Market Guide for Digital Twin of an Organization Platforms

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Initiatives:Technology Innovation and Strategy

> A digital twin of an organization helps to prioritize, guide, plan, monitor, simulate, analyze and scale complex initiatives. CIOs and technology innovation leaders can use this Market Guide to learn best practices for creating and using a digital twin of an organization platform.

Overview

Key Findings

- Organizations that devise digital business strategies, operational excellence and customer experience initiatives struggle to represent, prioritize, guide, simulate and monitor the underlying business-operational scenarios.

- Because of the many interdependencies of operations, processes and systems, scaling digital business transformation initiatives is extremely difficult and complex. Without a "navigator," the risk of failure increases dramatically as the scope and pace of the digital business initiative expands.

- Data scientists that are in high demand, armed with the latest AI and machine learning (ML) techniques, are deployed to conquer the abundance of data that is complicating any transformation challenge. Often, they lack an overview model that indicates which data is relevant for increasing productivity and delivering business value.

Recommendations

To drive business transformation and optimization through technology innovation, CIOs and technology innovation leaders should:

- Improve the rate of success in digital transformations by creating a digital representation of their organization that provides visibility into business operations, delivers situational awareness and supports improved enterprise decisions.

- Combine operational, architecture and governance disciplines in order to create the roadmap and vision for the use of an organizational digital twin by their enterprise.

- Determine the required capabilities and use cases that will support business outcomes. As this is an emerging market, the breadth and depth of functionality in products supporting a digital twin of an organization (DTO) will vary greatly, depending on the predominant use case that is marketed by the vendor.

Market Definition

A DTO is a dynamic software model that relies on operational and contextual data to understand how an organization operationalizes its business model, connects with its current state, responds to changes, deploys resources, simulates future states and delivers customer value.

A DTO platform is a technology platform that supports the creation, management and operationalization of a DTO.

Market Description

What Is a Digital Twin of an Organization?

Earlier research defined a digital twin as "a digital representation of a physical object." However, the digital twin concept can be extended to complex entities, such as departments, business units, whole enterprises, or even cities and countries. These more-abstract digital twins can be used to support specific financial or other decision-making processes. Furthermore, additional optional elements, such as analytics, control and simulation, can augment these digital twins.

An example of such an abstract digital twin is the digital twin of the organization. A DTO differs from a digital twin of a device in that it models both human and nonhuman (such as AI and automated activities) behavior in business operations. It reflects what humans actually do instead of what they are supposed or expected to do, based on business process activities and workflows.

Digital business initiatives aimed at digital optimization or digital business transformation, as well as customer experience and operational excellence initiatives, trigger a whole set of interrelated changes to the organization, its products and services, and its internal and external relationships. Managing such complexity is difficult and risky. A DTO helps leaders explore options and reduce the risk of chosen paths as the company moves forward.

This research discusses the approach to the definition, creation and use of DTOs and, more specifically, the technology supporting them or DTO platforms. It describes the market, identifies use cases, and highlights some key vendors and their fit to common usage scenarios.

Functional Building Blocks of a DTO

In earlier research, we compared a DTO to a navigation system or GPS. Like an in-vehicle GPS, it can guide your organization to its desired destination (the to-be state) using five elements:

- **Destination:** Information about your desired destination and when you would like to arrive there.

- **Map:** A guide showing how to reach that destination — your organization's GPS will only be as good as its map database.

- **Performance:** An indication of how far along you are on your journey.

- **Situation:** Situational awareness (i.e., organizational awareness of roadblocks and challenges on the road ahead).

- **Value:** Accurate information on your organization's progress and situation to enable informed decision making.

If we translate these GPS constituents into an organizational or a business environment, we arrive at the five building blocks of a DTO (see Figure 1):

- **Destination:** Digital optimization, optimized business operations, improved or new business models, digital business transformation and/or optimized customer experience. [1]

- **Map:** Digitalized business operations model (shows how externally focused customer-driven interactions align with internally focused business operations, delivering stakeholder value).

- **Performance:** Business performance management framework (to align diverse measurement schemes through the model).

- **Situation:** Business operations intelligence (to provide the model with real-time data).

- **Value:** Business decisions and actions that create value for the different stakeholders (internal/external) of the organization.

Figure 1: Building Blocks of a Digital Twin of an Organization

Building Blocks of a Digital Twin of an Organization

DTO	Destination	Map	Performance	Situation	Value
	Business Model	Business Operations Model	Business Performance Management	Business Operations Intelligence	Business Actions
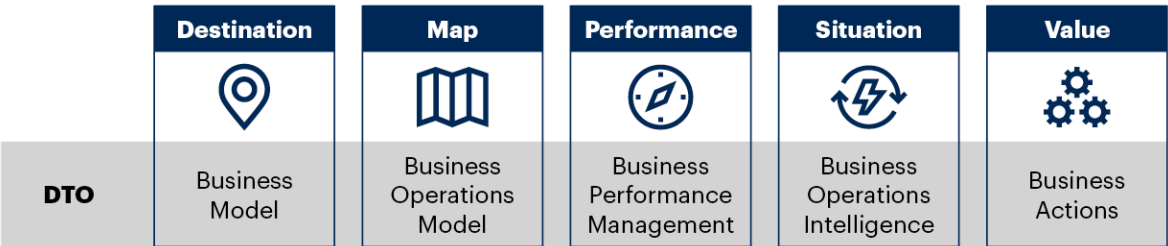
Source: Gartner
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Gartner

To capture what humans actually do instead of what they are supposed or expected to do based on business process activities and workflows, DTO platforms commonly rely on process mining techniques. Process mining is a discipline focused on creating digital twins of business operations. It also is one of the main drivers of DTO platform adoption in the market (see Magic Quadrant for Process Mining Platforms).

DTO Platforms

DTO platforms are a combination of different technologies (see Figure 2). Organizations can apply them to provide input for, achieve realization of, and derive benefits from a DTO.

Figure 2: DTO Platform

DTO Platform

	Destination	Input	Map	Performance	Situation	Output	Value
DTO	Business model		Business operations model	Business performance management	Business operations intelligence		Business actions
Supporting technology component	Enterprise architecture (EA) tools		• Enterprise business process analysis (EBPA) • Enterprise architecture (EA) tools	• Enterprise performance management (EPM) platforms • Business analytics	• Continuous intelligence (CI) • Process mining		Business process automation (BPA)

Source: Gartner
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Gartner

DTO vendors predominantly come from the following software categories:

- **Enterprise business process analysis (EBPA):** EBPA is the discipline of business and process modeling aimed at transforming and improving business performance, with an emphasis on cross-viewpoint, cross-function analysis, and strategic and operational decision support (see Market Guide for Enterprise Business Process Analysis Tools).

- **Enterprise or strategic corporate performance management:** Enterprise or strategic corporate performance management is the process of monitoring performance across the enterprise with the goal of improving business performance. An enterprise performance management system integrates and analyzes data from many sources, including, but not limited to, e-commerce systems, front-office and back-office applications, data warehouses and external data sources.

- **Enterprise architecture (EA):** EA tools provide a central repository to capture data and metadata and conduct analysis across the business and technology artifacts that describe the enterprise in its current and planned future states. (See Magic Quadrant for Enterprise Architecture Tools.)

- **Continuous intelligence:** Continuous intelligence is a design pattern in which real-time analytics are integrated into a business operation, processing current and historical data to prescribe actions in response to business moments and other events (see Innovation Insight for Continuous Intelligence). It provides decision automation, augmentation or support.

