

Sustainable by Design

Secure your license to operate
in the future net-zero and
circular world

A TCS Neural Manufacturing™ offering suite



Manufacturers need to act on Sustainability and the best time is NOW!



Our world is only 8.6% circular. We can live well within planetary boundaries if... We act NOW!

[Circularity-gap.world](https://www.circularity-gap.world)



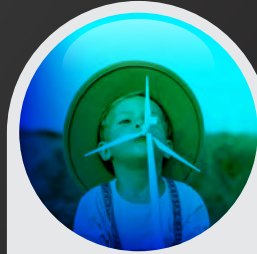
Being one of the major sources of direct and lifecycle emissions, manufacturing can and should play definitive role in our transition to a low carbon economy

[Ourworldindata.org](https://www.ourworldindata.org)



Rapidly evolving global sustainability policies, regulations, disclosure requirements need to be addressed with transparency and efficiency

[Spglobal.com](https://www.spglobal.com)



Investor evaluation of companies is increasingly focusing on sustainable long term value creation for society

[Hbr.org](https://www.hbr.org)



Sustainability is fast becoming a competitive advantage and market differentiator

[Forbes.com](https://www.forbes.com)



Digital technologies can accelerate realization of sustainable and circular business models

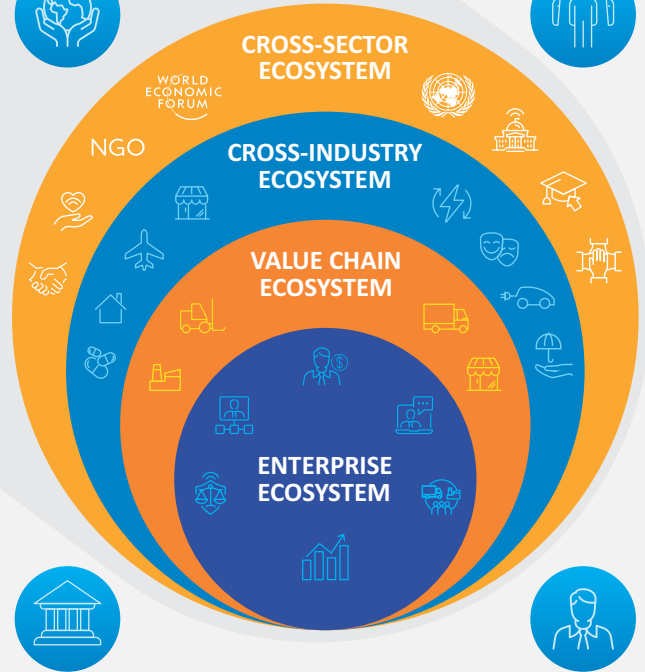
[Weforum.com](https://www.weforum.com)



Social Sector



Community



Public Sector



Private Sector



Platform Led



Experience Led



Purpose Led



We believe in ecosystems that empower sustainable choices

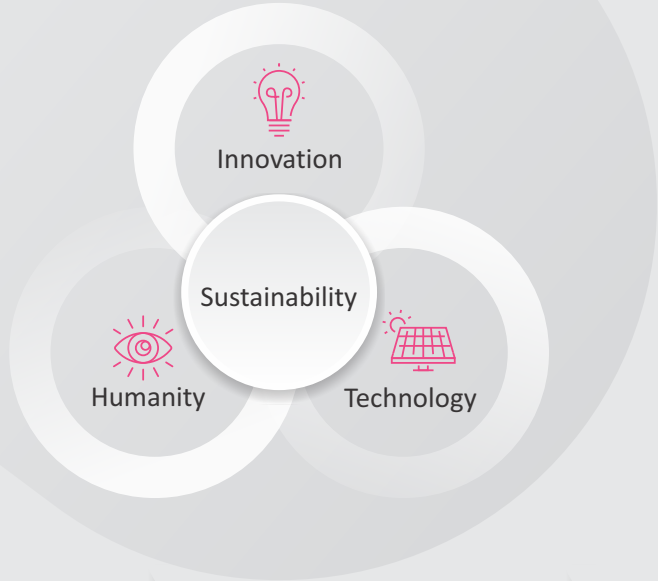
No single organization can create a sustainable future. An ecosystem approach is needed.

