



Signavio: The Fourth Industrial Revolution – **Raise the Manufacturing bpm With BPM**



A White Paper
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1. Introduction: Process Management—Industry 4.0

Are organizations ready to embrace the "Fourth Industrial Revolution"?

Not really. According to a [Deloitte survey](#), just 14% of 1,600 C-level executives across 19 countries are highly confident their organizations are ready to fully harness the changes.

But... 87% of CXOs believe Industry 4.0 will lead to more equality and stability.

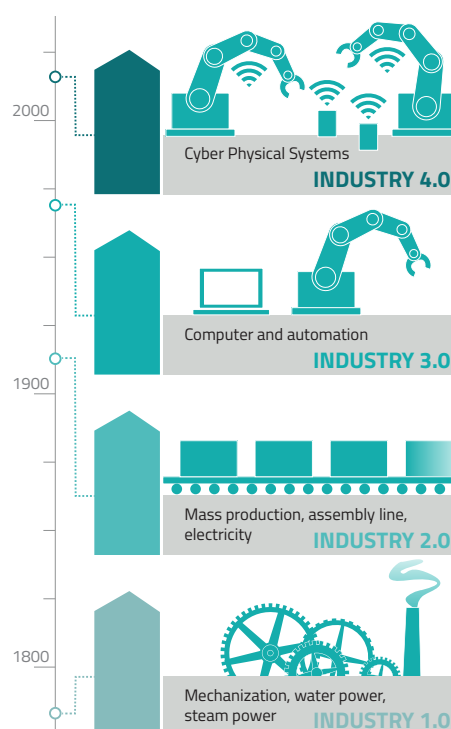
As the digital-change tsunami continues to crash around us, a new trend of automation and data exchange is flooding across manufacturing technologies, promising even greater transformation. Known as the “Smart Factory,” the revolution that is Industry 4.0 includes the internet of things (IoT), cloud computing, cyber-physical systems, and cognitive computing.

This is the coming of age for automation and the dawn of big data reciprocity within manufacturing technology.

Under its broad-concept umbrella, Industry 4.0 is blurring the gap between physical and digital technologies to create dynamic enterprises that are both interconnected and capable of more informed decision-making. The high-tech strategy originated in Germany, and some Industry 4.0 concepts include machinery which can predict failures and trigger maintenance processes autonomously, and self-organized logistics which react to unexpected changes in production.

These digital organizations can analyze, communicate, and use data to empower intelligent action in the physical world. Also called the “Fourth Industrial Revolution”, Industry 4.0 is about embedding smart and connected technology, not only within organizations, but also our daily lives.

It is the responsibility of business leaders to safeguard long-term success, and looking outside of the box now, means looking in on new opportunities in the future. Embracing Industry 4.0 initiatives opens the lid on success and means the limited boundaries of individual factories will most likely disappear. Instead, they will evolve into multiple interconnected factories or even clustered geographical regions.



2. Industry 4.0 Adaptivity

It has become imperative for manufacturing entities to adapt and to keep track of their operational models. If not, they risk losing their edge on multiple levels, including market competition and customer relations. However, for many companies, business transformation and newer concepts like [Next Practice](#), which puts innovation at the heart of success, can be difficult to implement. This is because it is hard to identify areas for improvement, to analyze the scope of change and its impact on an organization, and anticipate possible future outcomes.

Industry 4.0 technologies can make existing production and operations more efficient and cost-effective. But this in turn requires innovative business management models that will not only drive direct and indirect stakeholder value, but better protect a company from disruption.

