



# Building a Winning Data Strategy to Enable Digital Transformation



# TABLE OF CONTENTS

1.	Overview .....	1
2.	Barriers affecting AI realization .....	2
3.	Strengthen Data Strategy .....	2
4.	Alternate solution .....	2
5.	Marlabs Approach.....	4





## Overview

Today, thriving in a competitive world means businesses adopt a data-driven strategy. Growth is a primary objective for a business. Traditionally, businesses have observed linear growth. At the end of the last decade, market leaders or disruptors are the ones that follow a data-centric strategy toward exponential growth. However, data is still an afterthought to a business strategy.

As corporate data volumes grow, it introduces data complexities and diversity that are yet to be efficiently addressed. Technologies of artificial intelligence (AI) and machine learning (ML) are helping businesses overcome technical debt. According to the International Data Corporation (IDC), global spending on AI is forecast to double over the next four years, growing from \$50.1 billion in 2020 to more than \$110 billion in 2024. The assumption here is that investments in new technology would lead to higher results. But are we seeing this happen?

```
ses, self.weights):  
    (activation)+b  
  
d(z)  
activation)  
ative(activations[-1], y) * l  
])  
lta, activations[-2].transpose()  
.num_layers):  
z)  
.weights[-l+1].transpose(), delta) * sp  
t(delta, activations[-l-1].transpose())  
w)  
a):  
ax(self.feedforward(x)), y)  
in test_data  
in test_results  
ions, y):
```



## Barriers to realizing AI investments

Despite the high investments, most organizations are still data-rich, but information poor. Businesses are unable to realize the benefits of AI/ML owing to several barriers. In a recent survey, Gartner lists the barriers to AI/ML implementation:

- Unable/hard to measure the value
- Data volume and complexity
- Data scope or quality problems
- Data accessibility challenges

Data management is a recurring barrier to business growth. Corporate data constitutes a large volume of financial and operational data. However, the data is stored across systems and locations with no standard data definitions. The unorganized data cannot be used by the AI systems that require clean, consistent, and relevant data.

It is clear that data is central to business growth. Defining what data to gather, how to analyze, and how to apply the insights requires a sound data strategy in place. But what is data strategy?

## Building a Focused data strategy

Data can no longer be an afterthought for business operations. It is rather a critical corporate asset that enables processing and decision making. An effective data strategy is fundamental to achieving the business growth goals that underly any digital transformation initiative. Data strategy is pivotal to achieve results from AI/ML investments. Understanding your data and integrating it into every step of decision-making helps in establishing data and market dominance. The benefits include:

-  Avoid friction between teams
-  Higher ROI on overall IT efficiency
-  Efficient resource utilization
-  Higher data accuracy and usability
-  Quicker maturity attainment for market competitiveness
-  Readiness in security and compliance

Currently, several organizations have one or more data management solutions (data platform, master data management, analytics maturity, quality etc.,) implemented. However, these solutions are limited to a specific business need. A robust data strategy aligns these disparate resources toward business growth. The main goal of a data strategy is to improve the process to acquire, store, manage, share, use data, and ultimately automate the entire process.

Nearly every new application requires access to digital data assets. Traditionally, the process of acquiring the data insights is through manual processing of data from disparate systems. This process is long, arduous, and inefficient as it does not cover all aspects of corporate information. With data gathering being the limiting step, how do you create products at high velocity and scale?

## Composable architecture for AI/ML

AI/ML applications demand a sophisticated architecture that governs all the data resources across on-premises, hybrid cloud, and multi-cloud environments. This unified architecture encompasses a single environment that simplifies and integrates data management initiatives to accelerate digital transformation.





Data fabric is one such architecture. According to Gartner, data fabric is the future of data management. Gartner defines data fabric “as a design concept that serves as an integrated layer (fabric) of data and connecting processes.” The architecture combines human and machine capabilities to serve up the microservices that carry the intelligence of the organization. For example, data services for location services or customer management.

Is data fabric another term for data lake? – No.

Data Fabric approach is more focused on Architecture than technology. It answers the most important questions around data – How do we use data? Where can we use it? Bringing context to data is essential for accurate AI/ML analysis. Data fabrics are different from data lakes as they present:

- ➔ Augmented data catalogs – an inventory of all data assets of an organization
- ➔ Advanced knowledge graphs – efficient correlation of data points and resources
- ➔ Newer concepts of semantics – assimilates data from all touchpoints to create a customer 360 view.

A data fabric essentially helps companies overcome the technical debt and provide the required AI/ML data services. It addresses the challenges to enable hyper-automation by:

- ➔ Removing semantic ambiguity – providing contextual data and making it machine understandable. The value of data fabric is in its ability to transform data into machine-readable or understandable formats. The new algorithms enable the machines to easily pick organized data for use by other consumers (applications, software, etc.
- ➔ Improving data quality - with a data-centric approach to organizing data.



