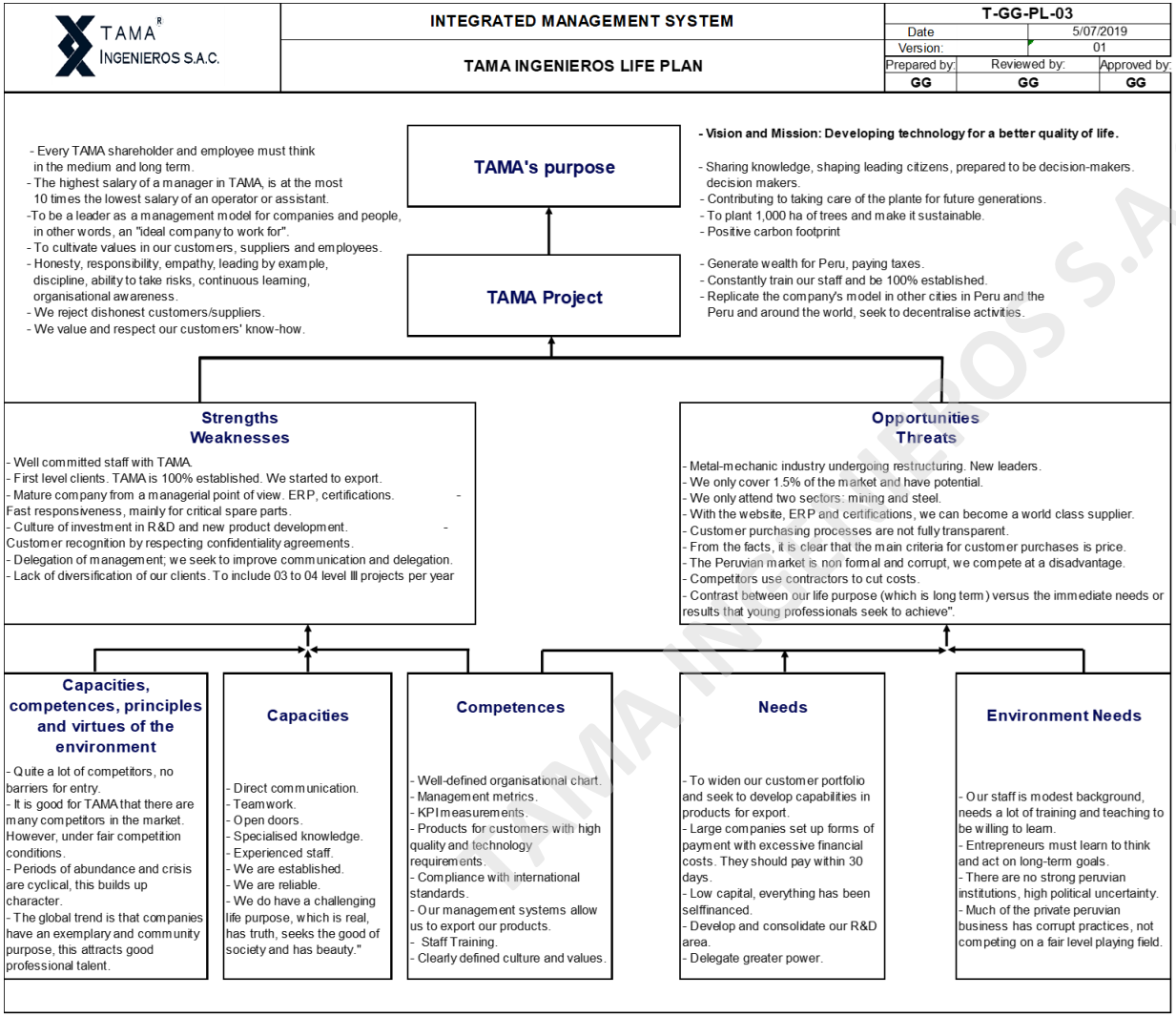


Figure 2. TAMA life plan T-GG-PL-03

Prepared by:	Reviewed by:	Approved by:
Representative of the Control and Auditing Body	Representative of the Control and Auditing Body	General Manager

2.2. Social categories

In Figure 3 we summarize the hierarchies for a healthy and fair society according to how they have been conceived in our document **T-GG-CA-02 Social Categories**. From TAMA's perspective, the hierarchies can change in Peru, for times of crisis and economic bonanzas, considering that, in general terms,Peruvian society is neither healthy nor fair [1] [2] [3].

a. Religion: Religion can provide a moral and ethical framework for society. It can inspire people to act in a fair and ethical manner.
b. Ethics: Ethics refers to the moral principles that guide our actions and decisions. In a fair society, ethics is applied to ensure fairness and equity.
c. Politics: While it can be a tool to promote social justice, historically, politics has tended to upset the balance of power.
d. Law: Law includes natural law (based on morality and ethics), cultural law (based on customs and traditions) and formal laws (civil and criminal).
e. Economics: Economics can influence power and pleasure in a society. Although economics can corrupt politics, it can also be a tool to promote social justice.
f. Home: Having a safe and stable place to live is fundamental to a fair society. A home provides constancy and security, which is essential for people's well-being.

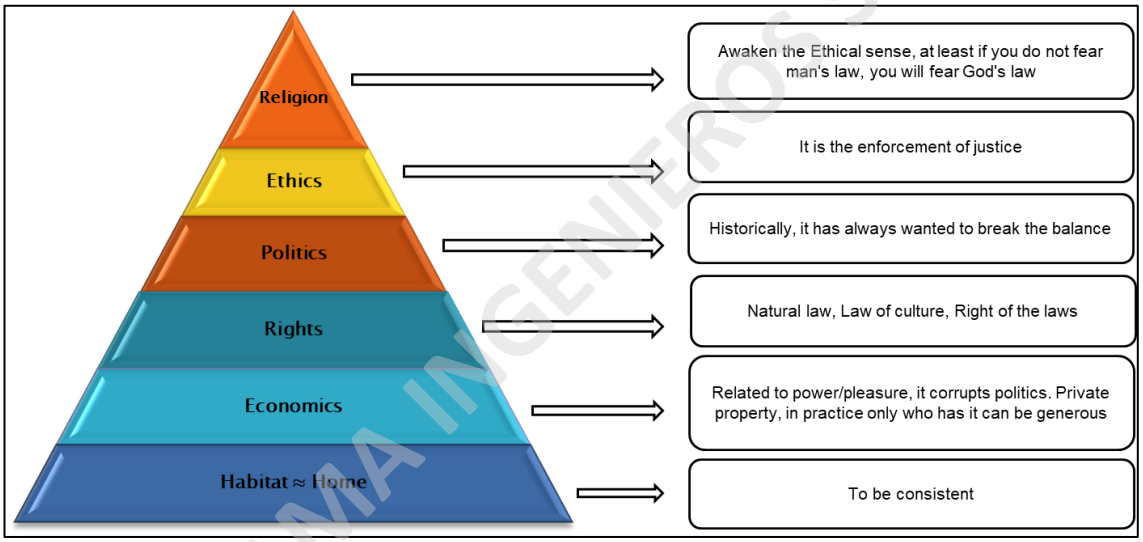


Figure 3. Social category for a fair society.

In times of boom or crisis, these categories may be reversed. For example, in a severe crisis, economic interests may override ethics in decision making, and in good times, ethics is further relegated to fair decision making, as shown in Figure 4.

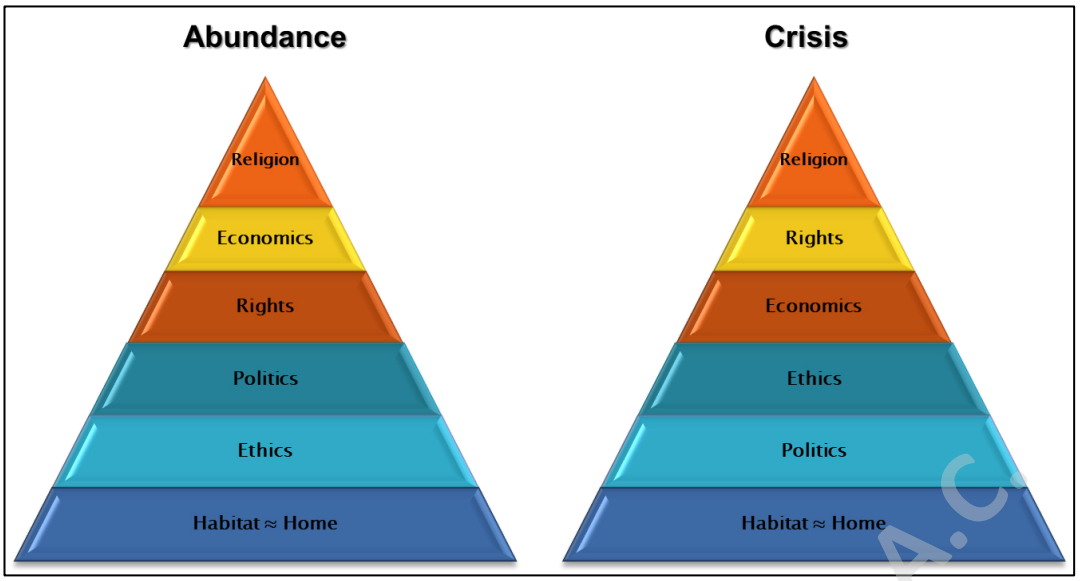


Figure 4. Possible ordering of social categories in developing societies in times of abundance and crisis.

2.3. Categories of rights

According to what we have established in our document **T-GG-CA-03 Categories of Law**, at TAMA, decisions are made considering ethics and human rights before personal or group interests.

a. Ethics: This is the highest level of the hierarchy and refers to the moral principles that guide our actions. Ethics has justice as its main objective and promotes honesty, integrity, and respect. For more details you may see our code of ethics on TAMA's website.
b. Human rights: In the second level are the rights inherent to all human beings, the right to life and freedom, the right to health, work, and education, among others.
c. Cultural, historical, and customary rights: Thirdly, there are the customs (laws and unwritten rules or practices) that have been developed over time in a society and which may be based on cultural traditions and customs.
d. Right of laws: Fourth, the law granted by the constitution, civil code, criminal code, technical standards, contracts between private parties, etc., the formal laws governing a society that provide a framework for acceptable conduct and the consequences of illegal actions.
e. Actions that tend towards ethics and may affect important groups: At this level are actions that may or may seek to have a significant positive impact on groups of people. They may first be against the law and then succeed in changing it.
f. Group interests, individual interests: At the lowest level of the hierarchy of rights are individual or group interests. They are diverse and lower in the hierarchy, as depicted in Figure.

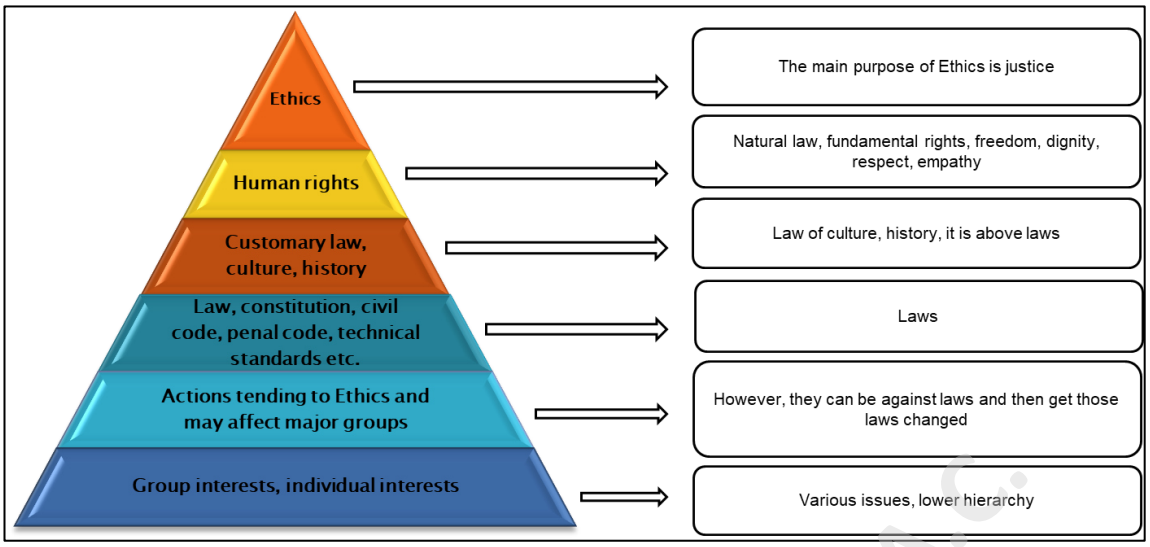


Figure 5. Categories of rights for a fair society T-GG-CA-03.

2.4. Criteria for operational decision making in TAMA

Below are the eight hierarchies of criteria used to make operational decisions at TAMA, considering the value we place on our employees and the fact that we carry out a very high-risk economic activity.

1. The first criterion for making a decision is to preserve the physical and mental integrity of our workers.
2. Secondly, the criterion of resource sustainability for future generations.
3. The information security criterion (confidentiality, integrity, availability)
4. The strategic criterion related to the "Development of technology for a better quality of life".
5. To meet the needs and expectations of our customers and product requirements.
6. Delivery time criterion: Purchase orders are delivered on the date agreed with the Customer.
7. Economic criterion, to ensure financial strength for the sustainable development of the company.
8. Other criteria.

Figure 6. Criteria for decision making in TAMA.

These criteria are communicated and shared with our employees in the **T-GG-CA-04 Criteria for decision-making at TAMA**.

2.5. Definition of Leader in TAMA

According to what we have defined in our document **T-RAD-F-01 Key Individual**, in TAMA, we have defined two complementary ways to evaluate a Leader: Through a set of directive competencies and another set of "entry-level" competencies. The former are evaluated in a special way for leading positions in TAMA and the latter for all professionals who aspire to work in TAMA. In both cases, competencies are identified in three dimensions: (a) strategic dimension, regarding the ability to increase the efficiency or economic value generated by TAMA, (b) executive dimension, regarding the ability to adapt operations to tasks that the most talented people are more likely to perform, and (c) leadership dimension, or the ability to drive people to act for transcendent reasons, increasing unity, trust, and identity with the organization [4]. In line with Pérez López, "for a manager to help the organization grow, he or she must have at least a minimum level of all three dimensions" [4].

