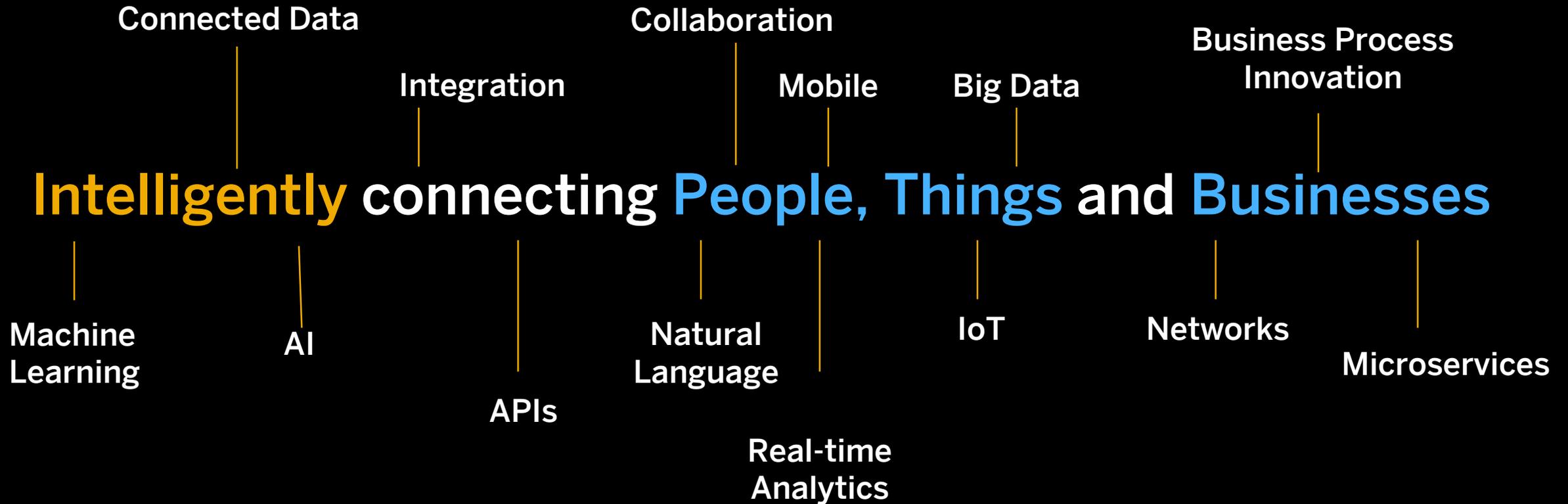# SAP Leonardo

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Cloud and Platform Technology □ SAP Middle & Eastern Europe

SAP Run Simple

Digitization
Every company strives to become a connected business

Connected Data

Collaboration

Business Process
Innovation

Integration

Mobile

Big Data

Intelligently connecting **People, Things** and **Businesses**

Machine
Learning

AI

IoT

Networks

Microservices

APIs

Natural
Language

Real-time
Analytics

SAP Leonardo

The **digital innovation system** that enables you to **innovate at scale** to confidently redefine your business.

