Cognitive Procurement Reinvention

MODERNIZE TODAY | ENVISION TOMORROW

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Global Leader for Procurement Automation

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Strategic Imperatives

A Closer Look

Next Steps

PROCUREMENT TODAY

You react to your needs **as they happen.**

PROCUREMENT OF THE FUTURE

We know what you need…
before you need it.

Industry Snapshot

In today's world, meeting the industry average is not enough

Low compliance

Too little spend under management

25% of organizations have competencies in place today

Insufficient incremental savings

Benchmark sources: Hackett, HfS, IBM

COGNITIVE PROCUREMENT REINVENTION

Imperatives

CPOs need to digitize, predict the future and enable their talent to deliver savings and value – not just to keep up, but to get ahead.

Digitize Processes

Transform from analog to digital for a seamless, responsive procurement organization

Drive Insights

Enrich data for analytics and cognitive insights to make more informed decisions

Amplify Talent

Elevate procurement capabilities and intelligence from ordinary to extraordinary

Cognitive Procurement Reinvention

We take traditional, linear Source to Pay processes and apply automation, cognitive, and analytics to deliver agile processes infused with deeper insight.

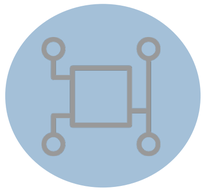
Analog Transactions

Analog, linear sequential transactions vulnerable to incorrect payments and rework downstream.

Managing Catalogs

Small pool of suppliers that are manually controlled, leading to data/content inconsistency.

DIGITIZE PROCESSES



Automating and Eliminating Transactions

Digital and collaborative processes minimize payment inaccuracies and eliminate rework and waste.

Powering Marketplaces

Collaborative self-serve marketplace ensures competitive suppliers, data insights and continuous innovation.

Reacting to Demand

Inefficient spending habits and unrealized savings dictated by historic data.

Negotiating Terms

Supplier selection focused primarily on cost savings.

DRIVE INSIGHTS

Predicting Demand

Effective outcomes driven by dynamic forecasting, market insights, and industry expertise.

Designing Better Results

Supplier partnerships based on expertise, deep insight, responsiveness and business outcomes.

Low Value Activities

Staff spend time on low value tasks and unable to keep up skills for competitiveness

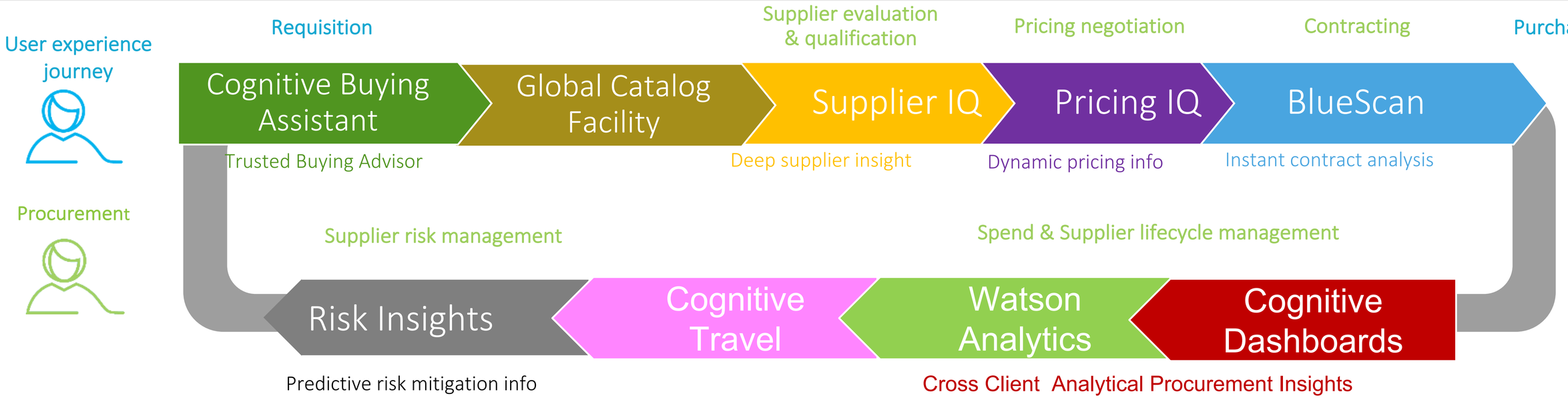
AMPLIFY TALENT

High Value Contribution

Remove inefficient analog processes through automation and infuse team with new skills, methods and assets

So how do we achieve this Procurement Digitization and Transformation

IBM Procurement Cognitive & Analytics Solutions Journey Map



User Experience

- ✓ **Simple easy engagements completed with speed**
- ✓ **Ability to use natural language, unstructured text & digital imagery.**
- ✓ **Highly personalized experience that learns over time**

Procurement Experience

- ✓ Refined real time data to make quicker more informed decisions
- ✓ Maximizes preferred suppliers
- ✓ Tactical and administrative tasks automated to allow a focus on strategic and relationship management activities

✓	**Buying Advisor**	Users place orders on hand held devices remotely while receiving guidance for selecting best item
✓	**Supplier IQ**	360 degree view of Supplier capabilities, news, and financial benchmarking from integrated sources
✓	**Pricing IQ**	Market driven pricing comparisons historical and forward looking
✓	**Blue Scan**	Instant contract analysis comparing to model agreement or supplier to supplier
✓	**Virtual Agent**	Sustainable Client transaction support for process, execution and knowledge based inquiry
✓	**Risk Insights**	Predictive risk mitigation and next best action to maximize supply & minimize cost
✓	**Travel Manager**	Travel program manager ingests all travel segment data to optimize travel spending

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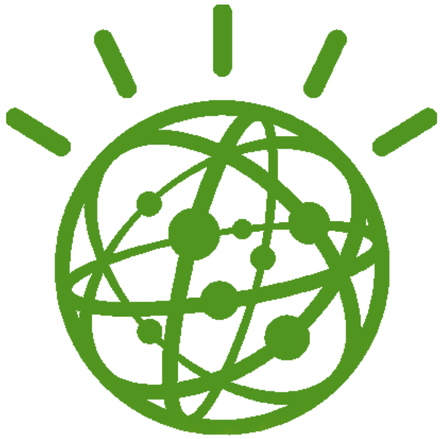
Cognitive Procurement Assistant

Trusted Buying Advisor



The vision

A mobile-enabled, smart, digital buying assistant which recommends appropriate & preferred products & suppliers to business users ‘on the go’.

The disruption

Allows users to specify their procurement needs through natural language, unstructured text & digital imagery, including active dialogue.

