



# THE POWER OF FUSION DEVELOPMENT APPROACH: THE NEXT WAVE OF EVOLUTION OF CITIZEN DEVELOPERS IN ENTERPRISES

## Overview

*“Walking on water and developing software from a specification are easy if both are frozen”, by Edward V. Berard.*

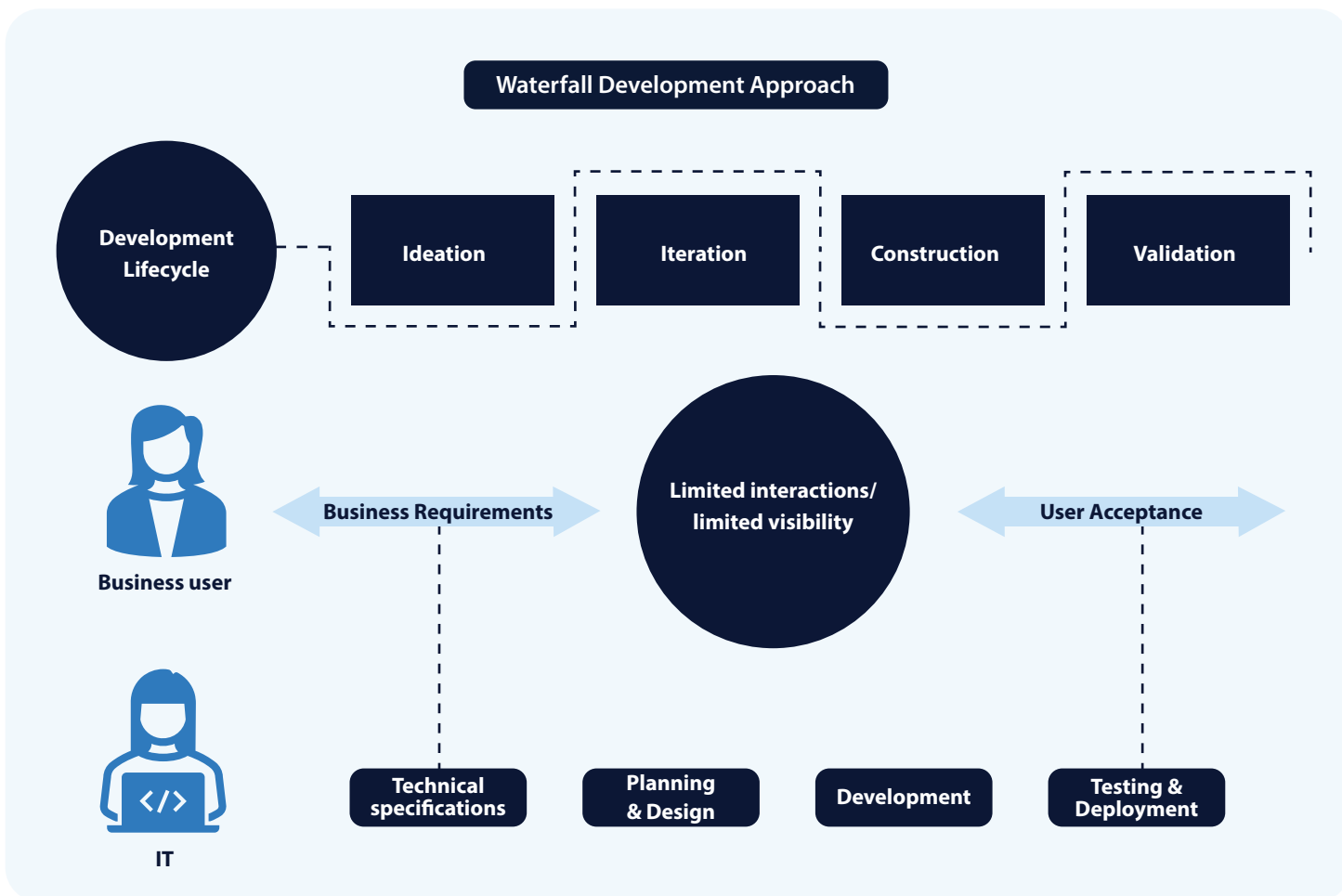
Throughout the history of Technology Evolution, the industry has witnessed the co-existence of contradicting priorities between software developers and business end users. The literature on software development abounds with a valid emphasis on having precise and unambiguous specifications that are unaltered through the pane of time and untouched by the whims of people. Equally validly, the world of business points out the inherently complex nature of the industry, the ambiguity of business transactions, and changing nature of rules of enterprise engagements.