SAP Leonardo Digital Innovation System
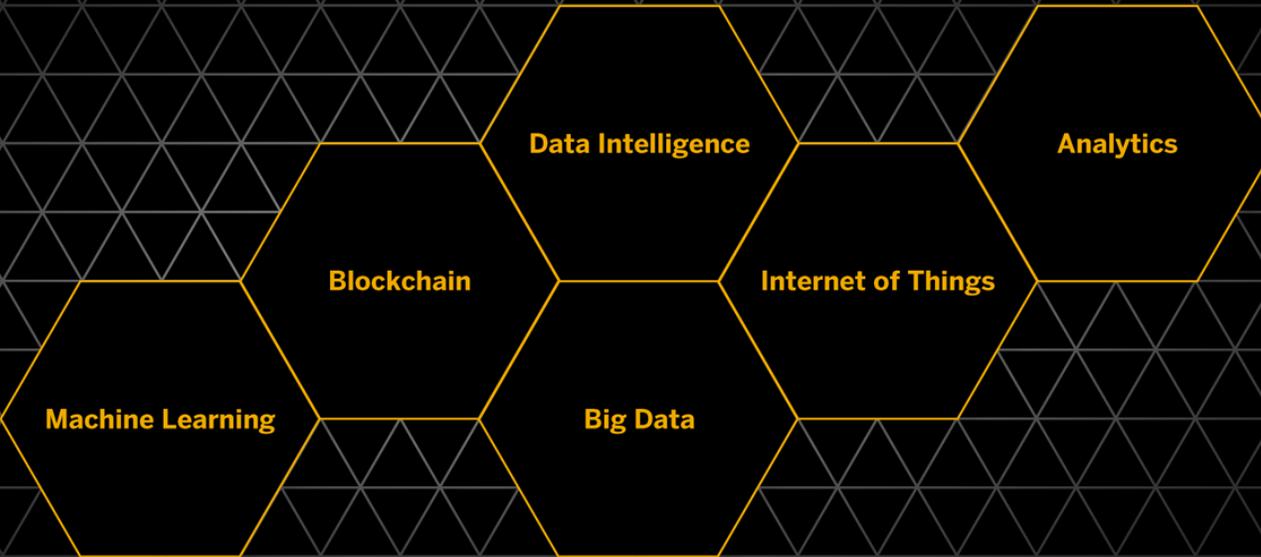
Solution Ideation & Vision ⟩ Rapid Prototyping ⟩ Business Case Development ⟩ Technology Blueprint

Design Thinking Services

SAP Leonardo Technologies

Machine Learning · Blockchain · Data Intelligence · Big Data · Internet of Things · Analytics

SAP Cloud Platform   Microservices | Open APIs | Flexible Runtimes | Integration

Multi-Cloud Infrastructure   SAP Data Center   Google Cloud Platform   Microsoft Azure   amazon web services

VR – Virtual reality

What is it the definition?

Virtual reality replaces the real world with a simulated one.

Headsets and sensory devices enable the user to be isolated from the physical world and be immersed in a virtual world

Business Use

Virtual reality is being used in automotive, aerospace, and ground transportation OEMs in their product engineering and manufacturing engineering . Virtual reality adds more dimensions to virtual prototyping, product building, assembly, service, performance use-cases.

AR – Augmented Reality

What is the definition?

Augmented reality (AR) , is a live direct or indirect view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or location data. Examples are Google Glass and Vuzix goggles

Business Use

Complex tasks such as assembly, maintenance, and surgery are simplified by inserting additional information into the field of view. For example, labels can be displayed on parts of a system to clarify operating instructions for a mechanic performing maintenance on a system Big machines are difficult to maintain because of the multiple layers or structures they have. AR permits Service engineers to look through the machine as if it was with x-ray, pointing them to the problem right away. Marketing materials can be designed with certain "trigger" images that, when scanned by an AR-enabled device using image recognition, activate a video version of the promotional material.

Blockchain
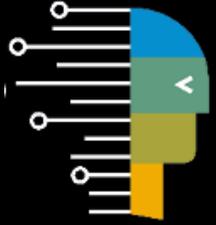
What is the definition?

A blockchain is a distributed database that is used to maintain a continuously growing list of records, called blocks. By design, blockchains are inherently resistant to modification of the data. Once recorded, the data in any given block cannot be altered retroactively without the alteration of all subsequent blocks and the collusion of the network. Functionally, a blockchain can serve as "an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way.

Business Use

Finance: Decentralized crypto currencies provide people across the globe with instant, secure, and frictionless money.

Property: Smart property allows ownership of both physical and non-physical property to be verified, programmable and tradeable.

