![HFS horizons logo]

HFS Horizons Report

Process Intelligence Products, 2023

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The vendor landscape for process intelligence looks radically different today than just a few years ago. Many vendors have been snapped up by larger enterprise technology platforms, automation, and workflow vendors. All the while, we've seen new entrants use different approaches to gathering and analyzing how people work. The net result? Enterprise clients are spoiled for choice more than ever before, and we see the adoption of process intelligence across a wide range of use cases, from process excellence to automation ROI, ERP modernization, organizational visibility, risk and compliance, and training and development. The playbook for process intelligence is very much still in development.

Reetika Fleming, Executive Research Leader

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Process intelligence is one of the hottest emerging technologies we track at HFS. The market landscape is continually changing as an increasing number of vendors see the value of delivering process excellence for enterprises, and they're willing to aggressively partner, invest, and acquire to mature their own capabilities. For enterprises, there's never been a better time to dive into the world of process intelligence. Market consolidation is making the technology more accessible than ever, and the business value we see today is only the tip of the iceberg for process intelligence's potential.

Sam Duncan, Practice Leader

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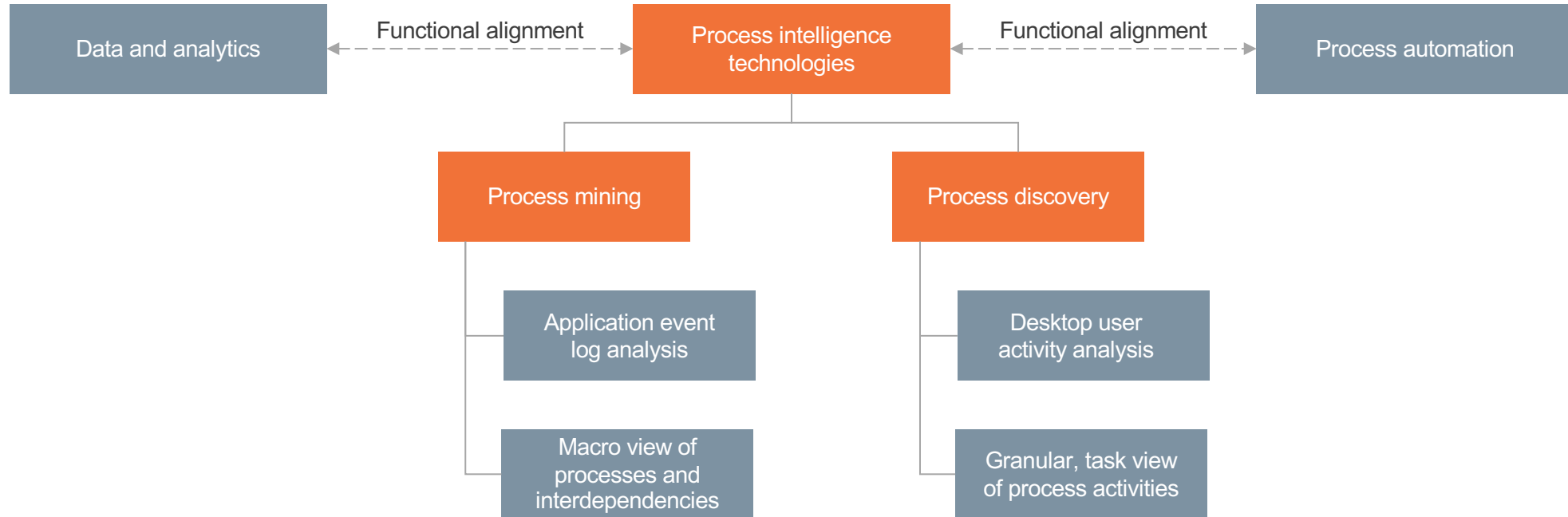## Introduction and the HFS value chain

Introduction

- This **HFS Horizons: Process Intelligence Products, 2023** report evaluates leading process mining and task mining vendors' capabilities. Organizations have found themselves battling decades of technical and process debt, and in the digitally enabled economy, enterprises with efficient operations will succeed. Process intelligence products have the potential to help enterprises significantly impact operations and tackle technical and process debt.

- The **HFS Horizons: Process Intelligence Products, 2023** report examines 20 tech vendors across a defined series of value propositions, execution and innovation, go-to-market strategy, the voice of the customer, and alignment with the HFS OneOffice criteria. The report highlights the overall positioning for all participants and the leaders for each sub-category.

- This report also includes detailed profiles of each tech vendor, outlining key company capabilities, strengths, and development opportunities.

- We supported this Horizons research with input from 400+ enterprise clients from the Global 2000. We asked specific questions about the innovation and execution performance of the tech vendors we assessed. We augmented the research with information collected in Q3 2022 through vendor RFIs, structured briefings, inputs from HFS' network, and publicly available information sources.
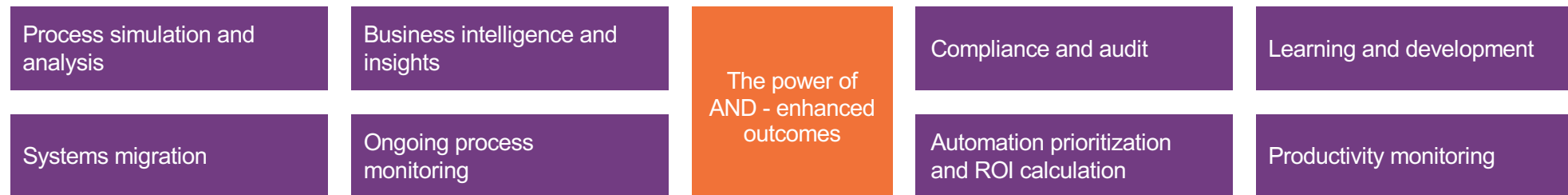
Key findings

1   **Horizon 3 vendors**   We assessed 20 product vendors across value proposition, execution and innovation capabilities, go-to-market strategy, and market impact criteria. The Horizon 3 leader is Celonis, with the potential to drive seamless cross-organization process improvement, leveraging a combination of data-collection approaches to analyze structured and unstructured enterprise data and deliver impactful insight at scale for enterprises. Further, it has curated rich ecosystems of partners to complement its own capabilities and has effectively attracted, trained, and retained industry-leading talent in a hugely competitive market.

2   **The impact of market consolidation**   Process intelligence continues to be one of the fastest-moving emerging technology markets we track. There are investments, partnerships, and acquisitions aplenty. In 2022 alone, we saw Celonis acquire PAFnow, Microsoft acquire Minit, and Pega acquire Everflow; 2021 was equally as active. Market consolidation can put process intelligence products into the hands of even more organizations, positioning the market for continued rapid growth. For example, Automation Anywhere rolled FortressIQ's process discovery capabilities into existing engagements at no extra cost. However, some enterprises told us they prefer to partner with pure-play process intelligence vendors, and the everchanging market landscape makes it increasingly difficult to select a long-term partner for fear of them being acquired.

3   **The combination of process and task mining**   Leveraging process mining products to monitor log data from enterprises' IT systems can only go so far. The reality is that every process requires employees to work across various applications and screens, all of which a traditional process mining approach could miss. To that end, we're seeing an increasing number of vendors invest in combing process and task-mining capabilities to deliver complete process transparency to their clients, leveraging process mining for log data and task mining for desktop-level data collection. One enterprise even complimented its chosen vendor for its ability to leverage "process mining as a part of a larger solution with a lot of building blocks." IBM is a notable example of this, as the acquisition of myInvenio saw the vendor combine process and task-mining capabilities. But this isn't just happening on the vendor side; enterprises told us they are looking to work with multiple vendors with different skill sets to complement one another and deliver complete transparency into their processes.

4   **Enterprises are looking for UI/UX improvements**   Adopting process intelligence is a daunting task for any enterprise, regardless of its experience level with other emerging technologies. To that end, leading process intelligence vendors offer streamlined onboarding processes, deliver effective support, and, critically, have clean and easy-to-navigate UI/UX, which clients told us could be a leading reason for selection. However, a handful of enterprises also told us that UI/UX was one of the leading areas of improvement for their chosen vendor, with some saying their vendor "could do more here" and "they can make it more user-friendly."

5   **Early integration remains a challenge—or a selling point**   In a recent study assessing the state of the process intelligence market, we identified early integration challenges as a significant roadblock to process intelligence adoption. Our conversations with enterprise clients throughout this report confirmed this, as many stated it remains a challenge. However, several enterprises also told us that "easy integration" was one of the key selling points for their vendor, which means the vendors that solve the integration challenge could be poised for success in 2023.

Process intelligence product scope

| Data and analytics | ← Functional alignment → | Process intelligence technologies | ← Functional alignment → | Process automation |

Process intelligence technologies branches into:

Process mining
- Application event log analysis
- Macro view of processes and interdependencies

Process discovery
- Desktop user activity analysis
- Granular, task view of process activities

Typical use cases

| Process simulation and analysis | Business intelligence and insights | | Compliance and audit | Learning and development |
| Systems migration | Ongoing process monitoring | The power of AND - enhanced outcomes | Automation prioritization and ROI calculation | Productivity monitoring |

2 | Research methodology

Vendors covered in this report

ABBYY   appian   apromore   AUTOMATION ANYWHERE Go be great.   celonis

fluxicon   IBM   MPM MEHRWERK PROCESSMINING   Microsoft   NICE

nintex   PEGA   QPR   SIGNAVIO   Skan^AI

software AG   SORO CO   stereo logic   UiPath   ultimate.suite

Note: All tech vendors are listed alphabetically

Sources of data

This report relied on myriad data sources to support our methodology and help HFS obtain a well-rounded perspective on process intelligence vendors in our study. Sources are as follows:

RFIs and briefings

Each participating vendor completed a detailed **RFI.**

HFS conducted **briefings** with executives from each participating vendor.
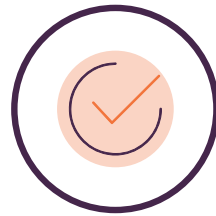
Reference checks

We conducted reference checks with active clients of the study participants via phone-based interviews and detailed surveys.

HFS vendor ratings

Each year, HFS fields multiple demand-side surveys in which we include detailed vendor rating questions. For this study, we leverage the HFS Pulse data featuring **400+ vendor ratings from Global 2000 enterprises.**
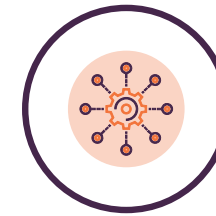
Other data sources

Public information such as press releases, websites, etc.

Ongoing interactions, briefings, virtual events, etc., with in-scope vendors and their clients and partners.

Assessment methodology

The **HFS Horizons: Process Intelligence Products, 2023** report evaluates vendors' capabilities across a range of dimensions to understand the **Why, What, How, and So What** of their process mining and task mining products offering.

