

Essentials to Manage your IoT Ecosystem

"GIVE YOUR ORGANIZATION THE BEST
IoT OPERATIONS CENTER THAT IT DESERVES."

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Scope

The IoT abbreviation is so simple to state - Internet of Things; but is it that simple? Internet of Things ecosystem could be combined with the ecosystem of products, services offered, service platforms, infrastructure, skills and regulatory. In a nutshell, IoT is a vast ocean which can be controlled and managed.

However, the Challenges are to:

01

Connect every dot of the ecosystem

02

Sustaining the ecosystem with continuous improvements



There are several phases that Enterprises go through while adopting IoT. It is quite aligned to product and service development ecosystem.

Step 01 Drawing the Road map

Roadmap for the type of product and service we wanted to launch or enabled existing product & services to integrate with IoT based solutions.

- This must be the core strategy of product and service company.

Step 02 Defining the Strategy

Once we have defined strategy, we should get into the product & program development.

- This could be a joint exercise by core company and its associates' company (vendors, service providers, a technology company and more.)

Step 03 Development/Deployment

- **Core Product and Service Development** - A joint exercise by core company and the service provider.
- **Service and Platform Development** - Exercise should be performed by the service company.

Platform Development

Service provider with core expertise in product engineering.

Deployment & Hosting Platform

Service provider with core expertise in infrastructure management.

Operate and Maintain

Service provider with core expertise in infrastructure management.

Purpose

Purpose of this document is to elaborate products launched, platforms deployment and sustaining & maintaining the IoT ecosystem. Through this document, our objective is to focus on IoT Operation Center and enable enterprises to draw their IoT roadmap, which will primarily target on core business needs and eliminate the distractions from any technical jargons.

The document will run you through 3 phases of IoT product deployment:

Phase 01

Technical trial (Beta Launch) - Product and Service Launch

Phase 02

Production Deployment - Infrastructure and Provisioning Services

Phase 03

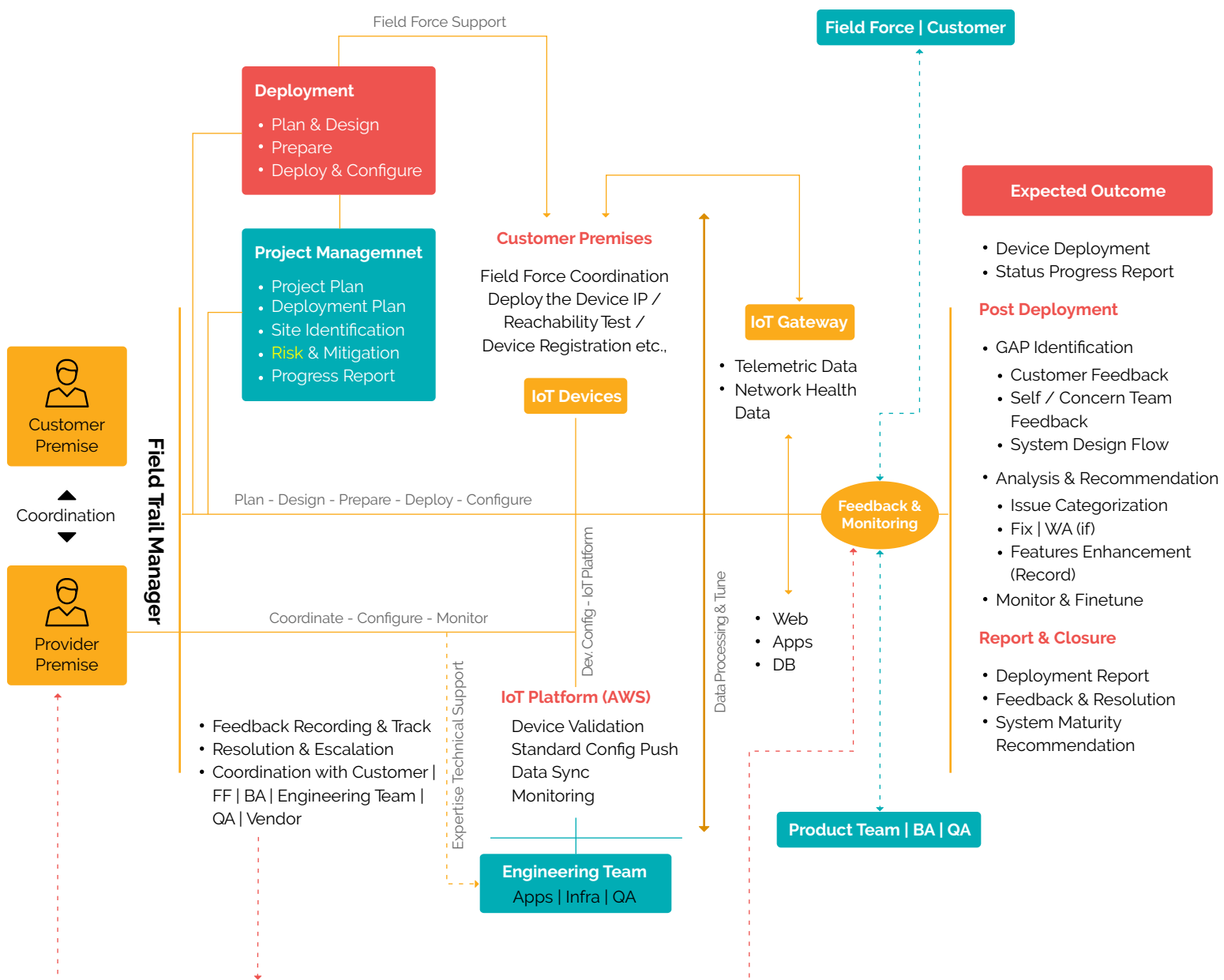
Support engagement - IoT Operation Center - Operate & Maintain

