Everest Group PEAK Matrix® for Process Mining Technology Vendors 2021

Focus on Software AG
June 2021

Background of the research

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Everest Group defines Process Mining (PM) as a software product that involves a fact-based approach to help discover, monitor, and optimize as-is processes by analyzing process-related information from event logs generated by information systems (ERP, CRM, etc.) and/or recordings of activities performed by users on their desktops. Process mining has been one of the fastest growing markets in the intelligent automation space over the past few years. Process mining products find a wide variety of use cases from different business functions and verticals. Adoption of process mining solutions can not only help enterprises achieve cost savings and operational efficiency by identifying process optimization/automation opportunities, but also improve workforce productivity and enhance customer experience. These products are also rapidly evolving in the sophistication of their capabilities, features, and functionalities.

In this study, we assess process mining software products in the market that can analyze process-related information captured in event logs to discover process models, and which are available for independent licensing.

In this study, we analyze the process mining technology landscape across various dimensions:

- Everest Group's PEAK Matrix® evaluation, a comparative assessment of 18 leading process mining technology vendors
- Overview of process mining software products
- Competitive landscape of the process mining technology vendor market
- Key process mining technology trends
- Remarks on key strengths and limitations for each process mining technology vendor
- Desktop process mining / task mining technology vendor landscape

Scope of this report:

Products
Process mining

Geography
Global

Technology vendors
18 leading process mining technology vendors

Process Mining Products PEAK Matrix® characteristics

Leaders:

Celonis, Minit, Software AG, and UiPath

- Leaders have invested in developing superior product capabilities, with greater focus on ease of use, robust data preparation functionality, integration with enterprise applications, and process monitoring and dashboarding. They are differentiated by their strong focus on developing innovative and enterprise-grade features for process enhancement

- Leaders continue to make investments in Artificial Intelligence (AI) and Machine Learning (ML) to enhance predictive and prescriptive analytics capabilities. They are ahead in offering greater breadth and depth of out-of-the-box connectors to enhance the platform's interoperability. They are also offering process-/system-specific packaged solutions to accelerate adoption

- Leaders have been pioneers in introducing innovative features such as action triggers that enable sending alerts, assigning tasks to users, and executing pre-built automations based on process insights. They have also invested in developing in-house capability or forging third-party partnerships for desktop process mining / task mining capability to expand the scope of process mining

- Leaders have strong vision and capability to drive enterprise-wide adoption of process mining and have invested in robust training programs, support forums, dedicated customer success programs, and service provider partnerships to educate the market. They are playing a pivotal role in evangelizing the technology through various events and thought leadership initiatives

Major Contenders:

Apromore, Everflow, Lana Labs, Logpickr, MEHRWERK GmbH, MonkeyMining, myInvenio, PAFnow, QPR Software, Signavio, and UpFlux

- Major Contenders are following Leaders in offering more enterprise-grade functionality for process discovery and monitoring to improve ease of use for business users. They are also investing in developing AI-/ML-based advanced capabilities to strengthen their value proposition for process-enhancement use cases

- The majority of Major Contenders are focusing on building strong technology partner ecosystem covering solutions such as Robotic Process Automation (RPA), Intelligent Document Processing (IDP), and process orchestration. To supplement their offering, some of them are offering desktop process mining / task mining capability either through in-house investments or third-party partnerships

- Major Contenders are expanding their presence across industries, geographies, business functions, and buyer-sizes. However, there is limited focus on expanding the scope of their collaborations with service providers to accelerate adoption and support large-scale implementations

Aspirants:

Integris, Livejourney, and Live Objects

- Aspirants are relatively new entrants in the market and are currently making investments to improve the core capability for process discovery and conformance checking, as well as developing features for process monitoring and enhancement

- Aspirants have approached the market by targeting pockets of opportunities and client requirements in specific geography or industry. Expanding their global reach and awareness could help drive greater growth

Everest Group PEAK Matrix®
Process Mining Products PEAK Matrix® Assessment 2021 | Software AG positioned as Leader