Table 1. Competencies assessed in TAMA key employees

Dimension	Directive Competencies	"Entry-level" Competencies
Leadership	Humility, self-criticism	Ethics
	Fairness, equity	Legality
	Responsibility	Fair
	People development	Pursues the well-being of others
	Truthfulness	Loyal
	Respect	Beware of malice
	Beware of malice	
Executive	Teamwork	Exemplary
	Delegation	Passion
	Conflict management, negotiation	Energy
	Networking	Master and guide
	Communication	
Strategic	Resource management	Proficient
	Time management	Demanding
	Stress management	Strategy
	Business acumen	Vision
	Action oriented	
	Optimistic	

An excerpt of our **Key person assessment form T-RAD-F-01** is provided in **Appendix 1**, as well as each of the definitions of the competencies mentioned for a better understanding.

In addition, in 2013 we designed a methodology for evaluating the cardinal competencies and specific competencies of our employees (Figure 7). The former are those that all employees must hold and develop and are linked to our company's values (Honesty, Responsibility, Empathy, Leading by example, Discipline, Risk-taking ability, Continuous learning, and Organizational awareness), while the latter are those required for the execution of the duties proper to each position and are linked to efficiency. Through this evaluation of cardinal and specific competencies, we identify the employees with the best profile and those who require further development.
From a different perspective, cardinal competencies have to do with the ethical principles and

values that guide a leader's decisions, while specific competencies have to do with habits as frequent behaviors that influence the effectiveness of a leader.

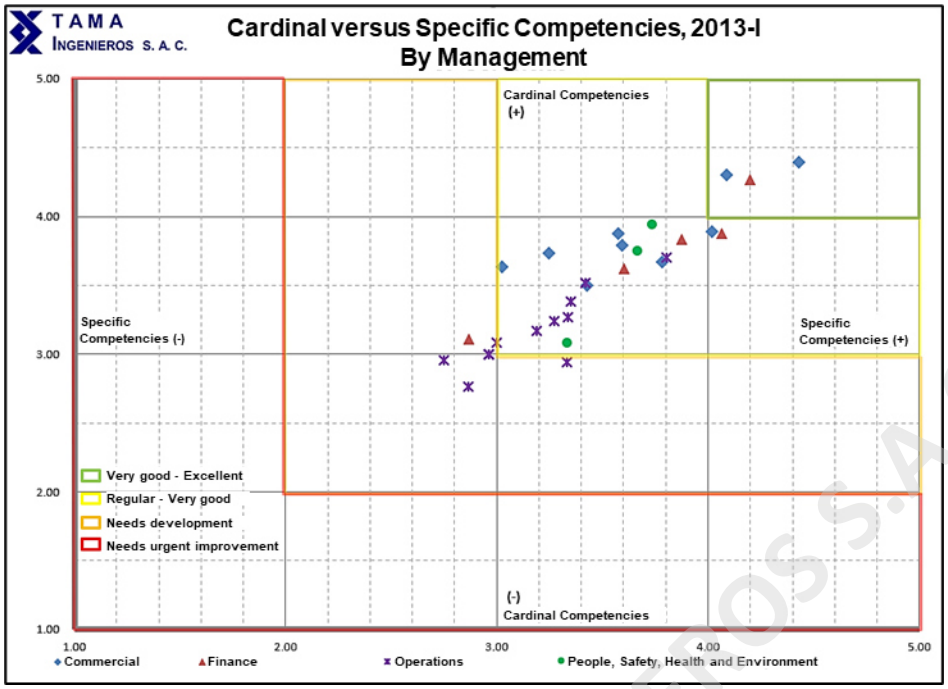


Figure 7. Cardinal versus specific competences in TAMA.

Technical knowledge related to the position is but one of the elements of what it means to be a leader. In addition, a leader in TAMA must possess passion and energy, vision and strategy, ethics and legality, and authority (to be competent, exemplary, and pursues the well-being of others). In short, a leader in TAMA is a master and guide, demanding and fair, and must also have the moral capacity to correct others. Only then will he or she be able to put our anthropological foundations into practice and make fair decisions in an adverse environment.

3. This is TAMA

TAMA is a company founded by first generation Peruvian entrepreneurs, we started our operations in September 2004 and we work to be leaders at a national level as a model of management of companies and people, and to be considered as the "ideal company to work for" in the Peruvian metal-working industry. In our **T-GG-CA-05 This is TAMA** booklet we summarize the main indicators and guidelines that reflect TAMA's culture and values, and the sustainability criteria of this report (Figure 8).

Figure 8. "This is TAMA" T-GG-CA-05.

4. Sustainability

Sustainability is everyone's responsibility and is society's common goal to ensure that our current needs are met without compromising the ability of future generations to meet theirs. The aspects, indicators and evidence reported in this document are related to the UN Sustainable Development Goals [5] (hereinafter SDG), and to the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct [6] (hereinafter, OECD Guidelines) and reflect the positive contributions TAMA makes to economic, environmental and social progress, and how it seeks to reduce the negative impacts associated with its operations.
This sustainability report is organized into eight domains, aligned as shown in the comparative table attached as Appendix 2 to this report:

- Anti-bribery and anti-corruption
- Environment
- Human and labor rights
- Health and safety
- Quality and customer satisfaction
- Financial sustainability
- Technology and Innovation
- Stakeholders.

At the same time, these eight areas have been prioritized according to the six hierarchies of rights by which TAMA is governed and which were described in section 2.3 (see Figure 9).

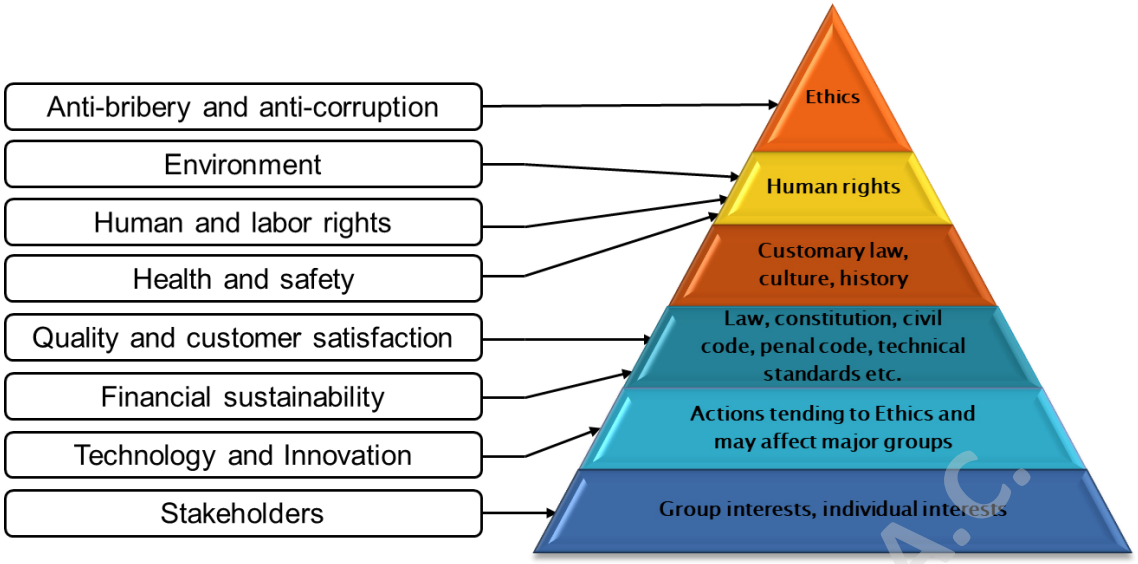


Figure 9. TAMA's eight domains of sustainability and the categories of rights.

5. Anti-bribery and anti-corruption

In line with SDG N°16 (Peace, justice, and strong Institutions) and Chapter VII of the OECD Anti Bribery Convention (Combating Bribery and Other Forms of Corruption), in TAMA we implemented since 2019 an anti-bribery management system based on the standards and best practices of ISO 37001, with the aim of strengthening our mechanisms for prevention, detection and response to possible acts of bribery. To ensure the rigorous application of our principles with integrity and transparency within our management, we request our customers, suppliers, employees, or public officials to read and understand our **Anti-Bribery Management System Policy** T-GA-PO-01and its **Code of Ethics** T-GA-F-05, published in our website, before participating in any activity. Likewise, and as stipulated in our **General Terms and Conditions of Sales** T-GC-DC-05, in the event that attitudes or acts contrary to said code are detected, TAMA will notify them through the customer's corporate e-mails, with a copy to their immediate superior or their ethics channel. At TAMA we do not tolerate fraud; therefore, our employees, customers, suppliers, public institutions, and the community can report any dishonest action to etica@tama.pe Likewise, other e-mail addresses and channels for the corresponding communications are published in our website.

6. Environment

At TAMA we transform steel with a real commitment to the protection of the environment, the safety of our workers, and the well-being of the community and society. We focus on preventing and managing negative environmental impacts, actively contributing to Sustainable Development Goals 6, 7, 12 and 13, related to water, energy, responsible consumption and production, and climate action, in accordance with Chapter VI of the OECD Guidelines on Environmental Protection.

In this section, we share the progress achieved in our second CO_2 emissions measurement, a key step in our commitment to sustainability. We also present relevant indicators that reflect our efforts in the responsible use of resources such as electricity, water, paper, and wood, as well as the proper management of solid waste. These actions are essential for environmental protection, since the reduction in consumption and waste generation helps to conserve natural resources and mitigate climate change.

Our environmental commitment transcends the reduction of consumption and waste; **our goal is**

to plant 1,000 hectares of trees, an initiative that will allow us to achieve a positive carbon footprint in the coming years.

Although the first formal measurement of our carbon dioxide (CO_2) emissions took place in the first quarter of 2024, we have been monitoring and controlling the main impacts derived from the transformation of steel into equipment and components, such as the consumption of energy, water, paper, wood for packaging and the generation of solid waste, since much earlier. This monitoring is done through the T-GI-F-17 indicator board that we have implemented in TAMA since 2020.

6.1. CO_2 emissions

TAMA, in line with SDG No. 13 "Climate Action" and Chapter VI of the OECD Guidelines, has made a commitment to reduce its environmental impact and provide its customers with transparent information to support its sustainability goals. Therefore, at the end of 2024 we started our second carbon footprint measurement under the guidelines of the international standard ISO 14064-1:2018 [7], the GHG Protocol [8] as well as the Peru Carbon Footprint Platform [9], the results are summarized in Table 2.

Total greenhouse gas (GHG) emissions generated by TAMA in 2024 amounted to 2,121.79 tons of carbon dioxide equivalent (CO2e), of which 0.93% were direct emissions (Scope 1), 1.24% were indirect emissions from imported energy (Scope 2) and 97.83% were indirect emissions occurring in the value chain (Scope 3). With respect to 2023, Scope 1 emissions increased by 53%, Scope 2 emissions decreased by 26% and Scope 3 emissions decreased by a significant 17%.

Table 2. TAMA Greenhouse Gas Emissions, 2024.

Scope according to the GHG Protocol	GEI TAMA 2023 (Ton CO_{2e}, %)	GEI TAMA 2024 (Ton CO_{2e}, %)	Emission sources
Scope 1: Direct GHG emissions.	12.87 0.52%	19.73 0.93%	Fuel (forklift, truck), fire extinguishers, and lubricants.
Scope 2: Indirect GHG emissions from purchased energy.	35.52 1.43%	26.30 1.24%	Electricity.
Scope 3: All other indirect emissions occurring in the organization's value chain.	2,439.63 98.06%	2,075.76 97.83%	Transportation (freight, cabs, travel, home-work transportation), water, paper, solid waste, and purchased materials (2,389 Ton CO_{2e}).
Total emissions Scopes 1, 2 and 3	**2,488.02 100%**	**2,121.79 100%**	**Var. 2024 vs 2023: -14.7%**

Within the indirect emissions of Scope 3, 1,553.31 tons CO_{2e} are due to the purchase of steel raw materials, and 335.51 tons CO_{2e} originate from the purchase of wood and its derivatives used for packaging (plywood, wood, and pallets), as shown in Figure 10.

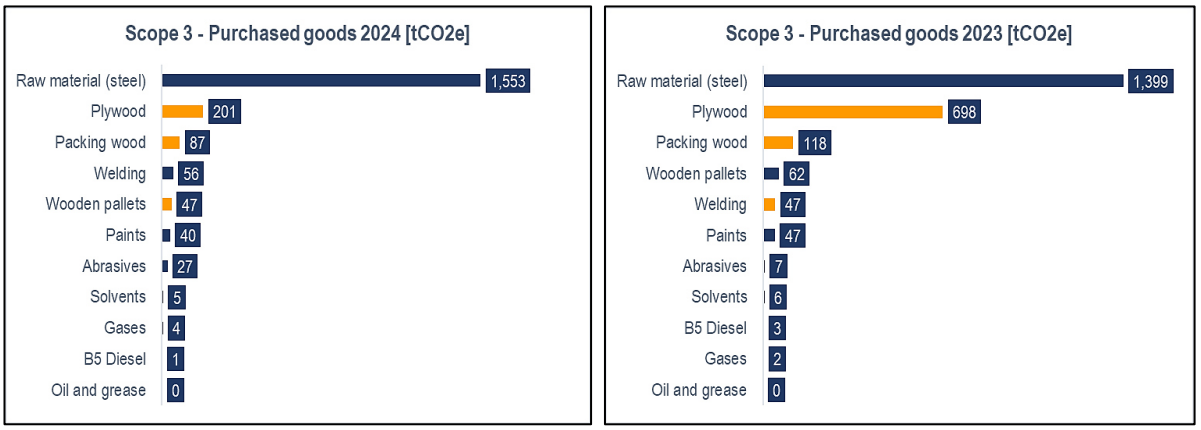


Figure 10. Scope 3 Indirect GHG emissions by purchased goods, 2023-2024.

In April 2024, TAMA completed the validation process of science-based climate targets, as well as the publication of our commitment to join the Science Based Targets Initiative (SBTi), objectives that determine how much and how fast organizations must reduce their GHG emissions to avoid the effects of climate change [10]. In this way, and as shown in Figure 11, we have set out the following three goals:

> *"TAMA INGENIEROS S.A.C. commits to reduce scope 1 and scope 2 GHG emissions 42% by 2030 from a 2023 base year, and to measure and reduce its scope 3 emissions. TAMA INGENIEROS S.A.C. commits to reach net-zero by 2050. As part of this, TAMA INGENIEROS S.A.C. commits to reduce scope 1+2+3 emissions 90% by 2050 from a 2023 base year"* [11].