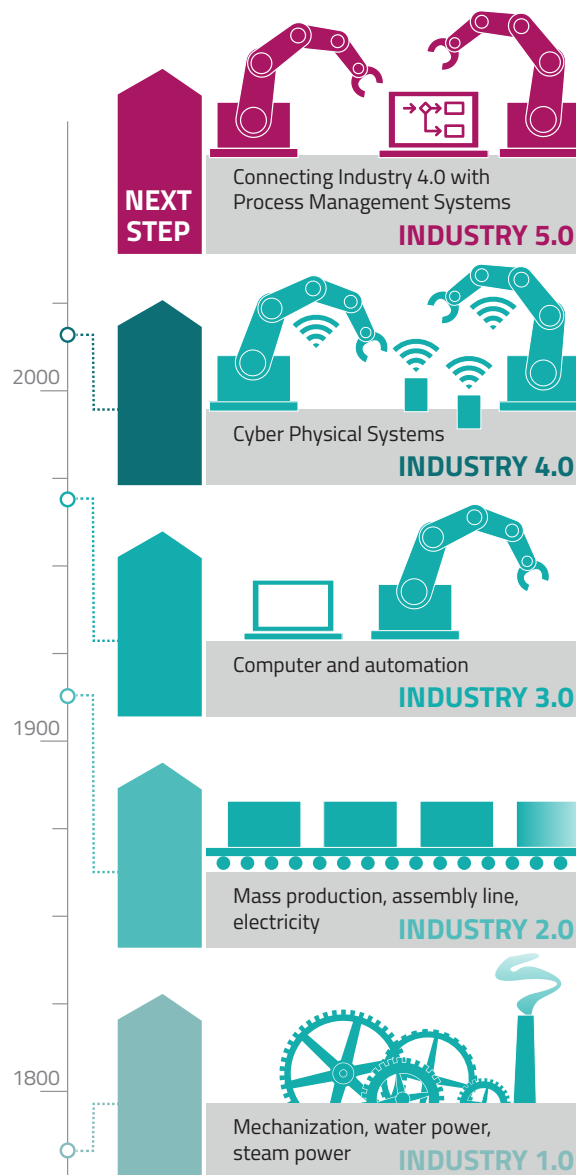
Having strong process initiatives is a prerequisite to successfully tap into Industry 4.0 because processes, models, and materials must be connected to generate the essential data necessary to make real-time decisions. Organizations may want to consider—and perhaps even redesign—their decision-making processes to account for new business trends, shifts, and strategies. Defining processes, models, and leveraging customer experience is crucial for enhanced products and new offers.

Within this Next Practice concept, [Business Process Management \(BPM\)](#) is an ideal system choice. It relieves bottlenecks in operations, sales and orders, and product life cycles, and aligns business strategies with innovative business models and end-to-end service processes. This ensures a strong process management system that empowers Industry 4.0 manufacturers of all sizes and types to discover, analyze, and design processes vital to their infrastructure and success.

BPM empowers better efficiency, effectiveness, performance, and productivity through automation, workflows, and synchronization. It can also improve tracking and scheduling, and optimize consumption which can increase turnover, quality, and profits, as well as reduce costs and waste. All elements vital to current success and future triumph.

If the vision of Industry 4.0 and new sector standards are to be realized, enterprise processes and models must become more digitized and agile through process management systems. A critical element will be the evolution of traditional supply chains toward a connected, smart, and highly efficient supply chain ecosystem.

Indeed, the vision of connecting Industry 4.0 with process management systems edges towards the creation of Industry 5.0.

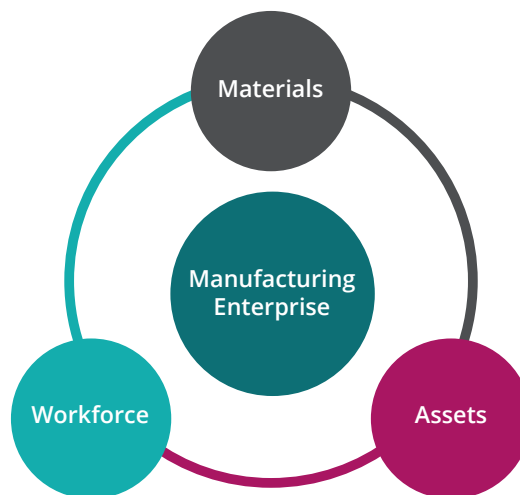


3. The World of Manufacturing

Manufacturing is built around three parameters: the **workforce**, **assets**, and **materials**. A manufacturer's ability to effectively combine this trio, so productivity is both efficient and effective, provides a competitive edge which can be sustained as the company develops. This advantage empowers an organization to respond to variations in labor supply, technology advances, and industry momentum.

The manufacturing sector includes a vast range of activities and production techniques, which vary from small-scale enterprises using traditional production methods and local suppliers, to global conglomerates. These enterprises sit atop a high and broad pyramid of parts and component suppliers, collectively manufacturing complex products. Indeed, the manufacturing sector is probably among the most varied within the global economy.

The handling of these parameters is critical to the success of any business. A lack of synchronization will lead to a reduction in asset utilization, profits, and productivity. A solution that continuously loops between the **workforce**, **assets**, and **materials** is the basic building block of any successful manufacturing entity.



