Total Societal Impact in the Defence and Space Industry:

A Proposal for a Fact-Based Assessment of Contributions to Society

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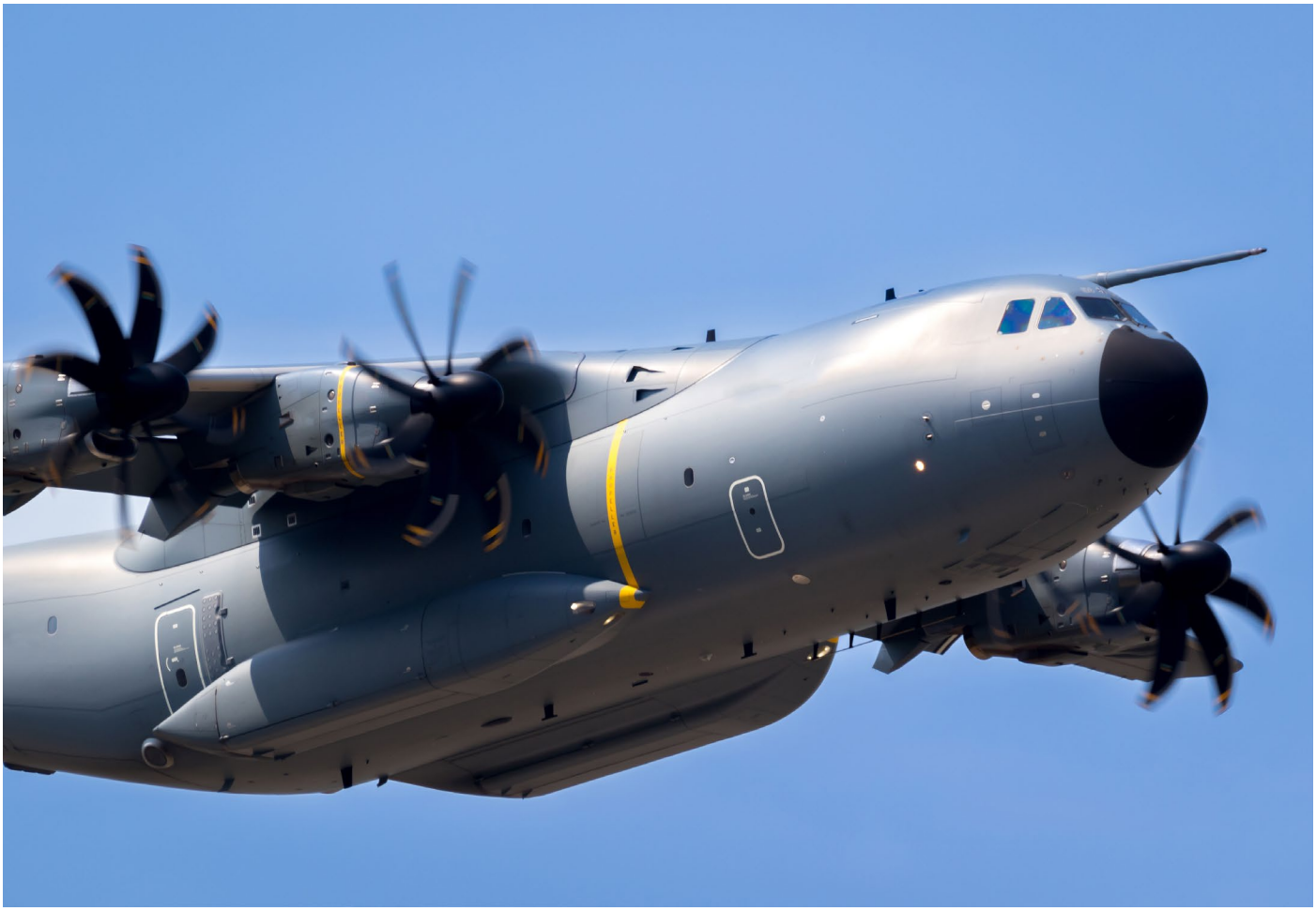


1. Executive Summary

The defence and space (D&S) industry's global role is frequently being challenged, despite the ongoing global conflicts, due to its military nature, environmental concerns, and much more. At the same time, the industry struggles to define and clearly communicate its significance to society. An initial total societal impact (TSI) assessment was conducted for certain products from Airbus Defence and Space demonstrating the industry's significant societal contributions in a world with rising conflicts and increasing threats to democracies.

