

# Improving the Execution of Work with an AI Driven Automation Platform

**Kramer Reeves**

*Director, Global Marketing -  
IBM Automation*

**Michael Lim**

*Program Director -  
IBM Digital Business Automation*

**Jeffrey Goodhue**

*Technical Specialist -  
IBM Digital Business Automation*

# The intelligent automation opportunity is three-fold:

## Free up employees from low value tasks

“Automation can save up to three work hours per day, according to 78% of business leaders.”

WorkMarket, 2017

## Assist employees with high value work

“By 2022, one in five workers engaged in mostly nonroutine tasks will rely on AI to do their jobs.”

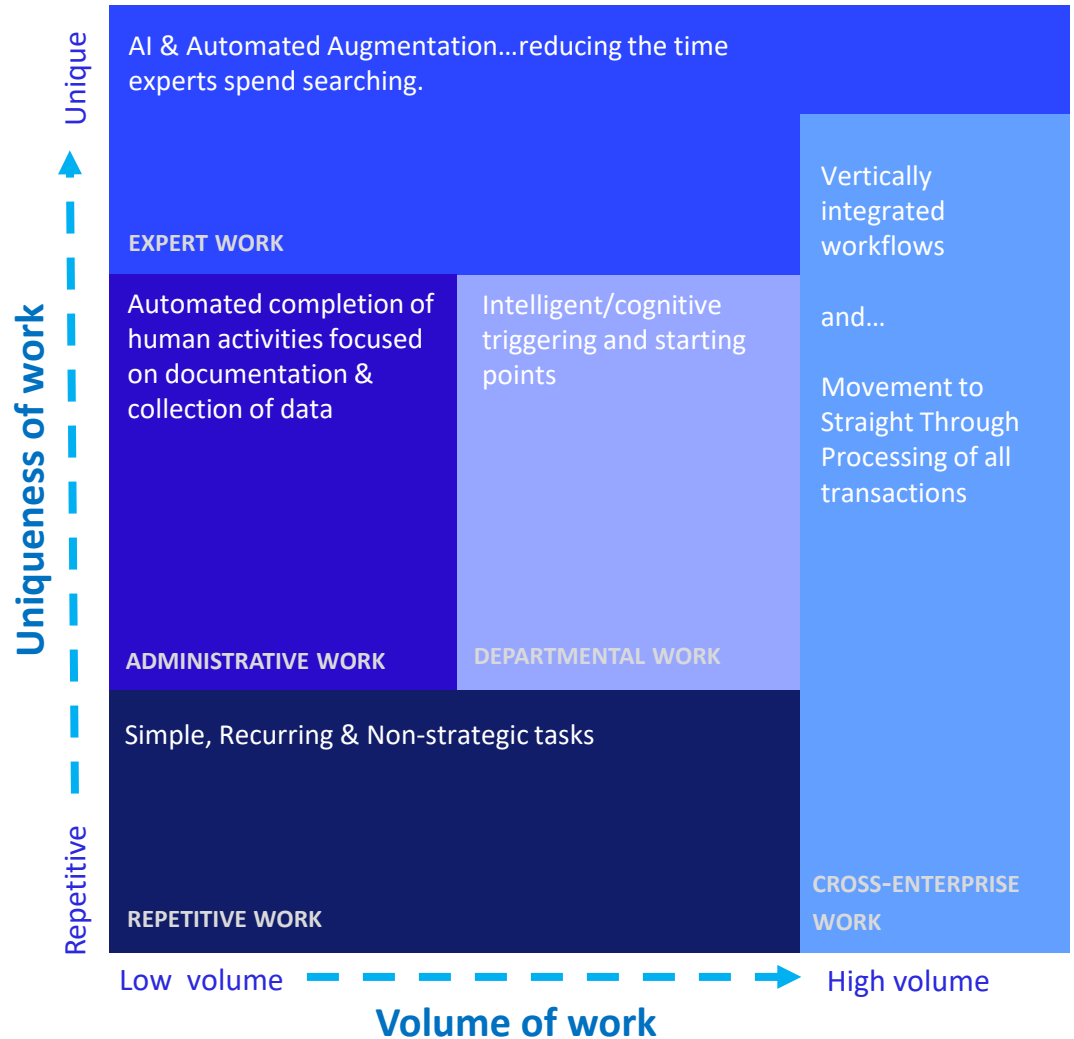
Gartner, 2019

## Drive growth and new business models

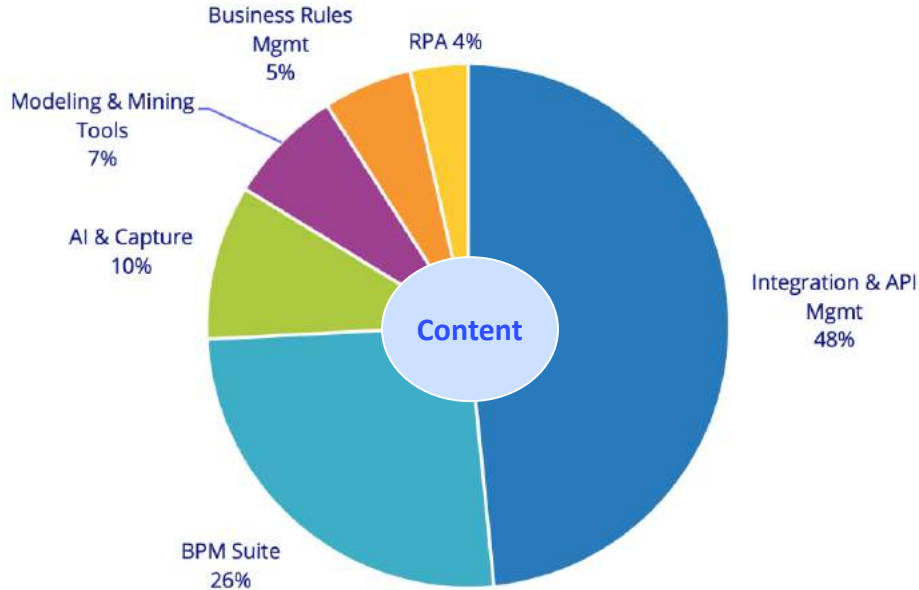
“Intelligent automation will drive topline growth of 4-6% in banking, insurance and capital markets by 2020.”