IBM Catalog information + Natural Language Classifier + Speech to Text

The result: Business utilizes preferred suppliers and users get a highly personalized experience that learns over time

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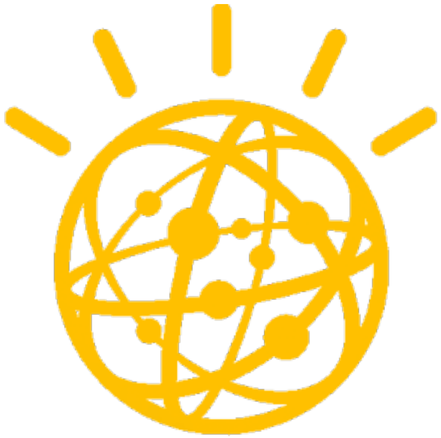
Supplier IQ

Deep Supplier Insight



The vision

Supplier financial and risk assessment tool using real time holistic view of all information to uncover hidden trends

The disruption

Comprehensive information aggregation to change how Sourcing Professionals consume and exploit data

Internal supplier data + External market intelligence + Watson APIs

The result: Users equipped with enhanced supplier knowledge for optimal source identification and/or informed negotiations

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Supplier IQ

Corporate Intelligence for Procurement

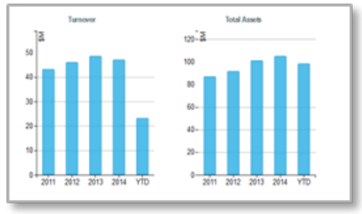
Key Features

Company Overview

- Firmographics
- External / internal data sources

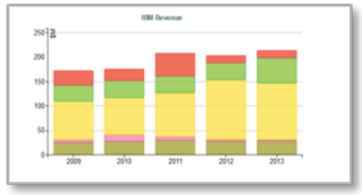
Company Financial Performance (5 yrs)

- Key Performance Indicators
- Infographics to analyze trending



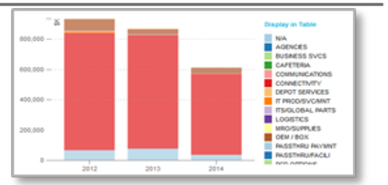
IBM Revenue

- Overall revenue and services subset for trending



IBM Spend

- Overall supplier spend with multiple filtering capabilities



Auto Peer Group Creation & Benchmarking

- Creation based upon the analytic profile of the targeted supplier
- Five Scoring categories based upon embedded industry KPIs

Performance Gaps

- Easy visualization where gaps exist between selected companies to each KPI

Strategic Intent

- Automated text analytics aggregating recent news on the targeted company grouped into categories

IBM & Supplier Contacts

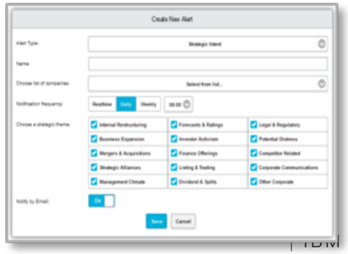
- IBMers and company contacts sourced from internal and external data sources

Supplier Books (pdf)

- Entire company assessment downloadable

Personalized Alerts

- User selected criteria
- Based on single or group of companies
- Based on single or multiple strategic intent categories



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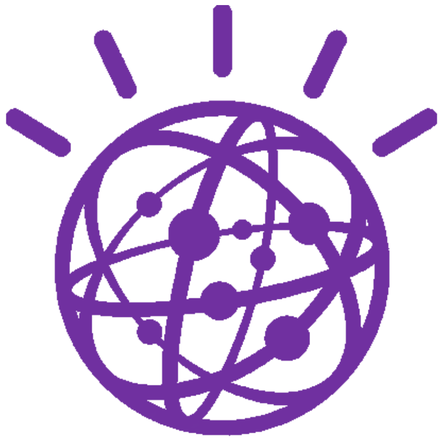
Pricing IQ

Dynamic Pricing Information



The vision
Collect and refine real time comprehensive market intelligence data to identify pricing trends by category or skill and recommend optimized price points

The disruption
Procurement Professionals freed from time consuming research and data aggregation

Internal pricing trends + External market intelligence + Watson APIs

The result: Procurement professional equipped with enhanced pricing knowledge for improved negotiations

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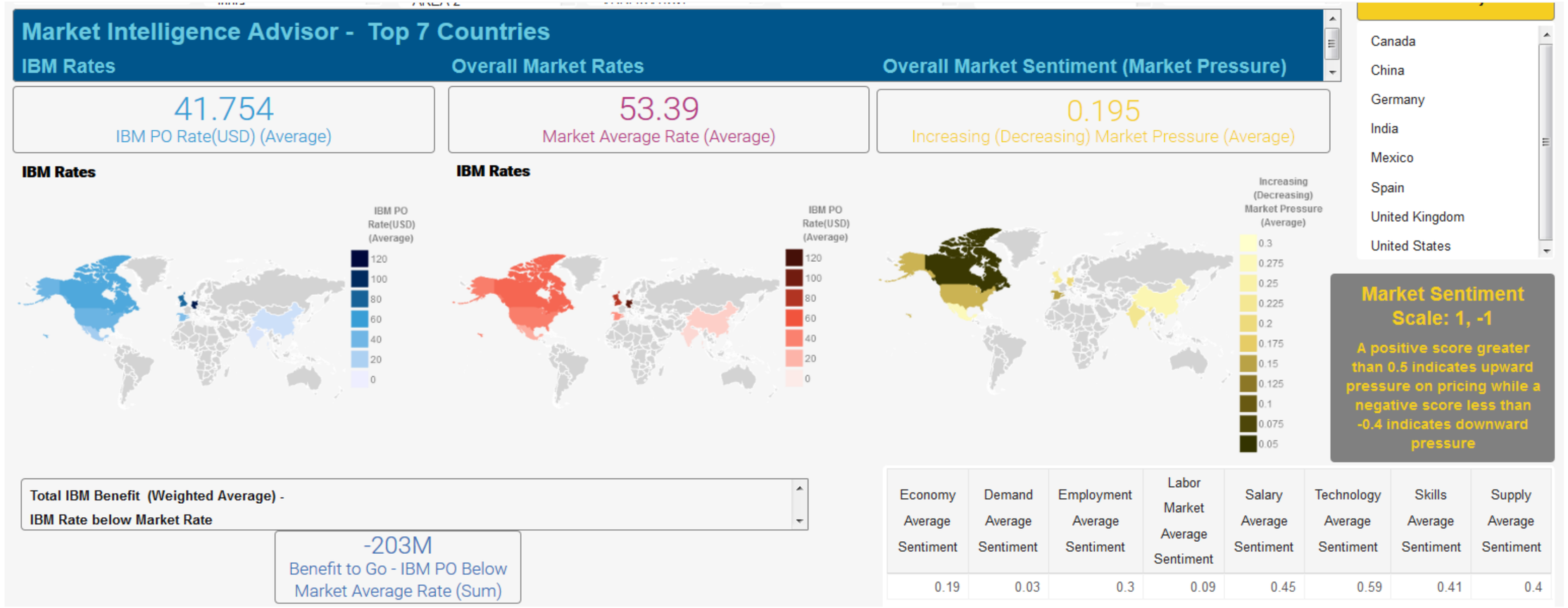
Pricing IQ - example

- **Market:** Buying below market pricing
- **Sentiments**: Stable, mild upward pressures
- **Guidance**: buyer execute at rate & extend duration to preserve competitive advantage



Market Intelligence

Fair Value

Purchasing Insight

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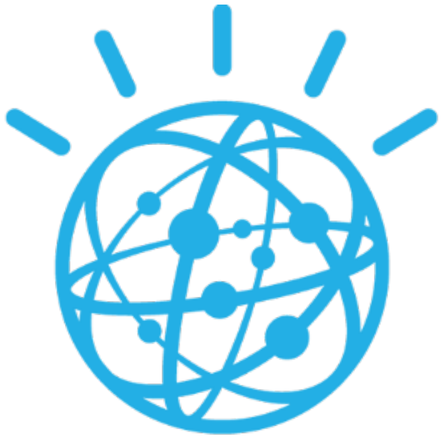
BlueScan

