CHALLENGES WITH NEW AGE DIGITAL STARTUPS

by

Nitin Kukreja

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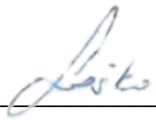

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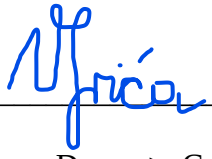

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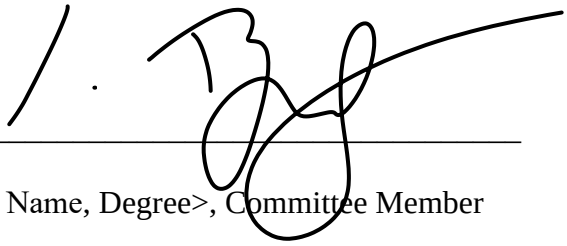

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Declaration

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- The entirety or the majority of this work was completed during my doctoral studies at the Swiss School of Business and Management, Geneva.
- In cases where any part of this thesis was previously submitted for a degree or any other qualification, whether at this University or any other institution, it has been explicitly mentioned.
- I have always provided clear attributions when consulting published works by others.
- Any quotes taken from the work of others are accompanied by proper source references. Besides these quotes, the entire content of this thesis is my original work.
- I have duly acknowledged all primary sources of assistance and support.

Signed: 

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Date: **July 30, 2023**

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ABSTRACT

CHALLENGES WITH NEW AGE DIGITAL STARTUPS

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2023

Dissertation Chair: <Chair's Name>

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In recent times, there has been a significant surge in the popularity of the terms "digital transformation" and "startup." Considering the ongoing digital transition, this research proposal aims to investigate the key factors that contribute to the success of startups. To provide a comprehensive understanding of digital transformation, the proposal begins by defining the concept and explaining its operational mechanisms.

Startups have traditionally achieved success in the business sector by introducing disruptive innovations. However, it remains a challenge to discern how startups differ from more established businesses in terms of strategy, management, and organizational structure. This study recognizes the potential drawbacks that may arise during the digital transition, which are discussed in the final section.

The primary objective of this research proposal is to help readers comprehend the distinct benefits that digital transformation can offer to startups. Additionally, this study aims to identify the specific challenges that startups face in adopting project management

practices, particularly within the digital or information technology industry. By examining various project management techniques employed by startups, the desired outcome of this study is to showcase how startups develop project management approaches and address associated issues.

GLOSSARY

- **Digital Startup**: A newly established business that operates primarily through digital platforms, leveraging technology to deliver products or services.
- **Disruption:** The process by which a new product, service, or technology significantly alters existing markets and business models, often displacing established industry players.
- **Entrepreneurship**: The activity of designing, launching, and running a new business venture, typically characterized by innovation, risk-taking, and the pursuit of growth opportunities.
- **Agile Methodology**: A project management approach that emphasizes iterative development, flexibility, and collaboration to quickly respond to changing requirements and deliver value to customers.
- **Minimum Viable Product (MVP):** A basic version of a product or service that has enough features to satisfy early customers and gather feedback for further development.
- **Lean Startup:** A methodology for developing businesses and products that emphasizes validated learning, rapid experimentation, and iterative product releases.
- **Scalability:** The ability of a system, process, or business to handle increasing levels of workload, users, or data without significant degradation in performance or efficiency.

- **User Experience (UX):** The overall experience and satisfaction that users have when interacting with a digital product or service, including ease of use, efficiency, and delight.
- **User Interface (UI):** The visual and interactive elements of a digital product or service that users interact with, including screens, buttons, menus, and navigation.
- **Data Analytics:** The process of collecting, analysing, and interpreting large sets of data to identify patterns, extract insights, and make data-driven decisions.
- **Artificial Intelligence (AI):** The simulation of human intelligence in machines, enabling them to perform tasks such as speech recognition, problem-solving, and decision-making.
- **Machine Learning:** A subset of AI that involves algorithms and statistical models that allow computer systems to learn from and improve with experience without being explicitly programmed.
- **Cybersecurity:** The practice of protecting computer systems, networks, and data from unauthorized access, theft, damage, or disruption.
- **Cloud Computing:** The delivery of computing services, including storage, servers, databases, software, and analytics, over the internet, providing on-demand access and scalability.
- **Digital Transformation**: The integration of digital technologies into all areas of a business, leading to fundamental changes in how it operates, delivers value, and engages with customers.

- **E-commerce:** The buying and selling of goods and services over the internet, typically involving online transactions, electronic payments, and digital marketing.
- **Disintermediation**: The removal of intermediaries or middlemen from a supply chain or distribution channel, often facilitated by digital platforms that directly connect buyers and sellers.
- **Startup Ecosystem:** The network of organizations, resources, and support structures (such as incubators, accelerators, investors, and mentorship programs) that foster the growth and success of startups.
- **Customer Acquisition**: The process of attracting and gaining new customers for a product or service, typically through marketing, sales, and promotional activities.
- **Business Model Innovation**: The creation or modification of a business model to deliver value in a unique and differentiated way, often driven by new technologies or market opportunities.

LIST OF ABBREVIATIONS

NADS	New Age Digital Startups
AI	Artificial Intelligence
ML	Machine Learning
AR	Augmented Reality
VR	Virtual Reality
IoT	Internet of Things
SaaS	Software as a Service
PaaS	Platform as a Service
IaaS	Infrastructure as a Service
MVP	Minimum Viable Product
UI	User Interface
UX	User Experience
CTA	Call to Action
CRM	Customer Relationship Management
CPC	Cost Per Click
CPA	Cost Per Acquisition
CTR	Click-Through Rate
SEO	Search Engine Optimization
SEM	Search Engine Marketing
ROI	Return on Investment

KPI	Key Performance Indicator
CRO	Conversion Rate Optimization
MVP	Minimum Viable Product
B2B	Business to Business
B2C	Business to Consumer
CAC	Customer Acquisition Cost
LTV	Lifetime Value
CRM	Customer Relationship Management
CPM	Cost Per Thousand Impressions
API	Application Programming Interface
SDK	Software Development Kit
UXD	User Experience Design
CTA	Call to Action
DM	Direct Message
CPC	Cost Per Click
CEO	Chief Executive Officer
UXD	User Experience Design
CAC	Customer Acquisition Cost
KM	Knowledge Management

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CHAPTER I:

INTRODUCTION

1.1 Introduction

The term "new age startup" refers to startups that are based on cutting-edge technologies and innovative business models. These startups are often focused on disrupting traditional industries and creating new markets. New age startups can be based on a variety of technologies, including artificial intelligence, blockchain, the Internet of Things, and virtual and augmented reality (Adler-Milstein, 2021; Kraus et al., 2021). They leverage new business models such as the sharing economy, subscription-based services, and on-demand services (Ebert and Duarte, 2018; Vial, 2021; Zasa et al., 2020). In addition to their focus on technology and innovation, new age startups are often characterized by their agility and ability to adapt to rapidly changing market conditions. These are highly scalable and able to grow quickly, and funded by venture capital or other sources of startup funding (Balakrishnan and Das, 2020; Kozarkiewicz, 2020). Examples of new age startups include Uber, Airbnb, Tesla, and SpaceX, as well as a wide range of startups in industries such as fintech, healthtech, and edtech.of challenges that can make it difficult to launch, grow, and sustain a successful business.

This study covers the some of key challenges that digital startups faces and focuses on the ‘Project Management’ challenge. Proposed research also enables readers on the life cycle of Digital & Non – Digital Startups. Result of extensive surveys on more than 100+ digital startups provide a detailed explanation on the latest project management methods and challenging areas.

Digital startups face a variety of challenges that require careful planning, strategic thinking, and effective execution to overcome. While these challenges can be daunting, they also represent opportunities for entrepreneurs to innovate and create value in the digital economy. Some of the key challenges are:

- **Increased Competition**: With the rise of digital technology, it's easier than ever for entrepreneurs to start a new business. This means that new age digital startups often face fierce competition from other startups and established companies.

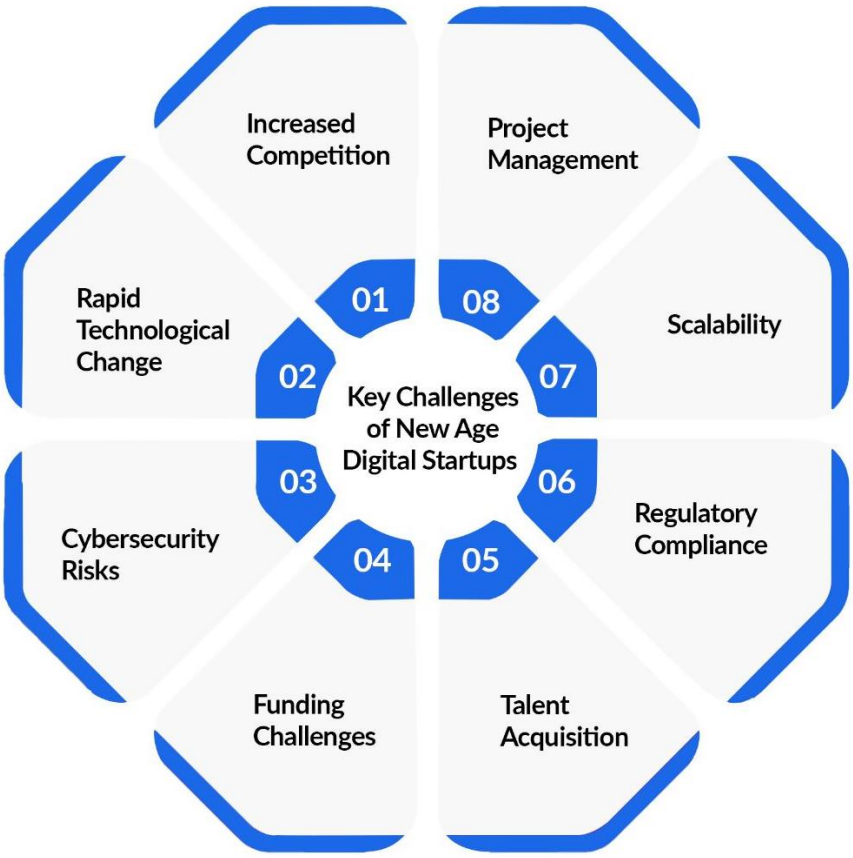


Figure 1.1

Key Challenges of New Age Digital Startups

- **Rapid Technological Change:** The pace of technological change is constantly accelerating, which can make it difficult for digital startups to keep up with the latest trends and innovations.
- **Cybersecurity Risks:** As digital startups rely heavily on technology and online platforms, they are often vulnerable to cybersecurity risks such as hacking, data breaches, and theft of intellectual property.
- **Funding Challenges:** Digital startups may face challenges in securing funding, especially in the early stages when they have not yet proven their business model and revenue potential.
- **Talent Acquisition:** Digital startups require specialized skills and expertise in areas such as software development, data analytics, and digital marketing. Finding and retaining top talent can be a challenge, especially for startups with limited resources.
- **Regulatory Compliance:** Digital startups may be subject to a complex web of regulations and compliance requirements, especially in areas such as data privacy, intellectual property, and cybersecurity.
- **Scalability:** Digital startups often have ambitious growth plans, but scaling up can be difficult and expensive. Ensuring that their technology and infrastructure can handle increased demand, while maintaining a high level of quality and customer service, can be a challenge.
- **Project Management:** Effective project management is critical for new age startups, as they operate in a fast-paced environment with constantly evolving technologies, markets, and customer needs.

Figure 1.1 depicts the key challages that new age digital startups are facing, nowadays. This thesis aim to provide the value insight and key recommendations on the Project Management and its various challenges.

1.2 New Age Startups

Today's innovation landscape views startups as vital contributors. Startups are fledgling businesses that are formed to create a one-of-a-kind service or product, bring it to market, and make it compelling and irreplaceable to clients. In the business world, "startup" is frequently used as a catch-all buzzword. Startup is a term that is being used more and more, yet it is frequently ambiguous (Majchrzak et al., 2016). The term "startup" does not, in fact, refer to a new business that uses new technologies. To completely comprehend a startup's role in the economy, it is crucial to define it correctly (Ebert and Duarte, 2018; Westerman et al., 2014). A startup is a transient organization created to look for a repeatable and sustainable business model (Sadeghiani et al., 2022). Figure 1.2 depcits, the life cycle of a startup can be broadly divided into five stages*:*

- **Idea and Concept Stage:** This is the stage where the idea for the startup is conceived. The founders identify a problem or an opportunity and develop a concept for a product or service that solves the problem or leverages the opportunity.
- **Seed Stage**: This is the stage where the founders begin to develop their idea into a viable business. They may build a prototype, conduct market research, and develop a business plan. At this stage, the startup may raise seed funding from angel investors or venture capitalists.

- **Growth Stage**: This is the stage where the startup begins to scale its operations. It may start generating revenue and may raise additional funding to fuel its growth. The startup may also begin to hire employees and build out its infrastructure.

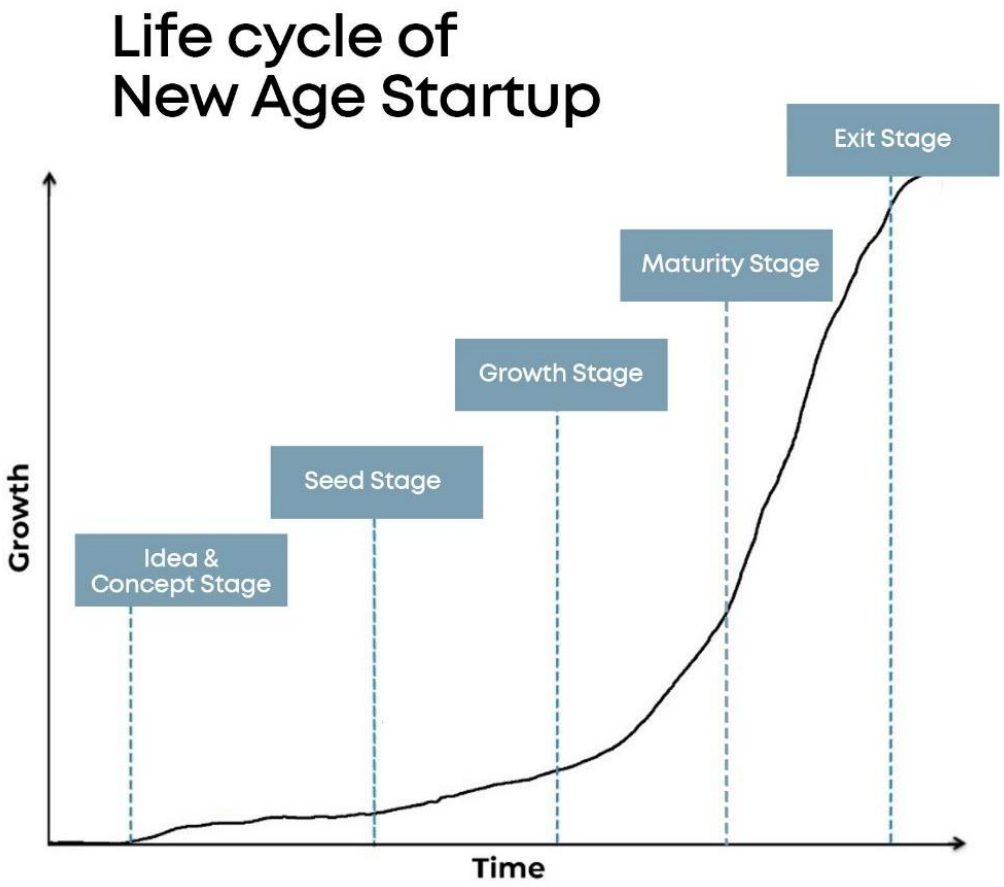


Figure 1.2

Life Cycle of New Age Startup

- **Maturity Stage**: This is the stage where the startup has established itself in the market and is generating consistent revenue. It may have a loyal customer base

and a strong brand. At this stage, the startup may look to expand its product line, enter new markets, or consider an exit strategy.

- **Exit Stage**: This is the stage where the startup is acquired by another company or goes public through an initial public offering (IPO). The founders and investors realize a return on their investment, and the startup transitions into a new phase of its life cycle as part of a larger company or as a publicly-traded entity.

Note: Not all startups will follow this exact life cycle, and some may experience different stages or move through them at different speeds. Depicted information in the figure 1.2 is founded from the extensive literature. However, this framework provides a general overview of the typical stages that a startup may go through as it grows and evolves.

1.3 New Age Startup: Classification

There are five popular ones of businesses across a wide range of industries, each with its own approach to scaling. Figure 1.3 boardly explain the various category of each of them.

- **Small Business Startups:** Using the criteria outlined above, the ordinary startup shares more widely with a small local business than it has with Apple or Google. And, yes, the line in between startups and smaller companies is hazy. That could explain why so many individuals use the words interchangeably (Koeleman et al., 2019; Ziyadin et al., 2020). Most entrepreneurs include some sort of "bigger" endgame in mind, including being bought off and receiving a cash injection. Startups for small businesses are unique (Gonçalves et al., 2022).

These startups, which range from partnerships and sole proprietorships to small teams, are content to remain so as they sell their goods and services. And, while they want to grow, they do so at one own pace (Guinan et al., 2019a).

Such startups are frequently bootstrapped or self-funded, which means there is less pressure to scale quickly or be compelled to the immediate requirements of investors. One such startup is 24 Hour Tees. They regard their place of work as a family, despite the fact that they run an effective, scalable business (Lanzolla and Anderson, 2008). They also demonstrate that you don't need to belong to a tech firm to gain from technology. Even if you're a startup that makes T-shirts, simply being interested in and aware of technology can save you a lot of time and money (Cooper and Sommer, 2018). Enterprises such as 24 Hour Tees engage in toolkits and automation systems to max up their business, as opposed to old-school smaller firms that get jammed in their ways (Kane et al., 2015).

- **Scalable Startups**: Companies seeking finance (or scale themselves): The urge to scale is a common thread throughout all sorts of companies. This is true whether you're a company with hundreds of workers or a couple operating out of your parents' garage (Griva et al., 2021; Lanzolla and Anderson, 2008) . However, some startups are more easily scaled than others. Most consumer and commercial applications are instances of scalable startups: after they've generated awareness and a user base, acquiring new clients becomes easy. It's like a snowball effect (Reis et al., 2018).

  Scalable businesses do this by raising funding coming from external financiers (consider the following: angel funders, venture capital firms, business partners, friends, and family). With their newfound income, they may

fund expansion activities to gain more consumers and eventually attract the attention of those eager to buy them out (Verhoef et al., 2021). However, there are certain firms that can expand indefinitely without relying on a typical exit plan. Convert Kit is an excellent example. The firm has previously received finance, but it just exceeded $15 million ARR as well as hopes to keep its "startup" status (Griva et al., 2021).

Furthermore, organizations seeking to expand and raise financing may not always need to rely on billionaires or millionaires to do it. In reality, several firms, like Oculus, have grown through crowdfunding from enthusiastic, potential clients

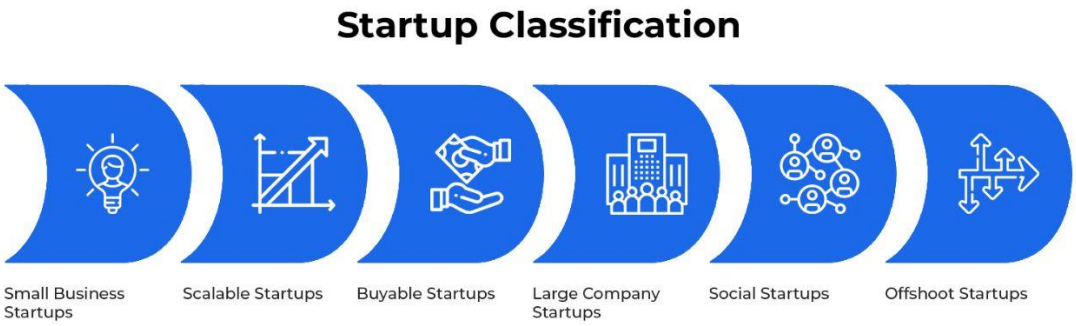


Figure 1.3

Classification of Startups based on the size and service offered.

- **Buyable Startups (Businesses Designed To Be Purchased):** The idea is that small teams create a business from the ground up and then sell it to a larger player in their sector (Cavallo et al., 2019). Typically, these startups are affiliated with software and technology. You've probably seen headlines about Amazon or Uber purchasing out smaller startups. Such mergers and

acquisitions occur frequently (Gonçalves et al., 2022). Getting bought out looks like a good bargain, doesn't it? However, creating something valuable enough to be purchased worth millions (or billions) of dollars is simpler said than done. Assume first that competition in any particular software business is severe (Cooper and Sommer, 2018; Lanzolla and Anderson, 2008; Verhoef et al., 2021) .

In B2B SaaS alone, there are hundreds of companies to fight with. Bear in mind that companies do not have to be successful in order to be acquired (and many are not). This presents a significant danger for shareholders, but an even greater one for business owners who are seeking to sell a firm that is losing money. Look no farther than WeWork's untimely demise to see how complicated this procedure can be (Gonçalves et al., 2022). However, there are many independent app developers and lower divisions that spend several years on a corporation (or even a minor hustle) before selling it to a larger corporation. What's the bottom line? Creating a buyable firm does not have to imply "go big or go home."

