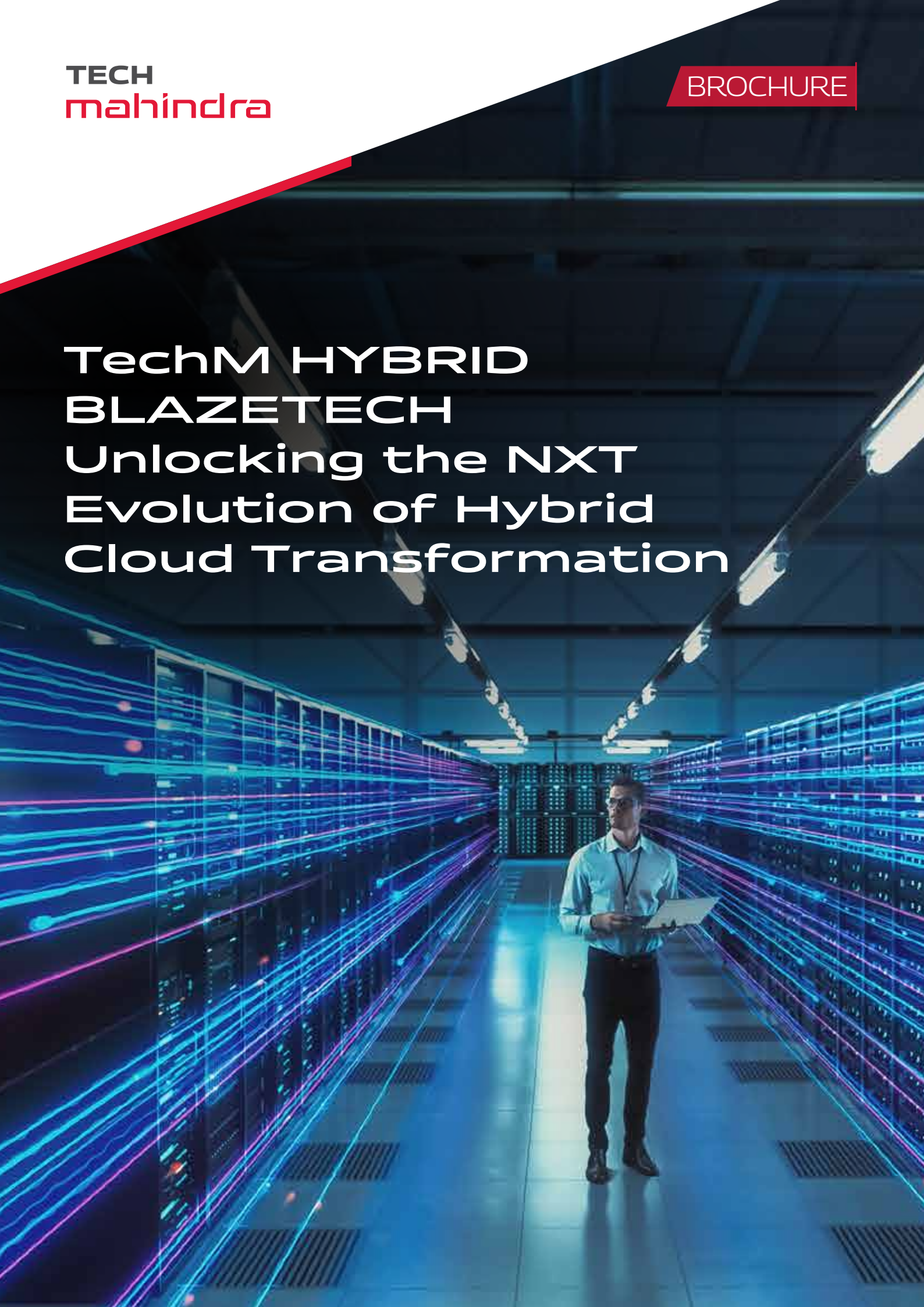# TechM HYBRID BLAZETECH Unlocking the NXT Evolution of Hybrid Cloud Transformation

Abstract

Intel and TechM collaborates to create a joint solution offering called – HYBRID BLAZETECH which is a multi-hybrid cloud and edge integrated platform needed by a broad suite of customers by integrating the latest Intel hardware and software offering to address the modern digital transformation strategy. The solution adopts a specialized strategy tailored to specific industries, utilizing a carefully curated collection of solution accelerators. This empowers businesses to unlock enhanced business benefits swiftly and effectively, while simultaneously promoting simplicity, sustainability, and cost efficiency. Built on an AI-ready infrastructure which offers broad ecosystem support ensuring seamless operations.