With an ever-changing ecosystem of competitors, suppliers, and customers, it is of paramount importance for organizations to adapt rapidly. Within the manufacturing industry, which is so dependent on the three parameters above, it is even more vital to have a safe and trusted solution that provides control over quality, cost, and time.

Having to evaluate regulatory risks—especially when a business has a presence in multiple countries—is also very daunting. Managing these risks requires sustained effort, usually at the same time as trying to maintain product turnover, meet manufacturing standards, and sustain high customer retention. These are tasks that may be well beyond what a CIO or even an IT department can manage single-handedly.

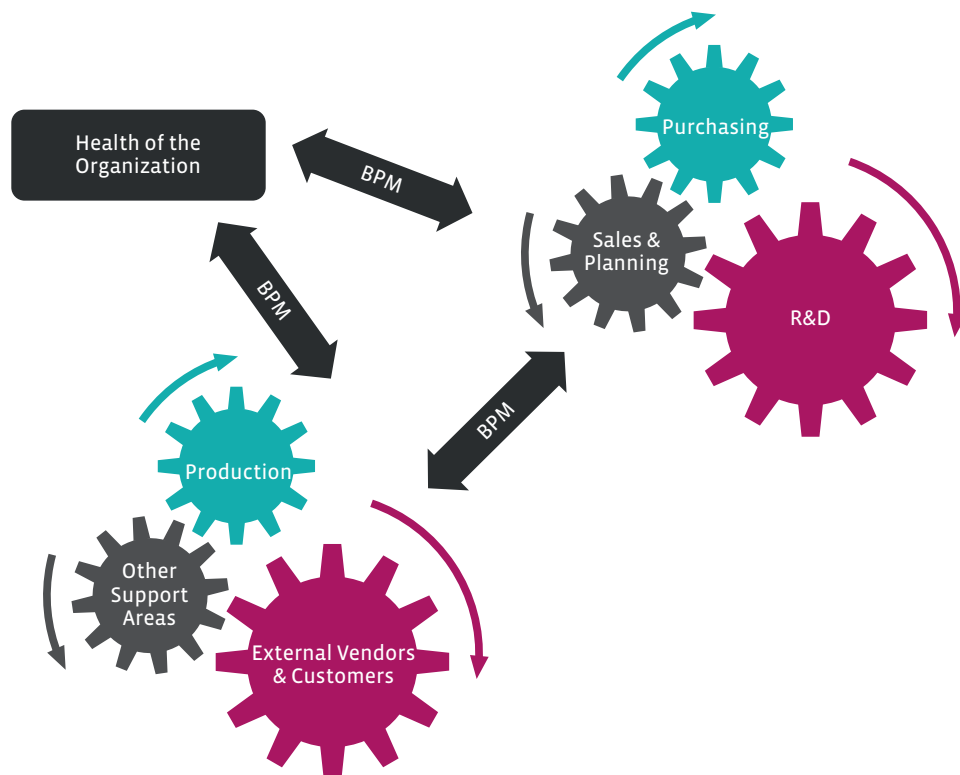
4. Industry 4.0 and Business Process Management

To survive, *Six Sigma* and *Lean* must translate from the manufacturing floor to more unconventional settings. But the fundamental benefits of Business Process Management—with workflow automation, implementation velocity, and collaborative integration—are already essential elements of the oncoming manufacturing revolution.

Business Process Management, as already outlined, is the ideal choice for improving efficiency and effectiveness within the manufacturing sector. Yet, many industry insiders are unsure of its benefits. This vacuum is especially surprising as some of the biggest challenges facing the industry can be addressed by a strong Business Process Management framework. These include bottlenecks within operations, sales and orders, and product lifecycles.

Continuous improvement strategies like *Lean* and *Six Sigma* have done much to increase the effectiveness of manufacturing operations, but the sector is now looking beyond the horizon—beyond quality control, and towards innovation. And this is far more manageable using BPM.

After all, BPM is a means to an end. It is a tool to understand, engineer and analyze processes, by leveraging a five-step model. BPM helps design, model, execute, monitor, and optimize. *Six Sigma* may be used to improve processes, but BPM looks to automate and manage them. BPM as a dynamic model that incorporates business and process intelligence, and tools such as predictive analytics, is very much alive, and very much needed for future success.