Everest Group Process Mining Products PEAK Matrix® Assessment 2021[1]
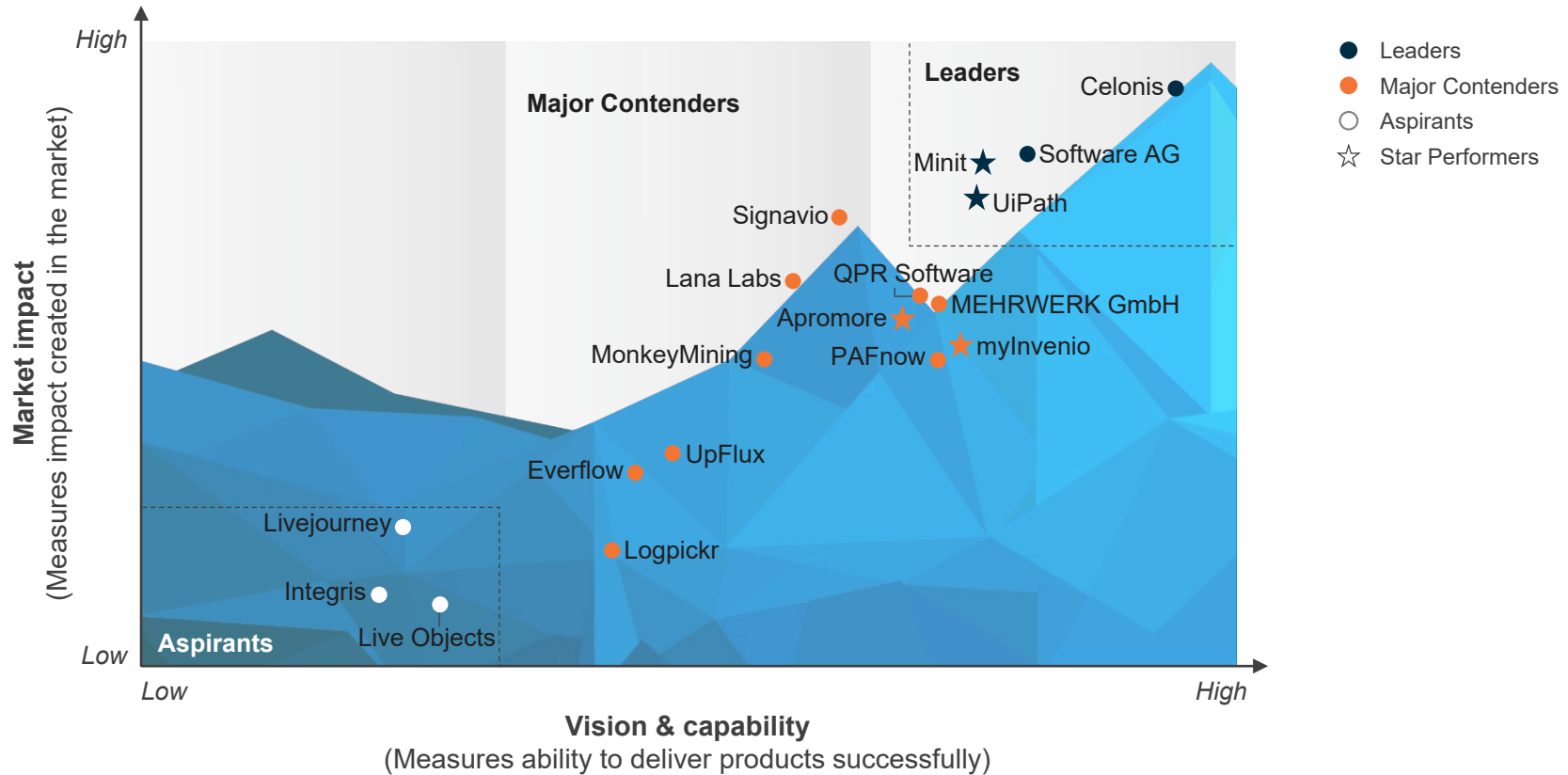
1   Analyses for Signavio and myInvenio are based on their capabilities before they were acquired by SAP and IBM, respectively

Note: Star Performers are selected based on a relative comparison of vendors' performance on the market impact and vision & capability dimensions in the previous and latest PEAK Matrix® assessments. Vendors with the highest year-over-year improvement are designated as Star Performers. The Star Performer title does not reflect the overall market leadership position, which is designated through Leaders, Major Contenders, or Aspirants

Software AG | process mining product profile (page 1 of 7)
Overview

Company overview:

Software AG is an enterprise software company operating in the domain of independent integration & API management, Internet of Things (IoT) , analytics, and process software & services. Founded in 1969, Software AG currently has more than 5,000 employees, is active in 70 countries, and is traded on the Frankfurt Stock Exchange. It has developed its own software capabilities in process mining. They focus on helping enterprises across business process management lifecycle to make better decisions by enabling them to overcome data silos between people, departments, systems, and devices.