- **Large Company Startups:** Large businesses must continuously innovate due to the shifting environment. They are supposedly large-scale startups. These companies will have an infinite lifespan if they continue to innovate in response to new competition, changes in customer tastes and preferences, and technological advancement (Cavallo et al., 2019).

  They have the potential to become a driving force for more disruptive innovation. Google and Android are two such startups. New markets are responsible for engaging customers with the sales of new goods and services (Kane et al., 2015).

- **Social Startups (Charitable Organisations and Non-Profits):** Startups are commonly portrayed as being preoccupied with growth and money. However, other businesses are purpose-built to accomplish good. Charities and nonprofits are examples of social startups that scale for the purpose of generosity (Cooper and Sommer, 2018; Kane et al., 2015).

  They function in the same way as any other firm, but with the assistance of funding and benefactors. Code.org is a shining instance of a social enterprise, having raised approximately $60 million (as from such as Google and Fb) to assist provide students chances in the area of computer science (Gonçalves et al., 2022; Griva et al., 2021; Ziyadin et al., 2020).

- **Offshoot Startups (Companies That Break Out From Larger Enterprises):** Not all startups are developed from the roots up. An offshoot firm is self-explanatory.

  Simply described, these are startups that break away from larger parent corporations to become independent enterprises (Mukti et al., 2019). An offshoot firm, for example, may be founded in order enable a larger corporation to enter a new industry or undermine a smaller competitor. Because these startups operate freely of their parent corporations, they are allowed to conduct operations and experiment without attracting undue attention or criticism. As Investopedia points out, an excellent example of a subsidiary is Sidewalk Labs (a subsidiary of Google's parent firm Alphabet) (Ziyadin et al., 2020).

1.4 New Age Digital Startup

The mobile and internet revolution has created opportunities for digital entrepreneurs. You will be a digital firm if you translate an amazing concept into a mobile app or

website (Griva et al., 2021; Verhoef et al., 2021). According to Matt et al., (2015) many digital firms act as a bridge among two parties or as a helping hand for certain services. Because it is so simple to launch a digital company, it requires far less infrastructure and capital than any other traditional firm (Kersten, 2018).

The life cycle of a normal startup and a digital startup share many similarities, but there are also some key differences (Matt et al., 2015). Here are some of the main differences:

- **Idea and Concept Stage**: In the idea and concept stage, digital startups may have an advantage over traditional startups because they can leverage technology to develop innovative products and services. Digital startups may also have a faster path to market as they can use online platforms to reach customers and test their products.
- **Seed Stage**: In the seed stage, digital startups may require less initial capital than traditional startups because they can leverage cloud computing and other online tools to reduce their infrastructure costs. However, digital startups may face more competition as it is easier for others to replicate their ideas and products.
- **Growth Stage**: In the growth stage, digital startups can scale much more rapidly than traditional startups due to their ability to leverage technology and online platforms. This can allow digital startups to quickly expand their customer base and revenue streams. However, digital startups may face challenges in building a sustainable business model and may need to continuously adapt to changing market conditions and technologies.
- **Maturity Stage**: In the maturity stage, digital startups may have a lower barrier to entry for new competitors, which can make it challenging to maintain market

share and profitability. Digital startups may also need to continuously innovate and develop new products and services to stay ahead of the competition.

- **Exit Stage**: In the exit stage, digital startups may have an advantage over traditional startups because they can leverage online platforms and digital marketing to reach a wider audience of potential buyers or investors. Additionally, digital startups may be more attractive to buyers or investors due to their potential for rapid growth and scalability.

Please refer figure 1.2 for the better understand and clarity. Overall, while the life cycle of a digital startup shares many similarities with a traditional startup, the use of technology and online platforms can give digital startups some unique advantages and challenges (Kersten, 2018; Matt et al., 2015; Mukti et al., 2019; Sadeghiani et al., 2022).

1.5 Service Offered by New Age Digital Startups

New age digital startups offer a wide range of services to their customers (Westerman et al., 2014). Here are some examples of the types of services offered by these startups.

- **E-commerce:** Many new age startups are focused on e-commerce, offering online shopping experiences that are convenient, efficient, and personalized.
- **On-Demand Services:** New age startups offer on-demand services, such as ride-hailing, food delivery, and home cleaning services. These services provide customers with immediate access to the products and services they need.

Figure 1.4

Service Offered by New Age Digital Startups

- **Financial Technology (Fintech)**: New age startups are transforming the financial services industry through the development of new technologies such as mobile payments, blockchain, and online lending.

- **HealthTech:** Startups in the healthcare industry are leveraging technology to improve patient outcomes and increase access to healthcare services.
- **Educational Technology (EdTech):** New age startups in EdTech are transforming the education industry through online learning, personalized learning experiences, and innovative teaching methods.
- **Artificial Intelligence (AI):** AI startups are developing new technologies and applications that are transforming a wide range of industries, from healthcare to finance to transportation.
- **Virtual and Augmented Reality (VR/AR):** Startups in the VR/AR space are developing new technologies and applications that allow users to immerse themselves in virtual worlds, enhancing their experiences in a wide range of industries.
- **Social Media and Marketing:** New age startups in the social media and marketing space are developing new ways to connect with customers and build brand awareness through online channels.

1.6 Project Management

Project management is the process of planning, organizing, and executing a project from start to finish (Hassani et al., 2018). It involves defining project goals, determining the scope of the project, identifying project stakeholders, creating a project plan, allocating resources, managing risks, and monitoring project progress (Verhoef et al., 2021). The primary goal of project management is to complete a project on time, within budget, and to the satisfaction of stakeholders (Ahmed, 2022). Effective project management requires strong leadership, communication, and problem-solving skills,

as well as a thorough understanding of project management methodologies, tools, and techniques (Lewrick et al., 2018; Wolff et al., 2021).

Project management is essential for the success of any project, whether it is a small-scale initiative or a large, complex project (Karlesky and Vander Voord, 2008). It helps to ensure that projects are completed efficiently, effectively, and with minimal waste or rework (Cobb, 2011). Project management is used in a wide range of industries, including construction, engineering, information technology, healthcare, and marketing. It is an essential part of any business or organization that undertakes projects, as it helps to ensure that projects are completed on time, within budget, and to the satisfaction of stakeholders (Dremel et al., 2017; Karlesky and Vander Voord, 2008).

1.7 Project Management in New Age Digital Startups

Project management is crucial for the success of new age digital startups. These startups operate in fast-paced, highly competitive environments where technology is rapidly evolving, and customer expectations are continually changing (Gimpel et al., 2018). Effective project management helps these startups to manage their resources, mitigate risks, and deliver high-quality products and services on time and within budget (Leybourne, 2009). Some of the key considerations for project management in new age digital startups include:

- **Agile Methodologies**: Many new age digital startups use Agile methodologies to manage their projects. Agile is a flexible, iterative approach that allows teams to adapt to changing requirements and priorities quickly. Agile methodologies are well-suited to the fast-paced, highly dynamic environments of new age digital startups (Griva et al., 2021).

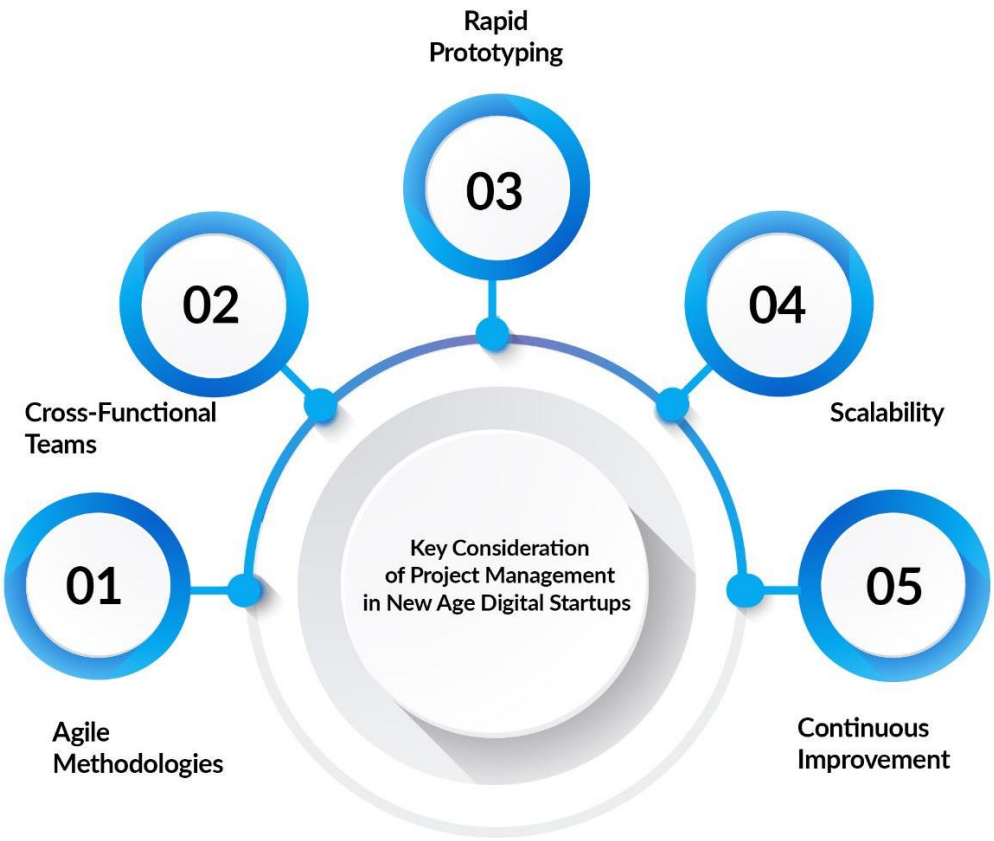


Figure 1.5

Key Consideration of Project Management in New Age Digital Startups

- **Cross-Functional Teams:** New age digital startups often have cross-functional teams, consisting of individuals with different skill sets and backgrounds. Effective project management in these startups requires strong collaboration and communication across different teams and departments (Jackson et al., 2015).
- **Rapid Prototyping:** New age digital startups often use rapid prototyping to test and refine their products and services quickly. Effective project

management requires a process for developing and testing prototypes quickly and efficiently (Visvizi et al., 2022).

- **Scalability:** Scalability is a critical consideration for new age digital startups. Project management must consider the potential for growth and expansion and ensure that the project is designed in a way that can accommodate future growth (Ivančić et al., 2019).
- **Continuous Improvement:** New age digital startups must be constantly innovating and improving their products and services to stay ahead of the competition. Effective project management requires a process for continuously improving products and services based on customer feedback and market trends (Guinan et al., 2019b).

In summary, project management is a critical factor in the success of new age digital startups. Effective project management requires an understanding of the unique challenges and considerations of these startups, including the use of agile methodologies, cross-functional teams, rapid prototyping, scalability, and continuous improvement.

CHAPTER II:

PROBLEM STATEMENT

2.1 Problem Statement & Motivation

The entire study has been structured into two distinct parts, each addressing a critical aspect of the research topic. The first part delves into the significance of studying digital transformation, exploring its impact on industries, economies, and society. By examining the drivers, challenges, and potential benefits of digital transformation, this section aims to provide a comprehensive understanding of why the understanding on new age digital startups needs careful examination. The second part focuses specifically on the importance of project management within the context of new-age digital transformation-providing companies. It recognizes project management as a crucial discipline that plays a pivotal role in ensuring the successful execution and implementation of digital transformation initiatives.

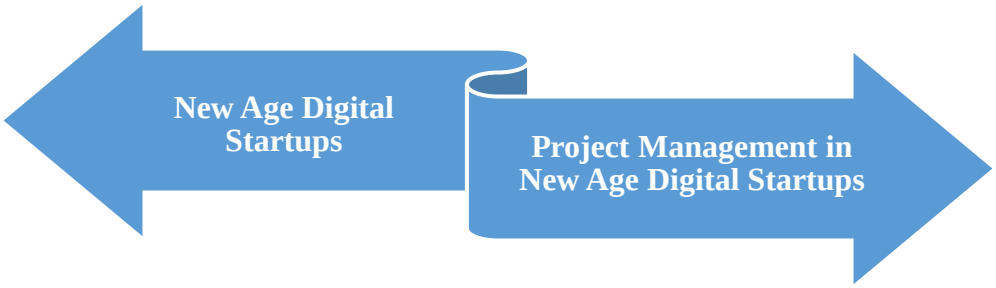


Figure 2.1

Depicts the two different sections of this proposed study.

Figure 2.1 shows the two different topics which we picked and analysed carefully during this investigation. By exploring the challenges, strategies, and best practices associated with project management in this context, this section aims to highlight the integral role it plays in achieving desired outcomes and maximizing the value derived from digital transformation efforts. By dividing the study into these two distinct parts, the research aims to provide a comprehensive and holistic understanding of the importance of studying digital transformation, while also specifically highlighting the criticality of project management in driving successful outcomes within new-age digital transformation-providing companies. This approach ensures a well-rounded exploration of the subject matter, offering valuable insights and knowledge for researchers, practitioners, and organizations navigating the complexities of digital transformation.

2.1.1 New Age Digital Startups:

Studying digital startups is crucial due to their significant economic impact, technological advancements, and role in driving entrepreneurship and innovation (Gonçalves et al., 2022; Hassani et al., 2018). These startups disrupt traditional industries, introduce new products and business models, and contribute to job creation and economic growth. By studying digital startups, we can understand the latest technological trends, learn from their successes and failures, and gain insights into the strategies employed for disruption and transformation (Ahmed, 2022). Furthermore, this knowledge is invaluable for organizations undergoing digital transformation and seeking to adapt in the digital era. Here are some of the key reasons:

- **Innovation:** Digital startups are often at the forefront of innovation, developing new products, services, and technologies that can change the way we live and work. By studying digital startups, you can gain insight into the latest trends and emerging technologies that are driving innovation in various industries (Quinones et al., 2015).
- **Entrepreneurship:** Digital startups are often founded by entrepreneurs who are passionate about solving problems and creating new opportunities. By studying digital startups, you can learn about the entrepreneurial mindset and the skills and strategies needed to launch and grow a successful business (Wolff et al., 2021).

Figure 2.2

Key Outcomes from the New Age Digital Startups

- **Career Opportunities**: Digital startups are creating new jobs and transforming industries, providing opportunities for professionals with a wide range of skills and backgrounds. By studying digital startups, you can gain valuable knowledge and experience that can help you pursue a career in the digital economy (Leybourne, 2009).
- **Social Impact:** Many digital startups are focused on creating positive social and environmental impact, in addition to generating revenue. By studying digital startups, you can learn about the growing movement of social entrepreneurship and how businesses can be a force for good in the world (Gimpel et al., 2018).
- **Personal Development**: Studying digital startups can be a great way to challenge yourself and develop new skills and knowledge. By exploring new ideas and learning about the latest technologies and business models, you can expand your horizons and open new possibilities for your personal and professional growth (Visvizi et al., 2022).

2.1.2 Project Management in New Age Digital Startups:

Studying project management can be motivating and beneficial for a variety of reasons, depending on your interests and goals. Here are some of the key motivations for studying project management:

- **Career Advancement:** Project management is a critical skill in many industries and can lead to opportunities for career advancement. By studying project management, you can learn the skills and tools needed to manage projects effectively and efficiently, which can make you an asset to employers (Karlesky and Vander Voord, 2008).

- **Personal Development**: Studying project management can also be a great way to develop your leadership and organizational skills, as well as your ability to manage time, resources, and stakeholders. These skills can be useful in many areas of your life, from managing personal projects to volunteering in your community (Visvizi et al., 2022).
- **Improved Project Performance:** Effective project management can help ensure that projects are completed on time, within budget, and to the satisfaction of stakeholders. By studying project management, you can learn best practices for project planning, execution, and control, which can help you deliver successful projects (Ivančić et al., 2019).
- **Increased Efficiency:** Project management can help improve efficiency and productivity by optimizing resource allocation, reducing waste, and streamlining processes. By studying project management, you can learn how to identify and address bottlenecks, mitigate risks, and implement continuous improvement practices (Gimpel et al., 2018).
- **Greater Accountability**: Project management emphasizes accountability and responsibility, which can help ensure that projects are completed with high quality and integrity. By studying project management, you can learn about the importance of clear communication, documentation, and tracking, which can help you establish and maintain a culture of accountability (Leybourne, 2009).

2.2 Key Component of Digital Transformation

There are numerous factors that can be either included or excluded as components of the digital application life cycle. In Figure 2.2, we have emphasized four distinct components.

Figure 2.3

Important Factors those considered during Digital Application Life Cycle Development

**We are only focusing on Project Execution & Management, during this investigation*

To gain a deeper understanding, and while maintaining alignment with the theme of this research proposal, the objective is to present a comprehensive overview of the challenges related to project execution and management faced by New Age Digital Startups operating in multiple regions worldwide.

Continuing the discussion, Table 2.1 offers a concise overview of the key components and associated factors that require attention when implementing each component in a digital startup environment (Guinan et al., 2019b, 2019b; Ivančić et al., 2019). It provides valuable insights into the considerations necessary for successful implementation of these 4 components:

- Business, Technology Transformation Strategy & Roadmap
- Information Managmenet & Analytics
- Intelligent Automation
- Project/Program & Execution

Table 2.1

Key Component of Digital Transformation

Business, Technology Transformation Strategy & Roadmap	**Information Managmenet & Analytics**	**Intelligent Automation**	**Project/Program & Execution**
Strategy & Roadmap Development	Enterprise Data Strategy & Data Management	Process Management Workflow Mapping	Strategic Planning
Business Architecture	Business Intelligence	Automation & Prefill	Governance
Capability Identification & Mapping	Advanced Analytics	Automated Operations	Agile Development
Target Operation Model	Artificial Intelligence	Robotic Process Automation	Program & Project Management

2.3 Project Management Challenges with Digital Startups

New age digital startups also face unique challenges when it comes to project management. Here are some of the key challenges that digital startups may face in project management:

- **Rapidly Changing Requirements**: In a fast-paced digital environment, project requirements can change rapidly, which can make it difficult to keep projects on track and deliverables aligned with stakeholders' needs (Bergmann and Karwowski, 2019).
- **Uncertainty and Risk**: Digital startups often operate in highly uncertain and risky environments, with new technologies, competitors, and customer needs emerging quickly. Managing risks and anticipating and responding to change is critical in project management (Balakrishnan and Das, 2020).
- **Technical Complexity:** Digital startups often rely on complex technology stacks, APIs, and integrations, which can make projects more challenging to manage. Technical issues such as bugs and unexpected system behavior can delay projects and put them at risk (Dam et al., 2019).
- **Distributed Teams:** Digital startups may have teams distributed across different geographies and time zones, which can make communication and collaboration more challenging. Project managers must ensure that team members are aligned and on the same page (Lee and Yong, 2010).
- **Scalability:** Digital startups often have ambitious growth plans, and projects must be scalable to support increased demand. Project managers must ensure that projects can scale efficiently and effectively, without sacrificing quality or customer satisfaction (Lee and Yong, 2010).

- **Agile Development:** Many digital startups use agile development methodologies, which prioritize flexibility and adaptability over rigid project plans. Project managers must be able to adjust plans and schedules quickly to accommodate changes in project requirements (Anwar et al., 2022).
- **Limited Resources:** Digital startups may have limited resources, including funding, personnel, and technology. Project managers must be resourceful and creative in managing projects with limited resources (Anwar et al., 2022).

Project management in the context of digital startups requires a flexible and adaptable approach that is tailored to the specific needs of each project. Effective project managers must be able to anticipate and respond to change, manage risks, communicate effectively, and ensure that projects are delivered on time and within budget, while maintaining a high level of quality and customer satisfaction (Anwar et al., 2022; Lee and Yong, 2010; Pirro, 2019).

2.4 Importance of Project Management in Digital Startups

Project management helps digital startups to prioritize and focus on the most important tasks. Here are the servral reasons for its importance in the new age digital startups:

- **Helps to prioritize and focus on the most important tasks:** Project management helps digital startups to prioritize and focus on the most important tasks. This is crucial as startups often have limited resources and time, and need to ensure that they are focusing their efforts on the most critical tasks that will help them achieve their goals (Augustine, 2005)

- **Ensures that projects are completed on time and within budget**: Project management helps digital startups to plan and track their projects, ensuring that they are completed on time and within budget. This is essential for startups as they often have limited resources and need to ensure that they are making the most of their available resources (Augustine et al., 2005).

