



Improving Productivity and Performance through Automation

REINHOLD ENGELBRECHT
SENIOR TECHNICAL SPECIALIST FOR AUTOMATION
IBM

THE FUTURE OF INTELLIGENT AUTOMATION



OVATIONS

Speaker Introduction

- Has been with IBM for over 26 years
- Technical and Business Automation Sales Manager for IBM Technology
- 12 years-Technical Sales Manager for Enterprise Content Management, Europe



Reinhold Engelbrecht
Senior Technical Specialist
for Automation
IBM

Improving Productivity and Performance with IBM Business Automation

Opportunities for automation are everywhere

Customer service and innovation

Limit customer service disruptions

Reduce processing errors

Industry and mission-critical operations

Digitize processes to maintain business continuity

Approve operations tickets and exceptions

Financial management and planning

Reduce time from procure to pay

Speed order to cash

Risk and compliance

Automate Know Your Customer (KYC) regulatory compliance

Quickly identify fraudulent transactions

IT operations

Improve management of IT service requests

Empower Line of Business⁴ (LOB) through low-code tooling

Talent lifecycle

Identify gaps in operations workers

Speed employee onboarding

IBM
Watson

IBM
Content

IBM
Workflow

Creativity

Memory

Nervous
System

Reason

Sight

Tools

IBM Decisions

IBM Document
Processing

IBM RPA



Understanding and Visibility

IBM Process Mining & Insights



What is the IBM Cloud Pak for Business Automation?

Comprehensive platform

Complete offering for automating business operations

Integrated capabilities

Pre-integrated automation technologies and low-code tools

Flexible deployment

Design, build and run automation solutions on any cloud or within your data center or SaaS managed by IBM



IBM Cloud Pak for Business Automation

Client and partner solutions

Low-code applications

Automation accelerators



Process mining and modeling




RPA and digital labor



Operational intelligence

Core automation




Document processing



Workflow



Decision management



Content services

AI and machine learning

Automation foundation

– Robotic Process Automation

– Natural language interactions

– Process and task mining

– Event detection

– Machine learning

– 3rd Party integrations

– Operational models



IBM Cloud



AWS



Microsoft Azure



Google Cloud



VMware



Private



IBM Z
IBM LinuxOne
IBM Power Systems

End points



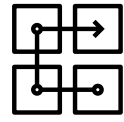
IBM Cloud Pak for Business Automation: Core automation



Document processing

Capture, classify, and extract data from content

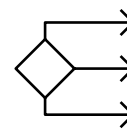
- Speed extraction of data
- Reduce data entry errors
- Gain insights from unstructured documents



Workflow

Design and manage start-to-finish workflows

- Choreograph human and automated activities
- Improve consistency across business operations
- Increase straight-through processing



Decision management

Automate decisions with business rules

- Rapidly adapt to business change
- Increase consistency and auditability of decisions
- Integrate with predictive analytics



Content services




Share, manage and collaborate on content

- Instant access to content
- Connect content to digital business applications
- Assure governance and compliance

Demo time

Intelligent Client Onboarding Scenario Flow

service provider across various industries

-  Intelligent Automation
-  Business Automation
-  Integration

Page 1



Fill out onboarding info



Review documentation

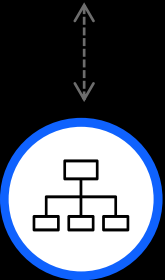


Submit for approval

Page 2

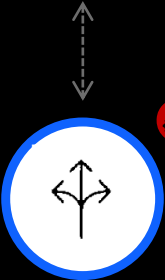
Page 3

Business Automation Application



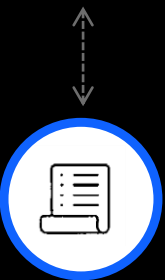
Workflow

Retrieve details based on client name



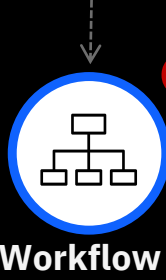
Decisions

Determine services fee and additional services to offer



Content

Review existing client documents



Workflow

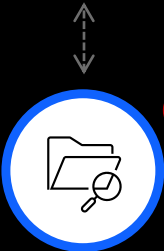
Orchestrate tasks based on info provided



App Connect

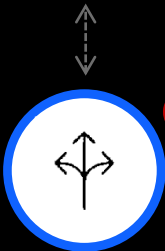
Send Email via Gmail

Manual intervention if required



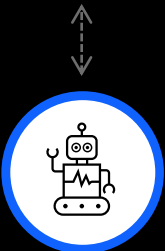
Capture

Collect additional documents and validate ID



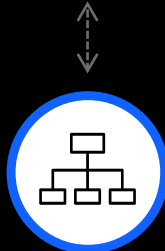
Decisions

Scoreboarding (Assess risk and classify client)



RPA

Add client to legacy system



Workflow

Provide approval status notification

Where to get started?