Assessment dimension (weighting)

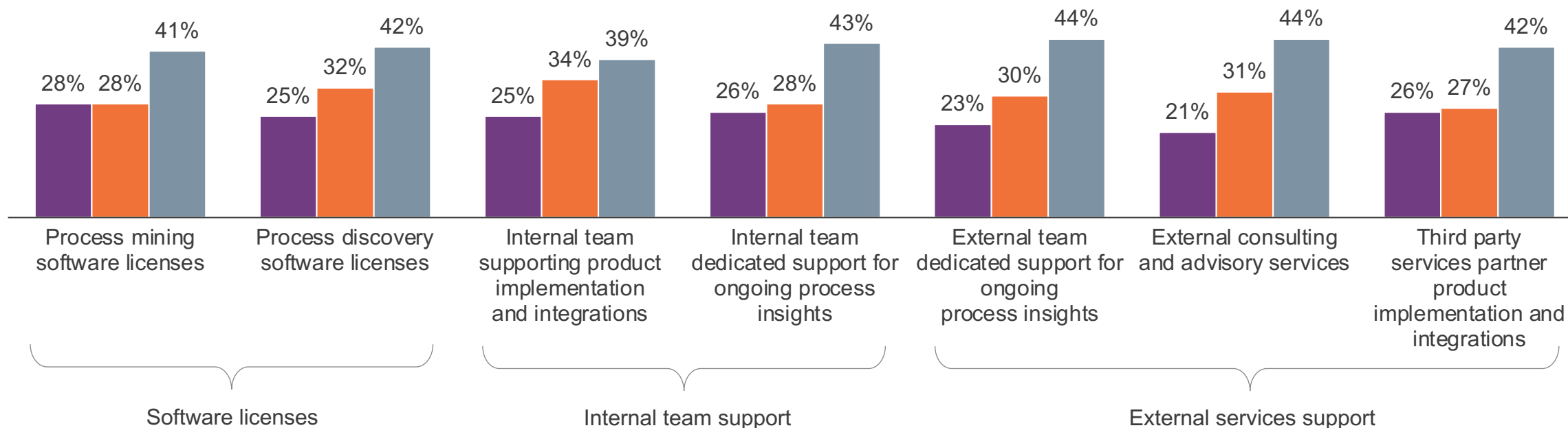|		**Value proposition: The Why? (25%)**	**Execution and innovation capabilities: The What? (25%)**	**Go-to-market strategy: The How? (25%)**	**Market impact: The So What? (25%)**
Distinguishing tech vendor characteristics		1. Strategy for process intelligence function and vision for the future of process mining and process discovery 2. Process intelligence products aligned to addressing the top problem statements of enterprise clients across different use cases 3. Differentiators—Why enterprises would choose your product	1. Depth and breadth of key functionalities that go across process intelligence technologies 2. Scalability & flexibility to drive large-scale process intelligence adoption 3. Extensibility to seamlessly plug into an enterprise technology landscape 4. Level of focus to provide training, service, and support capabilities to enterprise customers. 5. Helping clients treat data as a strategic asset 6. Applied technology innovation	1. What are you selling to different levels of a client organization? 2. Approach to and strength of ecosystem partners 3. Nature of investments in building process intelligence products: M&A, non–M&A, intellectual property (IP) 4. Co-innovation and collaborative approach with customers and partners, including commercial models 5. Geographic presence	1. Scale of process intelligence products: revenue, growth, and number of clients 2. Proven outcomes showcasing the nature of value delivered to process intelligence clients 3. Voice of the customer feedback on overall performance (reference and non-reference clients)
	Horizon 3	• Horizon 2 + ability to drive **"OneEcosystem" synergy** via collaboration across multiple organizations with common objectives around driving completely **new sources of value**	• Horizon 2 + comprehensive depth and breadth of key functionalities across process intelligence • Cutting-edge product innovation that is adopted by multiple clients seeking broad-based technology transformation	• Extensive process intelligence products • Investments aligned to Horizons 1 and 2 and ecosystem enablement • Horizons 1 & 2 + co-creation with customers & partners • Horizons 1 and 2 + new value creation • C-Suite coverage across lines of business and geographies	• Proven scale and growth driven by Horizon 2 + ecosystem synergy • Top marks as a global growth partner driving new processes • Referenceable and satisfied clients driving process excellence leveraging process intelligence products.
	Horizon 2	• Horizon 1 + enablement of the "OneOffice" model of **end-to-end organizational alignment** across the front, middle, and back offices to drive **unmatched stakeholder experience** (EX, PX, CX)	• Horizon 1 + highly scalable and flexible set of process intelligence technologies • Creation of accelerators, connectors, and other points of integration to a wide range of enterprise technologies • Strong strategic process intelligence expertise and talent pool to support enterprise adoption	• Horizon 1 + investments aligned to large enterprise clients, range of personas and LOBs, Tiers 1 and 2, broad geographic coverage • Range of process intelligence-specific partnerships • Driving seamless process improvement	• Proven scale and growth driven by Horizon 1 + stakeholder experience • Top marks as a process improvement partner emphasizing stakeholder experience
	Horizon 1	• Ability to drive **functional optimization outcomes** through cost reduction, speed, and efficiency	• Robust products with the ability to support end-to-end process mining or task mining projects for enterprise clients	• Robust process mining or discovery products • Investments aligned to functional optimization outcomes • Target-focused personas and lines of business (LOBs), majority Tier 2 and 3 firms, geo-specific	• Proven scale and growth driven by functional optimization focus • Top marks as an optimization partner

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Market dynamics

The process intelligence market shows no signs of slowing down as most enterprises predict significant spending increases"

Q: What is your current level of investment in process intelligence technology and associated services and expected spending in the next 12-18 months?
% respondents

- High (10%+ increase) ■ Medium (5-10% increase) ■ Low/No change (0-5% increase)
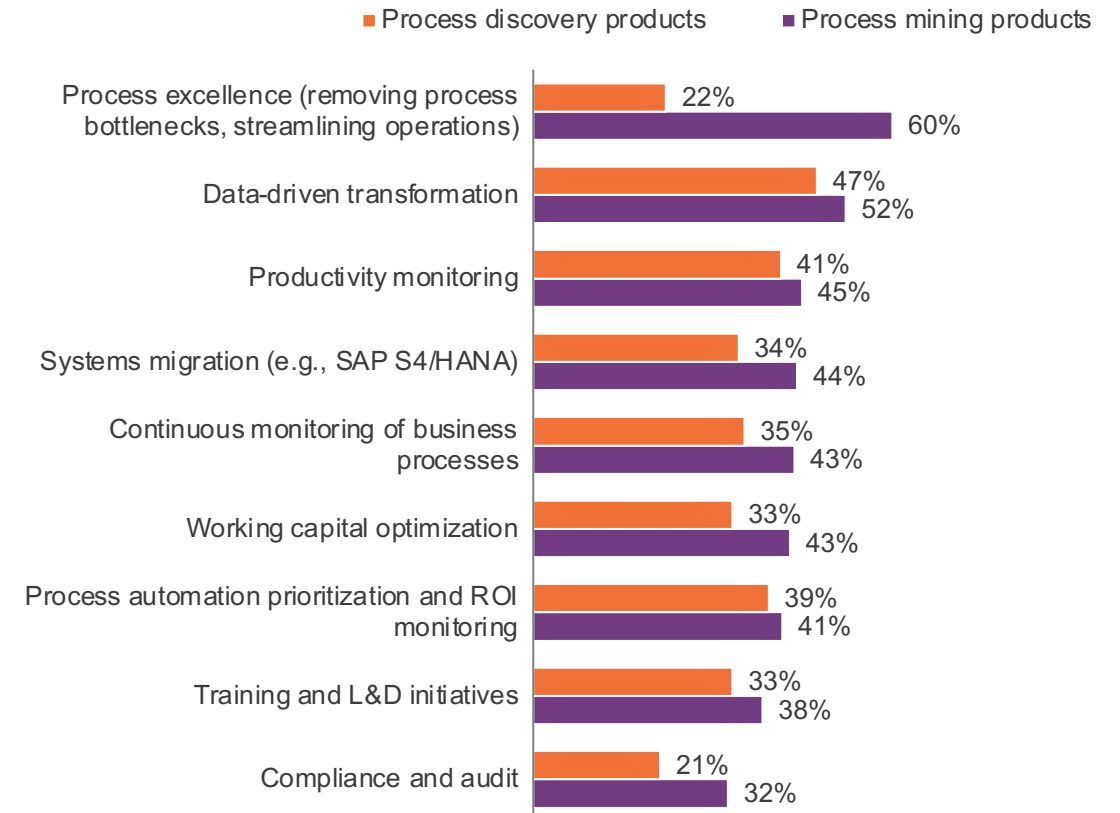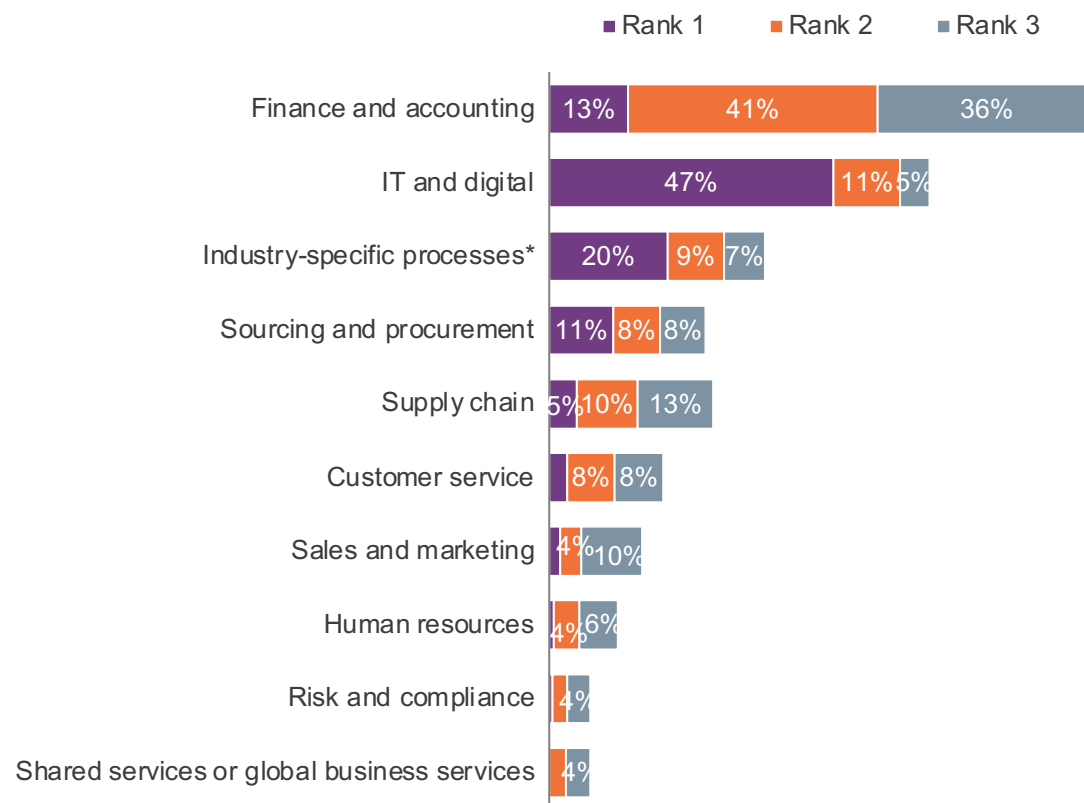

	Process mining software licenses	Process discovery software licenses	Internal team supporting product implementation and integrations	Internal team dedicated support for ongoing process insights	External team dedicated support for ongoing process insights	External consulting and advisory services	Third party services partner product implementation and integrations
High	28%	25%	25%	26%	23%	21%	26%
Medium	28%	32%	34%	28%	30%	31%	27%
Low/No change	41%	42%	39%	43%	44%	44%	42%

Software licenses   Internal team support   External services support

F&A and IT departments are leading the charge for process intelligence adoption, while process excellence and data-driven transformation emerge as leading applications

Q: Where is the biggest demand for process intelligence coming from in your organization?

Legend: ■ Rank 1 ■ Rank 2 ■ Rank 3

Category	Rank 1	Rank 2	Rank 3
Finance and accounting	13%	41%	36%
IT and digital	47%	11%	5%
Industry-specific processes*	20%	9%	7%
Sourcing and procurement	11%	8%	8%
Supply chain	5%	10%	13%
Customer service		8%	8%
Sales and marketing		4%	10%
Human resources		4%	6%
Risk and compliance			4%
Shared services or global business services			4%

Q: How are you using process intelligence technologies in your organization today? (Select all that apply)

Legend: ■ Process discovery products ■ Process mining products

Application	Process discovery products	Process mining products
Process excellence (removing process bottlenecks, streamlining operations)	22%	60%
Data-driven transformation	47%	52%
Productivity monitoring	41%	45%
Systems migration (e.g., SAP S4/HANA)	34%	44%
Continuous monitoring of business processes	35%	43%
Working capital optimization	33%	43%
Process automation prioritization and ROI monitoring	39%	41%
Training and L&D initiatives	33%	38%
Compliance and audit	21%	32%

Enterprises must tackle challenges across people, data, process, technology, data, and change management

Q: What are the biggest challenges holding you back from getting more business impact with process intelligence?
% respondents selecting 4 or 5 on a scale where 1 is "not a challenge" and 5 is a "major challenge today"

People	Process	Technology	Data	Change management
71% Lack of in-house talent with process intelligence expertise	**71%** Complexity of inter-related business processes	**72%** Failure to fully implement or productize process intelligence tools	**71%** Inability to extract insights from existing data	**58%** Lack of resource, talent, or time given to manage change properly
67% Lack of senior management mandate and vision	**69%** Non-standard for incomplete end-to-end processes	**67%** Lack of scalability of current implementation	**70%** Deficiency in overall data quality	**51%** Lack of organizational clarity & accountability for driving the process intelligence agenda
66% Lack of external service partner talent and capabilities	**67%** Lack of knowledge on which business processes would most benefit from process intelligence	**66%** Lack of clarity of full technology "stack" that aligns with process intelligence	**70%** Inability to invest in foundational data readiness to get more value out of process intelligence	**48%** Change management concerns over the effect on employees