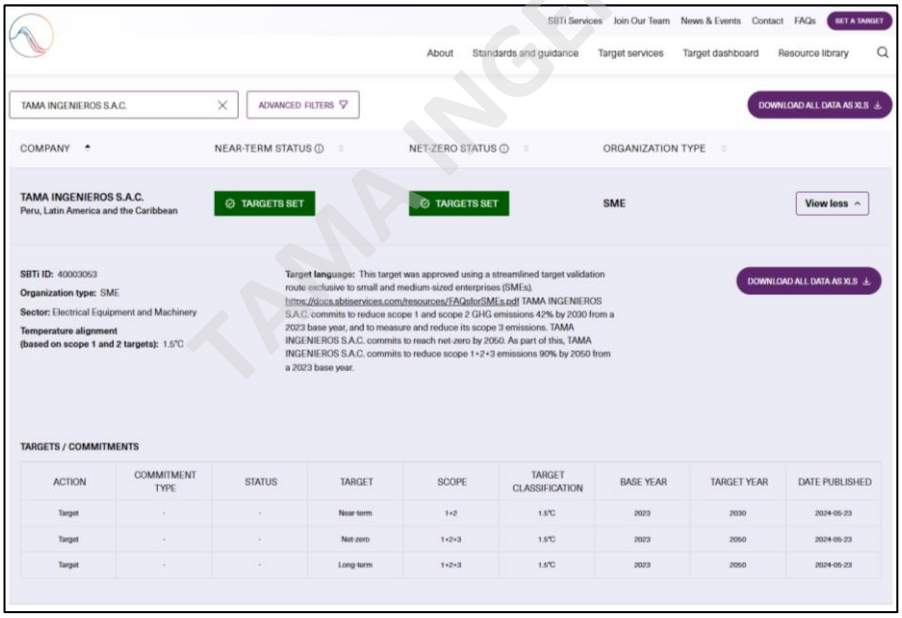


Figure 11. TAMA science-based target setting.
Note: Retrieved from https://sciencebasedtargets.org/target-dashboard

6.1.1. CO_2 emissions intensity

In relation to CO_{2e} emissions intensity - i.e., the amount of carbon dioxide equivalent (scopes 1, 2 and 3) emitted per ton of processed steel- TAMA achieved a significant reduction of 14.9% compared to the previous year, decreasing from 5.32 to 4.52 tons of CO_{2e} per ton of steel. The

progress shown in Figure 12 reflects a significant improvement in the environmental efficiency of our processes, demonstrating our commitment to sustainability and the effective implementation of measures to minimize our carbon footprint.

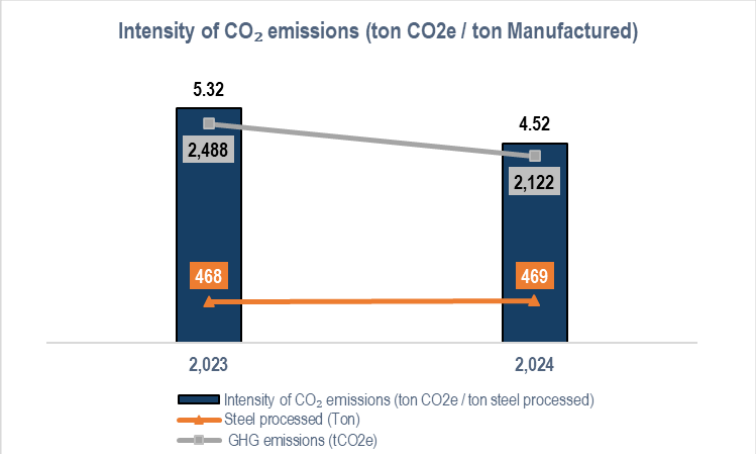


Figure 12. Intensity of CO_2 emissions (2023-2024).

6.2. Electricity Consumption

The UN Sustainable Development Goal No. 7 seeks to ensure universal access to affordable, secure, sustainable, and modern energy by 2030, highlighting the need to improve energy efficiency globally [12]. At TAMA, we have worked on optimizing our electricity consumption, achieving in 2024 a 32.4% reduction in energy intensity, with a consumption of 264 kWh per ton of processed steel, as shown in Figure 13.

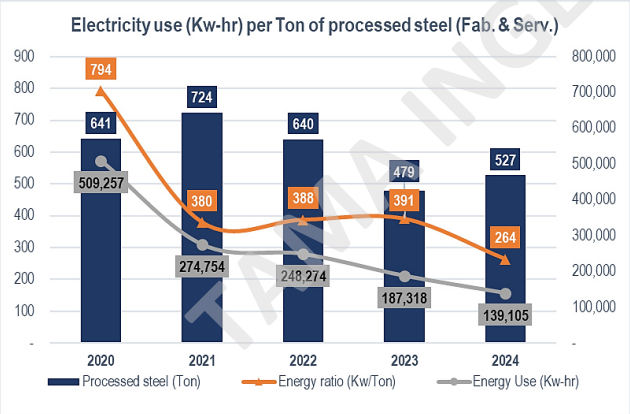


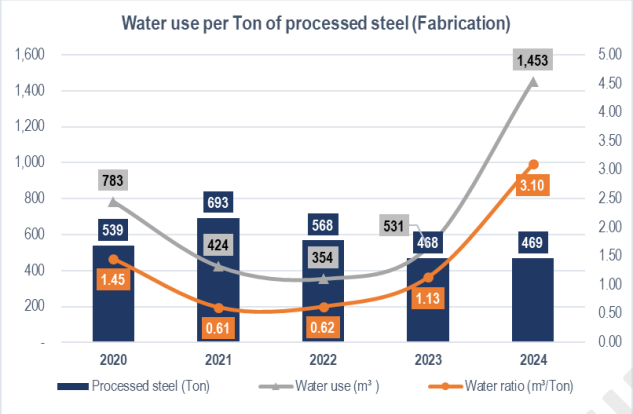
Figure 13. Electricity consumption per Ton of processed steel in TAMA (2020-2024).
Note: Retrieved from TAMA's Indicator Dashboard T-GI-F-17

6.3. Water Consumption

Likewise, SDG No. 6 on "Clean Water and Sanitation" demands us to be more efficient in water use to achieve universal coverage by 2030. Figure 14 shows a positive trend in water consumption efficiency in TAMA from 2020 to 2023. Overall, a decrease in water consumption per ton of manufacturing was observed, from 1.45 m³ in 2020 to 1.13 m³ in 2023. However, in 2024, TAMA experienced a notable rise in water consumption, primarily due to unauthorized use of our public network connection by third parties through illicit taps. As a result, water usage surged from 531 m³ to 1,453 m³, causing water intensity to nearly triple and reach 3.10 m³ per ton of steel produced. This incident prompted us to reinforce our water supply controls and implement enhanced security

measures to prevent similar disruptions and safeguard our operational performance.

Water theft through unauthorized connections is a widespread social issue that particularly impacts formal companies—such as ours—that consistently fulfill their obligations to pay for essential services. In the Lima and Callao metropolitan area, during just the first five months of 2024, up to 10 cases per day were reported in districts such as San Juan de Lurigancho, Comas, and Ate Vitarte (major urban zones in Lima), resulting in financial losses exceeding S/ 1.3 million [13]. Furthermore, in 2023, SEDAPAL (the public water utility company for Lima and Callao) identified 1,612 illegal connections, which caused economic losses greater than S/ 2 million [14]. This situation underscores the urgent need to strengthen monitoring and enforcement measures to minimize the negative effects on the fair distribution of water resources.



"Enterprises should also avoid and address land, marine and freshwater degradation, including deforestation"
Chapter VI, environment. OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (2023)

Figure 14. Potable water consumption per Ton of processed steel in TAMA (2020-2024).
Note: Retrieved from TAMA's Indicator Dashboard T-GI-F-17

6.4. Paper Consumption

Sustainable Development Goal 15, which focuses on "Life of terrestrial ecosystems," promotes the protection and sustainable management of forests to halt deforestation, a key aspect of preserving terrestrial ecosystems. Reducing paper consumption contributes directly to this goal by reducing pressure on forest resources and preventing the felling of trees. In 2024, paper consumption at TAMA, used mainly for printing manufacturing drawings and records, increased from 0.11 to 0.17 thousand per ton of steel, as shown in Figure 15, due to specific requirements from some customers who request their quality dossiers in physical format. This challenge highlights the importance of continuing to promote practices that minimize the impact on forests and halt biodiversity loss [15].

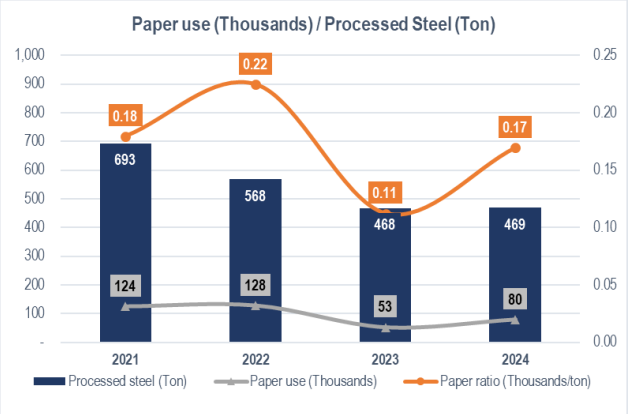


Figure 15. A4 size paper consumption per Ton of processed steel in TAMA (2020-2023).
Note: Retrieved from TAMA's Indicator Dashboard T-GI-F-17

6.5. Wood consumption for packaging

In the same line, in 2023 TAMA carried out the research T-GI-F-21 Estimation of the amount of wood used in TAMA and its equivalence in number of trees to determine the amount of wood consumed in the packaging process of our fabrications, which is used in three different ways (a) as wooden boards for the preparation of customized packaging, (b) as pallets or wooden pallets with standard measures of 1,300mm x 1,100mm and (c) in the form of wooden packaging treated for export, whose service is carried out by third-party suppliers.

Our study established the following measurements of a typical tree of the *Pinus Radiata* species (one of the most used for the manufacture of wooden pallets) based on reference studies in Peru: Diameter at breast height (D_{ap}) of 0.81m and Trade Height (H_c or height up to the trunk is straight) of 17.90m, (Figure 16). Among other findings, it was determined that for every m3 of tree felled, only 24.16% of the timber harvested is used for packaging.

Figure 16. Measurements of a standing tree. Background: Palcazú, province of Oxapampa, department of Pasco. Note: Images retrieved from [16] [17].

This research also determined that the diameter or height of a tree does not determine its cutting age, but rather its time of greatest productive efficiency, which in the case of Pinus radiata ranges from 7 to 10 years. In Puno, in southern Peru, an investigation determined that the optimum felling age for plantations of this species was 33 years [18].

In 2024, TAMA used 34.13m^3 of wood in the form of laths, stringers and packaging, equivalent to 23.6 standing trees, considering the dimensions of a typical tree. This means that for every 100 tons of steel processed in fabrications, approximately five trees had to be felled (see details in Table 3 and Figure 17).

Table 3. Estimated volume of wood used in TAMA (m3, %) as pallets, boards, and packaging.

Description	UM	2020	2021	2022	2023	2024
Wooden pallets	m^3	12.97 (28.6%)	8.02 (22.4%)	16.1 (40.1%)	10.21 (21.5%)	7.74 (22.7%)
Wooden boards	m^3	32.17 (71%)	27.76 (77.4%)	22.21 (55.3%)	35.94 (75.8%)	25.65 (75.2%)
Wood packaging	m^3	0.19 (0.4%)	0.07 (0.2%)	1.83 (4.6%)	1.27 (2.7%)	0.74 (2.2%)
TOTAL	**m^3**	**45.33 (100%)**	**35.85 (100%)**	**40.13 (100%)**	**47.43 (100%)**	**34.13 (100%)**

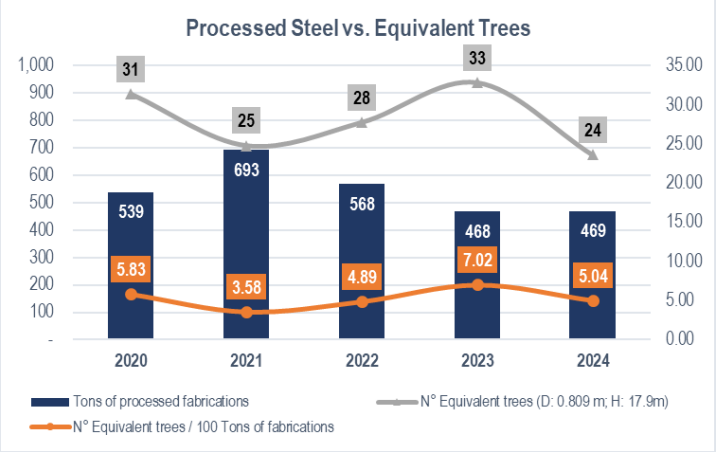


Figure 17. Estimated TAMA wood consumption in number of trees (2020-2024).
Note: Retrieved from Report "T-GI-F-21 Estimation of the amount of wood used in TAMA and its equivalence in number of trees".

In 2024, we set out to restrict the use of wood exclusively to pallets with standard dimensions of 1,300 mm x 1,100 mm, eliminating the use of wooden slats or beams for packaging our fabrications (see Figures 18 and 19). . To this end, we initiated the fabrication of metallic parapets using leftover steel from previous projects. This initiative enabled us to reduce wood consumption by 28% compared to the previous year, contributing to the fulfillment of our commitment to the Science Based Targets (SBTi) initiative to reduce Scope 3 emissions and achieve carbon neutrality by 2050. In the long term, this strategy will not only reduce solid metal waste, but will also optimize the use of leftover paint by almost 100%, which in turn will reduce the generation of hazardous waste (see section 6.6). In this way, we are making progress in integrating practices that improve the efficiency of our processes and minimize the environmental impact associated with our packaging.

Figure 18. Design change from wooden pallets to steel.

Figure 19. Design of metal parapets with leftover steel from previous projects.

6.6. Solid waste

Since 2009, TAMA has been carrying out statistical control of the solid waste generated by our operations, as shown in Figure 20. In the 2020-2023 period, the ratio of solid steel waste generation has remained stable between 167 and 185 kg of steel waste per ton processed.