The TSI evaluation offers a blueprint for companies to assess their societal contributions, both positive (handprint) and negative (footprint). Societal impact encompasses economic, social and environmental dimensions. Strategically embedding TSI into core business processes and decision-making enables firms to refine their portfolio, foster sustainable growth, and strengthen ties with both internal and external stakeholders. It aims at enhancing their positioning in the industry with the objective of maximizing their handprint, while minimizing their footprint.

Airbus Defence and Space and BCG teamed up to pilot a first TSI assessment in the D&S industry. In addition to the considerable and better established concept of footprint of the industry early results also show a sizable handprint. This stems from the pivotal role of the D&S industry in conflict prevention, humanitarian aid, contributions to research and innovation, job generation and wealth creation. In light of emerging regulations and the increasing demands from customers, it's crucial for corporations to diligently assess and underscore their societal impact in its totality.

Assessing TSI is a journey towards understanding the impact of D&S firms and their customers on society and acting upon it - this report represents a first step on this journey.

2. Introduction

Given the strategic purpose of Defence and Space to support in safeguarding and protecting sovereignty, stakeholders require a clear view on their social contributions. Take the UK's Social Value Act, for example: it emphasises the imperative to demonstrate societal value, making it both a mandate and a competitive edge. This is in contrast with public perception in some regions around the world, where D&S's contribution to society is considered less favourable.

To address these challenges and factualise the discourse, TSI aims to create a fact-based assessment, enabling a clear view on a company's positive handprint and negative footprint.[1]

While sectors like health care and consumer goods have successfully adopted the TSI approach, Airbus and BCG joined forces to start exploring its first adoption in the D&S industry and provide first insights of the TSI assessment.

Handprint
Qualitative and quantitative measurements that can be used to assess the direct or indirect positive impacts across pillars of sustainability. This does not include the reduction of one's footprint.

Footprint
Qualitative and quantitative measurements that can be used to assess the negative impacts across pillars of sustainability.

TSI is a compilation of measures and assessments. A comprehensive, quantitative TSI data model for D&S takes multiple hundreds of parameters and thousands of input factors into account (see exhibit 1).

To ensure accuracy and relevance, each parameter is framed within sensitivity margins and based on external data, reports, and expert discussions, complemented by internal data and qualified assumptions.