Sample: Study by HFS Research and Genpact, 2022; 400 executives from G2000 enterprises
Source: HFS Research, 2023

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Horizons results: Process intelligence products, 2023

HFS Horizons—summary of process intelligence tech vendors assessed in this report

Vendors (alphabetical order)	HFS point of view
ABBYY Timeline	Potential to combine process and task mining to identify automation opportunities
Appian	End-to-end workflow management with a particular focus on government and BFSI
Apromore	Smaller vendor with mighty ambitions and a unique access into the Salesforce ecosystem
Automation Anywhere (FortressIQ)	AI-driven process intelligence in the Automation Anywhere ecosystem
Celonis	Ecosystem enabler for execution management with process intelligence
Fluxicon	Small process mining vendor steeped deep in academic history
IBM (myInvenio)	IBM-fueled end-to-end process optimization
Mehrwerk (MPM)	Qlik-based process intelligence complemented by "storytelling" data visualization
Microsoft (minit)	Hierarchical process insights with out-the-box templates, all in Microsoft Power Automate
NICE	Automation-focused, always-on process monitoring

Vendors (alphabetical order)	HFS point of view
Nintex (Kryon)	An established vendor with rich automation capabilities
Pega	Decades of process understanding now getting amplified with Everflow toward developing autonomous enterprise
QPR	Integration with Snowflake Data Cloud helps deliver quick time-to-insight and scalability
Signavio	Process intelligence embedded at the core of the SAP ecosystem
Skan.AI	Quickly x-raying operations for a detailed, holistic view of process data
SoftwareAG (ARIS)	An established process mining product doubling down on the linkages to process modeling
Soroco	Cross-industry process discovery with a bold vision on developing work graphs for enterprises
StereoLOGIC	BFSI-focused vendor that looks beyond automation to drive process excellence
UiPath	End-to-end offering from opportunity identification to deploying automation
UltimateSuite	Experienced task mining vendor with a scalable approach to data capture

HFS Horizons—Process intelligence products, 2023

HORIZON 3 – Market Leader

celonis

HORIZON 2 – Enterprise Innovator

appian AUTOMATION ANYWHERE IBM MPM MEHRWERK PROCESSMINING Microsoft

nintex PEGA software AG SO RO CO UiPath

HORIZON 1 – Disruptor

ABBYY apromore fluxicon NICE QPR

SIGNAVIO Skan AI stereo logic ultimate.suite

INNOVATION SCOPE — SYNERGY / EXPERIENCE / OUTCOMES

VALUE ASPIRATION — ECOSYSTEM TRANSFORMATION / BUSINESS TRANSFORMATION / FUNCTIONAL TRANSFORMATION

Note: All tech vendors within a "Horizon" are listed alphabetically

Horizon 3 is Synergy

Tech vendors demonstrate Horizon 2, plus
- Ability to drive "OneEcosystem" approach by finding completely new sources of value
- Compelling thought leadership that helps clients to articulate their North Star
- Effectively envisioning outcomes and providing business assurance for not just process intelligence, but broader enterprise operations
- Well-rounded capabilities across all value creation levers: culture, talent, domain, technology, data, and change
- Driving co-creation with clients and ecosystem partners
- Referenceable and satisfied clients driving new business models based on the partnership

Horizon 2 is Experience

Tech vendors demonstrate Horizon 1, plus
- Ability to drive real business outcomes and stakeholder experience while achieving functional transformation
- Highly scalable and flexible set of process intelligence technologies
- Creation of accelerators, connectors, and other points of integration to a wide range of enterprise technologies
- Strong strategic process intelligence expertise and talent pool to support enterprise adoption
- Referenceable and satisfied clients for the ability to blend technology and business objectives

Horizon 1 is Optimization Outcomes

Tech vendors demonstrate
- Ability to drive functional optimization outcomes
- Driving cost reduction, speed, and efficiency
- Robust products with the ability to support end-to-end process mining or task mining projects for enterprise clients
- Referenceable and satisfied clients for the ability to execute

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Horizons profiles: Process intelligence products, 2023
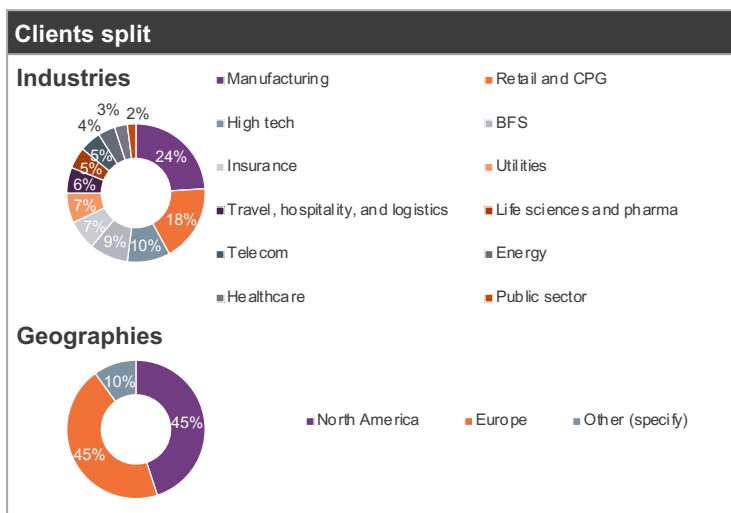
Celonis: Ecosystem enabler for execution management with process intelligence

Celonis, founded in 2011, is headquartered in New York and Munich, where the firm was founded. Valued at $13 billion, Celonis is a global leader in process intelligence and rose to prominence thanks to its focus on "execution management" and its Execution Management System (EMS). Celonis claims to have pioneered the process mining category and reports over 3,000+ customer deployments since inception.

HORIZON 3 – Market Leader

celonis

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

Process mining |Task mining

Strengths

- **Ecosystem driver:** The next step is for Celonis clients to take EMS cross-organization and establish a data network to follow processes seamlessly across organizations, which it is already doing with a handful of clients.
- **Size and scale:** Alongside its own size, Celonis pulls heavily on its ecosystem strings with 15,000 consultants trained in EMS across 250 partners, alongside a catalog of execution apps developed by clients and partners in the EMS Store.
- **R&D investment:** Celonis is well known for continued investment in research and development for the process intelligence market. Its offerings are some of the most cutting edge available.
- **Market leader:** Celonis is well established as a market maker, which means it is often the first vendor organizations consider. This was confirmed in client reference conversations when several non-Celonis clients told us they initially considered the vendor.
- **Client success stories:** Celonis has an extensive catalog of accessible client case studies and success stories to help organizations understand the benefit of leveraging the Celonis' catalog of solutions.

Development opportunities

- **PAFnow acquisition:** In March 2022, Celonis announced the acquisition of PAFnow, which we praised in the 2020 iteration of this report for the Microsoft PowerBI integration. HFS would like to see Celonis leveraging this acquisition and PAFnow's capabilities throughout more of its client engagements.
- **High expectations:** Celonis makes a lot of bold claims and shows impressive client success stories throughout its marketing. This, combined with the market perception of Celonis being a premium offering, means clients have high expectations from the vendor. Celonis must manage these expectations and ensure it continues to delivers to its high standards.
- **Premium pricing:** Client references of other vendors told us that often they didn't select Celonis due to its premium price point. While the market leader continues to expand its client base in the global enterprise market, targeting the biggest deployments and scope, it must consider how its offerings could be made more accessible to clients and projects of different sizes.

Clients split

Industries

- Manufacturing — 24%
- High tech — 18%
- Insurance — 10%
- Travel, hospitality, and logistics — 9%
- Telecom — 7%
- Healthcare — 7%
- Retail and CPG — 6%
- BFS — 5%
- Utilities — 4%
- Life sciences and pharma — 3%
- Energy — 2%
- Public sector

Geographies

- North America — 45%
- Europe — 45%
- Other (specify) — 10%

Key clients

Total number of clients: 1,300+

Key clients include
- Dell
- Deutsche Bank
- AstraZeneca
- L'Oréal
- Siemens AG

Key partnerships and acquisitions

Acquisitions
- **2022:** Acquired PAFNow to bring Celonis' intelligence to other platforms through Celonis Experiences, starting with Microsoft Power BI
- **2021:** Acquired Lenses.io to enable data-streaming as a process-intelligence data source
- **2010:** Acquired Make.com (formerly Integromat) to expand low-code automation capabilities

Partnerships
- **Key implementation partners:** Accenture, IBM, Deloitte, EY, PwC
- **Key technology partners:** ServiceNow, Conexiom, Rossum, Microsoft, IBM

Go-to-market approach

- **Sales model:** Direct and indirect through partners; platform approach with complementary pre-built apps for specific processes
- **Headcount:** 2,800
- **Key locations:** Headquarters in Munich, Germany and New York, NY, United States. Twenty-two regional offices worldwide in the United States, Germany, France, Spain, India, Italy, the Netherlands, Sweden, Denmark, the United Kingdom, and Japan, including sales, consulting, implementation, support, and training.

Top five recent developments

- **August 2022:** Secured $1 billion to help customers fight economic and supply chain challenges, increasing valuation to nearly $13 billion.
- **November 2021:** Announced a new process mining and execution management operations center in India.
- **October 2021:** Launched execution graph technology for linking processes across business units with a graph database.
- **August 2021:** Appointed "Godfather of Process Mining" Professor Wil van der Aalst as Chief Scientist.
- **June 2021:** Announced a series D funding round of $1 billion at a valuation of more than $11 billion.

Appian: End-to-end workflow management with a particular focus on government and BFSI

Appian is headquartered in Mclean, VA. In 2004, it first introduced its BPM Suite, which offered real-time process intelligence and business activity monitoring for all processes executed on Appian. In 2021, Appian acquired Lana Labs, which helped the company expand its process intelligence offerings and capabilities by releasing Appian Process Mining in 2021.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

appian

HORIZON 1 – Disruptor

Process mining

Strengths	Development opportunities
• **End-to-end process automation:** Despite having solid automation capabilities, helped by its 2020 acquisition of Novayre Solutions SL, Appian looks beyond automation toward the larger digital transformation opportunity. The vendor expects clients to leverage its offering to manage entire workflows, from discovering processes to addressing inefficiencies, before re-evaluating them for further improvements. • **Industry focus:** Appian told us it is tailoring its solutions to the government, banking, financial services, and insurance sectors. It plans to develop industry-specific solutions that navigate unique process challenges, such as BFS' complex regulatory environment. Clients have told us they would like to see vendors doing exactly this. • **Clean UI/UX:** Analyzing complex process data can be a daunting task for any organization, and complex UI/UX can add to their woes. HFS noted Appian's clean and straightforward UI/UX, making its process intelligence offering accessible and easy to use.	• **Combination of process and task mining:** Appian told us it is planning to integrate the data from its task recorder into its wider process mining offering. HFS believes this would drive significantly more impactful insights for Appian's clients. • **Manufacturing and logistics expansion:** In the 2020 iteration of this report, we highlighted Lana Labs' focus on the logistics and manufacturing industries as a key strength. Given Appian acquired Lana Labs, it has an opportunity to leverage the domain expertise of Lana Labs to expand into these industries. This would complement its government, banking, financial services, and insurance focus and create an extensive catalog of industry-specific use cases.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Appian does not report industry-specific data. **Geographies** • Appian does not report client base by geography or product. • For 2021, Appian reported that 34% of total revenue came from outside the US.	**Total number of clients:** Appian does not report clients by platform technology. Appian reported 813 total customers in its 2021 10-K.	**Acquisitions** • **2021:** Acquired Lana Labs Process **Partnerships** • **Key implementation partners:** Infosys, KPMG, Kepner-Tregoe, Coforge, Vuram • **Key technology partners** – AWS: Appian Cloud – Google Cloud: IDP – Microsoft: No-code out-of-the-box (OOTB) integrations for AI services, Power BI, SharePoint, Dynamics, Office 365, storage, databases, and more – Docusign: No-code OOTB integration and joint marketing for content management – SAP: No-code OOTB integration and co-marketing activities to promote joint use	• **Sales model:** Direct and indirect through partners • **Headcount:** 2,300+ – Engineering: 650+ – Sales: 600+ – Customer success: 450+ • **Key locations:** Appian has many offices in North America, EMEA, and APAC. • **Development offices only** – McLean, Virginia (US) – Seville, Spain – Berlin, Germany – Chennai, India	• **January 2022:** Appian Process Mining is released for GA • **August 2021:** Acquired Lana Labs Process Mining

HFS horizons

Automation Anywhere: AI-driven process intelligence in the Automation Anywhere ecosystem