Capgemini Research Institute, 2018

# Every type of work is being inspected for automation.



# So what technologies are driving the intelligent automation market

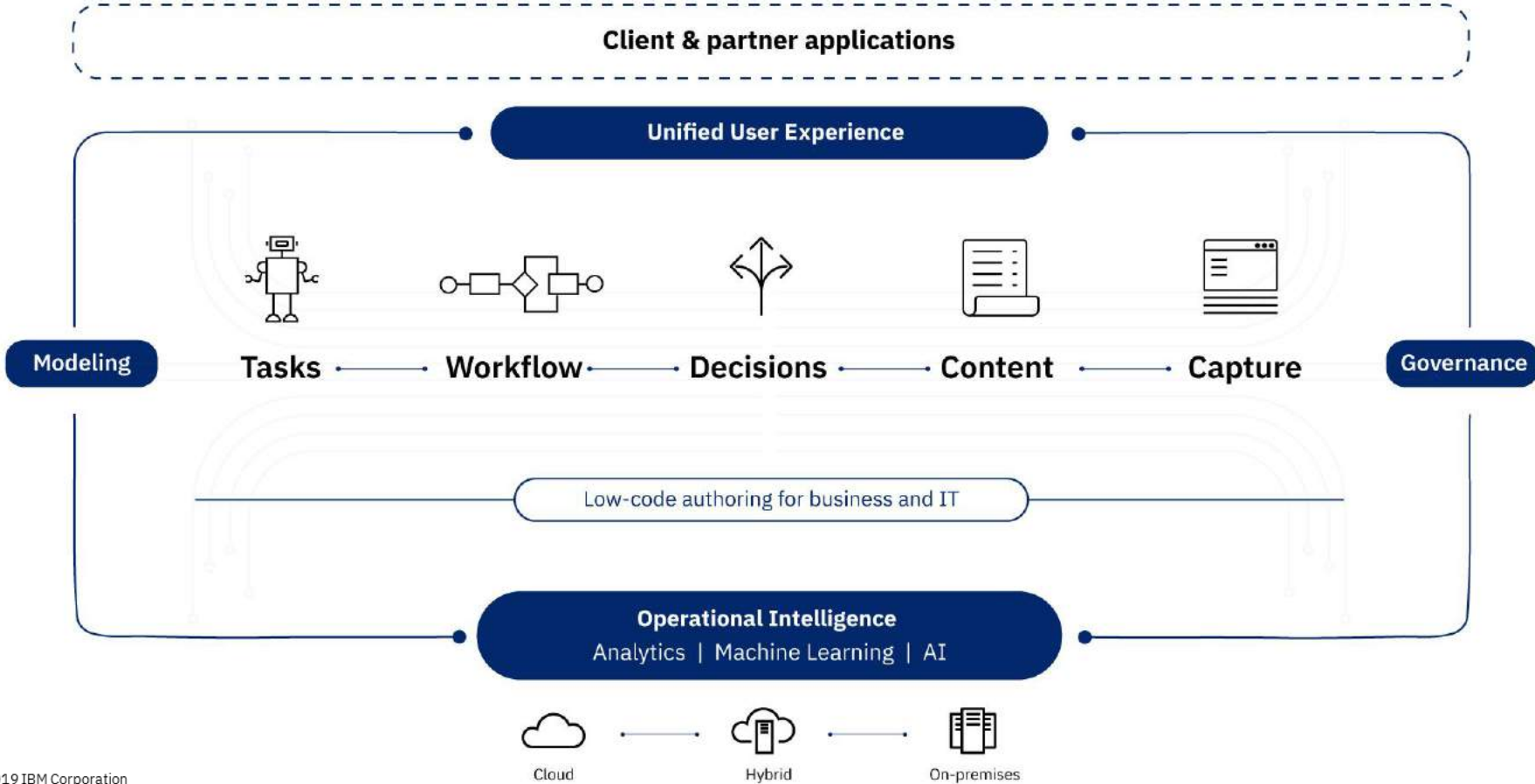


6 core markets that **combine to improve the quality and speed of business processes while driving down the operating costs per unit of work**

Research insights

- **Robotic process automation grew the fastest in 2017**
- **BPM suites revenue declined as focus shifts to process automation**
- Integration is the largest segment of the market
  - **API Economy**
  - **Integration between Multi-Cloud applications and infrastructure**
  - **Microservices**
- **AI and Process Mining platform are helping to identify automation opportunities**

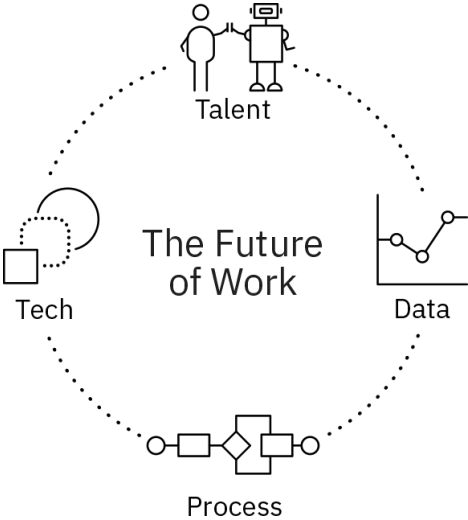
# Adopt an automation platform that manages work at scale



# The future of work harnesses the power of key components to **change the way work gets done**

Harnessing the power of **exponential technologies**, such as AI and IoT

Optimizing **talent**, with human-machine collaboration



Using **data** to generate better business outcomes

Improving **workflows** to boost efficiency and speed

# What do we uniquely offer through automation platform?

Unified platform that provide all capabilities to delivery intelligent automation solutions

Flexible deployment options through public, private and Hybrid cloud with portability

First-class support for unstructured data

Empower business people to create user experience

## **Underpinned by:**

- Low-code citizen developer focused with reusable micro business services and digital agents
- Infused Cognitive and AI the automation platform