Gaining visibility

“And a thing is not seen because it is visible, but conversely, **visible because it is seen**” Socrates c. 400 BC

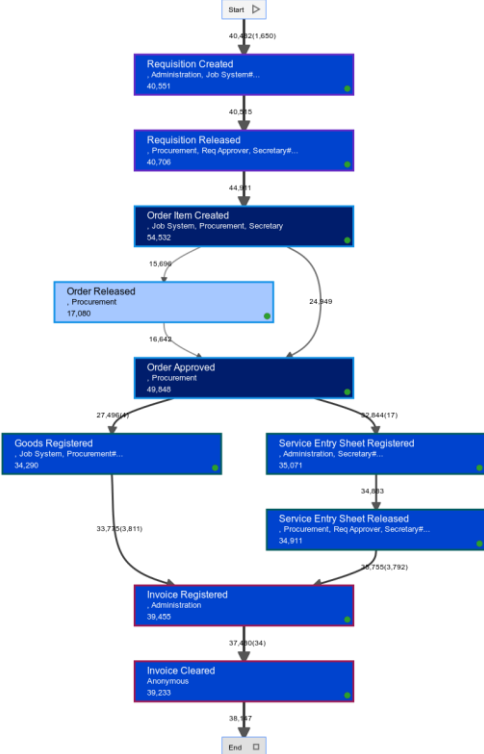
1

How we think life works



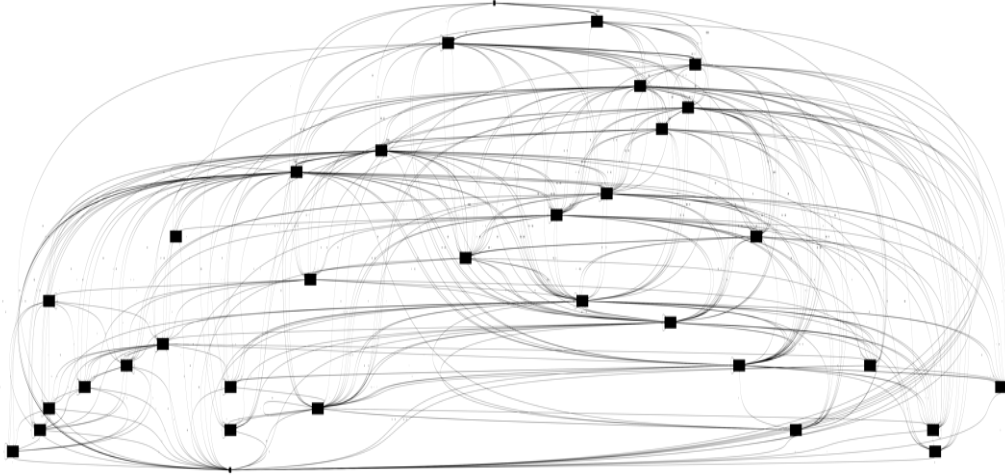
2

How life appears to us



3

How the truth actually operates



AI infused IBM Process and Task Mining unique capabilities



Discovery: Create digital twin

Automated **Discovery** algorithms for:

- Process discovery
- **Task mining**
- **Business rules mining**
- **Multi-level process mining**

Use digital twin

Continued **Monitoring** of:

- KPI and cost
- Compliance
- Automation
- Root cause analysis

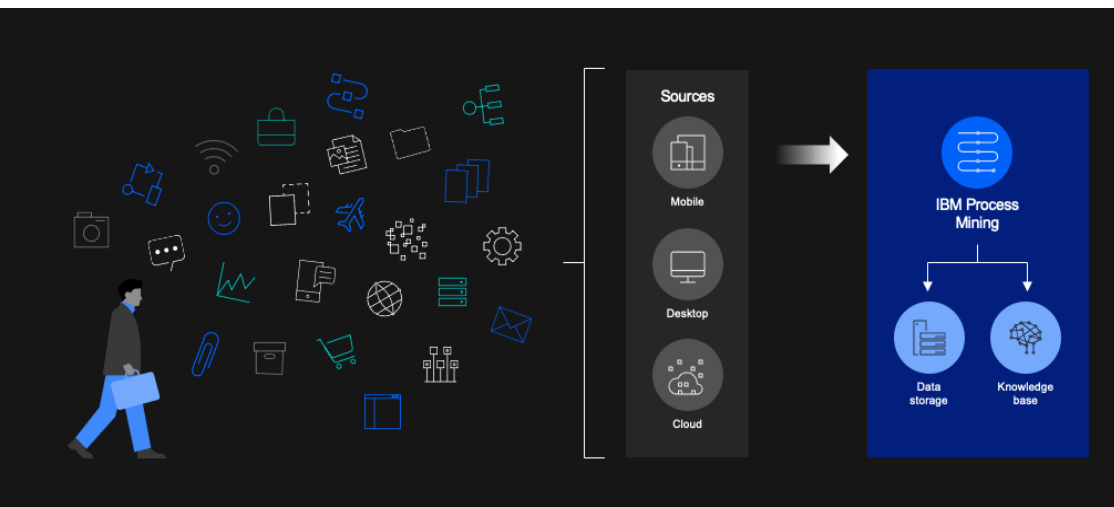
Play with digital twin

Optimize using:

- What-if scenarios
- **Simulation**
- **Automation recommendation: RPA and Workflow**
- ROI calculator

Flexible deployment models

- Cloud: Provided as a SaaS solution
- Hybrid Cloud: Red Hat OpenShift containers
- On-prem: Red Hat Enterprise Linux



Apply AI to capture and understand content

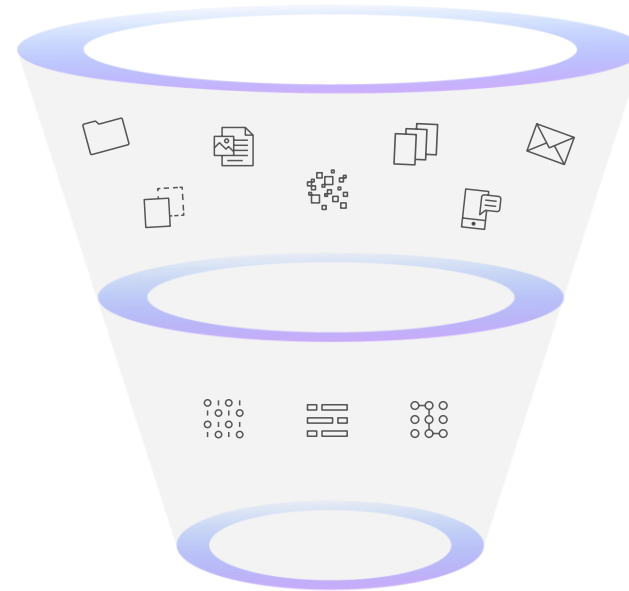


Content & Capture

Intelligent classification and extraction provides a way to automatically understand unstructured documents such as images, videos, emails, social media, blogs, and other documents

Benefits:

- Save employee time
- Improve customer service
- Increase operational efficiency



Content and capture with IBM Cloud Pak for Business Automation



Content & Capture

Intelligently classify documents and extract data with Automation Document Processing

Read

- Apply Deep Learning to extract data from forms, statements and unstructured documents
- Text fields, simple tables, checkboxes, natural language

Refine

- AI-powered data enrichment
- Automatic data correction and suggestion
- Validate data values to produce trusted data
- Human-in-the-loop validation

Apply

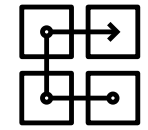
- Automatically classify and extract data from documents added to IBM FileNet Content Manager
- Feed data to workflow, RPA, and applications

The screenshot displays the 'Create data extraction model' interface in the IBM Cloud Pak for Automation Studio. The breadcrumb trail is 'DBA Studio / DEMO1 / Data Extraction'. The workflow progress bar shows 'Split samples' and 'Teach model' as completed steps, 'Train model' as the current step, and 'Enrich data (optional)' and 'Preview model (optional)' as optional steps. A 'Teaching summary' section states 'The document types and fields to be trained for this model.' Below this is a search bar with the placeholder text 'What are you looking for today?'. A table lists the document types and their training status:

Document type	Samples taught	Fields taught	Status
Invoice	2/9	6	Ready to train
Packing List	0/10	0	Will not be trained
Purchase order	0/10	0	Will not be trained

On the right side, a 'Training' summary box indicates '1 document type' and '6 fields', with a 'Train model' button.