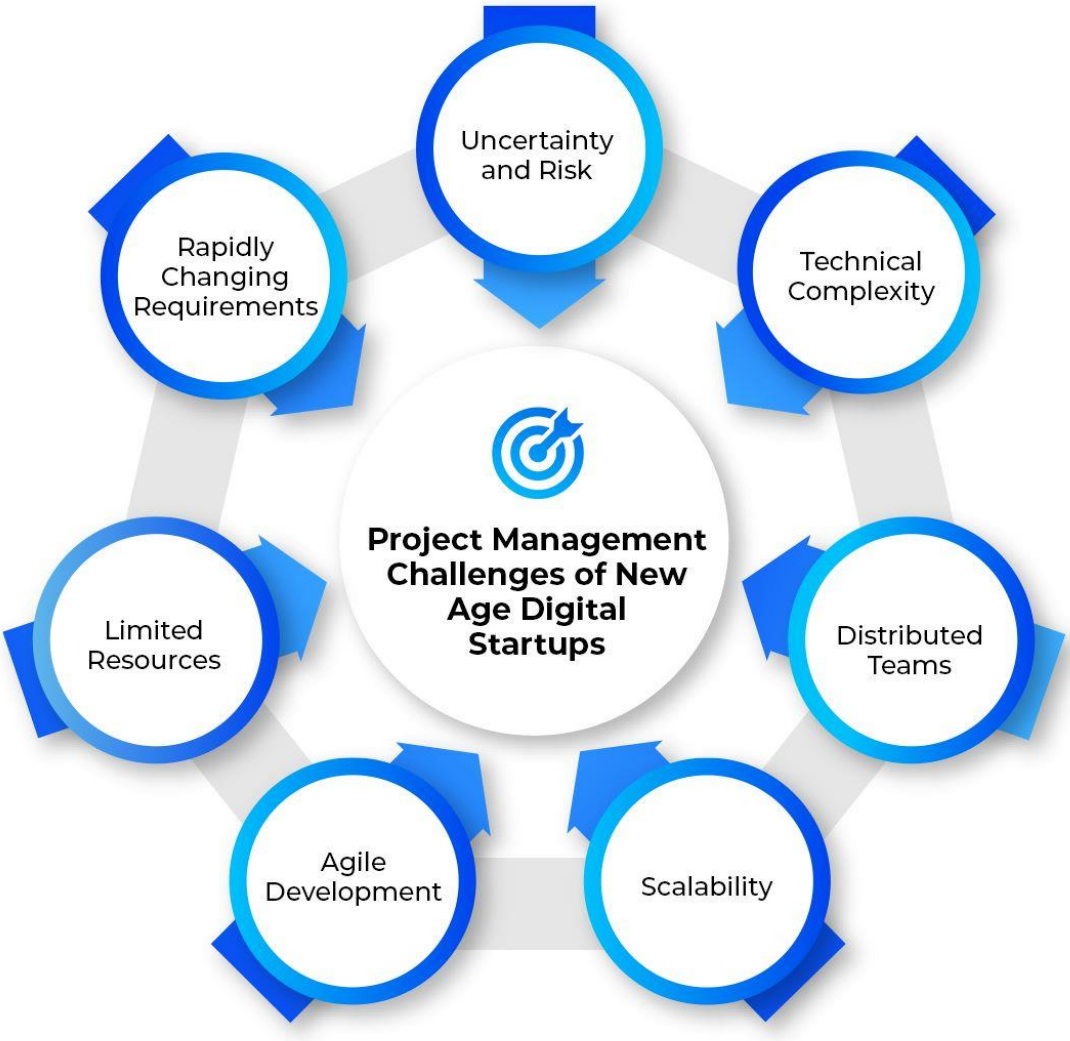


Figure 2.4

Project Management Challenges with Digital Startups

- **Improves communication and collaboration**: Project management facilitates communication and collaboration among team members. This is important for startups as they often have remote teams, and need to ensure that everyone is on the same page, and working towards the same goals (Sharma et al., 2022).
- **Helps to mitigate risks:** Project management helps digital startups to identify and mitigate risks associated with their projects. This is important for startups as they often operate in a fast-paced and uncertain environment, and need to be able to quickly identify and address potential risks to their business (Wernham, 2012).

Figure 2.5

Importance of Project Management in Digital Startups

- **Facilitates continuous improvement**: Project management helps digital startups to continuously improve their processes and operations. This is important for startups as they need to be agile and adaptable in order to stay competitive and grow

in a rapidly changing digital landscape. Overall, project management is critical for digital startups as it helps them to achieve their goals, optimize their resources, and improve their overall operations (Sharma et al., 2022).

The five distinct essential concerns that we carefully selected and examined during this examination of project management issues in digital startups are shown in Figure 2.1. There are numerous more issues that are available and that are encountered by numerous different stakeholders, but we have chosen these in keeping with the focus of this thesis.

2.5 Key of Success

After careful investigation during the extensive literature study, we have found that If you want to strengthen your project management skills in the context of digital startups, here are some key areas to focus on:

- **Agile Methodologies**: Agile development methodologies are widely used in digital startups, and understanding how they work is essential for effective project management. Areas to focus on include Scrum, Kanban, and Lean methodologies, as well as Agile project management frameworks (Hassani et al., 2018).
- **Digital Tools and Technologies**: Digital startups rely heavily on technology to manage projects, and familiarity with digital project management tools such as Jira, Trello, and Asana is essential. Understanding how to integrate different digital tools and technologies is also important (Sharma et al., 2022).
- **Risk Management**: As mentioned earlier, digital startups are often subject to a variety of risks, including technical, financial, and legal risks. Understanding how

to identify, assess, and mitigate risks is critical for effective project management (Sharma et al., 2022).

- **Leadership and Communication**: Effective project management requires strong leadership and communication skills. This includes the ability to motivate and inspire team members, as well as the ability to communicate project goals, status updates, and changes to stakeholders (Dam et al., 2019).

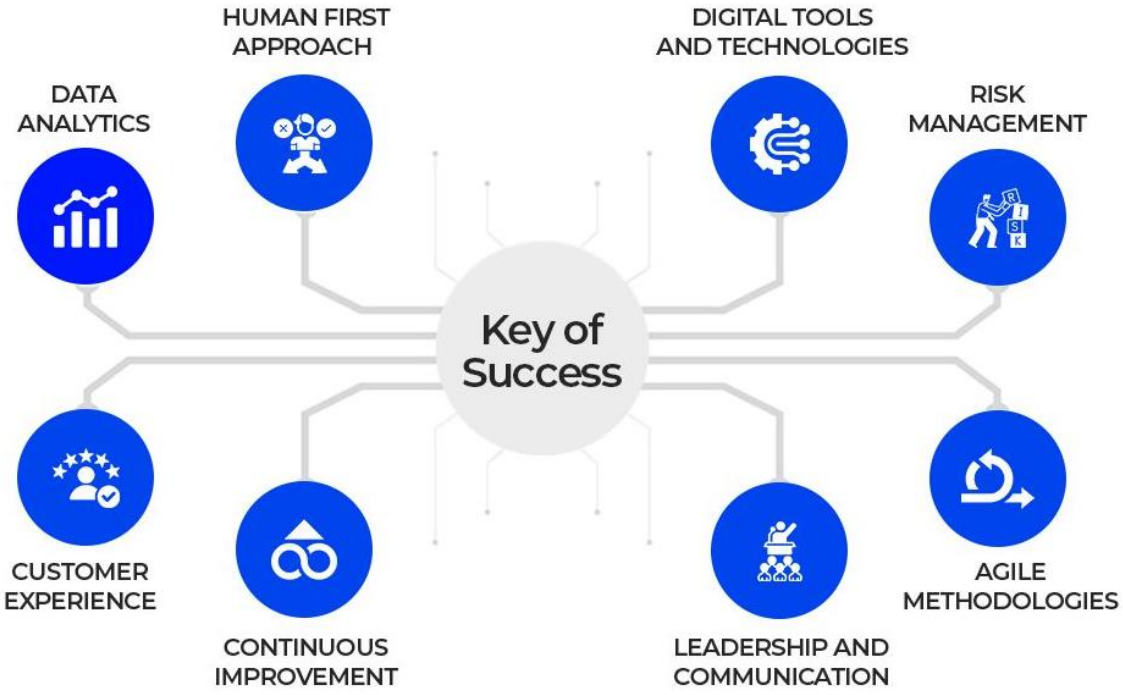


Figure 2.6

Key of Success for New Age Digital Startups

- **Data Analytics**: Digital startups generate large amounts of data, and the ability to analyze and interpret this data is critical for effective project management. This

includes understanding how to use data to inform project decisions and identify areas for improvement (Ahmed, 2022).

- **Continuous Improvement:** Digital startups operate in a rapidly changing environment, and the ability to continuously improve processes and practices is essential for success. Understanding how to use feedback and data to make incremental improvements is critical for effective project management (Augustine et al., 2005).
- **Human First Apporach:** This is emerging as a key factor for success in New Age Digital Startups. In an era where technology often takes center stage, prioritizing human-centric principles and values becomes paramount. This approach revolves around understanding and empathizing with the needs, desires, and pain points of the target audience (Salamzadeh et al., 2023).
- **Customer Experience**: Digital startups are often focused on delivering a great customer experience, and understanding how to incorporate customer feedback and needs into project management is important. This includes understanding how to prioritize customer needs and deliverables, and how to measure and track customer satisfaction (Marnada et al., 2022).

By focusing on these key areas, you can strengthen your project management skills in the context of digital startups and improve your ability to deliver successful projects in a fast-paced, rapidly changing environment.

CHAPTER III:

STATE OF ART

3.1 New Age Digital Startups

The current ecosystem is facing a rapid change of digital transformation because the digital is becoming more influential in our daily lives. According to Matt et al., (2015) every company needs to take advantage of the many opportunities that have been created by digital transformation, regardless of whether they are business-oriented or not. Companies and individuals may not always understand the digital transition, which could result in a misinterpretation of what is happening (Carlson and Usher, 2016; Dremel et al., 2017; Matt et al., 2015)

It is true that digitalization and digital transformation might be conflated. While digitalization focuses on the application of technologies. Digital change, meanwhile, involves more than just technology (Gong and Ribiere, 2021) In fact, digital transformation affects not only tools but also people, organizations, and their behaviors, modes of operation, and certainly managerial methods and hierarchical structures (Kitchenham et al., 2010).

The digital transformation (Centobelli et al., 2017) can be defined as "the purposeful and continuing digital evolution of a firm, business model, concept process, or technique, both strategically and tactically." By realizing the benefits of the reduced entry barriers offered by technology, startups enter these digital markets and compete with established businesses (Hinterhuber, 2022). In addition, startups choose a distinct business model and approach than the most established corporations by utilizing the digital sphere (Pollman, 2019). Rethinking everything is one of the biggest opportunities presented by the digital transition. As a result, startups have a

distinct edge over established companies since they are not constrained by corporate traditions, and creation and the adoption of emerging technologies are crucial for those new businesses (Adler-Milstein, 2021; Vial, 2021; Vrana and Singh, 2021).

Today's innovation landscape views startups as vital contributors. Startup is a term that is being used more and more, yet it is frequently ambiguous (Lisa et al., 2020; Mugge et al., 2020). The term "startup" does not, in fact, refer to a new business that uses new technologies.

To completely comprehend a startup's role in the economy, it is crucial to define it correctly (Bockshecker et al., 2018; Galli, 2019; Sutton, 2000). A startup is a transient organization created to look for a repeatable and sustainable business model (Pollman, 2019). A Silicon Valley businessman named Steve Blank founded the lean startup concept and the customer development process.

A startup is structured to find a working business model, but an enterprise is structured to execute and optimize one (Porter and Michael; ilustraciones Gibbs, 2001). A business model outlines how a company develops, delivers, and captures value. Four requirements must be met for a new business to qualify as a startup: it must be impermanent, seeking a business model, industrialized and reproducible, and scalable (Blanck et al., 2019; Galli, 2019). To be a startup isn't an objective, and this is dealt with in the transitory of a startup.

The fundamental goal of a startup, which is often associated with the research stage, is to exit that stage by turning an idea into more of an enterprise (Centobelli et al., 2017; Pollman, 2019; Teixeira et al., 2018).

Figure 3.1 gives an overview of all key characteristics of any startup and highlights why any customer must always look for a startup to solve this technical or business-related problem.

To put it another way, the startup is searching for just a business model that ties into the second goal. Being a startup means offering a service or product that has never been offered before while providing value to clients. The difficulty for a startup is in developing a business model that is unique and not based on an existing framework. Once a business model is developed and proven to be successful, it can be industrialized and replicated so that it can be carried out on a bigger scale, in other locations, or by other people (Kiznyte et al., 2016).

Figure 3.1

Depicts Overall key characteristic of any Startup based on the literature review

Scalability is another attribute of a startup. The goal is to develop a company model that supports exponential growth, meaning that as the number of consumers grows, so do the profit margins. The price increases with each successive customer. Startups

can expand rapidly and widely in a short period of time compared to more established companies because of this scalability and the model's reproducibility (Ghezzi, 2019; Ghezzi and Cavallo, 2020).

As a result of the startup's status as a pioneering business and its connection to the idea of exploration, we must also discuss a climate of great ambiguity when discussing this topic. Without knowing its clients, the position of the product, or anything else, the startup is creating an engagement in a new market. Boundless' cofounder and CEO, Xiao Wang (Li, 2020), put it this way: "A startup is a firm which has more questions than answers about its business strategy and its sustainability." Because of this, it is exceedingly challenging to evaluate the risk (Ghezzi and Cavallo, 2020).

However, some large corporations show a startup mentality by employing a working style that promotes invention, builds teamwork, and makes the team more responsive (Kollmann et al., 2021; Marnada et al., 2022; Remane et al., 2016). It implies that codes can be broken by even the largest businesses. Additionally, startups are linked to innovation, which they seek to foster and advance in a more targeted manner (Li, 2020; Lisa et al., 2020).

Figure 3.2 explains the various key challenges faced by Digital Startups. Addition to all the key challenges mentioned in the above figure Project Management is also one of the key factors which can help any digital startup to make a great success, nowadays.

Another aim of this study is to investigate the challenges with the way that project management has been adopted by the various digital startups.

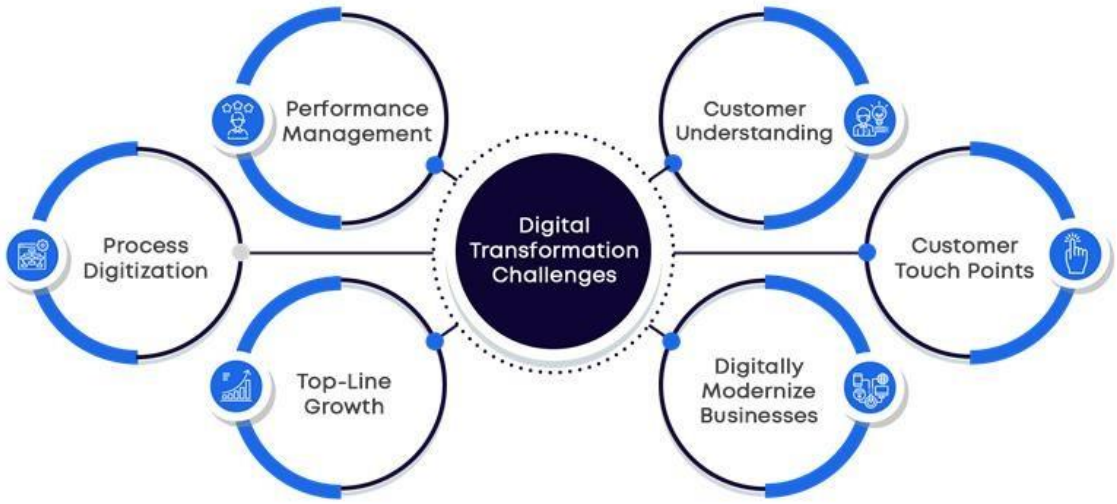


Figure 3.2

Depicts the various transformation challenges faced by New Age Digital Startups

3.2 Project Management: Fundamentals

Project management can be broadly categorized into two main approaches:

- Traditional
- Agile

In the next two section will give you a detailed overview on both the approaches. The important point society and the working environment are not always ready to embrace and promote digital transformation. Take, for example, Uber in Germany. Uber is a location-based application that connects users who wish to travel somewhere with a driver (Lisa et al., 2020). Customer does not require cash because customer pays the driver immediately through the app and is aware of the sum even before accepting the trip. This application, which aligns the supply and demand in

actual time, is remarkable. However, in Germany, cash is still more widespread than credit cards, so paying via phone is difficult to comprehend. In the case of Germany or other countries that prohibit Uber's presence, we might assume that the firm did not prepare for entry into the market and did not consult with legislators. Indeed, laws are quite important and must sometimes be amended to get things done (Blanck et al., 2019; Galli, 2019; Lisa et al., 2020).

Let us discuss how to bring about digital revolution through society and culture. When a corporation considers digital transformation, both good and negative implications must be considered. If a corporation wants to innovate, it must accomplish something that benefits everyone in society. Furthermore, when there are risks linked to digital transformation, the organization must attempt to mitigate them (Assyne and Adjei, 2017; Melegati and Goldman, 2016). The laws are another factor in bringing about the digital transition. Companies must create a legal foundation.

In other circumstances, new or amended legislation are required to facilitate the shift. Taking social media as an example, it is now simple to enter this industry because no legislation is required. It is also necessary to look outside the Internet, since what people require are riches, happiness, and safety, among other things. Companies' objective is to determine human requirements before considering the Internet (Mazzone, 2014). Furthermore, while looking at success stories is beneficial for businesses since it provides strong examples, it is more necessary to look at organizations that failed (Klotins et al., 2015).

Indeed, examining failures allows any organization to avoid making the same mistakes. As a result, the organization has the knowledge necessary to carry out the digital transition. (Berman, 2012; Ebert and Duarte, 2018; Henriette et al., 2016)

3.2.1 Traditional Project Management:

Traditional project management follows a structured and linear approach. It involves detailed planning at the beginning of the project, with emphasis on defining requirements, creating a comprehensive project plan, and establishing a fixed scope, timeline, and budget.

Traditional project management typically involves a hierarchical organizational structure with a clear chain of command and well-defined roles and responsibilities (Lewrick et al., 2018). It focuses on extensive documentation, formal processes, and a sequential execution of project phases, often referred to as the "waterfall" approach. This approach is commonly used in industries with well-established practices and predictable project outcomes. Traditional project management approaches have a lot of concerns when it comes to applying in startups (Centobelli et al., 2017). Implementing agile methodologies in startups is the most preferred solution, now. In an uncertain climate, startups need to establish a long term business, which is achieved by putting business concepts to test and validating them through successes or failures (Galli, 2019). In comparison to medium-large businesses, startups must be innovative and employ novel technologies to compete and be lucrative (Kitchenham et al., 2010, 2009). Some key features of traditional project management include:

- A well-defined project scope and detailed project plan with a schedule and budget.
- A hierarchical organizational structure with clear roles and responsibilities for project team members

- A focus on risk management and contingency planning to identify and mitigate potential issues.
- Emphasis on strict control and documentation to ensure adherence to project requirements and deliverables.
- A focus on achieving project objectives through a defined scope, plan, and timeline.
- A sequential approach to project activities, where each phase must be completed before moving onto the next.

3.2.2 Agile Project Management:

Agile project management is an iterative and flexible approach to managing projects that emphasizes collaboration, continuous improvement, and customer satisfaction (Day et al., 2022). It was developed as a response to the limitations of traditional project management, which was seen as too rigid and inflexible to handle the demands of modern projects and industries. Agile project management is particularly well-suited for software development projects but can be applied to a wide range of projects (Müller et al., 2019).

Through an iterative process of project management i.e., Agile, startup aims to give tools to shorten product development cycles by establishing hypotheses and experiments. The iterative procedure is also a learning one, as it validates with help of futuristic based gathered information (Galli, 2019). Some key features of agile project management include:

- A focus on delivering value to the customer through early and continuous delivery of working software or product.

- A flexible, iterative approach to project planning, where requirements and priorities can be adjusted based on changing needs.
- Emphasis on frequent collaboration and communication among team members, stakeholders, and customers.
- A self-organizing, cross-functional team with a high degree of autonomy and empowerment to make decisions.
- Regular review and reflection on the project's progress to identify areas for improvement and adapt accordingly
- Use of tools such as burndown charts, user stories, and daily stand-up meetings to track progress and ensure everyone is aligned.

Both traditional and agile project management approaches have their strengths and weaknesses, and their suitability depends on the nature of the project, the industry, and the stakeholders involved (Buganová and Šimíčková, 2019; Day et al., 2022; Gimpel et al., 2018; Prebanić and Vukomanović, 2021). Table 3.1 is giving a quick comparison of both agile and traditional project management methods.

Table 3.1

Quick Comparison in both Agile & Traditional Project Management

Categories	Traditional	Agile
Development Model	Traditional	Iterative
Focus	Process	People

Management	Control	Facilitate
Customer Involvement	Requirement Gathering & Delivery	Always Involved
Software Developers	Individual	Collaborative
Product Characteristics	All Included	Most Important First
Tests	End of Development Cycle	Iterative

3.3 Key of Success for Project Management in New Age Digital Startups

The client, customer, end user is the key to success in digital transformation programs and projects (De Meyer et al., 2002; Hinterhuber, 2022). Although the phrase "customer centricity" can be utilized, what does that mean? First and foremost, we believe it entails placing the customer at the forefront and providing him with consistently excellent and relevant service because doing so adds value and ensures any company will remain in operation. Therefore, it is related to both clients and their experiences, or, from a more business-oriented standpoint, it is related to value and service (Kitchenham et al., 2009). This principle, however, calls for being customer focused. Even though customer focus and customer centricity are frequently misconstrued, they are both entirely different.