FortressIQ was founded in 2017 to address a business challenge that technology had been unable to overcome. The firm has since raised $46 million between seed and Series A and B investments. The FortressIQ platform is the firm's flagship product, allowing companies to gain insights and process details on the current state of their business operations. It was acquired by Automation Anywhere in December 2021 becoming their Process Discovery product.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

AUTOMATION ANYWHERE

HORIZON 1 – Disruptor

Task mining

Strengths	Development opportunities
• **AI approach:** Automation Anywhere's Process Discovery leverages computer vision to collect unstructured data and deliver almost complete accuracy into processes. However, this is complemented by its cognitive and AI capabilities to recommend processes to optimize, and their AI-powered 'Privacy Enhances Gateway' which redacts sensitive employee information. • **Automation capabilities:** FortressIQ was acquired by Automation Anywhere in 2021 and became part of its ecosystem of offerings. To that end, FortressIQ clients now have access to Automation Anywhere's entire suite of solutions, which can see it through from identifying automation opportunities to implementing them. • **Client list:** Automation Anywhere's Procewss Disocvery continues to be leveraged by some of the biggest global clients, which means new and existing clients can be confident in the vendor's ability to deliver its process intelligence product in large and complex organizations.	• **Scaling to meet new demand:** In the previous iteration of this study, we highlighted FortressIQs impressive growth since inception, and that it must ensure it scaled effectively to meet growing customer demands. Since the Automation Anywhere acquisition, the vendor must ensure it can effectively scale its process intelligence product, Process Discovery, to meet the new demand that comes from Automation Anywhere's existing clients. • **Look beyond automation:** Since the FortressIQ acquisition, the company must ensure its process intelligence tools don't become purely devoted to identifying automation opportunities. For example, their product could be leveraged to drive process excellence through training and process standardization too. • **Staying relevant:** Since the acquisition, Automation Anywhere must ensure its process intelligence product, Process Discovery, remains relevant and isn't absorbed in the wider Automation Anywhere ecosystem; otherwise, it may struggle to compete with pure-process intelligence vendors.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Key industries include financial services, manufacturing, food and beverage, retail, telecoms, logistics, and healthcare. **Geographies** • North America, Europe, Asia-Pacific, LATAM	**Total # of clients:** 4,250 **Key Clients:** • Fortune 10 retailer • Top 5 global system Integrators • Top 5 global staffing firm • $60+billion financial services firm • Top 5 Australian financial institution • Top 10 global mining company	**Acquisitions** • **2022**: None **Partnerships** • **Key implementation partners**: Deloitte, PwC, Cognizant, HCL, Accenture, Reveal Group • **Key technology partners:** Google, Celonis, Signavio, Blueprint	• **Sales model:** Direct and Partner-led • **Headcount:** 1,800 • **Key Locations:** US, Canada, UK, EU, Australi and New Zealand, LATAM	• **October 2022 –** Automation Anywhere launched the Automation Success Platform integrating Process Discovery • **December 2021 –** Acquired by Automation Anywhere • **February 2021 –** FortressIQ launches process intelligence foundation platform

Note: Automation Anywhere declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

IBM: IBM-fueled end-to-end process optimization

IBM Process Mining helps businesses quickly make informed decisions for process improvement through data-driven insights. IBM Process Mining covers the process analysis lifecycle, offering a solution for intelligent automation and providing capabilities to automatically analyze processes, identify improvements or corrective actions, and automatically apply the required changes through AI-powered automation. In April 2021, IBM acquired myInvenio as part of its hybrid cloud and AI strategy, believing it could leverage the acquisition to help clients streamline business processes and reduce the time to market of the best automation journey.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

IBM

HORIZON 1 – Disruptor

Process mining | Process discovery

Strengths	Development opportunities
• **End-to-end offering as a part of IBM:** IBM's existing process mining capabilities are complemented well by the entire IBM ecosystem. Clients not only get access to its process mining capabilities, but can also leverage IBM Cloud Paks, which includes its intelligent AI and automation solutions, making IBM one of the most compelling vendors covered in this report for end-to-end process optimization. • **Size, scale, impact:** Since the acquisition, IBM Process Mining has the full weight of IBM behind it, allowing it to roll in its other offerings like IBM Cloud Paks and enabling IBM Process Mining to grow into IBM's existing relationships. New clients can be confident in the support services they will receive. • **Process and task mining:** IBM has successfully blended its process and task mining capabilities to allow clients maximum transparency and insight into its processes, using a bottom-up approach. It also advises we can expect to see further investment into its proprietary task mining capabilities over the next year.	• **Vendor agnostic:** IBM must work to ensure myInvenio remains vendor agnostic despite becoming part of the IBM ecosystem. This means partnering with leading automation vendors and services partners to allow customers the opportunity to design their own process intelligence journey rather than being solely focused on IBM. • **Geographic expansion:** myInvenio was historically mostly Europe focused, but we have noted significant growth in North America since the last iteration of this study. However, the vendor has an opportunity to leverage IBM's reach to further its North American expansion and look toward expanding a real presence in other regions like Asia-Pacific. • **Focus:** Historical feedback from clients tells us that offerings can often get lost in the vast portfolio within IBM, and they sometimes find the firm difficult to navigate. The IBM Process Mining business must ensure its process intelligence offering is accessible to all, existing IBM client or not, and continues to receive support and investment from its parent company.

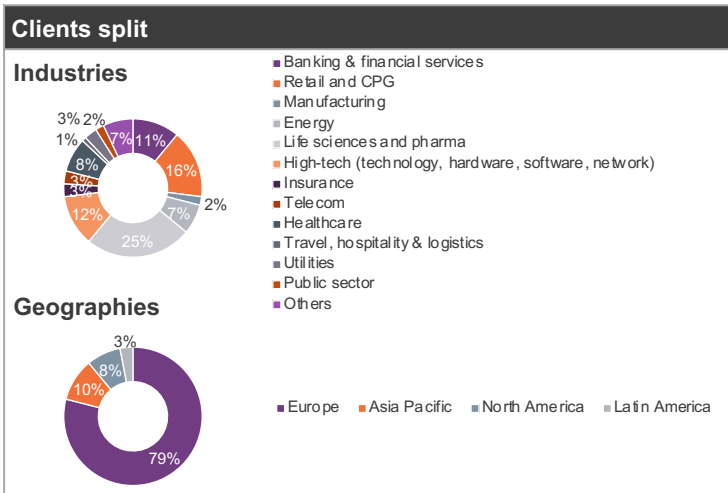| Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments

Industries
3% 1%
6%
7%
10% 32%
10%
31%
 	
■ Banking & financial services
■ Retail and CPG
■ Manufacturing
■ Energy
■ Life sciences and pharma
■ High-tech (technology, hardware, software, network)
■ Insurance
■ Telecom
 	
Geographies
2% 1%
6%
7%
52%
32%
 	
■ North America ■ Europe ■ Asia Pacific
■ Middle East/Africa ■ Latin America ■ Other (specify)
	Key clients include
	• Credito Emiliano (Italy)
	• MaxMara (Italy)
	• Large bank in Europe
	• Large multinational energy company
	• Multinational pharma company
		Acquisitions
		• **2021:** Acquired the process mining company myInvenio
		• **2020:** Acquired the RPA company WDG Automation
		Partnerships
		• **Key implementation partners**
		  – Salient: Process mining and RPA
		  – Prolifics: Process mining and RPA
		  – Heartcore: Process mining
		  – Comparus: Process mining
		  – SCAI Consulting: Process mining
		• **Key technology partners:** Red Hat: OpenShift; AWS: Hosting Cloud
			• **Sales model**: Direct and indirect through partners
			• **Headcount**: IBM has thousands of resources that can provide consulting implementation services and support on a worldwide base
			• **Business partners**: 300+ globally
			• **Key locations**: Americas, Europe, Asia-Pacific, Japan
				• **July 2022:** IBM Process Mining releases the Bot Generation Capability (1.13.0)
				• **May 2022:** IBM Process Mining releases the Insight to Action capability (1.12.0.5)
				• **September 2021:** myInvenio product becomes IBM Process Mining and the new version of Task Mining is released
				• **May 2021:** IBM acquires myInvenio
				• **October 2020:** IBM includes myInvenio OEM within the IBM Cloud Pak for Business Automation

MEHRWERK: Qlik-based process intelligence complemented by "storytelling" data visualization

Founded in 2008, MEHRWERK focuses on helping enterprises shape the present and the future of their business through its modular software solutions. Emphasizing software-based business process optimization, MEHRWERK Process Mining (MPM) is accompanied by extensive data analytics, task mining, and no-code/low-code automation capabilities. MEHRWERK's mission is to empower customers to get the most out of their processes and provide them with higher transparency, a better base for decision-making, and a single point of truth for process management and execution.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

MPM MEHRWERK PROCESSMINING

HORIZON 1 – Disruptor

Process mining | Task mining

Strengths	Development opportunities
• **Industry experience:** MEHRWERK has been in the data and analytics business since 2008, and it expanded into process mining around seven years ago. Through this period, it has developed a strong client portfolio, including global firms like Siemens and Vodafone. This experience makes the company a credible vendor in this market, and positions it well to support clients process intelligence journeys, providing best practices and services support alongside its product. • **Quick time to value:** MEHRWERK's process mining tool is based on the data analytics platform Qlik, a unique differentiator that allows clients fast return-on-investments. • AutoML integration: MEHRWERK recently announced it has fully integrated AutoML in its process mining tool, which will lower the barrier to entry for organizations considering MEHRWERK's tool. • **Data visualization:** Rather than just providing screenshots and static visualisations of an organization's process data like some of its peers offer, MEHRWERK believes its tool is more useful for "storytelling," as clients can drag and drop process elements to analyze their processes. • **Vision around executing actions:** MEHRWERK has a good narrative around identifying process insights using its tools; it also intends to integrate the execution of these insights within its product and through the API-first approach with clients' underlying backend systems.	• **Focus on client outcomes:** MEHRWERK must ensure it looks beyond technology and the capabilities of its process intelligence product toward the actual value it can deliver clients and the business outcomes it can impact. • **Market narrative to help clients understand its vision:** While HFS was impressed with MEHRWERK's process intelligence offering, we noted that we don't hear enough about the vendor in the process intelligence market. To that end, MEHRWERK should invest in expanding its marketing function to get its product in front of enterprises and accompany it with a catalog of success stories from its impressive client list. • **Geographic expansion:** MEHRWERK is almost entirely Europe-centric, which means it has a great opportunity to expand into other regions like North America.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries Banking & financial services Retail and CPG Manufacturing Energy Life sciences and pharma High-tech (technology, hardware, software, network) Insurance Telecom Healthcare Travel, hospitality & logistics Utilities Public sector Others **Geographies** Europe Asia Pacific North America Latin America	**Total number of clients:** 354 **Key clients include** • Vodafone • AOK (largest health insurance company in Germany) • Deutsche Bahn • SEW Eurodrive • Siemens • REWE (largest retailer in Germany)	**Acquisitions** • **2021:** netgo (MPM Platform company) acquired arxes-tolina, which included a strong workflow automation and process digitization platform • **2021:** Qlik acquired BigSquit to enhance AutoML features • **2020:** Qlik acquired Blendr to support automation within third-party systems (integration platform as a service) **Partnerships** • **Key implementation partners:** Deloitte, Capgemini, DrakeAnalytics, Horn & Company, Celver	• **Sales model:** Direct and indirect through partners • **Headcount:** 250 • **Key locations:** Headquarters in Germany	• **March 2022:** MPM eXecution 2.0, no-code/low-code workflow automation • **March 2022:** New template application with automated insights • **February 2022:** Provisioning of automation playbooks • **February 2022:** Native AutoML integration • **November 2021:** Announcement of real object-centric process mining (first and only vendor)

Microsoft: Hierarchical process insights with out-the-box templates, all in Microsoft Power Automate

Microsoft's Power Platform is a suite of no-code, low-code tools for hyper-automation, digital transformation, and more. Microsoft's first entry into process mining was the release of Process Advisor, a capability of Power Automate, in 2021. In 2022, Microsoft signaled its intention to make process mining a key piece of the Power Platform with its acquisition of Minit, a leader in the process mining market. Since this acquisition, Microsoft has been making progress on its integration of Minit by announcing the public preview of Minit + Process Advisor in November 2022.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

