



CTG Advisory

REORCHESTRATING YOUR BUSINESS: THE POWER OF VIRTUAL ASSEMBLY LINES

Discover how reimagining your business as a digital factory can drive innovation, efficiency, and competitive advantage in the era of AI.

THE DIGITAL FACTORY PARADIGM

A New Approach to Digital Transformation

In the race to stay competitive and meet ever-evolving customer expectations, many organizations continue to embrace digital transformation as a critical imperative. However, the path to successful and sustainable digital transformation remains fraught with challenges. Companies struggle to transform their legacy systems, processes, and ways of working, often underestimating the complexity and difficulty of the journey ahead.

In this context, the promise of automation and artificial intelligence (AI) has led some to believe these advanced technologies are the long-awaited silver bullets. They hope AI will magically transform poor processes, piles of technical debt, on-premise woes, and data replication nightmares into beautifully evolved, digitally transformed future-state experiences.

However, in their rush to implement these solutions, many companies overlook the crucial foundation upon which successful digital transformation is built: **process orchestration.**

Without a solid foundation of tech-enabled, well-orchestrated processes, even the most advanced AI and automation technologies will struggle to deliver the desired results. It's like trying to build a high-performance sports car using a rusty, outdated chassis – no matter how powerful the engine or sleek the design, the underlying structure will always hold it back.

The Digital Factory Approach

To overcome these challenges and build a foundation for successful transformation, organizations should embrace a "Digital Factory" approach. This involves rethinking their processes and systems as a collection of well-structured, efficient, and adaptable virtual assembly lines, creating a robust foundation for integrating advanced technologies. Central to this transformation is the concept of "process reorchestration". Unlike traditional process orchestration, which focuses on coordinating and managing automated business processes, process reorchestration involves revisiting and significantly overhauling existing processes to improve and adapt them. This transformative approach is essential for organizations looking to break free from the constraints of legacy systems and fully leverage the power of modern technologies.



VIRTUAL ASSEMBLY LINES:

The Product of Strategic Process Reorchestration



Much like the assembly line revolutionized manufacturing by providing a structured, efficient, and optimizable 'end-to-end' framework for production, process reorchestration lays a similar groundwork for successful digital transformation. By breaking down disparate processes, complex technology stacks, and data silos into standardized, repeatable steps, and establishing clear flows of data and work, well-executed process reorchestration creates the necessary virtual assembly lines for the digital age.

These virtual assembly lines are not limited to a single process or workflow. When done right, process reorchestration efforts focus on breaking down multiple, often disconnected, and inefficient process silos that exist within and outside an organization to create a more connected, holistic production line.

This approach enables transactions to flow seamlessly across the organization and continues to control and monitor that flow when customers need to be involved. Instead of being confined to vertical silos where manual or electronic handoffs are required to stitch together fragmented workflows, a properly reorchestrated digital process ensures a smooth, end-to-end flow of work, rules, and data.

By creating cohesive, end-to-end virtual assembly lines for transactions that span both internal and external stakeholders, today's process reorchestration platforms provide a scalable and adaptable framework for digital transformation.

This allows organizations to continuously improve and evolve their processes as new technologies and customer needs emerge, while maintaining visibility and control over the entire transaction lifecycle. The resulting virtual assembly lines are more efficient, agile, and customer-centric, enabling organizations to deliver better experiences and outcomes for all involved parties.

THE TRANSFORMATION CATALYST:

Process Reorchestration as the Key to Digital Evolution

While process reorchestration serves as a critical foundation for digital transformation, it's important to recognize it as part of a larger, interconnected ecosystem of digital transformation building blocks. This ecosystem includes:

- A robust data strategy that turns information into actionable insights
- Modernization of legacy systems to enhance agility and reduce technical debt
- A shift to cloud computing for scalability and flexibility
- Development of agile and customer-centric ways of working
- Implementation of robust cybersecurity and data privacy controls
- Continuous talent and skills development to keep pace with technological advancements
- Cultivation of strategic ecosystem partnerships to leverage external expertise and innovation

Each of these elements is complex and multifaceted, deserving of its own deep dive. However, they all share a common thread: the need for a well-orchestrated process foundation.

In this article, I spotlight what I believe to be the linchpin of successful digital transformation: process reorchestration and the establishment of new transaction-based virtual assembly lines. This focus is not arbitrary.