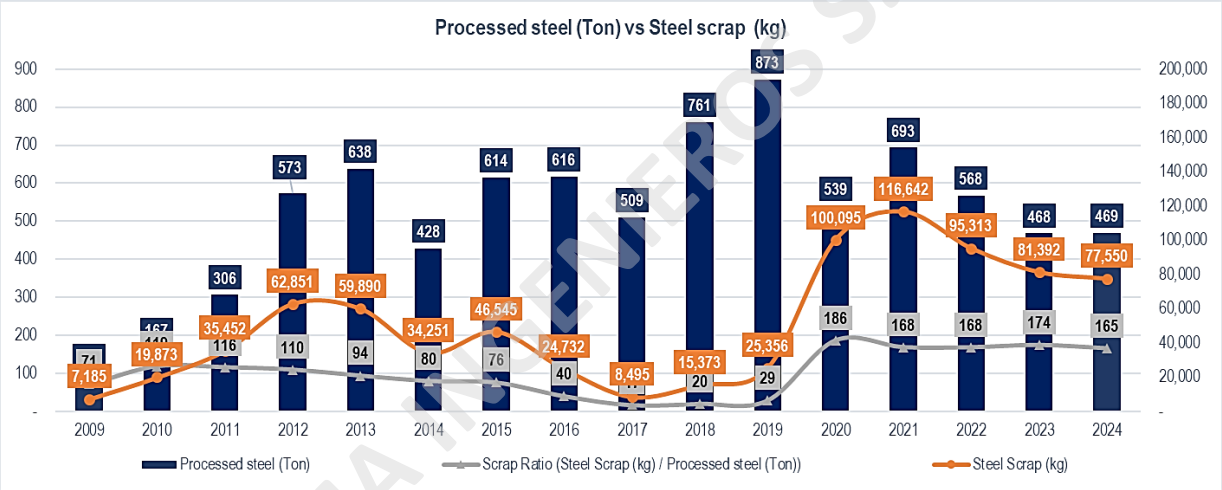


Figure 20. Evolution of solid steel waste generation in TAMA.

It is important to mention that the hazardous waste generated by TAMA is mainly composed of metal paint cans, remains of rags or plastics contaminated by paint, and other similar waste. In 2023, 1,210 kg of these were generated (see Figure 21).

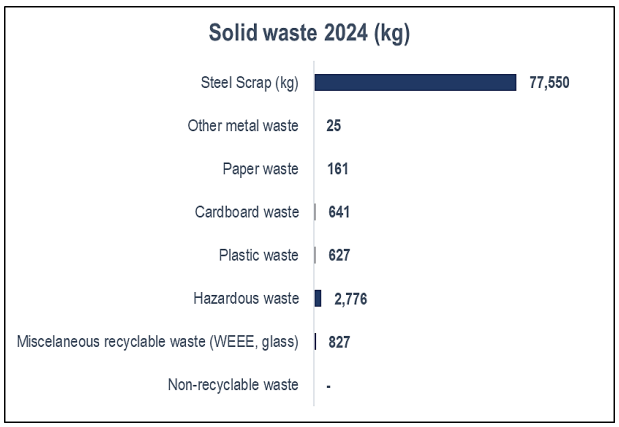


Figure 21. Hazardous solid waste, 2024.

7. Human and labor rights

SDG 8 aims to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all". On the other hand, SDG 10 on reducing inequalities states that it is necessary to distribute resources equitably, and to invest in education and capacity building [19]. In this section, we present our progress in terms of education towards our employees and, in addition, we present our 10:1 wage policy as objective fact that represent our investment in training in terms of man-hours and the search for equity. Along the same lines, TAMA has published in its **Code of ethics** **T-GA-F-05** some other statementsand commitments on inclusion and respect for human beings.

7.1. Education indicator

Since 2018 when TAMA began the process to achieve ISO 9001, ISO 14001, ISO 45001, ISO 27001, and ISO 37001 certifications, we have progressively increased training for employees and operators. Thus, for example, in 2024 TAMA workers received an average of 5.59 days of technical training, personnel induction, and five-minute safety talks, compared to 4.68 annual days of training received in 2023, as shown in Table 4.

Table 4. TAMA training for employees and operators (2022-2024)

Concept	2022	2023	2024
Induction of new workers	371.63	142.36	150.00
Technical Training	404.03	521.03	1,358.03
Emergency Brigades	80.00	72.00	22.50
OSH Law Training	306.00	385.75	315.25
Integrated management system	147.00	58.00	-
Health and Safety training	488.00	76.00	17.43
Five-minute safety talks	2,903.84	2,716.76	3,018.65
Total MH training	**4,700.50**	**3,971.90**	**4,881.86**
Total MH (excluding absences)	213,921.22	190,052.73	201,366.03
N° of workers trained	113	89	91
Avg. MH Training per Worker (year)	41.51	44.88	53.65
Training Days per Worker (Year)	**4.32**	**4.68**	**5.59**

Notes: (1) Taken from "Education Indicator T-GP-F-65".
(2) A 9.6-hour workday is considered a workday.

7.2. 10:1 wage policy

In line with SDG N° 8 (Decent Work and Economic Growth) and SDG N° 10 (Reducing Inequalities). [5] and in line with our **Life Plan T-GG-PL-03**, the highest salary of a manager at TAMA is, at most, ten times the lowest salary of an operator or assistant. All employees are informed of this by means of the **Internal Work Regulations T-GP-RL-01**. Thus, as of 2021 the minimum payroll salary of any TAMA worker has been increased from S/ 1,400 to S/ 1,600. In addition, at TAMA, all salaries are paid on payroll with the real wage and we do not hire minors. TAMA's operator labor costs (measured in US$/MH) have evolved as shown in Table 4.

Table 5. Evolution of Operator Labor Costs (US$/HH) 2004 to 2024.

Years	Operator Labor Cost (US$/HH)
2004 to 2007	1.90
2008 to 2009	2.50
2010 to 2011	3.00
2012	3.20
2013 to 2020	3.50
2021	4.40
2022	4.80
2023	5.20
2024	5.60
2025	6.00

Figure 22 shows the variation of TAMA's labor costs compared to the variation of the CPI (inflation) in Metropolitan Lima. Taking 2004 as the base year, the CPI increased 1.9 times while labor costs increased 3.16 times.

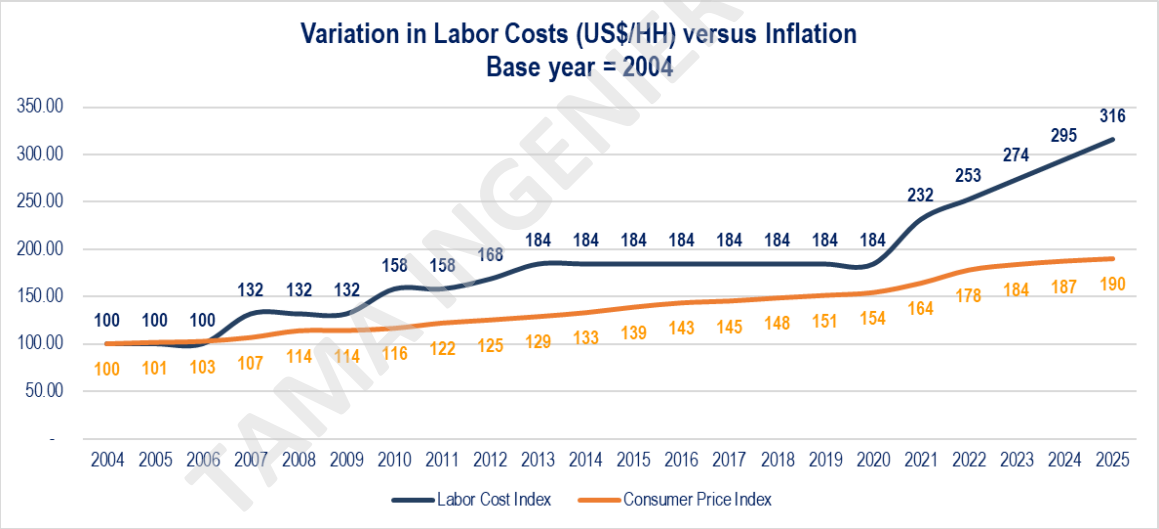


Figure 22. Variation of Labor Cost (US$/HH) vs. Variation of CPI in Metropolitan Lima (2004-2024).

This variation is explained by TAMA's positioning in the value chain of the metal-mechanical manufacturing industry in Peru. In 2024, TAMA generated a Gross Value Added per Capita of US$20,580, compared to Peru's average Gross Domestic Product per Capita of US$8,520. This economic metric measures the value generated by TAMA in its production process. TAMA is a company that is part of a broad Peruvian metal-mechanic sector that ranges from the manufacture of metal products (locksmithing, metal structures) to the manufacture of machinery and capital goods. Its specialization in the manufacture of technically complex equipment and spare parts typical of an OEM (Original Equipment Manufacturer) allows it to compete with manufacturers in OECD (Organization for Economic Cooperation and Development) countries, so it is reasonable to compare its labor cost with the average labor cost of the manufacturing sector in those countries. Thus, for example, according to Figure 23, the man-hour cost of a manufacturing worker in general in Chile is US$ 8.31, US$ 2.64 in Peru, US$ 2.61 in Brazil, and in OECD countries this can vary

between US$ 14.94 and US$ 60.07 according to official figures from the International Labor Organization (ILO) [20].

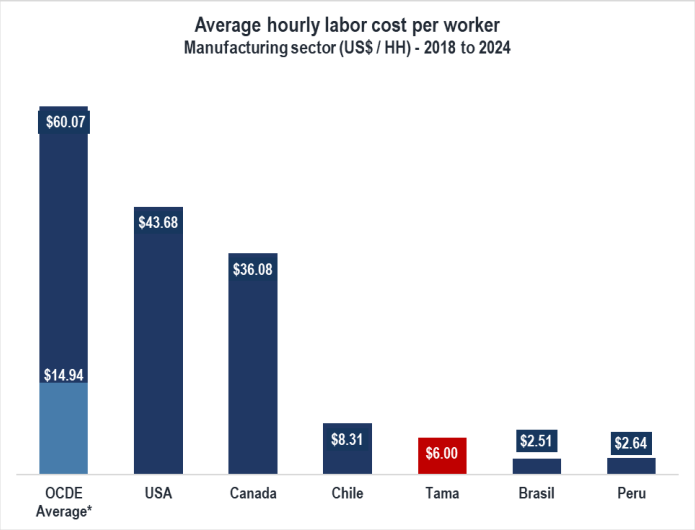


Figure 23. Labor cost per hour - Manufacturing sector average (US$ / HH). Source: ILOSTAT [20]. Note: OECD data are for 2024, USA and Canada 2023, Chile 2018, TAMA 2025, Brazil 2020, and Peru 2021.

8. Health and safety

It is relevant to mention that a 46-minute video on safety, health and environment is available on our web page www.tamaingenieros.pe, which can help in the training of employees from other metalworking and related companies. This video is used at TAMA as a mandatory part of the induction of new personnel.

Figure 24. Health, safety, and environmental video on TAMA website.
Note: Retrieved from "Health, safety and environment Video", by TAMA, 2021 (https://tamaingenieros.pe/en/aspecto-formal_eng/)

8.1. Injuries, severity, and frequency

As can be seen in Figure 22 and Figure 24, at TAMA we have been managing our safety indicators since 2012 and, as a result of the safety training carried out, in the last five years we have significantly improved the frequency and severity rates of incidents.

Figure 25. Number of safety incidents (2012-2024).

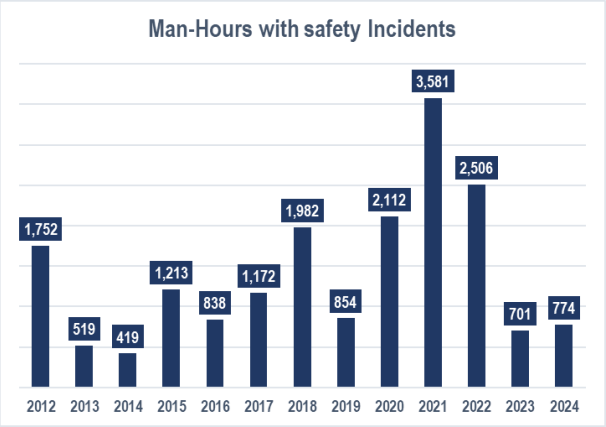


Figure 26. Man-hours with safety incidents (2012-2024).

Table 6 shows in greater detail the reduction in severity in terms of man-hours with medical leave with respect to 2022, particularly in incidents involving hand injuries. It should also be noted that in the metalworking industry 98% of safety accidents happen to workers, as shown in Table 7.

Table 6. Man-hours with medical leave (MH-ML) by incidents and illnesses

Incidents - Illnesses - Man hours with medical leave (ML)	Average 2012-2016	Average 2017-2021	2022	2023	2024
Splinter in the eye	182	91	10	19	77
Low back pain	20	18	-	365	-
Hand injuries	363	1629	2,477	144	464
Foot injuries	132	182	-	29	-
Others	251	20	19	144	232
Total MH-ML	948	1940	2,506	701	774
Total Days-ML	**99**	**202**	**261**	**73**	**90**

Table 7. Man-hours with medical leave (MH-ML) by categories of workers

Incidents - Illnesses - Man hours with medical leave (ML)		Average2012-2016	Average2017-2021	2022	2023	2024
Splinter in the eye	Assistant	39.72	21.82	9.60	-	77.40
	Officer	75.37	30.62	-	-	-
	Welder	36.42	18.05	-	19.20	-
	Master	26.20	18.49	-	-	-
	Employees	4.34	2.46	-	-	-
Low back pain	Assistant	7.68	1.92	-	364.80	-
	Officer	5.96	13.90	-	-	-
	Welder	1.92	-	-	-	-
	Master	4.10	1.98	-	-	-
	Employees	-	-	-	-	-
Hand injuries	Assistant	86.70	113.60	115.20	144.00	68.80
	Officer	98.50	862.53	-	-	68.80
	Welder	22.64	272.48	2,150.40	-	249.40
	Master	150.23	265.40	211.20	-	77.40
	Employees	5.16	115.20	-	-	-
Foot injuries	Assistant	16.14	92.26	-	-	-
	Officer	76.62	19.49	-	-	-
	Welder	-	70.23	-	-	-
	Master	12.54	-	-	28.80	-

	Employees	26.88	-	-	-	-
Others	Assistant	33.36	3.84	-	-	-
	Officer	52.66	14.14	-	144.00	232.20
	Welder	3.04	-	-	-	-
	Master	42.24	-	19.20	-	-
	Employees	120.00	1.92	-	-	-
Total MH-ML		**948.42**	**1,940.33**	**2,505.60**	**700.80**	**774.00**

Note: Taken from TAMA's "Occupational Safety and Health Statistics Record T-SM-F-17".