To maximize profitability, marketing efforts should be concentrated on high-value client segments and consider a customer's lifetime value (Giardino et al., 2015; Klotins et al., 2015). As you surely already know, most clients are not important to the business, thus we shouldn't focus on them. Customers can be categorized into

three categories (Centobelli et al., 2017; Nguyen-Duc et al., 2020; Pollman, 2019). After the extensive survey & refereeing to the existing literature of similar interest, we have found that,

- 70% of the company's clients are classified as "Meh customers" and are uninterested in the goods. It indicates that they will depart as soon as they discover an identical good or service with superior qualities or at a lesser cost. It makes no sense to build a company around them because it is frequently more demanding than it's worth (Klotins et al., 2015).
- The remaining 20% are the "good clients," who appreciate the products or service and feel a little connected to the business. If a sound plan is employed, those customers, who have a greater lifetime value, may transition towards the third customer group (Klotins et al., 2015).
- The third category, referred known as "Great consumers," only comprises 10% of all customers. Those clients are the best for the business since they are dependable, have a low attrition rate, and have a high lifetime value. Since they are valuable consumers, any business must concentrate on attracting more of this kind of clientele (Klotins et al., 2015).

In other words, focusing on the typical consumer would include spending time and money on low-quality clients who would yield modest profits. On the other hand, by considering the lifetime value of each client, a business must use client data to better analyze and segment its client base. The business must concentrate on providing the best customers with the right. We must learn to identify the people who are most important to our success since we cannot be everything to everyone. These exact phrases encapsulate the need to avoid focusing

on every customer. In addition, most clients are now online, therefore businesses must offer an enhanced and transparent client experience to help them quickly and easily find what they're looking for (Hanelt et al., 2015; Marković et al., 2015).

In this sense, we may argue that the digital transformation starts with a growing focus on the client (Ilin and Nikulchev, 2020). Startups are at an advantage since they completely grasp this idea and make good use of the digital world. For any startup, creativity, as well as the use of new technology & correct way to becoming the customer’s trusted advisors, are essential. From a digital perspective, both the customer and their expectations are rapidly changing.

CHAPTER IV:

OBJECTIVES

The focus of the literature survey was on various project management strategies that are used in startups and how ably they worked. As an outcome, there was additional information about startups and their working, but slighter about how project management sustained them.

Given the role of project management in any firm, including startups, it's vital to figure out where this issue can develop and look for effective techniques for incorporating project management approaches into startups. During the probe about Project Management Implementation Issues in Digital Startups, three recurrent topics emerged. These are:

- What exactly are startups and how do they work?
- Project management's importance in startups.
- Various project management methodologies adopted by startups.
- Numerous project management strategies & action plans employed by startups.

4.1 What are startups and how do they work?

Startups are formed and structured in a unique way than the larger firms, so understanding their definition and how they oversee problems is important. The world's largest corporations by market value in 2019 Apple, Microsoft, and Amazon, all started out as startups, according to Pollman, (2019). Google, Facebook, Amazon, Uber, Airbnb, Salesforce, and Spotify, all began as digital ventures, according to the report (Zaheer et al., 2019). The impulse to produce new things in an environment of

severe uncertainty" is one of the definitions of a startup (Nicolescu and Lloyd-Reason, 2016). Uncertainty of task is an unavoidable part of startups (De Meyer et al., 2002). With emphasis on technology and innovation with lot of risk and emphasis on growth, startups differ from both public firms and typical closely held corporations (Imtiaz et al., 2013; Lecoeuvre-Soudain and Deshayes, 2006; Pollman, 2019).

Startups are also characterized as businesses founded by entrepreneurs with outside funding, with the purpose of establishing an original product or service, achieving rapid growth (Pollman, 2019). According to Teixeira et al., (2018) startups strive to take advantage of opportunities such as getting purchased by another company or becoming a public firm. Startups aim to develop services and products based on innovative concepts. They are also "heavily reliant on cutting-edge technologies." Entrepreneurs' creative minds are fueled by innovation, and it is a requirement for growth and sustainability (Centobelli et al., 2017; Cova and Salle, 2005; Obradović et al., 2016; Wooder and Baker, 2012). The startup makes a start at the seed stage and tirelessly works towards the maturity phases, with a set of goals (Frederick et al., 2014). As the company progresses their focus changes and they start figuring out how to be acquired or go public (Centobelli et al., 2017).

4.2 Project management's importance in startups.

In all the businesses, even startups, project management is critical (Centobelli et al., 2017; Pollman, 2019; Teixeira et al., 2018). (Lecoeuvre-Soudain and Deshayes, 2006; Pollman, 2019) examined how will startups successfully adopt and apply project management as a business approach. Given the difference between startups and established businesses in several ways, such as a lack of funding and competent

human resources, they must carefully consider how to execute project management. According to Marković et al., (2015) project management is becoming more popular as a method for staying competitive, increasing value, and attracting new customers.

Project management is now in its third wave of application, with a focus on modern management principles such as information and knowledge management (Nicolescu and Lloyd-Reason, 2016; Obradović et al., 2016). Project management and marketing management have a synergetic relationship, (Obradović et al., 2016). Product development in digital marketing is a relatively new idea, particularly in terms of its applicability in small and medium businesses (SMBs) and startups, having lack of resources and are unable to take big risks (Cova and Salle, 2005). As a result, there is a huge demand for the adoption of various project management tools (Teixeira et al., 2018).

According to Centobelli et al., (2017) each year, new technology-based enterprises (Startups) are born. As a result, entrepreneurs, particularly those in digital or technology sectors, are benefitting the economies more than ever before (Cova and Salle, 2005; De Meyer et al., 2002). According to Johnson and Co-Founder, (2017) only 21% of startups survive for more than five years.

Many articles examine how small, medium and large organizations use knowledge management (KM) systems , concluding that they are crucial to their competitiveness (Centobelli et al., 2017). In nutshell, the KM systems can help in project management implementation, especially for digital startups.

4.3 Various project management methodologies adopted by startups.

The approach of project management methods for startups and bigger firms will be different. There are numerous viewpoints on this, classic project management

strategies may not be the ideal way to run the firm with so much unpredictability (Johnson and Co-Founder, 2017). Teams must be able to adapt quickly and employ management methods to maintain order in a chaotic setting (De Meyer et al., 2002; Johnson and Co-Founder, 2017).

Understanding how project management works in startups requires looking at the notion of lean methodologies and their origins. The lean startup method applies scientific principles to the context of free-market entrepreneurship (Galli, 2019). The method of lean startup, according to Galli, (2019), is a unique strategy for generating successful business models. His research also covered the differences between traditional business models and the lean-approach. (Galli, 2019) also investigated the influence of innovation on startups and companies that are attempting to use project management, innovation methods. Under a prominent level of significant uncertainty, Lean or Agile provides a model for any firm to investigate, create, and deploy innovative solutions.

4.4 Successes in applying various project management methodologies in

The function of startups is vital to the global economy due to their numerous achievements. Examining the successful uses of various approaches in startups is crucial (Bostanshirin, 2014). According to Porter and Michael; ilustraciones Gibbs, (2001), a startup's definition of success must be understood to understand how it operates and how to adopt various management methods in it. Since, new technology-based enterprises (Startups) are formed each year, consequently, startups especially those in technology or the digital sector—have a greater influence on economies today than ever before (Paternoster et al., 2014). They are businesses with the potential for quick expansion and scalability, contributing to the growth and

employment creation of an economy (Galli and Kaviani, 2017; Madsen et al., 2008). They are more important than ever as a new paradigm for growth in the world's most vibrant marketplaces.

To learn how to improve them, it is crucial to analyze their triumphs. (Porter and Michael; ilustraciones Gibbs, 2001) a key component in the expansion of businesses (Doganova and Eyquem-Renault, 2009; Lyon et al., 2000). Numerous articles discuss how knowledge management (KM) platforms are used in small, medium, and big businesses and draw the conclusion that these systems are essential to these businesses' competitiveness (Chorev and Anderson, 2006; De Meyer et al., 2002; Lecoeuvre-Soudain and Deshayes, 2006).

On the other hand, there are hardly any contributions to the application of KM tools in startups. Because entrepreneurs now make up a significant portion of the economy and because of their inherent characteristics (insufficient resources, compact size), they might substantially gain from the implementation of knowledge management techniques and/or systems, this is a crucial issue that needs to be addressed (Batjargal, 2007).

Startups should use knowledge management systems to expand their knowledge generation, storage, and transfer processes, which should rely mostly on human expertise (Henriette et al., 2016; Melegati and Goldman, 2016). Since startups have a different kind of knowledge than medium or big organizations, KM systems must be adjusted accordingly (Da Silva et al., 2011; Giardino et al., 2015; Hanelt et al., 2015). KM systems may be able to assist startups with their project management implementation challenges.

CHAPTER V:

RESULT

5.1 Methodology Adopted

With the help of extensive literature study and by doing the careful consideration of facts and data set available in the past & present, mentioned approach, in figure 5.1, has been identified to solve all the respective problem statements.

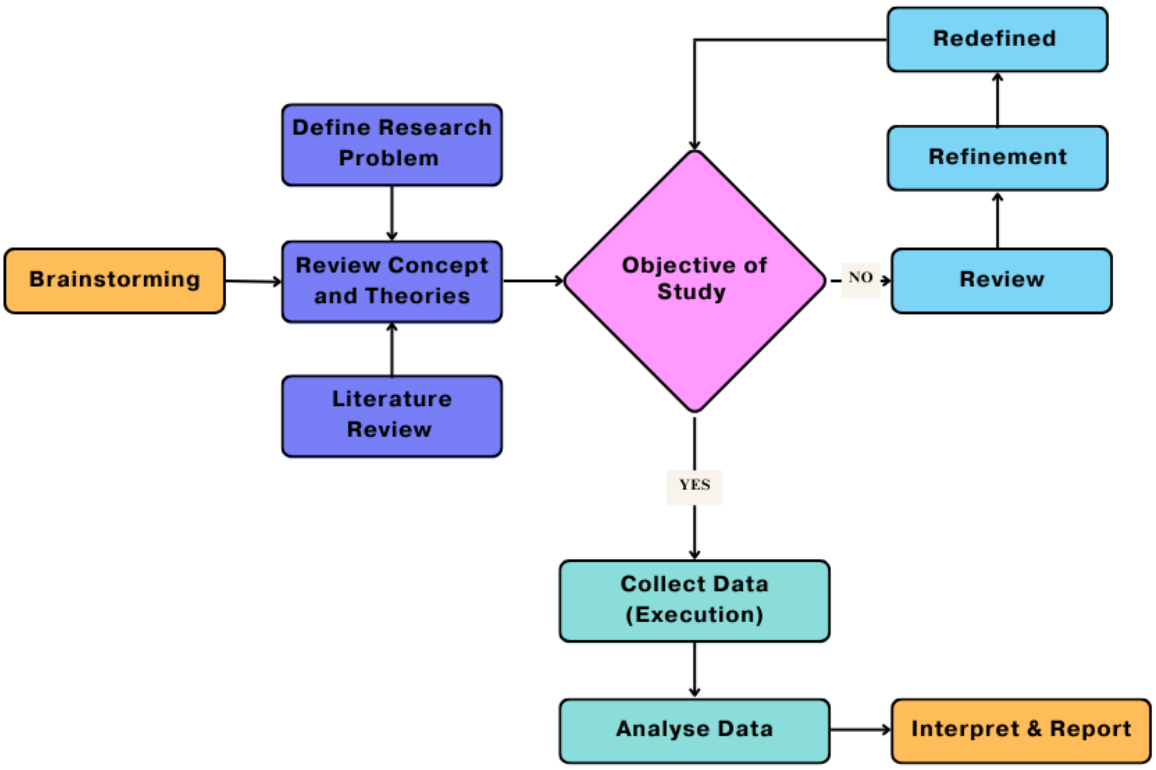


Figure 5.1

Depicts the methodology adopted for doing research & analysis.

5.2 Data Collection

Based on the various methods available for data collection, we have utilized the followings 04 methods for collecting the data for this investigation, mentioned in figure 5.2:

1. Interviews with the CXOs
2. Surveys with co-workers of Digital & Non-Digital Startups
3. Observation by working with Digital Startup
4. Group Discussion with co-workers of Digital & Non-Digital Startups

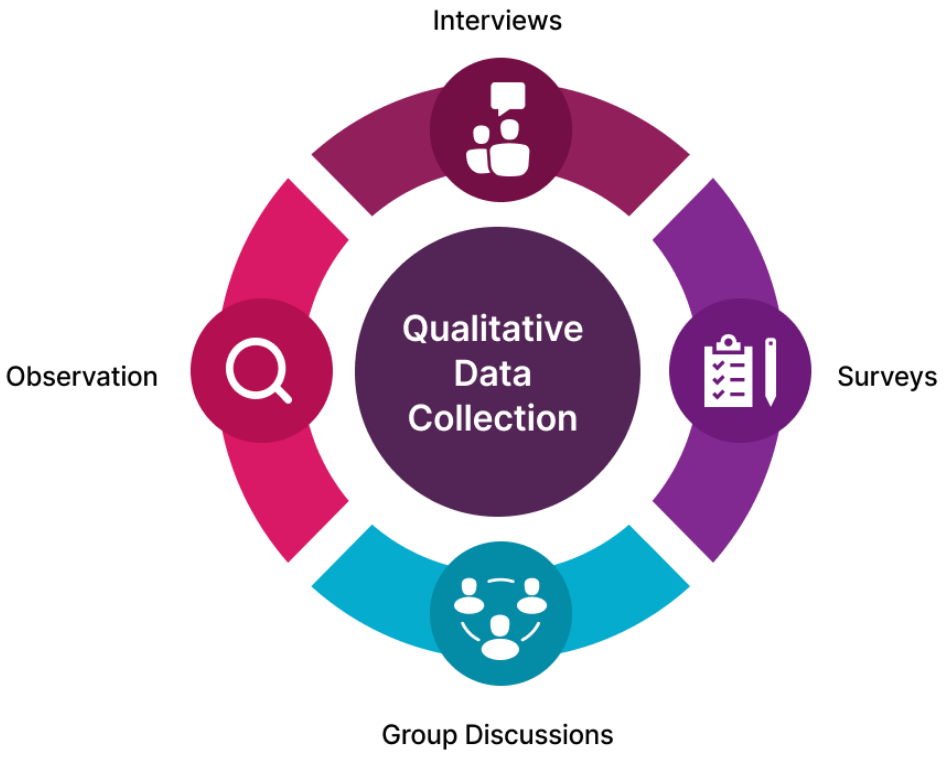


Figure 5.2

Depicts the various forms of collecting data from key stakeholders.

More than 100+ digital & non digital startups, who offer services in various sectors were analyzed during this investigation. The following questions were prepared and 4 different methodology, interview, survey, group discussion, observation, are adopted for collecting the data from various resources. All of these have been mentioned in respective sections of Appendix at the end of thesis. For quick understanding, these are as follows:

- **APPENDIX A** - Explore insightful interviews with the CXOs, where they reveal their strategic insights and thought leadership. Get exclusive access to their priceless viewpoints that influence organizations' futures in a dynamic and ever-changing business environment.
- **APPENDIX B** - Discovered the fascinating results in the form of Pie Charts, where polls of employees from both digital and non-digital businesses provide insight into the range of opinions and experiences that exist within these dynamic work environments. Learn from those at the forefront of innovation about the obstacles and triumphs that have shaped the thriving startup ecosystem.
- **APPENDIX C** - Explore the depths by a thorough questionnaire designed to shed light on the complex project management difficulties faced by digital companies. Understanding the challenges of navigating agile workflows, technology disruptions, and team dynamics can help you create a plan for successfully completing projects in the quickly evolving digital environment.

- **APPENDIX D** - Through Appendix D, we share observation why project management is important. Project management is crucial because it ensures effective planning, organization, and control of resources to achieve project goals on time and within budget. It provides clear direction, minimizes risks, and enhances collaboration among team members, leading to successful project outcomes and increased efficiency.
- **APPENDIX E** – Here, we have shared the observation on new digital transformation framework. The new digital transformation framework emphasizes seamless integration of emerging technologies, customer-centricity, and agile processes. It promotes a holistic approach to organizational change, fostering innovation, and leveraging data-driven insights. This framework facilitates rapid adaptation to market dynamics while enhancing operational efficiency and ensuring sustainable growth in an increasingly digital world.
- **APPENDIX F** – Here the new software development life cycle for medium projects have been explained. The new software development life cycle for medium projects incorporates iterative planning, agile methodologies, and continuous feedback. It emphasizes requirements gathering, design, development, testing, and deployment stages, with regular updates and reviews. This streamlined approach ensures efficient development, timely delivery, and adaptable solutions to meet evolving project needs.

5.3 Data Analysis

To identify the desired objectives the following steps were taken to represent the data in the form of pie charts.

- Defined the research objectives and questions you want to answer with your data analysis.
- Gathered and organized the data in a structured format. Cleaned the data by removing errors, duplicates, and outliers. Handle missing data appropriately.
- Performed the descriptive statistics, hypothesis testing, regression analysis, and data visualization.
- Explored and summarize the data to gain insights and identify patterns. Created the visualizations and conducted the initial data exploration to understand the variables and relationships.
- Analysed the output of our statistical tests and interpret the findings in the context of our research question.
- Created the pie-charts to present our findings visually.
- Draw conclusions by summarizing our findings and related them back to our research objectives.

In the next coming sections, all the findings, after careful consideration, are presented in the form of tables and pie charts.

5.3.1 Types of Industry analyzed during this investigation.

As a result of survey form, majority startups studied during this investigation are belongs to Digital Sector (almost 36%), whereas the percentage of healthcare, fintech, e-commerce, AgriTech, transformation & logistics, edtech came under the less than around 10%.

Table 5.1 represents percentage-wise classification of all startups and figure 5.3 represents the same information in the form of pie chart. During the one-to-one interviews of different CXOs, it has also been identified that there are couple of other categories as well, which were not coming in all these mentioned 7 categories, so we have parked all such sectors in the others section, which is around 27% representing in the figure 5.3.

Table 5.1

Depicts the sector-wise split of startups analyzed for this investigation.

Name of Sector	Percentage (%)
Digital/Tech/SaaS	36 %
Healthcare	7 %
FinTech	7 %
E-Commerce	6 %
AgriTech	2 %
Transportation & Logistics	4 %
EdTech	11 %
Others	7 %

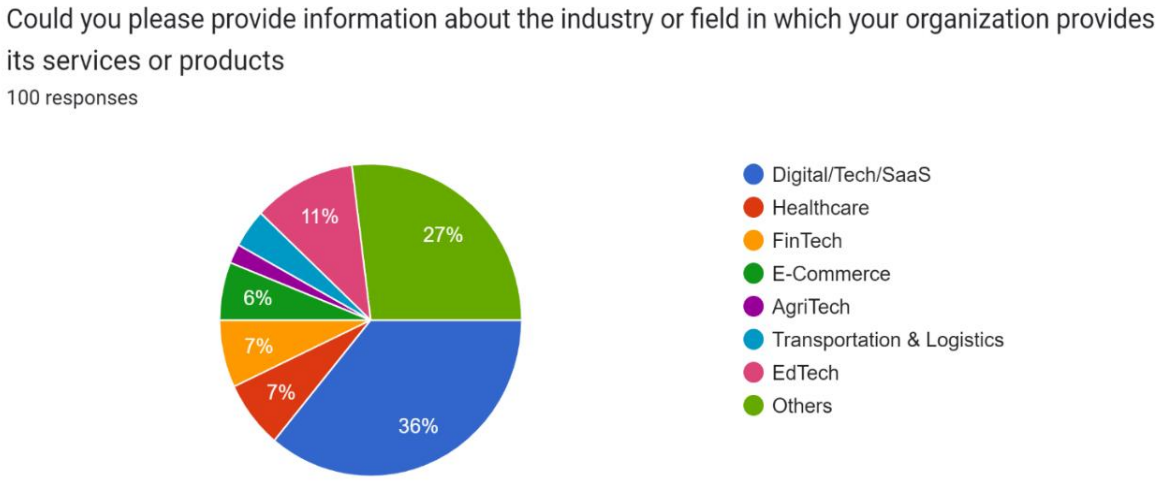


Figure 5.3

Depicts the sector-wise split of startups analyzed for this investigation.

5.3.2 Stage-wise split analyzed during this investigation.

According to a result of survey form, most startups studied during this investigation belong to Growth Stage (almost 56%), whereas the percentage of other stages like Scale were 26% and Seed & Concept were almost 9%.

Table 5.2

Depicts the stage-wise split analyzed during this investigation.

Name of Sector	Percentage (%)
Growth	56 %
Scale	26 %
Seed	9 %
Concept	9 %

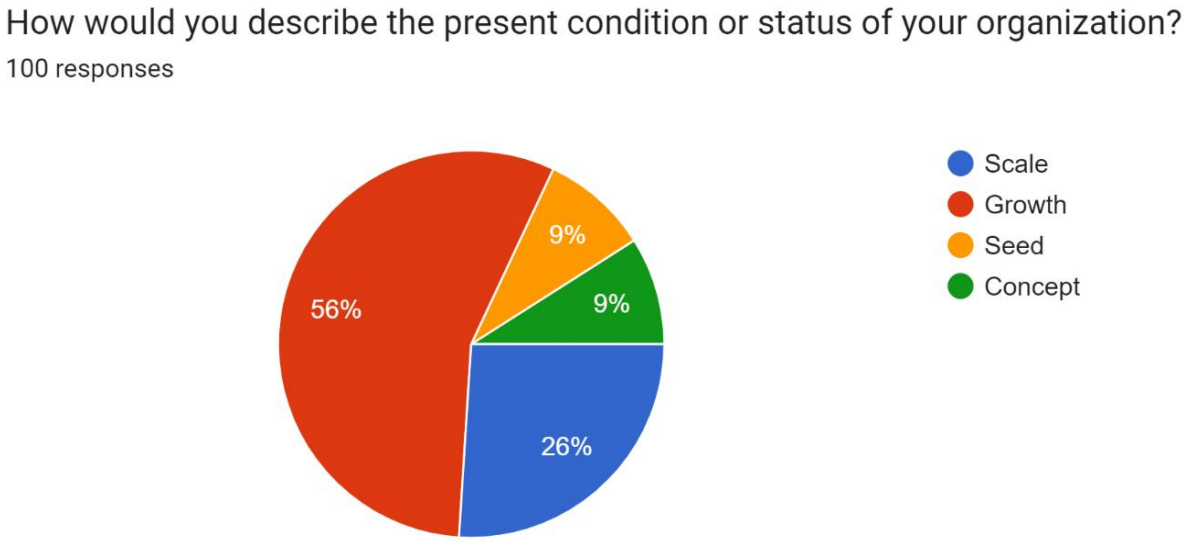


Figure 5.4

Depicts the stage-wise split analyzed during this investigation

Table 5.2 represents the Stage-wise split of startups analyzed for this investigation and figure 5.4 represents the same information in the form of pie chart.

