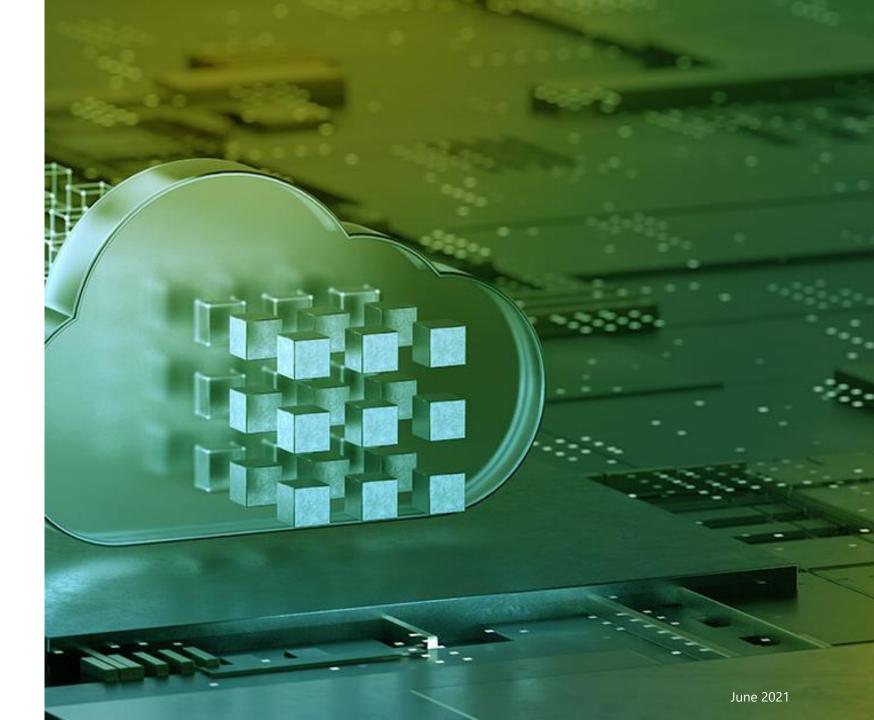


Happiest Minds
Cloud
Infrastructure
Services
(Powered by
Microsoft)





# AGENDA



- Cloud Services Portfolio
- Cloud Center of Excellence
- Happiest Minds Success Stories
- Cloud Adoption Framework
- Cloud Maturity Models
- Happiest Minds Value Proposition

## Cloud adoption challenges that we are addressing



#### **Cloud Skills & Expertise**

- Fast evolving cloud technology and services eco-systems
- Choosing the right cloud services, architecture, migration, integration and automation strategies
- Cloud native development
- DevSecOps

#### **Azure Cloud Management**

- Increasing number of technologies, products, tools and integrations to be managed
- Siloed toolsets and processes for managing Azure Cloud Infrastructure & applications

## **Application Performance** and User Experience

 Concerns over application performance resulting in poor user experience

#### **Cloud Governance**

 Lack of clearly defined policies resulting in poor cloud operating models

#### **Cloud Cost Management**

Inefficient capacity management leading to "cloud waste"

## **Cloud Security & Compliance Management**

- Data governance
- Regulatory compliance
- Multi-cloud and Azure cloud security monitoring

80% of the Enterprises have a Azure Cloud strategy

85% of the organizations are reporting some cloud repatriation activities

Cloud waste is more than 30%

30% of the Enterprises are implementing applications using microservices

# Happiest Minds' Cloud Services Portfolio (Powered by Microsoft)



### Cloud Services Across Applications, Infrastructure and Security

**Consulting & Strategy** 

**Cloud Migration** 

**Digital Applications** 

**Cloud Operations** 

Application Modernization

DevSecOps

App Support & Maintenance

**Cloud Security** 

### Enabled by Skills, Partnership, IP Assets and Frameworks

4E Digital Transformation Framework

Cloud Assessment and Migration Framework

AlOps Enabled ELLIPSE
Platform for Continuous
Service Assurance and
Optimization

Cyber Risk Protection Platform for Advanced Cloud Security

# Cloud & Data Center Infrastructure Services (Powered by Microsoft)



- Public, Private and Azure Clouds



#### **Strategy & Architecture**

Infrastructure and Application Portfolio Analysis ROI – Business Case

ROI – business case

High Level Architecture

Migration Strategy & Planning

DR/BCP Consulting





Azure Cloud & Azure Stack (Private Cloud)Design
Proof of Concept
Build and Integrate
Azure Cloud
Migrate Applications and Data