Prioritise tasks with IBM Cloud Pak for Business Automation



Workflow

Intelligent task prioritization

- Every task in a worker's task list is scored using predictive analysis:
 - Skill score
 - Performance score
- Each worker's task list is sorted with the high-valued, high-skill, and high-performance tasks at the top of the list
- Workers can prioritize their time on the highest value tasks

Status	Priority	Name	Due on
On track	Medium	Task: GM Approval	11/10/2020
On track	Medium	Approve Extension	11/20/2020

Formula0 Recommendation
86% confident about Approval

Task: GM Approval

Contact: Head of Product Development
Department: Head of Product Development
Title: Head of Product Development
Starting date: 11/10/2020
Number of employees: 1

Qualifications

Education Skills Experience

Bachelor of Science (BS)
Bachelor of Arts (BA)
Bachelor of Engineering (B.Eng)
Bachelor of Architecture (B.Arch)

Approval

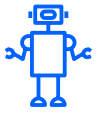
Approved?
 Approved
 Rejected

GM comment

Submit

Intelligent task prioritization uses predictive analysis to score each worker's tasks by expected skill and performance

Enhance Automation with Conversational AI



Artificial Intelligence (AI):

Computing technology that exhibits anything that resembles human intelligence, either by reasoning logically, inferring, learning from data using Machine Learning techniques, or finding patterns using deep learning or other methods.



Machine Learning (ML):

A subset of AI, a technique where algorithms identify patterns, make decisions and learn.



Deep Learning:

A subset of machine learning, a technique where an application that teaches itself to perform a specific task with increasingly greater accuracy, without human intervention.

Conversational AI

Conversational AI is a type of artificial intelligence that enables consumers to interact with computer applications the way they would with other humans.

Generative AI

Generative AI is a type of artificial intelligence technology that can produce various types of content including text, imagery, audio and synthetic data.

Predictive AI

Predictive AI uses data analysis, machine learning, artificial intelligence, and statistical models to find patterns that might predict future behavior. It can use historic and current data to forecast trends and behaviors with a great deal of precision.

Demo time

[Link](#)

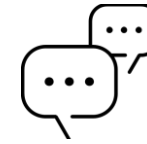
How is Digital Labor more than a chat bot?



Hi. I'm Watson.

How it interacts

- Natural language / Autonomous events
- Context Awareness
- Most optimized, guided interactions



Chat



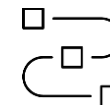
Context



Guidance

How it thinks

- Orchestrate skills dynamically
- Memory is maintained over multiple interactions to complete complex work



Dynamic Sequencing



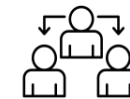
Memory

How it works

- Pre-built skills
- Easily Discover & Train new skills
- Delegation of long-running tasks
- Multi-tasking of skills execution



