

Factors [12]	Elements [12]	Definition/ Example [12]	1 Initial [12]	2 Rudimentary [12]	3 Standalone [12]	Maturity Stages	4 Systematic [12]	5 Optimizing [12]	6 Outstanding
Organization  Organization enables significant process mining	Purpose	Describes the scope of process mining use cases in the organization, as well as the long-term strategies and vision. A use case contains a process mining technique, a process and an expected benefit	No specific use case has been defined yet	A first use case for process mining exists in the organization	A vision is written down, supported by performance indicators and a monitoring	The application of process mining is continuously expanded based on a roadmap with regard to new techniques or processes	A long-term pursued vision is continuously developed and systematically reviewed	A long-term pursued vision is continuously refined, meticulously executed, and thoroughly evaluated to enable advanced applications on processes.	
	Center of excellence for process mining	Bundles the effort for process mining in the organization, thus accelerating the adoption - Leadership and managerial support - Technical support and trainings - Methodological support, best practices	No unit of the organization bundles support for process mining	One unit deals with process mining with focus on one specific use case Time horizons are short-term	An interdisciplinary team addresses multiple use cases Time horizons are medium-term	A (centralized or hybrid) Center of excellence guides role assignment, tasks, and duties for process mining Time horizons are long-term	Process mining is established and anchored it in the organizational structure Time horizons are visionary and future-oriented	Process mining is established and anchored it in the organizational structure. In addition, there is an expert group dealing with advanced applications in PM. Time horizons are visionary and future-oriented	
	Process centricty	The organizations aspiration is to think and work cross-functionality	No process awareness (functional divisions act and optimize for themselves)	Initial process awareness through cross-functional process oriented thinking	Cross-functional process management (e.g. fixed responsibilities, standardization measures and KPIs)	Target-driven end-to-end processes (e.g. proactive action and strategic alignment of processes)	Continuous optimization of end-to-end processes	Automated optimization of end-to-end processes	
	Evidence centricty	Data is generally used to base decisions in the organization	Data is not used for decision support	Data is passively collected but not used for decision support	Data is actively collected, but not actively used to support decisions (i.e. there is no need to view the data)	Data is actively used for decision support	Data-based standard solutions are established in relevant business areas and account for the main source of information	Process Mining Analysis solutions are established in the relevant business areas and complement data-based standard solutions.	
	Change centricty	Culture and organization is open for change	Corporate culture is rigid	Changes only happen top-down	A culture of change is established among employees, especially in the form of an active error culture	Mistakes are seen as a chance for improvement	Change is considered natural at all levels	Change is seen at all levels as an opportunity to gain an advantage over competitors.	
	Methods of process mining project phases	Maturity of methods in the organization to structure tasks of process mining project phases - Workshops or structuring templates - Data map - Process models like CRISP-DM or PM'2	No supporting methods in use	Supporting methods are undocumented	Supporting methods are documented	Supporting methods are linked to project phases and become mandatory	Methods are bundled and further developed in one place	Methods are bundled and further developed in one place. New Methods from science are quickly implemented in practice in a meaningful way.	
Data foundation  Environment enables sufficient process mining	Process-oriented IT-systems	Describes the maturity/ used IT-systems regarding completeness and reliability for event logs	Data is mainly recorded by hand	The majority of data is recorded automatically as a by-product of IT-systems, but there is no claim to completeness or reliability	Data is automatically recorded by IT-systems and the data in the system is reliable, but there is no claim to completeness	Data is automatically recorded by IT-systems and is complete and reliable	In addition, data protection, security, and semantically clear structures are guaranteed	The IT-system automatically provides an event log for each process.	
	Data accessibility	Access to data can be given quickly to relevant entities - Reduction of databases - Uniform and optimal format - Reduction of access time	Data is not optimally accessible	First business units develop a strategy to increase accessibility Data is only extracted on demand and in a costly manner	The strategies are extended and aligned Data is only extracted on demand, but in a fixed procedure	Hurdles are systematically removed, and access times are accelerated through targeted measures Extraction is standardized and enables immediate data transformation	Data is directly accessible at all times according to the analysis questions without additional IT effort	In addition, further data is available for direct retrieval at any time, which can be used additionally.	
	Scope of the data	Data is annotated, transformed and enriched with further information according to its process-specific context - Meta data - Additional attributes like resource, order, size, type of product etc. - Completeness of contextualization	No additional description of the data	Limited data scope, with manual extensions and testing	Functional data scope, with first automated contextualization for specific application scenarios	Advanced data scope, through corporate standards for contextualization	Data is automatically extended by its context	Data is intelligently and dynamically augmented in real-time, leveraging advanced contextual analysis and predictive algorithms to ensure comprehensive and accurate information.	
	Handling process mining tools	The ability to use suitable tools independently at the right time - Knowledge of functional scope - Knowledge about tool limitations	No knowledge exists in handling process mining tools	Relevant business units have unpracticed knowledge about process mining tools	Operational, autonomous knowledge of process mining tools available in relevant business areas	Relevant business areas have routinized knowledge in the use of tools and can solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.	
	Technical basics	General knowledge of IT topics - Integration and dashboarding - Database queries - Operational support	No knowledge exists on technical basics	Relevant business units have theoretical knowledge of technical basics	Operational, autonomous knowledge of technical basics available in relevant business areas	Relevant business areas have routinized knowledge of technical basics and are able to solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.	
	Data preparation	Data can be processed to increase its information content - Preprocessing pipeline - Filters for data - Detect human errors and incompleteness	No knowledge exists on data preprocessing	Relevant business units have theoretical knowledge of data preprocessing	Operational, autonomous knowledge of data pre-processing available in relevant business areas	Relevant business areas have routinized knowledge of data preprocessing and can solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.	