Key leaders

- Sanjay Brahmawar, Chief Executive Officer
- Dr. Stefan Sigg, Chief Product Officer
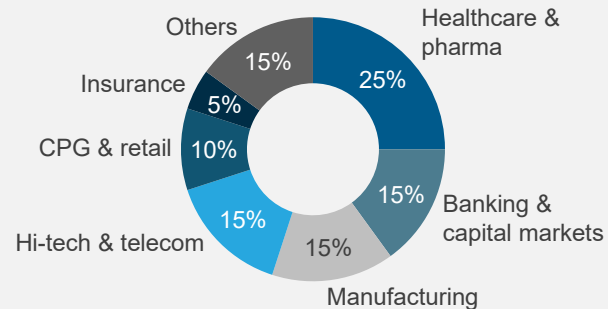
Headquarters: Darmstadt, Germany

Key clients include: Siemens, Vodafone, Coca-Cola, ING Bank, Encevo, T-Systems, Airbus, Adobe, Lanxess, Eppendorf, DMG Mori, Weifu Group
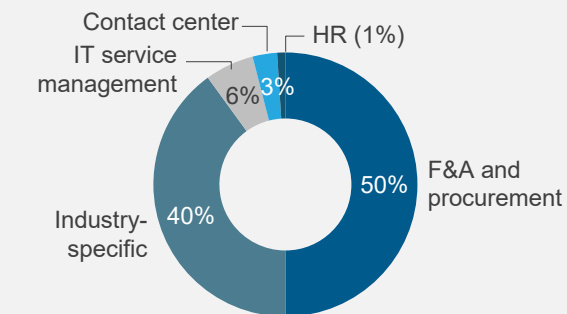
Website: www.softwareag.com

Recent deals and announcements (not exhaustive)

- **April 2021:** Launched enterprise edition of ARIS Process Mining SaaS offering
- **April 2021:** Organized a webinar on the topic, "Role of Process Mining in Accelerating Digital Transformation"
- **March 2021:** Conducted a virtual customer conference titled, "conXion 2021"
- **March 2021:** Announced its Trendminer software that provides self-service industrial analytics for smart factories and industry 4.0 operations
- **March 2021:** Launched PartnerConnect, a new global partner program
- **February 2021:** Siemens promotes digital process management with ARIS
- **February 2021:** Entered a collaboration agreement with Automation Anywhere, which aims to make scalable automation achievable for more businesses
- **December 2020:** Announced a strategic partnership with Re'flekt, a provider of augmented reality
- **August 2020:** Launched ARIS Process Mining SaaS offering, a new cloud platform for process mining
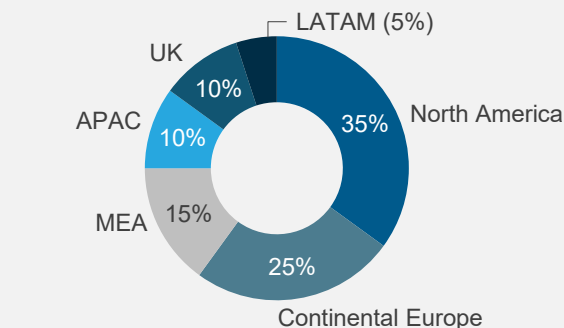
### Split of process mining revenue by buyer industry

- Healthcare & pharma: 25%
- Banking & capital markets: 15%
- Manufacturing: 15%
- Hi-tech & telecom: 15%
- CPG & retail: 10%
- Insurance: 5%
- Others: 15%

Split of process mining revenue by process areas

- F&A and procurement: 50%
- Industry-specific: 40%
- IT service management: 6%
- HR: 3%
- Contact center: (1%)

Split of process mining revenue by buyer geography

- North America: 35%
- Continental Europe: 25%
- MEA: 15%
- APAC: 10%
- UK: 10%
- LATAM: (5%)

Split of process mining revenue by offerings
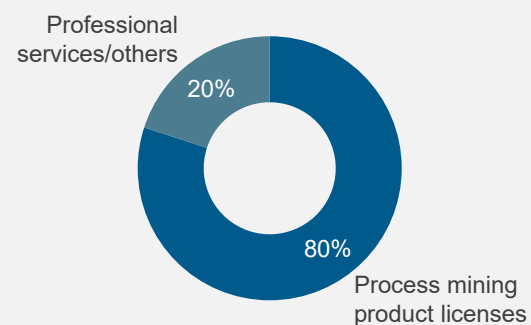
- Process mining product licenses: 80%
- Professional services/others: 20%

Note: Operational and product-/offering-related information as of December 2020, collected as part of the study / based on Everest Group estimates
Source: Everest Group (2021)

Software AG | process mining product profile (page 2 of 7)
## Overview

Product overview:

Software AG's ARIS Process Mining solution provides insights into operational data, allowing users to analyze the business processes within their organization. The product is available in three editions (Elements, Advanced, and Enterprise) based on the size and scope of process mining implementation. The tool helps discover and analyze processes spanning across multiple applications including process hierarchies and process variants. The conformance check is integrated into ARIS so that users can use process models from their process repository. The results of the conformance check can be visualized with both designed process models and contextual models, allowing detailed analysis and can display the identified compliance issues. ARIS Process Mining provides a dashboard component that displays process mining results, such as operational performance data, calculated KPIs, and process deviations. ARIS Simulation allows users to define multiple scenarios and can check outcomes for varying simulation parameters.