- **Process mining:** Process mining is designed to discover, monitor and improve actual processes (i.e., not assumed processes) by extracting knowledge from event logs readily available in today's information systems (see Magic Quadrant for Process Mining Platforms).

Key Capabilities of DTO Platforms

Gartner has identified distinct capabilities for the map, performance and situation building blocks of a DTO (see Table 1). Technologies supporting a DTO must have these capabilities to be successful. The identification of these capabilities is based on our extensive coverage over the past years (via end-user client inquiries). We also consider our many contacts with academic researchers (through yearly academic business process management [BPM] conferences) and a survey with many vendors providing these technologies. [2]

Table 1: DTO Capabilities Provided in the Market

(Enlarged table in Appendix)

Building Block	Capabilities
Business operations model	▪ Support for modeling and analysis of business operations in a larger operating model context, indicating how capabilities and other resources are deployed to deliver value to the organization's stakeholders (i.e., the link to day-to-day execution). ▪ Support for customer interactions and customer journey maps, allowing for customer segmentation, as well as sales and distribution channel segmentation. ▪ Models of offerings (products, services and information) delivered to customer segments. ▪ Process mining capabilities (automated business process discovery). ▪ Models of resources (such as machines, IT systems and people) that perform the operations and thus are connected to the entire business operating model. ▪ Support for internal and external ecosystems, depicting user-generated and external content relevant to processes or business operations. These are typically generated by social-media-style collaboration and multichannel communication. ▪ Access to project and program data to monitor progress, and to align with business outcomes. ▪ Orchestration of business operations (design model).
Business performance management	▪ Support for multiple measurement schemes (such as operational performance indicators, financial models, quality schemes and service-level agreements) and how they work together or interact within the context of a business operating model. ▪ Support for customer journey, customer interaction and customer touchpoint analyses. ▪ Support for KPIs and root cause analysis, enabling operational decision support. ▪ Real-time dashboards with support for KPIs that are continuously monitored and enable decision support. ▪ Scenario testing and predictive and prescriptive analytics based on the business operating model. ▪ Risk management and monitoring. ▪ Cost/value analysis (balancing cost savings with operational effectiveness and business value). ▪ Support for analysis, using externally provided performance indicators or measurements (from the ecosystem), such as temperature, air pollution and noise.
Business operations intelligence	▪ Adapters or connectors to receive and send data. The most common adapters are for RESTful APIs, message-oriented middleware, files and databases. Some platforms also have adapters for web services, packaged applications and sensor data in event streams or historical databases. ▪ Event processors. Most platforms filter incoming event data and can detect simple patterns that represent threats and opportunities (including exceptions or anomalies). Some platforms have stream analytics engines capable of sophisticated complex-event processing, including generalized event correlation, high throughput, low latency and the ability to detect intricate temporal or spatial patterns in sliding time windows. ▪ Rule processors. A rule-processing capability determines the appropriate response to conditions that have been detected. It may be implemented in a scripting language, production rule engine (inference engine) or similar tool. ▪ Notification, alerting and triggering capabilities. These are capabilities for sending email, text messages or other alerts. ▪ Knowledge augmentation of workers. This capability is accomplished through adding real-time information about tasks to be performed. ▪ Real-time monitoring. Real-time dashboards that continuously refresh are typically updated every second, every few seconds or every few minutes. ▪ Extraction, transformation and loading (ETL) capabilities. During this process, data is taken (extracted) from a source system, converted (transformed) into a format that can be analyzed, and stored (loaded) into a data warehouse or other system. ▪ Generative AI capabilities.

Source: Gartner (November 2024)

CIOs and technology innovation leaders should realize that not all DTO platform vendors will support all features, and that not all features are always required for the targeted use case. Because of the emerging natures of some of the use cases and underlying disciplines, and the vast combination of different areas, most suppliers still have gaps in their offerings.

Market Direction

We see five main drivers for DTO platform adoption in the market.

Digital Transformation

Digital transformation initiatives have made business users more aware of the benefits of analyzing and understanding these initiatives within a broader enterprise context. A model to map your journey will guide your plan for executing the chosen digital business strategy, and this model will ensure that the targeted business outcomes are achieved.

An organization has multiple customer interactions, operations, products, services, channels, roles, systems, applications, processes and resources. These all act together in a network of business operations. Existing methodologies struggle to provide insight into this business operations network. They don't show how these resources add value, both individually and collectively, to offerings (products, services and information), markets, channels, and customer segments. Furthermore, scaling or industrializing digital optimization and transformation is not only about new technological innovation and capabilities. It also has an organizational and management component based on modeling and monitoring the operationalization of these technological capabilities. This implies that, on the organizational level, a DTO is needed to connect all the organization's objectives with its business operations. This provides the relevant guidance and monitoring that, in turn, enables your organization to adapt to the continuously changing environment.

Today, it is clear that organizations will not face just a single business transformation or optimization initiative. These initiatives occur in many places within the organization and often happen multiple times, depending on the organization's digital ambition and the level of disruption in different industries (see Digital Business Ambition: Transform or Optimize?). In many cases, the initiatives may take place independent of one another, especially in companies with multiple business units.

Even in a single business transformation initiative, the destination and objectives can often change during the process. The dynamic characteristics inherited from an Internet of Things (IoT) digital twin (event-driven, always connected, networked data by design) and applied to a DTO will assist with guiding, steering, monitoring, communicating and adapting these initiatives, as well as aligning them.

Digital Twins

Digital twins are part of the digital theme that describes an ever-increasing merger of the digital and physical worlds. The digital-twin trend focuses on creating appropriate digital representations of the operations of physical assets in the real world. These digital twins may be as simple as a dashboard with critical performance indicators, such as a threshold temperature or vibration, or they can be highly sophisticated, incorporating input from many sensors and external data.

Although much attention is on digital twins of entities as part of an expanding IoT model, more-sophisticated digital models of the real world will have a much larger impact. Digital twins are built on the concept that virtual asset models coexist and are connected to real assets — they're twins. However, this concept isn't limited to assets or things.

Virtual doppelgängers of real-world elements are growing along many dimensions. Like digital twins, these other digital entities often grow from metadata structures and models of things in the real world that are disconnected from those real-world things, or are, at most, only loosely connected to it. Over time, these digital representations/models will be connected more tightly to their real-world counterparts. Digital twins of people, processes, organizations and environments will be used for strategic and operational decision making and advanced simulation. Examples are a digital twin of a city (Singapore), a digital twin of a factory (Siemens) and a digital twin of a port (the Port of Antwerp-Bruges; see Note 1).

Process Mining

The adoption of DTOs is also being driven by the emergence of process mining and its ability to provide a digital representation of operations or processes. Process mining aims to discover, monitor and improve actual processes (not assumed processes) by extracting knowledge from event logs readily available in today's information systems (see Magic Quadrant for Process Mining Platforms).