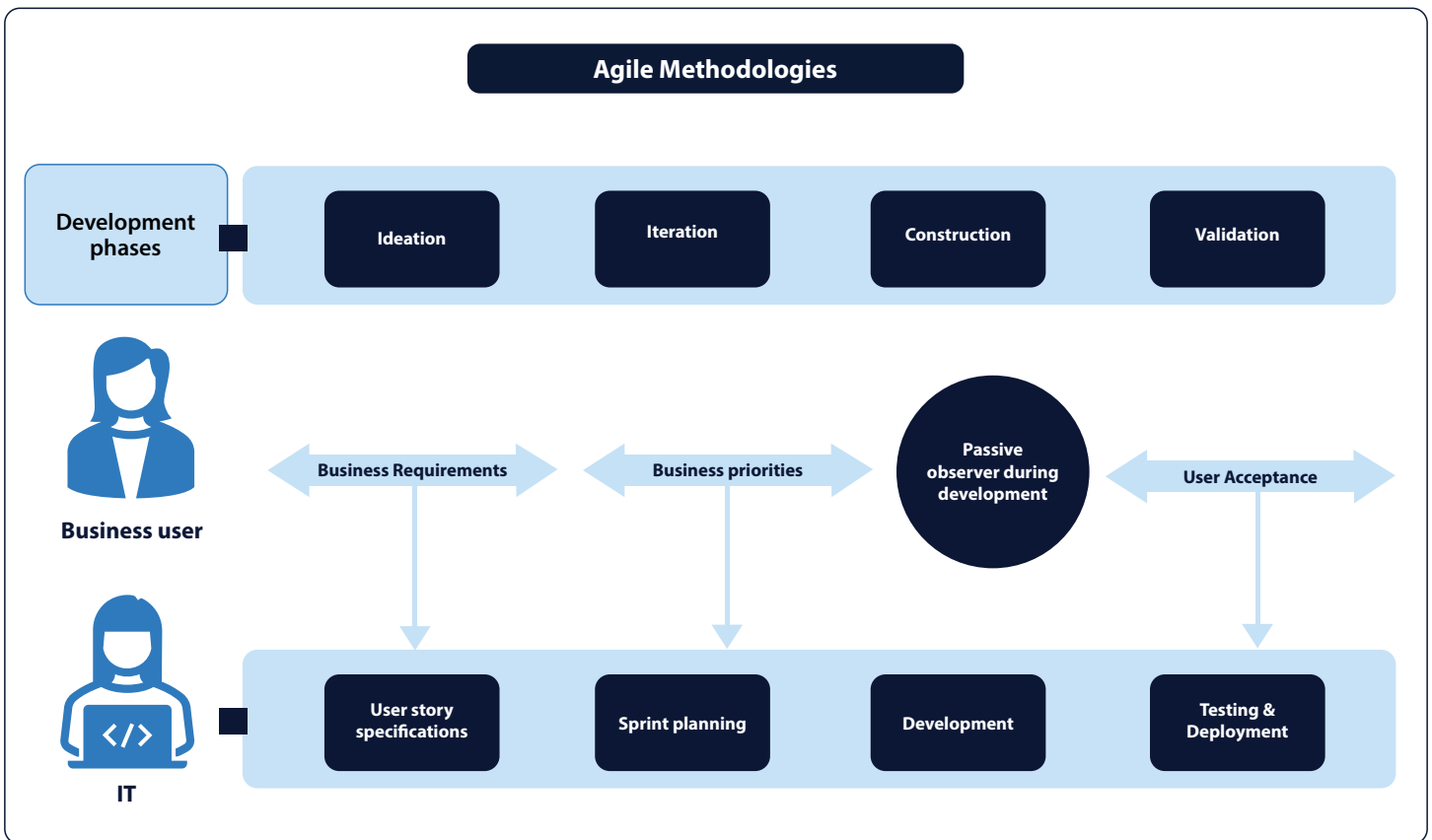
Despite this, the increasingly digitizing world necessitates continuous building and nurturing of technology solutions that need the software developer and end users to collaborate, define, design, and build products and solutions that orchestrate business processes. Various attempts have been made over the years to bring their worlds together.

## The legacy and evolution of Software development methodologies

In the 1950s **the Waterfall Model** was defined, as a standard approach for software development, which emphasized a time-bound approach for organizations to define, specify, and formulate requirements at the outset and then let the developers build against those specifications. While such a document-and-deliver approach provided clarity to the process and defined the rules of engagement at various phases of the project, it fell flat to keep pace with the rapidly changing business priorities, shorter turnaround expectations, and dwindling capital allocations.

