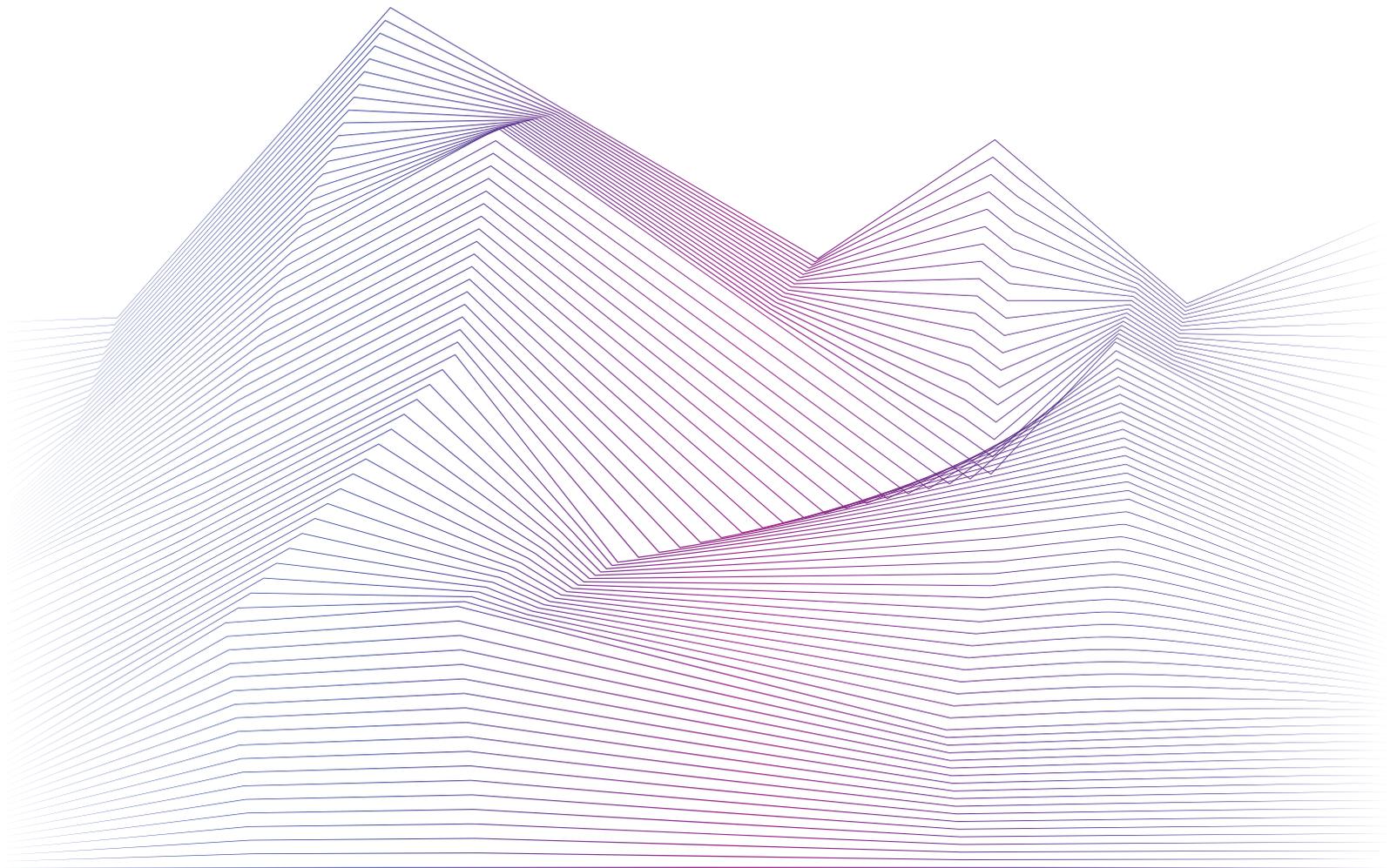


Building tomorrow's data-driven enterprise - why a robust architecture is crucial to drive business transformation



The global buzz around digital transformation in the business and IT world solely rests on data and its injection into organizational culture and strategy - what we have come to know as a “data-driven enterprise”. Cracking the data code is not easy - there are a multitude of challenges around acquisition, processing, analytics, governance, security, and compliance. Organizations struggle to bring in order and standardization to their existing business processes and enterprise IT landscape; not to mention defining a clear framework for data analysis given the multiple data models present within the organizational framework.