# Focused on these Personas



IT Admin

- Responsible for installing and deploying enterprise platform(s) for building business solutions
- Looking for ways to scale their organization while maintaining governance
- See digital transformation as a solution to their developer scale challenges



Developer

- Developer/Coder by trade
- Builds assets, services and applications for the enterprise
- Looking for ways to accelerate software delivery through reusable frameworks
- Wants to free up more time to focus on the harder and more complex critical business problems



Business Developer

- a.k.a. Shadow IT, Business Analyst, Citizen Developer, ...
- **Is not a developer/coder by trade**
- **Works in or with LOB**
- **Has good enough software skills**
- Wants to create and deliver applications for LOB within guidelines of IT



# Business Automation Studio

## Business Automation Studio

Single environment to build and manage automation based projects

Access low-code design tools to create applications

Role based capabilities



## Business Automation Application Designer

“Low-code / No-code” designer

Utilizes all the DBA automation capabilities

Focus is on page creation and layout, assemble applications using visual UI views

Configure actions, eg: start a workflow for an approval process



## Business Automation Application Templates and Toolkits

Templates jump-start building your new application

Toolkits enable more complex functions and are referenced in application templates

Platform and business partners provide pre-built templates and toolkits



## Business Automation Navigator

Common user experience portal for the platform.

Business user access automation applications through their assigned portal.



# Reusable Business Micro-services

Provide a platform that enables Business Developers, Developers, and business partners to create reusable business micro-services powered by the automation platform.

These are automation fragments that associate to a workflow pattern, business decision, content lifecycle, capture templates, bot scripts, etc...

This is a place where business developers, developers, and Business Partners can contribute