5.3.3 Sizes of Digital Startups analyzed during the investigation.

Four different sizes of startups have been analyzed while performing the different types of questionaries during this investigation.

Table 5.3 represents the sector-wise split of startups analyzed for this investigation and figure 5.5 gave a clear description in terms of pie chart & percentage in numbers & size of startup investigated during this study.

Table 5.3

Depicts the sizes of digital startups analyzed during the investigation.

Name of Sector	Percentage (%)
Small	26 %
Medium	25 %
Larger	27 %
Super Large	22 %

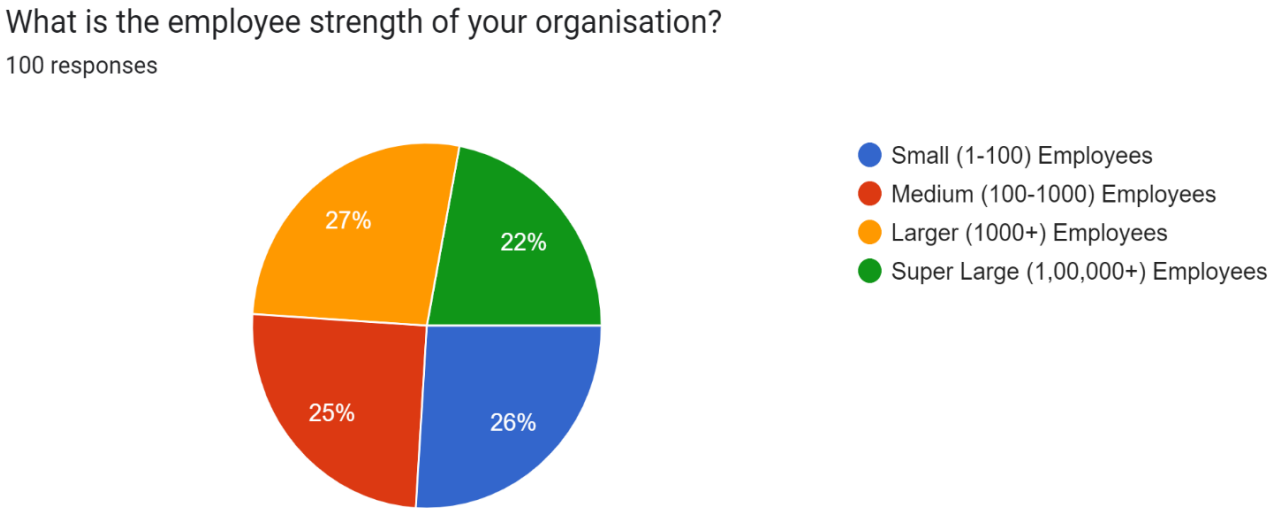


Figure 5.5

Depicts the sizes of digital startups analyzed during the investigation.

5.3.4 Project Management Method Adopted

This section gives an overview of almost 100+ startups in terms of what kind of project management model they are adopting and have adopted in the past.

Table 5.3 compares the outcomes of two different approaches, Agile and Waterfall, and presents them as percentages. Learn crucial information about the performance and efficacy of each strategy, enabling you to choose the best methodology for your projects with confidence.

A visual pie chart depicting the current state of startup approaches is shown in Figure 5.6. It demonstrates a noteworthy trend, with the majority of New Age Startups adopting the Agile Method while a substantial portion, roughly 27%, continue to use Traditional Methods. This information emphasizes the changing tastes and various strategies used in the entrepreneurial world, highlighting the continued coexistence of many tactics in the startup ecosystem.

Table 5.3

Depicts the percentage project management method adopted.

Name of Method	Percentage (%)
Agile Method	67 %
Waterfall	27 %
Others	8 %

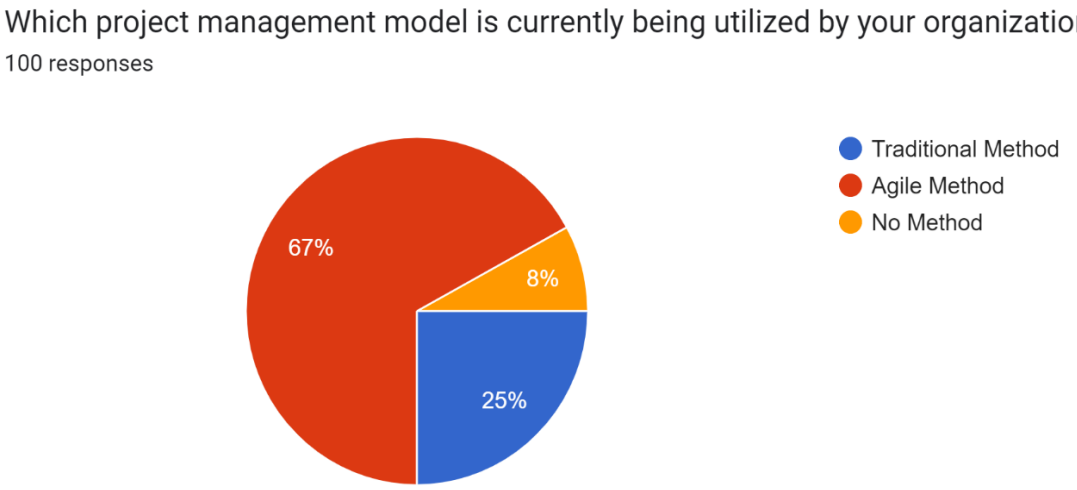


Figure 5.6

Depicts the percentage project management method adopted.

5.3.5 Most challenging obstacle faced by New Age Digital Startups.

We have picked four of the most difficult challenges that New Age Digital Startups encounter to undertake this analysis.

These challenges were carefully identified after a thorough assessment of the literature at the time. Following pointers were identify to converge the results:

- Lack of Resources
- Lack of Time Management
- Funding Difficulties
- Scaling Up

A thorough explanation of these four difficult challenges is given in Table 5.4 & Figure 5.7, organized in accordance with the services supplied by New Age Digital. Getting practical experience was the main goal of this practice.

Table 5.4

Depicts the challenging obstacle faced by New Age Digital Startups.

Name of Method	Percentage (%)
Lack of Resources	38 %
Lack of Time Management	22 %
Others Funding Difficulties	18 %
Scaling Up	22 %

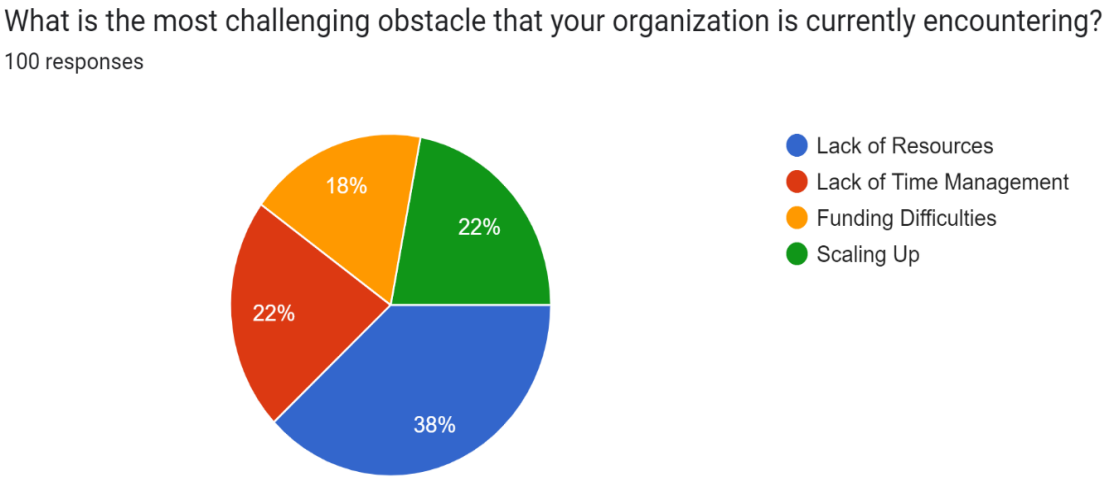


Figure 5.7

Depicts the challenging obstacle faced by New Age Digital Startups.

5.3.6 Most crucial limitation during Project Execution

We have picked four of the most difficult crucial limitations that startups encounter during the project implementation and execution. These challenges were carefully identified after a thorough assessment of the literature at the time. Following were the limitations:

- Time
- Scope
- Budget
- Resources

A thorough explanation of these four difficult challenges is given in Table 5.5 & Figure 5.8, organized in accordance with the services supplied by New Age Digital. Getting practical experience was the main goal of this practice.

Table 5.5

Depicts the most crucial limitation during project execution.

Name of Method	Percentage (%)
Time	14 %
Scope	21 %
Resources	34 %
Budget	27 %
Others	4 %

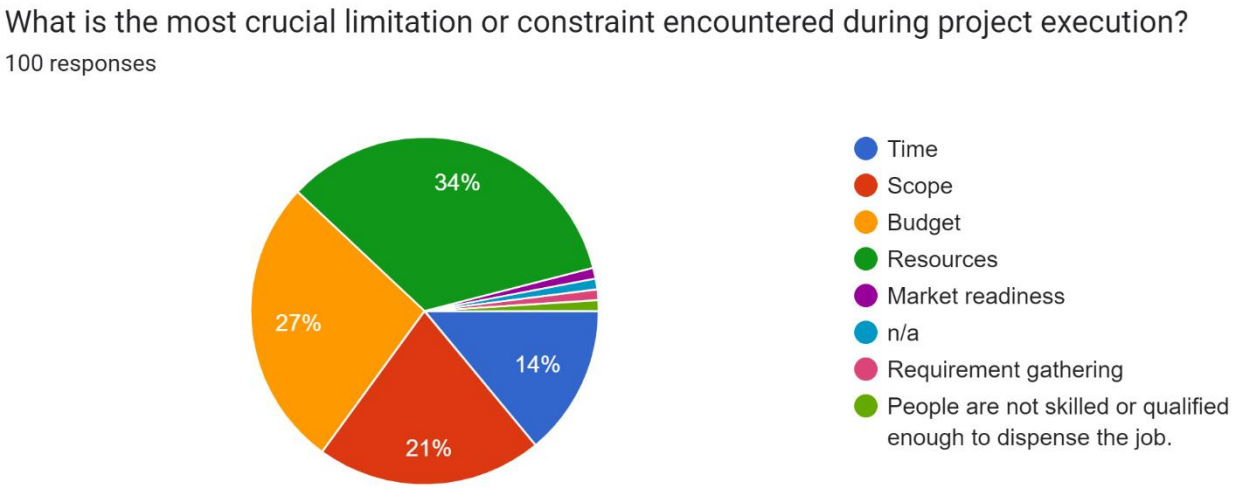


Figure 5.8

Depicts the most crucial limitation during project execution.

5.3.7 Impact of Digital Startups on the Global Economy

In this section, we have examined four individuals' viewpoints on the effects of digital startups on the global economy.

Most respondents, or about 67% of those surveyed, showed a high belief in the significance of digital startups. About 25% of the participants agreed that digital startups are at least somewhat significant, whereas a tiny percentage said they were neither significant nor uncertain.

These four viewpoints are fully explained in Table 5.6. Figure 5.9 also includes a pie chart that shows how the replies were distributed. This exercise's

main goal was to collect useful advice from people working on both digital and non-digital startups.

Table 5.6

Depicts the impact of digital startups on the global economy.

Name of Method	Percentage (%)
Very Important	69.7 %
Somewhat Important	25.3 %
Not very important	2.5 %
Unsure	2.5 %

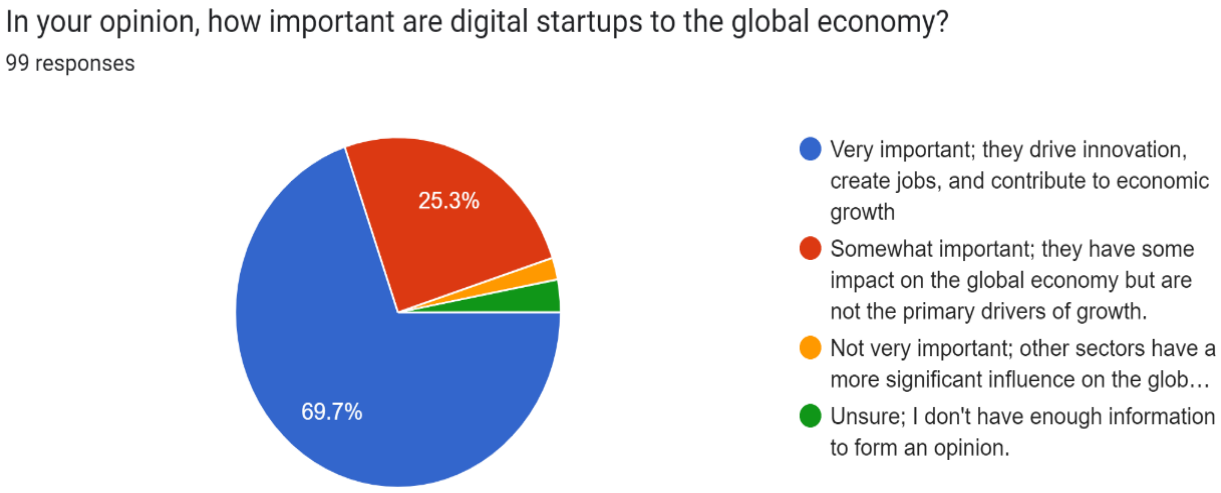


Figure 5.9

Depicts the impact of digital startups on the global economy.

5.3.8 Regions of working for Digital Startups

To learn more about how people perceive the areas with the greatest concentration of digital startups, we have picked several regions around the world in this section. Participants' perspectives differed greatly, emphasizing a wide range of Indian regions in addition to only three, including:

- Silicon Valley, United States
- Bangalore, India
- London, United Kingdom
- Berlin, Germany
- Mumbai, India
- Hyderabad, India
- Dubai
- Nordics for Fintech

A detailed breakdown of these areas is shown in Table 5.7, which also emphasizes the widely held perception that Silicon Valley in the United States serves as the main incubator for the conception and formation of most successful digital firms.

The results of this analysis make it clear that the United States is essential to the development of the global digital landscape. Figure 5.10's pie chart, which graphically displays the results of the thorough survey form, provides important details on how businesses are perceived in various locations. With this procedure, we hoped to better understand how digital startups are distributed across the globe.

Table 5.7

Depicts the percentage of regions of working for digital startups.

Name of Method	Percentage (%)
Silicon Valley United States	43 %
London, United Kingdom	6 %
Berlin, Germany	4 %
Bangalore, India	40 %
Mumbai, India	2 %
Hyderabad, India	1 %
Dubai	1 %

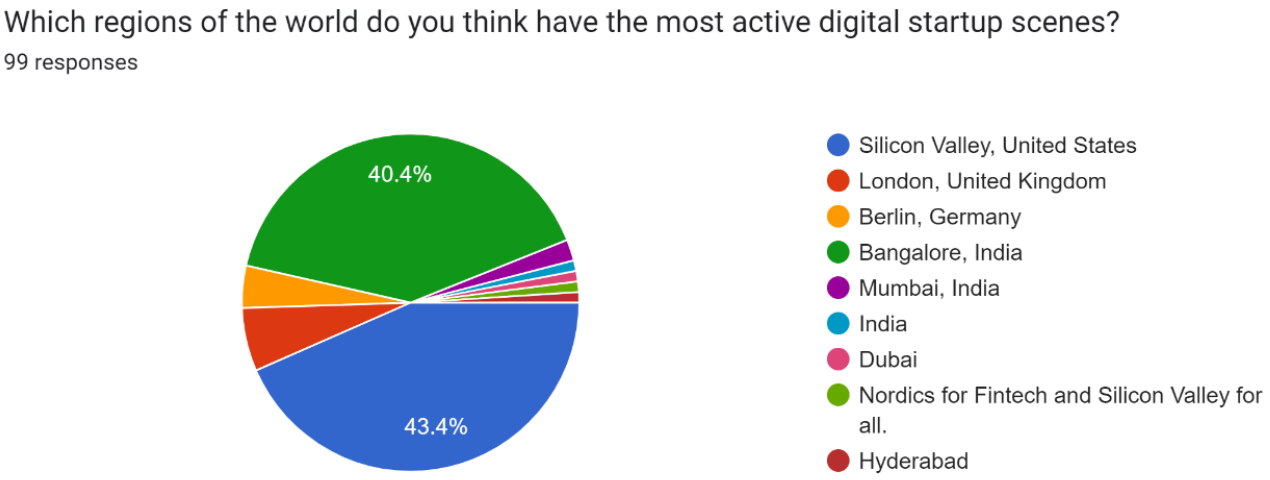


Figure 5.10

Depicts the percentage of regions of working for digital startups.

5.3.9 Key Competencies for entrepreneurs working in the digital startup space

In this analysis, we have identified four key competencies that are necessary for any entrepreneur who wants to run a Digital Startup successfully. These abilities have been discovered by a thorough analysis of the literature now available on the market, and they are as follows:

- Technical skills and coding proficiency
- Business acumen and strategic thinking
- Effective communication and networking abilities
- Adaptability and ability to embrace.

The outcomes unequivocally show how crucial business acumen and strategic thinking are. This is clear from the information shown in Table 5.8 and Figure 5.11, which offer a pie chart-style visual depiction and support the same conclusion.

Table 5.8

Depicts the percentage of key competencies for entrepreneurs.

Name of Method	Percentage (%)
Technical skills and coding proficiency	6 %
Business acumen and strategic thinking	37 %
Effective communication and networking abilities	22 %
Adaptability and ability to embrace.	34 %

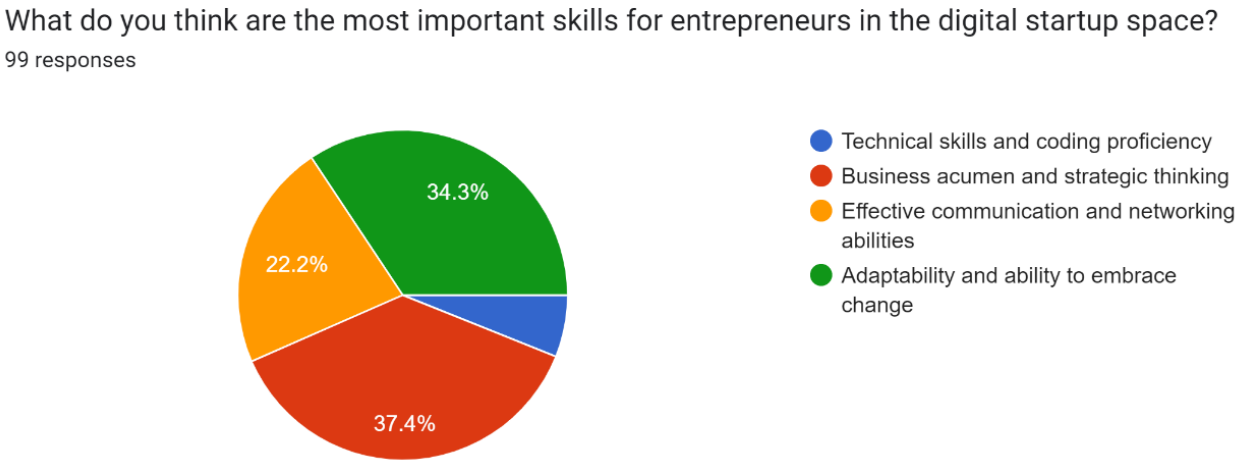


Figure 5.11

Depicts the percentage of key competencies for entrepreneurs.

5.3.10 Importance of formal Project Management Approach

This section explores the value of a formal project management approach and the crucial function as it is important in achieving effective project outcomes.

A formal project management strategy minimizes risks, improves efficiency, and maximizes the possibilities of attaining project objectives in a systematic and controlled manner by establishing explicit structures, processes, and accountability.