This led to the emergence of various **Agile models** in the 1980s that gained momentum through the 1990s and 2000s, as a framework to plan, structure, and rapidly build in smaller increments and in an iterative fashion with continuous and consistent involvement and contribution from the business stakeholders involved. While the approach gained popularity since it allows teams to bring new products to market faster, incorporate user feedback along the way, and easily experiment with new features, it is also not an approach for every scenario. While the sprint increments allow for frequent interaction with the end users, it still allows only their passive involvement with an invisible glass wall separating the business needs from the developed product.





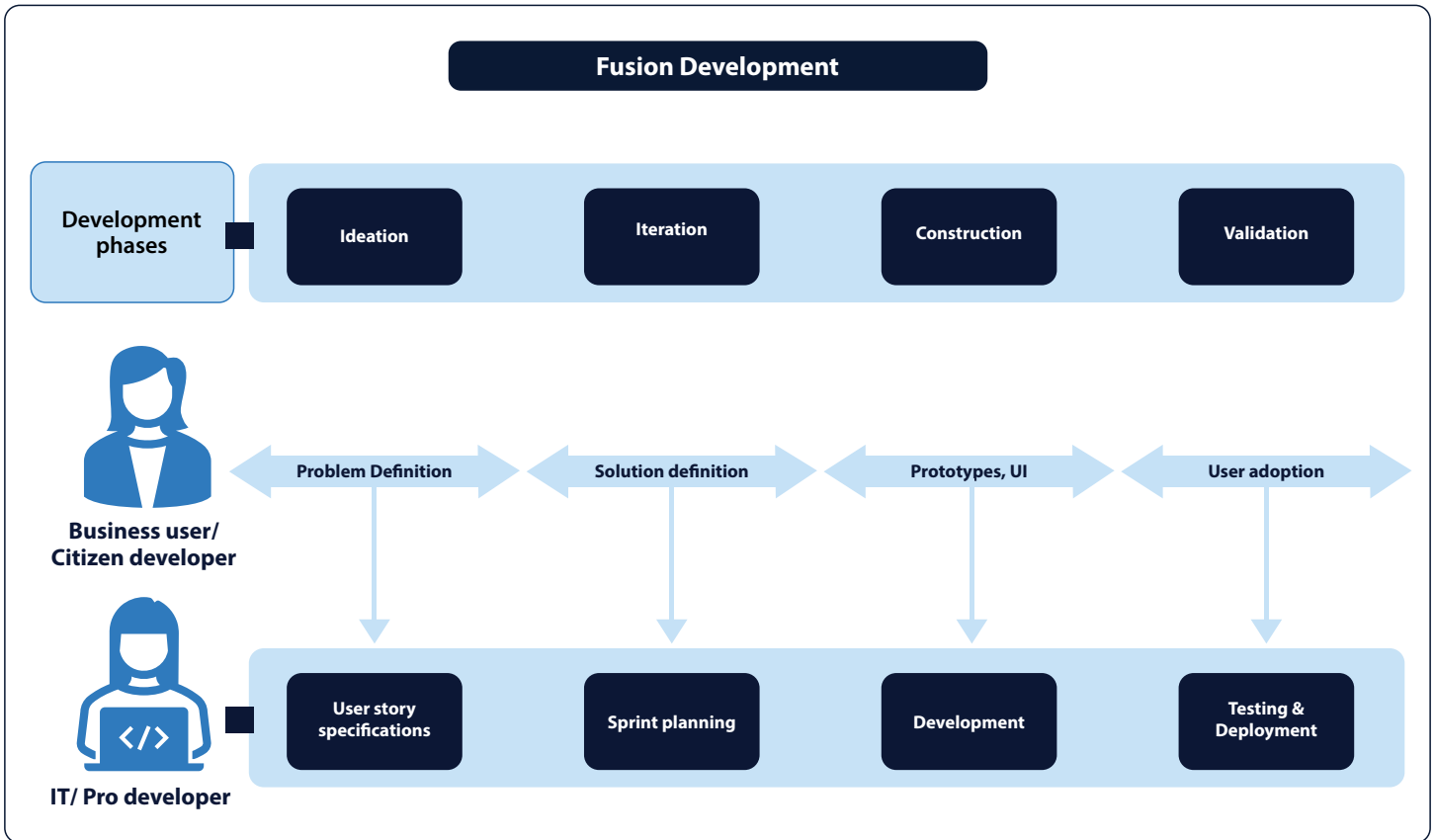
This scenario has changed in the last five years or so with the focus on LCNC apps. The advent of low-code and no-code application development platforms empowered business end users to experiment with models that induce a higher degree of control and flexibility in developing solutions with minimized constraints and dependencies from a centralized IT construct. Such **Citizen Development Approach** saw several early successes in enterprises, with pilots and proof of concepts built directly by business line users who are living and breathing the business problems with no time lost between business problem definition to solution construction. Such empowerment is the intent behind low-code and no-code platforms which also helps to circumvent budget constraints, time constraints, and the endless quagmire of interactions between business and IT. However as more and more such edge-developed solutions are deployed in enterprise environments, it led to a set of problems of the kind that necessitated the control measures set forth by IT in the first place, which is to centrally manage security, avoid duplication, define a standard mechanism for solutions to talk to each other, and to put in processes to manage and sustain the solutions in a controlled manner; all of which adds to the burden of citizen developers which overrides the benefits.