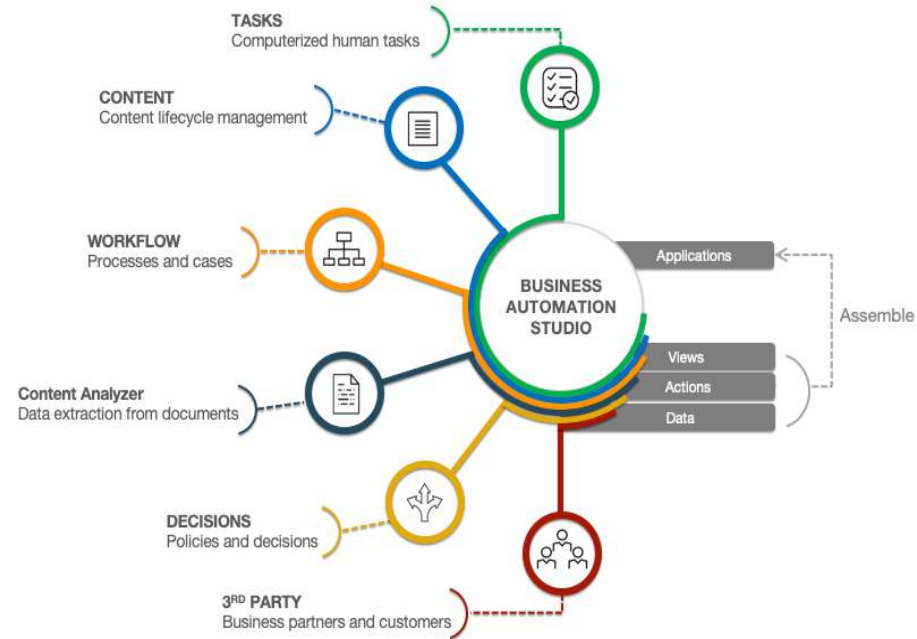
Business Developer



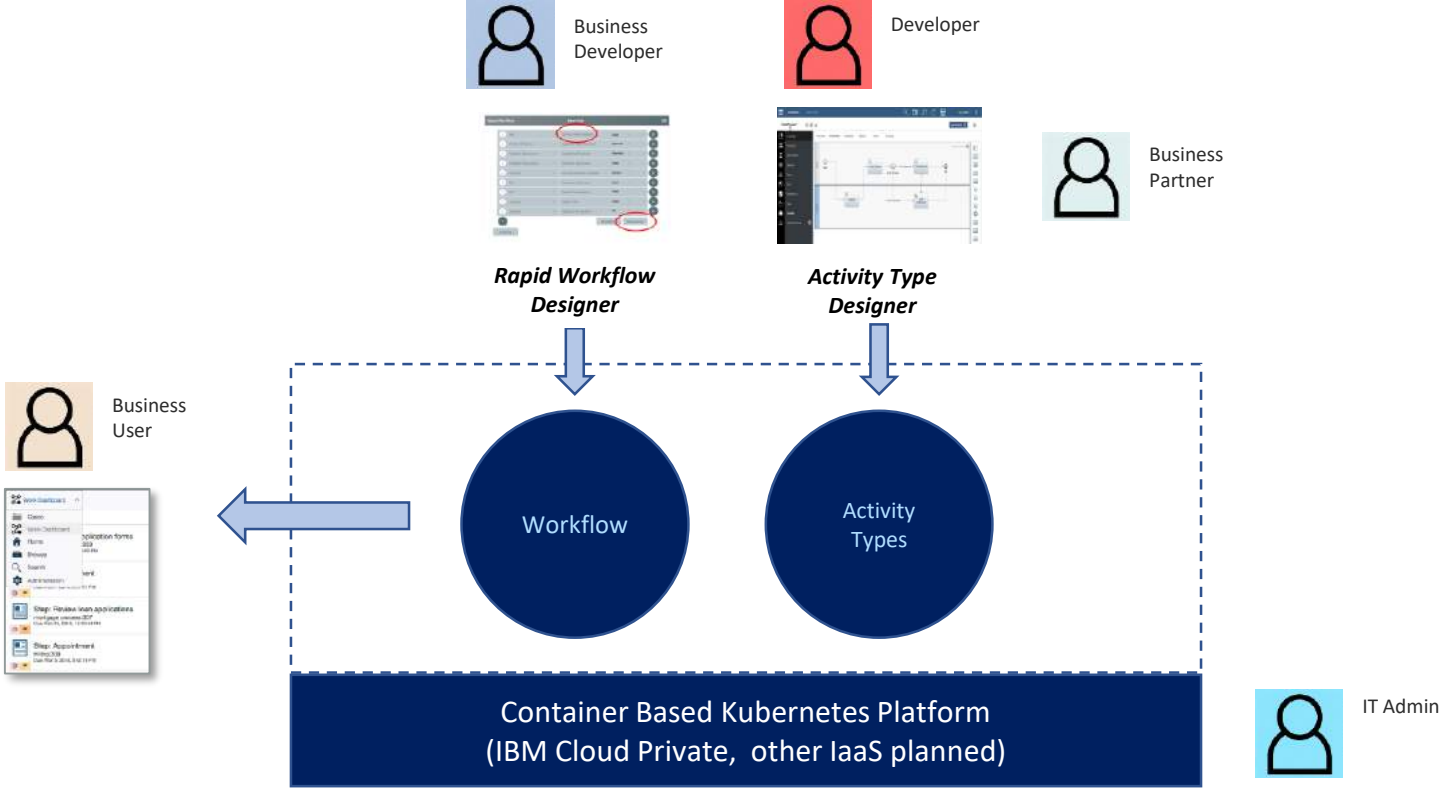
Developer



Business Partner



# Creating Micro Processes Business Services



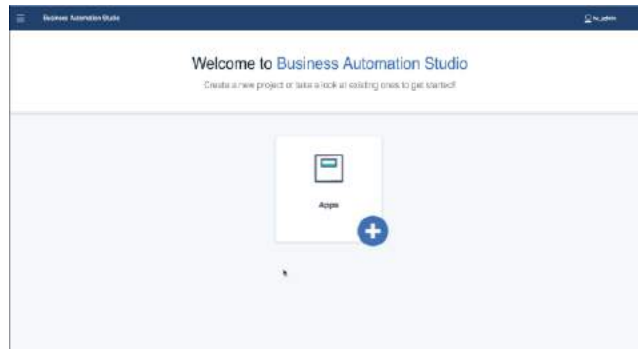
# Expanded low-code authoring: Business Automation Studio