No single process lives in isolation, and they should all eventually be contextualized within their organizational settings. If we shift the scope of process mining to the operational and organizational level (process mining platforms), it is possible to link these operational insights to big strategic initiatives, such as digital optimization or digital transformation. Process mining provides visibility, analysis and understanding around business operating models that represent the organization's way of doing business by providing near-real-time information to all end users about how they are currently performing and what could be improved. Furthermore, process mining supports them in finding opportunities for improvement.
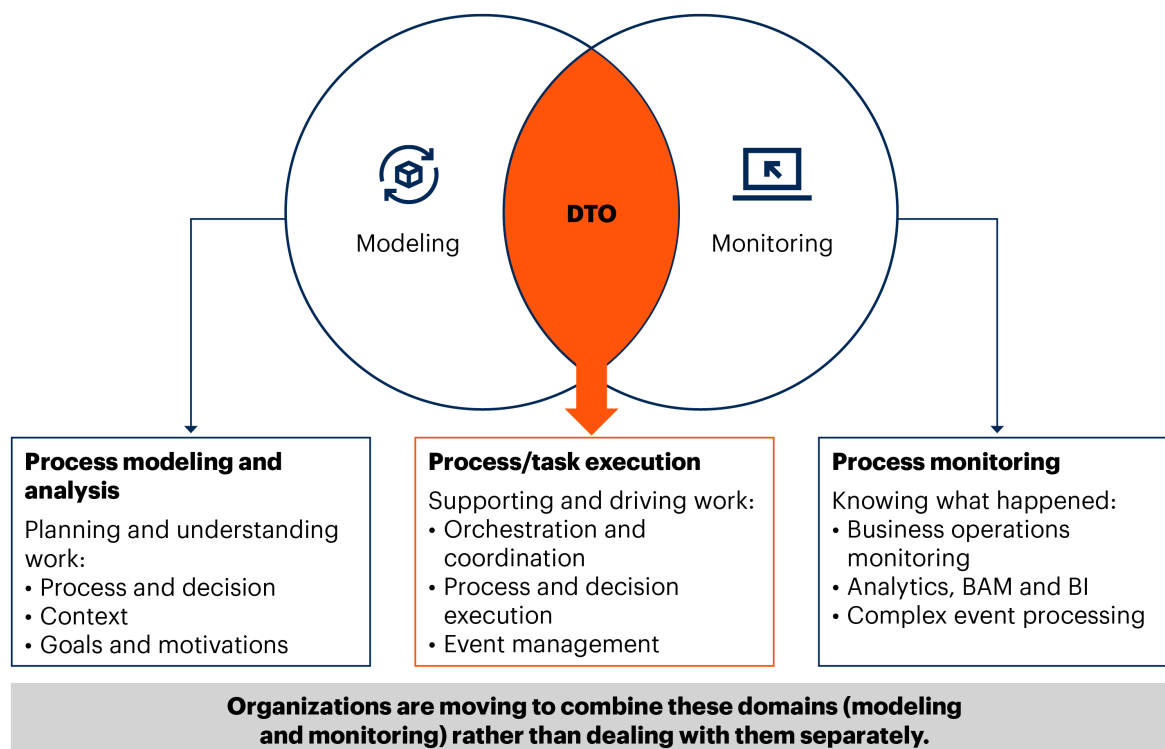
Process Intelligence

Yet another driver for the DTO platform market is the renewed interest in process intelligence. Leading organizations are carefully managing the different process-related models and past performance data. Combining these process and decision models with the situational context of work helps control and optimize the execution of work in real time.

Definition

Process intelligence enables less-technical users, people who perform day-to-day operations, and business leaders to discover, model, analyze, explore, share, and manage processes, and collaborate and share understanding and insights, enabled by tools and platforms and augmented by AI. Process intelligence serves as an enterprise asset that continuously monitors and improves the way of working for any organization.

As shown in Figure 3, insights and analytics on past performance combine with process and decision models to create a DTO platform, which then drives the execution of processes and tasks.

Figure 3: Process Intelligence and DTO

Process Intelligence and DTO

Modeling   DTO   Monitoring

Process modeling and analysis

Planning and understanding work:
• Process and decision
• Context
• Goals and motivations

Process/task execution

Supporting and driving work:
• Orchestration and coordination
• Process and decision execution
• Event management

Process monitoring

Knowing what happened:
• Business operations monitoring
• Analytics, BAM and BI
• Complex event processing

Organizations are moving to combine these domains (modeling and monitoring) rather than dealing with them separately.

Source: Gartner
DTO = digital twin of an organization; BAM = business activity monitoring; BI = business intelligence
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Autonomous Business Operations

Autonomous business operations are a fifth driver of DTO platform adoption. As indicated in earlier research (see Building a Digital Future: Autonomic Business Operations), the new approach to managing business operations is strongly connected to creating business operations resilience. Therefore, one can assume that the journey from business operations to autonomous business operations is strongly connected to the journey from business operations resilience to autonomous business operations resilience (see Figure 4).

Figure 4: Business Operations Resilience

Business Operations Resilience
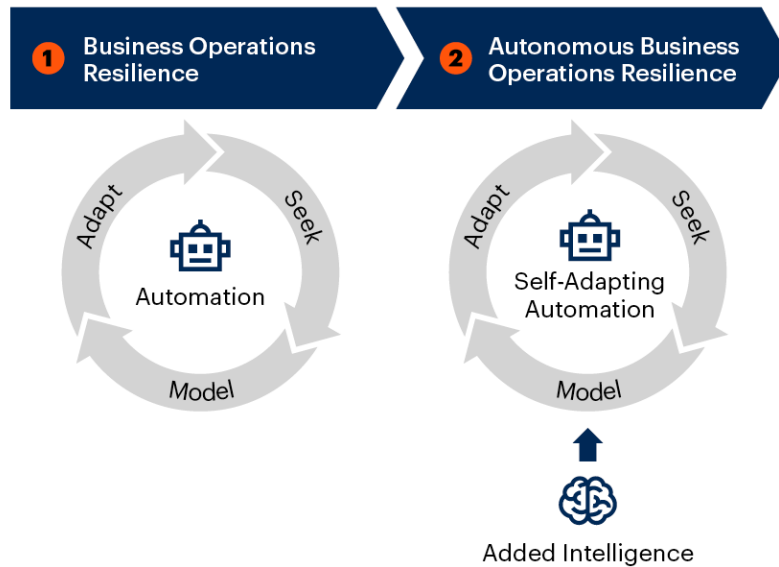
Source: Gartner
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These two states of resilience can be described as follows:

Business Operations Resilience

The techniques underpinning process mining provide a new and enhanced way to encompass seek-and-model capabilities. Based on available day-to-day operational data, process mining continuously seeks and finds relevant objective operational data. Advanced process-mining algorithms then provide an accurate model of the ways of work in a format that can be understood by anybody in the organization. This ensures that everybody can be engaged in the change initiative. Furthermore, it allows for continuous adaptation and improvement because, after the adaptation, the new operational data will give insights into the new adapted way of working. But the step to continuously turn insights into action (adapt) is driven by human actions and interactions.

Autonomous Business Operations Resilience

Adding execution or automation capabilities to business operations resilience in an intelligent way allows for an autonomous way of handling this operations resilience. The three different stages of business operations resilience (seek, model, adapt) are connected and performed autonomously (i.e., without supervision, and minimal or no human intervention). The resulting autonomous operations are one of the building blocks of autonomous business, which is Gartner's current term for the next distinct macro wave of digital and information-technology-enabled business.

Market Analysis

Common DTO Use Cases

CIOs and technology innovation leaders should at least consider the seven most common use cases to assess DTO platform vendor technology propositions:

- **Enterprise performance and cost optimization.** Supporting business cost optimization involves helping enterprise leaders leverage information technology to maximize business outcomes. A DTO is created to support the discovery of cost optimization opportunities that deliver the most value and that do not negatively impact other entities in the organization. A DTO visualizes the interdependence between functions, processes and KPIs to drive value. A DTO also helps reduce political and cultural barriers induced by any cost optimization.

- **Customer experience.** Customer experience leaders leverage a DTO platform that delivers organizationwide performance management from the customer perspective, focusing on the continuous improvement of customer processes and interactions. This visibility and related insights will give anyone in the organization the opportunity to improve the customer experience (see Boost CX CORE With Intelligent Coordination).