Going forward, mobile, social, predictive and cloud-based BPM are some of the hottest industry trends. In fact, BPM is a methodology that helps manufacturers of all sizes and types discover, analyze, and design processes built around its **workforce, assets, and materials**.

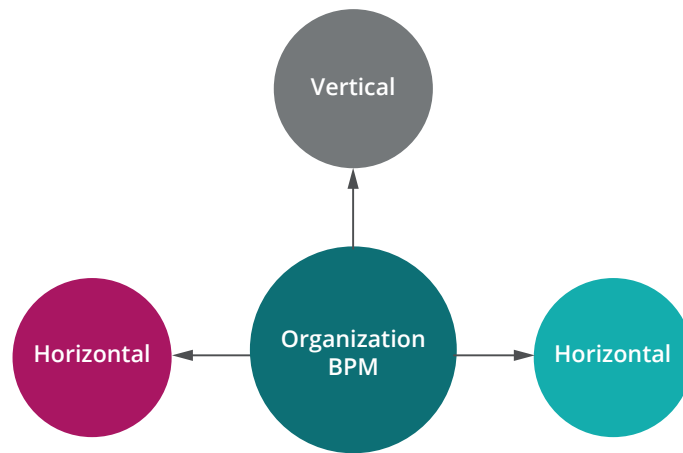
The use of BPM in a dynamic Industry 4.0 space helps:

- Create process institutions that capture the knowledge of a retiring/aging workforce
- Rapidly solve problems, isolate causes, and drive solutions
- Understand new business cases
- Rethink industry practices and processes to maximise fresh outcomes
- Allow collaborative process solving among all key stakeholders in an organization
- Create an infrastructure to act upon real-time and event-driven data
- Improve accountability among the workforce to drive process improvements
- Improve visibility across an organization, which in turn helps *improve operations, detect variations, and monitor processes*
- Capture information that resides in various plant/enterprise databases
- Maintain compliance with government, industry, and corporate regulations

5. The Vertical and Horizontal

Business Process Management also allows processes to be defined both vertically and horizontally, making the day-to-day running of a company easier. And while this is true within other process systems, including Total Quality Management (TQM) and Business Process Reengineering (BPR), an effective BPM system offers a far quicker and more scientific process analysis. BPM solutions are particularly advantageous in analyzing large and complex processes within manufacturing.

For example, the **vertical** can mean monitoring activities ranging from the input of raw material to the output of the final product, and the maintenance and overview of the supply chain. This includes warehousing, distribution/shipping, and receiving goods. The **horizontal** can be defined as monitoring the **workforce, assets, and materials** which span an entire enterprise.



BPM also monitors unscheduled or ad-hoc processes, bringing in contextual data from people and assets (such as equipment). This provides a structured and standardized approach to operations, enhanced collaboration, and better adherence to operating procedures.

BPM offers a 'shop floor to top floor' perspective.



6. Signavio: Fueling Your Industry 4.0 Success

Highlighting Signavio's impact, one manufacturing entity had an established presence in over 50 countries but had 25 different ERPs in place from various vendors. Signavio enabled the company to gain major insights into how processes varied within different offices. The collected data smoothly translated to give a big picture of system standardization and consolidation.

With over 1 million users in over 1,000 companies worldwide, Signavio has rapidly established itself as a leading provider of cloud-based process modeling and management systems. Signavio's innovative [Business Transformation Suite](#), including the Stevie Award-winning Signavio Process Intelligence, is recognized for its ease of use and rapid return on investment.

Through [Signavio Process Manager](#), [Signavio Workflow Accelerator](#), and [Signavio Process Intelligence](#), the Suite helps your processes reach peak efficiency, without sacrificing effectiveness. Signavio empowers manufacturers to improve productivity while cutting costs—what's not to like?

Three is the magic number:

- **Signavio Process Manager:** Covers all relevant aspects of BPM. Business analysts, process owners, and application architects use Signavio Process Manager as their tool of choice for process identification, documentation, and requirement specification. It delivers robust process and decision-modeling capabilities, which in turn foster company-wide transparency and improved regulatory compliance.
- **Signavio Workflow Accelerator:** Industry-leading automation catalyst with numerous functionalities such as form and information routing, escalation management, task distribution, record keeping, and standard operational procedures adoption.
- **Signavio Process Intelligence:** Carries the baton forward by leveraging transactional footprints of data within an organization and translating them into current operational models. Process Intelligence reverse engineers organizational prophecies and enables companies to identify process bottlenecks. It also reveals areas that can be improved or enhanced by automation.