Microsoft

HORIZON 1 – Disruptor

Task mining

Strengths	Development opportunities
• **Out-the-box templates:** Microsoft recently announced a set of out-the-box process mining templates, making it easier for enterprises to leverage their tools and accelerating time-to-value for new adopters. Microsoft cited procure-to-pay, order-to-cash, and accounts payable as early use cases. • **Hierarchical process mining:** We previously complimented Minit for its hierarchical process mining approach, and it's something we continue to see since the Microsoft acquisition. This approach involves the end-to-end monitoring of bots, user-clicks, and a wide range of data to allow clients to view data based on their company structure. For example, how much time a business unit spends on a specific process. • **Microsoft integration:** Since acquiring Minit, Microsoft has rolled its process mining capabilities into its Power Automate offering. Microsoft's extensive client catalog puts process intelligence tools in the hands of more enterprises, reducing the barrier to entry for adopting the technology. • **End-to-end process automation:** By integrating, Minit with its Power Automate offering, Microsoft can help clients all the way from identifying process inefficiencies to solving them with automation, if that is their chosen route	• **Microsoft focus:** For Microsoft, one of the biggest companies in the world, process mining—and Minit—is a small business line. However, the process intelligence market moves so quickly, it must continue to invest in its offering to maintain market relevance. • **Market presence:** Since Microsoft acquired Minit, we've noted limited activity from the firms in the process intelligence market. In fact, firms that previously competed with Minit told us they no longer see the firm when competing for clients.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Banking and financial services, insurance, manufacturing, retail and CPG, telecoms, high-tech, energy, utilities, and public sector **Geographies** • Worldwide	**Key Clients:** This information is confidential	**Acquisitions** • **2022:** Acquisition of Minit to enhance Power Automate's Process Mining capabilities • **2021:** Acquisition of Clear Software to enhance connectivity to systems of record like SAP and Oracle • **2020:** Acquisition of Softomotive to enhance Power Automate's RPA capabilities **Partnerships** • This information is confidential	• **Sales model:** This information is confidential • **Headcount:** This information is confidential • **Key locations:** Worldwide	• **December 2022:** Microsoft launched 20 new independent publisher connectors • **November 2022:** Microsoft announces the public preview of a new joined version process mining product, Power Automate Process Advisor with Minit functionality • **September 2022:** Cineplex drove digital transformation with Power Automate (RPA) led by citizen developers • **March 2022:** Microsoft acquired Minit to further enhance process mining capabilities. • **May 2021:** James Dening joined Minit Process Mining as new CEO

Note: Microsoft (Minit) declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

Nintex: An established vendor with rich automation capabilities

In February 2022, Kryon was acquired by Nintex, a process automation vendor. With the acquisition, Nintex is now offering a full suite of process intelligence and automation capabilities, including Nintex RPA (previously known as Kryon RPA) and Nintex Process Discovery (previously known as Kryon Process Discovery). Kryon was founded in 2008 when it developed its computer vision technology. Years later, the firm ventured into RPA by introducing attended, unattended, and hybrid automation solutions. In 2018, Kryon launched Process Discovery to solve a gap in RPA technology, providing identification and full visibility of business processes.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

nintex

HORIZON 1 – Disruptor

Task mining

Strengths	Development opportunities
• **Automation capabilities:** While we're seeing more process intelligence vendors partner or acquire to gain automation capabilities, Nintex has its own rich workflow and robotic automation offerings to complement its process intelligence offering. In particular, Nintex's RPA Studio offers "click to automate" style support. • **Process discovery trials:** In 2021, Kryon announced a free, limited version of its process discovery tool. While this has since been discontinued, it instead offers free trial periods and proof-of-concept options to allow enterprises to experiment with the tool on a small scale before fully committing to a large-scale project. • **Full process visibility:** Nintex's product aims to deliver clients complete end-to-end process visibility using its machine learning algorithms to capture data directly from employees' screens. • **Early mover advantage:** Alongside being an early mover in the automation space, founded in 2008, Kryon was also one of the earliest vendors to apply process intelligence products to identifying automation opportunities. Paired with Nintex's long-term experience in the automation market (Nintex was founded in 2006), it understands the ins-and-outs of the automation and process intelligence markets and can leverage this knowledge to help clients navigate their process intelligence journeys.	• **Automation focus:** While Nintex's automation capabilities should be considered a key strength, the vendor must be wary of its process intelligence tools being considered only a gateway to automation. Instead, Nintex should look to also highlight process improvement opportunities that involve process standardization and employee training rather than just automation.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Banking and financial services, insurance, hospitality, healthcare, telecom, manufacturing, retail, government **Geographies** • North America, Europe, Asia-Pacific, Middle East, Africa	**Total number of clients:** 10,000 customers worldwide **Key clients** • Wyndham Hotels & Resorts • LTCG • Visma|Raet • A multinational investment bank and FS holding firm • A large retail operator in Thailand • A large US provider of service solutions for the senior living industry	**Acquisitions** • **2022:** Kryon purchased by Nintex **Partnerships** • **Key implementation partners:** Wipro, Capgemini, Genpact, IBM, EY, PwC, Verint, Software AG, Amdocs, Naviant, Navicom, Croc, HMS, Devoli, TeBiz, Sopra Steria, FIS Global, Virtual AI, and Nexteria • **Key technology partners:** Software AG, AWS, Microsoft Azure, Sapiens, and Verint	• **Sales model:** A combination of direct and indirect through partners • **Headcount:** 1,000+ • **Key locations:** The United States, Germany, the United Kingdom, Israel, Australia, Singapore	• **June 2022:** Kryon (now known as Nintex) named "Best Robotic Process Automation Company" in 5th Annual Artificial Intelligence Breakthrough Awards Program • **February 2022:** Nintex acquires Kryon • **January 2021:** Kryon V-Bot automates large-scale scheduling of COVID-19 vaccinations

Note: Nintex declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

Pega: Decades of process understanding now getting amplified with Everflow toward developing autonomous enterprise

Pegasystems was founded in 1983 in Cambridge, Massachusetts. It is a low-code platform for AI-powered decision-making and workflow automation. The company recently acquired Everflow to bolster its process mining and automation goals.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

PEGA

HORIZON 1 – Disruptor

Process mining | Task mining

Strengths	Development opportunities
• **Workflow:** Because of Pega's workflow focus, the vendor thinks about the points of integration of how processes work, which means it can leverage process intelligence to bring unique perspectives to clients. • **Process and task mining:** Pega leverages a combination of process and task mining. It can deliver complete process transparency using event logs and desktop recorders, while some of its peers continue to use a single approach. • **Always-on monitoring:** Pega focuses heavily on developing the "always-on" monitoring aspects of workflow intelligence, something it is positioned well for due to the combination of its workflow expertise and Everflow's process intelligence capabilities. Meanwhile, many process intelligence vendors focus instead on leveraging their process intelligence offerings for point-in-time analysis.	• **Pega's focus:** Pega must ensure the Everflow acquisition and its process intelligence product remain a core focus in the wider Pega ecosystem. If it neglects these items, Pega could fall behind other pure-play process intelligence vendors as they continue to invest and innovate. • **Market education opportunity:** Given its unique experience, Pega can educate the market about the potential of layering different emerging technologies to improve operational performance. It should leverage its extensive set of capabilities (including workflow automation, case management, and now process mining) to help show enterprise clients the potential of infusing process intelligence across business operations.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Split of types of industries: • Large: 89% • Midsize: 8% • Small: 3%	**Key clients** • J.P. Morgan Chase • Bank of America • Cisco	**Acquisitions** • **2022**: Everflow **Partnerships** • **Key implementation partners**: Accenture, Capgemini, Cognizant, EY, Google Cloud, Infosys • **Key technology partners**: AWS, Areteans, Virtusa	• **Headcount:** 6,000+ FTEs • **Key locations:** Headquartered in Cambridge, MA, United States	• **August 2022:** Announced the appointment of Dr. Kikelomo (Dayo) Belizaire as its first Chief Medical Officer to bring a clinical lens to Pega's strategy for serving its healthcare clients • **July 2022:** Introduced Pega Launchpad to empower users to build and monetize new B2B SaaS apps • **June 2022:** Launched Pega Process Extender for Salesforce Lightning on Salesforce App Exchange and Pega Marketplace; the component makes it easy to embed Pega into Salesforce environments to further automate customer service workflows • **May 2022:** Acquired Everflow to add intuitive process mining to its product suite • **November 2021:** Announced partnership with Google to enhance personalization in healthcare

Note: Pega declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

SoftwareAG: An established process mining product doubling down on the linkages to process modeling

Software AG was founded in 1969 and is headquartered in Germany. It has more than 5,000 employees and operates in more than 70 countries worldwide.
Through ARIS Process Mining, Software AG can offer a process mining product that originated in 2000, supported by the firm's experience in process mining and the business process analysis market.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

Process mining | Task mining

Strengths

- **Rich company history:** Software AG is the oldest vendor covered in this report; it has an extensive global footprint and client base. This means its process mining offering, ARIS, is more accessible to hundreds of existing clients, and new clients can be confident of the firm's stability and support services.
- **Valuable process analysis frameworks:** Software AG has taken a unique approach to analyzing process data. For example, it defines a "fitness value" for every process, defining how close an organization's process is to the standard. A "fitness score" of 100 defines a perfect process. This is more in-depth than a conformance calculation shows whether or not a process is fully compliant; it defines exactly how compliant a process actually is.
- **Establishing an ecosystem:** Software AG is working to curate an ecosystem of partners to complement its process mining offering, including leading automation vendors and IPaaS vendors. HFS would like to see this ecosystem expand further in the coming years; however, the progress so far has been notable.

Development opportunities

- **Applied tech innovation:** ARIS continues to focus on refining and delivering strong foundational functionalities as a process mining tool that works well with its business process modeling capabilities. HFS and Software AG's clients would like to see the vendor consider technology innovations in this market; for example, in the areas of preconfigured solutions, dashboarding flexibility and customization, and extensibility.
- **Continue to make progress on UI/UX:** In the previous iteration of this report, we explained that Software AG must invest in its UI/UX, as clients told us there was significant room for improvement and often a reason they didn't select Software AG. Since then, we note that the vendor has made significant investment in this space, but it remains a development area for future versions of ARIS to stay in line with market advancements.

Clients split

Industries

- Manufacturing 16%
- Insurance 7%
- Retail and CPG 5%
- Banking & financial services 7%
- High-tech (technology, hardware, software, network) 14%
- Healthcare 10%
- Travel, hospitality & logistics 12%
- Utilities 7%
- Telecom 3%
- Life sciences and pharma 8%
- Public sector 6%
- Energy 5%
- Others 7%

Geographies

- Europe 36%
- North America 29%
- Middle East/Africa 19%
- Asia Pacific 12%
- Latin America 1%

Key clients

Total number of clients: 900+
Key clients include
- Tesco
- Alicorp
- One of the largest shipping containers business
- One of the globally reputed telecom vendors based in the UK
- One of the largest banks in Africa
- Municipal corporation of a rapidly growing nation in the middle east
- A German multinational conglomerate, which is also one of the largest industrial manufacturing company

Key partnerships and acquisitions

Acquisitions
- **2022:** Streamsets
- **2018:** Built.io
- **2018:** Trendminer

Key implementation partners
- Ernst & Young, PwC, Accenture, KPMG, Infosys, Persistent Systems

Key technology partners
- Amazon Web Service: Cloud hosting provider and intelligent automation
- Microsoft: Cloud hosting provider and low-code automation
- Automation Anywhere: RPA
- Nintex: Task mining
- Dremio: Data lake connectivity

Go-to-market approach

- **Sales model:** Direct, indirect through partners, online shop
- **Headcount:** 5,000+
- **Key locations:** Headquartered in Germany with global presence and hubs in North America, LATAM, EMEA, and Asia-Pacific/Japan

Top five recent developments

- **May 2022:** Insight into action capability
- **Early 2022:** Launch of solution hub with accelerators built by Software AG and external partners
- **October 2021:** Root Cause Miner for automated process mining insights
- **May 2020:** Real-time task mining insights and full-cycle automation suite integration
- **2020:** Launch of all-new cloud-native SaaS offering

Soroco: Cross-industry process discovery with a bold vision on developing work graphs for enterprises

Soroco, headquartered in Boston, Massachusetts, United States, was founded in 2014 by Harvard, MIT, and CMU graduates. The firm's goal is to become a category-agnostic process intelligence firm.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

SO RO CO

HORIZON 1 – Disruptor

Task mining

Strengths

- **Work graph:** Soroco's vision around work graphs is compelling and could have a significant impact on the market. The vendor describes a work graph as a real-time scalable map of a team's digital journey across every document and application it uses, which it believes will enable a software-driven continuous-improvement loop.
- **Extensive portfolio of offerings:** Soroco has a catalog of products built around its Scout platform, such as Scout Quickstart and Scout Telescope. This allows Soroco to support organizations of all shapes and sizes regardless of the maturity of their process intelligence journey and helps them gain very specific insights into very specific processes.
- **Ecosystem:** Soroco is working hard to curate an ecosystem around its Scout platform, which includes Celonis and a number of academic institutions to train the next wave of Scout users.
- **Industry agnostic:** Soroco has a good number of engagements across virtually every industry, with no one industry emerging as its clear favorite. This means Soroco has a good understanding of the unique challenges in almost every industry, but it must be careful it doesn't become a jack of all trades but master of none.
- **Data privacy:** Soroco has a strong opinion around data privacy and ethical use of employee work data. Its offerings anonymize all data collected and only show team level data without highlighting specific individuals.