Security remains paramount for the platform, with complete data protection and advanced cyber resiliency.

TechM and Intel are working together on various technology roadmaps, where TechM will utilize Intel's broad product portfolio, and Intel will draw on TechM's experience in application and enterprise architecture.

Introduction

Modernization Journey to TechM HYBRID BLAZETECH

With TechM's deep domain knowledge and services and Intel's technologies like SDDC-private and hybrid cloud benchmarked reference architecture for dedicated workloads and automation scripts/playbooks, organizations have the building blocks to deploy transformational solutions more quickly and effectively. Intel DC transformation tools like Xeon Advisor/Xeon transition guide/workload advocacy tools helps us for faster and more successful deployment.

 Moreover, by using Intel's private cloud / hybrid cloud transformation tools such as Intel DCM organizations can speed up the transformational impact and unlock more value. Intel DCM can help reduce data centre total cost of ownership (TCO) by improving asset management, increasing reliability, simplifying maintenance, optimizing efficiency, maximizing density, and reducing downtime.

TechM leverages Intel reference architectures and migration advisory to reinforce hyperscale cloud capabilities and hybrid cloud migration. These solutions help optimize costs and time to results for critical workloads, including VMware and SAP.

Our Solution

Tech Mahindra recognizes the importance of running business workload from where it really matters to meet the regulatory, compliance, data security, and sovereignty with strong automation and process framework.

We have developed hybrid architecture offerings that help reduce the total cost of ownership (TCO) and enhance operational excellence for our clients. Tech Mahindra also offers various business strategy models such as pay-per-use models, helping enterprises move away from capex to opex model.

Why Hybrid BlazeTech ?

Hybrid Technology

- Agile in accordance with business requirements.
- Hardware and virtualization independent with dynamic scalability.
- Flexible and fungible across all private cloud platform needs.
- SLA driven performance with regulation and compliance support.
- Sustainability at the core.
- Long-term commitment and partnership.

Financial Flexibility

- Eliminating huge capital investments, capital lock-in, and financial risks.
- Ease of contract and highly customizable options.
- Flexible pricing options available as per client needs.
- Both opex and capex model available.
- Budget management with optimized TCO up to 45%.
- Policy-based provisioning metering, chargeback, show-back.

Hyper Automated Operations

- Dynamic workload management.
- Multi-hypervisor support.
- Supports multi-cloud.
- Multi cloud governance.
- Reduce operations cost upto 55%.
- Cloud ops.

HBT Solution Blueprint

Customer data is very critical be it in web, app, or database environments, hosted on-premises, or through private / third-party public clouds. But the question is: how do we manage the data?

Tech Mahindra's HYBRID BLAZETECH is the answer. Our solution comprises cutting edge technologies curated for these exact customer needs. It is a holistic framework based on validated reference architecture and blueprints completely designed, deployed, migrated, and managed by Tech Mahindra.
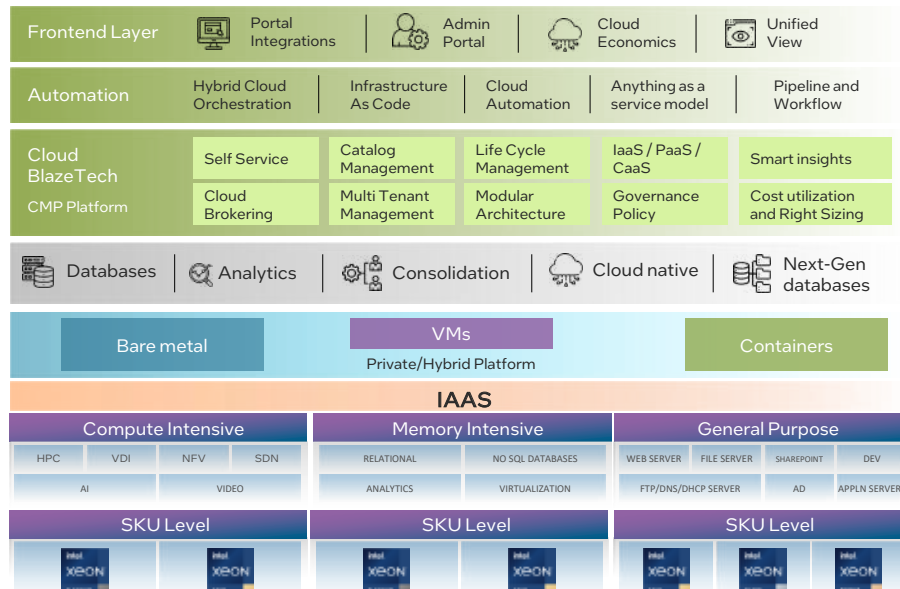
Common pool of infrastructure	Seamless experience	Production ready	Performance based sizing
Automated provisioning	Single UX (Portal, API, CLI)	Workload optimized	Latest Intel architecture
Allocate capacity across services	Self-service	Consistent performance	