Instant Contract Analysis



The vision
Accelerate contract analysis by identifying clause similarities and deviations from IBM standards

The disruption
This solution manages large volumes of unstructured written data with leading-edge Watson technology

Differing contract language + Natural Language Classifier + Ontology builder

The result: Maximize T&C's to IBM's benefit, and reduce overall risk

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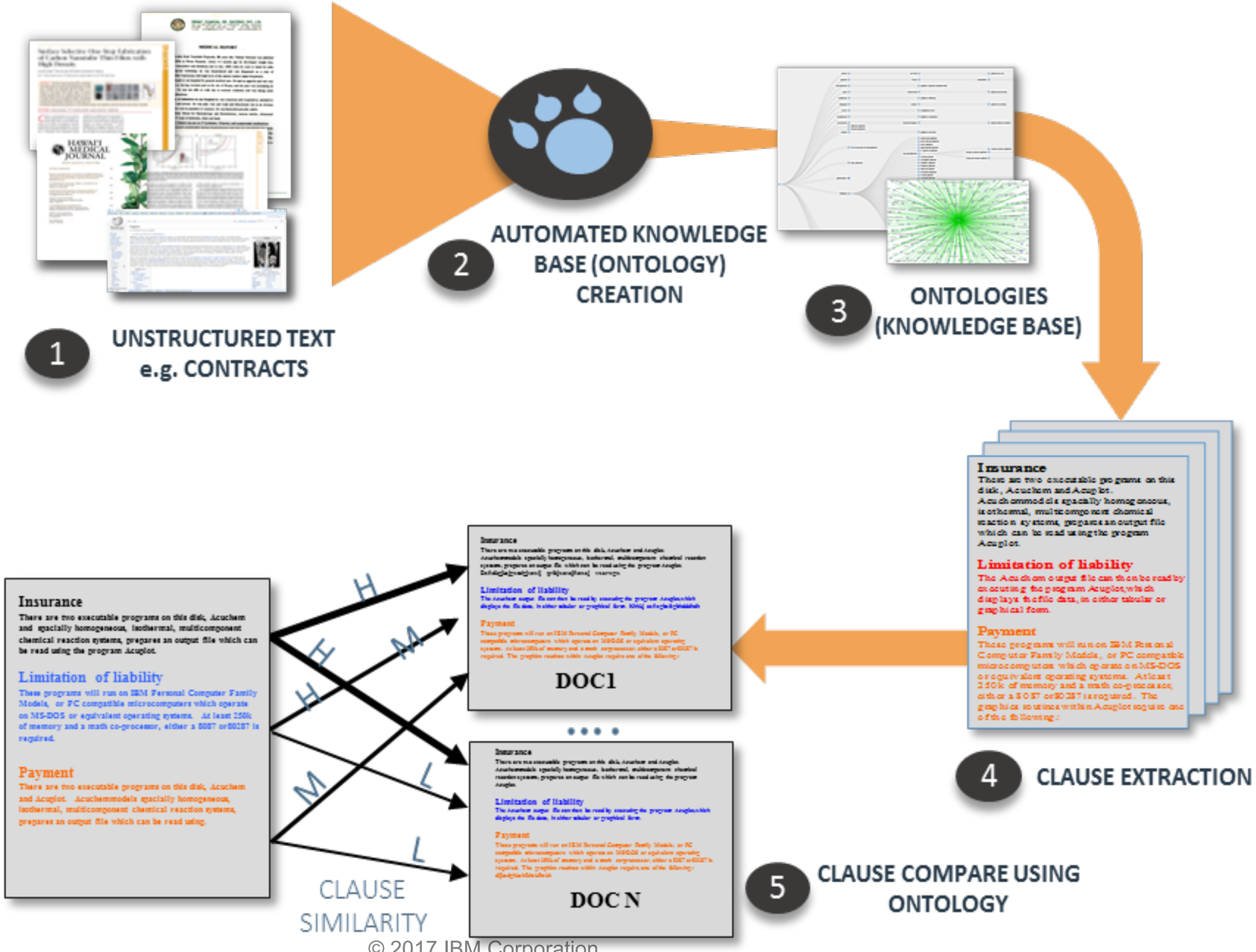
Watson BlueScan - Instant contract analysis

Key Features



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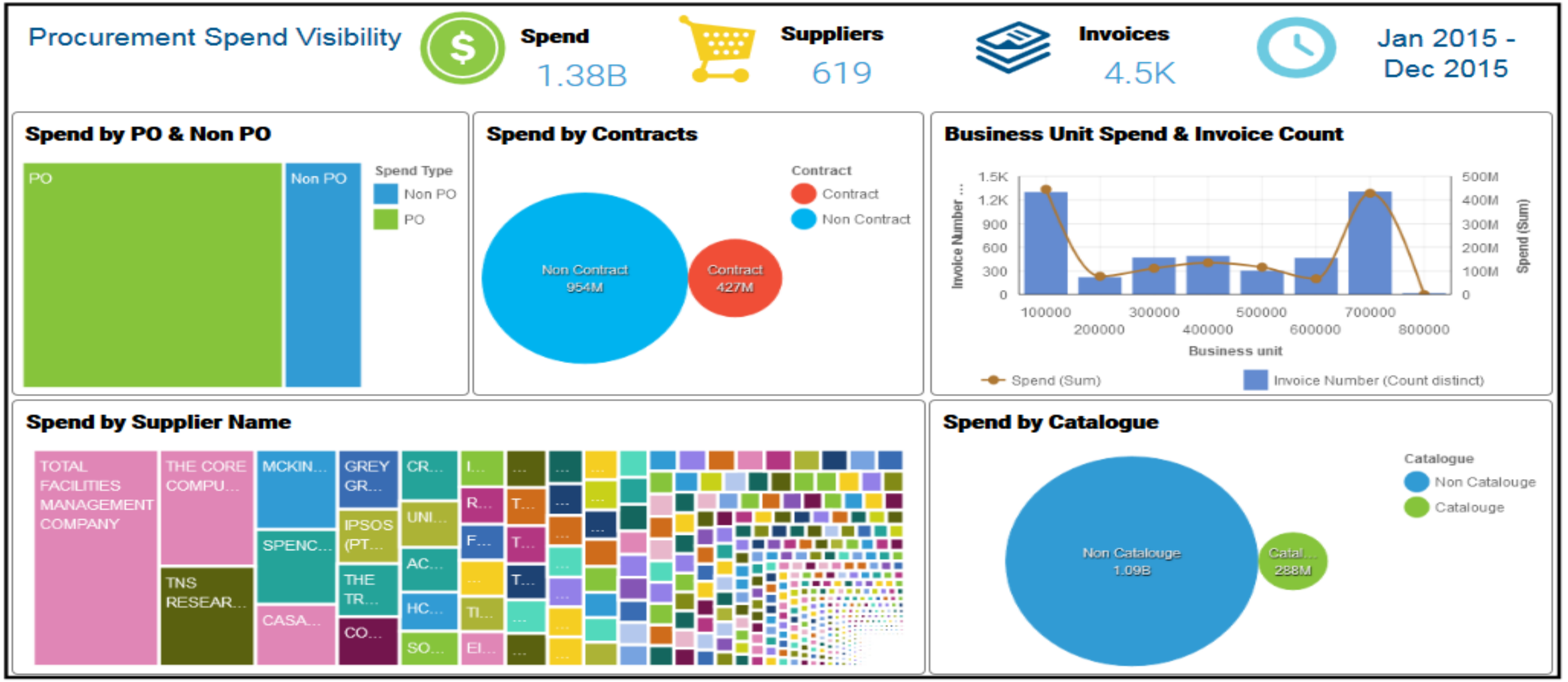
Watson Analytics – Dashboards – Analyze and identify opportunities