**Private** 

Public

Self-service Portals
Infrastructure Orchestration & Automation
Cost & Capacity Optimization
DevSecOps Integration



**Automate & Optimize** 

AlOps Infused ELLIPSE Platform
Azure Cloud Operations
24/7 Monitoring & Management
Analytics Driven Dashboards & Reports

**Intelligent Cloud Operations** 



**Skills & Partnerships** 







**vm**ware<sup>®</sup>

## **Example Case Studies for Azure Cloud Services**



#### US Based Automotive Aftermarket OEM

B2B eCommerce platform development, integration with ERP and CRM systems. Application, infrastructure and security support services.

#### For an International Qualification Accreditation Company

End to end Infrastructure setup on Azure Cloud Highly secure and optimized environment Provisioning of database by leveraging Azure PaaS offering

## Leading Global Retailer of Luxury Watches

Blockchain enabled platform for trading of pre-owned luxury watches; cloud assessment & migration, reduced operational spend by more than 30%.

## Global Pharmaceutical Company

Azure Cloud Migration, DC consolidation & optimization, M&A related DC infrastructure consolidation and Cloud migrations

#### For a Global Professional Services Company Specializing in Tax, Accounting, HR & Payroll Processes

 Transformation Capabilities Covering Azure Cloud, Azure Stack, DC/DR, Cloud, End User Services, Networks and ITSM/ITOM

# A Large UK Based Manufacturer of Roofing and Waterproofing Solutions

End-to-End Offerings in End User Computing, Directory Services, Messaging & UC, Azure Cloud & IDAM

#### For a Europe Based Wholesale Retail Company with Operations Across India

- Smooth Transition and Setup of the Transformed e-Commerce Site on Azure.
- Setup of Infrastructure Backbone on Azure.

#### US Company That Provides Information on Physicians and Hospitals

25% cloud cost savings through cloud capacity optimization, improved availability and process streamlining Cloud Migration & Adoption Journey (Powered by Microsoft)





**Cloud Journey** 

## Phase-3 Transformation

(Lift and Shift, Rehost, Replatform, Rewrite, Replace and Retire)



Phase-4
Operations

(Continuous Service Assurance and Continuous Optimization)

## **Phase-1: Assessment/Consulting (Powered by Microsoft)**



Description	Tools	Advisory and Assessment Frameworks	Assessment Areas	Deliverables
	Ellipse Platform Toolsets, Azure Native Tools, SolarWinds, Device42, Dynatrace, AppDynamics, any existing customer tool and CMDB (if available)	1. Application Profiling	Business Applications and Functionalities. Determine BR, FR and NFR driving transformation	Application Profiling Quadrant Results and Reports. Application Cloud Adoption Strategy Results. Go/No Go Decisions
		2. cIAF - Infrastructure Assessment Framework	People, Process, Tools, Technology and Architecture	Current State Maturity (Basic, Reactive, Proactive, Service Orientation and Value Realization)
		3. cQF - Cloudability Quotient	Functional and Non-Functional Requirements	Maturity Score to Understand the Cloud Adoption Readiness
Integrated Cloud Advisory & Assessment - iCaaF		4. cAF - Cloud Adoption Framework (Maturity Model)	Maturity Scores derived from cQF - Cloudability Quotient	Maturity Model (Build your own, Private Cloud/IaaS, PaaS, SaaS, BPaaS) will be derived based on various business factors (Capex, Opex, Efficiency, Faster Deployment and Agility)
				Cloud Operating Model
		5. cSAF - Cloud Stack Assessment and Selection Framework	Maturity Model Derived From cAF - Cloud Stack Assessment and Selection Framework	Detailed Analysis Covering:
				1 Azure
				2. Open-Source vs Proprietary
				3. Azure Private Stack vs Azure Public Cloud
				Cloud Business Case and ROI
		6. iCSAF - Integrated Cloud Security Assessment Framework	Cloud Security Readiness Audit	Detailed Analysis and Security Recommendation Reports
			Consultation for Cloud Architecture, Database Security, IDAM, Cloud Network Security, Application Security	
			BCP/DR Planning	