Discover



Delegation



Multi-tasking

Watson Orchestrate

Digital labor for automating work

User

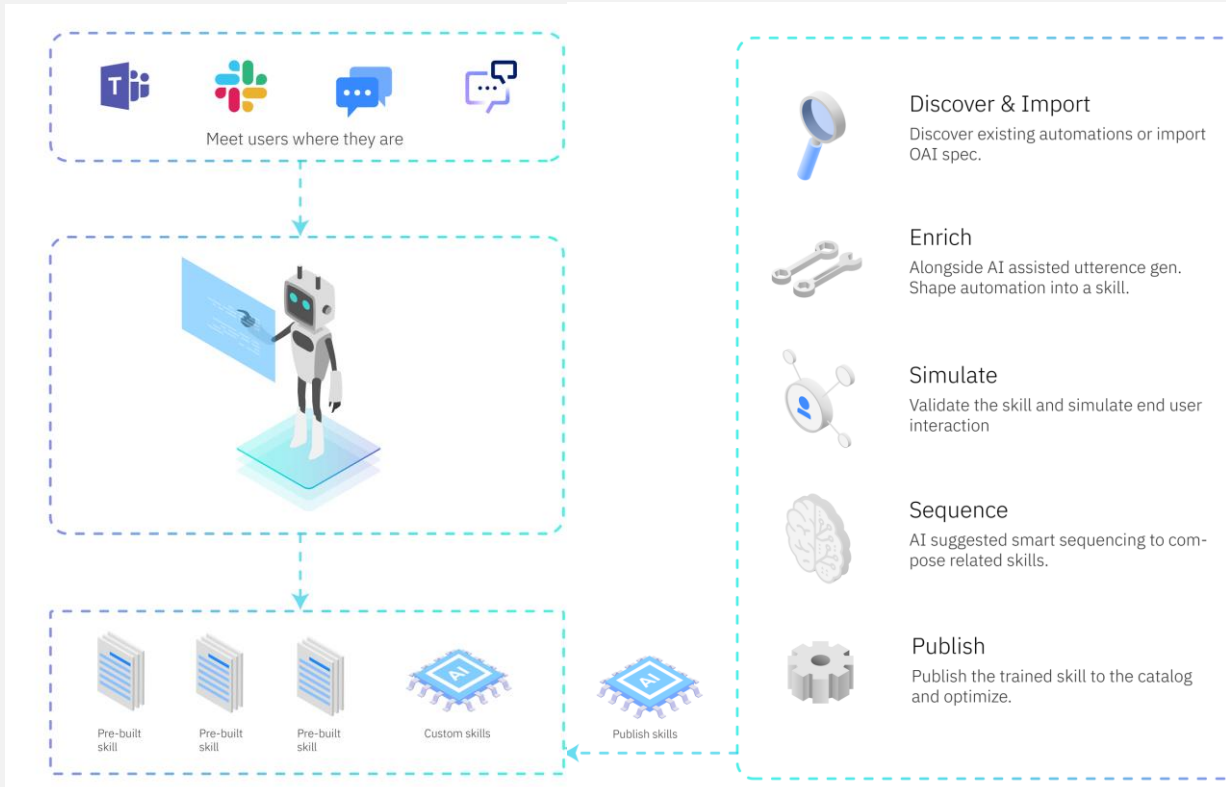
Engage with the Watson naturally. Focus on the **outcome**, not the process or systems



- Create a sales lead
- Post the job on LinkedIn
- Find me potential vendors for subcontracting
- Identify the best customers for product A
- Schedule an interview
- Has the candidate responded to my job ?

Watson

Watson, a personal digital employee with contextual memory, able to mix-and-match skills in real time



Day 1 and compounding value from growing catalog of pre-trained skills and integrations by domain (HR, Procurement, etc.)
© 2023 IBM Corporation

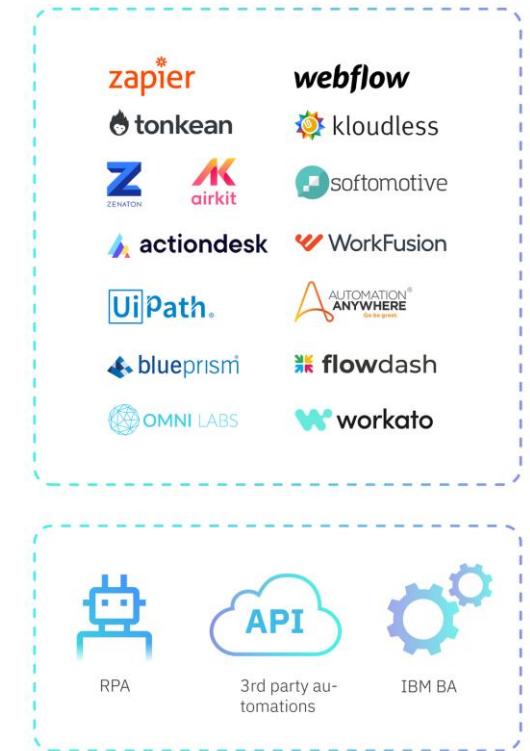
Discover & Train

Turn any automation into a digital labor skill through low-code, AI assisted manner, in a few min