Each Suite product can be installed independently or integrated seamlessly with existing systems to amplify your achievements.

[Signavio Collaboration Hub](#) is a Suite component that offers a centralized location for business knowledge. It eases communication and provides decision-makers with the most up-to-date data. Centralizing data is beneficial for both single location companies with multiple departments, as well as multi-site companies that need to share data. Business reporting and company productivity will be more accurate, focused, efficient and effective when a workforce can utilize consolidation capabilities.

When processes are ineffective or dysfunctional, they can affect the quality of manufactured goods, the services provided, and can lead to dissatisfied and frustrated employees. In turn, this can directly affect production, profits, and cause bottlenecks within the management system. Signavio Business Transformation Suite identifies and improves current strategies within a company to find more useful ways to get things done.

Customer experience is vital to achieving success, and a strong BPM initiative, coupled with tight customer journey mapping, helps manufacturers look beyond traditional process initiatives to future initiatives. Today's Industry 4.0-outfitted factories are empowered to drive productivity and keep costs down while ensuring quality and consistency across manufacturing processes globally.

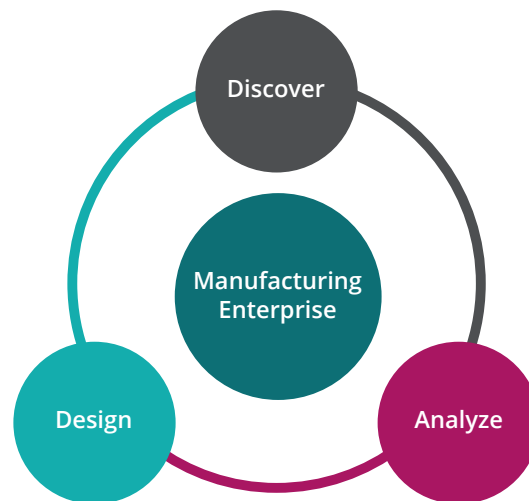
Signavio was the first to combine Customer Journey Mapping (CJM) with process management, empowering you to improve your customers' experiences in new ways. Users can design their Customer Journey Maps in Signavio Process Manager, and the results of Design Thinking workshops can now be recorded in the form of infographics. It is a modern solution designed to leverage the devices and working practices of today, with the future of your processes in mind.

7. Signavio: Revolutionizing Your Industry 4.0 Processes

The concept of BPM and successful Industry 4.0 process strategies relate more than ever to process-change management, given the pace at which newer enterprise technologies are outmaneuvering predecessors. It has become imperative for companies to keep track of their operational models or risk losing their edge on multiple levels, including market competition and customer relations.

This allows manufacturing entities to reimagine, optimize, and reinvent themselves from an operational perspective. At its core, the Signavio platform redefines enterprise collaboration for organizational change, harnessing employee knowledge to give a more granular-level view of processes.

This important crowd knowledge and particle-level data is the nucleus of achievement. It reveals the heart of a company and its operational inner workings. Success and change can be maintained, understood, and most importantly, reflected upon. Let us design, analyze, and discover for success.



Three quick ways Signavio Business Transformation Suite empowers manufacturing organizations.

- **Efficiency:** Processes can become inefficient due to inadequate monitoring of effort and progress. Improving processes will increase efficiency and remove activities that waste time and resources.
- **Effectiveness:** As processes become more efficient, they also become more effective. This leads to better-informed decisions and execution of necessary tasks and improved customer experiences, making the organization more profitable and competitive.
- **Flexibility:** Manufacturers must have tools that are flexible and easily adjustable. Companies that don't, or that work with out-of-date business processes, may fail. New opportunities, partners, or regulations can all require flexibility to accommodate different ways of doing things.

By implementing Signavio Business Transformation Suite, manufacturers have eliminated process inefficiencies and realized the full potential of their workflow processes across all departments in their organization. Some benefits of business process improvement include:

- › Reduced turnaround for build-to-order processes
- › Better end-to-end visibility into mission-critical processes
- › Reduced latencies in production processes
- › Strengthened relationships with customers and partners.

Times have changed. Doing the right things isn't enough anymore. Nor is just doing things right. We must be doing the right things right. Finding the sweet spot by combining efficiency and effectiveness is the ultimate goal for all companies. It can mean the difference between surfing the digital tsunami and disappearing under it.