Contracts: Smart contracts are verified on the blockchain, allowing for programmable, self executing and self enforcing contracts.

Identity: Blockchain technology allows for identity verification, authorization, and management, significantly reducing fraud…

Big Data
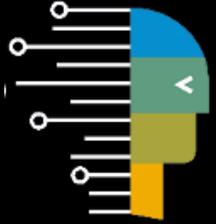
What is the definition?

Big data is a term for data sets that are so large or complex that traditional data processing application software is inadequate to deal with them. Challenges include capture, storage, analysis, data curation, search, sharing, transfer, visualization, querying, updating and information privacy. The term "big data" often refers simply to the use of predictive analytics, user behavior analytics, or certain other advanced data analytics methods that extract value from data, and seldom to a particular size of data set.

Business Use

Huge impact on all areas of business:

Manufacturing: Improvements in supply planning and product quality provide the greatest benefit of big data for manufacturing. Big data provides an infrastructure for transparency in manufacturing industry, which is the ability to unravel uncertainties such as inconsistent component performance and availability.

Healthcare

Big data analytics has helped healthcare improve by providing personalized medicine and prescriptive analytics, clinical risk intervention and predictive analytics, waste and care variability reduction, automated external and internal reporting of patient data, standardized medical terms and patient registries and fragmented point solutions...

Chat Bots

What is the definition?

A chatbot is a computer program which conducts a conversation via auditory or textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner, thereby passing the Turing test. Chatbots are typically used in dialog systems for various practical purposes including customer service or information acquisition

Business Use

Chatbots are often integrated into the dialog systems of virtual assistants, giving them the ability to deflect or support service requests, promote products or support the placement of orders .

IoT - Internet of things
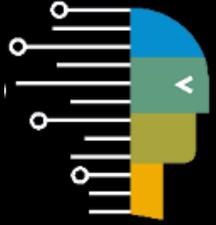
What is the definition?

The Internet of things (IoT) is the inter-networking of physical devices, vehicles (also referred to as "connected devices" and "smart devices"), buildings, and other items embedded with electronics, software, sensors, actuators, and network connectivity which enable these objects to collect, exchange and respond to data.

Business Use

According to Gartner, there will be nearly 20.8 billion devices on the Internet of things by 2020. It is universally agreed that this will have widespread and beneficial effects by 2025 for all aspects of business. New business models will be developed, customer service will be improved and product development will benefit.

Data Intelligence - Data Networks
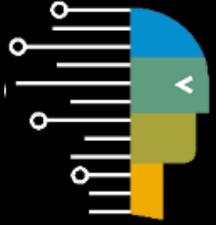
What is the definition?

In its simplest form, Data Networks monetize data assets it has access to. It takes raw data from millions of records, aggregates and anonymizes them. Algorithms derive unique insights from the data that are then packaged and visualized and put to market in a cloud environment for customers to consume.

Business Use

To be competitive, companies have initiated their cloud transformations - many having entered and already completed digitization of their companies' assets. The next step, now that they can properly store, analyze, and communicate their data is to do something with it: businesses are now looking for ways to to capitalize on either their own (or external) vast stores of data in the newly emerging Data Economy

AI/ML - Artificial intelligence / Machine Learning
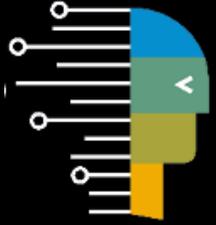
What is the definition?

Computers learn from data without being explicitly programmed, they can see, read, listen, understand, and interact. Machine learning explores the study and construction of algorithms that can learn from and make predictions on data – such algorithms overcome following strictly static program instructions by making data-driven predictions or decisions, through building a model from sample inputs. Machine learning is employed in a range of computing tasks where designing and programming explicit algorithms with good performance is difficult or infeasible

Business Use

SAP Leonardo Use Cases:

- Invoice Matching

- Service Ticket Intelligence

- Brand Impact

- Resume Matching

- Customer Retention…

Why Now?