Version number: ARIS Process Mining

Release date: August 2020

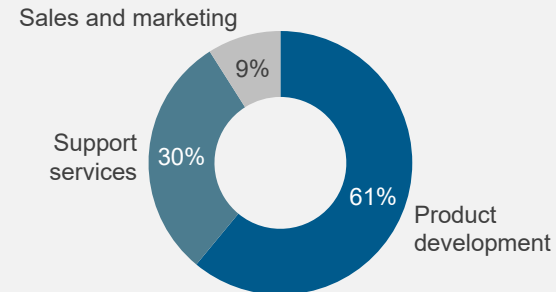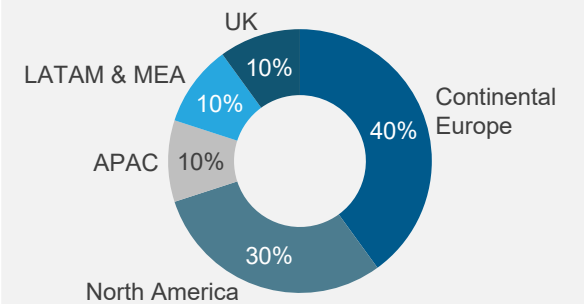| Market adoption and capability overview		
Description	**2020**	**YoY growth**
Process mining clients **(individual logos)**	N/A	N/A
Process mining FTEs	N/A	N/A
Number of service provider partners/resellers	48	12%
Number of technology/software partners	9	N/A
Key service provider partners/resellers	Accenture, AWS, Capgemini, Cognizant, Infosys, HCL, PwC, and Wipro	
Key technology/software partners	Automation Anywhere and Kryon	

Process mining client mix by buyer size[1]

- SMBs 10%
- Small 10%
- Mid-size 25%
- Large 55%
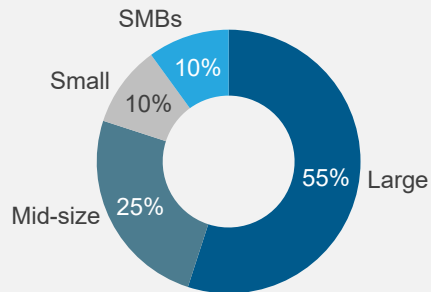
Process mining client mix by hosting model

- Cloud 30%
- On-premise 70%
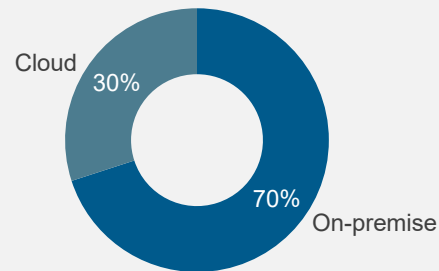
Split of process mining FTEs by function[2]

- Sales and marketing 9%
- Support services 30%
- Product development 61%

Split of process mining FTEs by geography

- UK 10%
- LATAM & MEA 10%
- APAC 10%
- North America 30%
- Continental Europe 40%

1   Buyer size is defined as large (>US$5 billion in revenue), mid-size (US$1-5 billion in revenue), small (US$50 million-US$1 billion in revenue), and SMBs (<US$50 million in revenue)
2   Includes FTEs in product development, support services (product support, implementation, etc.), and sales & marketing; excludes FTEs in corporate functions such as HR and IT
Note: Operational and product-/offering-related information as of December 2020, collected as part of the study / based on Everest Group estimates
Source: Everest Group (2021)

Software AG | process mining product profile (page 3 of 7)
Capabilities

Capability & offerings

| | Available | In the roadmap | Available via formal partnership | Not available |

| Process setup and data preparation | Built-in ability to pre-process (prepare, clean, and transform) event logs data | Ability to detect outliers in the event logs | Ability to merge event logs from different information systems for a process model | Ability to configure/modify case IDs, resources, and any specific attributes in event log data |
| | Ability to supplement event logs with data from IoT devices for discovering processes | | | |

Interoperability	Pre-built connectors for SAP applications	Pre-built connectors for Oracle applications	Pre-built connectors for ServiceNow applications	Pre-built connectors for Salesforce applications
	Pre-built connectors for Microsoft applications	Support for Windows OS	Support for Linux OS	Support for Mac OS
	Online public repository of pre-built packaged solutions for specific systems/processes	Ability to integrate with third-party tools / products through REST or SOAP web services	Ability to access all platform functionalities through open APIs	

| Integration with complementary capabilities | Conversational AI / chatbots | Intelligent document processing (IDP) | Business Intelligence (BI) / data visualization | Business Process Management (BPM) / process orchestration |
| | Robotic Process Automation (RPA) | Extract Transform Load (ETL) | | |

Process discovery	Ability to create BPMN 2.0 compliant process models	Ability to display cost for each process step	Ability to display resources consumed for each process step	Ability to detect exceptions (failed transactions) in process
	Ability to detect anomalies / fraudulent transactions in a process	Out-of-the-box dashboards to assess rework percentage for identified process loops	Ability to merge two or more process models	Ability to automatically discover/derive business rules
	Multi-level process mining capability	Ability to discover organization-level relationships / social networks	Ability to discover customer journey maps by mining customer interactions through websites, ticketing systems, etc.	