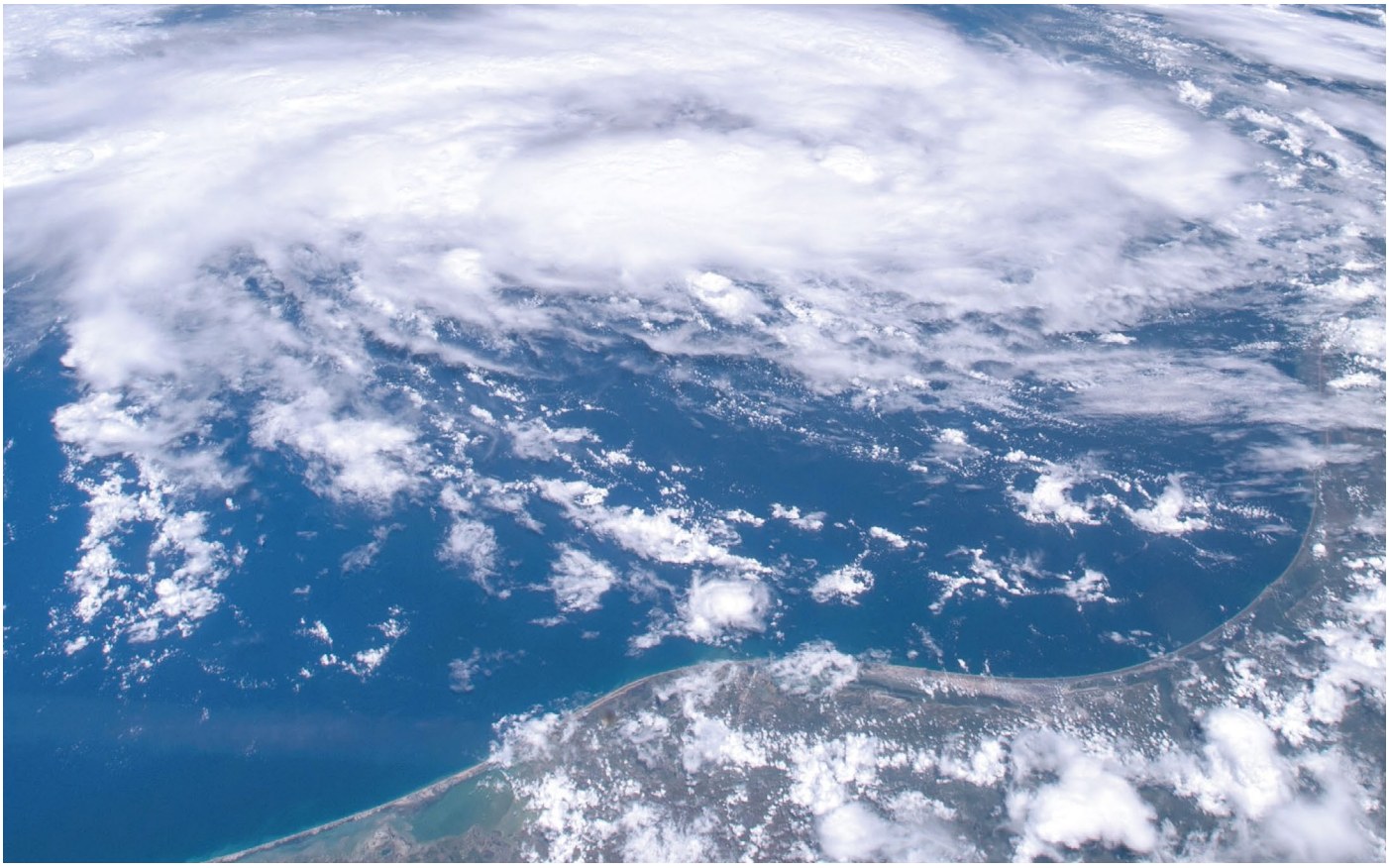
Exhibit 1 - TSI gives a clear view on a companies' impacts on society

Non-exhaustive list

	Value	Main drivers
Sovereignty	Peace & stability preserved	• GDP loss avoided • Infrastructure damage prevented
	Jobs maintained	• Direct jobs maintained • Indirect jobs enabled
	R&D/innovation created	• Innovation created • Dual-use applications enabled
Social	Lives prolonged	• Disaster relief flights performed • Evacuation flights performed
	Disaster tele-medicine enabled	• Telemedicine access provided
	Air policing supported	• Air policing flights performed
Environment	Forest area saved	• Carbon sequestration potential preserved • Economic output from forests preserved
	Methane emissions prevented	• Methane leakages prevented
...		

	Cost	Main drivers
Social	Human rights impact	• Collateral damage caused • Unintentional human rights due diligence blind spots resulting in negative impact
Environment	Scope 3 emissions caused (use of product sold)	• Emissions caused during aircraft usage • Emissions caused during satellite operation
	Scope 1 & 2 emissions caused	• Emissions caused from company's activities
	Waste generated	• Tons of (hazardous) waste produced
	Water consumed	• Water consumed in areas of water scarcity
Economic	Gaps in diversity & inclusion created	• Cost of diversity and inclusion gaps incurred
...		

1. BCG (2017). *Total Societal Impact: A New Lens for Strategy.*



3. Main Insights from initial TSI Assessment in the D&S industry

While D&S companies evidently have a societal footprint (especially in case of product misusage), assessments of TSI in D&S also indicate a significant positive societal contribution. This is mainly driven by economic value, infrastructure value, value of jobs & wealth created and product-specific contributions. To further validate these findings, additional products will be included in the assessment. The accuracy can be reinforced by reducing the number of assumptions and introducing additional impact categories, e.g. Scope 3 upstream.