8.2. Health Indicator

An important indicator that reflects the health of our workers is the number of days not worked due to common illness or work-related accidents, which have been decreasing steadily since 2020 (after the Covid-19 pandemic), as shown in Figure 27.

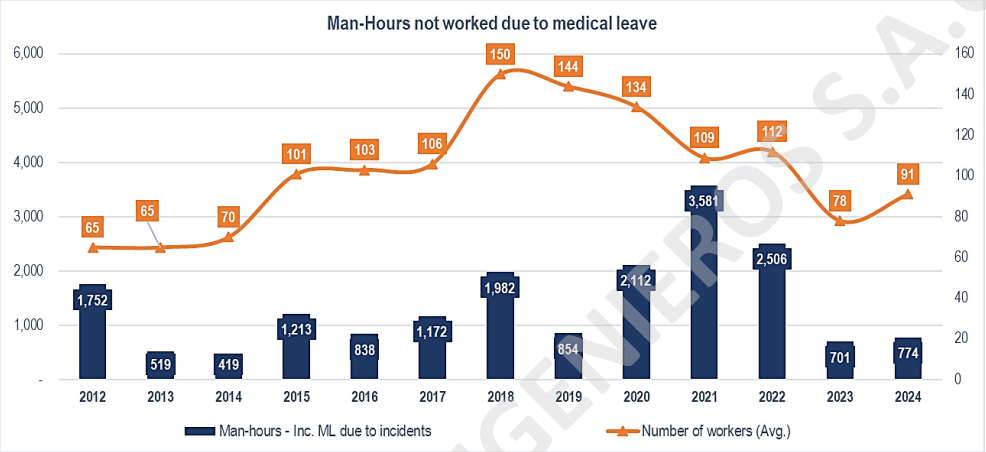


Figure 27. Evolution of man-hours not worked due to illness or accident in TAMA (2019-2024).
Note: Retrieved from TAMA's " Occupational Safety and Health Statistics Record T-SM-F-17".

9. Quality and customer satisfaction

The long standing of our customers, the qualifications obtained over the years in different audits, along with the evolution of the steel tons produced by each worker reflect that in TAMA we strive for the development of friendship, looking forward to the medium and long term, while preserving the know-how of our customers. In addition, in TAMA every year we ask for feedback from our main customers through the **Customer Satisfaction Survey T-GC-F-01**.

9.1. Long-standing customer relationships

Thirteen years is the average length of our relationships with our main customers, as shown in Figure 28.

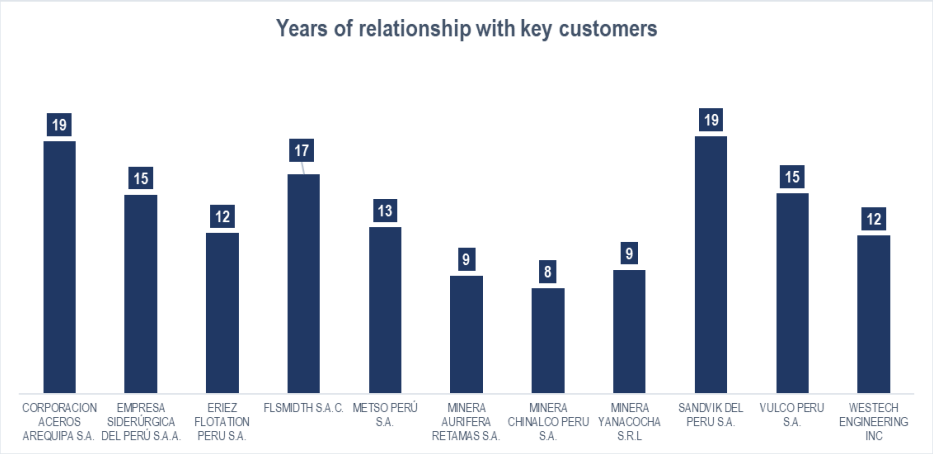


Figure 28. Years of relationships with main customers, in alphabetical order.

9.2. Qualification audits

At TAMA we have successfully faced several qualification processes since 2009, with scores above 90%. Considering the 2020-2024 period, TAMA has been rated "A" by auditing firms such as Dun & Bradstreet, Q-Risk, and Bureau Veritas, as shown in Figure 26.

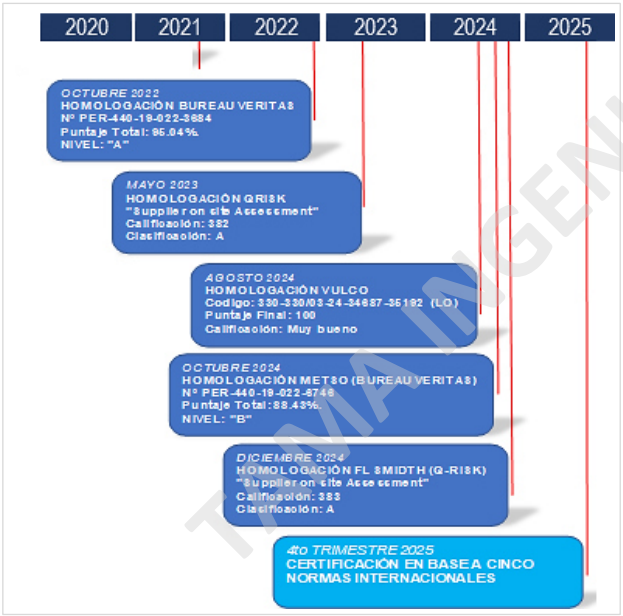


Figure 29. Qualification audits by several customers (2020-2025). See further details on our website..

9.3. Tons produced versus number of workers

At TAMA we classify the types of products we manufacture, which allows us to propose real plant capacities. We are committed to keep a maximum employee to operator ratio of 1:1.5 (i.e. a maximum of 15 operators for every 10 employees) and to not using contractors. This mix of management and manufacturing capacity is what allowed us, for example, to transform 469 tons of steel in 2024 with 91 collaborators, 38 of whom are management employees (Figure 30).

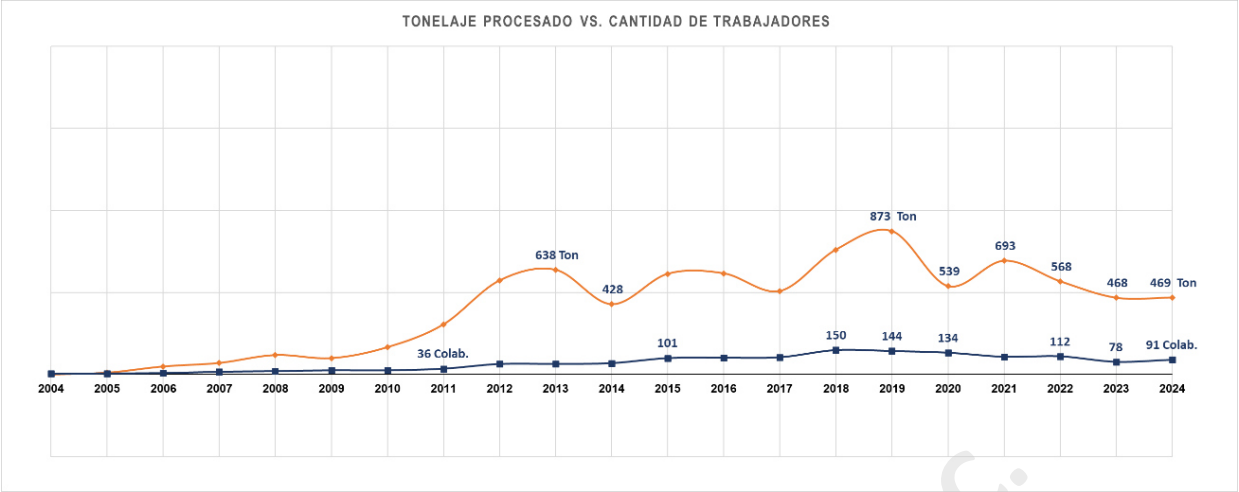


Figure 30. Timeline of tons produced versus number of workers.
Note: Retrieved from TAMA's "Timeline tons produced vs. number of workers" T-AD-F-06. Available from: https://tamaingenieros.pe/en/historia_eng/

10. Financial sustainability

According to the United Nations Development Program, in addition to achievements in health and education, a country's development should also be measured in terms of per capita income [21]. At TAMA, since 2022 we measure gross domestic product per capita, an economic index that also reflects TAMA's efforts towards global objectives such as eradicating poverty, decent work, economic growth, and industry, innovation, and infrastructure (SDG No. 1, 8, and 9, respectively).

In the financial area, it is also relevant to mention that large companies, through their banks, charge high financial interests to their suppliers in invoice factoring for payments over 30 days, since such rates do not vary proportionally with interest rates of the Central Reserve Bank of Peru (BCRP): As we stated in our “Price Variation Report 2025”, it was reduced between 5.27% to 33.06% [22].

“It is important that enterprises contribute to the public finances of host countries by making timely payment of their tax liabilities. In particular, enterprises should comply with both the letter and spirit of the tax laws and regulations of the countries in which they operate”
Chapter XI, Taxation. OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (2023) [6]

10.1. Gross Domestic Product (GDP) per Capita

The GDP of an economy is calculated as the sum of the Gross Sector Value Added (GVA), and the value added is the amount each organization adds in its production process to the national economy [23]. In this way, the Gross Value Added of a company will be the value of its production minus the value of the inputs consumed.
On the other hand, Gross Domestic Product per capita (GDP_{pc}) represents the monetary value of all final goods and services generated in a country that would belong to each individual inhabitant if that wealth were distributed equally. Because the standard of living generally tends to increase as GDP per capita increases, it is used as an indirect measure of the quality of life of the population in an economy [24]. As illustrated in Figure 31, in 2024 TAMA's Gross Value Added (GVA) per capita was US$ 20,580, 2.4 times the Peruvian GDP per capita, which is estimated at US$ 8,520 according to official data published by the BCRP, the National Institute of Statistics and Informatics

(INEI) and the World Bank [25]. In relation to 2023, TAMA's GVA per capita fell by 6.5%.

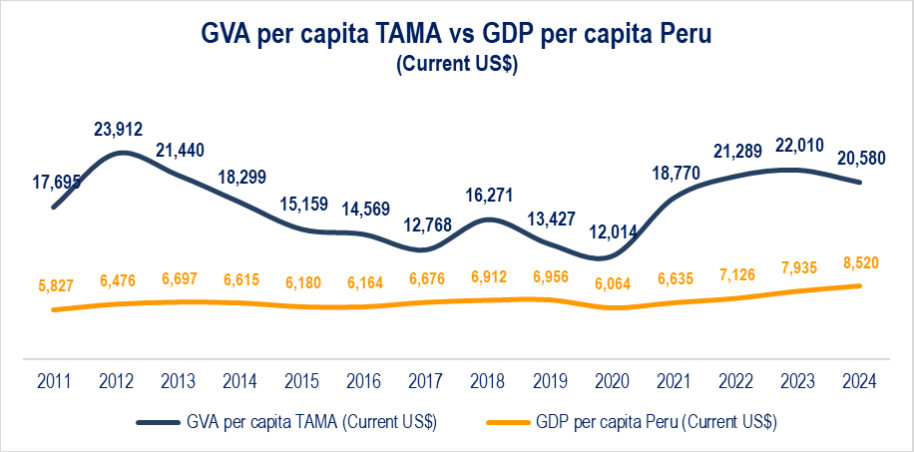


Figure 31. Comparison of TAMA's GVA$_{pc}$ and Peruvian GDP$_{pc}$ 2011-2024 (current US$).
Notes: (1) GVA: Gross Value Added, obtained from "T-AD-F-05 GDP per capita of TAMA". (2) GVA$_{pc}$ Peru obtained from World Bank [25].

10.2. Contributions paid to Peruvian State

In line with Chapter XI "Taxation" of the OECD guidelines, which emphasizes that it is important for companies to contribute to the public finances of countries making timely payment of their tax liabilities, between September 2004 and December 2024 TAMA has contributed to the Peruvian State S/ 19´906,179 including value added taxes, income tax, social security, workers' profit sharing, extraordinary profits, and a productivity bonus paid in 2022 (Figure 32).

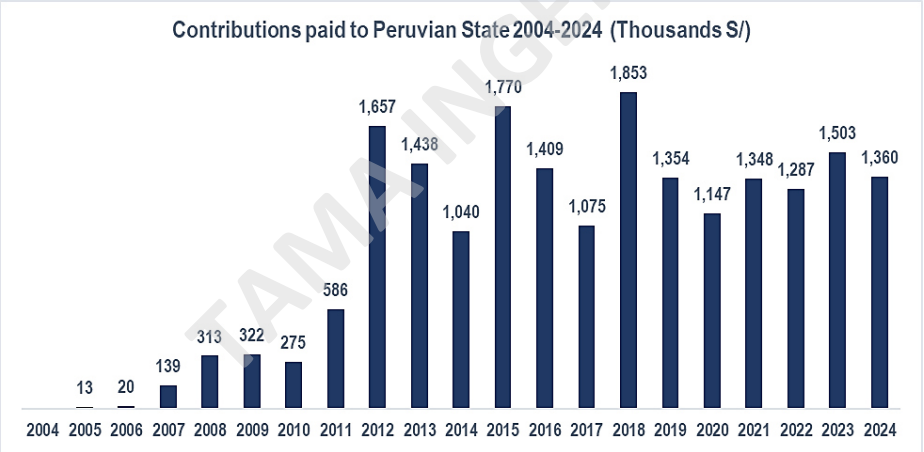


Figure 32. Evolution of TAMA's contributions to the Peruvian State 2004-2024 (To 2024 TAMA has contributed to the Peruvian State S/. 19,906,179).
Note: Retrieved from the Tama´s "State Contributions record T-AD-F-04".

Figure 33 shows the breakdown of social security contributions compared to headcount of TAMA, in which there is a significant correlation between both, showing that all TAMA workers are included in payroll with whole legal contributions. TAMA reveals this information so that customers in the industry also request that from other metal manufacturers to demonstrate if they declare all their staff with actual remunerations on the payroll.
If a company does not declare all its workforce on the payroll or does not report the real salaries, it is harming the worker's human rights, since this means that in the event of retirement, accident, or death:

- The worker does not receive a fair pension at retirement.
- The worker does not receive a real pension in case of serious injuries or permanent disability.
- The worker's beneficiaries do not receive a real pension in the event of death.

