# Optimize your journey towards sustainability through AI-driven analytics and reporting with TCS Intelligent Urban Exchange™ and Red Hat

*TCS Intelligent Urban Exchange™ and Red Hat empower organizations to accelerate and optimize sustainability journeys through insights, recommendations, and metrics.*

## Organizations encounter difficulties in starting their sustainability journey

While organizations understand the importance of sustainability in today's age, they face hurdles in starting their sustainability journey. Organizations are on a journey to become operationally interconnected, resilient, and sustainable as they step-up their climate action strategies. While profitability and consistent returns continue to be the fundamental operating principles of businesses, governments and institutions, consumer sentiment for climate friendly practices, such as Environmental, Social and Governance (ESG) guidelines, is rapidly growing.

In addition, mandatory emissions and climate protocols are rapidly being developed by global consortiums such as the Conference of the Parties (COPS) and the Intergovernmental Panel on Climate Change (IPCC). Backed by world bodies such as the UN and the World Health Organization, these regulations are compelling executive boards of organizations around the globe to prioritize and expedite their sustainability journeys.

Current systems in the market offer a limited view of an organization's emissions, such as 'last mile' and facilities operations emissions. These disparate views do not provide a holistic view across operations. Blind spots from such gaps create potential untracked emissions and risk of unintended regulation and target non-compliance.

Also, manual emission reporting systems have limited capability to address Scope 1 and Scope 2 emissions. Besides, Scope 3 emission monitoring is proving more difficult than expected for organizations to manage, track and report, again risking non-compliance.

Most reporting systems only provide ESG reporting and do not provide recommendations and mechanisms to reduce the carbon footprint.

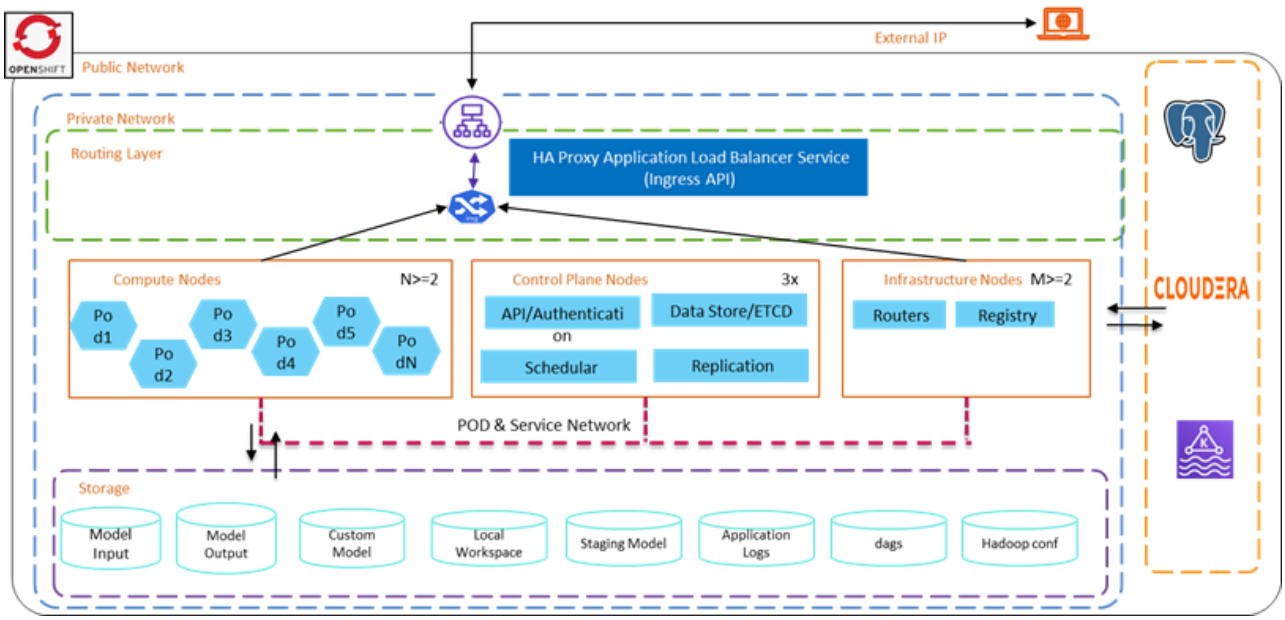
## Get on the path of an AI/ML-driven Net-Zero Journey with TCS Intelligent Urban Exchange™

TCS Intelligent Urban Exchange™ (IUX) is an advanced AI and ML powered solution that delivers comprehensive insights, recommendations, and metrics for environmentally clean organizational and value chain operations. The aggregate, system-wide impact of TCS Intelligent Urban Exchange™ for sustainability, results in substantial emissions reduction, cost savings, and resource conservation, while also advancing corporate environment stewardship, compliance, and social responsibility. TCS Intelligent Urban Exchange™ is a holistic sustainability solution for strategic planning, risk management, forecasting, monitoring, and reporting.