Intel DCM

Intel Xeon Processor Advisor

Intel SELECT SOLUTIONS — **intel EII OpenVINO** — **1 oneAPI**

Intel® Migration Advisor
Intel® Cloud Optimizer Densify
Intel® Workload Optimizer GRANULATE
Intel® Cloud DevOps Toolkit
Intel Optimized Cloud Stacks
Intel Optimized Containers

XEON — **OPTANE** — **GPU**

Intel SGX — Intel TDX — habana

Frontend Layer
- Portal Integrations
- Admin Portal
- Cloud Economics
- Unified View

Automation
- Hybrid Cloud Orchestration
- Infrastructure As Code
- Cloud Automation
- Anything as a service model
- Pipeline and Workflow

Cloud BlazeTech

CMP Platform
| Self Service | Catalog Management | Life Cycle Management | IaaS / PaaS / CaaS | Smart insights |
| Cloud Brokering | Multi Tenant Management | Modular Architecture | Governance Policy | Cost utilization and Right Sizing |

- Databases
- Analytics
- Consolidation
- Cloud native
- Next-Gen databases

| Bare metal | VMs | Containers |
| | Private/Hybrid Platform | |

IAAS

Compute Intensive				Memory Intensive		General Purpose		
HPC	VDI	NFV	SDN	RELATIONAL	NO SQL DATABASES	WEB SERVER	FILE SERVER	SHAREPOINT
AI		VIDEO		ANALYTICS	VIRTUALIZATION	FTP/DNS/DHCP SERVER	AD	APPLN SERVERS

| SKU Level | SKU Level | SKU Level |

XEON — XEON | XEON — XEON | XEON — XEON — XEON

Public Cloud

Azure

amazon

Google Cloud Platform

Other Cloud

HYBRID BLAZETECH Tech Day -1, 0, 1, and 2 Mode of Deployment:

Day -1 **Day 0** **Day 1** **Day 2**

Advisory

Plan

Pre-assessment | Workshop | Tools | Identification

Discover

Discovery | Technology | Dependencies | Trend Analysis

Classify

Business App COTS
Legacy App
Business App Bespoke
Infra App

Dependency

Inventoried DB Hosts | AD - xyz.com
AD - frxntnyc.frx2.com | DC-Cots-Direct
Highly Connected stack | DC-SHARED App
AD- global.xyz.com | DC-N Flex

Migrate & Modernize

Migration Strategy

Analyze App Arch | Current HLD | Finalize LLD
Define Wave | Cut over Plan | 6R Mapping
Tool Selection | Business Continuity

Platform Engineering

Hybrid / Multi Cloud Management

SELFSERVE
Self Service | Provisioning
Dashboards | Cost Mapping | Orchestration
Catalogs | Governance | Integration

Operate & Optimize

IT Operations

Monitoring | Upgrades | ITSM | Patching
Maintenance | SecOPS | AI & ML | Process Maturity

CLOUD INFRASTRUCTURE & SERVICES

Containers | **VM** | **Cloud Native Services – IaaS, PaaS**

kubernetes | OPENSHIFT | vm | vm

On-Premise
Compute | Storage | Network

Public Cloud
Azure | amazon web services | Google Cloud Platform

Cloud Blaze Platform (CBT)

Cloud BlazeTech is a differentiating IP of Tech Mahindra powered by Intel, which provides a unified cloud management platform to deliver an end-to-end cloud solution for customers, from consulting and defining the cloud roadmap, to setting up, managing, and automating their future hybrid Integrated cloud environment, it offers everything you need.