Business Developer



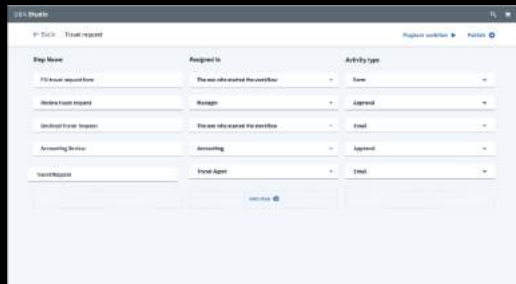
Business User



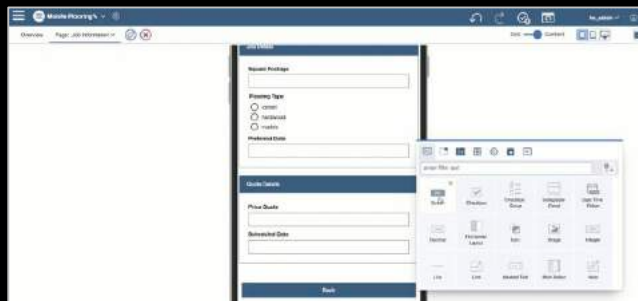
Business Automation Studio will present different 'designers' depending on the developer's role & project type

Currently in Tech Preview

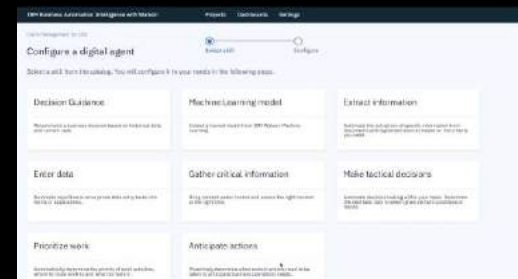
## Business Services



## Applications



## Agents





147

# What is Digital Exhaust

Digital Exhaust is the trail of data that is left by the activities users do on an application.

Common areas to find this data is via the application audit logs

Logs have a wealth of information to understand how work is done:

- identify common work patterns
- understand talent gaps
- uncover new process execution trends
- seek repetitive task for automation

Challenge: Audit logs are not normalized and most tools focus on viewing the past, not providing recommendations