A well-defined data reference architecture and process framework is critical for an organization’s sustained digital transformation journey. This whitepaper highlights the importance of a data-driven business strategy and challenges faced by organizations in effectively managing enterprise data. The business value and key benefits of deploying analytics such as positive impact on revenue, brand image, and growth are also indicated. The paper further outlines the need for an extensible and flexible data-driven architecture backed by a strong people-process-technology approach to garner transformational business insights.

INCORPORATING A DATA-DRIVEN CULTURE IS A CRITICAL ORGANIZATIONAL SUCCESS IMPERATIVE

Digital transformation is a cultural process - and it begins and ends with data. Enterprise data is growing at a voluminous pace and organizations are investing heavily in advanced data technologies to transform their businesses digitally.

Collective global big data - that stood at 33 zettabytes in 2018 - is expected to increase to 175 ZB by the year 2025, witnessing a growth rate of 61% - IDC*	Insights-driven businesses are growing at an unbelievable 30% per year and are well on track to register earnings of \$1.8 Trillion by 2021 - Forrester Research**	By 2023, worldwide spending on digital transformation will touch \$2.3 Trillion - IDC***
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*<https://www.networkworld.com/article/3325397/idc-expect-175-zettabytes-of-data-worldwide-by-2025.html>

**<https://www.forrester.com/report/InsightsDriven+Businesses+Set+The+Pace+For+Global+Growth/-/E-RES130848#figure3>

***<https://www.idc.com/getdoc.jsp?containerId=prUS45612419>

For businesses to seamlessly transition to a digital landscape, it is important that data is baked into the very culture of the organization. Data discipline within the enterprise begins from the inside-out – digital maturity is achieved only when there is a cultural shift in mindset that goes beyond technology adoption to leverage data for providing more value to customers. By studying the data flowing freely through the enterprise, organizations can:

make informed decisions regarding product and service innovations

offer better and sustainable value propositions to customers

clearly measure performance and take necessary corrective actions if required

enhance operational and process efficiencies

understand customer preferences and provide superior customer service

boost revenues and maximize profitability

DATA ANALYTICS HELPS UNLEASH TREMENDOUS BUSINESS VALUE

Data is just numbers till it is processed and analyzed to glean useful business insights. Analytics has come to the forefront in the last few years, with data-driven organizations deploying diagnostic, prescriptive, predictive, and descriptive analytical models to slice and dice enterprise data and extract critical decision-fueling insights. Analytics provides immense value by running advanced processes on all the structured and unstructured organizational data to separate the signal from the noise for precise information analysis. Outlined below are some of the business benefits of a structured data analytics strategy.

High revenue and profitability

A data-driven culture empowers organizations with critical information about customer needs and preferences, enabling them to create differentiated, highly personalized value propositions catering to a diverse customer universe. This means superior customer experiences leading to increased sales and repeat customers—and eventually higher revenue. Price optimization is another factor to be considered when measuring revenue. Most organizations are challenged when it comes to fixing price points for their various offerings across the different customer segments. In-depth market and customer data insights help organizations determine the right pricing strategies and subsequently maximize revenue. Market insights further enable data-driven organizations to identify growth opportunities, introduce newer lines of business, and enhance the offerings suite – eventually leading to an increase in sales and hence more revenue and business profitability.

Effective brand recall

When organizations adopt a sustainable data strategy by deploying the right technology and tool stack to extract business insights from data, the underlying benefits extend to the entire business by unlocking maximum value. Analytics provides clear insights on the functioning of enterprise data, leading to better decision making and productivity. Detailed competition mapping and subsequent re-aligning of the go-to-market strategy is critical to retain competitive edge and analytics facilitates this by studying market and competitor data to provide empirical insights. Organizations that act on customer-focused data insights deliver mature and superior customer experiences, thereby driving brand equity and further boosting business value.