Stage 1 - Advisory

In Stage 1, Intel and Tech Mahindra will evaluate the client's existing environment and develop a cloud roadmap. Intel CSA and Tech Mahindra customer engineering team will then collaborate to:

- Align customers' business goals with their cloud outcomes
- Provide workload profiling and optimization recommendations
- Offer trusted customer advisory services:
  - BOM optimization
  - Refresh recommendations
  - Advocacy for the 6 'R' strategy

Stage 2 - Migrate and Modernize

Intel and Tech Mahindra will expedite the migration and modernization process in Stage 2. Using a scientific, ML-based approach, Intel and Tech Mahindra will work together to reduce cloud expenses by 30 to > 60% by utilizing:

Intel Cloud Optimizer by **Densify** | Intel Workload Optimizer by **GRANULATE**

Cloud native tools used to accelerate migration and modernization also include:

Dr Migrate | CloudGeneral | **Intel CSA Consulting**

Stage 4 - Operate and Optimize

Stage 4 encompasses resource optimization powered by Intel tools and Tech Mahindra engineering activities.

Resource Optimization

Terraform HashiCorp : Set of optimized terraform scripts which can be readily adopted

O Hub (Optimization Hub) : A centralized repository for readily available recipes

Benchmarking : Measure performance and price factors of silicon performance

Cloud and Infrastructure Services

GRANULATE : Runtime optimization tool for instance optimization

: Optimized libraries to boost AI/ML workloads on cloud

Optimized Cloud Recipe : Provides tuning of workload parameters to get max performance

Intel CSA Consulting : Make informed decisions by selecting the appropriate SKUs

Stage 3 - Platform Engineering

Intel's expertise in platform engineering, combined with Tech Mahindra's leadership as a system integrator, expedites the achievement of Cloud FinOps goals in Stage 3.

Workload Benchmarking
Reduce time required for baseline performance analysis of open-source workloads running on public cloud instances.

| Gen to Gen |
| Application-specific |
| Optimized WLs |
| Custom |

Performance Profiling
Optimize performance and system configuration, enabling comparisons across various generations and competitive architectures.

| srv-info |
| EMON |
| Intel Telemetry Collector |
| g:Profiler |
| VT |

# Benefits

CHOICE	Enterprises can leverage the right cloud services based on their cloud maturity.	
PLANNING	Accurate assessment and deep insights result in optimized resource utilization and future planning.	
COSTS	20-30% cost savings with standardized practices and procedures that ensure significant cost savings through economies of scale.	
SUCCESS	Streamlined processes and service level agreements mean increased success rate of delivering world-class services.	
SKILLS	Right sourcing increases coverage from a service standpoint -right skill for the right job.	
SPEED	30% faster time to market; immediate onboarding capabilities vastly improve time to market.	

Our Integrated Operating Model

TechM proposes an operating model that is based on principles of service integration and management (SIAM), leveraging ITIL v4.0 best practices. This operating model is to be empowered through automation.
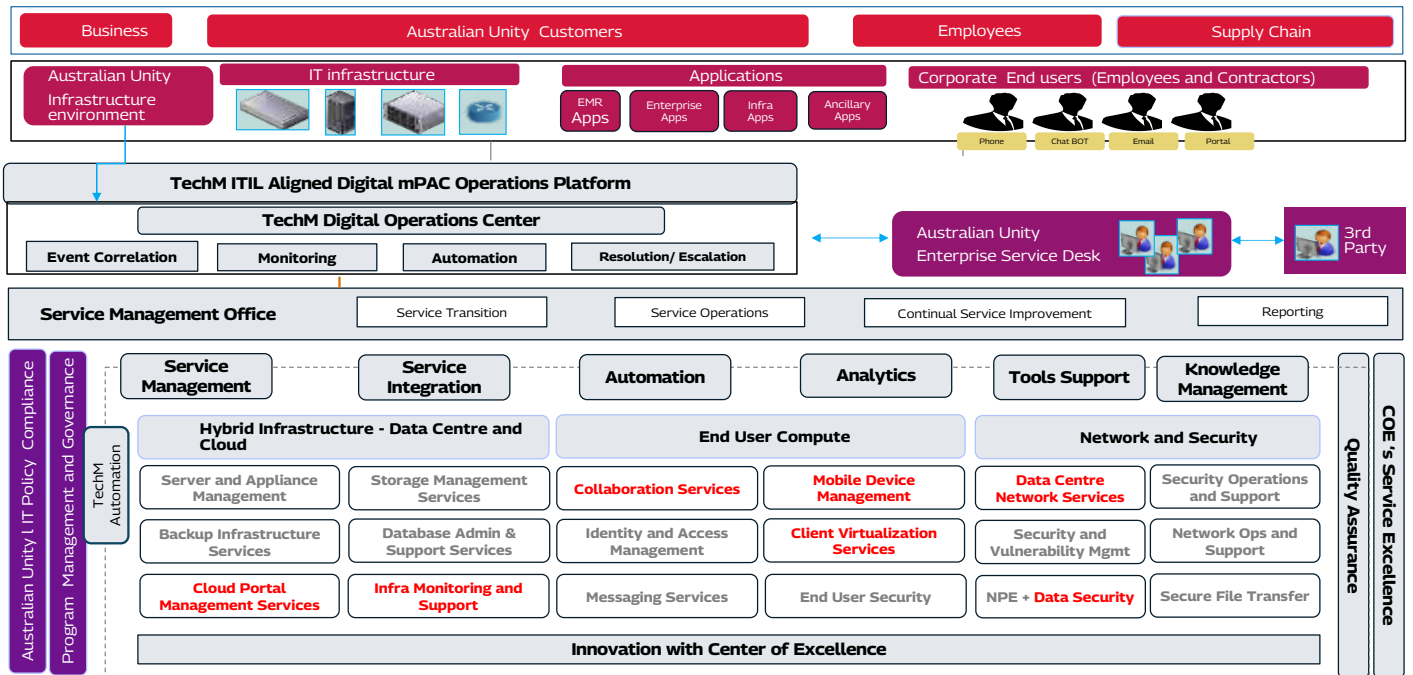
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Intelligence With Intel Inside