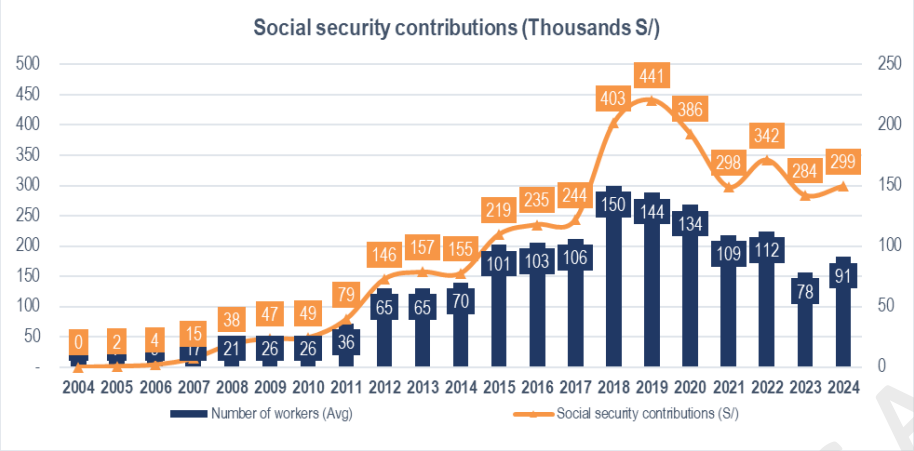


Figure 33. Evolution of TAMA's contributions to social security 2004-2024.
Note: Retrieved from the Tama´s "State Contributions record T-AD-F-04".

11. Technology and Innovation

We will describe in a simple and summarized way two contributions in this field, but for more detail we invite you to review our R&D chapter on the website www.tamaingenieros.pe/I&d where you can review the history of TAMA's research and development projects since 2008.

11.1. Stress relief by sub-harmonic vibrations

In 2014 TAMA developed the research "Stress relief by sub-harmonic vibrations in welded carbon steel joints", a method that, in addition to offering an efficient solution to the steel manufacturing industry in terms of mechanical and dimensional alterations, generates lower amounts of greenhouse gases: for each hour of stress relief heat treatment a typical furnace can generate 0.85 kg C_{O2} , a heat blanket 0.23 kg C_{O2}, compared to 0.13 kg C_{O2} emitted by this method [26]. That research was turned into a graduate thesis which can retrieved from our website's R&D chapter.

11.2. Stud Welding

As part of TAMA's commitment to continuous improvement and the search for more efficient and cost-effective solutions for the metalworking industry, in 2022 we introduced stud welded wear liners to the market as a result of our investment in research and development, significant advantages in terms of cost, delivery time and efficiency over traditional fabrications were highlighted, as summarized in Figure 33 below.

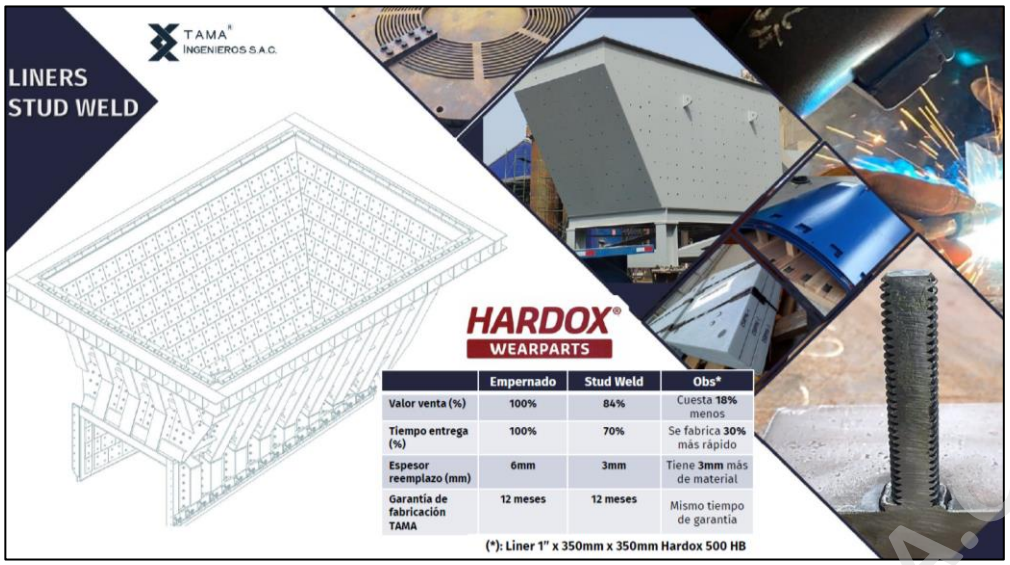


Figure 34. Proposed innovation of wear liners with TAMA stud weld.

11.3. Confidentiality agreements

TAMA aligns itself with Chapter IX of the OECD Guidelines on Science, Technology and Innovation which states that companies must comply with applicable national laws and requirements, including privacy and data protection requirements and export control regulations, and that digital security is a shared responsibility across all stakeholders, including businesses, customers, and governments [6]. In that regard, our **General Terms and Conditions of Sales** T-GC-DC-05 highlights that:

- Communications between TAMA and the recipient and/or customer will be made by e-mail. Corporate e-mails designated by the customer and TAMA are considered valid, and therefore, the information is considered to have been received in accordance with article 1374 of the Peruvian Civil Code.
- TAMA will send communication to the responsible person designated by the customer, with a copy to an additional person of the customer and with a copy to a member of TAMA.
- For the manufacture of equipment, components, and spare parts, TAMA will not accept requests for quotations with non-formal information (sketches, simple descriptions), and/or that do not belong to the requesting customer and/or receiver, unless the customer and/or receiver specifies or supports in writing the origin of such information, under responsibility.
- TAMA is committed to safeguarding the information provided by the customer by complying with the corresponding confidentiality agreements consistent with the Information Security Management System implemented at TAMA.

12. Stakeholders

In line with SDG N° 17 "A successful sustainable development agenda requires partnerships between governments, the private sector and civil society. These inclusive partnerships built upon principles and values, a shared vision, and shared goals that place people and the planet at the center, are needed at the global, regional, national and local level" and its target 17.11 "Significantly increase exports from developing countries", at TAMA, we are working to position Peruvian metal-working products abroad and, as a demonstration of this, we have continued to steadily increase our exports since 2018 (Figure 35), with Chile and the United States as our main destinations (Figure 36).

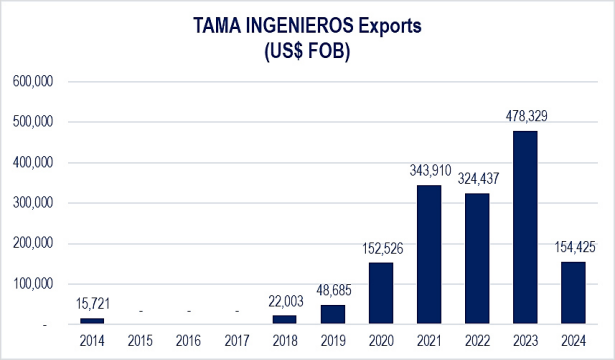


Figure 35. TAMA exports (2014-2024).

Figure 36. Exports by country of destination (2014-2024).

Notes: 1. Retrieved from "TAMA Exports Report T-GC-F-08".
2. 2024 TAMA exports do not include US$ 253,000 sold to the Peruvian subsidiary of a Canadian client that were finally exported to Canada.

13. Consistency in decision making and sustainability

In general, large and medium-sized companies usually publish on their websites reports or open access reports, in which they state that they work under guidelines of respect and compliance with human rights and fundamental rights, seeking to work with formal companies that comply with the law, have a code of ethics, and operate within a sustainable approach. However, in practice, the commitment to comply with these criteria is not usually evidenced in several large companies (including TAMA's customers).

In this sense, we share in **Appendix 3** a list of the main metalworking Peruvian companies identified by TAMA, obtained from public information provided by SUNAT [27]. In this annex, the following may be noted:

- Years in the industry.
- Number of employees registered in the payroll.
- Status of coercive debt with SUNAT, and status of "Reactiva" loans (a governmental guarantee program created in April 2020 to avoid a break in the payment flow of Peruvian companies under the impact of Covid-19) [28].

From this information, and from TAMA's 20 years of experience in the industry, inconsistencies in the decision making of Customers are observed, which are observed as follows:

a. In different tenders and calls for tenders, the metalworking companies do not know who they are competing with and the Customers do not disclose this data on the grounds of confidentiality of information.

b. Customers permanently carry out evaluations or homologations of suppliers, however, they do not publish the results of them. These results should be part of the criteria for making decisions regarding the awarding of projects.

c. It is understood that, with these supplier evaluations or homologations, the Client's professional staff will have a clear idea of its real monthly production capacity, according to the characteristics of the goods to be purchased and compliance with laws.

After this analysis it is concluded that Customer's decision making is still mainly based:

- On price (according to TAMA estimates, this criterion weighs between 60% and 70%).
- On quality, delivery time, and -even- subjective factors of a more personal nature.

In other words, even though their parent companies, directors and main shareholders set other

directives regarding sustainability, it is intended to achieve different results by using decades-old supplier evaluation methodologies.

To focus our efforts on building relationships with customers with lower risk to create sustainable income and keep long-term business relationships, in TAMA we have developed the **Potential customer evaluation procedure T-VE-F-02**, which covers five criteria:

1. Consistency criteria, under which we evaluate their alignment with TAMA's culture and values with aspects such as empathy, confidentiality of information, awareness of safety, health, environment, and formalities.
2. Market continuity criteria, which evaluates whether the customer has a steady and growing presence, is a technology owner, or is innovative).
3. Technical exigency criteria, under this we evaluate if the customer has proprietary technical specifications, allowing us to develop technical issues.
4. Potential criteria, that includes aspects such as demandingness and multinational operations, which allows us to export overseas.
5. Economic and financial solvency criteria, for example, their payment policies and payment opportunity.

This evaluation procedure not only allows us to determine if a customer is not a potential one, but also facilitates the priority to attend to urgent requirements, for example.

14. Conclusions

a. TAMA has been demonstrating its commitment to sustainability, which is evidenced by our efforts to measure and mitigate CO2 emissions, consumption of electricity, water, paper, wood, solid waste generation, and the commitment with science-based climate targets (SBTi).
b. TAMA has made significant improvements in the promotion of human and labor rights, as reflected by our education indicator and our 10:1 wage policy.
c. TAMA has made progress in terms of employee health and safety, as evidenced by accident rates, severity, and in the reduction of days not worked due to illness or health, and we expect to continue to improve our results in 2025.
d. TAMA continues to keep long-term relationships with customers, values their opinion through the annual satisfaction surveys and, in addition, its performance in terms of the ratings obtained through audits, and the balance between management and manufacturing capacity reflects significant achievements in efficiency over time.
e. TAMA measures its contribution to Peruvian GDP, and evaluates the performance of its own GDP per capita (which is 2.4 times the Peruvian GDP per capita), and with our 10:1 rule we demonstrate that there is a distribution of wealth that seeks fairness and proportionality and makes significant contributions to the Peruvian State not only to comply with tax obligations but also to ensure a future dignified pension for our employees and their access to essential health care services.
f. TAMA is committed to technology development and innovation, as reflected through research on sub-harmonic vibration stress relief, stud welding, and other topics since 2008, available on our website. In addition, we protect our customers' developments through legal confidentiality agreements.

15. Recommendations

a. We encourage customers to become more transparent and consistent with their procurement and sustainability policies, by incorporating the outcomes of their evaluations and sustainability assessments of suppliers as one of the most important criteria to be taken into account when awarding projects, basic criteria of public information-based formalities (see Appendix 3), and

criteria related to carbon footprint reduction, thus shifting increasingly away from price-based decision making.

b. We recommend customers to improve payment terms, with current rates and invoice payments at 90 or more days, a high financial interest is generated and affects the competitiveness of metalworking companies.
c. We strongly recommend metal-working manufacturers to incorporate, measure and report sustainability actions to contribute positively to the development and competitiveness of the industry but also to the welfare of our future generations.

References

[1] S. Benito, M. León and W. Vicente, "The effects of corruption on Peru's economic growth during the period 1998-2018," *Growing Science,* vol. 7, no. 2021, p. 1645–1654, 2021.

[2] L. Mariluz, "Judicial Corruption in the Peruvian Judicial System: Ways to resolve the problem by applying the Economic Analysis of Law," 2011. [Online]. Available: https://tspace.library.utoronto.ca/bitstream/1807/31331/3/Mariluz_Lizeth_P_201111_LLM_thesis.pdf. [Accessed 30 enero 2024].

[3] J. Dávila, "Impacto de la corrupción en el PBI Per Cápita del Perú, periodo 1981 2021," 2022. [Online]. Available: https://repositorio.upao.edu.pe/handle/20.500.12759/10833. [Accessed 30 enero 2024].

[4] J. A. Pérez López, Fundamentos de la dirección de empresas, Madrid: Rialp, 1992.

[5] ONU, "Objetivos y metas de desarrollo sostenible," 2024. [Online]. Available: https://www.un.org/sustainabledevelopment/es/sustainable-development-goals/. [Accessed 17 enero 2024].

[6] OCDE, "Las Líneas Directrices de la OCDE para Empresas Multinacionales sobre Conducta Empresarial Responsable," OECD Publishing, Paris, 2023. [Online]. Available: https://www.oecd-ilibrary.org/docserver/7abea681-es.pdf?expires=1700227941&id=id&accname=guest&checksum=BABD5DBB9CB82555FAE12DB66DF0A4F5. [Accessed 17 noviembre 2023].

[7] ISO, "ISO 14064-1:2018(es): Gases de efecto invernadero — Parte 1: Especificación con orientación, a nivel de las organizaciones, para la cuantificación y el informe de las emisiones y remociones de gases de efecto invernadero," 2018. [Online]. Available: https://www.iso.org/obp/ui#iso:std:iso:14064:-1:ed-2:v1:es. [Accessed 11 enero 2024].

[8] GHG Protocol, "Calculation Tools and Guidance," 2023. [Online]. Available: https://ghgprotocol.org/calculation-tools-and-guidance. [Accessed 11 enero 2024].