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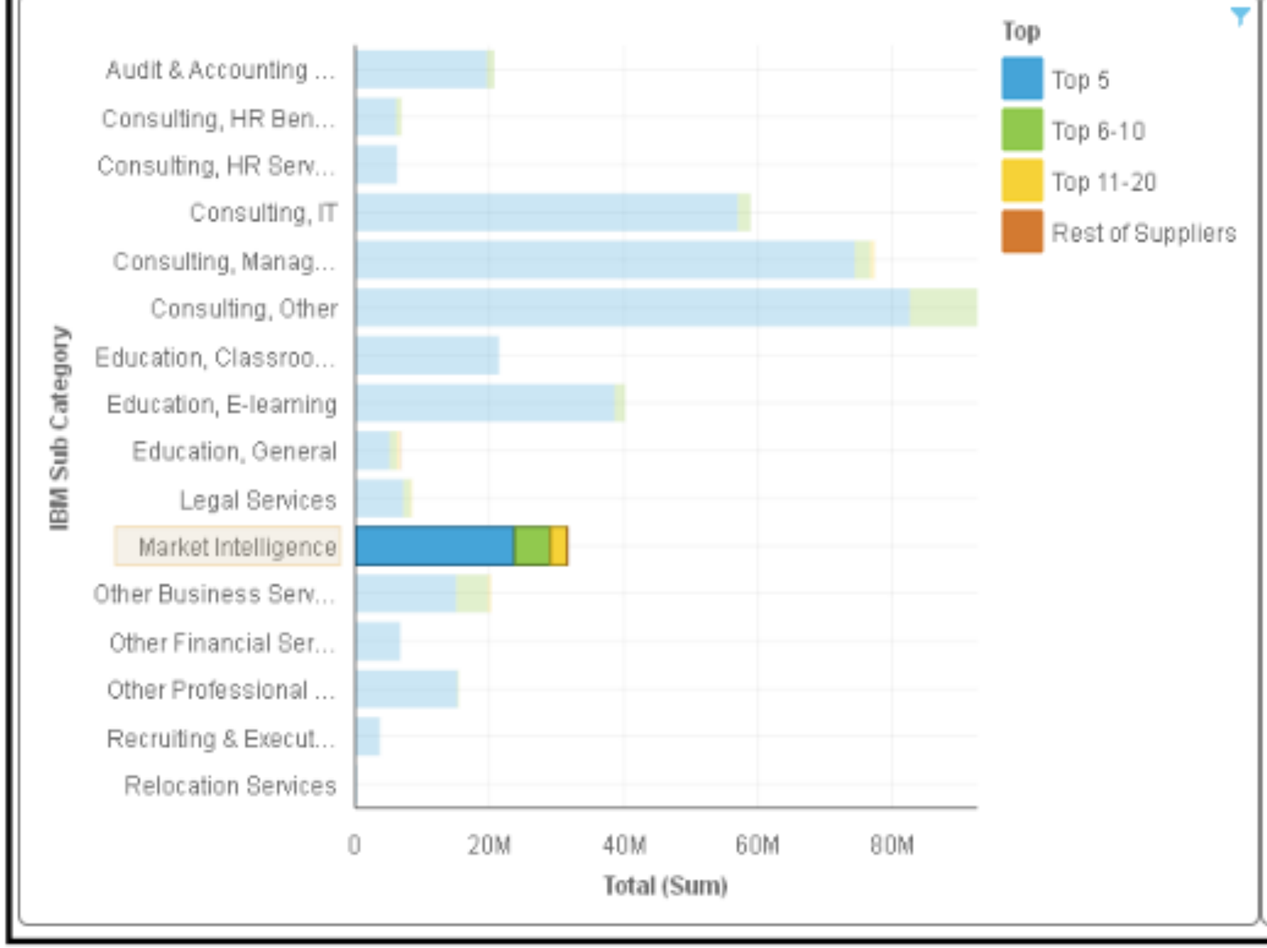
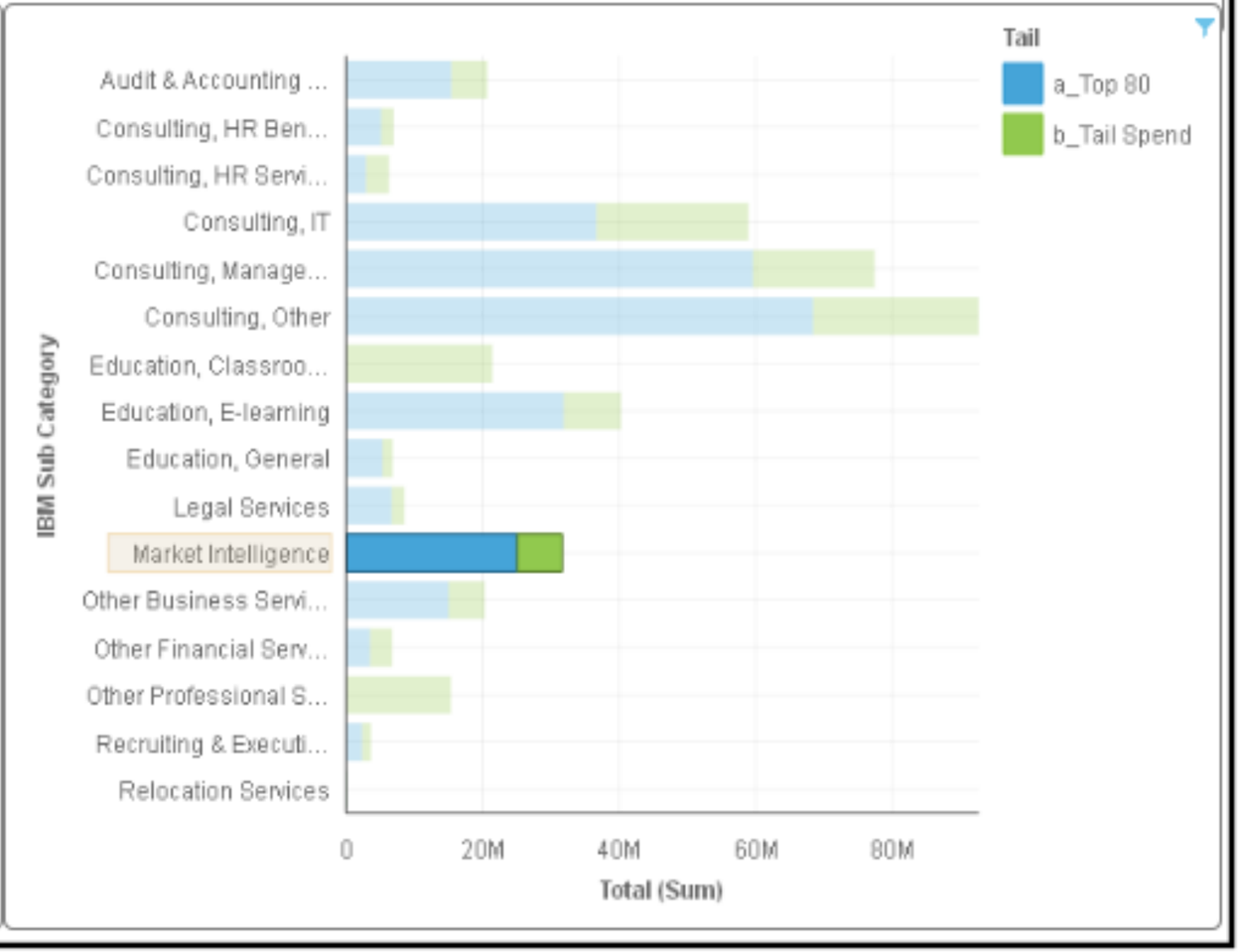
Supplier Fragmentation