The Intel Xeon processor is and remains the foundation of modern digital transformation architecture, accelerated by the Most built-in accelerators for any CPU in the market, with hardware enhanced security. Flexibility with 1s to 8s scalability to meet individual customer needs. Intel platform is the only CPU to offer support for both rack and blade designs and is the only platform certified for running SAP Hana workloads.

Tech Mahindra Infra as a Service (IaaS) Powered by Intel

Compute Intensive Intel-based Workload Stack	Memory Intensive Intel-based Workload Stack	General Purpose Intel-based Workload Stack

Compute Intensive

HPC	VDI	NFV	SDN
AI		VIDEO	

Memory Intensive

RELATIONAL	NO SQL DATABASES
ANALYTICS	VIRTUALIZATION

General Purpose

WEB SERVER	FILE SERVER	SHARE POINT	DEV
FTP/DNS/DHCP SERVER		AD	APPLN SERVERS

SKU Level (Compute Intensive)

6448Y	6458Q	8470Q

SKU Level (Memory Intensive)

6442Y	6448H	8450H

SKU Level (General Purpose)

6430	6438Y+	4416+
4416+		5420+

4th Gen and 3rd Gen Intel Xeon Scalable Processors/PVC/MAX

Intel Xeons based on Sapphire Rapids offer 53% general purpose performance gains along with up to 10x increase in AI workload performance with built-in accelerators and they also enable 3x better efficiency (perf/watt) with built in accelerators to drive a sustainable datacenter for enterprises to meet their compliance and emission goals.

Xeon stands alone, but with the addition of the new max series Intel changed the game. Delivering breakthrough memory bandwidth and performance for HPC and AI. Intel offers the biggest platform transition in years with SPR releasing new connectivity, I/O, and memory technologies: DDR5, PCIe Gen 5, and CXL 1.1

Our Joint Sustainability Offerings

Tech Mahindra is an end-to-end provider of sustainability services enabling organizations to measure, monitor and improve sustainability impacts. Tech Mahindra is a company with purpose for sustainability; undertaking sustainability as cause to spread across our customers, and society.

TechM's strategy and goals for sustainability is strengthened through this technology partnership by leveraging Intel's responsible, inclusive, and sustainable to enable (RISE) strategy and goals which include achieving net-zero greenhouse gas emissions in global operations by 2040. This goal is requiring Intel to apply breakthrough solutions and processes throughout the organization, including data centers.