8. Signavio Business Transformation Suite: Work Smart, Dream Big

Signavio supports your manufacturing business across all departments, leading to a better understanding of what your particular company does, what it is good at, and what it needs to address. In turn, this allows a fresh perspective and understanding of what matters, helping hone the whole organization. In essence, BPM—and therefore honesty—sits at the epicenter of strategy development and organizational change.

Once this is in place, it will become clear what needs to be done on the process front to deliver on the potential of Industry 4.0.

How Signavio can empower your manufacturing organization:

› **Problems within Operations Management?**

How Signavio helps:

Design and deploy critical business processes: This can be done in minutes and hours, not months or years, with easy-to-understand visuals.

Collaborate and create: With Signavio Collaboration Hub you have a strong repository of knowledge and intellectual assets.

Quality standards and business rules: With preset business rules fully customizable to your working needs, company standards will be set for all employees.

Functionality: Allows you to streamline operations and improve productivity.

› **Problems within Supply Chain Management?**

How Signavio helps:

Full visibility: Make processes and workflows throughout your operation transparent to all staff.

Reduce risk and complexity: With a single simple-to-use Cloud-based BPM platform, manufacturers can better manage tasks and workflows.

Critical workflows and operational processes: Minimize human error by improving continuity and performance.

Adaptive technology: Change how you work quickly, and as required. Get alerted to potential bottlenecks before they occur.

Scalable: Handle millions of activities and tasks, multiple processes and workflows, and full globalization functionality.

➤ **Problems within Product Lifecycle Management?**

How Signavio helps:

Reduce time to market: With automated workflows and processes, jobs are completed both more efficiently and more effectively.

Simple collaboration across all operations and locations: Wherever staff may be located, and within whichever department they work, make the best use of people, knowledge, assets, and processes.

Cost reduction: Quickly deploy business requirement and processes without the need for extensive IT involvement, specialist coding, or development skills.

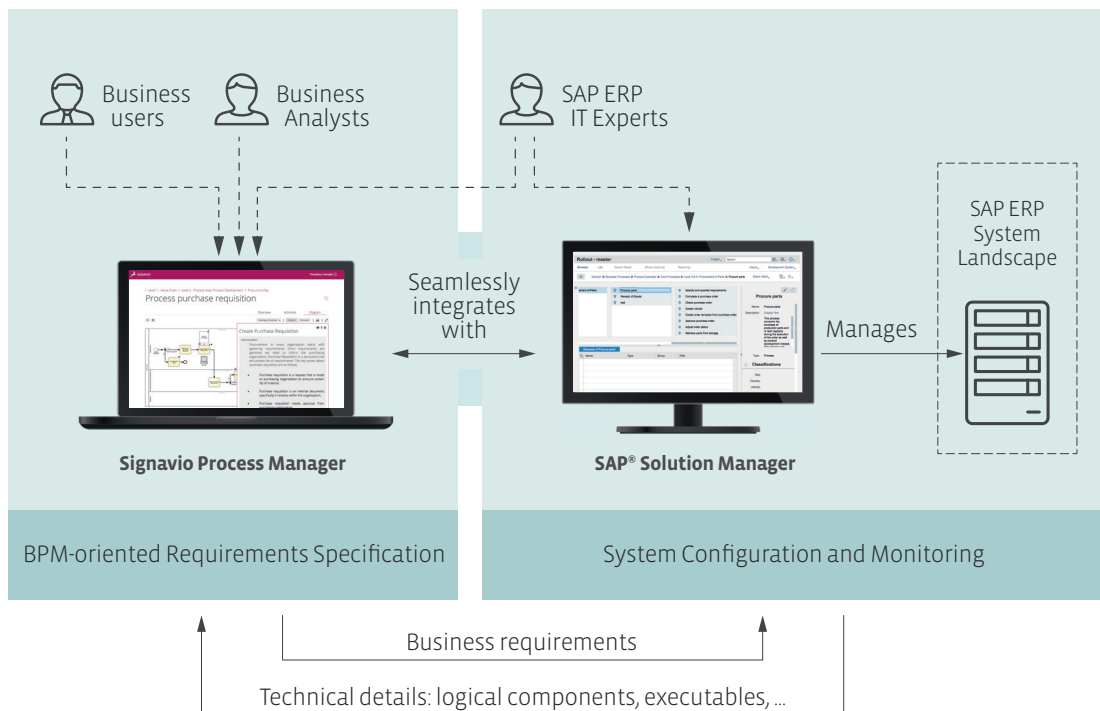
9. Signavio: SAP® Solution Manager 7.2 and SAP® S/4HANA Integration

Taking our leading technology one step further, Signavio Process Manager also offers integration with SAP® Solution Manager 7.2 and SAP® S/4HANA, empowering straightforward collaboration between Industry 4.0 activities and IT. This teamwork helps streamline business processes and proactively addresses improvement options, increasing efficiency, and supporting a better customer experience.