Sustained digital transformation

Insights-led innovation is key to building future-ready businesses that can take on competition and disrupt global markets. Forward-thinking organizations factor in innovation in their business models based purely on insights derived from enterprise data. Aligning advanced technologies with data insights is critical to drive digital transformation at scale and organizations that monetize legacy data are better able to modernize the brand vision, mission, and goals focusing on people, process, and technology. Digital transformation is more than mere implementation of cutting-edge technologies – it encompasses a wider strategy of utilizing data-led insights for structured innovation on all fronts. This further fosters a culture where data intelligence fuels business strategy, leading to sustained digitalization of the enterprise.

ROADBLOCKS TO BECOMING A DATA-DRIVEN ENTERPRISE

The journey to digital transformation is fraught with multiple data challenges threatening to slow down or stall organizational efforts in becoming fully data driven. A survey published in 2019 indicates a decline in organizations calling themselves data driven from 37.1% in 2017 to 32.4% in 2018 to 31.0% in 2019¹. While there have been huge investments in big data technologies and advanced analytics over the years, it is worthwhile to mention here that the problem is more cultural than technical. For businesses to profit from insights-based decisions, a culture of data must be woven into the organizational fabric – something 72% respondents of the same 2019 survey agree they are yet to achieve. Some of the main challenges causing failure of several data initiatives are listed below.

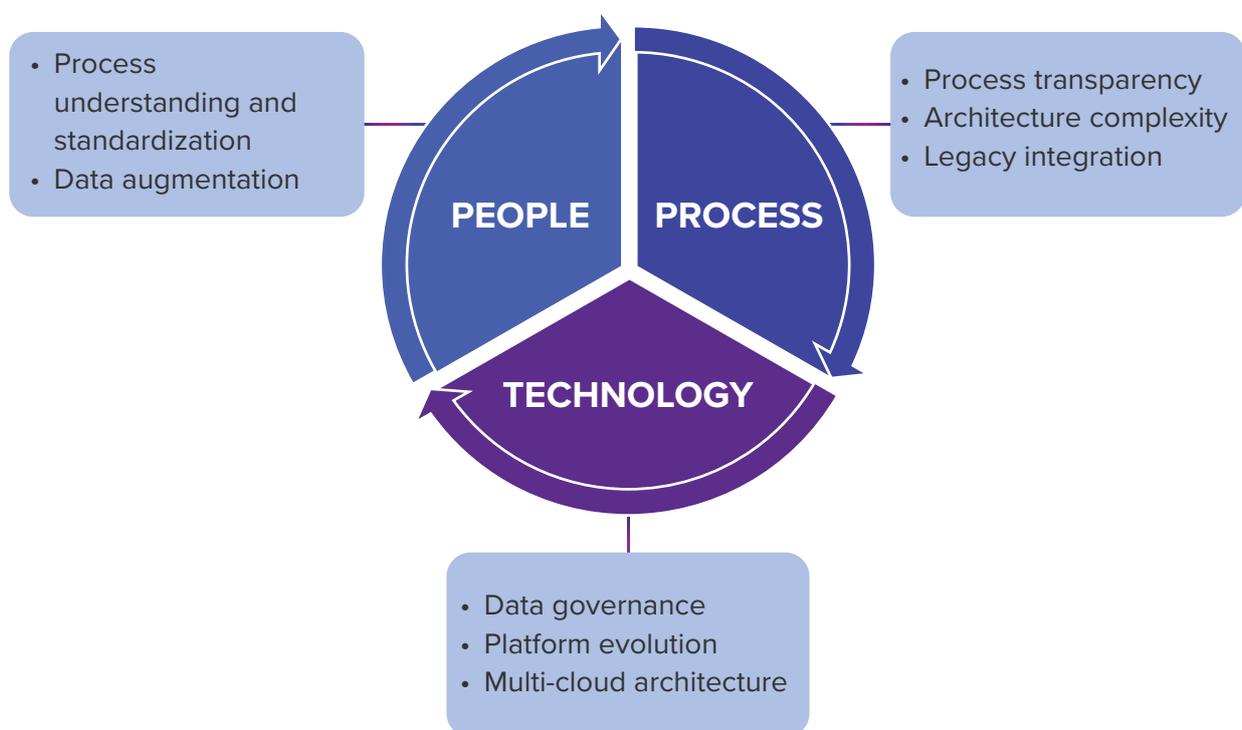
¹ <https://hbr.org/2019/02/companies-are-failing-in-their-efforts-to-become-data-driven>