Development opportunities

- **Market presence:** HFS noted that Soroco is one of the quieter vendors when it comes to marketing and market presence, instead focusing on its technology. Soroco must work to increase its presence in the market. The greatest tech can only be useful if people know about it. Client stories are particularly powerful for emerging technology adoption and an area for opportunity for Soroco. However, it is worth noting we saw increased activity in 2022, something the company should carry into 2023.
- **Channel partners:** Soroco should expand its channel partnerships on the sales side. This will help drive further growth, but also these partners can help Soroco clients tackle change management and leverage Soroco Scout to its full potential.

Clients split

Industries

- Services
- BFS
- Retail and CPG
- Life sciences and pharma
- Healthcare
- Insurance
- Manufacturing
- High tech
- Real Estate
- Travel, hospitality, and logistics
- Telecom
- Energy
- Utilities
- Public sector

16%, 15%, 12%, 10%, 8%, 7%, 7%, 7%, 7%, 3%, 2%, 2%, 2%

Geographies

- North America
- Asia Pacific
- Europe

47%, 30%, 23%

Key clients

Total number of clients: 100+

Key clients include
- Bayer
- Mars
- IQ-EQ
- American Modern Insurance Group
- British Telecom (BT)

Key partnerships and acquisitions

Partnerships
- **Key implementation partners:** Tech Mahindra, Fujitsu, ISG, ABP Consultancy, Hindustan Global Solutions, Mphasis
- **Key technology partners:** Microsoft, Blue Prism, Workato, JiffyAI, Celonis, Whatfix, Automation Anywhere, UiPath

Go-to-market approach

- **Sales model:** Direct and indirect through partners
- **Headcount:** 267
- **Key locations:** Boston, New York, New Jersey, Dallas, San Francisco, Austin (TX), Charlotte (NC), London, Amsterdam, Bangalore

Top five recent developments

- **2022:** Signed up 75 channel partners across USA, EMEA, and APAC
- **2022:** Signed up 3X customers in CY22 vs CY21
- **2022:** Holds ~40 patents

UiPath: End-to-end offering from opportunity identification to deploying automation

UiPath was founded in 2005 in Bucharest, Romania and is now headquartered in New York, NY. It has 10,650 customers worldwide. Its process and task mining products are offered as part of its Business Automation Platform, which also includes RPA, AI, NLP, API integration, intelligent document processing, low-code app development, and process orchestration solutions.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

Ui|Path™

HORIZON 1 – Disruptor

Process mining | Task mining

Strengths	Development opportunities
• **Integration with the UiPath ecosystem:** UiPath is one of the leading global automation providers, alongside its process mining capabilities. This means the vendor can support clients' end-to-end process automation by leveraging its entire catalog of offerings to guide clients through opportunity identification to actually deploy and monitor automation. • **Data visualization:** Clients had previously told us they were impressed by UiPath's data visualization capabilities, and we called it industry-leading in the previous iteration of this study. It's a trend we have seen continue this year with the vendor's visual interactive dashboards. • **Existing relationships:** UiPath can leverage its existing automation relationships, which include some of the biggest global organizations, as a sales channel for its process intelligence offerings or roll its process mining solution into automation deals.	• **Continued growth:** UiPath was one of the earliest automation vendors to move into the process intelligence market with its 2019 acquisition of ProcessGold. However, since then, we have seen limited activity from UiPath in the process intelligence space. Meanwhile, its peers have been making noteworthy investments. • **Pricing flexibility:** UiPath should ensure it monitors the latest pricing trends in the process intelligence market, as many of its smaller competitors are adopting innovative approaches that are attracting clients. • **Employee privacy:** One enterprise told us that it considered UiPath but ultimately chose another vendor because it felt UiPath's solutions were lacking in terms of employee privacy and GDPR compliance. • **Look beyond automation:** Several organizations told us that the UiPath teams have openly confessed that if they weren't planning on leveraging UiPath's automation, then their process intelligence solutions wouldn't be worthwhile for them. The vendor must recognize that process intelligence is a significant standalone market, and it doesn't always need to be a tool used to sell their automation tools.

Clients split

Industries

- Manufacturing: 23%
- High-tech (technology, hardware, software, network): 17%
- Banking & financial services: 9%
- Utilities: 9%
- Insurance: 5%
- Telecom: 5%
- Life sciences and pharma: 3%
- Other: 29%

Geographies

- North America: 40%
- Europe: 35%
- Asia Pacific: 23%
- Middle East/Africa: 2%

Key clients

Total number of clients: 10,650
Key clients include
- Cognizant
- JP Morgan Chase
- EY
- KPN
- Verizon
- Coca-Cola
- Unum
- Takeda
- PepsiCo
- Cushman & Wakefield

Key partnerships and acquisitions

Acquisitions
- **2022:** Reinfer for NLP
- **2021:** Cloud Elements for API integration
- **2019:** Process Gold for process mining; Stepshot for task mining

Partnerships
- **Key implementation partners:** Accenture, Atos, Avanade, Booz Allen, Capgemini, CGI, Cognizant, Deloitte, EPAM, Fujitsu, Genpact, Guidehouse, IBM, Infosys, Kearney & Company, KPMG, PWC, TCS
- **Key technology partners:** ABBYY, AWS, Alteryx, Box, Citrix Ready, Google Cloud, IBM, Microsoft, Oracle, Salesforce, SAP, ServiceNow, Workday

Go-to-market approach

- **Sales model:** Both direct and indirect through partners
- **Headcount:** 4,000+
- **Key locations:** New York, NY (HQ), Austin, Bengaluru, Bellevue, Brooklyn, Bucharest, London, Munich, Paris, Seoul, Shanghai, Singapore, Sydney, Tokyo

Top five recent developments

- **December 2022:** Partnership with Orica to scale application testing
- **November 2022:** Partnership with Neostella to deliver automation to midmarket businesses
- **September 2022:** Collaboration announced with Microsoft for the vision for the future of automation in the cloud

ABBYY: Potential to combine process and task mining to identify automation opportunities

ABBYY Timeline is an offering from ABBYY. It was founded in 2015 by Scott Opitz and Alex Elkin when the pair recognized that many business intelligence and BPM tools failed to provide intuitive process discovery and analytics based on how processes behave. The company is now a leading provider of intelligent automation, intelligent document processing (IDP), and process intelligence. ABBYY allows clients to deploy standalone solutions or as a package of RPA and BPM.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

ABBYY

Process mining | Task mining

Strengths	Development opportunities
• **Combining task and process mining:** ABBYY explained that its task mining tools will collect interaction logs and identify patterns, and then its process mining tools combine the task data with event data to deliver maximum insight into processes and how people work. • **Unstructured data analysis:** When ABBYY announced the acquisition of TimelinePI (now ABBYY Timeline), we were excited about the prospect of combining ABBYY's ability to analyze unstructured data with Timeline's process analysis capabilities, and it's something we're seeing come to life in recent versions of its product. • **Partnerships:** ABBYY has an extensive partnership ecosystem; its Blue Prism partnership is the standout. The relationship sees Timeline fully integrated within Blue Prism, allowing clients to export process data and leverage it to develop digital workers with Blue Prism. ABBYY reports it is seeing plenty of growth in this space. • **Integrated acquisition:** ABBYY announced and completed the acquisition of Timeline in 2019, and the platform's process intelligence capabilities are well integrated with the wider ABBYY ecosystem. In comparison, some of ABBYY's peers made big acquisitions in this market in 2021, giving ABBYY a slight advantage.	• **Automation focus:** ABBYY focuses heavily on the use of process intelligence to identify automation opportunities. While automation can often be the outcome of process and task mining, it doesn't have to be the only outcome. ABBYY must be wary of neglecting clients that are less interested in automation and are instead interested in process improvement through other channels, such as process standardization and training efforts. However, it's worth noting that ABBYY has recognized this and is making efforts to support clients through process improvements and standardization. • **Complexity:** One enterprise told us they found ABBYY Timeline complex and difficult to use, particularly when pulling data from multiple different screens, systems, and applications. Given that the complexity of process intelligence products remains one of enterprises biggest challenges, it's something the vendor should address.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Healthcare, financial services, insurance, telecommunications, and horizontal applications, such as supply chain and F&A **Geographies** • North America, Europe, the UK, Asia Pacific, Australia, New Zealand	**Total number of clients:** 185 **Key clients include** • Telstra • Geisinger • TriNet • Fortune 500 financial services company • Large P&C insurer	**Acquisitions** • **2020**: Pericom (digital intelligence company) **Partnerships** • **Key implementation partners**: ABBYY has 1,000+ partners, including technology partners, implementation and consulting partners, and resellers. Key partnerships include 25 companies offering process mining, such as Alteryx, RSM, Blue Prism, EXL, Genpact, Deloitte, PWC, and EY. • **Key technology partners**: Blue Prism, Alteryx, ServiceNow	• **Sales model:** A combination of direct and indirect sales and through system integrators and consulting partners. • **Headcount:** 1,000+ • **Key locations:** The US, Germany, the UK, France, Spain, Japan, Australia, Hungary, Ukraine, Cyprus, Singapore, Hong Kong	• **October 2022:** ABBYY reduces fraud losses and expedites customer onboarding with new Proof of Identity solution. • **July 2022:** ABBYY opens new intelligent automation engineering centers in Serbia and Lithuania. • **March 2022:** ABBYY strengthens partner ecosystem with ABBYYOne, a global program to drive intelligent process automation (IPA). • **September 2021:** ABBYY speeds up its public sector go-to-market strategy with Carahsoft distribution partnership. • **May 2021:** ABBYY receives investment from Marlin Equity Partners, the largest ABBYY shareholder, to accelerate growth.

Note: ABBYY Timeline declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).
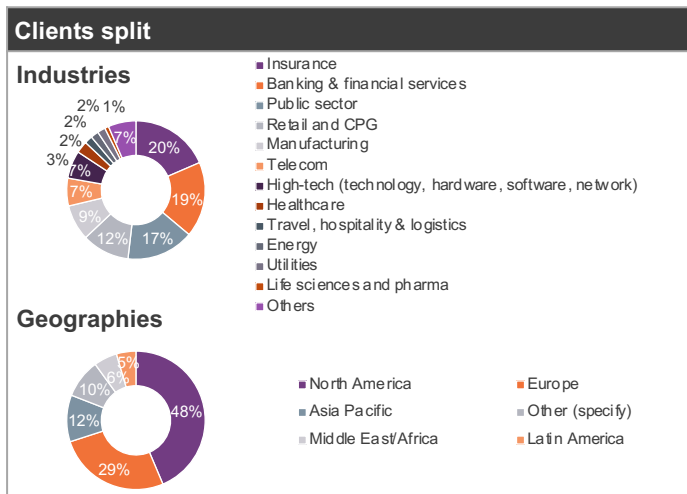
Apromore: Smaller vendor with mighty ambitions and a unique access into the Salesforce ecosystem

Apromore Pty Ltd is headquartered in Melbourne, Australia. Founded in 2009, Apromore closed Series A funding in 2020, raising US $5.3 million after seed funding of $7.7 million. A Series B funding round of $10.3 million, including investment from Salesforce, closed in late 2022. Apromore offers enterprise-grade process mining addressing the scalability needs of large enterprises. Scaling is delivered across three dimensions, event log size (more than 500 million events), number of processes supported (hundreds), and the number of users (thousands). Apromore's solution is also resold by GBTEC.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

apromore

Process mining

Strengths

- **Salesforce and MuleSoft integration:** Apromore is early in its journey with MuleSoft and Salesforce, but embedding itself in the Salesforce ecosystem could position the vendor well for growth in the coming years.
- **Ease of use:** Citizen process mining is the key mission for Apromore, as it hopes to make the technology as accessible as possible. It claims it takes only 12 hours to learn how to use its platform thanks to its no-code focus, and that's why it often sells to business users rather than IT departments.
- **Pricing approach:** Apromore continues to take a flexible approach to its pricing model, which it advises is possible because it never stores customer data. Approaches include user-based, per-process-based, and per-log-size-based pricing, which makes its offering even more accessible to clients, reducing the entry barrier for the process-intelligence curious.
- **Targeted roadmap:** Apromore plans to extend its real-time process mining and monitoring capabilities, which we see other vendors also offering. Further, Apromore is working to integrate its process mining solution with a wider range of platforms, including industry-specific core banking and insurance systems.