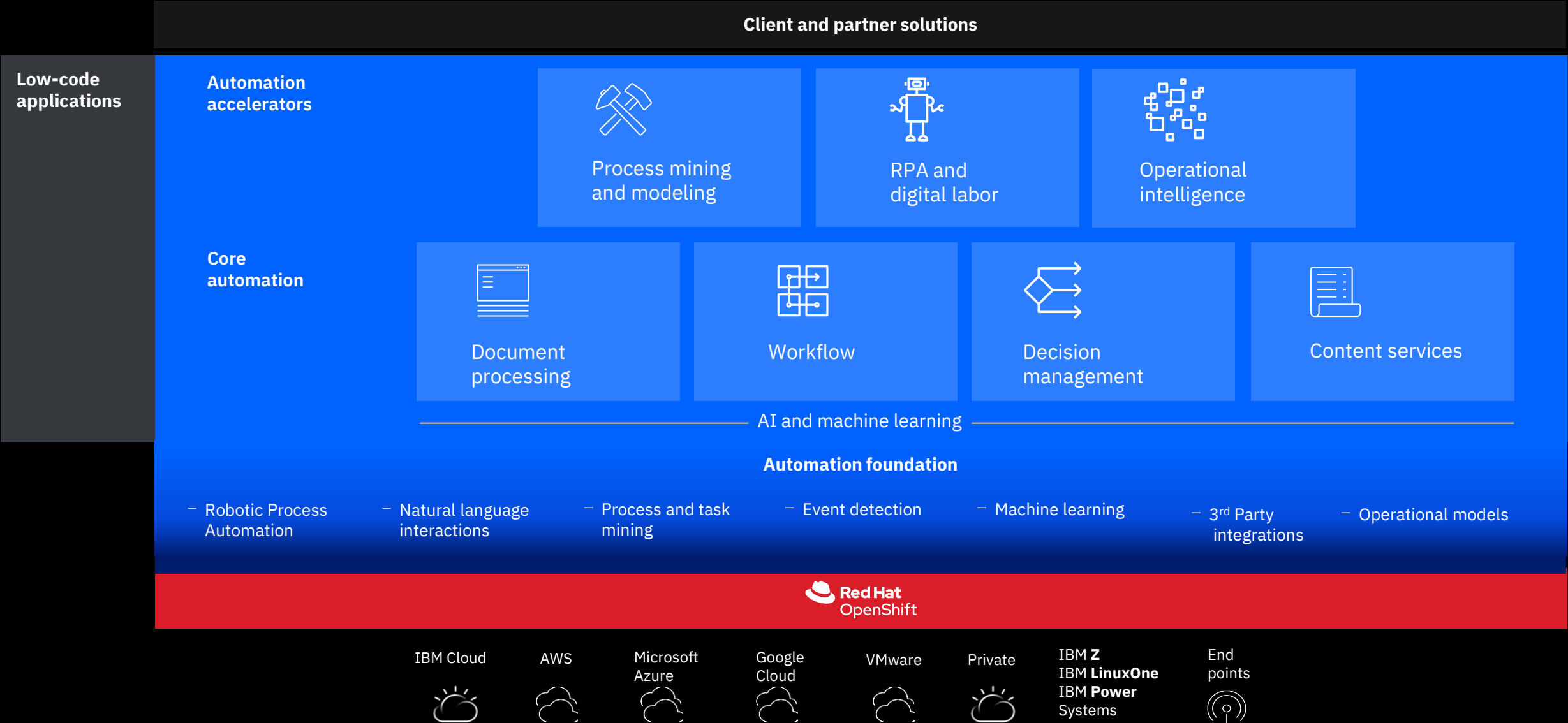
Accelerate digital labor skill creation through easy and AI assisted experience for customers and partners

Automation

Protect your investments. Bring in automation from various tools including 3rd party



IBM Cloud Pak for Business Automation



Our Direction

1 Support

Invest in our customers.

- Prioritize client and BP ideas to improve customer's overall experience of maintaining & modernizing existing workloads.
- Develop new deployment and business models.

2 Modernize

Modernize to support new workloads.

- New modern AI-infused tooling .
- Easy-to-use interfaces across many device types
- Enable builders to build delightful modern use experiences for end-users.
- Help clients move to new operation models (OpenShift, public cloud, SaaS)

3 Differentiate



Bring together the breadth of IBM technologies to create unique value.

- AI and digital labor at the core.
- Comprehensive, leading platform
- Extreme productivity and scalability.
- Always reliable and secure

Have an idea for our products?

Submit or Vote on Ideas :

<https://dba.ideas.ibm.com/>

Digital Business Automation Ideas

Shape the future of IBM!