This section also tries to emphasize the value of using a formal method, which offers another response to the query of how using a formal project management strategy may help businesses that offer digital services succeed. Response to this explanation is represented in the form of pie-chart in Figure 5.12

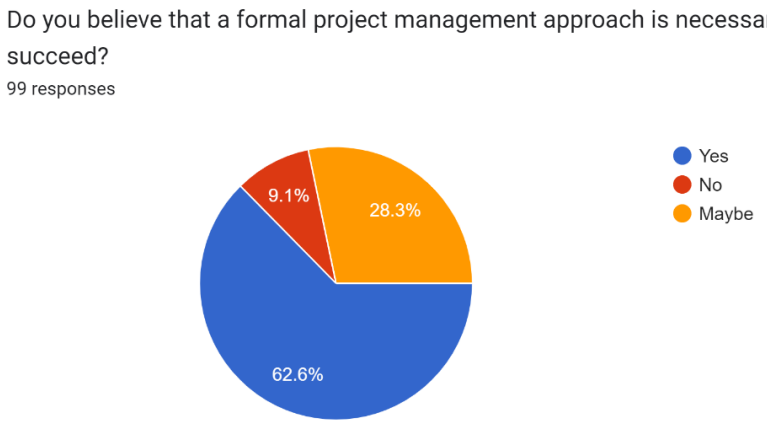


Figure 5.12

Depicts the Importance of formal Project Management Approach

5.3.11 Most significant challenge during any Digital Transformation Project.

The core problem of any Digital Transformation Project is unraveled as we go on a profound exploration in this section. The alignment of technology, people, and processes is a crucial challenge that must be overcome, and one of the main goals of this part was to shed light on this crucial issue and demonstrate the transformative potential of doing so. After carefully examining the literature at the time, these difficulties were noted. Which are:

- Project Management Technique
- Project Manager
- Lack of Change Management Strategy
- New Process & Tools

A thorough explanation of these four difficult challenges is given in Table 5.9 & Figure 5.13. The majority of those asked believe that the introduction of new process tools and the lack of a change management strategy are the biggest hurdles for digital transformation projects, and the findings reflect this belief.

Table 5.9

Depicts the percentage of challenges occurs for Digital Transformation Project.

Name of Method	Percentage (%)
Project Management Technique	27 %
Project Manager	9 %
Lack of Change Management strategy	34 %
New Process & Tools	30 %

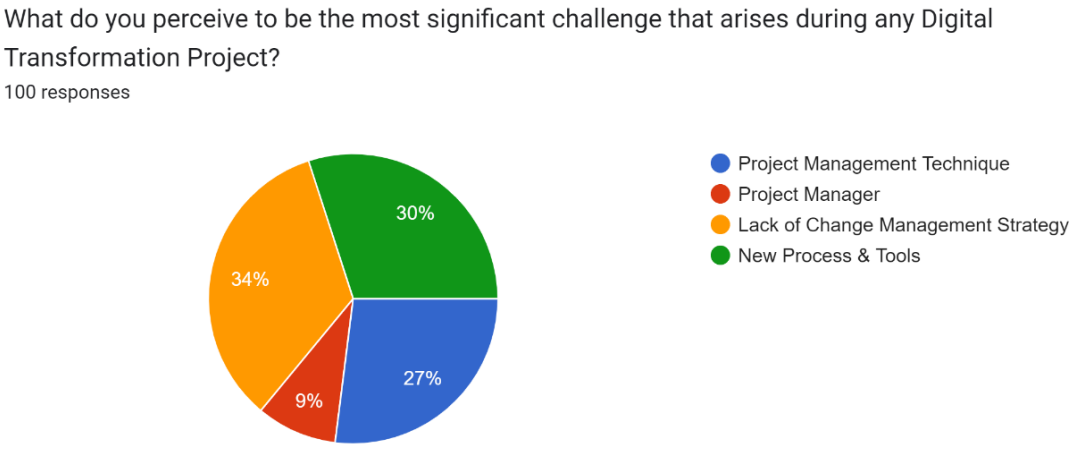


Figure 5.13

Depicts the percentage of challenges occurs for Digital Transformation Project.

5.3.12 Project Management Tools for Digital Transformation Projects

Project management tools for digital transformation projects streamline collaboration, planning, and execution to achieve successful outcomes. We have identified following tools to take responses:

- Trello
- Asana or Jira
- Monday
- Wrike
- Proof Hub
- SharePoint
- Google Drive

As the result people have utilize versatile platforms, to manage tasks, deadlines, and milestones efficiently. Leverage communication tools like Slack or Microsoft Teams for real-time updates and seamless team interaction. Additionally, people have used cloud-based document sharing and storage platforms like Google Drive or Microsoft SharePoint to ensure easy access and version control for project-related files. These tools empower teams to adapt, coordinate, and drive digital transformation initiatives effectively.

The results of response collected have been presented in Table 5.10 & Figure 5.14. To have the real data of project management tools used during the digital transformation projects was the main goal of this practice.

Table 5.10

Depicts the observation on various Project Management Tools.

Name of Method	Percentage (%)
JIRA	54.5 %
Trello	8.1 %
Monday	9 %
Wrike	9.1 %

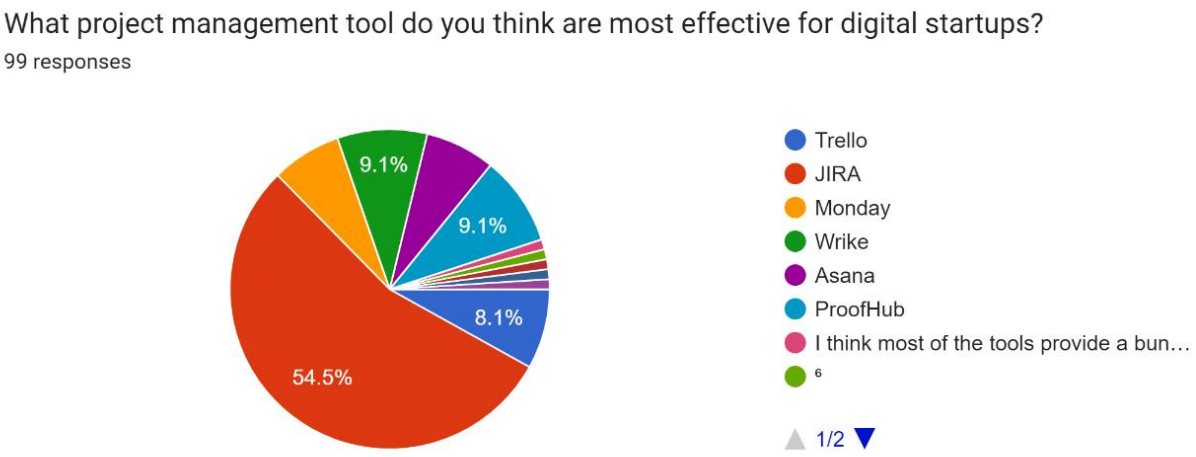


Figure 5.14

Depicts the observation on various Project Management Tools

5.3.13 Project Management significance in success of Digital Startups.

Understanding the significance of project management for the success of digital companies was one of the key concluding factors of this investigation. One question was framed and given to aspiring CXOs and other important stakeholders of IT organizations to attain their perspective on the successful execution of project management and after a thorough inquiry was conducted to grasp this difficulty. The summary was conducted around these four points:

- Very Low
- Low
- Moderate
- High

A thorough explanation of these four difficult challenges is given in Table 5.11. A details pie-chart is presented as Figure 5.15, which provides the visual display of the same.

Table 5.11

Depicts Project Management significance in success of Digital Startups

Name of Method	Percentage (%)
High	36 %
Moderate	54 %
Low	7 %
Very Low	3 %

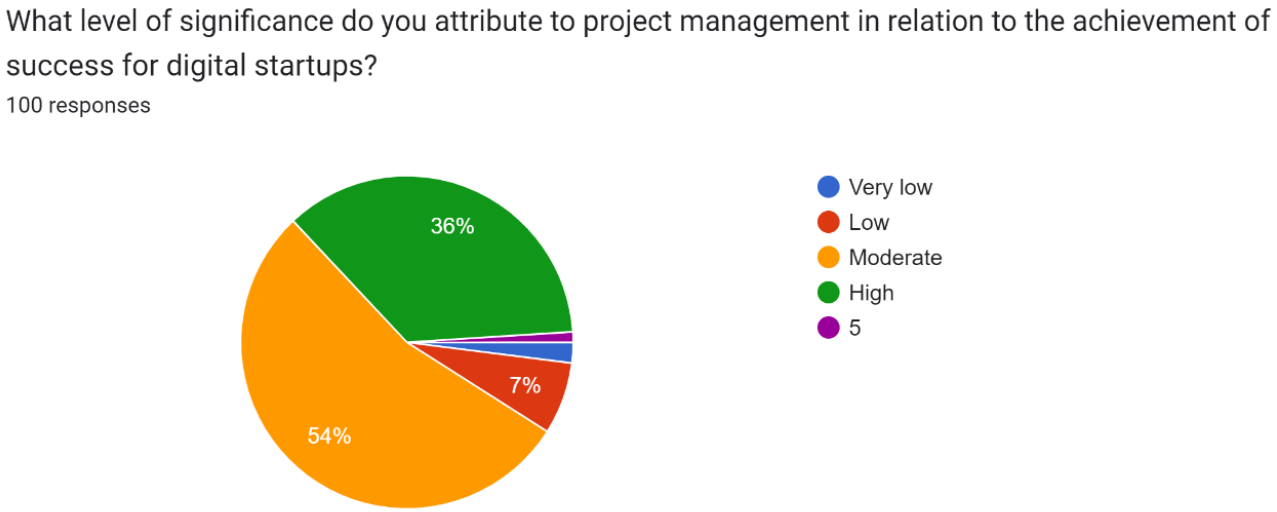


Figure 5.15

Depicts the Project Management significance in success of Digital Startups.

5.3.14 How Project Management can help in manage risk and uncertainty

This section's primary goal was to perform a thorough analysis of the four major problems that can aid in overcoming the risk and uncertainty for the success of any new generation digital startups.

To provide a broad understanding of the success of project management, following four points were identified:

- By providing a structured framework for identifying and analyzing potential risks and developing strategies to mitigate them.

- By offering tools and techniques to monitor and control project activities, startups to respond quickly to changing circumstances.
- By facilitating effective communication and collaboration among team members, enabling better risk assessment and decision-making
- By providing access to industry best practices and lessons learned, helping startups navigate uncertainties based on previous successful projects.
- All Above

The results showed in Table 5.12 & Figure 5.16 provides that most people selected all the options, demonstrating that most people are aware that a framework for structure, a variety of tools and techniques, effective communication, and access to industry best practices, all of these assist startups in overcoming risk and uncertainty.

Table 5.12

Percentage of responses how project management in managing risk and uncertainty.

Name of Method	Percentage (%)
By providing a structured framework for identifying and analyzing potential risks and developing strategies to mitigate them.	9.1 %

By offering tools and techniques to monitor and control project activities, startups to respond quickly to changing circumstances.	21.2 %
By facilitating effective communication and collaboration among team members, enabling better risk assessment and decision-making	11.1 %
By providing access to industry best practices and lessons learned, helping startups navigate uncertainties based on previous successful projects	1 %
All Above	57.6 %

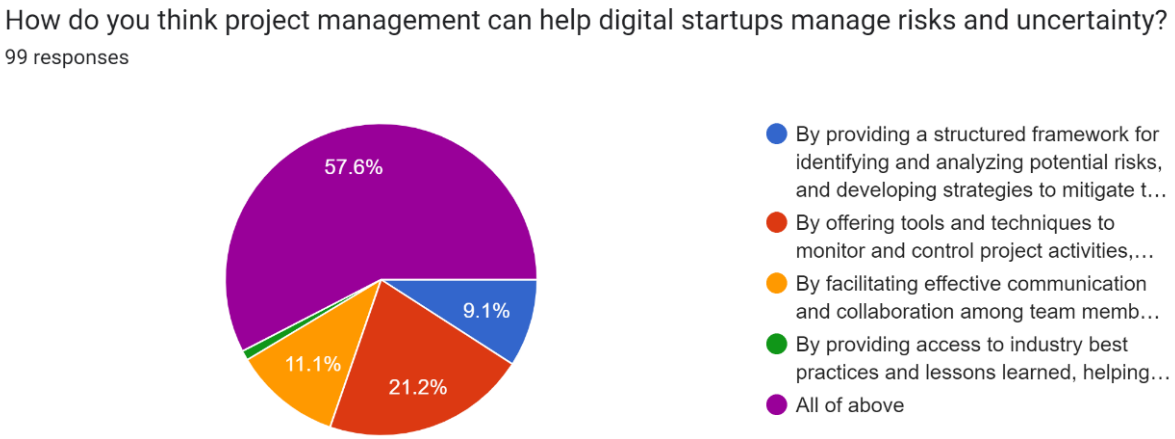


Figure 5.16

Pie chart of responses how project management in managing risk and uncertainty.

5.3.15 How Project Management can improve Communication & Collaboration

The purpose of this section was to give a brief overview of the various viewpoints that we had discovered through careful literature review and research findings. The findings clearly show that new age digital startups can improve communication and collaboration by offering all the pointers listed below:

- By providing a clear project roadmap and timeline to ensure everyone is on the same page.
- By implementing project management software tools that facilitate real-time communication and collaboration.
- By assigning dedicated project managers who can coordinate and facilitate effective communication among team members.
- By conducting regular team meetings and status updates to ensure everyone is aligned and informed about project progress.

Table 5.13

Depicts the percentage of responses how project management can improve Communication & Collaboration

Name of Method	Percentage (%)
By providing a clear project roadmap and timeline to ensure everyone is on the same page.	8.1 %

By implementing project management software tools that facilitate real-time communication and collaboration.	12.1 %
By assigning dedicated project managers who can coordinate and facilitate effective communication among team members	12.1 %
By conducting regular team meetings and status updates to ensure everyone is aligned and informed about project progress.	4 %
All above	63.6 %

The results of all four pointers are represented in Table 5.13, whereas figure 5.17 displays the same outcomes in the form of pie-chart.

5.3.16 How project management can help digital startups stay on track and meet their deadlines

The purpose of this section was to give a brief overview of the various viewpoints regarding how project management can help digital startups to stay on track and to meet their deadlines. These findings were discovered through careful literature review and research findings. The findings clearly show that new age digital startups can improve by providing structure framework, implementing agile

methodologies, utilizing project management tools and by assigning a dedicated project manager. Following pointer were identified:

- By providing a structured framework and clear milestones to track progress and ensure timely completion.
- By implementing agile methodologies and iterative development processes to adapt to changing requirements and deliver incrementally.
- By utilizing project management tools and software to streamline communication, collaboration, and task management.
- By assigning a dedicated project manager who can oversee the project, manage resources, and proactively address any roadblocks.
- All of above

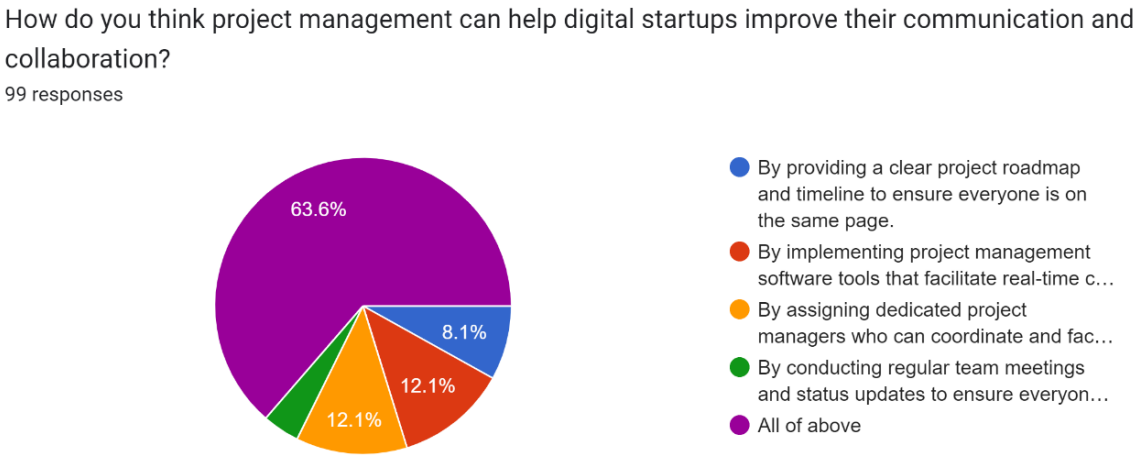


Figure 5.17

Depicts the percentage of responses how project management can improve Communication & Collaboration.

The results of all four pointers are represented in Table 5.14, whereas figure 5.18 displays the same outcomes in the form of pie-chart.

Table 5.14

Depicts the percentage of responses how project management can help digital startups stay on track and meet their deadlines.

Name of Method	Percentage (%)
Lack of Resources By providing a structured framework and clear milestones to track progress and ensure timely completion.	10.1 %
Funding Difficulties By utilizing project management tools and software to streamline communication, collaboration, and task management.	16.2 %
Funding Difficulties By utilizing project management tools and software to streamline communication, collaboration, and task management.	5.1 %
By assigning a dedicated project manager who can oversee the project, manage resources, and proactively address any roadblocks.	4 %
All of Above	64.6 %

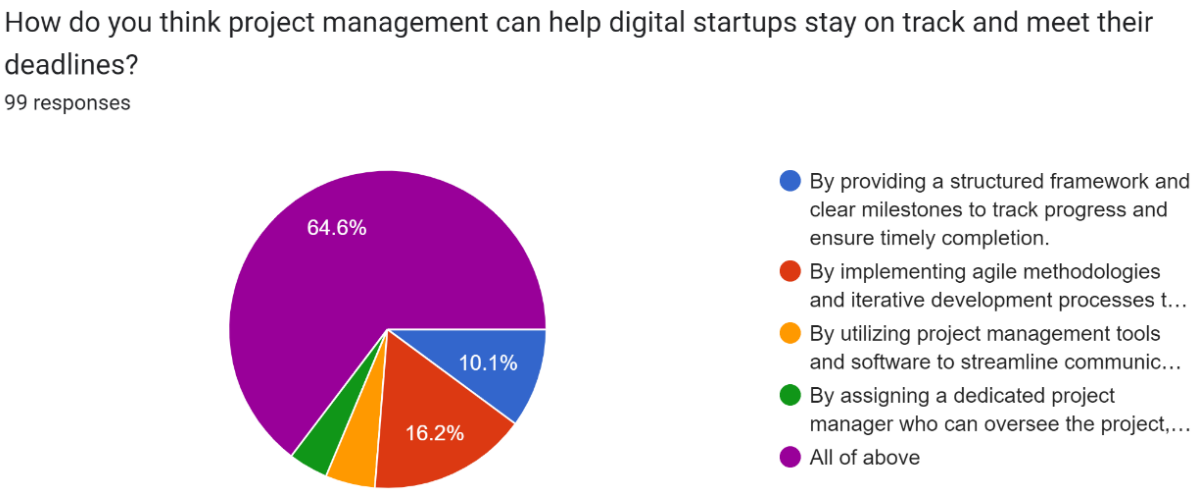


Figure 5.18

Depicts the percentage of responses how project management can help digital startups stay on track and meet their deadlines

5.3.17 What distinguishes between successful & failed digital startups

This section attempts to highlight the main takeaway for readers so that they may make an informed decision about the appropriate course of action while preparing for the overall goal and target of managing a successful digital startup. Following a thorough evaluation, the following four important factors were thoroughly determined:

- Strong leadership and a clear vision
- Innovative and disruptive technology
- Effective marketing and customer acquisition strategies
- Agile and adaptable business models

The findings of a thorough survey are shown in Table 5.15. The identical outcome is depicted in Figure 5.19 in the form of a pie-chart.

Table 5.15

Depicts what distinguishes between successful & failed digital startups.

Name of Method	Percentage (%)
Strong leadership and a clear vision	32.3 %
Innovative and disruptive technology	12.1 %
Effective marketing and customer acquisition strategies	23.2 %
Agile and adaptable business models	32.3 %

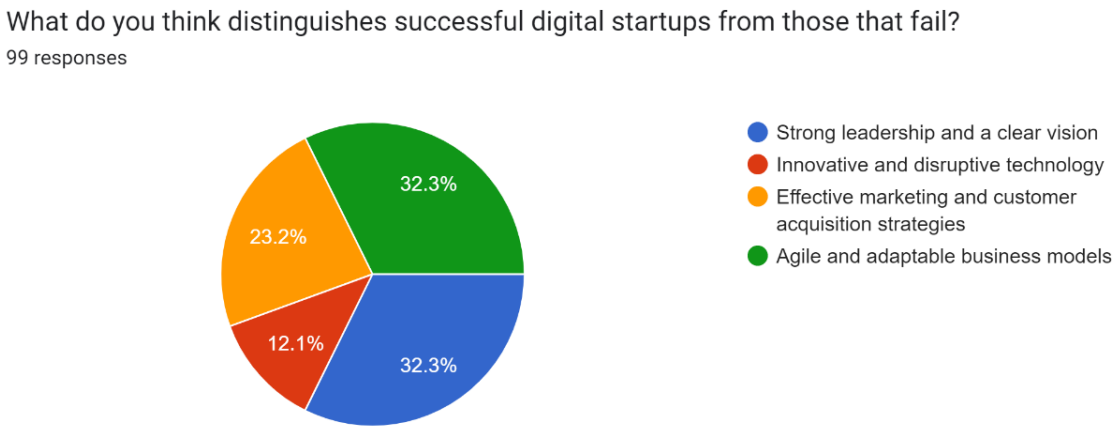


Figure 5.19

Depicts what distinguishes between successful & failed digital startups.