## **Phase-2: Plan & Design (Powered by Microsoft)**



Description	Tools	Framework	Planning & Design Considerations	Deliverables
Efficient Cloud Spend and Repurpose of Investments	Ellipse Platform, Cloud Native Tools, Existing Customer Tools	iCaaF – Integrated Cloud Advisory and Assessment Framework	<ul> <li>Functional and Non-Functional Requirements</li> <li>Business Drivers</li> <li>Design Aspects/Parameters</li> <li>Migration Strategies and Sequencing</li> <li>Infrastructure as a Code</li> <li>Deployment</li> <li>Cloud Integration, Monitoring and Management Strategies</li> </ul>	<ul> <li>High Level and Cloud Landing Zone Designs</li> <li>Low Level Designs</li> <li>Infrastructure Test Plans</li> <li>Proof of Concept Plans</li> <li>Learning/Findings, Updated Low Level Designs</li> <li>Project Plan Consisting of Implementation and Migration Details, Risk and Mitigation Strategies</li> </ul>

## **Phase-3: Cloud Migration (Powered by Microsoft)**



Description	Tools	Frameworks	Areas/Activities	Deliverables
Phased Migration, Minimal Downtime, Agile Transformation and Migration	Ellipse Platform & Cloud Native Tools	cTF - Cloud Transformation Framework	Application Transformation or Revitalization approach	<ul> <li>Application Transformation (The 6 R's): <ol> <li>Lift &amp; Shift (With No Change)</li> <li>Re-host (Lift &amp; Shift)</li> <li>Re-Platform (Lift &amp; Shift)</li> <li>Re-Write / Re-Architect (Decouple &amp; Redo)</li> <li>Retire the Application</li> <li>Replace with a Different App</li> </ol> </li> <li>Data Migration</li> <li>Cut Over and Sign Off</li> <li>Project Documents and Reports</li> </ul>
		cTF – Cloud Transformation Framework	Cloud Infrastructure Migration (Lift and Shift, Re-host or Replatform) – P2V, V2V, Data Migration)	
		cGF – Cloud Governance Framework	Change Readiness, Organization and work Design, Stakeholders Management, Team Effectiveness, Communication	

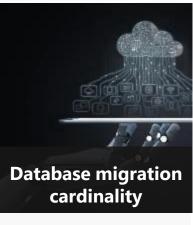
## Phase-3: Data Migration Factors and Enablers (Powered by Microsoft)





## Data Migration Methodology

Replication vs Migration
Partial vs Complete
Migrations
Heterogenous vs
Homogenous
Migrations
Zero versus Minimal
versus Significant
Downtime



Consolidation (n:1)
Distribution (1:n)
Re-distribution (n:m)



## Migration consistency

Consolidation (n:1)
Distribution (1:n)
Re-distribution (n:m)



### **Type of Migration**

Active – Active
(supports clients writing into both the source as well as the target databases during the migration)
Active – Passive (the source databases can be modified during the migration, while the target databases allow only read-only access)