- **Digital business optimization and transformation.** Digital business leaders adopt a DTO platform to turn the digital business blueprint (a contextual model or digital business operating model) into a digital business execution plan. This enables your organization to adapt to its changing environment through a DTO that continuously monitors and guides the digital transformation initiative.

- **Operational excellence.** Business process leaders create a DTO to provide a contextual model for business processes. The model indicates where enterprise value is linked with the different parts of an organization and how business processes can impact value creation. Remember that business operations — which are combinations of processes, activities and interactions that deliver products, services or information for internal or external customers — are an essential part of a DTO.

- **Logistics and manufacturing.** Supply chain leaders create a DTO that adds real-time status monitoring to transform the point-in-time documentation of a modular operating model into a digital twin. This will allow a physically intensive business to further enhance its digital agility. It also enables the business to simulate the impact of changes before implementing them and to better adjust performance to match business needs. Even in well-researched and efficiency-driven manufacturing environments, manufacturing leaders can leverage a DTO platform to deliver the necessary combination of these efficiencies with effectiveness in a near-real-time way that avoids local suboptimizations.

- **Operationalization of new capabilities, such as IoT.** Technology innovation leaders adopt a DTO platform to support the operationalization of new technology capabilities. The DTO approach makes it possible to measure the efficiency and effectiveness of the acquired capabilities, and to continuously monitor the status of capabilities within the value-creating operations. All things considered, remember that capabilities need to be deployed and operationalized to deliver the expected stakeholder value.

- **Business process outsourcing.** To create a high-performance business process outsourcing (BPO) organization, CIOs and business leaders adopt a DTO to visualize the supporting business operating models, and to continuously measure the business case and value of outsourced business processes. A DTO approach provides continuous assessment of the maturity of the outsourced processes, as well as a comparison of these processes against best practices and the operations of world-class companies.

State of the DTO Market

Over the last several years that we have covered this emerging market space, we have seen a slow start in uptake of this concept. However, we are finally in a stage where the general market is starting to inquire about solutions addressed by this concept. This is exemplified by worldwide consulting and systems integrators creating new offerings and services around the concept for their clients (such as Capgemini's Digital Twins for Business Operations).

All vendors active in the DTO platform market provide features and functionality for most use cases. However, the focus, breadth and depth of these features and functionality will vary significantly, depending on the predominant use case marketed and implemented by different vendors.
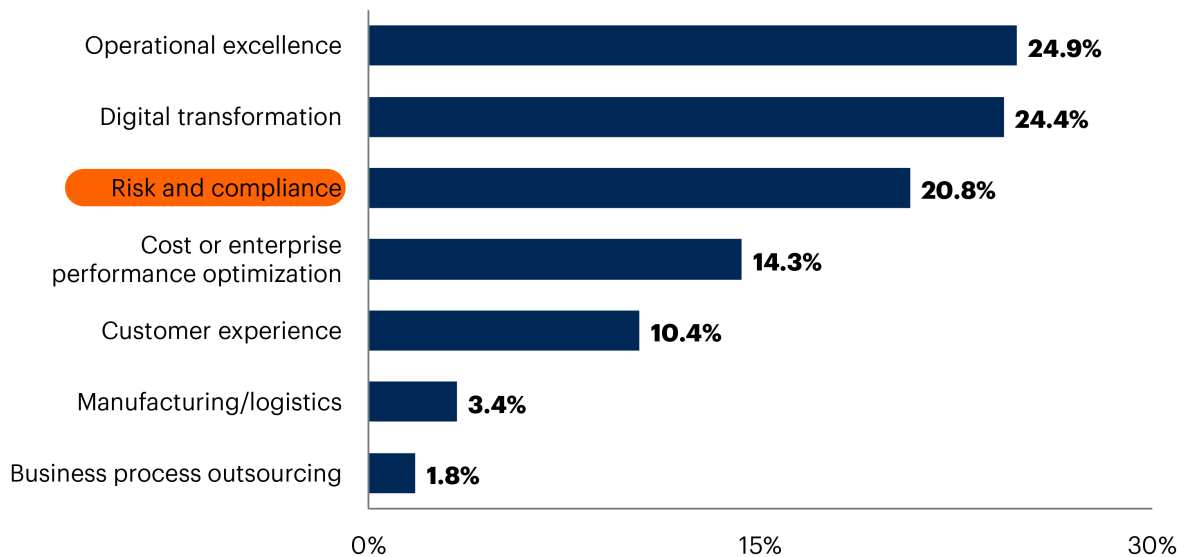
In 2018, vendors in this market sold predominantly on the operational excellence, cost or enterprise performance optimization, digital business and customer experience use cases, accounting for nearly 85% of the use cases. In 2020, the biggest changes could be observed in use cases for cost or enterprise performance optimization, and digital business. In 2022, vendors saw a significant shift from operational excellence and performance management toward the customer experience use case, the IoT use case and the business process outsourcing use case. According to our survey supporting this Market Guide, since 2023 we have introduced a new use case (risk and compliance) and have immediately seen a tremendous uptake on this use case, because of the increasing and more stringent regulations, and increased reporting requirements (see Figure 5). [2]

In this figure, we did not include information from previous years. This is due to the introduction of this new use case, which would distort the comparison of percentages over these years.

Figure 5: DTO Use Cases

DTO Use Cases
Percentage of respondents

Use Case	Percentage
Operational excellence	24.9%
Digital transformation	24.4%
Risk and compliance	20.8%
Cost or enterprise performance optimization	14.3%
Customer experience	10.4%
Manufacturing/logistics	3.4%
Business process outsourcing	1.8%

n = 2,000, combined over 19 vendors

Source: Survey conducted for Market Guide for Digital Twin of an Organization Platforms, G00785499
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Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Vendor Selection

Gartner sizes the market at about 80 vendors offering most of the DTO capabilities. Most of these vendors explicitly adopted the DTO term, but connect it to their own terminology, such as intelligent enterprise, enterprise management system or business management system. For the 19 vendors profiled in this Market Guide, we used client interactions, vendor briefings and case study research to verify that these offerings were in the market for at least a year, and that they are representative examples of this market. In terms of revenue, we estimate that these vendors represent more than 90% of the total market.

Table 2: Representative Vendors in Digital Twin of an Organization Platforms

(Enlarged table in Appendix)

Vendor	Product, Service or Solution Name	Background
ARIS	ARIS	EBPA/strategy to execution
Arrayworks	Transformation Acceleration Platform (TAP)	EBPA/strategy to execution
Bee360	Bee360	IT operating system
BOC Group	ADONIS	EBPA/business process analysis
BusinessOptix	BusinessOptix	EBPA/strategy to execution
Celonis	Celonis Execution Management System	Process mining
Corporater	Corporater Business Management Platform	Enterprise performance management
DCR Solutions	DCR Portal, DCR Workflow, DCR Process Engine, and DCR Indicators	Process mining
Edge Total Intelligence (edgeTI)	edgeCore	Enterprise application integration/system integration
EsseQuamVideri	SPHERA expert system	Risk & compliance management
GBTEC Software	BIC Platform	EBPA/strategy to execution/BPA
iGrafx	Process360 Live	EBPA/business process analysis
inorigo	inorigo Metagraph platform	DTO platform
Interfacing Technologies	Enterprise Process Center (EPC)	EBPA/strategy to execution
Mavim	Mavim ProcessVerse	EBPA/strategy to execution
Orbus Software	OrbusInfinity	EBPA/enterprise architecture
QPR Software	QPR DTO	EBPA/process mining
QualiWare	QualiWare X	EBPA/enterprise architecture
SAP	SAP Signavio Process Transformation Suite	EBPA/business process analysis

The Background column refers to the market that the vendor chiefly serves. The EBPA market has been further detailed along its various use cases, showing EBPA/use cases.