5.3.18 Knowledge Gained will soon replace Business Outcomes?

The section's goal is to examine how the landscape of digital transformation is changing and whether this evolution could result in a paradigm shift where knowledge and insights collected from these initiatives become increasingly important in influencing and forming business outcomes.

The following four findings were discovered through careful literature review and research findings. The findings clearly show that yes, knowledge gained during any transformation will soon replace business outcomes and it is also possible that knowledge gained during a transformation may complement business outcomes, but not replace them entirely. The following four key terms were identified after a thorough assessment of the literature at the time:

- Yes, knowledge gained during any transformation will soon replace business outcomes.
- No, business outcomes will always remain essential regardless of the knowledge gained during a transformation.
- It is possible that knowledge gained during a transformation may complement business outcomes, but not replace them entirely.
- The relationship between knowledge gained during a transformation and business outcomes may vary depending on the specific context and industry.

A thorough explanation of these four key terms is given in Table 5.16 and the identical outcome is depicted in Figure 5.20 in the form of a pie-chart.

Table 5.16

Depicts the result of finding for Knowledge Gained will soon replace Business Outcomes

Name of Method	Percentage (%)
Yes, knowledge gained during any transformation will soon replace business outcomes.	27.6 %
No, business outcomes will always remain essential regardless of the knowledge gained during a transformation.	9 %
It is possible that knowledge gained during a transformation may complement business outcomes, but not replace them entirely.	31 %
The relationship between knowledge gained during a transformation and business outcomes may vary depending on the specific context and industry.	32 %

5.3.19 How government policies are in fostering the growth of digital startups.

This section's goal is to investigate and evaluate how government regulations affect the development of digital startups in the context of New Age Digital Transformation Projects. In the age of digital transformation, the section also promotes the growth and development of digital startups by aiming to provide a

thorough grasp of how government policies affect the startup ecosystem. The following four findings were discovered through careful literature review and research findings.

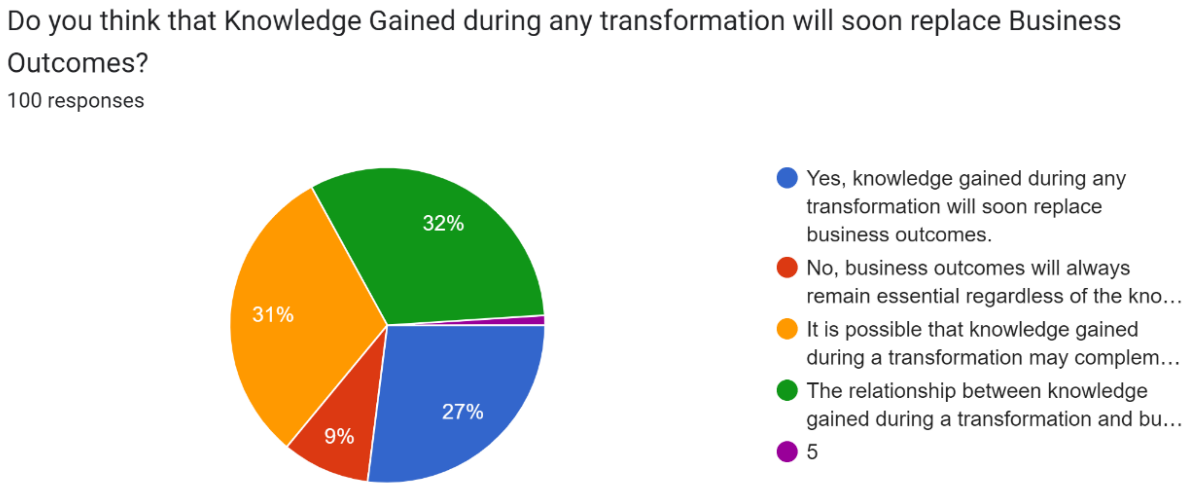


Figure 5.20

Depicts the result of finding for Knowledge Gained will soon replace Business Outcomes

The results clearly show that yes, government policies are extremely important. The following four key terms were identified after a thorough assessment of the literature at the time:

- Extremely important - Government policies play a critical role in providing a conducive environment for the growth of digital startups by offering financial incentives, creating supportive regulatory frameworks, and promoting innovation.

- Moderately important - While government policies can have some impact on the growth of digital startups, other factors such as market demand, access to funding, and entrepreneurial skills may have a more significant influence.
- Somewhat important - Government policies can have a limited effect on the growth of digital startups, but other factors like technological advancements and market dynamics play a more substantial role.
- Not important - Government policies have minimal to no impact on the growth of digital startups, and the success of these ventures relies solely on the efforts and strategies of the entrepreneurs themselves.

A thorough explanation of these four key terms is given in Table 5.17 and the identical outcome is depicted in Figure 5.21 in the form of a pie-chart.

Table 5.17

Depicts the percentage of responses that how government policies are in fostering the growth of digital startups.

Name of Method	Percentage (%)
Extremely important	58.6 %
Moderately important	29.3 %
Somewhat important	9.1 %
Not important	3 %

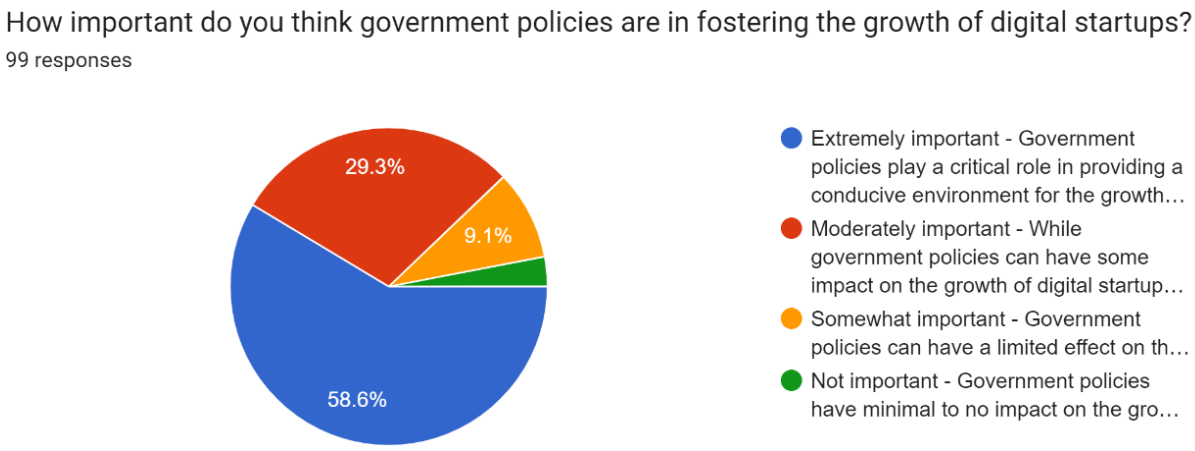


Figure 5.21

Depicts the percentage of responses that how government policies are in fostering the growth of digital startups.

5.4 Project Management Challenges in Digital Startups

Comprehending and delving into the core principles of project management while maintaining adaptability has been instrumental in keeping the project aligned with its predefined objectives. These objectives encompass crucial aspects such as:

- Project scope
- Timely completion
- Adherence to the budget.

Project management fosters efficient resource allocation, as startups often grapple with limited time, finances, and human capital. By employing robust project management

techniques, these valuable resources are optimized, resulting in better outcomes and reduced risks of cost overruns, or missed deadlines.

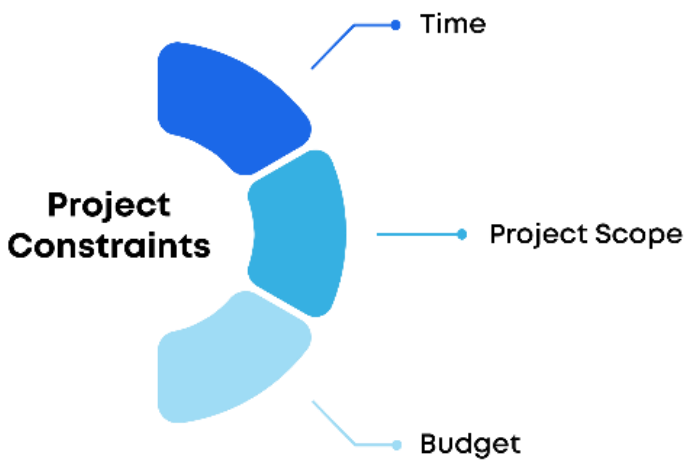


Figure 5.22

Depicts the Project Constrains especially in the Digital Sector

Projects fail all the time. According to a recent Standish Group report, only 36% of projects succeed in meeting the requirements.

- Why do so many projects turn off track?

There are several reasons–from a change in the organization's priorities and project objectives to procrastination and task dependency. But most of them point towards a common factor that is the lack of clear direction. Without sufficient requirements and objectives, projects in project management are prone to:

- Scope creep, in which the project's parameters and deliverables continue to grow without sufficient oversight, creating difficulties and inefficiencies.
- Budget overruns because poor financial planning and faulty cost estimates sometimes occur when there is unclear direction, which causes budgets to be exceeded.
- Delays brought on by unclear objectives and milestones, which make it difficult to gauge development and timely completion.

Figure 5.23

Depicts the various challenges encountered in Project Management

- Misallocation of resources causes inefficiencies and delays when workers and materials are improperly distributed due to a lack of clear direction.
- A breakdown in communication because confusing instructions can result in misunderstandings and misinterpretations among team members, stakeholders, and clients, which makes it difficult to work together effectively.
- Problems with quality include imprecise objectives that make it challenging to reach the desired quality standards and poor project results.

To overcome these difficulties, project managers must give defined objectives, specifying needs, and developing effective communication. This unity of purpose encourages teamwork, reduces risks, assures proper resource allocation, and improves the success of the project.

Following a comprehensive and successful literature review, numerous challenges have been identified for presentation in this thesis. The compilation of various project management challenges from the PMI's Pulse of Professional Report, 2018, is displayed in Figure 5.24*. This report sheds light on the diverse hurdles faced by project managers in their professional endeavors. The inclusion of this extensive list enhances the understanding of the complex landscape within which projects operate and provides valuable insights into the contemporary project management scenario. These challenges encompass aspects like resource allocation, risk management, stakeholder engagement, time constraints, and

adaptability to change, all of which significantly impact the success of projects in diverse industries. Additionally, the findings also underscore the importance of effective project management in overcoming these obstacles and ensuring project success and organizational growth.

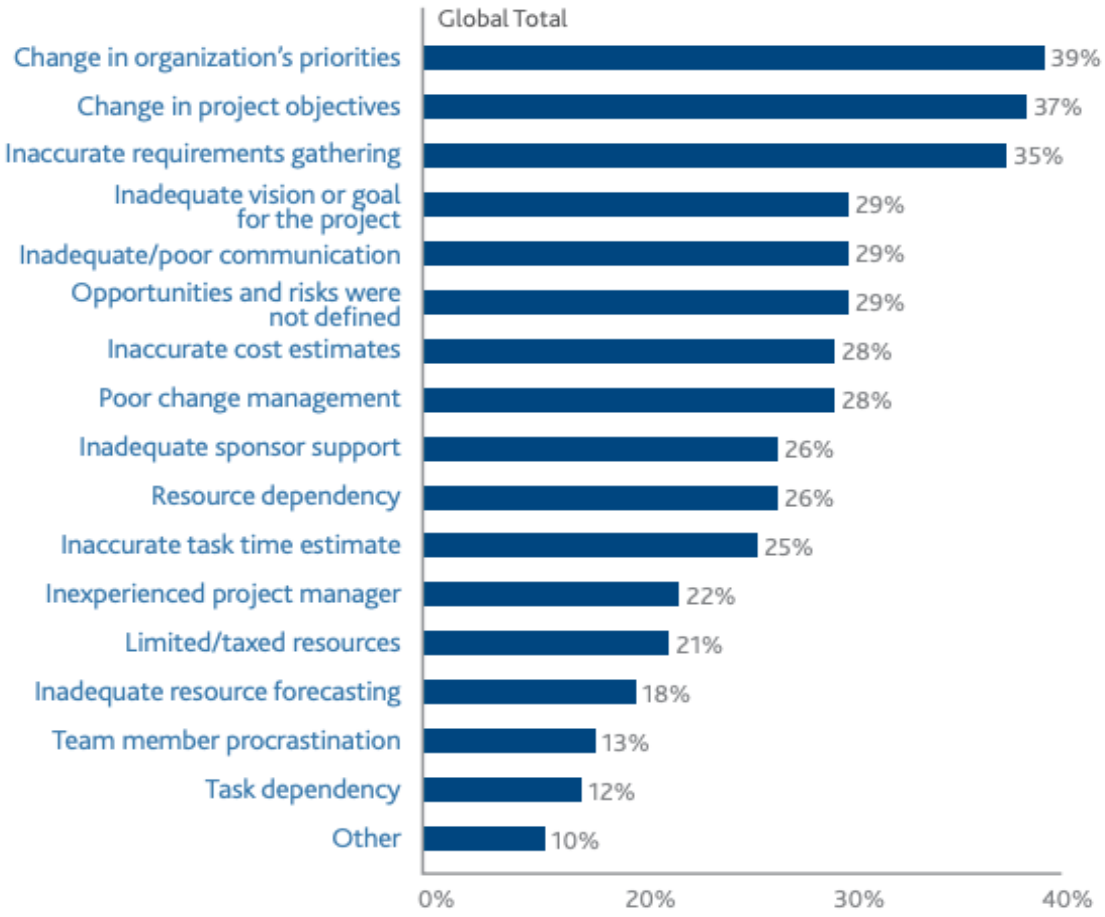


Figure 5.24

Depicts the various key project management challenges.

*Source – PMI's Pulse of Profession Report, 2018

5.5 Questionnaire to understand Project Management Challenges in Digital Startups

A questionnaire with open-ended questions shared with the key stakeholder of various digital startups. This approach has helped to get a thorough report on how various startups have dealt with the respective project management issues. First, a sequence of questions was created to understand the numerous issues that digital startups usually face. After that, questionnaires were sent out to key stakeholders. The data received was transcribed and recorded as per the respective company's theme and their domain of working.

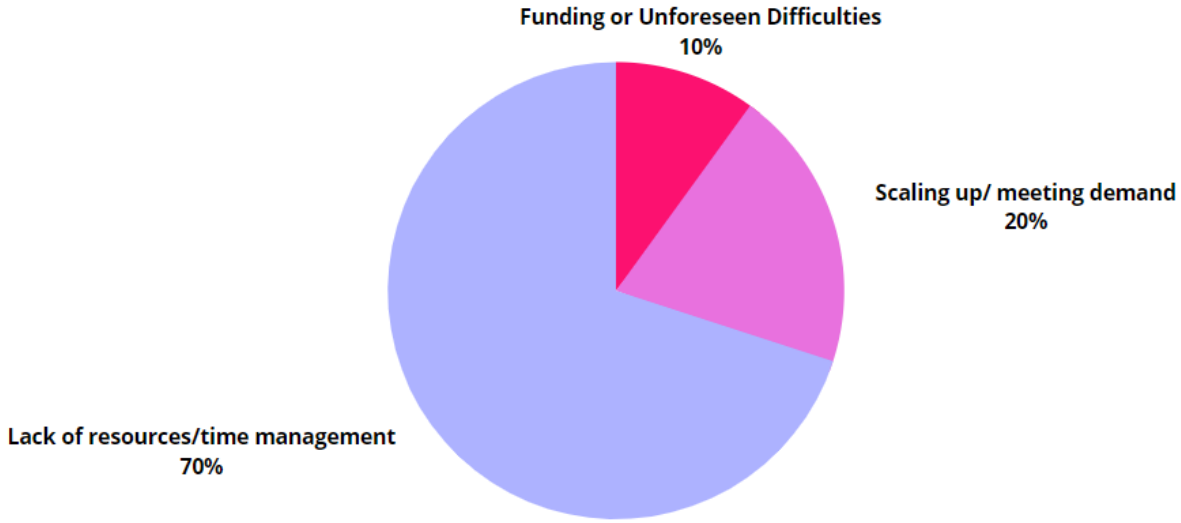


Figure 5.25

Depicts what organizational difficulties, companies are facing.

Figure 2.23 shows that 10% of startups have faced funding and unforeseen difficulties, 20% of startups have faced the challenge of meeting the current demands and while 70% have faced the issue of lack of resource and time management. All the startups surveyed had different organizational goals, but the themes identified during the study could be divided into three categories: getting funding, growing, and transitioning to remote.

The themes identified after the extensive literature study has divided into three categories: getting funding, growing, and transitioning to remote. These startups had attained some success with project management at some time, and it appeared to occur in a variety of forms for all these 100 startups assessed, but the general threads were a success by applying agile methods. 40 have had experienced success through agile approaches, 30 by using traditional methods, and the rest 30 with long-term planning. While some of the companies were successful using traditional methods, a larger proportion of them had tried agile methodologies at some point. Figure 5.24 explains the percentage change of different project management methods adopted by digital startups.

This also indicates that some firms continue to use traditional tactics, and some don't. Sixty out of hundred businesses ballot were using traditional methods such as Gannt Chart, PERT, WBS and PERT and were having problems with them, while four said they were finding success with agile methods like Kanban, Lean Startup, and Trello. As project management tools, four out of ten companies use Excel or Google Docs, while five choose online systems like Asana, Jira, or Trello.

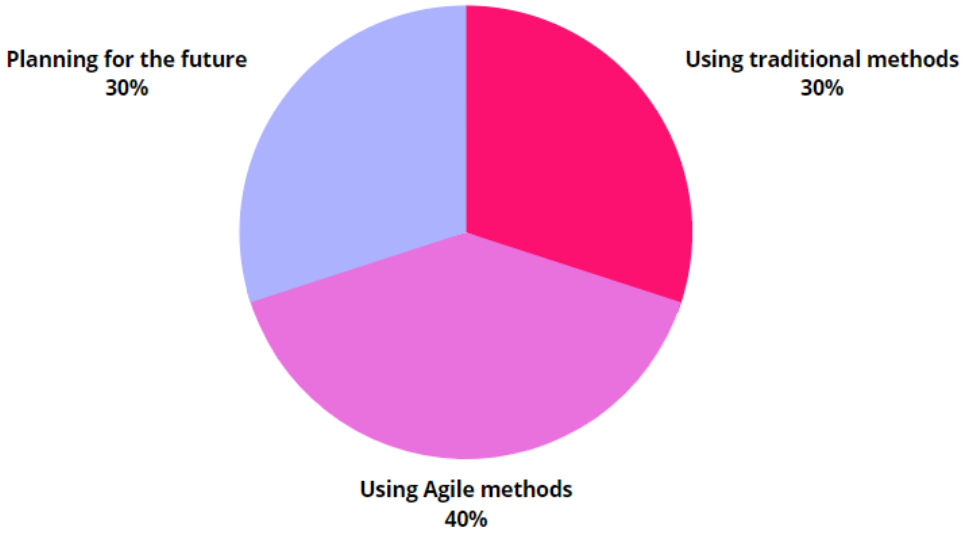


Figure 5.26

Depicts the success percentage of different project management methods.

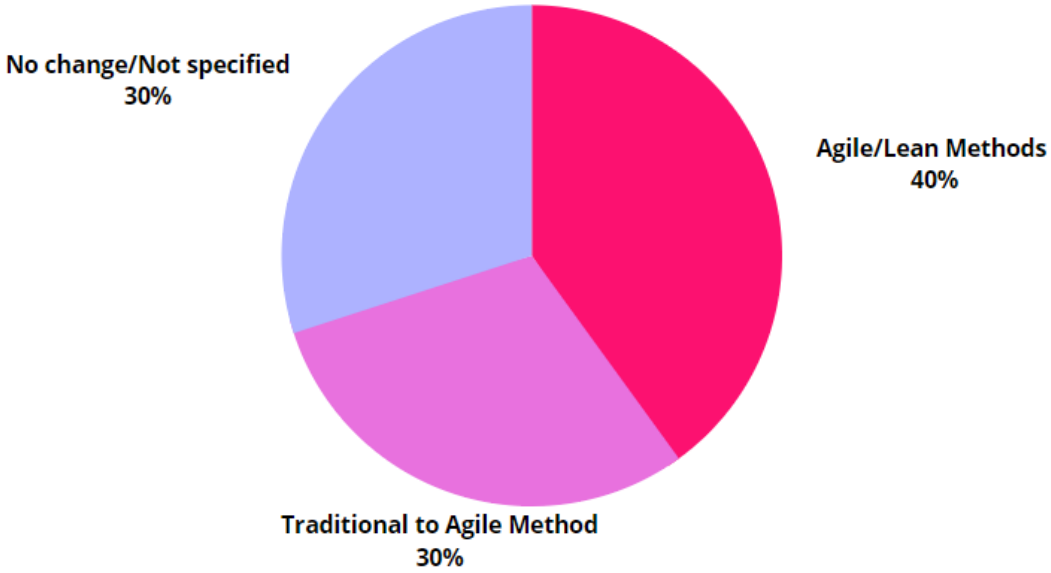


Figure 5.27

Depicts the how project management has evolved for Digital Startups

Lastly, after another survey, most startups (80 out of 100) wanted to move to agile methods, results are briefly explained in figure 5.25. Further to this some startups have also shown their interest in going with lean methods.