Process reorchestration efforts often necessitate addressing many, if not all, of the aforementioned digital building blocks, making it the ideal starting point for any digital transformation journey.

By prioritizing process reorchestration, organizations set in motion a domino effect of positive change:

- 1 Providing the structure needed to build a coherent data strategy
- 2 Highlighting inefficiencies in legacy systems, guiding modernization efforts
- 3 Facilitating the transition to cloud computing by clarifying process requirements
- 4 Naturally fostering agile ways of working by breaking down silos
- 5 Identifying skills gaps, directing talent development initiatives
- 6 Revealing areas where external partnerships could add value

In essence, process reorchestration acts as a catalyst, accelerating and amplifying the broader digital transformation agenda. It creates a solid, flexible foundation upon which organizations can build, enabling them to fully harness the power of automation, AI, and other advanced technologies.

By starting with process reorchestration, organizations don't just prepare for digital transformation – they ignite it, setting the stage for a future of enhanced efficiency, agility, and innovation.

THE DIGITAL FACTORY PLAYBOOK:

Three Essential Strategies for Process Reorchestration

Process reorchestration is the catalyst for digital transformation, laying the groundwork for various digital factory enablers. To ensure your reorchestration efforts create a sustainable and adaptable foundation for your digital factory, three critical strategies must be implemented.

These strategies form the essential backbone of process reorchestration, upon which other elements of your digital factory can be built. They ensure that your reorchestrated processes are not only effective today but can also evolve to incorporate future technological advancements, whether that's the next generation of AI or beyond.

Just as a modern manufacturing plant relies on advanced machinery, efficient floor layouts, and skilled workers, your digital factory requires state-of-the-art technology, well-designed virtual assembly lines, and a workforce aligned with this new paradigm.

By implementing these strategies, you'll create virtual assembly lines that are flexible, efficient, and primed for continuous improvement. This approach will help you break free from the constraints of legacy systems, siloed operations, and outdated workflows, positioning your organization to fully leverage current and future digital technologies.

Let's explore these three essential strategies that will enable successful process reorchestration and lay the critical foundation for your digital factory:

- 1 Invest in a future-proof, automation and AI and enabled reorchestration engine
- 2 Realign your organization around virtual assembly lines
- 3 Uncover the hidden blueprint of your operations



01 Foundational Investment: Secure a Future-Proof, AI-Enabled Reorchestration Platform

In the world of manufacturing, the assembly line is the heart of the operation. It's the foundation upon which everything else is built. The most successful manufacturers understand this and invest heavily in state-of-the-art assembly lines that leverage the latest technologies and best practices.

The same must be true in the digital world. The foundation of any successful digital transformation needs to include a future-proof, automation and AI-enabled reorchestration engine that serves as the virtual assembly line backbone for your operations. This is not an area where you can afford to cut corners by trying to "modernize" legacy systems.

Consider the example of Tesla. When they set out to revolutionize the auto industry, they didn't start by trying to retrofit a 1920s assembly line with modern technology. Instead, they built a state-of-the-art factory from the ground up, leveraging the latest advances in robotics, AI, and workflow automation. This allowed them to create a highly efficient, flexible, and scalable manufacturing process that could adapt to the rapidly evolving demands of the electric vehicle market.

The same approach is needed in digital transformation. Trying to transform legacy processes into digital end-to-end transactions by layering advanced AI and automation capabilities onto outdated systems is like trying to build a Tesla on a Ford Model T assembly line. It's a recipe for frustration, inefficiency, and ultimately, failure.

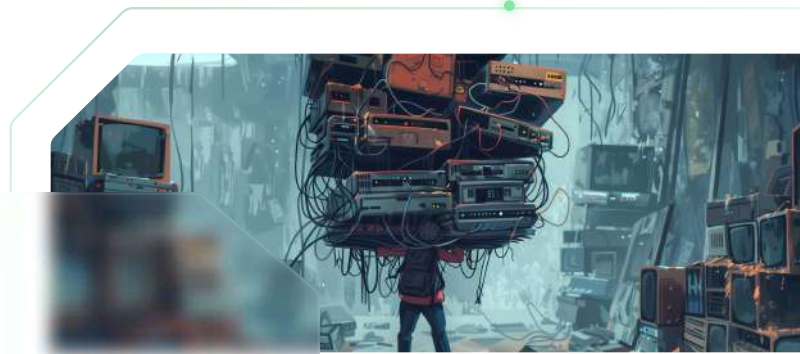
This is easily the most overlooked strategy by organizations undertaking digital transformation work. Funding challenges, siloed thinking, inexperience, and lack of leadership buy-in all present challenges, leaving companies searching for "quick hits" and shortcuts. But there are no shortcuts for this critical work.