Source: Gartner (November 2024)

19/80

Vendor Profiles

ARIS

ARIS, based in Saarbrücken, Germany, offering ARIS 10 SR26:

■   Being a market leader for many years in the Business Process Analysis market, ARIS combines four key capabilities of its process intelligence offering to support a DTO. These capabilities are business process analysis, process mining, automation, and risk and compliance, all supported by the ARIS AI Companion.

■   ARIS offers all capabilities that are needed to support the DTO through its enterprise management system (EMS) concept. Its modeling, process mining, risk management and compliance functionalities work together seamlessly within a single suite. This combination serves multiple process-related DTO use cases, eliminating the need for disparate tools.

■   ARIS's offerings incorporate not only the ARIS software, but also include accelerators, ARIS Professional Services and Fast Track Services. The offerings also include a partner ecosystem and cloud providers (Amazon Web Services [AWS] and Microsoft), as these are key to DTO solutions and cannot be regarded as a pure software product.

■   According to our survey, ARIS has an equally large focus on the digital transformation and operational excellence use cases, followed by the customer experience use case. Software AG also has a strong focus on the business performance management component, decision support capabilities and process mining capabilities.

Arrayworks

Arrayworks, based in Mansfield, Massachusetts, U.S., offering Arrayworks Transformation Acceleration Platform (TAP), version 5.9:

■   Arrayworks is one of the representative vendors that has built functionality genuinely targeting the capabilities of a business operating system. Arrayworks connects any aspect of an organization, whether based on knowledge, IoT sensors or existing systems of record, to its operations and processes, delivering situational awareness to support informed decision making.

- Arrayworks TAP offers a simple approach to the creation, correlation, attribution and elucidation of entities, using no-code declarative tools and a flexible architecture. An attractive feature of the Arrayworks platform is the ease and speed of modeling, ability to continuously remodel in minutes, and ability to bring complex operating models to life, supporting workflows and end-to-end processes.

- Arrayworks' IoT partnership with SAS, offered as TAP+, delivers the ability to monitor the edge and applies AI to drive both predictive and prescriptive actions. It also offers the ability to digitally represent every asset, provide operational awareness and orchestrate the work necessary to make events actionable across the entire digital landscape.

- According to our survey, Arrayworks has a larger focus on the digital transformation use case, followed by the operational excellence and customer experience use cases. Arrayworks has a strong focus on the business operations modeling component, flexible modeling capabilities, and rule-processing capabilities.

Bee360

Bee360, based in Karlsruhe, Germany, offering Bee360:

- Bee360 is a software and services company that serves as an example of how a DTO can be created for an IT organization. Through the combination of its proprietary methodology with its Bee360 platform, Bee360 creates an integrated management tool for the operational steering of an I&T organization, which could be extended to the whole organization.

- Bee360 provides a data-driven organizational model with built-in business content for I&T organizations to manage organization, legal structures, processes, value chains, demand, strategies, projects, value streams and services, and KPIs. All of these elements are connected and illustrate how an I&T organization contributes daily to business value.

- Bee360 provides tools for enterprise architecture management (EAM), enterprise agile planning (EAP), strategic portfolio management (SPM), IT financial management (FM), capacity management, and project/task management. These capabilities are fully integrated and represent real-life interdependencies, to operate and transform operations and structures.

- According to our survey, Bee360 has a larger focus on the digital transformation use case, followed by the enterprise performance and operational excellence use cases. Bee360 has a strong focus on the business performance management component, knowledge augmentation capabilities, and project and program capabilities.

BOC Group

BOC Group, based in Vienna, Austria, offering ADONIS 16.0:

- BOC Group is an established BPM and EA tool vendor that sells and markets ADONIS as a single product on a joint platform (BOC Management Office). This platform also integrates enterprise architecture (ADOIT) and governance, risk and compliance (ADOGRC). BOC Group considers this joint platform as a key value-add proposition.

- ADONIS supports the creation of comprehensive models for analyzing and understanding business context and providing an integrated management system. In blending static and dynamic information, ADONIS provides visualization and key insights into processes and further assets of the company, while at the same time maintaining integrity through its platform.

- A particular strength of BOC Group's offering is the focus on user experience for the different stakeholder groups providing, analyzing and consuming the data of the DTO. A key aspect is allowing collaboration between different stakeholders/experts, who are typically non-IT experts, when building and optimizing the digital twin.

- According to our survey, BOC Group has a larger focus on the digital transformation use case, followed by the operational excellence and enterprise performance use cases. BOC Group has a strong focus on the business operations modeling component, flexible modeling capabilities, and notification, alerting and triggering capabilities.

BusinessOptix

BusinessOptix, based in Kansas City, Missouri, U.S. and Guildford, England, U.K., offering BusinessOptix version 8.0:

- BusinessOptix is an online platform that models an organization's multiple layers, from high-level organization design and cross-functional mapping to process maps and documentation. BusinessOptix appeals to consulting and systems integrators, business process outsourcing and end-user organizations that are creating a center of excellence (COE) or intellectual property at scale on the platform.

- BusinessOptix' strength is in its ability to model an organization from multiple angles (e.g., top-down, bottom-up, cross-functionally and/or at detailed levels within a single area). BusinessOptix offers enhanced scenario modeling, automation support, process mining, offline working, customer journey mapping, process as a grid, transformation outputs, and Kanban boards.

- BusinessOptix recognizes the current challenges that new regulations are presenting to governance, risk and compliance requirements. BusinessOptix and its partners build specific solutions that are addressing these challenges, such as operational resilience, the EU's General Data Protection Regulation (GDPR) and Markets in Financial Instruments Directive (MiFID), and the UK's Client Asset Sourcebook (CASS).,

- According to our survey, BusinessOptix has a larger focus on the risk and compliance management use case, followed by the digital transformation and the business process outsourcing use cases. BusinessOptix has a strong focus on the business operations modeling component, flexible modeling capabilities, and knowledge augmentation capabilities.

Celonis

Celonis, based in Munich, Germany, and New York City, U.S., offering the Celonis Process Intelligence Platform:

- Celonis has been dominating the process-mining market since its commercialization. Celonis' process mining maps processes across all silos to create a digital twin based on real-time system data for a more accurate, always-up-to-date view of the enterprise. The insights provide a foundation for further analysis, improvements and automated actions in the Celonis platform.

- Beyond common process mining functionality, the Celonis platform provides data ingestion, process intelligence, simulation and planning, decision management support, process management, an automation engine, and Celonis Business Applications. The Celonis platform shifts process mining from a purely analytical discipline to a digital twin for business operations.

- Celonis enables its customers to go from mining a single process to mining their entire business and get full clarity across processes with a single point of truth regarding process knowledge through the Process Intelligence Graph. This Process Intelligence Graph leverages object-centric process mining to create a digital twin of a business for comprehensive process improvement.

- According to our survey, Celonis has an equal focus on the customer experience and enterprise performance use cases, followed by the digital transformation use case. Celonis has a strong focus on the business operational intelligence component, process mining capabilities, and operational decision support capabilities.

Corporater

Corporater, based in Stavanger, Norway, offering Corporater Business Management Platform version 5.4:

- Corporater provides a business platform to establish a holistic digital twin of an organization. This digital twin covers strategic, tactical, and operational levels in an organization. Corporater gives businesses a virtual representation of their business, systems, models, processes and assets.