	Classic data mining	Knowledge about the general handling of large data sets - Clustering - Dimension reduction - Feature selection - Machine learning	No knowledge exists of classic data mining	Relevant business units have theoretical knowledge about classical data mining	Operational, autonomous knowledge of classic data mining available in relevant business areas	Relevant business areas have routinized knowledge of classical data mining and can solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.	
	Process mining basics	Basic knowledge in process mining: process mining techniques, process representations (Petri nets, DFG, BPMN, etc.), algorithms - Advantages and disadvantages are known - Talking to use case	No knowledge exists of process mining basics	Relevant business units have theoretical knowledge about process mining basics	Operational, autonomous knowledge of process mining basics available in relevant business areas	Relevant business areas have routinized knowledge of process mining basics and can solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.	
Advanced application	Process mining for use cases beyond the main techniques (discovery, conformance, enhancement) - Control flow, organization, case, time perspective - Process flows - Predictive process mining	No knowledge exists on advanced applications	Relevant business units have theoretical knowledge on advanced applications	Operational, autonomous knowledge of advanced applications in relevant business areas available	Relevant business areas have routinized knowledge of advanced applications and can solve complex tasks autonomously	A knowledge management, carried out by a separate unit, is implemented to facilitate knowledge externalization and networking across business areas	A seamlessly integrated knowledge ecosystem, driven by a centralized and agile knowledge management function, empowers effortless knowledge externalization, fosters cross-functional networking, and facilitates real-time knowledge sharing and collaboration across all business domains.		
Scope of the process mining activity  Holistic application of process mining	Discovery	Process discovery describes how to create process models from event logs - Create actual process models - Incorporate knowledge from domain experts - Enrich process model with additional data	Process mining is not used for process discovery	Process discovery is used for simple proof of concepts or not by the organization itself	Process discovery is used in selected use cases by the organization itself	Process discovery is used for all relevant business processes	The use of process discovery is continuously optimized and expanded	An AI-driven process discovery continually evolves and expands, optimizing operational efficiency.	
	Analysis	Analysis describes the data-based analysis of processes with regard to dimensions such as time, quality, complexity or costs - Quantitative analysis (flow analysis, cycle time ...) - Conformance checking	Process mining is not used for process analysis	Process analysis is used for simple proof of concepts or not by the organization itself	Process analysis is used in selected use cases by the organization itself	Process analysis is used for all relevant business processes	The use of process analysis is continuously optimized and expanded	An AI-driven process analysis continually evolves and expands, optimizing operational efficiency.	
	Monitoring and controlling	Ongoing monitoring and control of processes by means of keyprocess indicators	Process mining is not used for process monitoring and controlling	Process monitoring and controlling are used for simple proof of concept or not by the organization itself	Process monitoring and controlling are used in selected use cases by the organization itself	Process monitoring and controlling are used for all relevant business processes	The use of process monitoring and controlling is continuously optimized and expanded	An AI-driven process monitoring and controlling continually evolves and expands, optimizing operational efficiency.	
	Operating advanced use cases	Process mining is used specifically for advanced application scenarios such as prediction or automated execution of actions	Process mining is not used for advanced applications	Advanced applications are applied to simple proof of concepts or not by the organization itself	Advanced applications are applied to selected use cases by the organization itself	Advanced applications are applied to all relevant business processes	The use of advanced applications is continuously optimized and expanded	Advanced applications are constantly being developed, enhanced and automated using AI to optimize operational efficiency.	
Governance  Guidelines for process mining application	Method / tool governance	The maturity of guidelines that define who can and must use which tools/methods - Which tool for which use case - Which method in which phase of the BPM lifecycle	No or undocumented method/ tool guidelines	Documented method/tool guidelines, but not consistently enforced	Documented method/tool guidelines are visible at a central location for all stakeholders and are consistently enforced	Future and historical changes to method/tool guidelines are visible for all stakeholders at a central location	Governance matters are bundled and further developed at one entity within the organization	A centralized governance center leads comprehensive development, refinement and documentation in a location that is readily accessible to all stakeholders at all times.	
	Roles and responsibilities	The maturity of policies that define accountability and role assignment for process mining in the organization - For employees, but also for other actors (crowdworkers, robots, smart devices, software)	No or undocumented roles and responsibilities	Documented responsibility guidelines, but not consistently enforced	Documented responsibility guidelines are visible at a central location for all stakeholders and are consistently enforced	Future and historical changes to responsibility guidelines are visible for all stakeholders at a central location	Governance matters are bundled and further developed at one entity within the organization	A centralized governance center leads comprehensive development, refinement and documentation in a location that is readily accessible to all stakeholders at all times.	
	Process governance	The maturity of standards and guidelines for process decisions - Who gets to modify processes and when? - Who defines and measures process performance? - Who documents and actualizes processes?	No or undocumented process guidelines	Documented process guidelines, but not consistently enforced	Documented process guidelines are visible at a central location for all stakeholders and are consistently enforced	Future and historical changes to process guidelines are visible for all stakeholders at a central location	Governance matters are bundled and further developed at one entity within the organization	A centralized governance center leads comprehensive development, refinement and documentation in a location that is readily accessible to all stakeholders at all times.	
	Data governance	The maturity of guidelines for management and control over the use of (process) data - Who is allowed to view process data and when? - Who may grant access to data and when?	No or undocumented data guidelines	Documented data guidelines, but not consistently enforced	Documented data guidelines are visible at a central location for all stakeholders and are consistently enforced	Future and historical changes to data guidelines are visible for all stakeholders at a central location	Governance matters are bundled and further developed at one entity within the organization	A centralized governance center leads comprehensive development, refinement and documentation in a location that is readily accessible to all stakeholders at all times.	