Software AG | process mining product profile (page 4 of 7)
Capabilities

Capability & offerings

    Available   In the roadmap   Available via formal partnership   Not available

Conformance checking	Ability to import BPMN models to define standard model	Ability to define target process workflow through a built-in process modeler	Out-of-the-box process templates based on industry best practices (e.g., for O2C, P2P)	Ability to perform gap analysis to identify (un-)desirable deviances/violations
	Ability to perform root-cause analysis to identify causes of process path deviations	Ability to check compliance rules such as segregation of duties		

Process monitoring and reporting	Ability to support text search capability in the process map	Ability to monitor processes in near real-time against defined KPIs	Ability to estimate lead time and predict delays based on near real-time process information	Ability of the software to identify optimal process variant
	Ability to create custom metrics to identify optimal process variant, by using functions	Ability to create PDD for the discovered process and add notes for process steps	Ability to share and export project analysis with other users	

Process enhancement	Ability to use AI/ML to predict and highlight any potential KPI breach	Ability to automatically send notifications to users in case of expected KPI breach	Ability to define scenarios and run multiple simulations (what-if analysis / scenario testing)	Ability to leverage AI/ML to recommend possible simulation scenarios
	Ability to save virtual logs of simulated process models to aid comparative analysis	Ability to automatically identify processes/tasks for automation	Ability to directly export workflows to automation platform's design studio	

Desktop process mining / task mining	Built-in process recorder – DOM/COM-based	Built-in process recorder – image-based	Ability to blacklist/whitelist applications for recording	Ability to leverage ML algorithms to classify tasks that belong to a particular process
	Ability to provide workforce intelligence insights/recommendation	Ability to automatically mask PII data in captured screenshots or recorded data		

Security and compliance	Availability of pre-built algorithms in system connectors to encrypt/decrypt event log data	Ability to create different environments with restricted user access authorization	Availability of role-based access to the system	Ability to selectively grant permissions to view attributes of a process model
	Availability of an anonymization option for any specific attributes in log data	Active directory integration		

Software AG | process mining product profile (page 5 of 7)
Capabilities

Capability & offerings

	Available	In the roadmap	Available via formal partnership	Not available

Product architecture and hosting options	Product architecture based on loosely coupled microservices	Product architecture based on lightweight docker containers	Supports multi-tenant deployments	On-premise (central server or virtual machine)
	Private cloud	Public cloud	Delivered as a Software-as-a-Service (SaaS) offering	

Product training and support	Training and certification by vendor	Training and certification by partners	Classroom training	Online portal for product training/certification
	Online self-paced training modules	Role-based product training courses	Online certification courses	Free training modules
	Interactive online training	Community edition of the product	Embedded help tool	Online user community / support forum

Commercial model	Perpetual licensing	Subscription licensing	User-based licensing	Process-based licensing
	Event logs volume-based / case-based / server capacity-based licensing[1]	Hybrid of user-based and event logs volume-based	Hybrid of user-based and process-based[2]	Hybrid of event logs volume-based and process-based

Key areas of enhancements in the latest product releases (as of December 2020)

- Interoperability
  - Made some functionalities of their platform accessible through open APIs
- Process discovery
  - Introduced the ability to create BPMN 2.0 compliant process models
- Conformance checking
  - Added the ability to import BPMN models to define reference model for conformance checks
- Hosting models
  - Launched ARIS Process Mining SaaS offering, a cloud-based platform for process mining

1   Applicable for on-premise offering
2   Applicable for SaaS offering (available in different sizes quantified by number of cases)

Software AG | process mining product profile (page 6 of 7)
Everest Group assessment – Leader

Measure of capability: ● High ◔ Low

Market impact				Vision & capability					
Market Adoption	Portfolio mix	Value delivered	Overall	Vision and strategy	Process setup and integration	Process intelligence	Implementation and support	Commercial and sales model	Overall
●	◔	◑	◕	◔	◔	◕	◕	◑	◕

Strengths

- Software AG focuses on providing an integrated platform to support enterprises through the process management life cycle and enable sustainable process transformation initiatives. With ARIS process mining, it focuses on driving process optimization by enabling users to discover, measure, and analyze business processes

- It offers ARIS platform in three editions; 1) Elements, which is a free edition to explore basic functionalities, 2) Advanced edition to enable process diagnostics using snapshot data, and 3) Enterprise edition for continuous process monitoring. These editions help cater to the needs of enterprises that are at different stages in their process mining journey

