



IOT INSIGHTS REPORT:

IoT Strategy & Readiness Part I: Generating a Foundation for IoT Execution

With **Romil Bahl**, President and CEO, KORE

Romil Bahl serves as CEO of KORE. He brings almost 30 years of consulting, information technology, professional services, and IoT experience in high-growth and turnaround environments. Throughout his career, Romil has been instrumental in enabling breakthrough growth in information and professional services organizations. He has risen to complex challenges where he has crafted growth strategies, tapped new emerging markets and energized global teams. His leadership approach reflects deep expertise in developing strong client relationships and creating teams that are driven to innovate and excel.

Prior to KORE, Romil served as President and CEO of Lochbridge, a leading technology solutions provider in the IoT, Connected Car and digital enablement space. Before that, he was EVP and GM of Global Industries for CSC, leading the industry go-to-market dimension across the entire approximately \$9 billion commercial business unit, creating global growth strategies and expanding CSC's global footprint into offerings such as cloud, cybersecurity and big data. Earlier, Romil was CEO of a data analytics-focused public company and had leadership roles at A.T. Kearney, Infosys and Deloitte Consulting.

Romil earned an MBA from The University of Texas at Austin and a Bachelor of Engineering degree from the Directorate of Marine Engineering & Technology in Kolkata, West Bengal, India.

The immense promise of the Internet of Things (IoT) is matched only by its complexity. To fully realize that promise, businesses must first conduct an honest, comprehensive assessment of organizational IoT readiness which will provide the contextual information needed to generate an attainable IoT strategy. Leveraging the results of the IoT readiness assessment, the IoT strategy phase of the deployment will attain greater insights into potential gaps in resourcing and expertise as it delves deeper into the specific components and timelines for IoT solution deployment, providing a framework for businesses to ensure they have a realistic plan, business case, and return on investment.

The IoT strategy of a company should be no different from, or at least should be directly driven from, the overall business strategy. After all, it is IoT that is enabling digital transformations to be truly company-wide, including the "edge" which is increasingly important as organizations finally see the promise of digital transformation come to fruition, with real-time insights from real-time data from the billions of sensors and devices that are expected to outnumber human beings on our planet by 7 or 8 to 1 by 2030. The most important goals of an organization should all have IoT initiatives identified that can help with breakthrough results, from improved customer experience and revenue generation to reduced costs and other internal efficiencies. Further, before launching pilots or proof-of-concepts, developing

a business case is a helpful exercise to identify all the components required and craft an early view of "total cost of ownership."

Each individual IoT sub-strategy or initiative should begin with the identification of targeted business processes to which IoT technologies can be applied to enable transformative business performance. This focused approach allows your organization to identify, on a global basis, where these processes operate, the back-end systems that need to be integrated, and the levels of security required. This understanding lays the groundwork for the numerous strategic decisions that your organization must now evaluate, with some of the most integral elements listed below:

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Security Requirements

Security is a critical consideration in any IoT solution to mitigate risk, so it is imperative to design and build your solution with security as a top priority. At least one member of your development team should be wholly dedicated to security, and, if possible, that person should complete an industry standard security certification. The level of security protocols required is directly proportional to the importance and sensitivity of the data and systems the solution is accessing. IoT security can be divided into three main layers – the device layer, the communications layer, and the application layer – and best practices should be “designed in” and actualized across each of these layers to alleviate security risks and vulnerabilities.

IoT Network Architecture

There are myriad network technology options available for connecting IoT solutions – including cellular, satellite, WiFi, and unlicensed technologies such as LoRa to name a few – however, each option has very specific capabilities related to range, bandwidth, throughput, security, scalability, mobility support, and cost. Your organization should closely examine these technologies to determine the optimal solution that can support the desired outcomes of your IoT project.

IoT Device Requirements

When selecting IoT devices, your organization should first decide if you are going to design and build proprietary equipment in-house, or if an off-the-shelf device will fit the bill. The optimal choice will be dependent on a number of factors related to internal resource availability, size of the deployment, and desired speed-to-market, among many others. Regardless of the decision, businesses must be sure to select the proper device standard to ensure it is compatible with the desired network, security, and application requirements.

Procurement and Sourcing Strategy

The IoT ecosystem is highly complex, with countless vendors offering various single-point solutions, components, systems, and services required to deploy an IoT solution. Your organization should examine all potential procurement activities such as demand forecasting, order management, and inventory management, to ensure resources are in place to manage these processes. Further, it is imperative for businesses to carefully select an IoT partner with complete IoT management capabilities to simplify supply chain operations through partner consolidation.