[9] Ministerio del Ambiente, "Huella de Carbono Perú," 2024. [Online]. Available: https://huellacarbonoperu.minam.gob.pe/huellaperu/#/inicio. [Accessed 11 enero 2024].

[10] Science Based Targets, "What are Science Based Targets," 2024. [Online]. Available: https://sciencebasedtargets.org/how-it-works.

[11] Science Based Targets Iniciative, "Target Dashboard (Beta)," 2024. [Online]. Available: https://sciencebasedtargets.org/target-dashboard.

[12] ONU, "Objetivo 7: Garantizar el acceso a una energía asequible, segura, sostenible y moderna," 2025. [Online]. Available: https://www.un.org/sustainabledevelopment/es/energy/.

[13] Diario La República, "Sedapal detecta más de 500 conexiones clandestinas: pérdidas superan un millón de soles en Lima y Callao," 22 junio 2024. [Online]. Available: https://larepublica.pe/sociedad/2024/06/22/sedapal-detecta-mas-de-500-conexiones-clandestinas-perdidas-superan-un-millon-de-soles-en-lima-y-callao-905718.

[14] Diario La República, "¿Cuáles son los distritos con más conexiones ilegales de agua? Sedapal perdió S/2 millones este 2023," 24 noviembre 2023. [Online]. Available: https://larepublica.pe/sociedad/2023/11/24/cuales-son-los-distritos-con-mas-conexiones-ilegales-de-agua-sedapal-perdio-s2-millones-este-2023-san-juan-de-lurigancho-872784.

[15] ONU, "Objetivo 15: Gestionar sosteniblemente los bosques, luchar contra la desertificación, detener e invertir la degradación de las tierras, detener la pérdida de biodiversidad," 2025. [Online]. Available: https://www.un.org/sustainabledevelopment/es/biodiversity/.

[16] Oficina de las Naciones Unidas para las Drogas y el Delito, "Manual para el Productor Forestal. Cómo cubicamos nuestra madera," 2017. [Online]. Available:

https://www.unodc.org/documents/bolivia/DIM_Manual_Como_cubicamos_la_madera.pdf.

[17] Andina, "Reserva Comunal Yanesha celebra su 34 efeméride conservando un tesoro natural y cultural," 2023. [Online]. Available: https://andina.pe/agencia/noticia-reserva-comunal-yanesha-celebra-su-34-efemeride-conservando-un-tesoro-natural-y-cultural-890701.aspx. [Accessed 26 enero 2024].

[18] R. Lopez and M. Gonzales, "Crecimiento del Pinus radiata en Puno-Perú.," *Revista Forestal del Perú,* Vols. 10(1-2), no. 1-2, pp. 1-6, 2014.

[19] ONU, "Objetivo 10: Reducir la desigualdad en y entre los países," 2023. [Online]. Available: https://www.un.org/sustainabledevelopment/es/inequality/. [Accessed 26 enero 2024].

[20] ILOSTAT, "ILOSTAT Data Explorer - Mean nominal hourly labour cost per employee per economic activity - Annual," 2024. [Online]. Available: https://rshiny.ilo.org/dataexplorer34/?lang=en&segment=indicator&id=LAC_4HRL_ECO_CUR_NB_A.

[21] PNUD, "Indices e indicadores de desrrollo humano," 2019. [Online]. Available: https://hdr.undp.org/system/files/documents/2018summaryhumandevelopmentstatisticalupdatesppdf.pdf. [Accessed enero 2024].

[22] TAMA, "Informe de variación de precios 2025," 2025. [Online]. Available: https://tamaingenieros.pe/wp-content/uploads/2025/03/T-GI-F-21-Informe-precios-2025-Final-Sello.pdf.

[23] PCGE, "Plan Contable General Empresarial," 2019. [Online]. Available: https://www.mef.gob.pe/contenidos/conta_publ/documentac/VERSION_MODIFICADA_PCG_EMPRESARIAL.pdf.

[24] INEE, "Instituto Nacional para la Evaluación de la Educación," 2009. [Online]. Available: https://www.inee.edu.mx/wp-content/uploads/2019/03/CS07-2009.pdf.

[25] Banco Mundial, "PIB (US$ a precios actuales) - Peru," 2025. [Online]. Available: https://datos.bancomundial.org/indicator/NY.GDP.PCAP.CD?locations=PE&name_desc=false.

[26] R. Valladares, "Alivio de tensiones mediante vibraciones subarmónicas en uniones soldadas de acero al carbono," 2017. [Online]. Available: https://tesis.pucp.edu.pe/repositorio/handle/20.500.12404/8639. [Accessed 11 enero 2024].

[27] SUNAT, "Consulta de RUC," 2023. [Online]. Available: https://e-consultaruc.sunat.gob.pe/cl-ti-itmrconsruc/FrameCriterioBusquedaWeb.jsp. [Accessed 22 diciembre 2023].

[28] Ministerio de Economía y Finanzas, "Lista de empresas beneficiadas," 2020. [Online]. Available: https://www.mef.gob.pe/contenidos/archivos-descarga/Reactiva_Peru_Lista_de_empresas_al_30102020.xlsx. [Accessed 27 diciembre 2023].

[29] COMEX, "Economía: Situación y perspectivas," 2023. [Online]. Available: https://www.comexperu.org.pe/articulo/economia-situacion-y-perspectivas. [Accessed 29 enero 2024].

APPENDIX 1

Competencies required of TAMA's key employees

TAMA INGENIEROS S.A.C.	INTEGRATED MANAGEMENT SYSTEM	T-RAD-F-01		
		Date:	1/08/2021	
	KEY PERSON ASSESMENT	Version:	01	
		Prepared:	Reviewed:	Approved:
		RAD	ROCA	GG

Employee : xxxxxxx

Dimensión	Competencia	1	2	3	4	5
Leadership	Humility, self-criticism					
Leadership	Fairness, equity					
Leadership	Responsibility					
Leadership	People development					
Leadership	Truthfulness					
Leadership	Respect					
Leadership	Beware of malice					
Executive	Teamwork					
Executive	Delegation					
Executive	Conflict management, negotiation					
Executive	Networking					
Executive	Communication					
Strategic	Resource management					
Strategic	Time management					
Strategic	Stress management					
Strategic	Business acumen					
Strategic	Action oriented					
Strategic	Optimistic					

MINIMUM SCORE 60

Dimensión	Competencia	1	2	3	4	5
Leadership	Ethics					
Leadership	Legality					
Leadership	Fair					
Leadership	Pursues the well-being of others					
Leadership	Loyal					
Leadership	Beware of malice					
Executive	Exemplary					
Executive	Passion					
Executive	Energy					
Executive	Master and guide					
Strategic	Proficient					
Strategic	Demanding					
Strategic	Strategy					
Strategic	Vision					

MINIMUM SCORE 46

COMMENTS :

STRATEGIC ASPECT:
EXECUTIVE ASPECT:
LEADERSHIP ASPECT:

RECOMMENDATIONS:

A leader, in order to be in authority, must:
- Must be competent (in this way he can be a master and guide).
- Must be exemplary (can be demanding and fair).
- Must pursue the good of others (a leader must be loyal).

Directive Competencies

Leadership	Executives	Strategic
Responsibility	**Teamwork**	**Business Acumen**
Fulfills duties by doing everything possible to achieve the objectives to which he/she is committed, acting within his/her values.	Goes beyond formal relationships and interactions, generating integration. Encourages when necessary, promotes cooperation, productive work and effective meetings.	Knows the industry very well, and is able to see customer demands that are NOT obvious at first glance, creating concrete and real opportunities.
Fairness and Equity	**Communication**	**Action Oriented**
Strives continuously to give to each person what is due to him/her, according to his/her duties and rights. He acts in this way with customers, colleagues or subordinates even when this means less benefit or even harm to himself or to the organization.	Gives full disclosure of relevant information to each person in the organization in such a way that he/she has the elements needed to make the decisions that concern him/her. Is open and knows how to explain. Is clear in what he says.	After defining the problem and making a diagnosis of the situation, establishes action plans and ensures that they are executed. Takes the initiative to carry out the necessary actions, convinced that in this way he/she can achieve the goal. Has a lot of determination, finishes what he/she starts.
Respect	**Delegation**	**Optimistic**
Ability to demonstrate with facts and constantly an attitude of consideration with people. Is understanding and does NOT mistreat, especially those who have less position of power in the organization.	Assigns objectives and tasks to his/her collaborators, taking advantage of and developing their talents. Takes into account their contributions and accepts their mistakes, is tolerant with other ways of being. He easily gets to know people.	Has a positive view of the environment and its events: Does NOT get discouraged at the first failure. Leverages the strengths and mitigates the weaknesses of the organization to meet customer demands and infuses a positive spirit into the organization.
Truthfulness	**Relationship Network**	**Stress Management**
Tells the truth, even if it goes against him/her, when others have the right to know it. Does NOT make promises he/she does not know if he/she will be able to keep.	Is able to identify the people who are key to the development of the business: employees, customers and suppliers. In addition, generates, develops and maintains long-term relationships with these people.	Able to withstand pressure situations without acting emotionally losing control of oneself. Can act in accordance with what one should act. Remains in control and calm in difficult, hostile or rejecting situations.
People Development	**Conflict Management and Negotiation**	**Time Management**
Has a genuine desire to achieve significant personal growth for those in his or her charge. Creates opportunities to help and offer advice to his coworkers, teaching them to analyze the full consequences of their actions and decisions.	Is able to reach agreements by negotiating discrepancies and making future commitments; is able to generate alternatives in which both parties in conflict find certain comfort and convenience. He is patient.	Is able to do the important things in a timely manner so that he/she is not overwhelmed by activities that absorb the day without knowing what is more important and what is not. Follows a predictable work schedule, does NOT improvise orders, practices punctuality.
Humility, Self-criticism	**Resource Management**	**Beware of Malice**
Recognizes his own mistakes and limitations in a very objective and real way, can listen to unfavorable opinions from others regarding himself and takes advantage of this information to improve. Does NOT flaunt his/her qualities or hide limitations, and when he/she acts well, does not expect to be celebrated.	Brings together the factors of production: allocates and uses resources in the most suitable and efficient way, and applies them in connection with the achievement of the company's objectives.	To be virtuous, one must know the vices (in practice or in theory). In Peru (today in 2021), where there is mistrust in all social actors, making decisions based on preventing any malicious act that may harm the organization is an essential quality.

Leadership	Executives	Strategic
Ethics	**Exemplary**	**Proficient**
It is the science that studies freedom and defines "what it is convenient for me to do according to the consequences for others". Likewise, freedom is understood as a free act, which requires conscience (knowing) and will (willing), but at the same time demands to answer for such act (merit or guilt).	Setting an example or teaching by example.	A competent person is someone who knows how to do something, knows how to do it and likes to do it or at least do it ethically. That is to say, it is not enough to know things, but to know what they are for, what they are used for.
Legality	**Passion**	**Demanding**
His/Her acts and principles are in accordance with the law and procedures established by the company.	Tendency toward an activity that brings satisfaction.	A person who is difficult to please because he/she demands too much. With very high expectations.
Fair	**Energy**	**Strategy**
We understand that a fair person is one who acts with justice and impartiality giving or recognizing to others what is rightly due. It is blind to see no economic position, hierarchical rank, race, creed. It is not blind to give to each his/her own. Justice is an act of the will of the human being.	Energy is the ability to do work and produce changes in themselves or in others. That is, the concept of energy is defined as the ability to make things work.	The strategy is a procedure arranged for decision making and/or to act in front of a given scenario. This, seeking to achieve one or several previously defined objectives.
Pursues the Wellbeing of Others	**Master and Guide**	**Vision**
Everything we do to others, in a way we also do to ourselves. The key is to nourish our good deeds from our own actions and not from what we receive in return or from what we have received before.	To be a master is to have a vocation of service, to be an example and to play an important role in society or in the company, but in itself, it is to be the learning facilitator.	It is about seeing the future and trying to influence it by creating a strategic plan. Linked to this vision of what we want to become or where we want to make our change.
Loyal		
Loyalty is a personal value and virtue that consists of being faithful and never turning our back on those who believe in us and what we believe in, that is to say; it is the fulfillment of honor and gratitude towards others.		
Beware of Malice		
To be virtuous, one must know the vices (in practice or in theory). In Peru (today in 2021), where there is mistrust in all social actors, making decisions based on preventing any malicious act that may harm the organization is an essential quality.		