It was critical to figure out if startups were pleased with their project management approaches or whether they would have changed their minds at some point along the way. Many of the organizations claimed that their project management had evolved from agile to more lean technologies as they progressed (40 out of 100), while the rest indicated it had transitioned from conventional to agile (30) or had not changed at all (10).

Another set of questionnaires with open-ended questions shared with the budding CEOs and CXOs of various IT & digital startups. This approach has helped to get a thorough report on how various startups have dealt with the challenges while transforming digitally.

Successful digital transformation demands not only the correct technologies but also the necessary knowledge and direction to guide the process and get the best outcomes after the effective iterations with a set of questions. Businesses that do not embrace or adapt to the demands of the digital revolution fail miserably. Matching the acceleration of digital transformation is difficult for organizations, especially for those that continue to use outdated operating practices. While those that aggressively implement digital transformation remain in the game longer and are acknowledged as leaders. However, the execution is more difficult the easier it seems. The following study, which was produced because of a thorough survey,

illustrates the important need for a strong project manager and an improved project management approach.

- 60% - Failure of the digital transformation was frequently caused by a poor project manager or an inappropriate project management method.
- 32% - Promoting the Use of New Methods & Tools
- 8% - inadequate change management approach

Figure 5.28

Depicts the result of second survey conducted to understand challenges while Transforming Digitally.

The series of surveys represented via figures 5.25, 5.26, 5.27 & 5.28, precisely explain the various challenges faced by the digital startups in establishing the right project management tool.

CHAPTER VI:

CONCLUSION

6.1 Conclusions and Outlook

This research study proposed that larger companies, SMEs, and startups have different business objectives and modes of operation. They also face different challenges while implementing any project. The conducted extensive literature study also concludes that startups must adopt flexible and swift project management solutions.

By using a qualitative survey among the key stakeholder of IT and digital startups, this study proposed that how any digital startup should deal with project management challenges and explained the challenges with the traditional project management solutions. The domain of this proposed study was limited to information & technology and digital startups. There is no one-stop fix for the escalating problems that entrepreneurs in this era face, and that is the truth. One also doesn't possess a magic wand that would allow one to instantly overcome the alleged hurdles. Enterprises need to be robust and concentrate on maintaining their integrity against all odds to meet and handle the so-called obstacles of a violent corporate environment.

This research proposal summarizes four (04) of the most significant issues facing digital startups. With 50 million new firms debuting each year, there seem to be 150 million firms in existence today. Every day, on average, 137,000 new businesses are founded. By any measure, they are substantial sums. However, the issue of how many businesses survive the ferocious waves of revolution which have radically altered the entire character of today's startups persists. Yes, there has been

a major paradigm change. And that change has made it more difficult for startups to operate generally.

Further research may be conducted to identify how IT and digital startups that use agile approaches perform as compared to those that use traditional methods when it comes to project management. Researchers may also work to identify the effective way of doing project visualization, project scheduling tools, tracking project progress, sending reminders, prioritizing tasks, and risk mitigation. Based on interviews, group discussion, surveys followings are the key outcome of our study, these are not mentioned anywhere in the above chapters, anyone of these can lead to another big area of research and help the entire research community to identify various outcome altogether.

- **Future of Work Trends**: The Agile Learning Imperative: In 2023, the global workforce suffered a significant impact, losing approximately 255 million full-time jobs, resulting in an estimated loss of $3.7 trillion in wages and 4.4% of the global GDP. This has had a profound effect on lives and livelihoods. Although the vaccine rollout has commenced and the growth outlook is expected to improve, socio-economic recovery remains uncertain. However, organizations and individuals that had embraced digital transformation to prepare for the future of work have emerged relatively unscathed and more resilient.
- **Rise of the New Work Culture**: The pandemic triggered both temporary and transformative changes, now considered part of the new normal. These changes have reshaped our approach to work, learning, and daily routines.

- **Employees want more:** Today's workforce no longer sees their employers merely as a source of income. Apart from fair pay and benefits, they seek meaningful work, a commitment to mental health, transparency on social issues, and managerial support and flexibility. Achieving a work-life balance has become a priority for modern workers.
- **Hybrid work and workplaces**: Post-COVID, businesses face a new challenge of managing a highly complex, hybrid workforce. According to a study by Gartner, 82% of business leaders plan to allow employees to continue working from home at least part-time, while 47% are considering permanent remote work options.
- **Empathetic Leadership:** Managers now play a crucial role in providing psychological safety and fostering a sense of belonging within their teams. Leading remote teams requires adapting management styles to address the unique challenges of virtual work.
- **More and different skills:** Jobs today demand an increasing number of skills, growing by 10% each year. Simultaneously, around 33% of the skills found in an average job posting in 2022 will become obsolete by 2024. Valuable skills now include proficiency with emerging technologies, analytical abilities, collaboration aptitude, adaptability, innovative thinking, and resilience.
- **The Longevity Opportunity**: The pandemic, coupled with the rapid impact of automation and longer human lifespans, has created an ongoing skilling imperative. The future of work necessitates a higher volume, velocity, and variety of learning for both enterprises and employees. To enhance organizational resilience, leaders must foster a culture of continuous

learning. Employees need to embrace continuous learning to stay current in their roles and reskill periodically to advance their careers or pivot into high-demand roles. Organizations must integrate learning directly into work design to enable employees to acquire new skills on-the-job when needed. Agile learning is the key discipline to make this happen.

Proposed New Value System for New Age Digital Startups

- **Business Outcome – Over Knowledge Gained**

  People working in digital startups will leverage the insights and expertise acquired during their journey to make informed decisions, innovate rapidly, and develop cutting-edge solutions that meet market demands and outperform competitors.

  This knowledge-driven approach empowers startups to optimize their processes, adapt to evolving trends, and enhance their overall business performance, ultimately leading to sustainable growth and success in the dynamic digital landscape.

- **Growth Mindset – Over Current Skill Set**

  Embracing a growth mindset is crucial for digital startups, as it encourages individuals to constantly seek ways to expand their skill sets beyond their current abilities. In the rapidly evolving landscape of digital entrepreneurship, having a growth mindset will empowers team members to proactively acquire new knowledge and expertise, adapt to emerging technologies, and tackle novel challenges with confidence and enthusiasm.

This mindset fosters a culture of continuous learning and innovation, enabling startups to stay agile and competitive in a dynamic market environment. By nurturing a growth mindset, digital startups can unlock their team's full potential, paving the way for long-term success and impactful achievements.

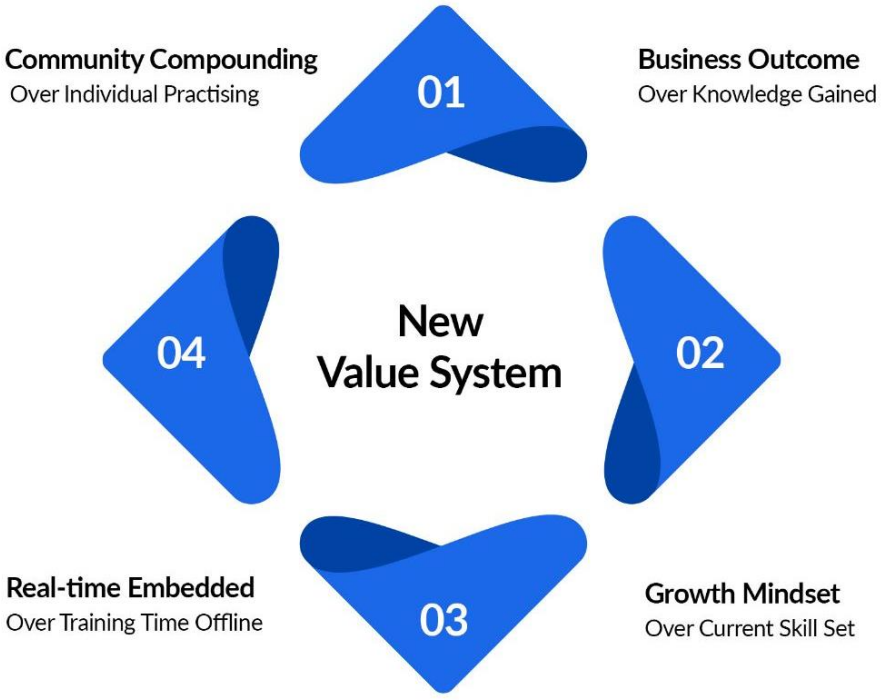


Figure 6.1

Depicts Proposed New Value System for New Age Digital Startups

- **Real-time Embedded – Over Training Time Offline**

  This feature will enable digital startups to seamlessly integrate real-time capabilities into their applications, allowing for instantaneous data processing and responsiveness to user interactions.

  Digital startups can leverage offline training time to enhance the performance and accuracy of their applications. By utilizing offline data and resources, the algorithms and models powering the startup's digital solutions can be continuously improved and optimized without affecting real-time operations. This approach ensures that the application remains reliable and efficient, even during online interactions with users.

- **Community Compounding – Over Individual Practising**

  In the context of digital startups, fostering a sense of community compounding takes precedence over individual practicing. By encouraging collaboration, knowledge-sharing, and collective problem-solving within the startup ecosystem, we can harness the power of diverse perspectives and experiences to drive innovation and sustainable growth.

  Emphasizing the collective effort and synergy among individuals within the startup community leads to stronger bonds, increased learning opportunities, and a supportive environment that fuels the success of all members involved.

APPENDIX A

QUESTION PREPARED FOR CXO INTERVIEW

1. How familiar are you with the concept of digital startups?
2. In your opinion, how important are digital startups to the global economy?
3. Which regions of the world do you think have the most active digital startup scenes?
4. What do you think are the biggest benefits of digital startups?
5. What do you think are the biggest challenges facing digital startups?
6. How important do you think government policies are in fostering the growth of digital startups?
7. What do you think are the most important skills for entrepreneurs in the digital startup space?
8. How important is access to funding for the success of digital startups?
9. What do you think distinguishes successful digital startups from those that fail?
10. In your opinion, what role do you think digital startups will play in shaping the future of the global economy?

APPENDIX B

SURVEYS WITH CO-WORKERS OF DIGITAL & NON-DIGITAL STARTUPS

1. Employee strength of different organization?
2. The company's line of business.
3. Present condition or status of organization.
4. Most challenging obstacle that organization is currently encountering.
5. Most crucial limitation or constraint encountered during project execution.
6. Opinion, how important are digital startups to the global economy?
7. Regions of the world do you think have the most active digital startup scenes?
8. Most important skills for entrepreneurs in the digital startup space?
9. Believe having a formal project management approach is necessary for digital startups to succeed?
10. What did they perceive to be the most significant challenge that arises during any Digital Transformation Project?
11. What project management tool do they think is most effective for digital startups?
12. What level of significance do they attribute to project management in relation to the achievement of success for digital startups?
13. How do they think that project management can help digital startups manage risks and uncertainty?
14. How do they think project management can help digital startups improve their communication and collaboration?

15. How do they think project management can help digital startups stay on track and meet their deadlines?
16. Do they think that Knowledge Gained during any transformation will soon replace Business Outcomes?
17. How important do they think government policies are in fostering the growth of digital startups?
18. Any suggestions or comments on how to enhance the productivity of Digital Startups in this thriving stage?

APPENDIX C

QUESTIONNAIRE TO UNDERSTAND PROJECT MANAGEMENT CHALLENGES IN DIGITAL STARTUPS

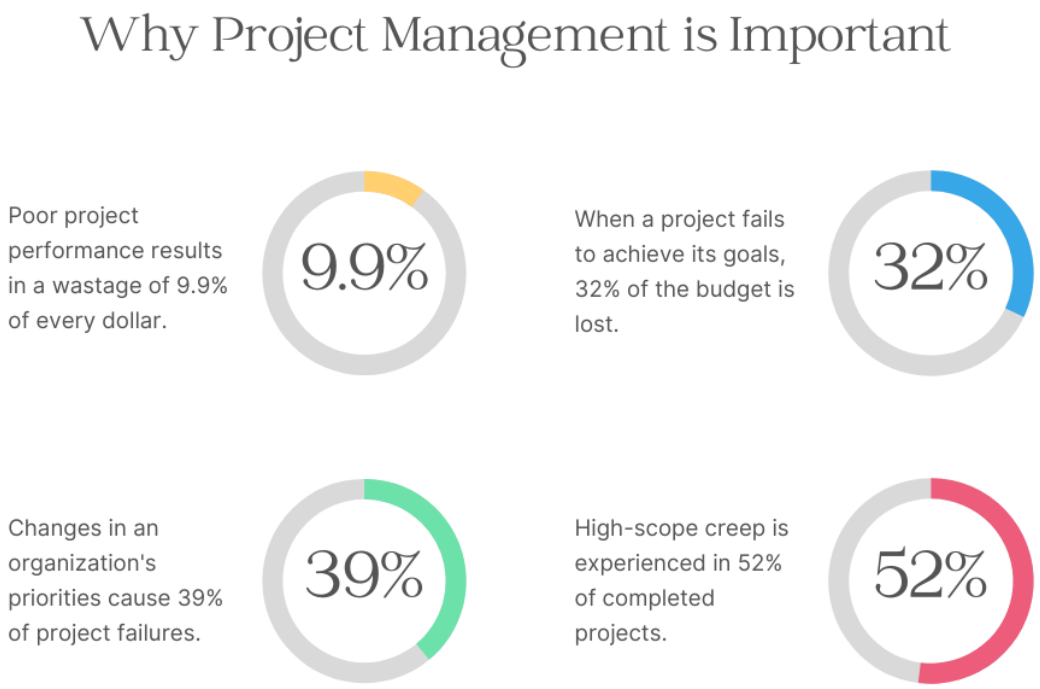
1. Have you ever worked for or been involved in a digital startup?
2. How important do you think project management is for the success of digital startups?
3. How do you think project management helps digital startups achieve their goals?
4. What project management tools or approaches do you think are most effective for digital startups?
5. In your opinion, what are the biggest challenges faced by digital startups when it comes to project management?
6. Do you believe that a formal project management approach is necessary for digital startups to succeed?
7. How do you think project management can help digital startups manage risks and uncertainty?
8. How do you think project management can help digital startups improve their communication and collaboration?
9. How do you think project management can help digital startups stay on track and meet their deadlines?
10. How do you think project management can help digital startups scale and grow?

APPENDIX D

WHY PROJECT MANAGEMENT IS IMPORTANT

Project management is essential for digital startups to navigate the complexities of their industry, optimize resource utilization, and deliver successful products/services that meet customer demands and drive business growth. it provides a structured framework for planning, executing, and monitoring projects, enhancing the overall efficiency and effectiveness of the startup's operations.

Following are our observation, represented in the number, and explained why project management is crucial for the success of any digital startup for several reasons:



*Data Source – PMI's Pulse of Profession Report, 2018

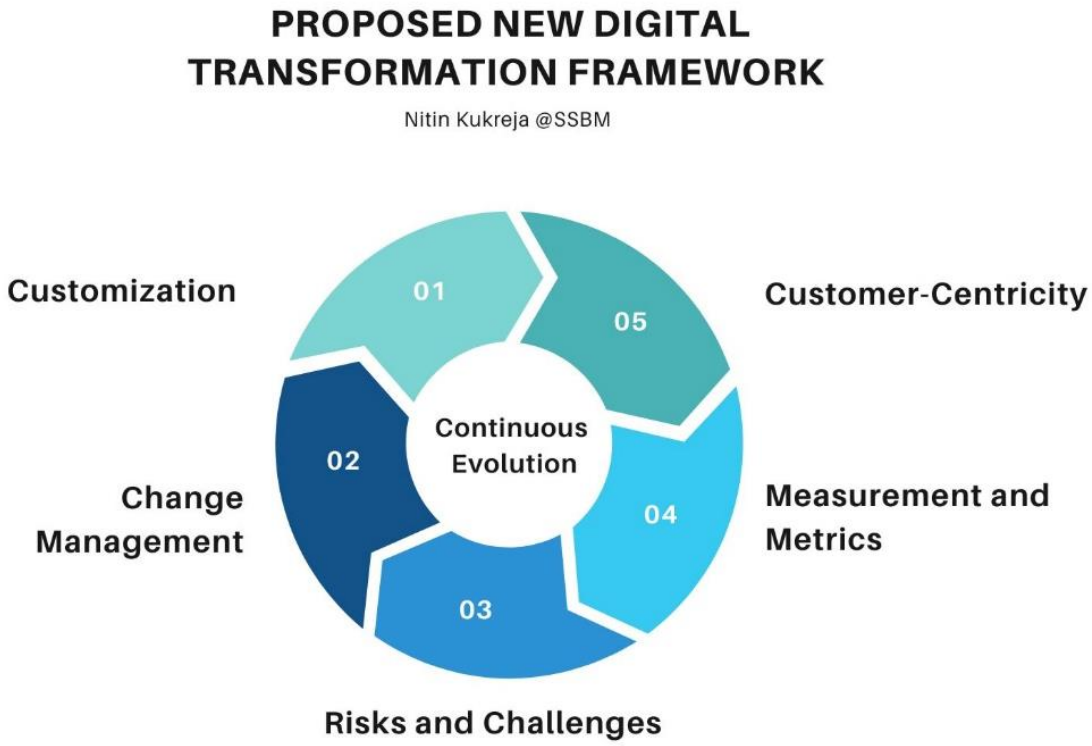
APPENDIX E

PROPOSED NEW DIGITAL TRANSFORMATION FRAMEWORK

Digital Transformation Framework is a structured approach that organizations adopt to navigate the process of integrating digital technologies and strategies into their business operations, culture, and customer experiences. It involves leveraging technology to create new business models, improve efficiency, enhance customer interactions, and stay competitive in the rapidly evolving digital landscape.

1. **Customization:** Organizations often need to tailor the digital transformation framework to their specific industry, size, and unique challenges. A one-size-fits-all approach may not work effectively
2. **Change Management**: The successful implementation of a digital transformation requires effective change management. Employees may face resistance to change, and addressing their concerns is crucial.
3. **Continuous Evolution:** Digital Transformation is an ongoing process. The digital landscape keeps evolving, and organizations need to continuously adapt and innovate to stay ahead.
4. **Customer-Centricity**: The focus on enhancing the customer experience is a common theme in most Digital Transformation Frameworks, as customer expectations continue to rise.
5. **Measurement and Metrics**: Setting clear key performance indicators (KPIs) is essential to track progress, measure success, and identify areas for improvement.
6. **Risks and Challenges**: Digital Transformation can involve substantial investments and risks. Organizations need to carefully evaluate potential risks and manage them effectively.

A well-executed Digital Transformation Framework can enable organizations to remain competitive, foster innovation, and unlock new growth opportunities in the digital age. However, it requires a holistic approach, strong leadership, and a commitment to embracing change across the entire organization.

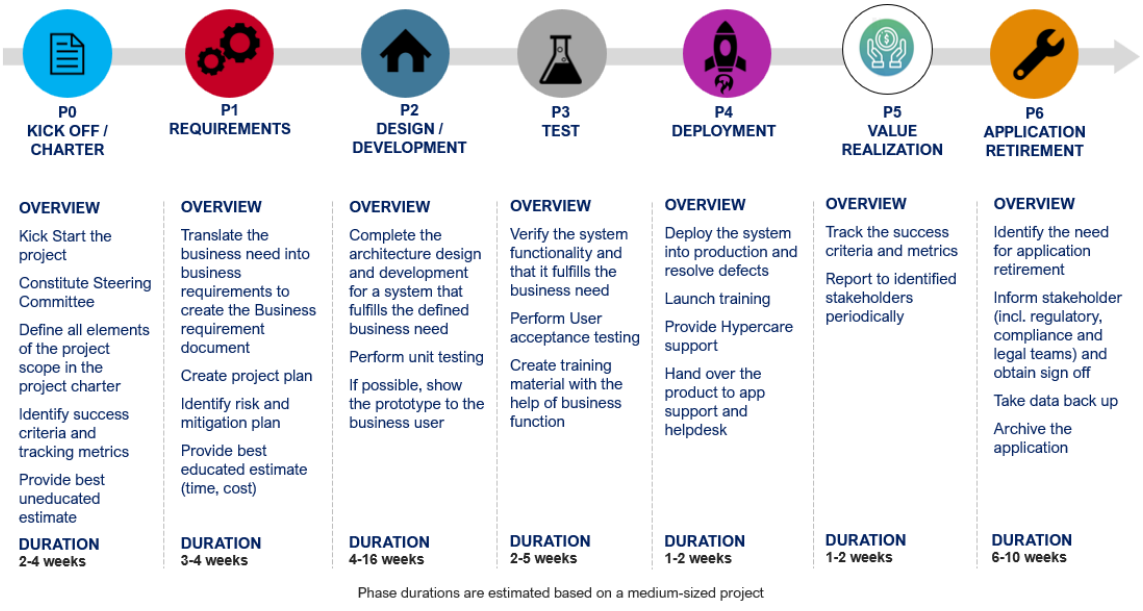


APPENDIX F

NEW SOFTWARE DEVELOPMENT LIFE CYCLE FOR MEDIUM PROJECTS

The New SDLC emphasizes collaboration, adaptability, and delivering value early and continuously. It encourages feedback from stakeholders throughout the development process, allowing for a more flexible and responsive approach to project development, which can be advantageous for medium-sized projects where requirements may evolve or change over time.

This proposed diagram explained the latest design, development and deployment model adopted by fortune 500 companies.



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