Solution

Phase 1 : Product and Service Launch – Field Trial Approach

Any organization who would like to take the first steps of IoT have to ensure that they have effective Beta launch platform. This enables the company to get mature into implementation and operational issues. They should have feedback and resolution mechanism helping in product maturity and feature enhancement.

Below solution depicts end to end engagement of Field Trial.



Phase 2 : Infrastructure and Provisioning Services

Below solution depicts about deployment and provisioning

IoT Infrastructure Deployment & Provisioning Services



IT Infra Design



IT Infra Deploy



IoT Networks

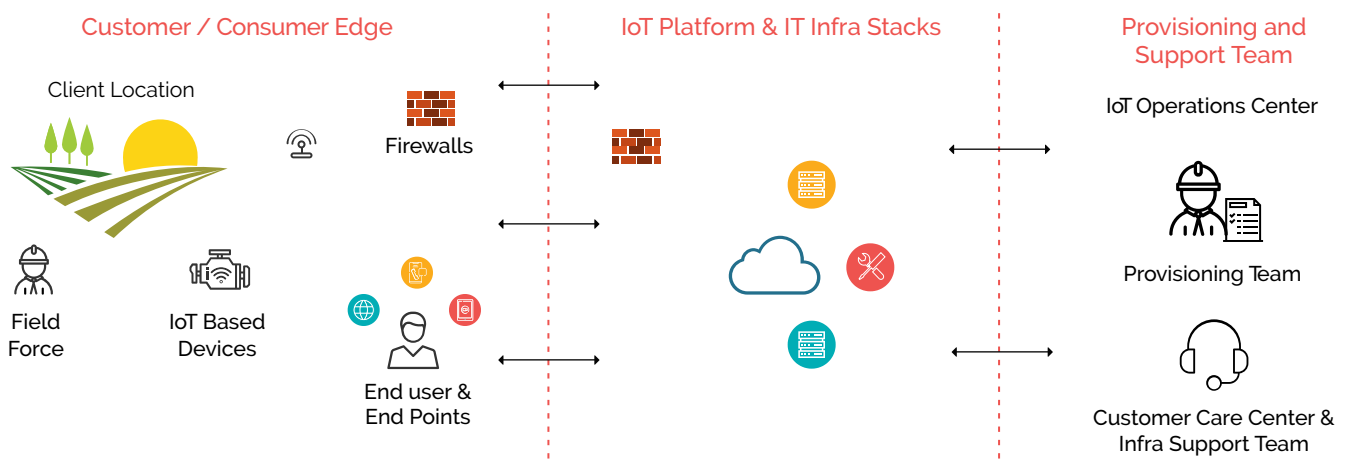


Tools and
Monitoring



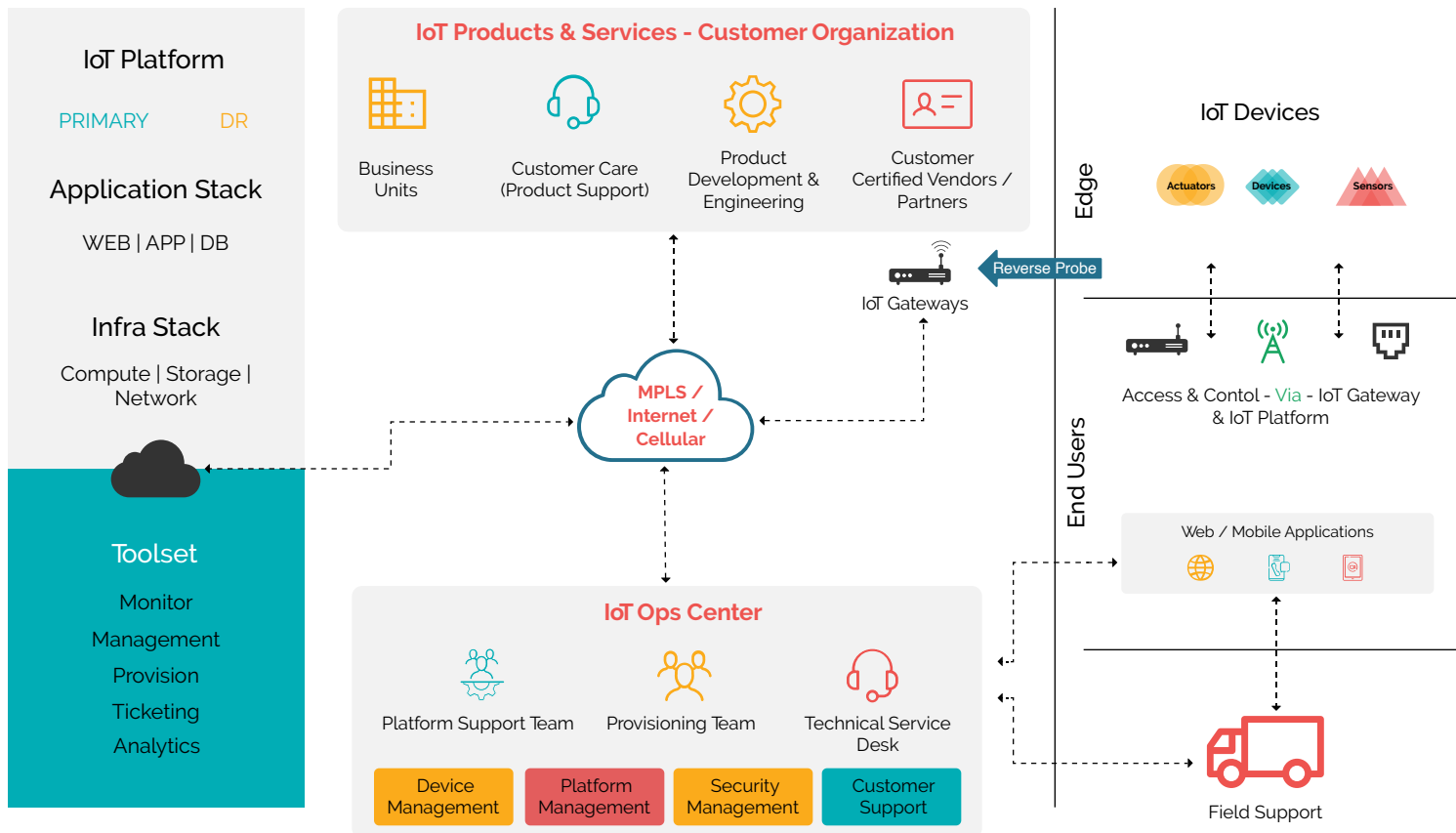
End Device
Connection

IoT Infra Commissioning Cycle



IoT as a product is available in the market. However, it's important to understand the Deployment life cycle of it. The above-shown figure explains the deployment framework and various parties/components involved to make an entire IoT solution chain. As we can see and IoT device with sensors on it is placed in Customer Premise with the help of Field Engineer. Sensors send the telemetric data to the IoT gateway and gateway is an internet-facing device which sends the consolidated data to the **cloud** platform to initiate the device performance analysis and management. At extreme right, we can see a team who monitor and manage the IoT solution to ensure all these components works fine. Any IoT product user can also check the performance and telemetric data of his IoT devices via his handheld devices. Handheld devices and applications fetch the data from a cloud - based SaaS platform.