Siloed Data <ul style="list-style-type: none">• Complexity and inconsistency in data analysis• Fragmented view of enterprise data• Outdated data management methodologies• Resource wastage• Low productivity	Dark Data <ul style="list-style-type: none">• 90% of unstructured enterprise data is dark*• Data collected and stored but not analyzed or put to meaningful use• No value for the business
Absence of a Robust Data Strategy <ul style="list-style-type: none">• Lack of centralized strategy to process multiple data streams from disparate sources	Infrastructure Challenges <ul style="list-style-type: none">• Absence of adequate technological infrastructure to gather, store, and process enterprise data• Data projects randomly assigned to various internal departments such as IT, sales, marketing, finance, and customer service resulting in untested ways of data management and insights analysis

* <https://analyticsindiamag.com/uncovering-enterprise-dark-data-for-successful-business-intelligence/>

THE NEED FOR A PEOPLE-PROCESS-TECHNOLOGY ENABLED DATA ARCHITECTURE FOR INSIGHTS-LED BUSINESS TRANSFORMATION

A robust people-process-technology enabled assessment framework backed by systems and processes that can slice and dice enterprise big data, run analytics, and garner actionable insights is critical for business transformation. A data-driven culture brings more method to the data madness, creating sustainable technology growth and helping organizations transform digitally with more agility and scalability.



Data governance, security, and compliance

Governance is a critical component in resilient data management. Effective governance provides clarity on what datasets are owned by the organization, which department/individual controls this data, what information can be extracted, and how should this data be used. Good governance enhances the utility of enterprise data from both internal and external sources, reinforces the application of advanced technologies, and assists in compliance efforts. Efficient governance further ensures accuracy, integrity, and security of enterprise information systems and sensitive data. A robust data governance framework assists in better data management planning, monitoring, and control.

DATA MANAGEMENT PLANNING

- Identify enterprise data requirements
- Build a robust data strategy
- Assign data-specific roles
- Enable data stewardship
- Develop data assessment framework
- Define data standards and policies

DATA MANAGEMENT CONTROL

- Supervise and manage data governance initiatives
- Enforce data compliance and standards
- Monitor and control processes and data architecture
- Oversee data management projects