A significant proportion of a typical D&S firm's TSI originates from societal contributions that aren't directly associated with a specific product. This originates from the company's contribution to sovereignty. The sovereignty of the individual EU member states contributes to the overall interlinked and interdependent security, economic prosperity and rule of law of individual countries. When combined, this creates a strategic autonomy in Europe, including the following dimensions:

- **Value of peace:** Economic stability is closely tied to maintaining peace, as conflicts pose significant risks to GDP and infrastructure.[2] Peace is a prerequisite for economic as well as social development and well-being.[3] Through its activities, the D&S industry plays an essential role in fostering and maintaining peace.

- **Value of stability:** Economic growth can be inhibited by extended periods of internal conflict and social unrest. By equipping law enforcement and enabling peacekeeping, D&S players contribute to enhancing national stability.

- **Value of independence:** A nation's self-reliance promotes job creation, research and development, and tax revenue. Industries emphasize the strategic advantage of sovereignty as foundational pillars for enduring peace and prosperity.

2. EBRD (2022–23). *Transition report on the economics of war and peace.*

3. BCG (2019). SEDA Index: *Sustainable Economic Development Assessment and Citizen Well-Being.*

Exhibit 2 – D&S companies contribute to sovereignty (peace, stability, and independence)

Value of sovereignty



Value of peace

- War causes GDP to collapse (-9–12%) and significant infrastructure damage
- D&S companies contribute to protecting peace through defense products

Value of stability

- Prevalence of terrorism can cost up to 0.8% GDP growth per year
- D&S products, like secure comm. devices for the police, bolster stability

Value of independence

- Local design and production boosts job creation and tax revenue
- Control over production of military equip. safeguards peace in long run

List of contributing factors (not exhaustive)
Source: Company data; American Economic Association; DEG; Eurostat; HRC; KYKLOS; Oica; OECD; Reuters; Statista; Trading Economics; UN; Vision of Humanity; World Population Review

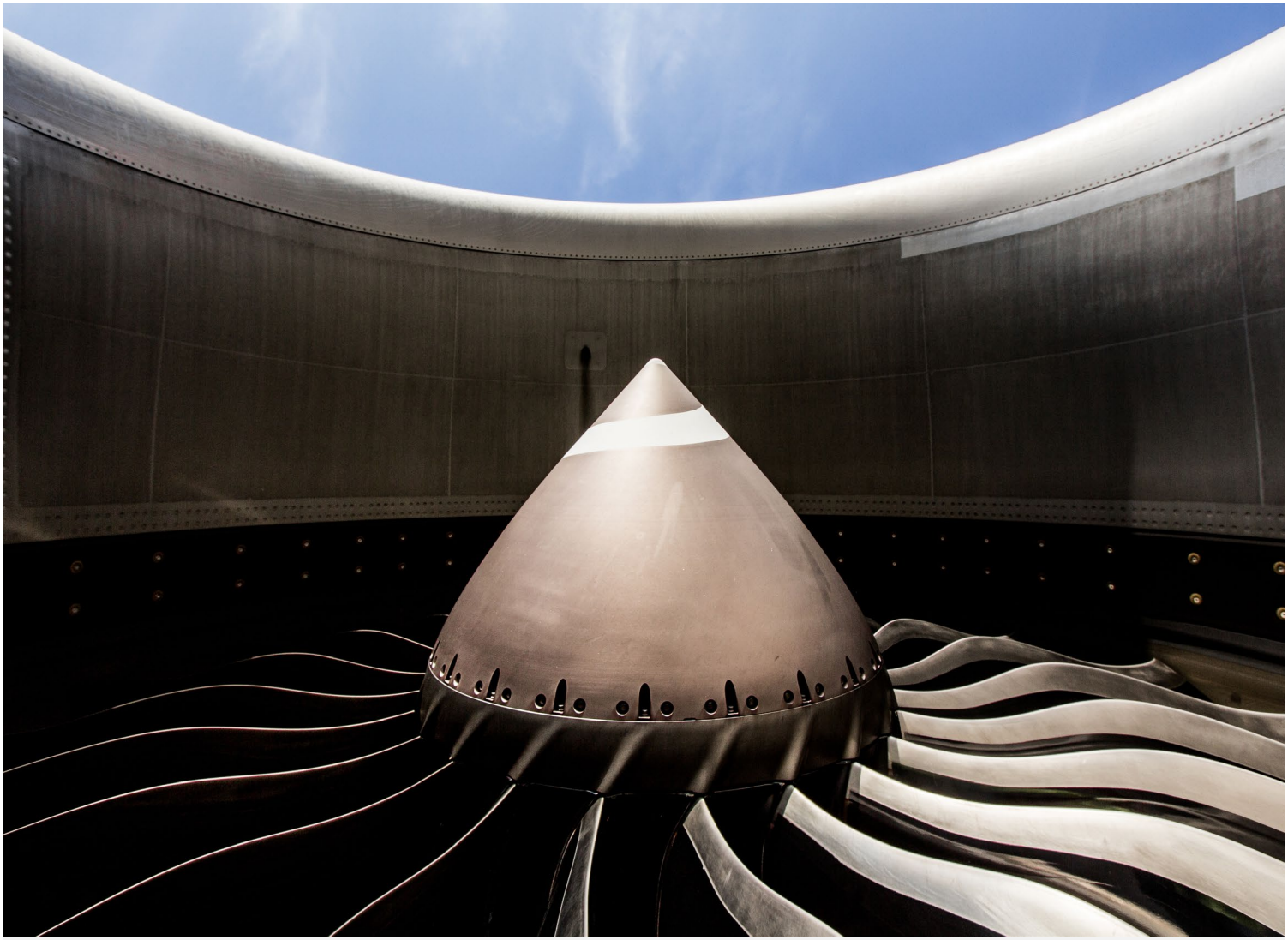
However and in addition to overarching company-level contributions, there is also a product-level handprint, with the following examples:

- **Military transport** supports humanitarian efforts, including evacuation and disaster relief, as well as firefighting efforts.
- **Fighter jets** contribute to ensuring peace, stability and avoid conflicts through their air policing, combat, and reconnaissance missions.
- **Climate monitoring satellites** contribute to environmental conservation, such as through greenhouse gas monitoring and detecting industrial methane leaks.[4]
- **Earth observation solutions** are vital to addressing climate and biodiversity challenges, notably in deforestation monitoring and conservation support.[5]
- **Intelligence products detecting misinformation**, such as during election campaign contribute to prevent conflicts and social unrest globally.
- **Human space exploration** catalyses technological innovation to various market sectors and thereby enhances long-term productivity, fuels GDP growth and elevates societal prosperity.[6]

However, there is also a significant footprint that D&S companies typically cause that must not be neglected and should be better mitigated, such as the following:

- **To prevent misuse and collateral damage:** D&S product deployment comes with a responsibility. Therefore, ensuring that stringent procedures are followed such as human rights due diligence on sales and export compliance is required to assess and mitigate potential risks of product misuse.
- **Emissions caused by product use:** Emissions caused by product use: D&S products in many cases require fossil fuels to be operated, causing greenhouse gas emissions.[7] D&S players thus have a role to play in increasing efficiency by optimizing technology to reduce product emissions, followed by fostering renewable fuels (SAF) and virtual training.
- **Waste, water usage and disposal during production:** D&S products generate waste and water usage during the production process and often include the extraction and processing of hazardous materials. While current calculations include the waste generated each year, the estimation of end-of-life footprint are currently ongoing.
- **Other societal footprint:** Depending on specific product type, additional footprint dimensions should be considered such as e.g. the environmental impact of materials.

4. BCG (2023). *Methane: Today's High-Impact Greenhouse Gas,*
5. BCG (2020). *The Staggering Value of Forests—and How to Save Them.*
6. BCG (2024). *More than a Space Programme: The Value of Space Exploration to Empower the Future of Europe*
7. Rennert, K., Errickson, F., Prest, B.C. et al. (2022). "Comprehensive evidence implies a higher social cost of CO2". *Nature*. 610, 687–692.