Phase 3 : IoT Operation Center – Operate and Maintain



Operating any environment is the most challenging task, and it ensures the continuity of the customer or consumer. Value of the product and services comes if we have very effective post-sales service under one umbrella. IoT Ops center provides you post-sales service platform along with deployment and trail services.

Above framework describe the operation or delivery model making it Integrated IoT ecosystem "how all the component and stakeholder are connected."

IoT Components and Stakeholders are:

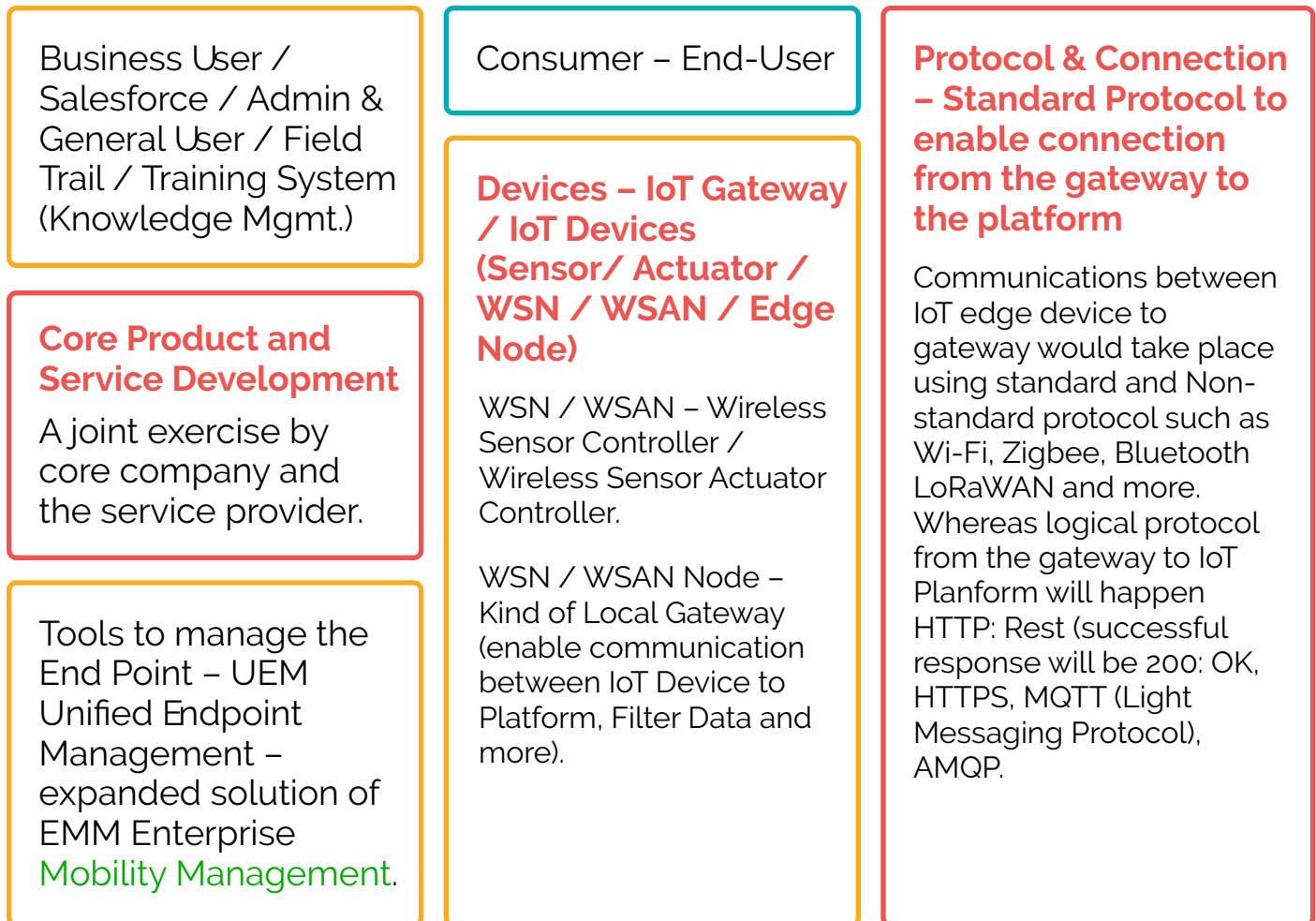
IoT Platform

Physical & Virtual State (Private Cloud / DC) or Cloud State (Public)