- Corporater provides a business-modeling metadata designer that can be configured and deployed in runtime, extending the underlying business model. By combining data, insights, context, planning, execution, and their underlying connections into a business-centric modeling platform, Corporater creates a corporate managerial decision environment.

- By modeling corporate compliance requirements and feeding the relevant organizational data into the right contexts of the business model, organizations can leverage the Corporater Business Management Platform to also achieve compliance excellence. This helps organizations implement new compliance requirements, such as those for environmental, social and governance (e.g., the EU's Corporate Sustainability Reporting Directive [CSRD]).

- According to our survey, Corporater has a major focus on the risk and compliance management use case, followed by the enterprise performance and operational excellence use cases. Corporater has a strong focus on the business performance management component, risk management and monitoring capabilities, and business process orchestration capabilities.

DCR Solutions

DCR Solutions, based in Copenhagen, Denmark, offering DCR Portal version 7.1.3; DCR Workflow and DCR Process Engine, version 5.7.1; and DCR Indicators, version 1.0.7:

- DCR Solutions started as a science research project at the IT University of Copenhagen in 2011 and became a separate entity in 2018. DCR Solutions helps organizations in heavily regulated industries, such as the public, healthcare, and finance sectors, to instantly digitize their processes, ensuring higher compliance and transparency, while saving employees time and company costs.

- By using declarative process mining, DCR Solutions succeeds in representing unstructured processes (such as in adaptive case management), which make up at least 60% of all processes in every organization. DCR Solutions captures the logic behind the process, instead of just a few possible paths that, in practice, rarely match reality.

- DCR Indicators leverage the DCR Process Engine to automatically create actionable intelligence. Furthermore, you can see how successful processes have been performed and focus on the top 10 process inefficiencies. In essence, DCR Indicators is an intelligent X-ray machine for your processes that only shows you what to fix.

- According to our survey, DCR Solutions focuses more on the operational excellence use case, followed by the risk and compliance management and customer excellence use cases. DCR Solutions also has a strong focus on the business operations intelligence component, the rule processing capabilities, and the scenario testing capabilities.

Edge Total Intelligence

Edge Total Intelligence (edgeTI), based in Arlington, Virginia, U.S., offering edgeCore, version 4.6.4:

- EdgeTI is a company providing real-time digital operations software. edgeTI has built and matured functionality to fold together the models used to describe the operations and business, along with analytics on current and past performance. Then, it uses this information to drive execution in real time via its edgeCore platform.

- edgeCore provides both a set of levers to govern and control the overall digital platform in real time, as well as a set of conceptual layers to plan, optimize, orchestrate and coordinate the components of that platform. This has been applied by edgeTI in a wide range of solutions, such as government and defense groups responsible for specific charters and missions.

- edgeCore reaches data where it lives without having to build and license another database, data farm or data swamp. Through using data in memory, direct writing and bidirectional data brokering with on-the-fly ETL, edgeCore reduces the data security and synchronization burden for rapid deployment and recovery.

- According to our survey, edgeTI has a larger focus on the operational excellence use case, followed by the manufacturing/supply chain and business performance management use cases. edgeTI has a strong focus on the business operational intelligence component, business process orchestration capabilities, and ETL integration capabilities.

EsseQuamVideri

EsseQuamVideri (EQV), based in Rome, Italy, offering SPHERA expert system (SPHERAes), version 2024:

- EsseQuamVideri is a software development and IT consultancy company with roots in the management of corporate internal controls and business intelligence (BI). The company has extended its capabilities aimed at the implementation and automation of control processes toward an integrated management platform.

- SPHERAes is not a product, but a software development methodology supported by an IT system that keeps up with the latest technologies. It has been conceptualized within the scope of internal control systems, where organizational structures, digital information and regulatory requirements are in continuous and rapid change, and made suitable for any other kind of context.

- Because SPHERAes is implementable in dynamic business contexts that continuously change and evolve, the product can be repurposed and implemented without interrupting business continuity, while helping the organization and consultants in supporting, auditing and optimizing the business processes.

- According to our survey, EQV has a larger focus on the risk and compliance management use case, followed by the operational excellence and enterprise performance use cases. EQV has a strong focus on the business performance management component, risk management and monitoring capabilities, and business process orchestration capabilities.

GBTEC Software

GBTEC Software, based in Bochum, Germany, offering BIC Platform 7.15:

- For over 20 years, GBTEC has been a provider of EBPA, BPA and governance, risk and compliance (GRC) software, covering the full cycle of identification and analysis of processes, the automation and digitalization of work, and the monitoring and optimization of business processes. Each of these modules are licensed separately, are integrated seamlessly and are bundled in dedicated packages.

- The BIC Platform goes beyond the concept of DTO by offering integrated no-code/low-code automation capabilities that allow users to rapidly create custom applications and automated workflows.

- Recently, GBTEC has developed a Computer Aided Structure and Semantic Analysis (CASSA) framework that allows organizations to obtain computer-aided assistance in creating and maintaining an enterprise architecture. The result is a digital twin of an enterprise architecture that is more than just a collection of diagrams in a model. The ability to access the content of the digital twin flexibly and comprehensively opens up the added value of integrated modeling.

- According to our survey, GBTEC has a larger focus on the operational excellence use case, followed by the risk and compliance management and enterprise performance use cases. GBTEC has a strong focus on the business operations intelligence component, process automation capabilities, and its business deliverable or offerings modeling capabilities.

iGrafx

iGrafx, based in Tualatin, Oregon, U.S., offering iGrafx Process360 Live:

- Being one of the pioneers in the business process analysis market, iGrafx offers a solution that supports business modeling and architecture from diverse viewpoints, including the contextual one. This extended business modeling serves as a context for process modeling and as a necessary step in supporting business transformation.

- iGrafx has modernized its platform and integrated its previously isolated myriad of capabilities into a single platform, creating representations that are accessible and usable by employees at all levels in the organization. Process360 Live also includes a low-code/no-code automation solution, which allows for business-centric workflow creation, and a conversational automation solution (Krista).

- By embedding process mining in its platform, Process360 Live provides opportunities to enhance process improvement beyond the process-by-process approach. By connecting process mining to its discrete event simulation engine, the offering's simulation results are more representative and accurate in predicting real-life business operations.

- According to our survey, iGrafx has a larger focus on the operational excellence use case, followed by the risk and compliance management and digital transformation use cases. iGrafx has a strong focus on the business performance management component, flexible modeling capabilities and cost/value analysis capabilities.

inorigo

inorigo, based in Malmö, Sweden, offering inorigo Metagraph platform:

- inorigo was founded by business architects (Ortelius). Ortelius recognized that while creating a true reflection of different business problems, there was a need to keep up with continuous exceptions that occurred in a real-world setting. Therefore, they created a platform reflecting reality and capable of testing the future within a secure, context-rich environment.

- inorigo uses advanced Metagraph technology for the modeling of complex relationships and dependencies within data. This capability supports multidimensional horizontal dependencies (ontologies) and vertical abstraction levels (taxonomies), and thus creates comprehensive and adaptable data models that can handle the complexities of modern business environments.

■ The inorigo Metagraph platform enables connections between multiple nodes, simplifying the visualization and management of complex data relationships, which is superior to traditional graph databases. This approach ensures consistent application of governance policies across all data assets, while also enhancing data quality, consistency and compliance.