The Legacy Trap

Throughout my career as a digital transformation consultant, I've encountered a recurring theme that perfectly illustrates the challenges of modernization. A recent client's situation encapsulates this issue strikingly. This organization found itself grappling with the management of over 15 distinct workflow systems, each a product of different eras and teams, built on varied code bases. Their ambitious goal was to reengineer these disparate legacy systems into an omnichannel-enabled experience engine - a noble yet fundamentally misguided aspiration.

The reality was far from seamless. Many of these systems couldn't communicate effectively due to API incompatibilities, a common challenge in today's tech landscape. As a result, human intervention became the glue holding many of these transactions together, negating any efficiency gains they hoped to achieve.

Despite the clear need for a fresh start, the client invested thousands of hours trying to retrofit their existing technology. This approach was a classic example of throwing good money after bad. The effort and resources spent on retrofitting outdated systems only highlighted the inefficiencies and limitations of their existing infrastructure. Ultimately, it became increasingly evident that a new investment in a modern, integrated platform was necessary to support their future needs and truly enable digital transformation.



Harness the Power of Next-Generation Reorchestration Platforms

Today's innovative reorchestration platforms are the key to unlocking true digital transformation. These platforms leverage the latest advances in AI, machine learning, and workflow automation to enable seamless, end-to-end process reorchestration across the entire organization.

One of their most powerful attributes is reusability - a concept borrowed directly from efficient manufacturing practices. Just as modern assembly lines use standardized, reusable components, these platforms allow you to define reusable process components, workflows, and business rules. This approach provides the flexibility and scalability needed in today's rapidly changing business environment.

I witnessed the transformative power of these platforms firsthand with a large financial institution client. They were struggling with an outdated loan application process, using separate systems for different loan types, each with its own workflow and customer interface. The implementation of a modern reorchestration platform, combined with the establishment of new virtual assembly lines, allowed the institution to:

- 1 Create a unified loan application process that works across all products
- 2 Implement intelligent routing of applications based on AI-driven risk assessment
- 3 Automate large portions of the underwriting process
- 4 Provide a consistent, omnichannel experience for customers
- 5 Rapidly launch new loan products by reusing existing components

The implementation of these virtual assembly lines, orchestrated by the modern platform, shattered the barriers between previously siloed processes, teams, and systems. The results were staggering. The project achieved a:



62%

reduction in loan processing time



39%

increase in customer satisfaction

Perhaps most impressively, the client gained the ability to launch new products in weeks rather than months, significantly improving their competitive position in the market. This transformation demonstrated the power of reimagining business processes as virtual assembly lines, orchestrated by a modern, AI-enabled platform.

While investing in such a platform requires significant upfront investment and a willingness to break with legacy systems, I've seen time and again that it's a critical foundation for successful digital transformation. It allows organizations to create adaptable virtual assembly lines that can swiftly respond to market changes and deliver consistent, high-quality customer experiences across all channels. The financial institution's success story is just one example of the transformative power of this approach.

In essence, while the journey may be challenging, the destination—a flexible, efficient, and future-proof reorchestration platform—is well worth the investment and effort. I've witnessed organizations revolutionize their industries by adopting this transformative digital factory strategy. This critical investment not only solves today's challenges but also positions companies to adapt and thrive in the face of future disruptions and opportunities.

02

From Silos to Synergy: Realign Around Virtual Assembly Lines

Successful process reorchestration requires more than just technological investment; it necessitates a fundamental reorganization of your company structure. To truly transform your transaction processing and enable omnichannel capabilities, you must reorganize your teams around the new virtual assembly lines that underpin your products and services.