Spend	Suppliers	Categories	Sub Categories	
31.7M	20	1	1	Jan 2015 - Dec 2015

Business ... Enterprise IT Product... Logistics Manufact... Marketing Networkin... Other Software Subcontra... Telecomm... Travel





Category Insights & Rationalization Analysis

Spend
1.38B

Suppliers
619

Invoices
4.5K

Jan 2015 - Dec 2015

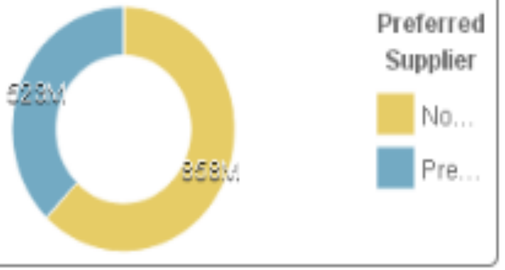
Spend by Categories

Categories
12

Sub Categories
75

Contractual Spend

Preferred Suppliers



Spend by Sub Categories

Supplier Spend

P2P Process Compliance Measure

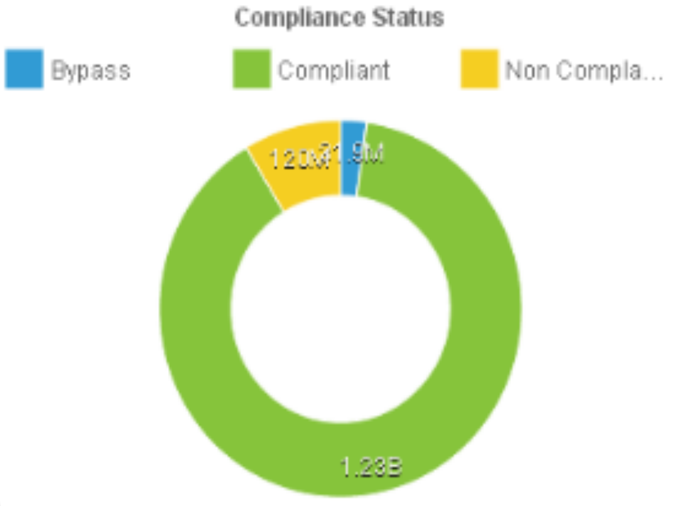
Spend 1.38B

Suppliers 619

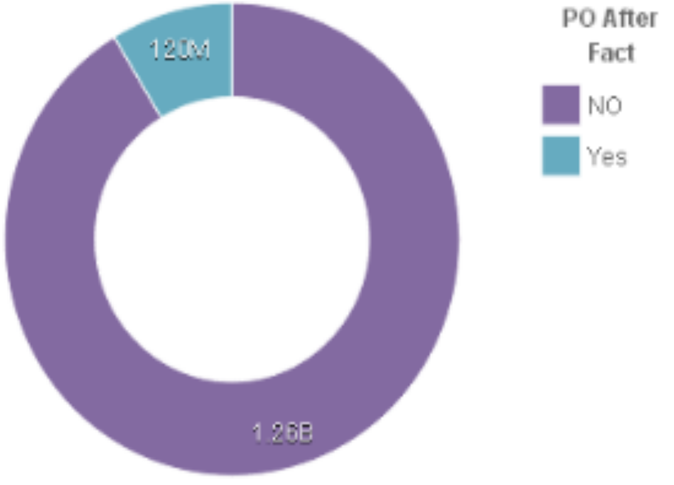
Invoices 4.5K

Jan 2015 - Dec 2015

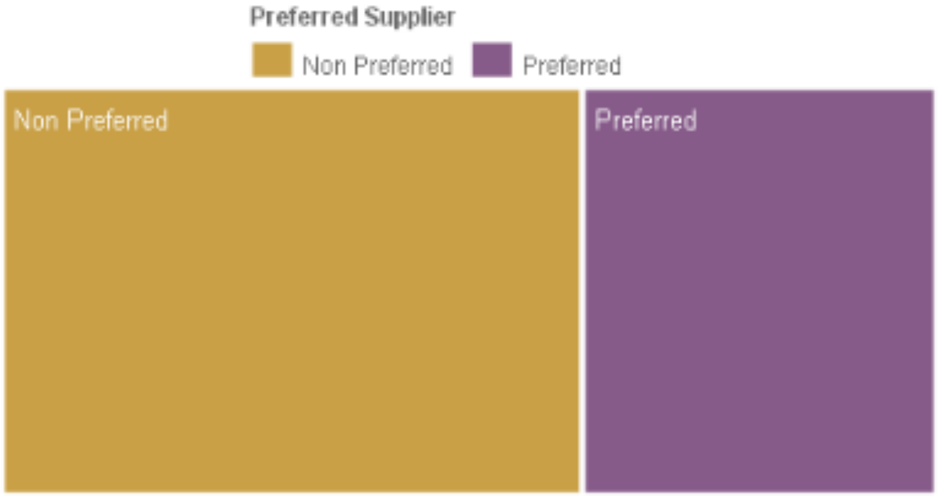
Compliance Status



Compliance to PO Creation prior to Invoice

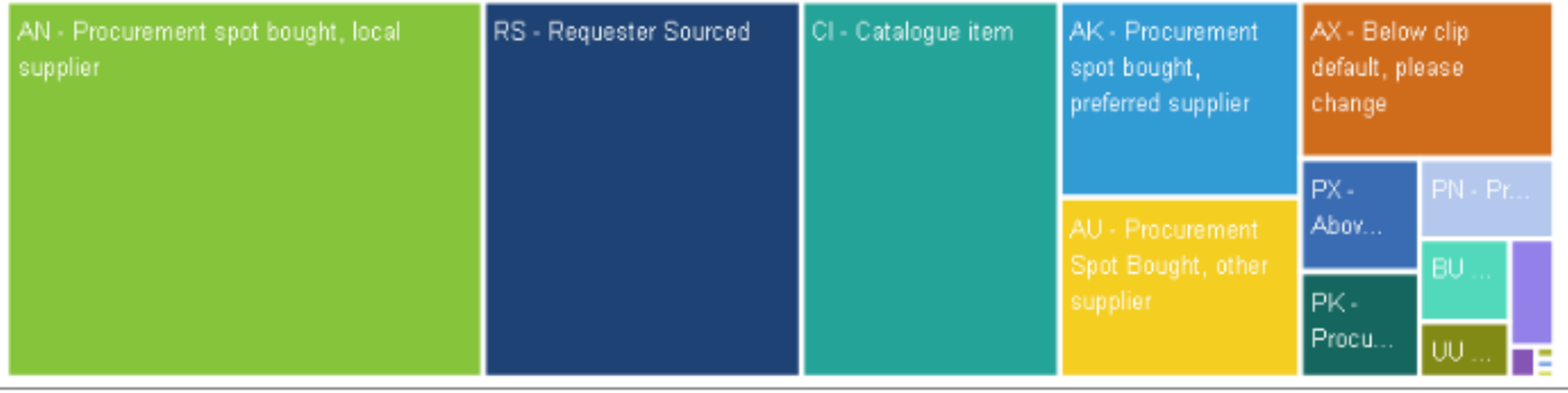


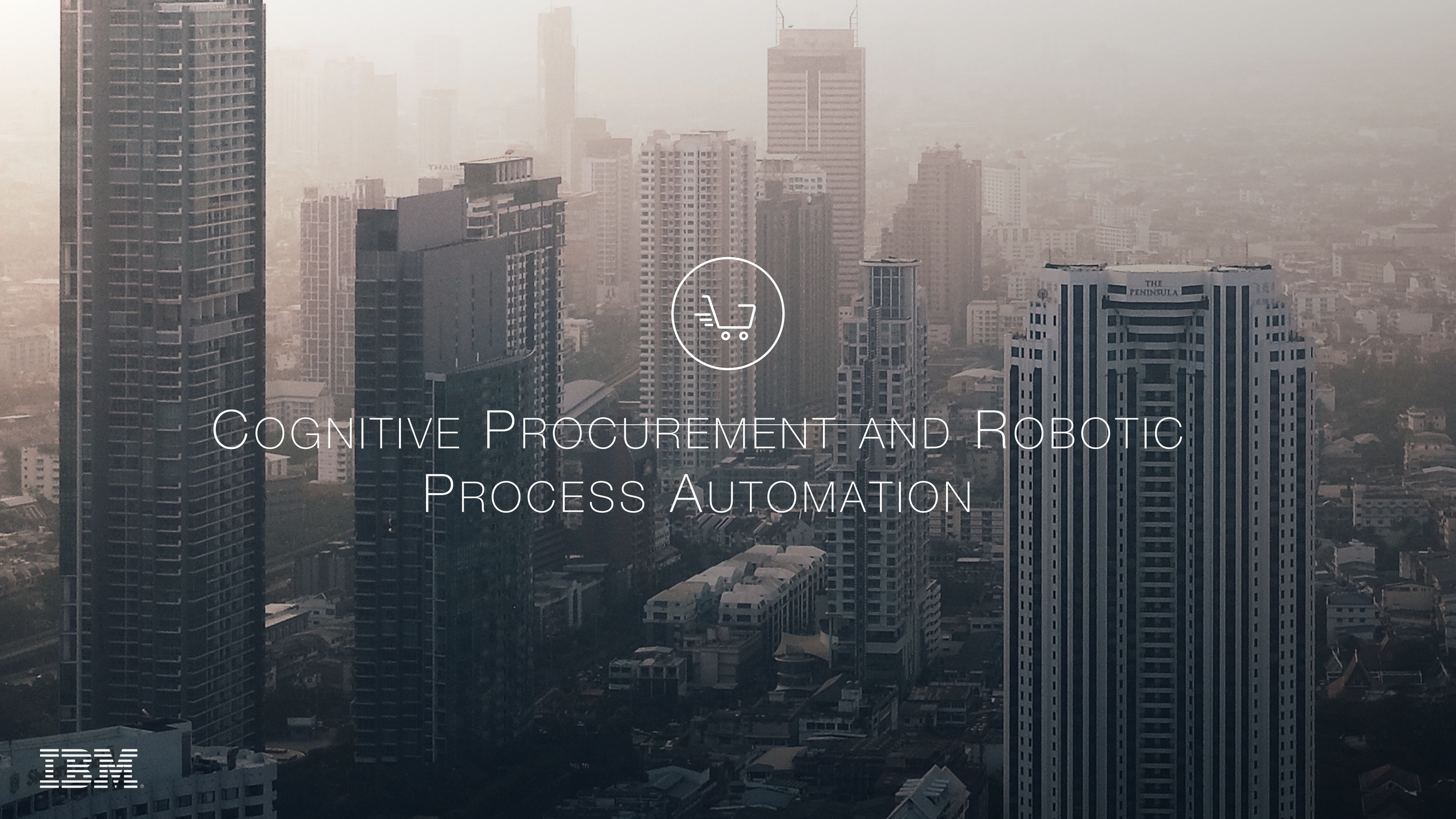
Compliance to Preferred Supplier Purchase



Contract Compliance

Sourcing Indicators





Cognitive Procurement and Robotic Process Automation

What is Robotic Process Automation (RPA)?

Software Robots

- Computer software which provides a “**Virtualized FTE**” that can manipulate, operate, and orchestrate other applications, follow business rules, and execute transactions
- More then just a desktop script or macro
- Can execute program APIs and other program objects

Software which Mimics Human Actions

- Is taught to “drive” applications the same way that a human does through the graphical user interface (GUI)
- The “robot” is programmed to follow predetermined computer pathways between the screen and data repositories, move or populate data between locations, conduct calculations, perform actions and trigger downstream activities.