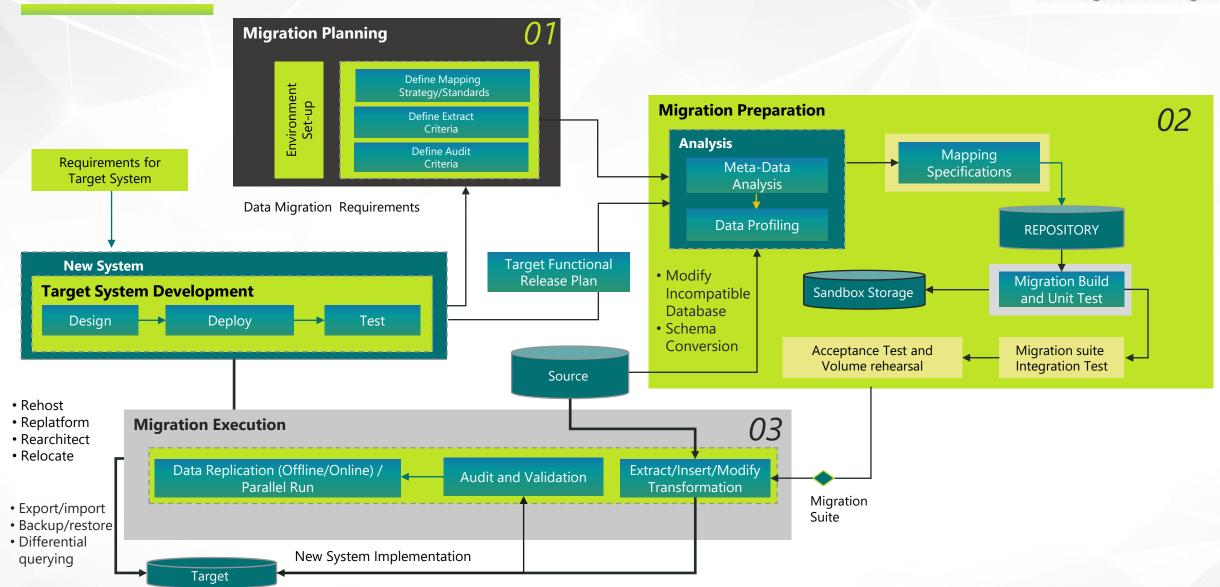


#### **Samples**

Migration Strategy
Cutover Strategy
Product / Technology
Specific Samples
Design
Data Mapping
ETL Scripts/Stored
Procedures
Reconciliation Scripts
Performance Tuning
Guidelines

## **Phase-3: Data Migration Flowchart (Powered by Microsoft)**





## Phase-3: Data Migration (Heterogenous/Homogenous) - Phases (Powered by Microsoft)



• Fall back / Roll Out

Activities

#### **Heterogenous Replication Continuing migration Source Deletion Roll-Out/Fall Back Initial Load Draining Switchover** •Implementing a Identify owners •Define extract, audit & Delete the source Quiescing the source Switch over the fallback, especially for validation criteria database systems. Prepare project plan clients from the source databases highly critical database Inventory Analysis Identify entities for Waiting for changes to to the target •Take a final backup of clients Initial load migration migration and analyze migrate to the target databases each source database process that queries the data volume •implementing a databases so that you have a fallback is essential dataset (whether Data quality assessment •Backing up the target defined end state that and must be treated complete or partial) from Capacity Planning database so have a is accessible as a full database the source databases Source and Target data defined point for future incremental migration, which model analysis includes testing backups • The migration reads the • Complete migration of • The source database • The clients are

operational and begin

to access production

databases

systems and the target

database systems are

synchronized, and no

occur

data modifications will

Offline Migration - Backup/Restore - Export/Import

transaction log and applies

change to the target

database system

Executing any data

modification

**Key Activities** 

**Deliverables** 

the initial dataset from

the source systems to the

target database systems

**Database Management System Replication – Homogenous Replication** 

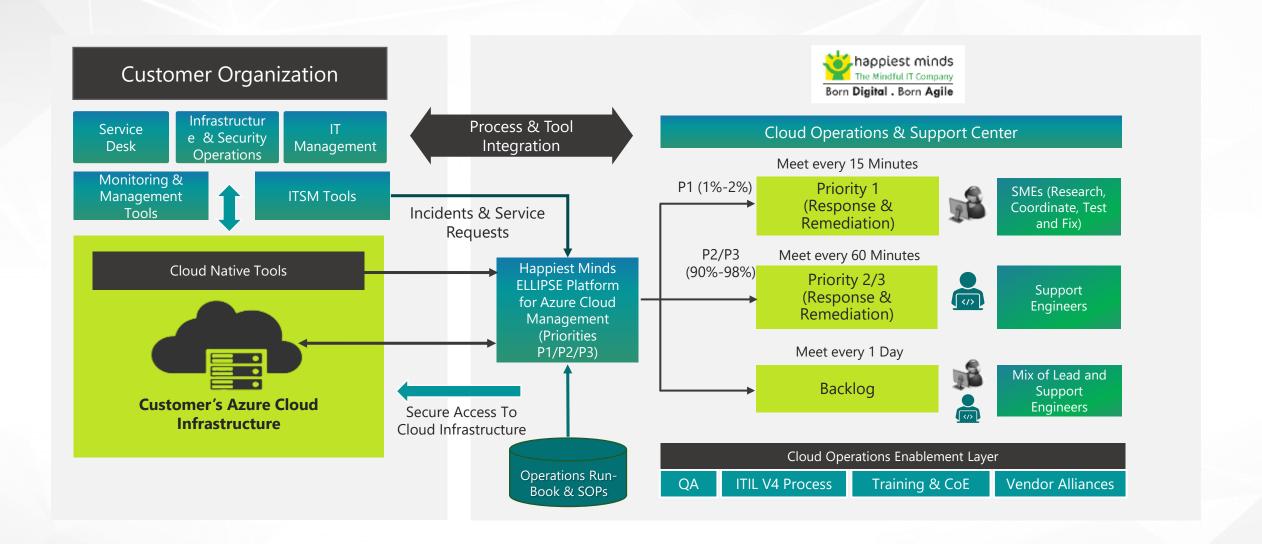
Schema Changes (Rehost, Replatform, Rearchitect, Relocate), Data Changes, Migration Process Changes, Migration Failure Mitigation