Development opportunities

- **Size and experience:** Apromore is one of the smaller vendors covered in this study and one of the latest entrants to the market; it launched its enterprise product at the end of 2019. Despite this, the firm is growing quickly. It reported a triple-figure growth rate for the last 12 months. Apromore must ensure it balances maintaining its impressive growth rate with satisfying existing customers, signing new customers, and investing in its process mining solution to meet evolving market demands.
- **North American expansion:** Apromore remains heavily focused in Europe and APAC. However, North America remains a largely untapped market for the company. With the new funding and backing of Salesforce, Apromore is making this a priority for 2023.

Clients split

Industries

- Insurance
- Banking & financial services
- Public sector
- Retail and CPG
- Manufacturing
- Telecom
- High-tech (technology, hardware, software, network)
- Healthcare
- Travel, hospitality & logistics
- Energy
- Utilities
- Life sciences and pharma
- Others

20%, 19%, 17%, 12%, 9%, 7%, 7%, 3%, 2%, 2%, 2%, 2%, 1%

Geographies

- North America
- Asia Pacific
- Middle East/Africa
- Europe
- Other (specify)
- Latin America

48%, 29%, 12%, 10%, 6%, 5%

Key clients

Total number of clients: 119
Key clients include
- ANZ Banking Group
- INAIL
- Nexi
- The University of Melbourne
- Vodafone
- Westpac Banking Group

Key partnerships and acquisitions

Key implementation partners
- Arvato: Process mining for SAP
- Deloitte: Consulting and delivery (APAC, EMEA)
- FPT Software: Consulting & delivery (APAC, US)
- HeartCore: Consulting and delivery (Japan)
- Nortal: Consulting and delivery (Nordics, GCC region)
- Nous Group: Consulting and delivery (ANZ, UK)
- PwC: Consulting and delivery (APAC, EMEA, US)

Key technology partners
- Datamatics: RPA
- GBTEC: Process modeling and execution
- MuleSoft: Integration and automation
- UltimateSuite: Task mining
- Workato: Integration and automation

Go-to-market approach

- **Sales model:** Direct & via reseller partners.
- **Headcount:** 76
- **Key locations:** Melbourne, Australia; London, UK; Tartu, Estonia

Top five recent developments

- **December 2022:** Apromore announced its Series B funding round, led by Salesforce.
- **August 2022:** Apromore releases MuleSoft Connector to deliver process mining to the Salesforce ecosystem.
- **July 2022:** Apromore announces predictive process monitoring capabilities to enhance operational excellence.
- **May 2022:** New digital twin capabilities in Apromore help enterprises make faster and better decisions.
- **January 2022:** Apromore announces partnership with Workato to help enterprises gain process intelligence across systems.

Fluxicon: Small process mining vendor steeped deep in academic history

Fluxicon was founded in 2009 by Anne Rozinat and Christian W. Gunther. Its process mining software, Disco, enables enterprises to take the data-driven path in a speedy manner. The software allows enterprises to get a view of their business processes based on real-time data. The company is headquartered in the Netherlands.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

fluxicon

Process mining

Strengths	Development opportunities
• **Early-mover advantage and academic background:** Fluxicon began exploring process mining in 1999 and spent its first 10 years researching the technology through an academic lens. Since then, Fluxicon has emerged as arguably the oldest process mining vendor, focused solely on the one technology, and this experience and focus could help clients. • **Simple licensing:** While some process intelligence vendors adopt complex licensing models, which enterprises describe as a deterrent, HFS noted Fluxicon's simple licensing model lowering the barrier to entry for process intelligence. Fluxicon offers multiple models, with the most popular being annual licenses which include unlimited events and processes, explaining that the typical client has only five licenses. • **Community development:** Fluxicon places a heavy emphasis on building a community around its process intelligence product. For example, the vendor has held an annual process mining camp for the last decade. As a result, Fluxicon clients can learn best practices and roadmaps from one another, simplifying their process intelligence journey.	• **Vision and strategy:** Fluxicon seems content being a small pureplay process mining vendor, while its peers have long-term visions and strategies for themselves and the wider industry. Fluxicon has an opportunity to think bigger and look to develop a vision for the future of process intelligence given its history and community engagement thus far. • **Size and scale:** Fluxicon remains deliberately small, reporting only three full-time employees. While this keeps overheads down and allows Fluxicon to be nimble, it means the company does not have the weight of some of its peers when it comes to supporting clients. • **Innovation:** While the rest of the process intelligence market invests heavily in innovation and evolving their tools, Fluxicon's small team means it is investing its time and effort into refining its existing tool rather than driving innovation. • **UI/UX:** Fluxicon's UI/UX is basic and sometimes complex when compared to the leaders covered in this study. We recommend Fluxicon invest in it to continue competing at the highest level.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach
Industries • Banks, telecom, insurance	• Volksbank • AIG • City of Vienna • Hasselt University • Veco Precision • Wacker Chemie AG • Telefonica • Cox Communications • RWTH Achen • Lufthansa	**Partnerships** • Undisclosed	• **Sales model:** Direct sales • **Headcount:** 3 • **Key locations:** The Netherlands

Note: Fluxicon declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

NICE: Automation-focused, always-on process monitoring

NICE was founded in 1986 and now has more than 6,000 employees with a presence across 150 countries. The firm also boasts more than 2,500 customers, including more than 85 of the Fortune 100. NICE's Attended Automation solution, NEVA, enables intelligent process optimization while unleashing employees' potential to ensure exceptional customer experiences.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

NICE®

Process mining

Strengths	Development opportunities
• **Always-on process monitoring:** NICE NEVA Discover collects metadata directly from users' desktops, including every click and keystroke they make, as opposed to screenshots and videos used by some of NICE's peers. This approach allows continued data collection, due to its small size, which allows NICE to offer always-on process monitoring rather than point-in-time analysis. • **Automation expertise:** NICE has extensive automation capabilities allowing clients to create an end-to-end working automation through its Automation Studio after identifying opportunities through process intelligence. This moves NICE into the "click to automate" category with fast and scalable return-on-investments.	• **Automation-centric:** Given NICE's expertise in automation, it typically offers its process intelligence tools as a method of identifying automation opportunity. Process intelligence can play a bigger role in digital transformation, and NICE should ensure it doesn't look past these opportunities. • **Focus on NEVA Discover:** For its size and scale, NICE has an extensive catalog of products and solutions. NICE must ensure focus and investment funds continue to flow into NEVA Discover, with continued innovation in process intelligence, if it hopes to continue competing with pure-play process intelligence vendors or those with deep investor pockets.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Telecommunications, banking, insurance, public sector, healthcare, utilities, many others **Geographies** • North America, EMEA, APAC	**Total number of clients:** 700+ **Key clients** • IKEA • Nationwide • Charter • Blue Cross of Idaho • Swinton • NHS	**Acquisitions** • **August 2021:** Moxie • **July 2021:** ContactEngine • **May 2019:** Brand Embassy **Partnerships** • Deloitte, Capgemini, TATA, ISG, BCG, PWC, Symphony, and Wipro • **Key technology partners:** AWS, Microsoft, Google, IBM, ABBYY, HyperScience, and Minit	• **Sales model:** Both direct and indirect through partners • **Headcount:** 300+ • **Key locations:** NICE has 40 offices in locations including the US, Europe, India, and Israel	• **November 2022:** NICE received the highest score for attended automation use case in the 2022 Gartner Critical Capabilities for Robotic Process Automation Report. • **November 2022:** NICE drives exceptional patient care for one of the largest health authorities in the UK. • **June 2022:** "Ease of use" has just become easier with NICE RPA's latest Innovations extending the capabilities of NEVA for a frictionless user experience.

Note: NICE declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

QPR: Integration with Snowflake Data Cloud helps deliver quick time-to-insight and scalability

QPR Software PLC, founded in 1991 and headquartered in Helsinki, Finland, is a software solutions provider specializing in process mining, process and enterprise architecture modeling, and performance management. QPR Software is the first process mining software to run natively on the Snowflake Data Cloud.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

QPR

Process mining

Strengths	Development opportunities
• **Established player:** QPR was founded in 1991 and launched ProcessAnalyzer, its process mining tool, in 2011, making it one of the more established players in the market. One client told us this was one of QPR's key strengths. Further, given the flurry of M&A activity in this market, QPR's size and scale add to its stability. • **Scalability with Snowflake Data Cloud:** Early in 2022, QPR announced that ProcessAnalyzer could run natively on the Snowflake Data Cloud. This goes some way to tackling the scalability challenge as clients can analyze large data volumes within the cloud, where it already resides, without needing to move it to QPR's platform. It's worth noting this could also go some way to increasing the security of QPR's ProcessAnalyzer. • **AI/ML predictions:** QPR's ProcessAnalyzer leverages AI/ML to deliver case-by-case predictions, such as a late delivery, and then suggest a handful of preventative actions, which could deliver significant savings for clients. • **Time to insight:** QPR continues to deliver impressive time-to-value thanks to its low implementation time and its clustering and root cause analysis tools, among others.	• **Ecosystem expansion:** Once client told us they assessed QPR's ProcessAnalyzer but ultimately selected a competitor's tool due to its ability to effectively analyze processes across an ecosystem of stakeholders rather than just within their own organization. However, QPR assured us that its recent partnership with Snowflake will address this. • **Local player:** Another enterprise told us that they considered QPR too much of a local vendor compared to its peers in the process intelligence market. The executive explained they would like to see QPR target aggressive growth and expand into new regions to better serve client needs.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Industries • Manufacturing, telecom, banking and financial services, healthcare, pharmaceuticals, logistics **Geographies** • Europe	**Total number of clients:** 100+ **Key clients** • Ericsson • Sanofi • KBC Group • Metsä Group • Solvay • Le Groupe La Poste • Gedeon Richter • BAE Systems • Allnex	**Partnerships** • **Key implementation partners**: Delaware Consulting, EY UK, Infomotion, NTT Data, Sofigate, Tietoevry • **Key technology partners**: Snowflake	• **Sales model:** Both direct and indirect through partners • **Headcount:** 83 (55 focus on process mining, 17% of which are in sales and marketing, 41% in consulting and customer care, and 33% in product) • **Key locations:** Finland, the UK, and France	• **December 2022:** QPR signs contract with a global healthcare company to expand its process mining SaaS • **December 2022:** Announces partnership with PACE-XL • **November 2022:** Partnership announced with Moore Belgium • **September 2022:** Introduction of jointly developed SAP S4/HANA Vectorial Solution with Tietoevry • **May 2022:** QPR Software joins Powered by Snowflake Partner Program

Signavio: Process intelligence embedded at the core of the SAP ecosystem

Headquartered in Berlin, Germany, Signavio was founded in 2009 and now has more than one million users in approximately 1,500 organizations worldwide. Signavio's Business Transformation Suite is a cloud-based management platform enabling mid-size and large organizations to understand, improve, and transform their business processes. In January 2021, SAP acquired Signavio to help the former provide an end-to-end business process automation layer.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

SIGNAVIO

Process mining

Strengths	Development opportunities
• **SAP integration:** SAP's acquisition of Signavio makes it easier than ever for SAP's clients to begin exploring process intelligence and streamline their migration to SAP S/4HANA. For Signavio, this provides a sizable growth lever as it has a unique competitive advantage for SAP customers. • **Collaborative hub:** We highlighted Signavio's collaborative hub in the previous iteration of this study. The hub allows users within an organization to access shared data and provide context for processes and functions. This has become even more of a strength as an increasing number of organizations pivot to remote work. • **Simulation engine:** Signavio's clients have once again complimented the firm's process mining capabilities, in particular its simulation engine, for enabling them to model changes and simulate them before actually actioning them.	• **Market placement:** Since the SAP acquisition, Signavio has placed itself in direct competition with market-leader Celonis, as the vendor is also well integrated within the SAP ecosystem. Signavio should look to ensure it is implemented as SAP's native process intelligence layer to gain the edge on Celonis. • **Continued innovation:** Clients had previously told us that Signavio's focus on innovation was lower than its peers, something the vendor must keep a watchful eye on since the SAP acquisition. If investment doesn't flow into innovation, Signavio risks becoming just a S/4HANA migration shop while the rest of the process intelligence market evolves.