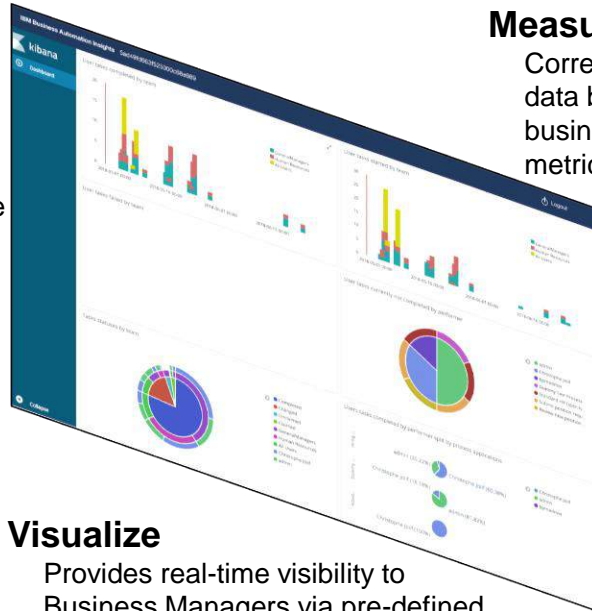
Customer		Vehicle Health Check				WIP Number		100001	
Phone		01221 661222				Date		15/06/2015	
Vehicle		Volkswagen Golf 1900				Reg		BG02TMR Miles	
Inspection:		Reg				Miles		Follow Up Date	
NOTES: min light tread depth is 1.6mm. Key: (Red) - Requires urgent attention; (Amber) - Advisory; (Green) - Visually OK		Page		1 of 2					
Check Brake/Vehicle	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
WIPER OPERATION / CONDITION	✓							0.00	
CLIMATE CONTROL	✓							0.00	
FRONT AND REAR WASHERS	✓							0.00	
INSTRUMENTS / WARNING LIGHT	✓							0.00	
SEAT BELT OPERATION / CONDITION	✓			✓				0.00	
Under Robot	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
BIKINI FILLED CONDITION / BIANK	✓							0.00	
BATTERY CONDITION	✓							0.00	
COOLANT CONDITION / LEAKS	✓							0.00	
ENGINE OIL LEVEL / LEAKS / CONDITION	✓							0.00	
V-BELT TENSION / CONDITION	✓							0.00	
Check Windows and Tyres	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
RIF DEPTH / CONDITION	✓				Tread 1.2 mm			0.00	
OR DEPTH / CONDITION	✓				Tread 1.5 mm			0.00	
RFR DEPTH / CONDITION	✓				Tread 1.2 mm			0.00	
OR DEPTH / CONDITION	✓			✓	Tread 1.0 mm			0.00	
SPARE / LOCK WHEEL NUT / ALIGNMENT	✓							0.00	
Check Exterior	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
FRONT OPERATION / CONDITION	✓							0.00	
REAR OPERATION / CONDITION	✓							0.00	
Check Bumper	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
FRONT PADS WEAR	✓							0.00	
FRONT DISCS CONDITION	✓							0.00	
REAR PADS WEAR	✓							0.00	
REAR DISCS CONDITION	✓							0.00	
FRONT BRAKE CONDITION	✓			✓				0.00	
Check Outside Vehicle	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
FRONT WIPER BLADE CONDITION	✓							0.00	
REAR WIPER BLADE CONDITION	✓							0.00	
WINDSCREEN CRACKS and GRACES	✓							0.00	
Check Inside Vehicle	Red	Amber	Green	Not checked	Report & recommendations	Follow up date	Fixed Price	0.00	
STEERING WEAR / CONDITION	✓							0.00	
SUSPENSION WEAR / CONDITION	✓							0.00	

# Insights for the platform

Gain visibility and deep understanding of business operations running on the automation platform\*

## Collect

Scalable cloud capability to capture end to end business data from different instances of DBA platform components into a data lake.

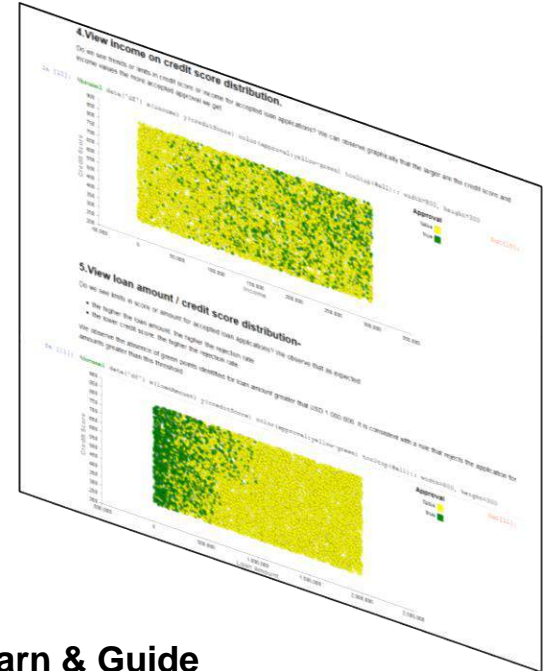


## Visualize

Provides real-time visibility to Business Managers via pre-defined or user configured dashboards.

## Measure

Correlate and measure the data based on collected business and operational metrics.