Development Center

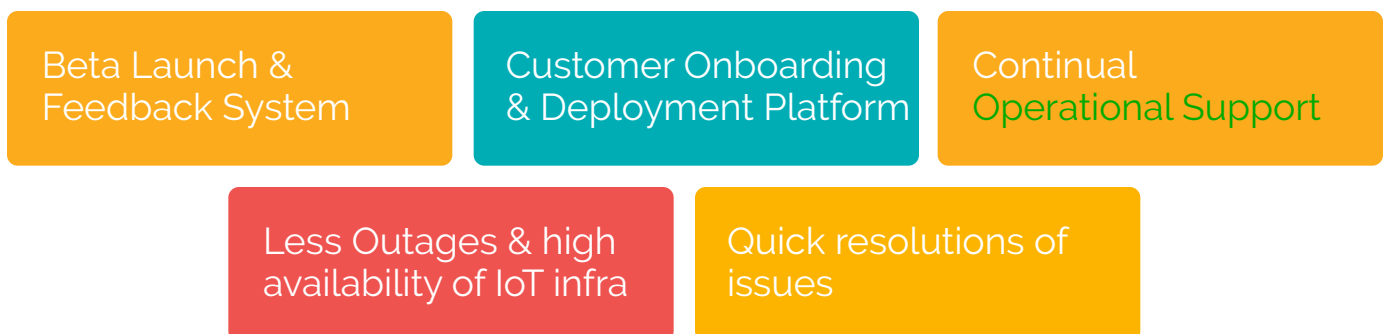
Product Development and Engineering

Customer Care / Technical Help Desk / Field Support Force / Vendor



Solution Benefits

Where we all are deploying the IoT products across all the segments of the market, however, we are still weak on managing and monitoring it for best performance. This document helps us explaining the end to end life cycle of how to manage and monitor IoT products and its core component. Key benefits are as below:



Integrated ecosystem under one umbrella enables you to win customer / consumer confidence

Happiest Minds Play

While, everyone wants to ride the wave of IoT, the real problem comes when they have to do the solution articulation, product launch, integrate with market trends, sustain and maintain the solution. Happiest Minds Technologies has launched a comprehensive End to End IoT Services which will help our customers achieve a smooth transition to an IoT ecosystem.



Platform Solution
Blueprint

Health check of End
Devices connection
(with open protocol)

Data Analysis and
Remediation

User Interaction (Web
and Mobile)

Launch of IoT Product
and Services – Beta
Phase technical

Maintain and Control
the IoT Platform (Edge
Gateway / Local
Processing Center /
IoT Gateway / IoT
Platform (Physical/
Virtual/Cloud state)

Deploy, Maintain and
control the End
Devices (Sensor /
Node / Gateways)

Data Transfer from
Node to IoT Gateway
or IoT Platform
(Telemetric and
Generic Data)

Conclusion

Industries, Enterprises, Cities, Healthcare, Education, Media & Entertainment, High Technical services and more are all exploring the IoT option to make life easier from every aspect. Gartner predicts that approximately there will be twenty billion internet-connected things by 2020, which is expected to grow by 17% - 25% YoY.

IoT aims at providing 6A Connectivity - Anything | Anytime | Anyone | Any Place | Any Service | Any Network, as per research done by Patrick Guillemain from Research Gate.

Author Bio



Chandra Prakash, a Knowledge seeker and Practitioner of IT technologies since 2004. Seasoned IT professional who has developed his skills around IT Infrastructure technologies be it conventional or cutting-edge technologies. He works with Happiest minds; In his current capacity he play diversified techno managerial role and encirclement his responsibilities as Technologies Consultant, Practitioner and Presales consultant and works for all round segment of enterprise to develop IT solutions best suited for their kind of business. Soft attitude guy and Strong believer in Hard work are ready to go down to acquire knowledge.

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About Happiest Minds Technologies

Happiest Minds, the Mindful IT Company, applies agile methodologies to enable digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights. We leverage a spectrum of disruptive technologies such as: Big Data Analytics, AI & Cognitive Computing, Internet of Things, Cloud, Security, SDN-NFV, Blockchain, Automation including RPA, etc. Positioned as "Born Digital . Born Agile", our capabilities spans across product engineering, digital business solutions, infrastructure management and security services. We deliver these services across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

A Great Place to Work-Certified™ company, Happiest Minds is headquartered in Bangalore, India with operations in the U.S., UK, The Netherlands, Australia and Middle East.