- Big Data (for example, business networks, cloud applications, the Internet of Things, and SAP S/4HANA) makes data at volume viable to use in real or near real time

- Massive improvements in hardware (graphics processing unit and multicore) at cheaper cost than ever before

- Deep learning algorithms are freely available with significant investment from major organizations leading to further optimization and innovation
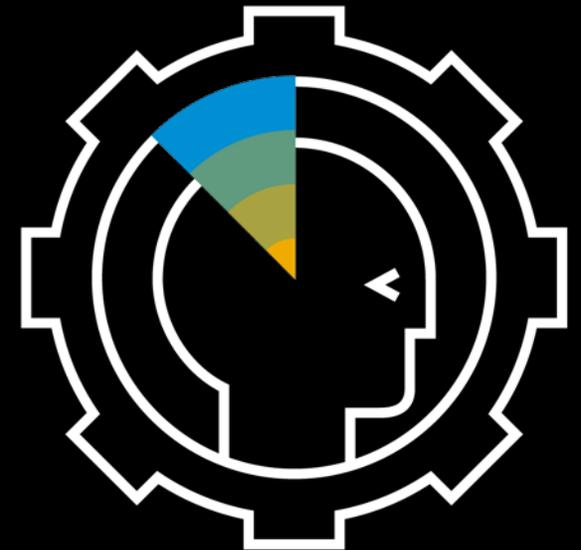
How enterprise data is transformed into business value
From data to insights

Input

Text
Video
Speech
Image
… and more

Machine learning

Train model
Apply model
Prepare data
Capture feedback

Output

Applications
(such as Service applications)

…and more

Services
(such as invoice processing, profile matching)
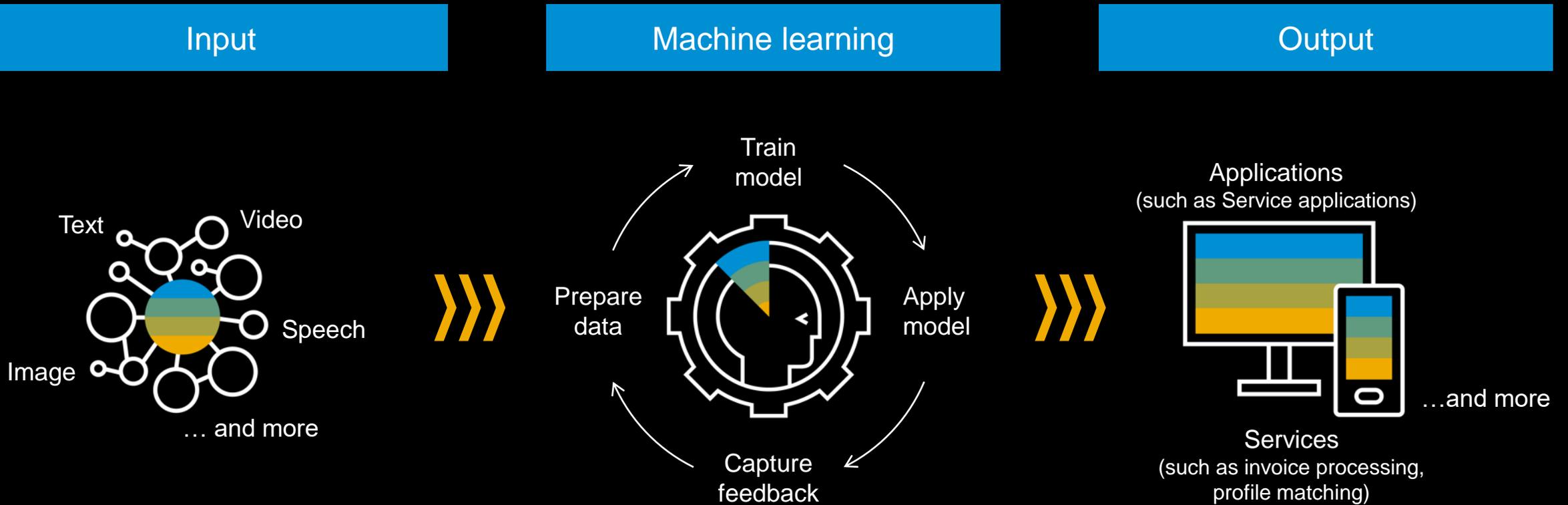
SAP Cash Application