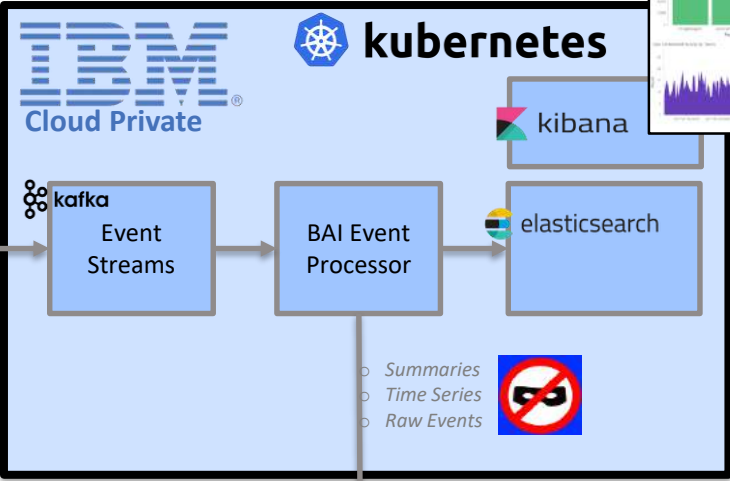


## Learn & Guide

Enable Data Scientists to apply MLs on the operational data lake to make recommendations to business managers and knowledge workers

# BAI architecture overview

Tasks	Content	Workflow	Decisions	Capture
<ul style="list-style-type: none"> <li>Content-level and productivity data that bots generate</li> </ul>	<ul style="list-style-type: none"> <li>Content lifecycle management data like Content events, user interactions with content etc.</li> </ul>	<ul style="list-style-type: none"> <li>Processes &amp; cases data, humans/system task data and user interactions</li> </ul>	<ul style="list-style-type: none"> <li>Rules in place, decision inputs, outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Data extracted from documents</li> </ul>
<ul style="list-style-type: none"> <li>RPA</li> </ul>	<ul style="list-style-type: none"> <li>ECM</li> </ul>	<ul style="list-style-type: none"> <li>BAW (process and case)</li> </ul>	<ul style="list-style-type: none"> <li>ODM</li> </ul>	<ul style="list-style-type: none"> <li>Datacap</li> </ul>



**Business Manager**  
**Operational Visibility**



**Machine Learning Patterns**  
**Learn and guide**



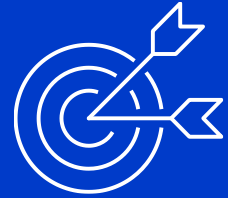
# Infuse AI into your business processes

## IBM Business Automation Intelligence with Watson

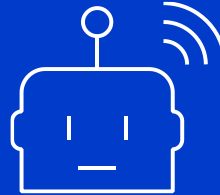
Automate all styles of work, from mundane clerical tasks to complex knowledge work



Discover hotspots



Monitor performance



Automate & integrate



Guardrails & governance

# Moments of intelligence as a Digital Agent

Extract information



Gather critical information



Prioritize work



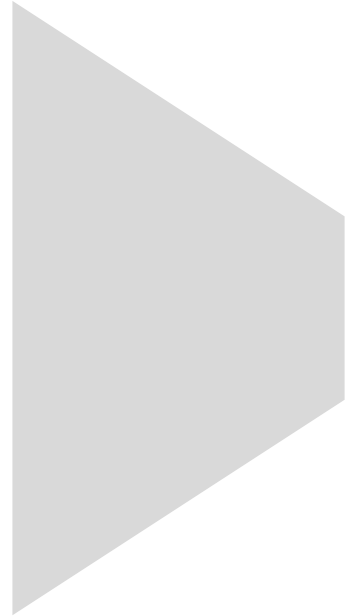
Enter data



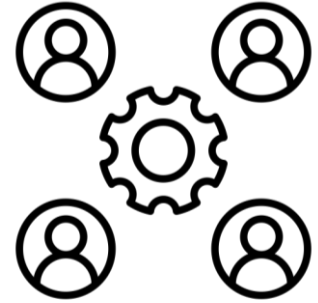
Make decisions



Anticipate action



**Your Business Operations**



One solution to automate both clerical and knowledge work

# Integrated automation platform can provide these capabilities



## Enhancing the Future value of the IBM automation platform

### Low-code

- Enable business users to create operational apps with multiple automation capabilities using low-code/no-code tools

### Intelligent automation

- Embed intelligence (AI) in business automation to achieve unprecedented levels of efficiency and customer service improvements across all types of work

IBM