- The Elements and Advanced product editions offer flexibility to enterprises that are looking to start small, test the waters, and limit their upfront investment

- It offers built-in ETL capability and pre-built connectors for enterprise applications such as SAP, Oracle, Salesforce, and ServiceNow. Clients have also indicated ease of integration with ERP software and Software AG's understanding of source systems, especially SAP, as its key strengths

- ARIS provides the ability to import process maps in BPMN 2.0 format for conformance checking and offers various reference process templates for comparative analysis. It also provides a fitness value dashboard to assess adjacency of a case w.r.t the reference model

- ARIS process mining offers features to generate process maps including hierarchies, perform variant analysis, detect process loops, and discover organization-level relationships

- Software AG offers in-house BPM capability and partners with Kryon for desktop process mining and RPA capabilities

- Its AI-based root-cause miner enables users to determine the underlying causes for specific deviations and rank them by their impact on various process KPIs. ARIS also allows process analysts to create bookmarks to enhance ease of collaboration across multiple users

- Software AG offers an online discussion forum for its customers and partners through ARIS community and provides access to a repository of pre-built packaged solutions through ARIS HUB. It continues to focus on establishing thought leadership in the process mining space through Special Interest Groups (SIG), customer success stories, webinars, and whitepapers

- It has experience of serving clients across geographies including Continental Europe, North America, and APAC, and verticals such as BFSI, manufacturing, and healthcare, among others

- Clients have indicated integration with BPM suite and the platform's dashboarding capabilities as key strengths. They lauded Software AG for their flexibility to customize as per client requirements and quality of technical and consulting support

Software AG | process mining product profile (page 7 of 7)
Everest Group assessment – Leader

Measure of capability: ● High ◔ Low

| Market impact				Vision & capability					
Market Adoption	Portfolio mix	Value delivered	Overall	Vision and strategy	Process setup and integration	Process intelligence	Implementation and support	Commercial and sales model	Overall
●	◕	◕	◕	◔	◔	◕	◕	◐	◕

Limitations

- While Software AG currently holds the second largest share of the process mining software market in terms of number of clients, it has experienced lower than average market growth

- Its process mining client portfolio is somewhat skewed toward mid-size and large enterprise segments with revenue greater than US$1 billion, and has a relatively lower experience of serving clients in the small enterprise and SMB segments

- The platform presently does not offer features such as automated extraction of decision rules that govern process routing and ability to predict lead time and delays based on near real-time process information. These features are reported to be in the roadmap

- While Software AG offers built-in dashboarding capability, the platform presently lacks pre-built integration / out-of-the-box connectors with leading third-party BI platform providers (Tableau, Power BI, etc.) – limiting its value proposition for enterprises looking to integrate the platform with existing BI landscape for advanced analytics and dashboarding

- ARIS Simulation module offers the ability to define scenarios and conduct what-if analysis; however, it presently does not provide AI-/ML-based recommendations for possible simulation scenarios that can be tested to improve process KPIs. Clients also indicated the scope to improve simulation capabilities

- Clients have indicated scope to enhance support for more near real-time process monitoring to provide proactive updates and offer AI-based predictive and prescriptive recommendations to users

- The platform presently lacks the ability to trigger actions such as assigning tasks to users and executing pre-built automation workflows based on process insights (in the roadmap)

- The value proposition of Software AG is not very strong for enterprises looking to mine processes involving unstructured data and customer interactions, as it currently does not offer integration with complementary technologies such as conversational AI and IDP

- While Software AG offers classroom training in several languages such as English, German, Spanish, and French, the platform is currently available only in English. Clients expect Software AG to increase its focus on enhancing customer experience and transition its sales operations from transactional to more relationship-driven

- Client feedback indicates scope to enhance ease of integration and data preparation, especially when using event logs from multiple non-ERP systems. Clients have also mentioned that the pricing of the product is relatively on the higher side and more suitable for larger enterprise-wide deployments

Appendix

Everest Group PEAK Matrix® is a proprietary framework for assessment of market impact and vision & capability