APPENDIX 2

Comparison between right categories, TAMA sustainability guidelines, UN sustainable development goals, OECD guidelines, metrics, and evidences

CATEGORIES OF LAW	TAMA SUSTAINABILITY GUIDELINES	UN SUSTAINABLE DEVELOPMENT GOALS (SDGS)	OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES ON RESPONSIBLE BUSINESS CONDUCT © OECD 2023	TAMA METRICS AND EVIDENCES
1. Ethics	1. Anti-bribery and anti-corruption	Goal 16: Peace, Justice, and Strong Institutions	Chapter VII. Combating Bribery, Bribe Solicitation and Extortion	– T-GG-CA-01 Pillars of society – T-GG-PL-03 TAMA Life Plan – T-GG-CA-02 Social categories – T-GG-CA-03 Legal categories – T-GG-CA-04 Criteria for operational decision-making – T-GG-CA-05 Poster "This is TAMA" – T-GA-F-05 TAMA Code of Ethics – T-GA-PO-01 Anti-bribery management system policy – T-GC-DC-05 General terms and conditions of sale.
	2. Environment	Goal 6: Clean water and sanitation Goal 7: Affordable and clean energy Goal 10: Reduced inequalities Goal 12: Responsible consumption and production Goal 13: Climate action Goal 15: Life on land	Chapter VI. Environment	– TAMA Carbon Footprint Report 2024 – T-GI-F-17 TAMA KPI dashboard: Electricity consumption (Objective 2) – T-GI-F-17 TAMA KPI dashboard: Water consumption (Objective 1) – T-GI-F-17 TAMA KPI dashboard: Paper consumption (Objective 3) – T-GI-F-21 Tree Calculation Report 2023 – T-SM-F-92 Historical social media report for carbon footprint measurement
2. Human rights	3. Human & labor rights	Goal 1: No poverty Goal 10: Reduced inequalities	Chapter V. Employment and Industrial Relations (Based on the 1998 ILO Declaration on Fundamental Principles and Rights at Work) Chapter IV. Human Rights	– T-GA-F-05 Code of ethics – T-GP-F-65 Education indicator – T-GP-RL-01 Internal Work Regulations (Chapter 7 Rule 10:1 on salaries)
	4. Health & Safety	Goal 3: Good health and well-being Goal 8: Decent work and economic growth		T-SM-F-17 TAMA Occupational Health and Safety Statistics (Accident Indicators: Man-hours Lost due to Medical Leave; Man-hours with medical leave due to incidents and illnesses and Man-hours with medical leave (MH-ML) according to employee's categories).
4. Law of laws (Law, constitution, civil code, penal code, technical standards, etc.)	5. Quality & Customer Satisfaction	Goal 9: Industry, innovation, and infrastructure	Chapter VIII. Consumer Interests (Fair trade, marketing and advertising practices and ensuring quality and reliability of products based on OECD, ISO, INCOTERMS)	– T-VE-F-09 Customer tenure – T-AD-F-06 Timeline of tons vs. production
	6. Financial Sustainability	Goal 1: No poverty Goal 8: Decent work and economic growth Goal 9: Industry, innovation, and infrastructure	Chapter XI. Taxation (contributing to countries' public finances through timely payment of their tax liabilities).	– T-AD-F-05 GDP per capita. – T-AD-F-04 Contributions to Peruvian State

5. Actions that tend to ethics and may affect important groups.	7. Technology & Innovation	Goal 9: Industry, innovation, and infrastructure	Chapter IX. Science and Technology (enterprises should observe the Guidelines and comply with applicable national laws and requirements, including privacy and data protection requirements and export control regulations. Digital security is a shared responsibility among all stakeholders, including companies, customers, and governments)	Stress relief by sub-harmonic vibrations Stud Welding, Confidentiality agreements
6. Group interests, personal interests	8. Stakeholders	Goal 17: Partnerships for the goals Objective 17.11 "Significantly increase exports from developing countries"	Chapter II: General principles (Recommendations, due diligence, treatment of negative impacts caused by the Company's activities). Chapter III: Disclosure of information (Transparency of information and disclosure of statements, and on responsible business conduct). Chapter X. Enterprises should Refrain from entering or carrying out anti-competitive agreements among competitors.	– T-GC-F-08 Export Report

APPENDIX 3

Public information on companies in the Peruvian metal fabricators industry

TAMA® INGENIEROS S.A.C.

INTEGRATED MANAGEMENT SYSTEM — T-GC-F-04 — 4/12/2023 — 01 — Aproved by: GG

PUBLIC INFORMATION ON COMPANIES IN THE INDUSTRY

Year: 2023

COMPANY	RUC	Date of founding	Today	Years in industry	Number of workers					Enforceable debt status	REACTIVA PERÚ I PROGRAM (S/)		REACTIVA PERÚ II PROGRAM (S/)		REACTIVA PERÚ I + II (S/)	
					Dec.22	Jan. 23	Mar.23	Jun.23	Sep. 23	Tax Liability	Loan amount	Covered amount	Loan amount	Covered amount	Total loan	Total covered
HAUG S.A.	20109925757	21/04/1993	1/02/2024	31	1058	968	1196	1600	1808		9,750,000	7,800,000	0	0	9,750,000	7,800,000
ESMETAL S.A. (ahora ESMETAL IMECON)	20302091766	13/03/1996	1/02/2024	28	46	48	47	47	40	Enforceable debt	10,000,000	8,000,000	0	0	10,000,000	8,000,000
INDELAT SAC	20100160707	9/10/1992	1/02/2024	31	146	147	137	115	114		4,440,000	3,996,000	5,560,000	4,448,000	10,000,000	8,444,000
TAMA INGENIEROS SAC	20508969512	1/07/2004	1/02/2024	20	105	102	117	84	82		1,412,000	1,270,800	2,800,000	2,520,000	4,212,000	3,790,800
CEMPROTEC S.A.C.	20418664542	24/11/1998	1/02/2024	25	487	542	564	553	693		NE	NE	NE	NE	NE	NE
METAL MECANICA CAMACHO S.A.C.	20502788753	10/09/2001	1/02/2024	22	89	92	95	83	93		NE	NE	NE	NE	NE	NE
MULTISERVICIOS BALDARRAGO S.A.C.	20522116115	28/05/2009	1/02/2024	15	23	21	22	21	24		0	0	796,044	716,440	796,044	716,440
FACTORIA LA MILLA S.R.L.	20508511176	6/04/2004	1/02/2024	20	20	19	19	19	18	Enforceable debt	217,869	206,976	435,730	413,944	653,599	620,919
INDUSTRIAL FACTORY S.A (Infasa)	20100267684	27/01/1993	1/02/2024	31	76	72	72	70	68		808,407	723,066	1,606,816	1,446,134	2,410,223	2,169,201
APYM INDUSTRIAL S.A.C	20521234983	9/03/2009	1/02/2024	15	8	8	6	5	5		233,451	221,778	466,000	442,700	699,451	664,478
FACTORIA VIGO S.A.C.	20507462911	17/10/2003	1/02/2024	20	27	26	22	22	22	Enforceable debt	275,097	261,342	0	0	275,097	261,342
STAFF REPRESENTACIONES S.A.	20502253302	31/05/2001	1/02/2024	23	225	236	241	245	247		3,126,994	2,834,295	1,500,000	1,350,000	4,626,994	4,164,295
FAMITEC S.A.C	20414063894	10/08/1998	1/02/2024	25	40	42	43	43	41		901,030	810,927	1,800,000	1,620,000	2,701,030	2,430,927
FAMITEC MINING S.A.C.	20545963691	7/12/2011	1/02/2024	12	21	20	18	15	15		0	0	635,678	603,894	635,678	603,894
ITALMECAN SAC	20377761902	13/10/1997	1/02/2024	26	87	90	149	93	88				1,480,636	1,332,572	1,480,636	1,332,572
INREMINSAC	20101312942	27/01/1993	1/02/2024	31	27	25	24	22	25		252,000	239,400	431,000	409,450	683,000	648,850
BM INGENIEROS SAC	20289083775	1/08/1995	1/02/2024	29	20	20	29	18	19		0	0	333,898	317,203	333,898	317,203
RESEMIN SA	20100307902	12/11/1992	1/02/2024	31	848	867	890	911	994		0	0	10,000,000	8,000,000	10,000,000	8,000,000
EMEMSA S.A.	20100276322	27/01/1993	1/02/2024	31	771	966	1755	903	719		0	0	10,000,000	8,000,000	10,000,000	8,000,000
BUDGE S.A.C	20503801575	14/02/2002	1/02/2024	22	131	137	162	150	148		0	0	10,000,000	8,470,860	10,000,000	8,470,860
MAESTRANZA DIESEL S.A.C	20474948006	15/09/2000	1/02/2024	23	39	39	NE	44	37		1,409,000	1,268,100	1,024,000	921,600	2,433,000	2,189,700
VyP ICE SAC	20513959134	7/09/2006	1/02/2024	17	1171	1262	1455	1558	1101		3,504,891	3,154,402	0	0	3,504,891	3,154,402
EMSUNIR S.A.	20307713382	25/06/1996	1/02/2024	28	188	132	136	132	113		1,515,760	1,364,184	3,000,000	2,700,000	4,515,760	4,064,184
LININGS S.A.	20538094995	10/11/2010	1/02/2024	13	72	70	66	69	78		1,037,717	933,945	1,324,000	1,191,600	2,361,717	2,125,545
ESERMIN PERU S.A.C. Arequipa	20539634802	4/10/2012	1/02/2024	11	129	166	131	158	203		0	0	870,000	783,000	870,000	783,000
ING. MANTTO, CONTRUCCIÓN Y SERVICIOS SAC (IMCO SE	20454276761	11/07/2006	1/02/2024	18	2096	2304	2549	2918	2936		10,000,000	8,000,000	0	0	10,000,000	8,000,000
FACTORÍA INDUSTRIAL SAC	20131669971	6/05/1993	1/02/2024	31	168	168	263	218	182		2,708,000	2,437,200	2,000,000	1,800,000	4,708,000	4,237,200
MECANIZA INDUSTRIAL SAC	20512420843	26/01/2006	1/02/2024	18	17	21	24	21	20		483,558	435,202	967,118	870,406	1,450,676	1,305,608
CONSTRUCCIONES METALICAS Y MONTAJE ABG S.R.L.	20122546837	30/04/1993	1/02/2024	31	68	82	128	133	131							
METALCORP PERU S.A.C.	20604923817	9/07/2019	1/02/2024	5	NE	NE	NE	NE	NE	Enforceable debt						
VALMET S.A.C.	20454076673	1/06/2005	1/02/2024	19	100	102	108	98	83							
ECAPERU SAC	20510771649	1/12/2005	1/02/2024	18	22	21	16	19	15							
JKL MINERALS DRESSING SAC	20492689965	9/10/2008	1/02/2024	15	1	3	3	2	1							
MAINSERV INGENIEROS SAC	20553422613	25/06/2013	1/02/2024	11	NE	10	10	10	NE							
AUTEK INGENIERIA Y SERVICIOS S.A.C.	20547163541	10/03/2012	1/02/2024	12	19	20	19	19	19							
INGENIERIA METALMECANICA SARMIENTO S.A.C.-IMMEC	20601087473	16/03/2016	1/02/2024	8	10	11	11	10	12							
FYCO - FABRICANTES Y CONSTRUCTORES S.R.L.	20108726614	2/01/1968	1/02/2024	36	69	66	57	61	58							
TRAMET - TRANSFORMACIONES METAL MECANICAS S.A.	20101200247	2/09/1980	1/02/2024	43	66	42	73	74	76							
ITEMSA PERU - INDUSTRIA TECNICA METALURGICA Y SE	20446052826	1/09/2000	1/02/2024	23	83	106	75	124	103							
GUTIERREZ Y ALIAGA METALES Y SERVICIOS GENERALE	20600574125	14/08/2015	1/02/2024	8	NE	7	8	NE	NE	Enforceable debt						
INDUSTRIA FAMEMSA S.A.C.	20492330435	4/09/2008	1/02/2024	15	40	41	27	41	46							
POWER ENERGY DISTRIBUTION S.A.C.	20601166021	1/05/2016	1/02/2024	8	52	52	49	48	66							
M Y V COMEIMPRO SAC	20492109496	13/08/2008	1/02/2024	15	22	17	19	20	17							
CALIENES INGENIERIA S.A.C.	20101232671	21/09/1978	1/02/2024	45	52	37	21	20	18							
METALMECANICA IWE S.A.C.	20600137230	13/02/2015	1/02/2024	9	25	25	24	26	70							
SC INGENIERIA Y CONSTRUCCION S.A.C.	20474868312	14/09/2000	1/02/2024	23	474	563	511	485	545		4,110,920	3,699,828	3,350,000	3,015,000	7,460,920	6,714,828
H.M. ASTILLEROS S.A.C.	20505995741	18/02/2003	1/02/2024	21	18	18	15	15	12		NE	NE	NE	NE	NE	NE
OPERACIONES SERVICIOS Y SISTEMAS S.R.L.	20504424899	29/05/2002	1/02/2024	22	514	491	785	491	582		3,567,096	3,210,386	0	0	3,567,096	3,210,386
CORMEI S.A.C	20102279256	9/03/1993	1/02/2024	31	436	400	536	471	466		2,500,000	2,250,000	4,260,000	3,834,000	6,760,000	6,084,000
FUNDICION FERROSA S.A.C.	20100653487	27/01/1993	1/02/2024	31	104	102	105	108	107		1,415,505	1,273,955	4,200,000	3,780,000	5,615,505	5,053,955
FUNDICIONES ESPECIALES S.A.	20100249511	27/01/1993	1/02/2024	31	88	86	107	90	91		0	0	3,803,027	3,422,724	3,803,027	3,422,724
FIMA S.A.	20199629000	27/11/1993	1/02/2024	30	4	4	6	6	5		NE	NE				
FIMA INDUSTRIAL S.A.C.	20546204201	28/12/2011	1/02/2024	12	64	63	57	50	51	Enforceable debt	NE	NE				
FIMA SERVICIOS S.A.C.	20546205396	28/12/2011	1/02/2024	12	NE	NE	NE	NE	NE	Enforceable debt	NE	NE				
TECNICAS METALICAS	20101145868	27/01/1993	1/02/2024	31	5	3	5	4	3		NE	NE				
COMECO	20330978326	12/08/1996	1/02/2024	27	NE	NE	NE	NE	NE	Enforceable debt	NE	NE				
IMECON S.A.	20142520558	16/06/1993	1/02/2024	31	NE	46	NE	1	3	Enforceable debt	NE	NE				
FABTECH	20502059478	24/04/2001	1/02/2024	23	44	64	7	9	7	Enforceable debt	NE	NE				
FIANSA	20185317581	7/08/1993	1/02/2024	31	1	1	1	1	1		NE	NE				
FABRICACIONES METAL MECANICA INDUSTRIALES S.A.C.	20482151907	17/03/2009	1/02/2024	15	NE	NE	NE	NE	NE		NE	NE				
INGENIERIA Y CONSTRUCCIONES CHIHUAN S.A.C.	20516048141	22/05/2007	1/02/2024	17	NE	NE	NE	NE	NE		NE	NE				
SFC S.A.C.	20492278506	29/08/2008	1/02/2024	15	NE	NE	NE	NE	NE	Enforceable debt	NE	NE				
CIA DE SERVICIOS DE INGENIERIA MECANICA ELECTRICA	20137390729	31/05/1993	1/02/2024	NE	NE	NE	NE	NE	NE		0	0	0	0	0	0
CONSTRUCCIONES Y SERVICIOS METALICOS S.A.C.	20481405999	4/10/2008	1/02/2024	17	NE	NE	NE	NE	NE	Enforceable debt						

Notes:

(1) For some companies, the debt information provided by the Reactiva program may not be up to date.

(2) Source: SUNAT (2023) Consulta RUC. Retrieved on Dec. 27 2023 from https://e-consultaruc.sunat.gob.pe/cl-ti-itmrconsruc/FrameCriterioBusquedaWeb.jsp.

(3) Source: Ministry of Economy and Finance (2020). List of companies beneficiaries of the "Reactiva" program (updated on Oct. 30 2020). Retrieved on Dec. 27 2023 from https://www.mef.gob.pe/contenidos/archivos-descarga/Reactiva_Peru_Lista_de_empresas_al_30102020.xlsx

(4) Enforceable debt (or “deuda coactiva” in Spanish) is a procedure whereby the Peruvian tax authority enforces unpaid tax debts.