### The need for the middle-path approach, that is, Fusion Development Model

The need for speed, in a world of complexity and rapidly evolving priorities, has led to the pursuit of a middle path that accommodates the best of both worlds. While the various evolving

agile methodologies enable the business to be involved in the “**ideation**”, “**iteration**”, and “**validation**” phases of the software lifecycle, the Fusion development approach enables the citizen developers to get closer to value delivery and encourages the business to be part of the “**construction**” phase of the software lifecycle as well. This creates a world of possibilities while allowing instant value realization for businesses. For example, business users can directly build prototypes, and simple workflows and define business logic without having to have a handshake with IT. Whereas IT can work alongside the business to define protocols, Integration frameworks, ensure commonality of data specifications, and publish reusables from elsewhere in the organization that solves the problem that is being addressed. This way while the business focuses on solving the specific business problem in front of it, IT can simultaneously work together to ensure the solution being built is sustainable, secure, and up to the standards defined for better maintainability.





## Blurring boundaries between IT and business

Gartner defines fusion teams as multidisciplinary teams that blend technology and domain expertise that are designed to deliver products rather than projects. According to a survey conducted by Gartner, at least 84% of companies and 59% of government entities have set up fusion teams\*. And 43% of them already report outside corporate IT to be closer to the point of value delivery\*.

This is a clear indication of a trend where value delivery is moving closer to the edge at the point of value creation, and not in a central hub of IT. However, merely having a fusion team in place is not always an indicator of success in digital adoption at enterprises. There are numerous instances of initiatives that remain isolated, people-driven, and sporadic blurb of brilliance rather than a sustained practice institutionalized across the community. In other cases, there are instances where several such solutions were developed and deployed over a period, originating from business practitioners solving specific business problems within the context of their visibility and hence deeply tailored to the business problems, and become accumulated without sufficient means of discovery, maintainability, or security standards in place.

Such scenarios are often indicators of an absence of adherence to principles that drive the successful adoption of the Fusion development model.

## Principles that drive the successful adoption of the Fusion Development Model

Among others, the below 3 principles when adopted by enterprises ensure a sustainable and structured adoption of the Fusion development model.

Maximum efficiencies are derived when the individual components of the fusion development team focus solely on its inherent strength. Business users turned citizen developers have direct exposure to business problems or opportunities, and often have a precise idea of how to solve them to drive business solutions. On the other hand, the expertise of IT or Digital COE lies in designing and architecting robust frameworks, deploying integration connectors, enforce architectural principles to ensure security, standardization, and consistency.

## • Principle 1 - Localize value creation - Centralize engineering efficiencies

### Localize value creation

Persona – Citizen developers/ Business users

#### Activities –

- Define and specify business problems
- Build and deploy prototypes
- Define business logic
- Drive business adoption

### Centralize Engineering efficiencies

Persona – IT/ Digital COE

#### Activities –

- Define Architectural frameworks
- Deploy reusable entities
- Deploy integration connectors & APIs
- Enforce architectural patterns

## • Principle 2 - Democratize digital skills - Centralize skills development framework

Skills such as AI, Automation, RPA, etc. are not just confined to a specialized group such as IT, but increasingly becoming everyone's business. The modern technology solutions introduced in the market are embracing principles such as self-help and mass distribution through low-code and no-code capabilities. Cultivating these digital skills deep into business functions while avoiding the creation of silos by adhering to a centralized established framework, ensure successful digital transformations by removing technology barriers making business think unconstrained with technologists.