The Silo Conundrum: Overcoming Organizational Barriers

To understand the challenges we face in process reorchestration and digital transformation, it's crucial to recognize two types of organizational silos that often impede progress:



Functional silos:

Groups organized by specific expertise areas such as Engineering, Product, Enterprise Architecture, Compliance, Legal, and Data Management. While these groups have specialized skills, they often operate independently, leading to coordination challenges.



Departmental silos:

Business units like Underwriting, Sales, Marketing, Customer Support, and New Business Development, each handling specific segments of the business process. These departments focus on their specific goals, which can sometimes lead to misalignment with broader organizational objectives.

These silos are often interwoven, creating a complex web of disconnected processes, goals and responsibilities. Both types can unintentionally fragment transaction processing, leading to technology and data silos, unnecessary complexity, redundancies, and inefficiencies.

In such a siloed organization, each department only sees a piece of the process. No one has end-to-end visibility or accountability for the entire customer journey, resulting in a fragmented, disjointed customer experience.

Interestingly, many companies have begun to address functional silos by aligning them to products, services, and or channels. However, they often overlook the departmental silos, where transactions are still broken up and managed by different groups, each focused on their piece of the process. This partial solution falls short of true end-to-end management, a critical component of successful reorchestration inside of your digital factory.

Reimagining Organizational Structure: Embracing Virtual Assembly Lines

The solution is to reorganize around your virtual assembly lines.

By creating cross-functional units responsible for the end-to-end performance of each key process, transaction, or customer journey, you simultaneously address departmental, functional, and technological silos. This approach integrates diverse expertise, aligns disparate processes, and unifies fragmented systems into a cohesive, end-to-end workflow.

This reorganization offers several key benefits:

- It breaks down silos and fosters collaboration, reducing turf wars and finger-pointing.
- It enables end-to-end optimization, allowing teams to identify and eliminate bottlenecks and redundancies.
- It drives accountability, with the team succeeding or failing together.
- It facilitates omnichannel development, making it easier to design systems and experiences that work seamlessly across all channels while maintaining regulatory compliance.
- “Solutioning” becomes a cross-functional exercise managed within this newly established micro organization and governed by Enterprise Architecture, eliminating the common disconnect between IT delivery and business.

Navigating the Transition: Challenges and Opportunities

Reorganizing around virtual assembly lines represents a fundamental shift in how businesses operate in the digital age. This transformation is not without its challenges. It demands strong leadership, clear communication, and a willingness to break with established ways of working.

However, in today's rapidly evolving business landscape, this reorganization is not just beneficial—it's essential. Organizations that successfully make this transition become more adaptable, more responsive to customer needs, and better equipped to innovate.

Remember, the goal is not just to change how you work, but to fundamentally transform how you deliver value to your customers and stakeholders. The rewards of this transition—enhanced operational efficiency and improved customer experience—far outweigh the challenges of implementation.



03 The Hidden Blueprint: Illuminate your Process DNA to Enable Reorchestration

In manufacturing, the assembly line is visible, tangible, and easily observable. This visibility allows for quick identification of bottlenecks, inefficiencies, and opportunities for improvement. However, in the transactional world of fragmented, manual processes and disparate systems, our current assembly lines are mostly invisible, making it challenging to see and understand the flow of work and information.

Before we can design an optimized, digital future state, we must first illuminate the invisible - clearly articulating our current state of fragmented process orchestration and uncovering what we might call our "process DNA". This critical step is often overlooked due to the complexity of existing silos, broken processes, and technology and data challenges. Yet, it's essential for several reasons:

- 1 It reveals hidden inefficiencies and bottlenecks in current workflow
- 2 It uncovers redundancies and unnecessary steps in manual processes
- 3 It helps identify critical rules and decision points in existing processes that need to be reevaluated as you build out your future state
- 4 It provides a baseline for measuring improvement as we shift to a virtual assembly line model

The Challenge of Hidden Rules and Patterns

Traditional current state analysis can be time-consuming and resource-intensive. Rather than advocating for an exhaustive documentation of every process variation, I recommend a more focused approach. Concentrate on identifying "patterns over processes" and uncovering the critical rules and decision logic that govern your existing, often manual transactions.

This approach is particularly crucial because these rules and patterns form the backbone of your operations, yet they're often hidden from view. They represent the accumulated knowledge and decision-making logic that has evolved over years, if not decades, of business operations. Uncovering them is like finding the DNA of your business processes.