4. The Key Principles of Assessing the TSI of Your Company

For a thorough and effective TSI assessment, several strategic principles are paramount:

1. **Product selection:** Adopt an 80/20 approach for product selection, focusing on products which contribute a significant revenue share, securing stakeholder & leadership buy-in.

2. **Assessment criteria:** Define main assessment criteria tailored to the company, business unit, or product level, balancing handprint and footprint.

3. **TSI assessment:** Conduct the TSI assessment using both private and public data, such as from international organizations, military institutions, space agencies, and company specific information, attaching monetary values to each criteria for comparability (optionally including monetary values in external communication).

4. **TSI target setting:** Set clear, measurable TSI goals, regularly track progress, and use it as a portfolio management tool to motivate teams and drive continuous improvement, based on industry and societal trends.

5. **Business steering:** Integrate TSI across business units, aligning with corporate strategy, and promote collaboration and inclusion in major decisions.

6. **External communications:** Use TSI findings in external communications and establishing standards to support regulators, enhancing transparency and supporting the creation of policies that reinforce societal contributions.

5. How to benefit from TSI

TSI provides multifaceted benefits, which, when strategically integrated, can trigger sustainable organizational growth and fortify stakeholder relationships through fact-based engagement. Those benefits include the following:

1. **Portfolio prioritization:** Utilize TSI to set priorities across your portfolio, focusing on products and services that maximize societal value and identify sustainable growth potential, thereby optimizing returns and minimizing ESG risks.

2. **Product development:** Integrate TSI insights into the product roadmap, refining innovations to align with societal benefits, turn sustainability into a business opportunity and anticipate regulatory shifts.

3. **Talent attraction:** Harness TSI to spotlight the company's societal contributions, thereby shaping talent perceptions and strengthening talent attraction and retention initiatives.

4. **D&S advocacy:** Leverage TSI to advocate the societal benefits of your products and company overall, enhancing both internal stakeholder buy-in and external stakeholder credibility.

5. **Stakeholder relations:** Use TSI to foster fact-based sustainability discussions and establish standards to support regulators and strengthen stakeholder engagement.

Exhibit 3 - Benefits of integrating TSI into core business processes

	A	B	C	D	F	G
Business process	Standard setting	Business development	Innovation portfolio mgmt.	Investment decisions	Product life cycle mgmt.	Service offerings
Approach to integrate TSI	Anticipate and prepare for upcoming standards and reporting requirements on societal value generation	Scout for unmet societal needs that can be addressed by company's capabilities and leverage to satisfy shareholders/ attract investors	Rebalance early-stage innovation portfolio with products and services exhibiting a clear TSI benefit	Integrate TSI as core decision criterion next to profitability, revenue, investment need, etc.	Consider the business case of improving the product's hand- and/or footprint and cross-check with company's overall TSI targets	Review ways to improve TSI through service offerings, such as training, maintenance, and upgrades
Benefit for business	Aim to reduce reporting burden due to sensible standards and legitimize participation in discourse	Tap into attractive new/adjacent markets by serving unmet societal needs and secure investment	Ensure future portfolio maximises positive contributions to society	Drive investments in products and services with positive societal contributions	Ensure maximum ROI for the company from development spend	Maximize the value of customer assets and help improve their societal impact
Key enablers:	Sustainability: Project steering, TSI target setting, tracking progress, and regular reporting to leadership Investor relations and communication: Inclusion of TSI in external communication					

6. Conclusion

The results of the first TSI assessment within the D&S sector assess the industry's significant impact on society. A major contribution of its positive handprint is driven by the value of sovereignty, particularly the contribution to peace, R&D/innovation and job creation. At the same time, D&S companies have a negative footprint, such as potential human rights impacts and emissions caused during product usage. Tracking societal contributions on a factual level can enable companies to track their improvements. TSI allows for measuring societal contributions and thereby drives action as well as progress.

By adhering to the key principles of TSI, companies can prioritize their portfolios, effectively communicate their societal impact, and gain stakeholder trust.

This fact-based approach not only benefits the companies but also society at large, paving the way for a more sustainable and impactful D&S industry.