Everest Group PEAK Matrix
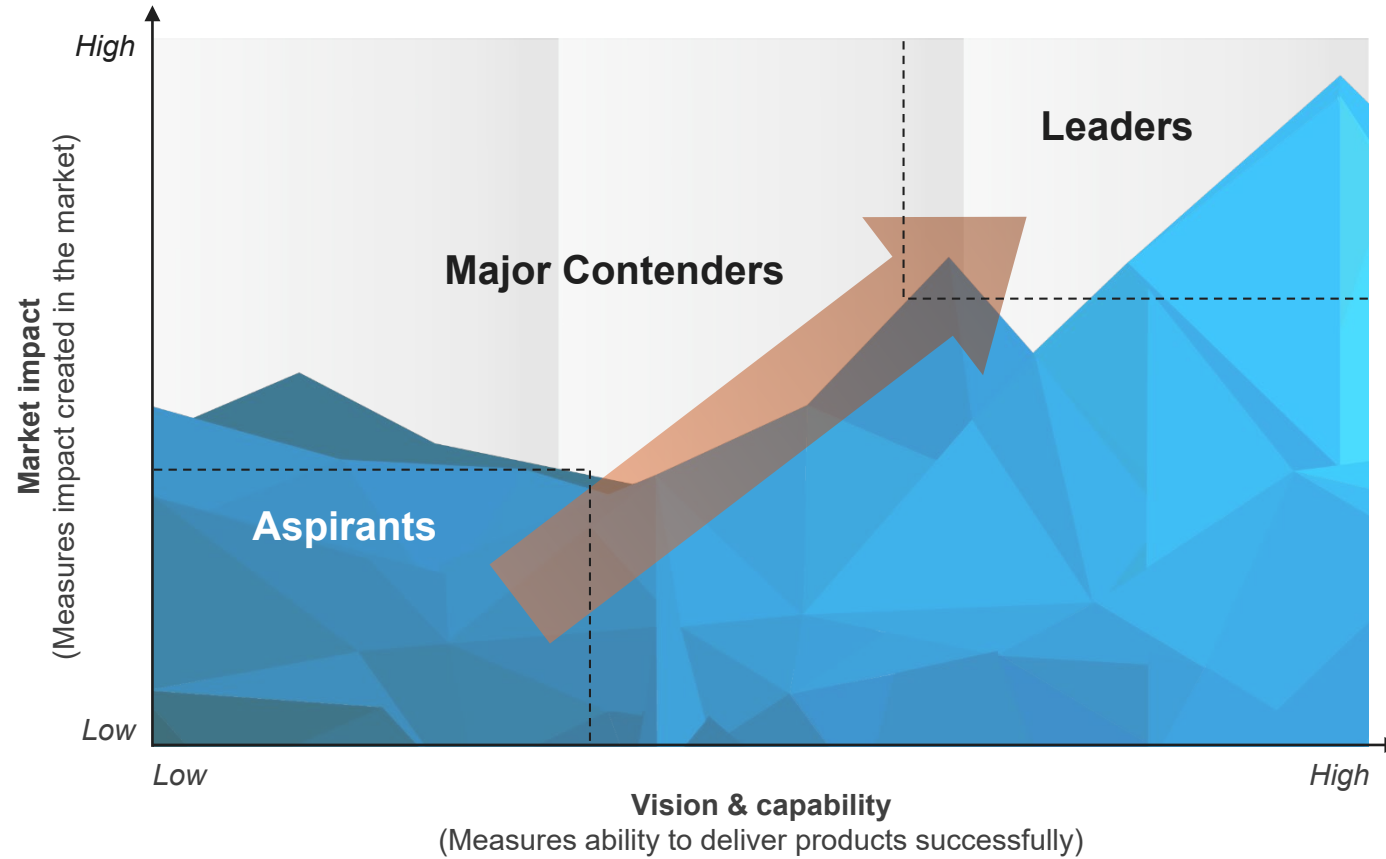
Process Mining Products PEAK Matrix® evaluation dimensions

Measures impact created in the market – captured through three subdimensions

Market adoption

Number of clients, revenue base, and YOY growth

Portfolio mix

Breadth of coverage of industries, geographies, processes / use cases, and enterprise size class

Value delivered

Value delivered to the client and their satisfaction with the product as well as the support, based on client feedback

Market impact

Leaders

Major Contenders

Aspirants

Vision & capability
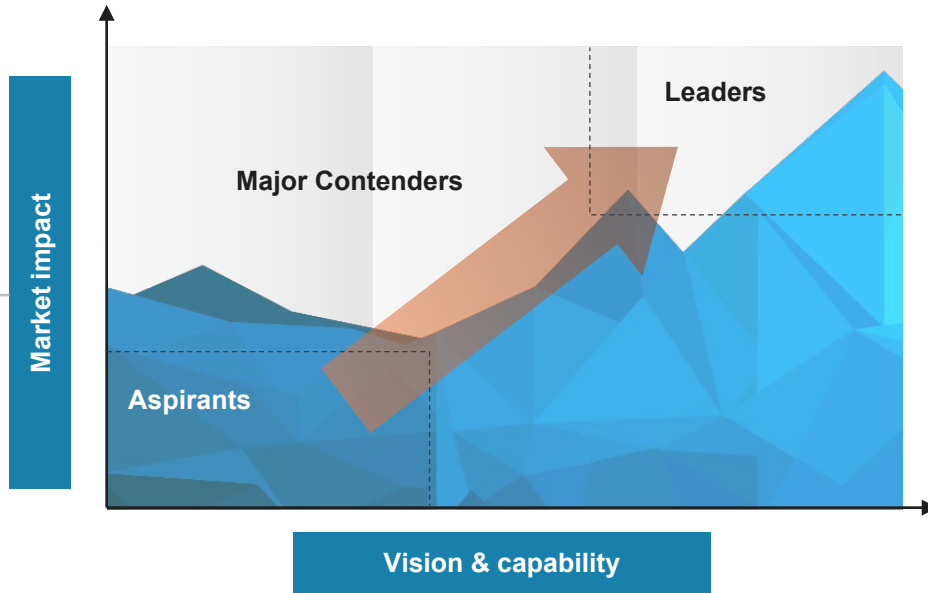
Measures ability to deliver products successfully. This is captured through five subdimensions