Ecosystems enable –

- Sustainable innovation culture within enterprise
- Value chain decarbonization leading to alignment with global climate goals
- Adoption of circular business models
- Sustainable life experiences for customers

Learn more about how TCS Pace™ enables innovation ecosystem through agile, multi stakeholder collaboration





We believe sustainability can be achieved at the intersection of Humanity, Technology and Innovation

Sustainable Business

- Climate Change
- Human Capital & Workforce

Sustainable Supply chains

- Circular Economy
- Compliance, Reporting and Governance

Sustainable Living

- Social Capital & Community
- Impact Innovation



'Sustainable by Design' Manufacturing Enterprise

Sustainable by Design suite of offerings help manufacturers enable ecosystem driven business models

Sustainability and circularity principles need to be embedded across processes, operations, products and business models

TCS Neural Manufacturing™ is the foundational framework for Sustainable by Design offering suite.

Learn more about TCS Neural Manufacturing™



Is yours a Sustainable by Design Manufacturing Enterprise?



Cognition & Intelligence

An integrated enterprise sustainability data model enabling insights, proactive response to anomalies



Transparency & Visibility

Track & Trace of sustainability data, materials and events across the value chain partners



Circular Product Design

Product design for Extended life, Ease of Recovery, Reuse, Repair, Remanufacture, End of Life treatment, Recycle, Lifecycle Emissions reduction



Sustainable Operations

GHG emissions intensity and waste reduction through resource and process optimization



Collaborative ecosystems

Ecosystem orchestration for new / alternate business models while achieving circular goals



Risk Management

Drive market valuation, capital access and compliance with sustainability performance reporting



'Sustainable by Design' Offering Suite

Outcomes across enterprise, value chain, multi industry and cross sector ecosystems

Sustainable Business

Enterprise Ecosystem

- Enable sustainable sourcing decisions with carbon assessment and validation, tracking and implement solutions to decarbonize the sourcing function
- Achieve net zero carbon goals for enterprises with optimized energy consumption, value chain decarbonization and smart logistics

Sustainable Supply Chains

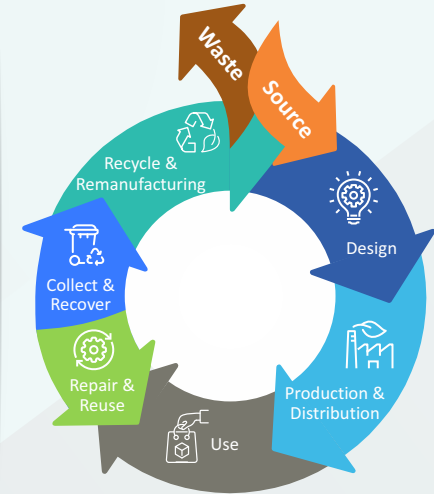
Value Chain Ecosystem

- Sustainability Analytics to provide a single view of sustainability data and metrics, enabling cognitive capability, thus, augmenting efforts towards enhanced sustainability performance, market valuation and risk management
- Circular operations to enable material visibility and new data led services for sustainability ecosystem partners through a digital platform

Sustainable Living

Multi-industry & Cross Sector Ecosystems

- Sustainable by Design strategy to identify sustainability led new business opportunities, design sustainable ecosystems and define target operating model
- Online marketplace to buy, sell or offer services for waste, secondary material, products to promote circular economy



Learn more about our Sustainable by Design offerings



Decarbonization of your operations and entire value chain

TCS's proven solutions enable value chain decarbonization through sustainable sourcing decisions and resource optimization.

Smart energy & utilities management

TCS Clever Energy™, an enterprise level energy and emission management system that helps commercial and industrial organizations be more sustainable, ensure energy and cost efficiency, decrease carbon emissions, and reach carbon neutrality by leveraging the power of IoT and AI.

A multinational adhesive manufacturer established a Connected Energy View with TCS Clever Energy™

- Real time monitoring of energy wastages through AI/ML and Sankey analysis
- Gamified and increased healthy competition amongst operators to be energy efficient
- More than 5% y-o-y savings in energy costs and equivalent reduction in carbon footprint

Know more about TCS Clever Energy™ 

Supplier sustainability Management

TCS helps manufacturers in building cognition and intelligence to track and mitigate supplier sourcing risks, resulting in improved procurement decisions for a sustainable supply chain.