Piloting Solution(s)

It is often beneficial to start small with IoT, and in fact, according to a recent study from Forbes, 66% of companies that were successful with IoT report that they purposely pursued smaller, strategic IoT initiatives to develop a technology and expertise for larger projects. Pilot programs allow your organization to better understand where and how targeted business processes take place, which back-end systems they are integrated with, as well as how to design critical security requirements, as previously

referenced. Key learnings from pilot programs can guide many of the strategic decisions that follow in a larger deployment increasing changes of long-term success.

Establishing an Organization

IoT solutions often demand enhanced, cross-functional collaboration. When developing the strategy for an IoT implementation, your team should determine which processes will be handled internally, which will require outside assistance, and how those internal and external teams will work together. Due to the significant resources and experience demanded for IoT deployments, engaging a trusted IoT partner that can support and complement internal teams to increase the value delivered by IoT projects is often recommended.

Establishing Governance

IoT governance focuses on the lifecycle of IoT devices, data managed by the IoT solution, and IoT applications. IoT governance processes should apply to the strategy, design, implementation and operation of the solution, and it is critical that the data approach follows company-wide data governance standards. Defining IoT governance in the strategy phase ensures the concepts and principles of the solution’s distributed architecture are managed appropriately and deliver on the stated business goals.

Establishing and Continuously Monitoring KPIs

KPIs for IoT applications and projects should assess the business impact of the solution you are bringing to market. Establishing baselines and benchmarks early in the process ensures that everyone involved agrees on how the initiative is progressing. The KPIs will vary depending on the solution’s objectives – in a fleet management use case, for example, KPIs may include the level to which on-time deliveries have increased, whereas in an industrial use case, KPIs may include the percentage decrease of equipment downtime.



Successful IoT Deployments Require 7 Key Steps

The IoT solution journey begins with a comprehensive strategy:

1 IoT Strategy	2 Security (end-to-end)	3 Technology Evaluation, Selection, Dev	4 Deployment (forward logistics)	5 Operations Management	6 Sustainment & Support (reverse logistics)	7 Analysis & Optimization
Business Process	Endpoint	Network(s) Selection	Demand Forecasting	Help Desk Support	Triage Support	Device
Global Footprint	Release Management	Device/Module Selection & Dev	Order Management	Service Assurance Tier 2 & 3	Claims Processing	Network
Security	APIs	IoT Platform Selection	Staging & Kitting	MNO Operations Support	Replacement Staging & Kitting	Application
Architecture	Network	Application Development	Inventory Management	Managed Services	Advanced Exchange	Business Intelligence
Sourcing	Platform/Cloud	Architecture	Site Survey	Endpoint Monitoring	Re-installation & Activation	Logistics Operations
Pilot	Application	Develop, Test, Prototype, Pilot	Installation & Activation	Network Monitoring	OEM Warranty Management	Support Operations
Organizational Governance	Business Continuity / Disaster Recovery	Certification	Asset Management	Release Management	End of Life Management	Platform

As we exhibit in our comprehensive approach to deploying IoT solutions, there are many complexities that need to be navigated across the IoT landscape to ensure results, and there is no one-size-fits-all strategy that can be applied across industries and unique applications. However, regardless of industry or IoT use case, promoting collaboration, ensuring best-in-class security and choosing the optimal technology mix provides the necessary foundation for IoT success, and partnering with a trusted IoT advisor with deep IoT knowledge and experience, global reach, purpose-built solutions, and deployment agility accelerates value realization and materially impacts business outcomes.

On this latter point of selecting a trusted IoT advisor, one of the key learnings KORE has observed over our decades of IoT experience is that businesses looking to deploy IoT are engaging with too many suppliers. That being said, a key piece of advice we

strive to communicate to our customers is to narrow the number of partnerships as much as possible, to a small, select group or ideally a single partner that can provide as many pieces of the puzzle as possible. This allows our customers to maximize returns on IoT investments since they are focused on their own growth, or on driving insights and better business decisions from the big data now available in real-time from IoT applications across their “edge devices”.

What is Next?

The IoT offers your organization new opportunities for significant innovation and success. For more information on how to capitalize on this digital business innovation, see Part 2 of this IoT Insights Report on preparing to execute your IoT strategy.

For more information, reach out to KORE to learn how we can simplify the complexity of IoT for your business.

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