New Capabilities

- Instantaneous scalability
- Improvements in speed, accuracy, compliance
- Auditable

“Doing with technology what humans would normally do … but faster and better”

IBM views automation as a continuum that covers multiple stages of capabilities

Desktop Automation

ERP Scripting

Workflow

Macros

Screen scraper

Auto eMailer

Robotic Process Automation

(Rules-based)

Extensible and adaptive pre-built process object libraries

Global robotic command center and dedicated SMEs

IBM / partner resilient, secured virtualized infrastructures

Autonomic Process Automation

(Knowledge-based)

Robots apply insight-driven knowledge and learn from experience

Continuous monitoring of process environment

E.g., Watson Policy Manager (WPM), piloting automation of key decision points

Cognitive Automation

(Artificial Intelligence–based)

Autonomous decision-making (“reasoning and remembering”)

New insights and data discovery (“learning”)

Personal and interactive support (“engagement”)

Insight-driven knowledge

Industry-specific Cognitive Assist

Simple Transactional Data → **Structured Data - Simple Rules** → **Unstructured Data - Complex Rules** → **RPA meets Cognitive Computing**

IBM’s Robotic Process Automation Value

1 Profitability and Cost

RPA is broader than a 1:1 FTE comparison, cost of a robot is a fraction of human resource, repositions labor to higher value tasks

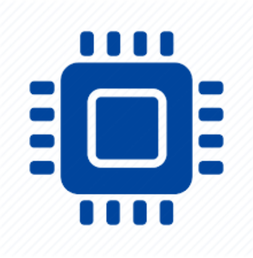
30% - 60% efficiency levels per sub-process