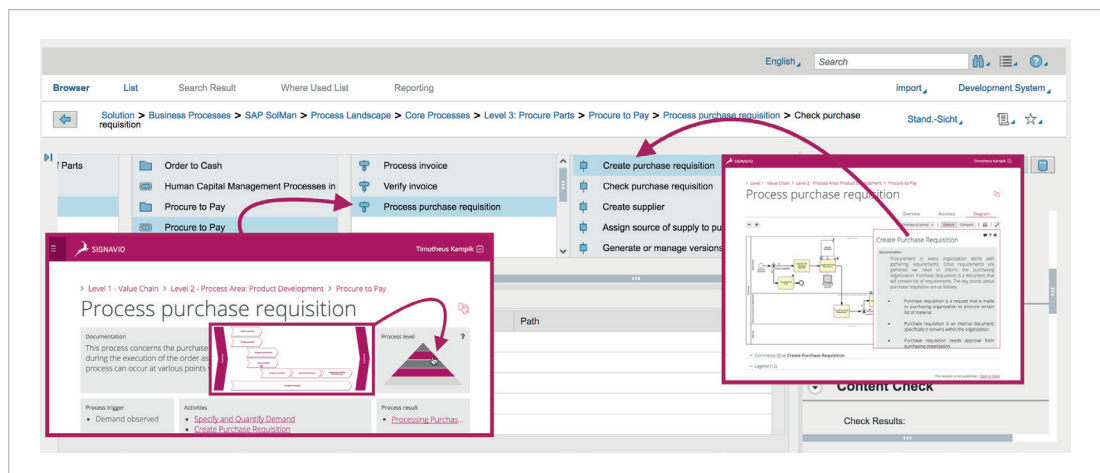
With Signavio Process Manager and the Collaboration Hub, processes are no longer buried within a complex system. Processes are brought into the light, making it far simpler to get all stakeholders involved and communicating.

Signavio Process Manager simplifies the whole SAP® implementation process, improving business and user engagement as well as handover and communication between business and IT. The collaborative capabilities of Signavio Process Manager make next stage delivery more user-friendly, ensuring that the 'go-live' is steadier. Signavio Process Manager is also the optimal business and user interface for facilitating Enterprise Resource Planning (ERP) implementations.

Signavio Process Manager is the tool of choice for business analysts, process owners, and application architects. By systematically responding to all BPM needs it allows for an easy and process-driven approach to SAP® implementation projects. This integration puts manufacturing requirements first.



Signavio and SAP® Integration: Improving Manufacturing Processes



Make Your Processes Available in SAP® Solution Manager 7.2 and SAP® S/4HANA

10. The Revolution is Here

See how Signavio can put your organization on the path to Industry 4.0 excellence with [Signavio Business Transformation Suite](#). Try it for yourself by registering now for a [free 30-day trial](#).

11. Contact

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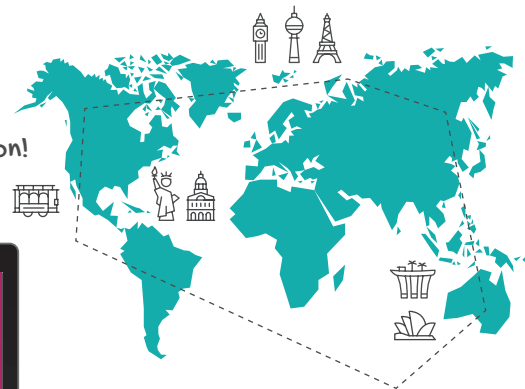
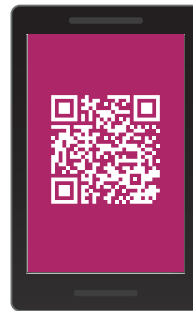


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