With TCS ENVIROZONE™ O-Zone solution, organizations can transform their supply chain to be reliable, sustainable and responsible

Nordics based company leveraged TCS ENVIROZONE™ to enable a single view of environmental effects of transporting individual customers' shipments.

Know more about TCS Envirozone™ 



Sustainable innovations

TCS's extensive body of work in business model transformation and well established innovation ecosystem accelerate sustainable & circular business model adoption

Sustainable Business model

Utility provider launches Singapore's first Renewable Energy Certificate (REC) aggregator platform.

The platform enables customers to transact RE100-recognised RECs to meet their green energy requirements. RECs aggregated from different sources along with RECs generated from utility provider's renewable assets for sale in bulk

Blockchain based features of the platform ensure transparency and integrity of every transaction as well as better security, while the quality of RECs are verified by third-party validators.

Circular business model

Global diversified industrial manufacturer launches B2B marketplace for re-manufactured parts in aviation industry.

For aviation industry, used parts provenance for chain of custody, useful life utilization, trust in inventory and price availability are critical for efficient and economic reuse of spares.

TCS's blockchain based solution helped build that trust in this B2B Marketplace, avoided ghost listings and improved adoption of re-manufactured parts.

Know more about TCS Smart Ledgers



Sustainability risk management

TCS's proven data & analytics based solutions establish sustainability data transparency and visibility across stakeholders. This helps enterprises streamline compliance & reporting needs as well. TCS IOT based solutions are transforming the way workforce health & safety risks can be effectively addressed

Reporting and Disclosures

Building material manufacturer establishes sustainability leadership

TCS Partnered with customer in their sustainability performance management transformation with materiality assessment, sustainability data management & reporting, lead metrics-based predictive analytics and insights for leadership.

- Sustainability leadership for 5 consecutive years in DJSI
- 41% & 17% reductions in Emissions & Energy Intensity respectively
- 4 months' efforts saved in disclosure activities
- Centralized view of Sustainability Performance & Lead Metrics

Workforce Health and Safety

Global agricultural major improves workforce health & safety

With focus on achieving employee health and safety goals of Zero fatality, Recordable Injury Frequency Rate of 1 and keeping 75% facilities injury free, the manufacturer engaged with TCS to address key use cases like –Lone worker monitoring, detection of safety belt usage and proximity detection.

- TCS's IOT led plant safety solution enabled EHS process optimization and advanced analytics for prescriptive insights.
- Real time safety alerts through personal safety devices and annunciation along with 100%reporting of all the unsafe, near miss and near miss with SIF potential incidents
- Zero fatality and improvement in other health & safety KPIs.

[Learn more about TCS's own Sustainability journey](#) 

[Know more about TCS Connected Universe platform](#) 

TCS Advantage



TCS walks the sustainability talk: As a purpose-led services business, TCS sees environmental stewardship as core to its sustainability strategy. Its vision is to decouple business growth and ecological footprint from its operations to address the environmental bottom line. TCS now targets net zero emissions by 2030. The green approach is embedded in its internal processes and services offerings.



Cross-industry experience: TCS has vast experience in building and orchestrating products and services for customers across industries apart from an extensive body of work in the manufacturing and utilities industries.



Deep domain and technical expertise: TCS leverages its product, enterprise knowledge and technological expertise across the manufacturing value chain to create operating business models and technology applications that are benchmarked against industry standards.



Assets and frameworks: TCS' differentiated thought leadership on sustainability, accelerators like neural data fabric, the sustainability risk and maturity assessment model, the value chain decarbonization framework, data and analytics-centric platforms and solutions, enable faster deployments.



Global presence: A well-established global footprint helps TCS achieve smoother rollouts and deliver robust post implementation support.



Co-innovation: Accelerating enterprises' path to value through a network of start-ups, academic partners, and facilities like the TCS Neural Automotive and Industrial Experience Center, TCS Pace Port™, and TCS Rapid Labs.



Awards & Recognition



About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at www.tcs.com

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