2 Productivity and Efficiency

Robots can be up to 5x faster and can work 24/7

3 Accuracy, Compliance and Security

Reduction of human error rates. Enhanced compliance and security



4 Scalability and Flexibility

Robots can easily be replicated and scaled to meet peak or atypical workloads

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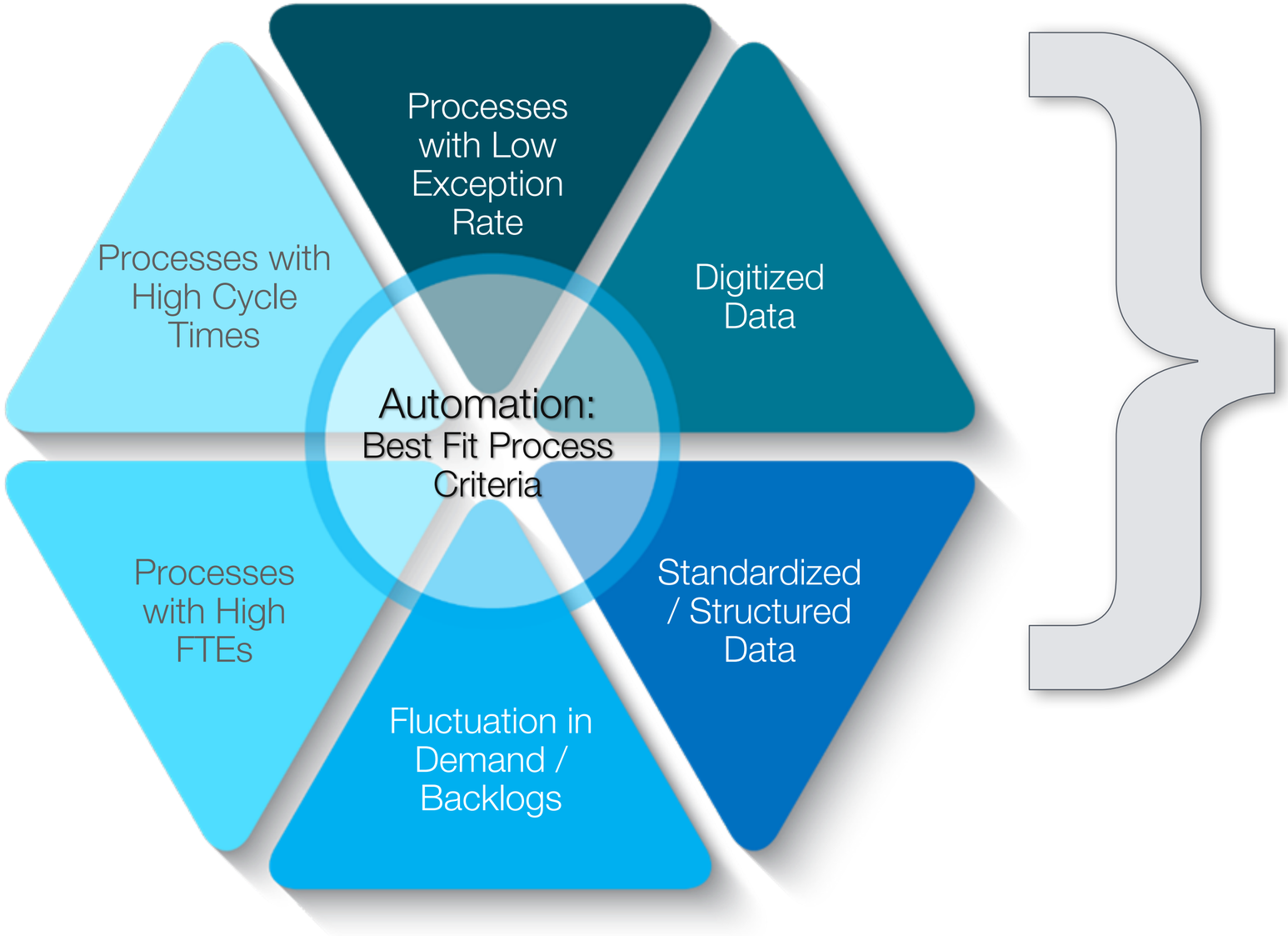
Procurement Operations processes are best suited for Automation



Procurement Operations

- Transactional Support
- Blocked Invoice Management
- PO Management
- Purchase Order Processing
- Catalogue & Contract Management

Sourcing

- Tactical Buying
- Category Management
- Sourcing Execution
- Strategy Development

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Robotic Process Automation Case Studies

IBM

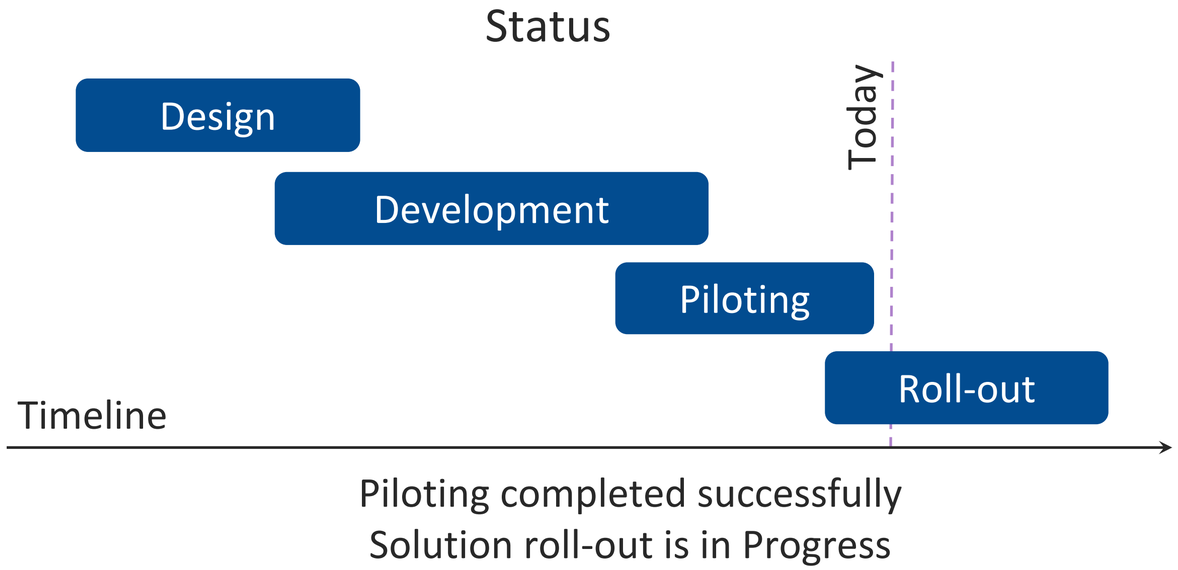
Process – PO Automation

Project Aim:
To reduce processing time within the PR to PO process with help of RPA solutions and system changes

Project Team:
EMEA / LA - Szilard Simon, Matyas Horvath, Orsolya Szabo, Anita Nagy
NA / AP - Sangita N Vinaik, Sandeep Dewangan, Bhanu P Kadiyala, Devesh Srivastava, Ankur Sharma

Calculated Benefits:
- Baseline ≈ 84 FTEs (PO Create: 52 FTEs / PO Alt: 32 FTEs)
- Benefits ≈ 17 FTEs (PO Create: 10 FTEs / PO Alt: 7 FTEs)

Improvements:
- Efficiency – 20 % processing time reduction
- Quality – 100% process complience
- Risk Avoidance – Accurate business validations
- Traceability – Actions recorded and logged
- Scalability – Reusable Components



Roll-Out Status	EMEA	NA	AP (SOUTH)	AP (GCG)
Tech Prod	DONE	31/03	30/04	30/06
FSS	DONE	31/03	30/04	30/06
Marcom	DONE	31/03	30/04	30/06
Travel	DONE	31/03	30/04	30/06
Services	20/03	31/03	30/04	30/06
Software	20/03	31/03	30/04	30/06