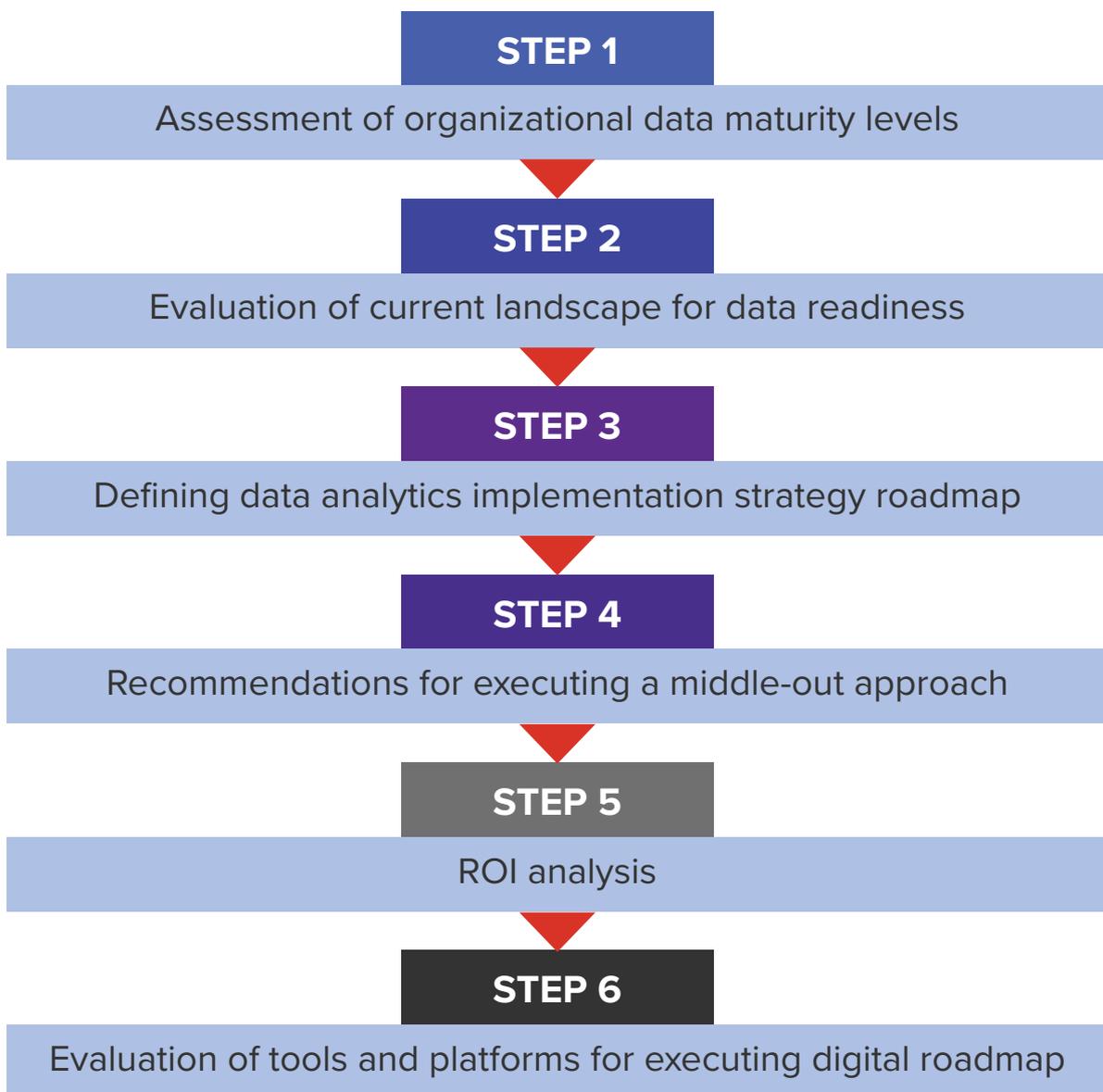
Continuous technology and platform enablement

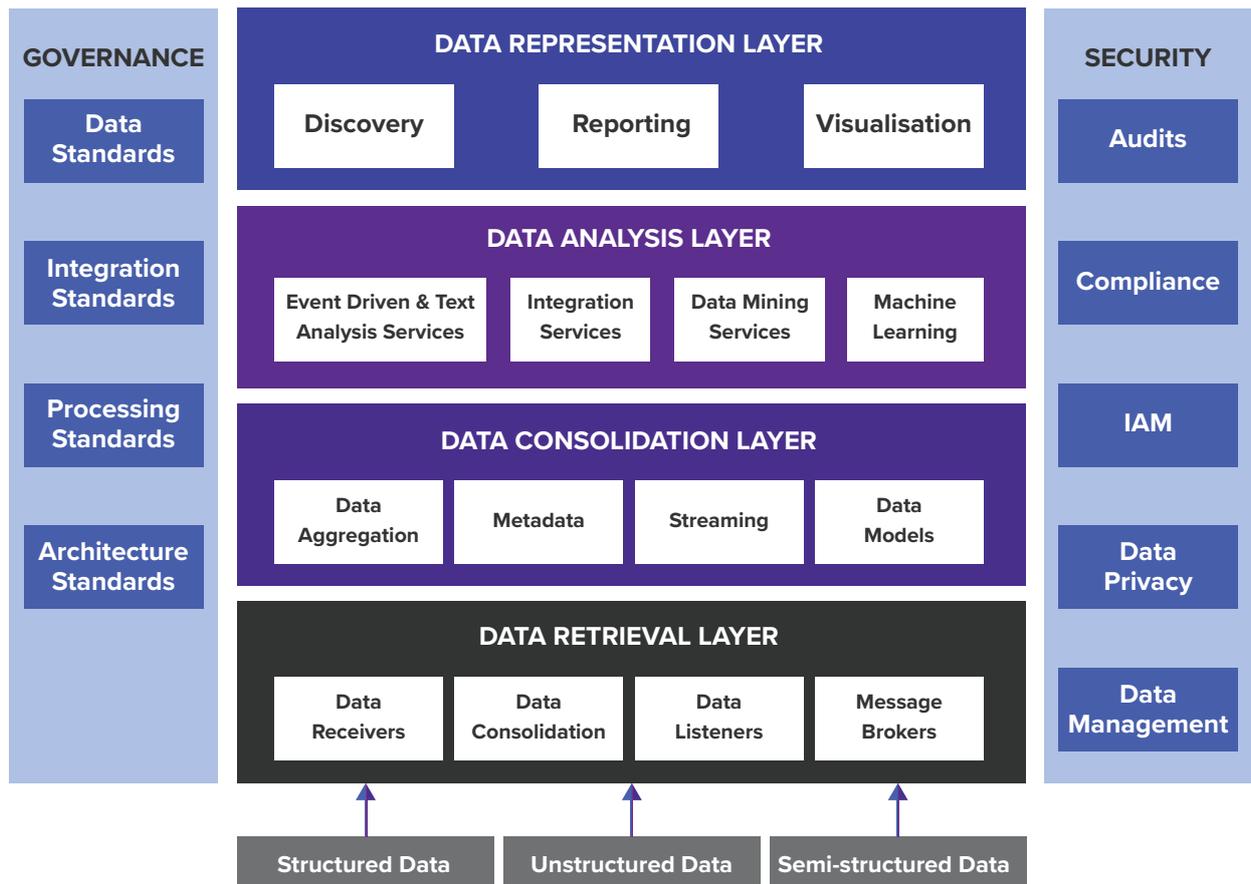
For an organization to become truly data driven, an important step is to democratize data access and achieve the transformation from raw data to meaningful insights within a short span of time. This requires a continuous and sustained evolution of the data platforms and associated components at scale, achieved by expanding and updating individual frameworks and inherent capabilities without disrupting the overall data architecture.