We invite you to shape the future of IBM, including product roadmaps, by submitting ideas that matter to you the most. Here's how it works:

Post your ideas

Start by posting ideas and requests to enhance a product or service. Take a look at ideas others have posted and upvote them if they matter to you,

1. Post an idea
2. Upvote ideas that matter most to you
3. Get feedback from the IBM team to refine your idea

Help IBM prioritize your ideas and requests

The IBM team may need your help to refine the ideas so they may ask for more information or feedback. The offering manager team will then decide if they can begin working on your idea. If they can start during the next development cycle, they will put the idea on the priority list. Each team at IBM works on a different schedule, where some ideas can be implemented right away, others may be placed on a different schedule.

Receive notifications on the decision

Some ideas can be implemented at IBM, while others may not fit within the development plans for the product. In either case, the team will let you know as soon as possible. In some cases, we may be able to find alternatives for ideas that cannot be implemented in a reasonable time.

Please use the following category to raise ideas for these offerings for all environments (traditional on premises, containers, on cloud):

- **Cloud Pak for Automation** - incl Business Automation Studio, Business Automation Insights
- **Business Automation Workflow (BAW)** - incl BAW, Business Process Manager, Workstream Services, Business Performance Center, Advanced Case Management
- **Content and Capture Services** - incl Filenet, Automation Document Processing, Daeja, Navigator, Content Collector, Enterprise Records, Business Automation Content Analyzer, Datacap, Automation Mobile Capture, Content Manager OnDemand, IBM Content Manager
- **Automation Decision Services (ADS)** - incl ADS, Operational Decision Manager
- **Robotic Process Automation**
- **Robotic Process Automation with Automation Anywhere**
- **IBM Blueworks Live**

If you encounter any issues accessing the Ideas portals, please send email describing the issue to ideasibm@us.ibm.com for resolution. For more information about IBM's Ideas program visit ibm.com/ideas.

Q Search all ideas...

+ ADD A NEW IDEA

My ideas 0

My votes 0

FILTER BY CATEGORY

Automation Decision Services (ADS)	97
Blueworks Live	266
Business Automation Workflow	464
Cloud Pak for Business Automation	48
Content and Capture Services	38
Robotic Process Automation	98

All ideas

Sort by: Trending Filter by: Status Showing 1035 of 1035

6 **Provide Daeja View Toolkit for BAW**

VOTE

We use Daeja View embedded into BAW using a toolkit originally created by an IBM employee (<https://us-south.git.cloud.ibm.com/schwarz/bpm-ui-Daeja.Document.Viewer/-/tree/master>). This toolkit is very useful but is now showing it's age as BAW has ...

5 days ago in Business Automation Workflow 0 Planned for future release

11 **Robot Scheduler with Recurrence**

VOTE

We are an accounting office, and we work with many activities that have recurrent.Example: Federal, State and Municipal tax payments on specified dates every month.in view of that, we need a solution where we can schedule the robot at once and hav...

13 days ago in Robotic Process Automation 1 Submitted

9 **When a bot runtime fails, add a shortcut in the web client to send the error and the error line number to the clipboard**

VOTE

In the web client, looking at a job log, we can click on details to see all the logs. Often enough, we only care about the error message that made the bot crash. Having a button that puts the error line number and the error message on the clipboard...

11 days ago in Robotic Process Automation 0 Submitted

IBM Business Automation Community

- Meet and interact with peers
- Stay informed on new product developments
- Ask for advice and guidance on a project
- Recommend product enhancements
- Participate in contests and hackathons
- Pick up useful tips and tricks
- Learn about upcoming automation events
- Build a personal brand as a subject matter expert

Any questions?

Join
now

Dedicated topic groups

Forum, blog, articles ...



IBM

IBM leads the market in business automation with AI

IDC

IBM ranking: #1

Worldwide Artificial Intelligence Services

Market Analysis Perspective: Worldwide Analytics and Intelligent Automation Services, 2021

IBM ranking: Major Player

Cloud Content Services

IDC MarketScape Worldwide Cloud Content Services 2022 Vendor Assessment

IBM ranking: Major Player

Robotic Process Automation

IDC MarketScape Worldwide Robotic Process Automation Software Vendor Assessment, 2021 – 2022