## Our transformation approach

The successful organizations in the market are the ones that have addressed the problems to enable automation. Building composable business applications from the data fabric hasten the product development and delivery process. Realizing the value of AI investments requires a defined goal, scope, focus, and development approach. The transformation journey is an incremental development process that allows companies to fail fast. Our approach takes a digital data-centric route to enable exponential growth for businesses over the course of 8-weeks.

### Week 1: Understanding strategic intent

The first week lays out the business goals of the organization. Defining the business goals is critical to understand the strategic intent. The week also entails in-depth background documentation analysis to prepare for the digital transformation.

### Week 2-3: Digital twin planning

Identifying the digital gaps in your organization's products and services undergoes a thought experiment of digital twin planning. Imagine a digital twin of your company that provides the same products and services as you. While you are an established enterprise, the digital twin differs by hyper-automating every aspect of their data. In a data-driven world, your digital twin is the successor as it has the advantage of operating at higher efficiency and lower costs – emerging as a market leader. This exercise chooses critical business aspects for digital transformation and simulate digital solutions for business growth.

### Week 4: Data strategy planning

The key component of the transformation approach is the data strategy. During this week data insights are used to design, develop, and test minimal viable products (MVPs).

### Week 5: Understanding the barriers

The MVPs developed help in understanding product usability issues. Developers, UI/UX testers, and marketers work together to identify potential fail points and how to overcome the challenges.

### Week 6: Digital data-centric product platform

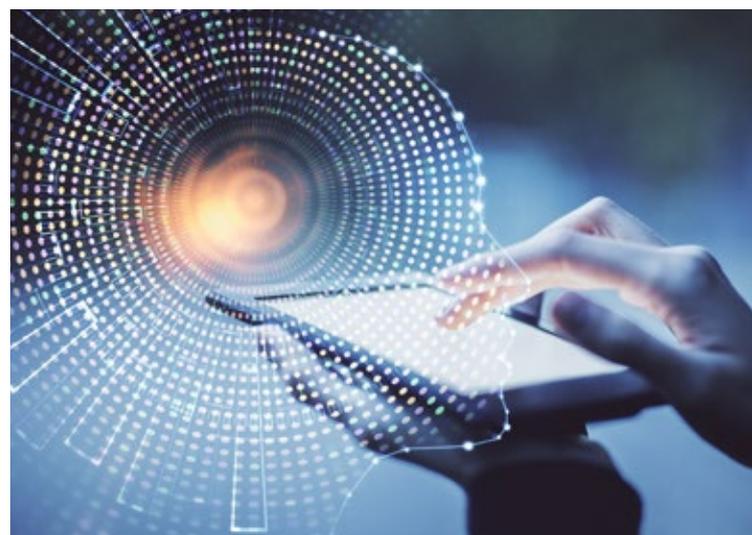
Developing products at hyper-velocity requires focused microservices development. On a data-centric platform, a large collection of microservices are composed into several products. Driven by AI/ML, the platform delivers the product with hyper-automation, high scalability, and focused on customer experience for high delivery velocity.

### Week 7: Refinements and improvements

A data strategy initiative is not a one-time exercise. The process is iterative and evolves with the business and its long-term goals.

### Week 8: Leadership presentation

With a detailed plan, developers can now present their strategy to executive leadership. The MVPs and data insights present a successful business case to key decision-makers. Organizations that have just started their digital transformation journey should build their data strategy based on the data fabric. On successful implementation, organizations can leverage no-code platforms to create application composition platforms to quickly develop products and go to market. Ultimately, data strategy is a roadmap for addressing your current and future data management needs.



**Mahesh RG**

Principal Architect, at Marlabs





# Building a Winning Data Strategy to Enable Digital Transformation by

Published by: Marlabs Inc.  
Inspired by: Zhamak Dehghani, ThoughtWorks



## About Marlabs

Marlabs designs and develops advanced digital solutions that help its clients improve business outcomes swiftly and precisely. It succeeds by harnessing the power of the Digital Collective™, which brings together design-led digital innovation with human experience, composable digital platforms, and a collaborative ecosystem of first-class technology partners and innovators.

Marlabs is headquartered in the New York Metro area, with offices in the US, Germany, and India. Its 2500+ global workforce includes highly experienced technology, platform, and industry specialists from the world's leading technical universities.

Marlabs Inc.(Global Headquarters) One Corporate Place South, 3rd Floor, Piscataway, NJ - 08854-6116,  
Tel: +1 (732) 694 1000 Fax: +1 (732) 465 0100, Email: [contact@marlabs.com](mailto:contact@marlabs.com)