Clients split	Key clients	Key partnerships and acquisitions	Go-to-market approach	Recent developments
Industries • Banking and financial services, insurance, telecom, manufacturing, media and high tech, travel, logistics, retail and CPG, healthcare, life sciences	**Total number of clients:** 100+ **Key clients include** • Dimension Data Global Services • NBN Co • VEOLIA • CoreLogic • A large mobile network Australian organization	**Partnerships** • **Key implementation partners:** Deloitte, Accenture, PwC, NTT Data Intramart, KPMG • **Key technology partners:** Blue Prism, Automation Anywhere Salesforce, FortressIQ, SAP Signavio also has reseller partners including Infor and NTT Data Intramart	• **Sales model:** Both direct and indirect through partners • **Headcount:** 500+ • **Key locations:** Germany, Switzerland, the UK, France, the Netherlands, Sweden, the US, Canada, Australia, Singapore, India, and Japan	• **September 2022:** Hosted the SAP Signavio Business Process Transformation forum • **March 2022:** Announced availability of experience-driven journey to process analytics • **January 2021:** SAP acquired Signavio to implement intelligence into its business processes

Note: Signavio declined our request for information, but we included it in this HFS Horizons report. HFS leveraged a wide range of data sources (public and private).

Skan: Quickly x-raying operations for a detailed, holistic view of process data

Skan, founded in September 2018 and headquartered in Menlo Park, California, is one of the newer entrants to the process intelligence market. Requiring zero-integration and powered by AI, Skan helps an organization build a digital twin of operations so that it can measure, analyze, and improve KPIs that drive business performance and compliance. In March 2022, Skan closed its Series B funding round, which raised $43 million to help provide what Skan describes as the missing link in the evolution of automation and digital transformation.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

Skan^AI

Task mining

Strengths

- **Holistic process view:** Skan's approach to data collection involves computer vision alongside several AI-driven collection and discovery techniques. It goes beyond Task Mining and allows clients to gain a detailed, end-to-end view of their business processes, spanning every front-, middle-, and back-office application. The fine-grain process data can then be analyzed in what Skan describes as a "control tower type view" to assess, improve, and help manage its end-to-end operations on a continuous basis.
- **Zero-integration data capture:** Thanks to Skan's data collection methods, there's no need for long API-integrations or connectors, which means clients can be up and running with Skan's process intelligence solution in days rather than weeks and months, which leads to faster time-to-value.
- **Continuous monitoring at scale:** Skan focuses heavily on continuously observing and monitoring processes at scale, even post-improvement, which is possible due to its zero-integration data capture approach.
- **Focus on delivering client value, including dashboards and analytics:** Skan offers analytics for value engineering, such as Statistical Process Control, Process Health Index (operations control tower to monitor Skan's weighted average index for process KPIs), and Automation Discovery and Analysis.

Development opportunities

- **Pilot engagements:** Skan has a high number of engagements in the piloting phase. It should look to move these towards the production environment to drive maximum value for clients and drive its own growth.
- **Geographic expansion:** Almost two-thirds of Skan's client engagements are in North America, which means it has a significant opportunity to expand globally. Skan should first look to enhance its presence in Europe, a real hub for process intelligence, before looking further toward APAC and LATAM.
- **Industry growth:** Skan should accelerate its penetration into banking, financial services, and insurance, where we see significant demand.

Clients split

Industries

- Manufacturing — 56%
- Banking & financial services — 17%
- Life sciences and pharma — 13%
- Telecom — 4%
- Travel, hospitality & logistics — 4%
- Utilities — 2%
- Energy — 1%
- Others — 7%

Geographies

- North America — 65%
- Europe — 26%
- Asia Pacific — 9%

Key clients	Key partnerships and acquisitions	Go-to-market approach	Top five recent developments
Total number of clients: 25+ **Key clients include** - Four of the top 10 insurance carriers - Four of the top 10 banking and financial services companies - Fortune 10 global health insurance carrier - Fortune 10 high-tech electronics vendor - Leading global data and analytics player	**Partnerships** - **Key implementation partners:** PwC, WNS, Fujisoft, Coforge - **Key technology partners:** Microsoft	- **Sales model**: 80% direct and 20% indirect - **Headcount**: 100+ - **Key locations**: Menlo Park, California covers North America; Bengaluru, India	- **December 2022:** Launched product version 3.0 featuring out-of-the box dashboards and analytics for real-time operations management, AI-powered graphical representation of automation discovery, and next-generation of virtual process agents for automated task discovery and accelerated deployment. - **Q3 2022:** Launched insurance claims analytics framework to enable insurers to reduce unit cost of claims, reduce claims denial rate, improve claims accuracy and process compliance. - **Q2 2022:** Launched "Future of Work" analytics framework addressing virtual work model challenges like benchmarking and monitoring compliance processes, enabling employee experience, and deploying pay-for-performance models. - **Q2/Q3 2022:** Key executive hires: VP Marketing, Damaris Santiago, a proven leader in driving category, company and product growth; EVP Strategy, Vinay Mummigatti, 20-year veteran of building enterprise-level transformations and Centers of Excellence. - **March 2022:** Series B investment of $43 million, led by Dell Technologies Capital.

* Data included for clients at production only and not total

StereoLOGIC: BFSI-focused vendor that looks beyond automation to drive process excellence

StereoLOGIC Ltd., a Canadian process and task mining pioneer, was launched in 2008 under the leadership of Sofia Passova, who has a Ph.D. in modeling and diagnostics of computer systems. The company introduced innovative technology providing integrated process and task mining. The company specializes in process improvement, enterprise software, operations management, employee performance, task mining, process discovery, customer experience, RPA, workforce optimization, process mining, operational intelligence, AML, hyper-automation, and enterprise operations. The technology is both application- and platform-agnostic and is actively used by small businesses and large enterprises for worldwide transformation projects.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

stereo logic

Process mining | Task mining

Strengths

- **Look beyond automation:** StereoLOGIC told us that its goal is not to just implement automation, but to "make processes work"—a refreshing approach compared to some of its peers focused solely on identifying automation opportunities.
- **Partnerships:** While StereoLOGIC mainly focuses on task mining, the vendor offers APIs for easy integration with other leading process mining vendors to allow clients to import their models from StereoLOGIC into other process mining tools.
- **Industry focus:** StereoLOGIC focuses on the BFSI industry, giving it an extensive understanding of industry-specific processes, regulations, and nuances, which can be a significant benefit for clients in this sector, particularly given its uniquely complex landscape. StereoLOGIC boasts an impressive BFSI client roster.
- **Time to value:** StereoLOGIC's clients told us they could collect employees' operations in one day and have a process map the very next day, crowning the vendor one of the fastest for time-to-value covered in this report. This quick turnaround time allows clients to see perceived "quick wins" and justify further investment in process intelligence.

Development opportunities

- **UI/UX:** We noted that StereoLOGIC's UI/UX is dated compared to some of its peers. The company should improve the UI/UX if it hopes to stay ahead of this fast-growing market.
- **Marketing:** We would like to see StereoLOGIC be more present in the market. The vendor told us it relies on word-of-mouth for marketing. The vendor should ramp up its marketing activities to showcase its products and capabilities. Sharing public client success stories could be a great place to start.
- **Look beyond BFSI:** StereoLOGIC has an advantage in BFSI because of its understanding of the business, but its tool can be used in other industries. The vendor should expand beyond BFSI to drive further growth.

Clients split

Industries

- Insurance — 40%
- Manufacturing — 28%
- High-tech (technology, hardware, software, network) — 20%
- Retail and CPG — 7%
- Banking & financial services — 3%
- Public sector — 2%
- Others — 7%

Geographies

- North America — 100%

Key clients

Total number of clients: Not disclosed
Key clients
- A major Canadian Bank
- Wyth Financial
- One of five largest US medical insurance companies
- Sixth largest US bank in consumer deposits
- East West Bank
- Pitney Bowes
- One of the world's largest FMCG providers

Key partnerships and acquisitions

Partnerships
- Accenture, Allevar, Appian, Genpact, CGI, Ciklum, Core, EY, Freestone Group, GoAutomate.AI, KPMG, L&T Infotech, Innovation Boutique, InXight, Wanliah

Go-to-market approach

- **Sales model:** Direct and partnership
- **Headcount:** 25
- **Key locations:** Canada, the US

Top five recent developments

- **December 2022:** 3X revenue growth from the prior year
- **February 2022:** Enterprise deal with one of the five-largest medical insurance companies in the US
- **January 2022:** Released the world's first unattended task mining tool, enabling business managers to discover, improve, and automate employee tasks without IT, process engineers, and data scientists
- **November 2021:** Wyth Financial selected StereoLOGIC for process and task mining solution to help streamline business operations

HFS horizons

UltimateSuite: Experienced task mining vendor with a scalable approach to data capture

The Prague-based company was established in 2020 by a group of seven people. UltimateSuite provides pure-play task-mining solutions for automated business process analysis. The company's key focus is on enabling performance management in areas where customers are missing data. Data capture is done via direct interaction.

HORIZON 3 – Market Leader

HORIZON 2 – Enterprise Innovator

HORIZON 1 – Disruptor

ultimate.suite

Task mining

Strengths

- **Data capture approach:** Rather than leveraging computer vision, UltimateSuite collects object-based data. This streamlines the data-collection process, collecting less but more impactful data. This enables rapid-deployment of UltimateSuite's product and helps it scale its operations as it is less resource-hungry due to the size of data.
- **Rapid deployment:** UltimateSuite's approach to data-collection makes its task mining product quick and easy to deploy, its clients told us this is a key strength of the vendor.
- **Industry focus:** UltimateSuite has a heavy focus on financial services, born out of its heritage with financial-services focused StringData. UltimateSuite has a deep understand of industry-specific processes, regulations, and nuances, and it is well positioned to support clients in that sector.

Development opportunities

- **Expansion beyond financial services:** While UltimateSuite's financial services expertise is a benefit to clients in the industry, the vendor should look to broaden its horizons and look to other industries to drive further business growth.
- **Size and scale:** UltimateSuite is one of the smaller vendors covered in this study. As it continues to scale its operations and client numbers, it should expand its team to ensure it has the capacity to service growing client demands.
- **Late entrant:** Having spun out of StringData in 2020, UltimateSuite is one of the newest vendors covered in this study, which means it doesn't have the catalog of client success studies and market credibility afforded to some of its peers. Further, it must address its headcount challenge to ensure it meets growing demands as it scales its operations.

Clients split

Industries

- BFSI — 62%
- Professional services — 13%
- Telecom and high tech — 13%
- Manufacturing — 6%
- Retail and CPG — 6%

Geographies

- Continental Europe — 94%
- North America — 3%
- Asia Pacific — 3%

Key clients

Total number of clients: 40+

Key clients
- Generali Insurance
- Media company ($3.5 billion revenue)
- Global
- Industrial processing (€ 6,699 billion revenue)

Key partnerships and acquisitions

Partnerships
- BREAKAWAI, Capgemini, PwC, StringData, KYMA, ProcessPoint, Bilig Opex, Opciber, EY, Apromore, Livejourney, Mazars

Go-to-market approach

- **Sales model:** Direct and partner channel
- **Headcount:** 25
- **Key locations:** Prague

Top five recent developments

- **January 2023:** Introducing UltimateSuite Analytics for data analysis and support for the majority of process mining solutions
- **December 2022:** The ability to leverage external data to allow instant scalability of the solution within an account
- **November 2022:** Launched global alliance and partnership program
- **February 2022:** Launched Robotic Process Mining for Task Discovery
- **October 2021:** Apromore partnered with UltimateSuite to drive process mining and task mining capabilities

6 | HFS Research authors

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Reetika Fleming leads coverage for smart analytics, insurance, and finance and accounting at HFS Research. She studies the broad use of data and analytics within enterprises, with a research focus on emerging strategies to institutionalize machine learning and other AI techniques. Her research extends into the impact of digital business models, IoT, smart analytics, and AI on business process services for insurance specifically, and finance and accounting broadly.

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Sam Duncan is a Practice Leader at HFS Research. His research includes exploring innovative applications of blockchain technology and delving into the latest trends in the Banking & Financial Services and Insurance industries. Sam is an Economics graduate from Bournemouth University where he took a particular interest in macroeconomics and global markets.

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Hridika Biswas is working on the F&A and BPO / Outsourcing domain and has recently joined the HFS team.

She has seven years of experience in quantitative research and analysis in Kantar. She has serviced British American Tobacco for its primary and secondary research needs, catering to the company worldwide.

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