Deleted Source

Databases

## Phase-4: Steady State Cloud Operations Model (Powered by Microsoft)





## **Cloud Operation Maturity Model (Powered by Microsoft)**



Container and Workload Orchestration

Infrastructure as a code

**Advanced Data Protection** 

Set Policies and notification to track the desired state

- Delete Unused Infrastructure, Terminate assets out of compliance
- Automate Provisioning and Security Risk remediation
- Integrate Continuous Governance to DevSecOps (CI/CD) workflow (Shift Left)



Governance and Automation (DevSecOps Integration)

#### **Business Integration**



- Integrate Continuous governance into business applications and system
- Align operational expense to profitability
- Measure Productivity
- Streamline Compliance and Audits



Right Size the Infrastructure, Decommission unused Infrastructure

Optimization • and Security •

- Optimize Discounts through reservations
- Implement Cloud and application Security



- Discover and Link Cloud Accounts, Establish Tagging Hygiene
- Group All Cloud Assets and Assign Cl's, Identify non-standard assets
- Establish Show back/chargeback, Find Actively running resources that are unused
- Build a baseline for utilization and performance, Establish key KPI's

## **Phase-4: ELLIPSE Platform for Intelligent Azure Cloud Operations**

Continuous Assurance and Continuous Optimization











#### **Azure Cloud Management**



#### **Infra Automation**



#### SERVICE MANAGEMENT

- Incident
- Problem
- Change
- Service Catalog
- Asset Management



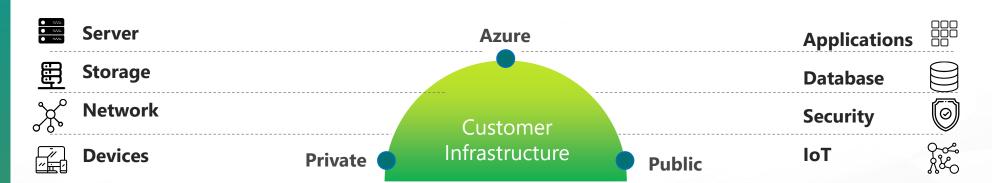
## MONITORING AND ANALYTICS

- AlOps
- Event Console



#### DEVICE MANAGEMENT

- Privileged Access
- Provisioning
- Advanced Patch Management
- Remote Access



## **Our Value Proposition**



**Predictable Pricing** Model

**Flexible Engagement Model & Ability to Scale**  **Proven Delivery Excellence** 

**Investments** in **Innovation & Tech CoEs**  **Quality Management & Transparency** 



"Born Digital - Born Agile" Company



**Skilled Team and ready** to deliver existing and new services



**Company with Great Values and Culture** 

Year-over year

savings in cost and

predictable model



The First "Mindful IT" Company



**Certified, Compliant** and Secured Delivery Centers



2020- 21 - Highest **Glass Door Ratings** 



**Continuous Investments** on Technology



2021 - Top 100 in "Great Places to work

**Strategic OEM** 

**Partnerships** 



**Highest NPS for the** Year 2019-20



Clients

**Co-innovation with** 



### Happiest People · Happiest Customers

India | United States | United Kingdom | Canada | Australia | Dubai

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