## Key features

- Automated Scope 1, 2, and Scope 3 reporting: Available out of the box with easy configuration.
- Leading climate models: Minimize climate risk and projected loss.
- Carbon transition risk assessment: Drives energy transition and climate action.
- AI-based ESG sentiment analyzer: Delivers insights on public perception of ESG initiatives.
- Sustainability twin carbon value chain simulation: Supports enterprise decarbonization strategy planning from Scope 1 to Scope 3.
- Optimal sustainability initiatives: Enables organizations to achieve more effective an cost-optimal carbon reduction.

## Deployment Architecture on Red Hat OpenShift




## Key Differentiators

In addition to emission reporting and SBTi target monitoring & benchmarking, TCS Intelligent Urban Exchange™ provides the following differentiators:

- **Climate Risk Estimation:** Physical risk of facilities & assets, transition and reputation risk.
- **Carbon Twin Simulation & Optimization:** Value chain simulation, scenario analysis and optimization for decarbonization.
- **Forecasting & Recommendation:** Forecast carbon footprint, identify hotspots and provide recommendations for reduction.

## *The Red Hat Advantage*

*Build Once, Deploy Anywhere with Red Hat® OpenShift® Container Platform*

*Red Hat® OpenShift® Container Platform is an industry-leading hybrid cloud application platform powered by containers and Kubernetes. Using OpenShift Container Platform simplifies and accelerates the development, delivery, and life cycle management of a hybrid mix of applications, consistently anywhere across on-premise, public clouds, and edge. OpenShift Container Platform is designed to deliver continuous innovation and speed at any scale, helping organizations to be ready for today and build for the future.*

## Features and Benefits

TCS Intelligent Urban Exchange™ for sustainability delivers the following benefits:

- **Integrated risk assessment**: Climate risk assessments that empower organizations to see the impact of climate changes on operations.
- **Sustainability insights:** Accurate and comprehensive insights for optimizing Scope 1, 2 and 3 emissions.
- **Robust emission reduction:** AI/ML-powered decarbonization optimization that exposes the key drivers of emissions, and provides unique insights to the most effective solutions for reducing those.
- **Driving net zero goals:** Carbon emission capabilities simulate complete emission behavior of the value chain, enabling organizations to identify and attain optimal emissions levels.
- **Continuous reporting:** Automated emission management provides continuous Scope 1, 2, and 3 emission reporting across the entire value chain, facilitating expedited corrective actions.
- **Greater resilience:** TCS Intelligent Urban Exchange™ on Red Hat OpenShift provides built-in services to help ensure the resilience of the application.
- **Higher efficiency:** TCS Intelligent Urban Exchange™ on Red Hat OpenShift allows better workload balancing, enabling better user experiences and minimizing application downtime.

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## Capabilities

### Reporting and Disclosure

- Metrics Computation & Assessments
- Disclosure Reporting

### Emission Management

- Emission Computations –Scope 1,2 & 3
- Emission Inventory management
- Emission Factors Library

### Sustainability Risk Resilience

- Physical Risk CVAR
- Transition Risk Models
- Reputational Intelligence

### Decarbonization Action

- Emission Simulation & Forecasting
- Decarbonization Project Evaluation and Prioritization
- Value Chain Sustainability Intelligence