Nelson Hall

IBM ranking: Leader

Process Discovery & Mining

Vendor Evaluation & Assessment Tool, 2021

Forrester

IBM ranking: Leader

Digital Process Automation Software

The Forrester Wave: Digital Process Automation Software, Q4 2021

IBM ranking: Leader

Decision Services

The Forrester Wave: Digital Decisioning Platforms, Q4 2020

IBM ranking: Leader

Robotic Process Automation Services

The Forrester Wave: Robotic Process Automation Services, Q2 2022

IBM ranking: Strong performer

Content Services

The Forrester Wave: Content Platforms, Q2 2021



Omdia

IBM ranking: Leader

Content Services

Omdia Universe: Selecting a Content Services Platform, 2021

Everest Group

IBM ranking: Major Contender

Robotic Process Automation

PEAK Matrix® Assessment 2022

IBM ranking: Major Contender

Process Mining

PEAK Matrix® Assessment 2022

IBM ranking: Major Contender

Intelligent Document

Processing

PEAK Matrix® Assessment 2022



Infosource

IBM ranking: Star vendor

Capture

Infosource Capture Market Matrix, 2022

IBM Automation expertise across industries



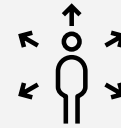
Global
capabilities

>17,000

Automation practitioners

3,000

IBM Research staff
in 19 locations across
six continents



Broad
experience

>5,000

Automation clients

3,800

Bots, runtime scripts
and automata deployed



Deep
expertise

>15

Industry and
domain heatmaps

8,682

U.S. Patents in 2021,
marking the 29th consecutive
year of U.S. patent leadership

TD Ameritrade

Business problem

TD Ameritrade wanted to automate and improve the process for opening new margin and option trading accounts. These are very profitable products, but they require a lot of work behind the scenes.

The solution

IBM Operational Decision Manager software brought about significant improvements. With the new solution in place, a staggering 97% of new margin and option requests went through immediately, and errors were virtually eliminated.



97%

straight-through processing
for of new margin/option
requests



Up to
70%

reduction in time
required to open a
new account

The world's most successful companies rely on IBM Business Automation



90% of the Fortune 100 companies



87% of the Fortune 100 companies



10 of the top 10 banks



5 of the top 5 airlines



10 of the top 10 healthcare companies



10 of the top 10 insurance providers



5 of the top 5 aerospace & defense companies



9 of the top 10 technology companies¹



²⁹
9 of the top 10 retailers



4 of the top 5 telcos



8 of the top 10 energy companies



4 of the top 5 food & beverage companies

Max Mara Fashion Group

Business problem

Over the course of the pandemic, the digital share of business volume nearly tripled, causing back-end operations to have a large impact on customer satisfaction.

Process problems created bottlenecks, especially in the range of warehouse-based activities between picking-and-packing and shipping.

The solution

IBM Process Mining helped Max Mara quickly and accurately identify not only where the problems were, but also which fixes would yield the highest ROI. Using the process discovery tool that combined implementation flexibility with powerful, granular process modeling capabilities, they were able to optimize their Order-to-Cash (O2C) processes.



Sompo Sigorta

Business problem

Turkish insurance company Sompo Sigorta was manually processing the nearly 10,000 pages of correspondence per day including claim forms, legal documents, hospital reports, estimates. It was a time-consuming, repetitive task that could result in document misplacement or other errors. They wanted to offer service level agreements to their customers and partners but were unable to track how long it would take to process documents and claims.

The solution

With IBM Business Automation Workflow, IBM Datacap and IBM Content Management software, Sompo Sigorta can now track each document as it moves through the organization. Claims processing specialists use business process management capabilities in IBM Business Automation Workflow to assess the information on the claim file and make necessary changes. Using this solution, Sompo Sigorta reduced the amount of time the operations department requires to file a claim by a full 20% in just six months.



20%

reduction in the time it takes to file a claim

Today, to hire a candidate for one job...

Business Process: [HR Talent Acquisition](#)



50+

Screens



9+

Different apps to switch



200+

Clicks



\$4,129

Average cost per hire



25+

Emails



8 hr/wk

Time spent by recruitment manager on scheduling interviews.



18+

Meetings

5+

Follow-ups



57%

Companies have a dedicated team member to schedule interviews.



42 Days

Average time to hire



x70 Average number of job openings that a single recruiter handles in a year.

With Watson Orchestrate...

Business Process: HR Talent Acquisition



- ↑ Increased productivity.
- ↑ Increased efficiency
- ↑ Increased quality of hire
- ↑ Positive recruiter and candidate experience.

40%
Increase in productivity of recruitment manager.

60%
Reduction in time to hire.

x100s Pre-built automation skills in the catalog and growing...