EMTEC DIGITAL'S AGILE, SUSTAINABLE, AND SCALABLE ENTERPRISE DATA ARCHITECTURE

At Emtec Digital, we take a middle-out approach to assess, identify, and resolve enterprise data challenges at every functional level, and help clients acquire deeper insights for better strategy alignment. Our data assessment experts review existing data systems and processes, identify gaps in data management, and help multiple functional teams understand how the data is structured, represented, and standardized across the organization. We leverage our extended platform expertise to enable clients to take the right technology decisions that result in impactful business growth.





Our systematic approach to creating a data-driven architecture offers tangible benefits in the form of -

Uncovering actionable insights from historical and current enterprise data

Improving organization-wide visibility into business operations

Setting achievable long-term technology goals for agile transformation

Creating a culture of technology readiness and process best practices based on data insights

Conclusion

The success of any digital transformation initiative is measured by organizational readiness to adopt a data-driven culture and achieve technology maturity, while ensuring sustained innovation and business profitability. The right data strategy backed by advanced technologies and a scalable enterprise data architecture is necessary to extract powerful insights that deliver enhanced business value. An experienced partner with proven capabilities in data assessment and expertise in emerging technologies can ease the arduous journey to digital transformation with increased efficiency and sustainable growth.

For over a decade, Emtec Digital has been helping organizations transition to newer and innovative data-driven business models for the digital era and accelerate business transformation at scale. Right from assessing your current data maturity to building a powerful data strategy and executing tested data-driven frameworks, our range of services and data capabilities will guide you on this difficult path of balancing innovation, transformation, and revenue growth.

ABOUT THE AUTHOR



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Nandakumar is a Digital Transformation Leader with over 20 years of experience in the IT industry. He has worked in sectors such as supply chain management, transportation and others, where he handled pre-sales, business requirements, solution and technical architecture, planning, project delivery and management.

For the last 5+ years, he has helped guide clients through their digital transformation initiatives involving cloud, big data, analytics, mobility and more. He also helps clients and organizations build scalable enterprise applications to support business needs and map their business processes to technology investments.

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ABOUT EMTEC DIGITAL

Emtec, an IT consultancy, is dedicated to helping our clients drive transformation and growth by employing the latest enterprise technologies and innovative business processes to empower their employees, accelerate innovation and deliver amazing client experiences.



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