## Key Outcomes

**Reduce**
20-50% in emissions

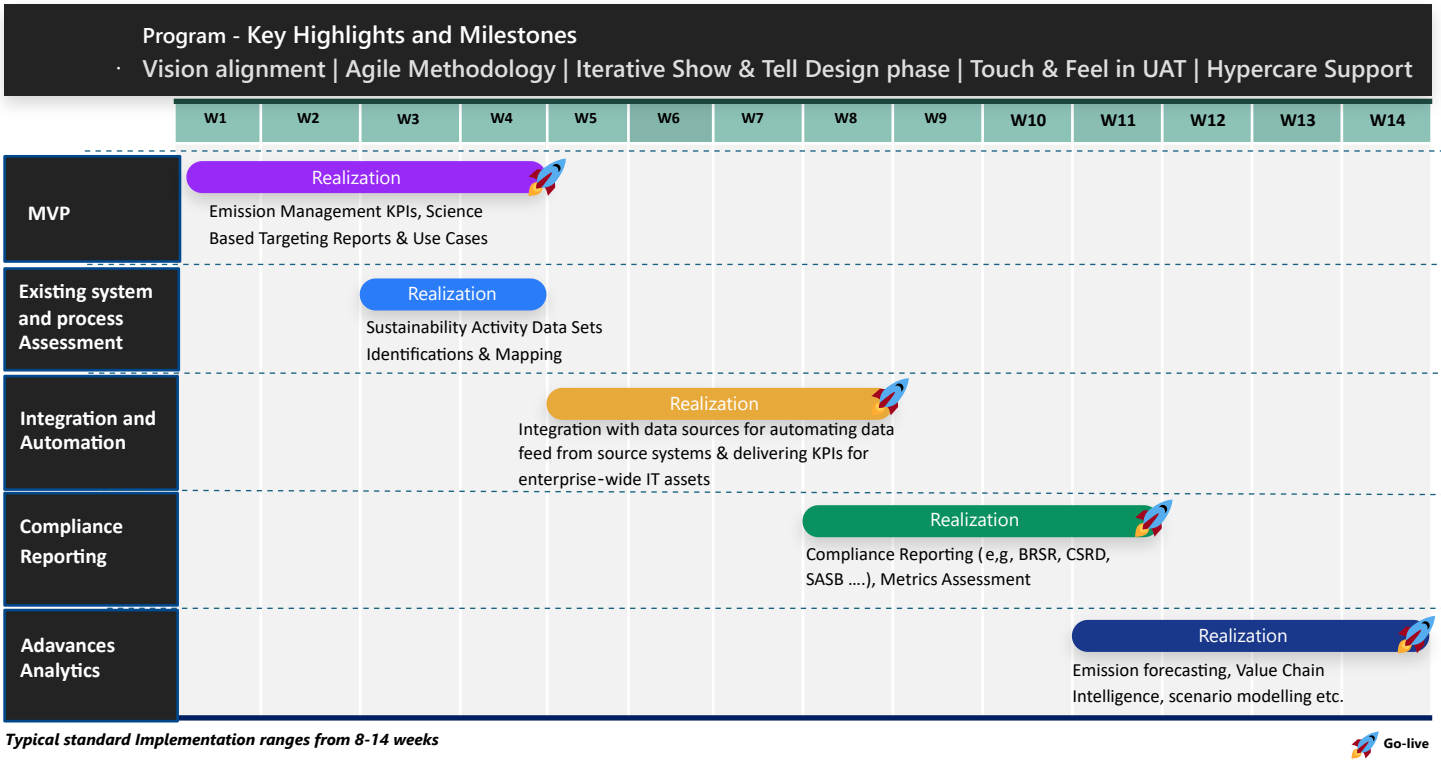
**Provide resilience**
against regulations, boost investor confidence, and spur innovation

**Save 200-500**
staff hours annually, due to automation of SBTi reporting

**Save 1000-2000 hours**
annually, due to automated data processing

## Accelerating the Implementation of Intelligent decisioning for sustainability

The implementation timeline for IUX depends on multiple factors like number of input data sources, modules in scope, regulatory requirements to name a few. A High-level, indicative program timelines are given below:

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Optimize your journey towards sustainability with AI-driven analytics and reporting.

## Case Study

# A large automotive manufacturer accelerated its sustainability journey, with TCS Intelligent Urban Exchange™

## Business challenge

The client operates in the premium luxury segment and has reimagined its strategy to position sustainability at the heart of its vision. Challenges that the solution needed to solve included a fragmented sustainability data landscape, over-reliance on manual efforts in data reporting, and weak decision support analytics. The client wanted a product that incorporated specific use-cases into their sustainability journey.

## Solution

A wide array of capabilities from TCS Intelligent Urban Exchange™ (IUX) solutions were implemented to accelerate the client's sustainability journey. IUX's *Digital Spine* brought in relevant sustainability data from multiple sources for automated data collection. IUX's *Emission Cockpit* assessed the top emissions drivers across geography, departments, and processes. IUX also automated environmental, social, and governance metrices to bring them into compliance with industry standards. The decarbonization solution provided simulation, forecast, benchmark, and sustainability project evaluation analytics. The sustainability twin created an emissions profile for the entire value chain.

## Impact

**20-25%**
in emission savings

**200 +**
staff hours saved annually, due to SBTi reporting automation

**1000 hours**
saved per year by automating the data processing

**Increased**
risk resilience, regulatory compliance, investor confidence, and innovation

## About Tata Consultancy Services Ltd.

Tata Consultancy Services is a purpose-led transformation partner to many of the world's largest businesses. For more than 50 years, it has been collaborating with clients and communities to build a greater future through innovation and collective knowledge. TCS offers an integrated portfolio of cognitive powered business, technology and engineering services and solutions.

To learn more about TCS Intelligent Urban Exchange™, visit **https://www.tcs.com/what-we-do/products-platforms/tcs-intelligent-urban-exchange**

To setup a meeting and understand more about the solution write to: **dss.partnersales@tcs.com**

## About Red Hat

Red Hat is the world's leading provider of enterprise open-source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open-source communities, Red Hat can help organizations prepare for the digital future.