Vision and strategy	**Process setup and integration**	**Process intelligence**	**Implementation and support**	**Commercial and sales model**
Vision for the client and itself; key investments, future roadmap, and strategy	Data preparation and import; integration with enterprise applications & complementary capabilities	Process discovery, conformance checking, process monitoring & reporting, process enhancement, and desktop process mining	Product training & support, partnerships with service providers, ease of use, product architecture, hosting options, and data security	Flexibility, progressiveness, and client adoption of available commercial models; sales channel effectiveness

Everest Group confers the Star Performers title on providers that demonstrate the most improvement over time on the PEAK Matrix®

Methodology
Everest Group selects Star Performers based on the relative YOY improvement on the PEAK Matrix

In order to assess advances on **market impact,** we evaluate each vendor's performance across a number of parameters including:
- Yearly YOY revenue growth (absolute and %)
- # of new clients
- Improvement in portfolio mix
- Improvement in value delivered

In order to assess advances on **vision and capability**, we evaluate each vendor's performance across a number of parameters including:
- Innovation
- Improvements in product features and functionalities
- Technology-/domain-specific investments
- Improvements in product-related consulting, training, support, and maintenance capabilities

We identify the vendors with the highest improvement rankings and award the Star Performer rating to those vendors with:
- The maximum number of performance improvements across all of the above parameters
  AND
- At least one area of significant performance improvement in both market impact and vison & capability

The Star Performers title relates to YOY performance for a given vendor and does not reflect the overall market leadership position, which is identified as Leader, Major Contender, or Aspirant.

FAQs

Does the PEAK Matrix® assessment incorporate any subjective criteria?
Everest Group's PEAK Matrix assessment adopts an unbiased and fact-based approach (leveraging service provider / technology vendor RFIs and Everest Group's proprietary databases containing providers' deals and operational capability information). In addition, these results are validated / fine-tuned based on our market experience, buyer interaction, and provider/vendor briefings

Is being a "Major Contender" or "Aspirant" on the PEAK Matrix, an unfavorable outcome?
No. The PEAK Matrix highlights and positions only the best-in-class service providers / technology vendors in a particular space. There are a number of providers from the broader universe that are assessed and do not make it to the PEAK Matrix at all. Therefore, being represented on the PEAK Matrix is itself a favorable recognition

What other aspects of PEAK Matrix assessment are relevant to buyers and providers besides the "PEAK Matrix position"?
A PEAK Matrix position is only one aspect of Everest Group's overall assessment. In addition to assigning a "Leader", "Major Contender," or "Aspirant" title, Everest Group highlights the distinctive capabilities and unique attributes of all the PEAK Matrix providers assessed in its report. The detailed metric-level assessment and associated commentary is helpful for buyers in selecting particular providers/vendors for their specific requirements. It also helps providers/vendors showcase their strengths in specific areas

What are the incentives for buyers and providers to participate/provide input to PEAK Matrix research?
- Participation incentives for buyers include a summary of key findings from the PEAK Matrix assessment
- Participation incentives for providers/vendors include adequate representation and recognition of their capabilities/success in the market place, and a copy of their own "profile" that is published by Everest Group as part of the "compendium of PEAK Matrix providers" profiles

What is the process for a service provider / technology vendor to leverage their PEAK Matrix positioning and/or "Star Performer" status ?
- Providers/vendors can use their PEAK Matrix positioning or "Star Performer" rating in multiple ways including:
  – Issue a press release declaring their positioning. See citation policies
  – Customized PEAK Matrix profile for circulation (with clients, prospects, etc.)
  – Quotes from Everest Group analysts could be disseminated to the media
  – Leverage PEAK Matrix branding across communications (e-mail signatures, marketing brochures, credential packs, client presentations, etc.)
- The provider must obtain the requisite licensing and distribution rights for the above activities through an agreement with the designated POC at Everest Group.

Does the PEAK Matrix evaluation criteria change over a period of time?
PEAK Matrix assessments are designed to serve present and future needs of the enterprises. Given the dynamic nature of the global services market and rampant disruption, the assessment criteria are realigned as and when needed to reflect the current market reality as well as serve the future expectations of enterprises

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With you on the journey

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