### Democratize Digital Skills

Persona – Business Units, support functions

#### Activities –

- Learning strategy aligned to digital goals
- Align learning pathways to cohorts

### Centralize skills development framework

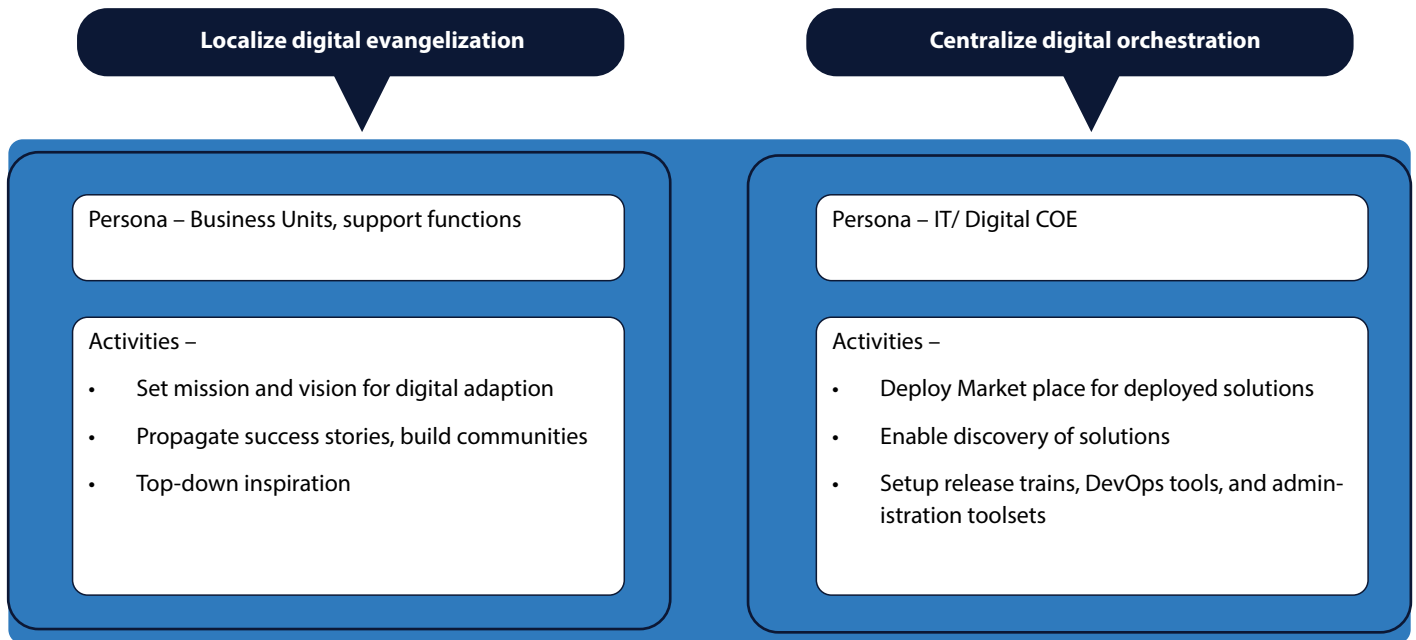
Persona – Digital COE/ Enterprise Digital Academy

#### Activities –

- Establish a learning framework
- Define cohorts, learning pathways, and curriculum

## • Principle 3 - Localize digital evangelization - Centralize digital orchestration

Efficient engineering functions ensure robust practices to ensure adherence to standards. While IT is positioned to ensure compliance with standards, businesses could focus on laying the broader vision and goals for digital adoption and propagate the ideas for wider participation.



### Conclusion

Enterprises evolve with the changing times and expanding capabilities and continuously innovate in adopting practices that help sustain their growth. Practices such as Fusion development allow enterprises to realize faster time to value and at the same time ensure compliance with standards and security. However, the successful adoption of fusion development requires building the right mindset and culture, separation of concerns, and commitment from leadership to propagate the practices. As digital skills are becoming ubiquitous crossing over the chasm from IT to

citizen developers, it is imperative for organizations to set the right framework and build communities tuned for fusion development. Establishing a community that embodies the appropriate mindset and possesses the necessary digital skills to leverage fusion development can prove to be a colossal undertaking for any organization. If not executed through a well-structured operating model, the ecosystem could fall into fragmented silos, ultimately leading to accumulated complexity. Therefore, it is imperative to secure top-down commitment, establish transparent operating principles, and centralize governance structure to fully realize the advantages of the fusion development model.





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Vinoth is a Practice Engagement Director with Microsoft Business Applications and Power Platform Practice @ Infosys, responsible for business development and client engagement in Europe Region. He has around 18 years of international experience in the IT industry across various functions and industrial domains engaging with clients and partners in their digital transformation initiatives across Customer Engagement, Enterprise Resource Planning, Low code/ No code, Automation, and Analytics initiatives. He takes an active interest in observing shifts in business trends that influence enterprise technology investments and shaping solutions to address them.

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