Building on the iterative nature of the TSI journey, we are further improving the methodology and the interpretation of the results to ensure broader applicability and significance. We welcome feedback and seek the interaction with all stakeholders to further enhance the approach and drive positive impact across society.

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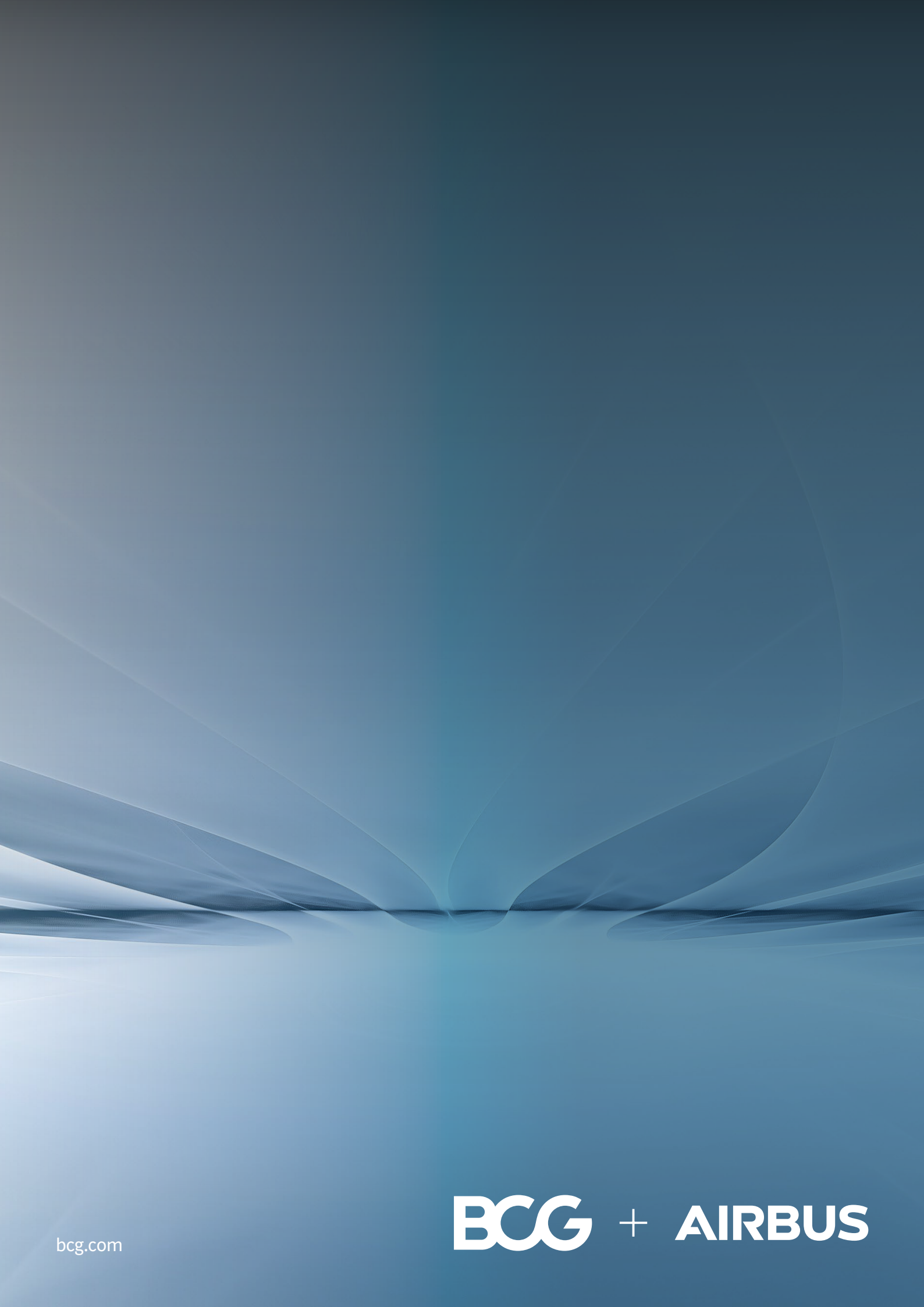

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