Sustainability Offering Catalogue

Sustainability Consulting
- Eco – Innovation
- Compliance
- Strategy & Financing
- Audit, Verifications and Validations

Sustainability Optimization Initiatives
- Emission Reduction and Energy Monitoring
- Sustainable Supply Chain
- Traceability, Digital Passports
- HSE Solutions
- RE Solutions
- Packaging Solutions

Global Reporting
- GRI, CDSB
- Integrated Report
- TCFD, SASB
- External Forums: DJSI and CDP

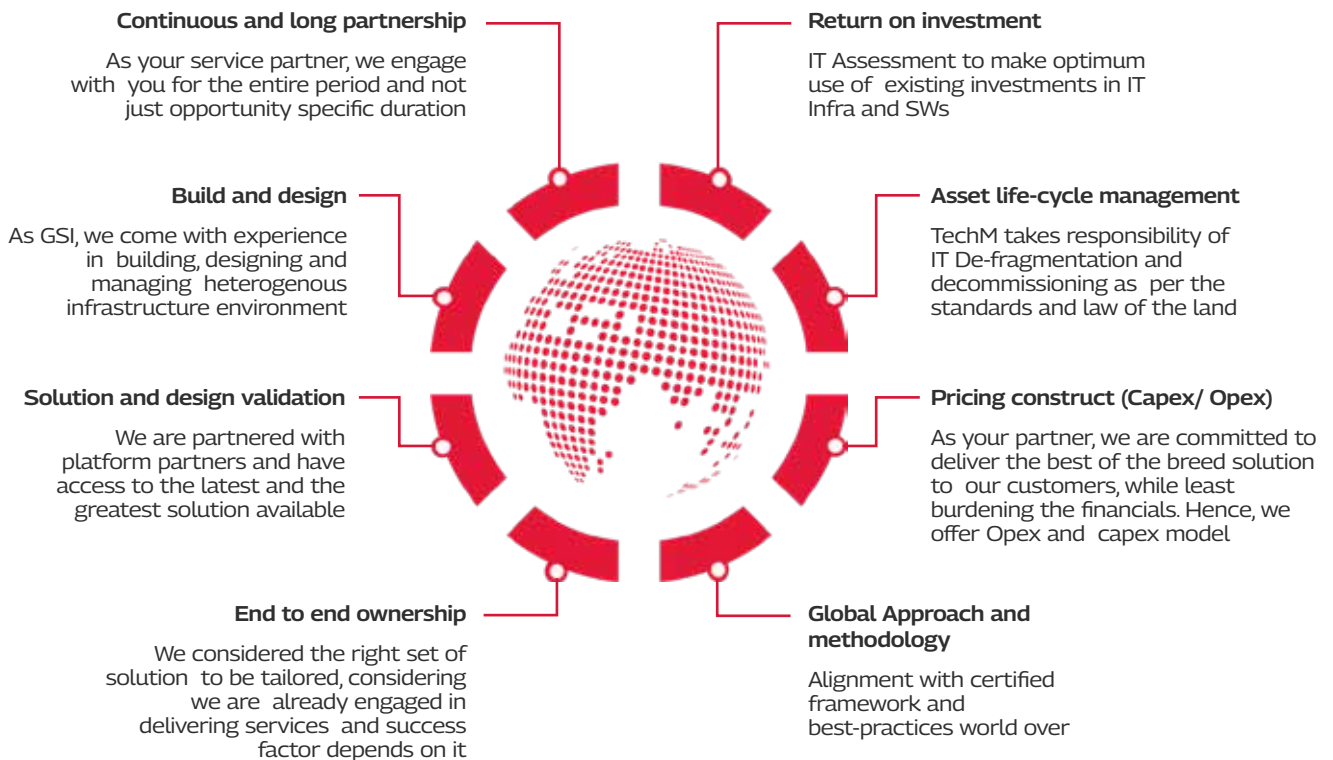## End-To-End Sustainability Charter

| Measure | Monitor | Improve | Achieve |

The NXT.NOW™ Advantage

Why Tech Mahindra

Continuous and long partnership

As your service partner, we engage with you for the entire period and not just opportunity specific duration

Build and design

As GSI, we come with experience in building, designing and managing heterogenous infrastructure environment

Solution and design validation

We are partnered with platform partners and have access to the latest and the greatest solution available

End to end ownership

We considered the right set of solution to be tailored, considering we are already engaged in delivering services and success factor depends on it

Return on investment

IT Assessment to make optimum use of existing investments in IT Infra and SWs

Asset life-cycle management

TechM takes responsibility of IT De-fragmentation and decommissioning as per the standards and law of the land

Pricing construct (Capex/ Opex)

As your partner, we are committed to deliver the best of the breed solution to our customers, while least burdening the financials. Hence, we offer Opex and capex model

Global Approach and methodology

Alignment with certified framework and best-practices world over

For further information, please reach out to **CISalliances@techmahindra.com**

TECH
mahindra

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www.linkedin.com/company/tech-mahindra
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