These elements of your process DNA are often hidden in various places:

- Embedded in legacy system code, often written in outdated programming languages
- Buried in countless forms and documents, some of which may no longer be in active use
- Stored in outdated knowledge bases that few employees access regularly
- Residing solely in the minds of long-tenured employees, creating a significant risk if these individuals leave the organization
- Concealed within complex user interfaces that have been layered with functionality over time

The challenge lies not just in finding these rules, but in understanding their relevance and importance to your current and future operations. Some rules may be outdated or redundant, while others are critical to maintaining compliance or competitive advantage.



By focusing on patterns and rules rather than exhaustive process documentation, you can more quickly identify:

- 1 Core business logic that needs to be preserved in any new system
- 2 Redundancies and inefficiencies that can be eliminated
- 3 Opportunities for standardization across different processes
- 4 Critical knowledge that needs to be captured from long-tenured employees
- 5 Areas where automation or AI could have the most significant impact

This approach allows you to build a more accurate and useful picture of your current state, providing a solid foundation for designing your future state virtual assembly lines. It also helps ensure that no critical business rules are overlooked in the transformation process, reducing the risk of costly oversights or compliance issues down the line.

Leveraging AI to Uncover the Invisible

Fortunately, AI is now helping organizations overcome this challenge. Tools leveraging machine learning and natural language processing can rapidly analyze vast amounts of data, code, and documentation to uncover these hidden patterns and rules. For instance:

- Process mining tools can reconstruct current process flows from system logs
- NLP algorithms can extract rules from unstructured documents
- Machine learning can identify patterns in user behavior and data flows within your existing processes

By leveraging these AI-powered tools, organizations can more quickly and accurately illuminate their invisible, fragmented processes, striking the right balance between thoroughness and efficiency as they prepare for this first critical phase of digital transformation.

Remember, the goal isn't to document every detail of your current state, but to gain a clear understanding of the patterns, rules, and decision points required to shape your future state processes. This understanding is crucial for designing an optimized, digital future state that not only improves efficiency and agility, but also maintains necessary controls and compliance in your newly redesigned digital factory.

As you embark on this journey of illumination, keep in mind that it's not just about process improvement. It's about gaining the visibility needed to truly transform your fragmented, manual processes into reorchestrated, streamlined, end-to-end digital transactions, enabling you to build virtual assembly lines that are as efficient and optimizable as the best physical ones in manufacturing.



ASSEMBLING YOUR DIGITAL FACTORY:

The Way Forward

Throughout this article, I've drawn parallels between digital process reorchestration and the world of manufacturing. This isn't just an analogy – it's a powerful framework for reimagining your entire business operation. By thinking of your organization as a factory, your end-to-end transactions as assembly lines, your data as raw materials, and your technology as machinery, you create a tangible vision for transformation.

As we look to the future, the digital factory concept will likely evolve even further. We can anticipate more sophisticated AI integration, predictive analytics driving real-time process optimization, and perhaps even self-healing systems that can identify and resolve issues autonomously. The organizations that start building their digital factory foundations today will be best positioned to leverage these advancements tomorrow.

Moreover, the competitive landscape is shifting rapidly. Those who master the digital factory mindset will not only survive but thrive, gaining the agility to respond swiftly to market changes and the efficiency to outperform their peers.

They'll be able to deliver personalized, seamless customer experiences at scale, setting new industry standards.

However, this journey isn't without its challenges. It requires significant investment, both in terms of resources and organizational will. You'll need to fundamentally rethink how your organization operates, tackle deep-rooted issues in processes, technology, and data, and commit to long-term change.

But don't let these challenges deter you. The rewards – in terms of operational efficiency, customer satisfaction, and competitive advantage – far outweigh the difficulties. Every step you take towards building your digital factory is a step towards future-proofing your organization.

Start your digital factory journey today by assessing current processes, identifying pain points, and envisioning a transformed operation. The future belongs to those bold enough to reimagine their businesses and resilient enough to realize that vision.

Ready to power up your digital factory?

Schedule a consultation with CTG Advisory to discover how our expert guidance in process reorchestration and AI integration can help you build seamless and efficient virtual assembly lines to power your digital factory.

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