Next-generation intelligent invoice matching powered by machine learning

History
Payments
Invoices

SAP Leonardo
Machine Learning

Matching
proposals

SAP Cash Application intelligently learns matching criteria from
your history and automatically clears payments.

Improves days of sales outstanding

Integrated with SAP S/4HANA for reduced TCO and time to value

Allows shared services to scale as the business grows

Empowers finance to focus on strategic tasks and service quality

SAP Brand Impact
Reimagine marketing and sponsorship engagements

Video
Brand logos

SAP Leonardo
Machine Learning

Exposure metrics
for business impact

SAP Brand Impact automatically analyzes brand exposure in video and images by leveraging advanced computer vision techniques. It helps media agencies, production companies, and brands to gain accurate, timely insights into sponsoring and advertising ROI.

Fast: Near real-time

Transparent
Interactive interface

Accurate and scalable
to millions of hours

Time-annotated
impact indicator API
for combining data
with CRM, ERP,
Web site stats

SAP Customer Retention

Build customer loyalty through proactive retention

Customer data
Digital fingerprints

SAP Leonardo
Machine Learning

Churn prediction
Root causes

SAP Customer Retention identifies leading indicators based on transactional interactions to anticipate customer behavior, such as product cancellations or renewals

Automatically classifies and finds patterns

Detects at-risk customers

Provides understanding of root causes and timely predictions to act

SAP Resume Matching
Find the best talent faster with intelligent candidate matching

History
Resumes
Jobs

01011
11010
10
01101

SAP Leonardo
Machine Learning

Best candidates

SAP Resume Matching automates the screening process by identifying the candidates with the best skills and education match with reduced bias

Fast-track the screening process to save time and effort

Identifies the best candidates and reduce false positives

Reduces possibility of missing potential candidate

Mitigates the recruiter's personal bias in screening candidates

SAP Job Standardization

Find the best fit job category faster with intelligent job description matching

History
Job Descriptions
Job Categories

`01011`
`11010`
`10`
`01101`

SAP Leonardo
Machine Learning

Best fit Job Category

SAP Job Standardization classifies job descriptions against job standards (such as the Occupational Information Network, O*NET)

Time Saving in searching for job category

Creates common language and improves consistency

Better targeted recruiting efforts lead to better job transparency

SAP Fraud Management
Identify fraud behavior

History
Invoices
Claims

SAP Leonardo
Machine Learning

Potential fraud

SAP Fraud Management increases accuracy of fraud alerts with predictive algorithms that identify potential cases based on historical data.

Ability to focus on cases with highest likelihood of fraud and ROI	Integrated with SAP HANA for reduced TCO and time to value	Models update as patterns of fraud evolve	Custom and 3rd-party algorithms to optimize for customer's business

SAP Accounts Payable

Automate the accounts payable processes

Incoming invoices

SAP Leonardo Machine Learning

Increased compliance Reduced cost

SAP Accounts Payable is an ever-expanding suite of machine learning services that automate accounts payable processes. Based on deep learning it processes incoming invoices and extracts important information. For a high level of compliance it also supports matching invoice vendors to you master database.

Automates and speed up the process from minutes to seconds

Reduces number of errors and effort when posting invoice data to record with higher accuracy

Increases quality and compliance, number of matches in a shorter amount of time and potential throughput of invoices