■ According to our survey, inorigo has a larger focus on the operational excellence use case, followed by the digital transformation and risk and compliance management use cases. inorigo has a strong focus on the business operations modeling component, the modeling of business deliverables and offerings capabilities, and ecosystem-provided indicators and analysis capabilities.

Interfacing Technologies

Interfacing Technologies, based in Montreal, Canada, offering Enterprise Process Center (EPC) version 15.1:

■ Releasing its first process analysis and simulation tool in 1993, Interfacing has been a pure-play process improvement software development provider for more than 25 years. It developed one of the first centralized web-based collaboration tools to document, model, manage, simulate, analyze, integrate, automate and improve processes.

■ EPC provides centralized management through the combination of its core architectural holistic views of all objects, their complex interdependencies and day-to-day monitoring. An AI process improvement tool provides insights into impacts and actionable process improvements to increase efficiency, remove redundancy, eliminate manual tasks and improve quality.

■ Specific to life science companies, pharma and medtech — as well as applicable to all other heavily regulated industries — every release is computer-system-validated (CSV) and offers a system compliant with 21 CFR Part 11 that automates digital signatures. This capability ensures the authenticity, integrity and confidentiality of electronic records.

■ According to our survey, Interfacing has a larger focus on the risk and compliance management use case, followed by the enterprise performance and digital transformation use cases. Interfacing has a strong focus on the business performance management component, ecosystem modeling capabilities, and generative AI capabilities.

Mavim

Mavim, based in Hoofddorp, Netherlands, and Boston, Massachusetts, U.S., offering Mavim ProcessVerse:

- Mavim started as an EBPA vendor with a strong Microsoft technology focus. Based on this Microsoft stack, Mavim has added business modeling, process mining and a business transformation framework. This has resulted in partnerships with large consulting organizations (such as Accenture, EY, KPMG and Microsoft) to guide and support transformation engagements.

- Mavim ProcessVerse, an integrated application offering on Microsoft Azure, includes a process-mining component as part of its process intelligence, serving as an operational intelligence component. This delivers capabilities that support closed-loop strategy to execution and a continuous improvement cycle, and makes Mavim one of the showcases of a business operating system.

- By connecting strategy, projects, personnel, processes, technology, risks, architecture, customers and infrastructure in one platform, Mavim creates visibility into operations, allowing decisions to be made in context of the possible impact on the organization. Mavim ProcessVerse facilitates the entire continuous improvement cycle in a single fully integrated platform.

- According to our survey, Mavim has an equally major focus on the digital business and customer experience use cases, followed by the operational excellence use case. Mavim has a strong focus on the business operations modeling component, customer journey and interaction capabilities, and business process orchestration capabilities.

Orbus Software

Orbus Software, based in London, U.K., offering OrbusInfinity version 1.107:

- Orbus Software is a vendor that offers EA, EBPA and business intelligence in a single integrated tool, enabling customers to easily integrate with specialist third-party EBPA/process mining and BI tools. Orbus Software maintained its original Microsoft focus through the development of OrbusInfinity.

- OrbusInfinity is designed to orchestrate decisions and processes at enterprise scale. By visualizing dependencies, impacts and potential risks across various architectural layers, OrbusInfinity enables stakeholders to make more-informed decisions, assess potential consequences, and mitigate risks associated with changes or investments in the IT landscape.

- The embedded iPaaS (OrbusInfinity Flow) is an accelerator for DTO across a wide range of use cases. It enables Orbus Software to integrate with over 150 data sources that can be used both to build the foundational models and to integrate event/performance data into those models. It enables integration with analytics platforms to track and predict performance with generative AI.

- According to our survey, Orbus Software has a larger focus on the digital transformation use case, followed by the enterprise performance and operational excellence use cases. Orbus Software has a strong focus on the business operations intelligence component, decision support capabilities, and project and portfolio management capabilities.

QPR Software

QPR Software, based in Espoo, Finland, offering QPR DTO:

- QPR provides a comprehensive set of performance management software (QPR Metrics), BPM- and EA-related software products (QPR EnterpriseArchitect/QPR Process Designer), a process-mining platform (QPR ProcessAnalyzer), and consulting services. Together, they form a comprehensive DTO platform (QPR DTO Suite).

- QPR ProcessAnalyzer, part of QPR DTO Suite, is directly connected to customers' own Snowflake account, providing an instant capability to process and analyze their data in the data cloud without copying/duplicating it anywhere. This eliminates data duplication, unnecessary exposure of critical business data to security risks, and computing costs related to CO_2 emissions.

- QPR Metrics, as part of QPR DTO Suite, provides highly sophisticated and comprehensive capabilities to model, manage and monitor strategy. QPR Metrics provides a highly visual and intuitive user interface for executive management to manage and monitor strategy execution and progress of digital transformation initiatives.

- According to our survey, QPR Software has a larger focus on the operational excellence use case, followed by the digital transformation and risk and compliance management use cases. QPR Software has a strong focus on the business performance management component, process mining capabilities and generative AI capabilities.

QualiWare

QualiWare, based in Farum, Denmark, offering QualiWare X version 10.9:

- QualiWare has continuously expanded its capabilities by adding process models, customer journeys and business operating models to fit the entire organizational architecture within the business ecosystem. The combination of metamodels, frameworks and multiple perspectives on the organization provides strong capabilities for DTOs.

- Because of its enterprise architecture background, QualiWare X supports the modeling, management, monitoring and rapid adjustment of capabilities (whether business or technical), which are key ingredients of an effective DTO. Capabilities drive the delivery of services, and resources are consumed in the interest of enabling capabilities.

- Within the QualiWare X platform, collaboration is a core feature, including governance workflows and social behavior analytics. An individual can leverage QualiWare X to develop digital twins; however, the offering's true value becomes evident when the collaboration features enable teams to work together, share insights and guide actions to establish consensus and improve decision making.

- According to our survey, QualiWare has an equally major focus on the digital business and the risk and compliance use cases, followed by the enterprise performance use case. QualiWare has a strong focus on the business performance management component, resources modeling capabilities, and event-processing capabilities.

SAP

SAP Signavio, part of SAP, based in Walldorf, Germany, offering SAP Signavio Process Transformation Suite version 18.2.0:

- SAP Signavio provides an end-to-end suite that joins data-driven (mining) and people-driven (modeling) analysis of the organization and builds an enterprise observability layer. This suite supports organizations in identifying transformation opportunities, in fostering collaboration, and in effectively driving these opportunities across people, processes, data and systems.

- Through the synergy with SAP LeanIX, the SAP Signavio Transformation Suite evolved its DTO concept to encompass companies' systems architecture and business capabilities. Additionally, this enables an organization to have a representation of its current state, operating model, IT construct, and the relationship between business processes and best practices.

- With its process AI, SAP Signavio developed generative-AI-powered capabilities based on large process models infused with unique process and SAP knowledge. Recommendations within its process AI on preconfigured process models, relevant KPIs and benchmarking are based on SAP's extensive industry experience and best practices.

- According to our survey, SAP Signavio has a larger focus on the digital transformation use case, followed by the operational excellence and customer experience use cases. SAP Signavio has a strong focus on the business performance management component, decision support management capabilities and generative AI capabilities.

Market Recommendations

CIOs and technology innovation leaders should:

- Embrace the disruptive potential a DTO presents for the enterprise. A DTO forms a proven design pattern for the operationalization of an enterprise operating model. It provides visibility, delivers situational awareness and supports improved enterprise decisions. A DTO also provides data scientists with a structured model that connects all relevant data.

- Link the DTO concept to the execution stage of initiatives. A digital twin is the contextualization, planning and monitoring of decisions that lead to action. For example, if one of these actions is execution of an automation (of a process, task or activities) or digitalization (of a product, service or channel), it requires separate modeling of the execution or actions. This can be done by connecting the DTO modeling to an execution platform (such as a business orchestration and automation technology [BOAT] platform). After all, a digital twin of an airplane engine doesn't execute the other real-life part of the twin, or ultimately, the plane itself. (See Quick Answer: Beyond RPA, BPA and Low Code — The Future Is BOAT.)

- Combine operational, architecture and governance disciplines to create the roadmap and vision for the use of a DTO for their enterprise. They should partner with business leaders to build an understanding of the concept of a DTO and the business case. This requires an outside-in view of internal operations, leadership and, above all, vision and courage.

- Be cognizant that all vendors active in the DTO platform market provide features and functionality for most of the use cases. However, because this is an emerging market, the focus, breadth and depth of these features and functionality will vary greatly, depending on the predominant use case marketed and implemented by different vendors.

Implementation recommendations include:

- Assess the gaps between corporate cultural maturity and what is necessary to enable digital-twin success. Think about corporate attributes such as trust, collaboration, transparency, empowerment and governance.

- Start by applying the DTO to a limited market/channel/process combination or organization, such as a department or business unit, and build from there.

- Create a DTO to support the discovery of cost optimization opportunities that deliver the most value and do not negatively impact other entities in the organization.

- Use a DTO to help close the strategy-to-execution loop by connecting the business operating model with real-life data to make this model dynamic, and to create situational awareness for business cost optimization efforts.

- Explore emerging technologies that support a DTO platform, such as process mining, which provide a first step for discovering optimization opportunities quickly and preparing for the next level of maturity, expanding further into the organization.

Evidence

¹ Business operations is the combination of processes, interactions, and activities that result in products, services and information, and ultimately provide value to customers and stakeholders of the organization.

² As part of this Market Guide, Gartner conducted a short survey with the participating vendors about the characteristics of their products, the products' use cases, and the forecast relevance of use cases and characteristics.

In addition to the survey conducted for this Market Guide, this research is based on Gartner client inquiry calls, vendor briefings, client interactions, interviews and 90 case studies provided by 35 vendors active in technologies supporting a DTO.

Note 1: Examples of Digital Twins

■ Singapore Experiments With Its Digital Twin to Improve City Life, Tomorrow.City.

■ Digital Industries, Siemens.

■ Smart Port, Port of Antwerp-Bruges. (Also see Case Study: Digital Twin Optimized for Value Delivery With Artificial Intelligence.)

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Magic Quadrant for Enterprise Architecture Tools

Innovation Insight: Demystifying Digital Twin of a Customer for B2B Sales

Quick Answer: What Is a Digital Twin?

Market Guide for Process Mining

Market Guide for Enterprise Business Process Analysis Tools

Digital Business Ambition: Transform or Optimize?

Building a Digital Future: Autonomic Business Operations

Autonomous Business Is the Next Tech-Enabled Strategic Growth Curve for Pioneer Enterprises

Boost CX CORE With Intelligent Coordination

Ignition Guide to Creating a Digital Twin MVP

Table 1: DTO Capabilities Provided in the Market

Building Block	Capabilities
Business operations model	■ Support for modeling and analysis of business operations in a larger operating model context, indicating how capabilities and other resources are deployed to deliver value to the organization's stakeholders (i.e., the link to day-to-day execution). ■ Support for customer interactions and customer journey maps, allowing for customer segmentation, as well as sales and distribution channel segmentation. ■ Models of offerings (products, services and information) delivered to customer segments. ■ Process mining capabilities (automated business process discovery). ■ Models of resources (such as machines, IT systems and people) that perform the operations and thus are connected to the entire business operating model. ■ Support for internal and external ecosystems, depicting user-generated and external content relevant to processes or business operations. These

are typically generated by social-media-style collaboration and multichannel communication.

- Access to project and program data to monitor progress, and to align with business outcomes.

- Orchestration of business operations (design model).

Business performance management	■ Support for multiple measurement schemes (such as operational performance indicators, financial models, quality schemes and service-level agreements) and how they work together or interact within the context of a business operating model.
	■ Support for customer journey, customer interaction and customer touchpoint analyses.
	■ Support for KPIs and root cause analysis, enabling operational decision support.
	■ Real-time dashboards with support for KPIs that are continuously monitored and enable decision support.

- Scenario testing and predictive and prescriptive analytics based on the business operating model.

- Risk management and monitoring.

- Cost/value analysis (balancing cost savings with operational effectiveness and business value).

- Support for analysis, using externally provided performance indicators or measurements (from the ecosystem), such as temperature, air pollution and noise.

Business operations intelligence

- Adapters or connectors to receive and send data. The most common adapters are for RESTful APIs, message-oriented middleware, files and databases. Some platforms also have adapters for web services, packaged applications and sensor data in event streams or historical databases.

- Event processors. Most platforms filter incoming event data and can detect simple patterns that represent threats and opportunities (including exceptions or anomalies). Some platforms have stream analytics engines capable of sophisticated complex-event processing, including generalized event correlation, high throughput, low latency and the ability to detect intricate temporal or spatial patterns in sliding time windows.

- Rule processors. A rule-processing capability determines the appropriate response to conditions that have been detected. It may be implemented in a scripting language, production rule engine (inference engine) or similar tool.

- Notification, alerting and triggering capabilities. These are capabilities for sending email, text messages or other alerts.

- Knowledge augmentation of workers. This capability is accomplished through adding real-time information about tasks to be performed.

- Real-time monitoring. Real-time dashboards that continuously refresh are typically updated every second, every few seconds or every few minutes.

- Extraction, transformation and loading (ETL) capabilities. During this process, data is taken (extracted) from a source system, converted (transformed) into a format that can be analyzed, and stored (loaded) into a data warehouse or other system.

- Generative AI capabilities.

Source: Gartner (November 2024)

Table 2: Representative Vendors in Digital Twin of an Organization Platforms

Vendor	Product, Service or Solution Name	Background
ARIS	ARIS	EBPA/strategy to execution
Arrayworks	Transformation Acceleration Platform (TAP)	EBPA/strategy to execution
Bee360	Bee360	IT operating system
BOC Group	ADONIS	EBPA/business process analysis
BusinessOptix	BusinessOptix	EBPA/strategy to execution
Celonis	Celonis Execution Management System	Process mining
Corporater	Corporater Business Management Platform	Enterprise performance management
DCR Solutions	DCR Portal, DCR Workflow, DCR Process Engine, and DCR Indicators	Process mining
Edge Total Intelligence (edgeTI)	edgeCore	Enterprise application integration/system integration
EsseQuamVideri	SPHERA expert system	Risk & compliance management
GBTEC Software	BIC Platform	EBPA/strategy to execution/BPA
iGrafx	Process360 Live	EBPA/business process analysis
inorigo	inorigo Metagraph platform	DTO platform
Interfacing Technologies	Enterprise Process Center (EPC)	EBPA/strategy to execution

Mavim	Mavim ProcessVerse	EBPA/strategy to execution
Orbus Software	OrbusInfinity	EBPA/enterprise architecture
QPR Software	QPR DTO	EBPA/process mining
QualiWare	QualiWare X	EBPA/enterprise architecture
SAP	SAP Signavio Process Transformation Suite	EBPA/business process analysis

The Background column refers to the market that the vendor chiefly serves. The EBPA market has been further detailed along its various use cases, showing EBPA/use cases.

Source: Gartner (November 2024)