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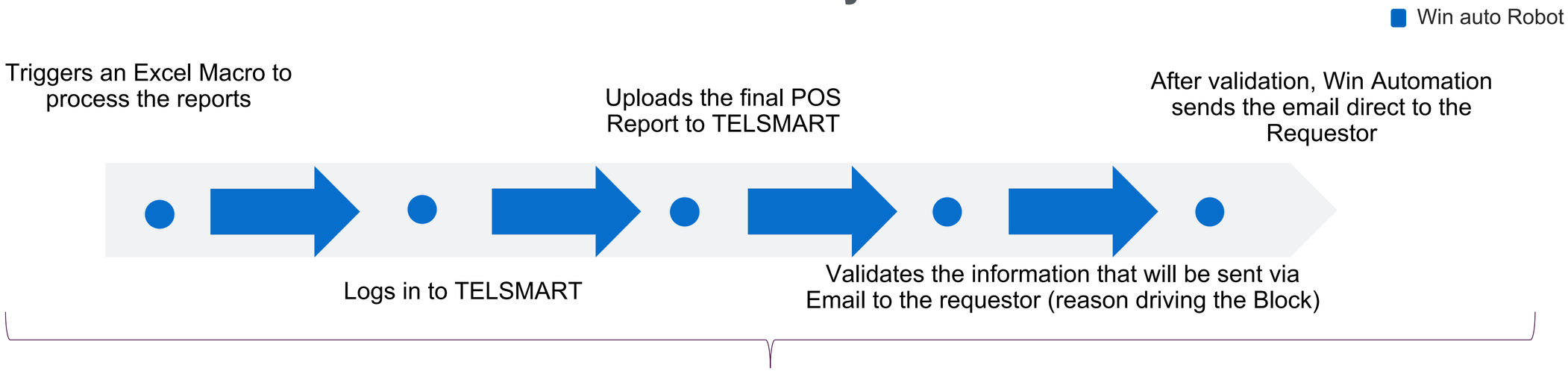
Robotic Process Automation: Blocked Invoice (Telecom)

Activities Performed by Robot



Business Issue:

- The process requires the team to handle a large volume of blocked invoices, approximately 2,500-3,000 per month
- Low value add time is spent manually drafting and sending requests
- The time spent on administrative activities within the process takes away time that could be spent on resolving the blocked invoices

RPA

Business Benefits:

- 25% improvement in productivity driving an FTE reduction of 6 to 3.2
- 40% reduction in “Aged Blocked Invoices without dependencies”
- Improved quality helps this process achieve 80% of Invoice classification (price, quantity etc.) vs 50% prior to robot implementation
- Approximately 50% cycle time reduction (7/8 minutes per invoice now vs 15-18 minutes before automation)

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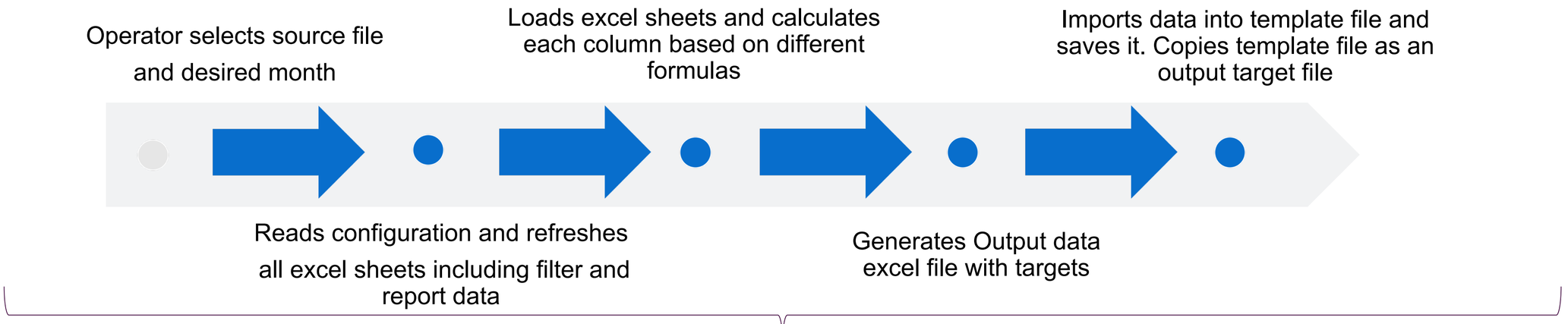
Robotic Process Automation: SLA Reporting Process (CPG)

Activities Performed by Robot

Blue Prism Robot
Practitioner



Business Issue:

- Highly manual process that requires extraction of data from multiple source files
- Large data volume typically leads to hardware issues such as crashes /'out of memory' errors, etc.
- Frequent manual fixes are required within the data

RPA

Business Benefits:

- Automation is robust and prevents previous hardware issues
- 75% cycle time improvement
- Automation will drive at least one FTE release
- Improvement around flexibility & scalability allow any enhancement or manual change to be made in the configuration file and applied

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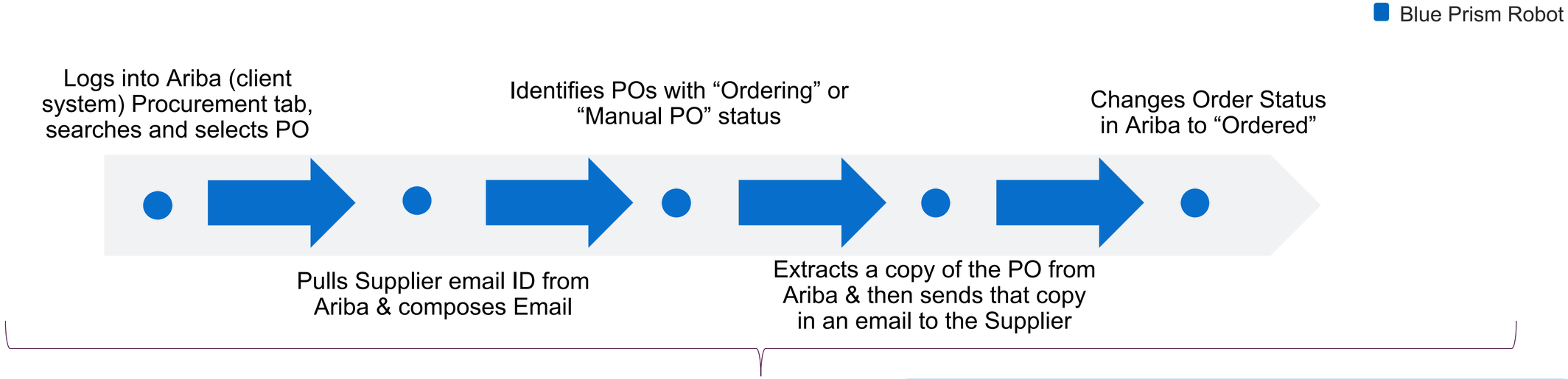
Robotic Process Automation: Manual PO Dispatch

Activities Performed by Robot



Business Issue:

- Team sends between 1,500-1,800 POs manually to vendors per month
- For any suppliers that are not on the Ariba Supplier Network, the team has to manually pull the PO and send the PDF copy to the vendor.

RPA

Business Benefits:

- 100% productivity savings as human intervention is completely eliminated - entire processing steps & content validation is automated.
- Exception rate – 0% compared to 2-3% prior to automation.
- Practitioners focus on value add activities (e.g. handling more complex POs).
- 70% Improvement in cycle time (3 minutes compared to 10 minutes pre-automation)

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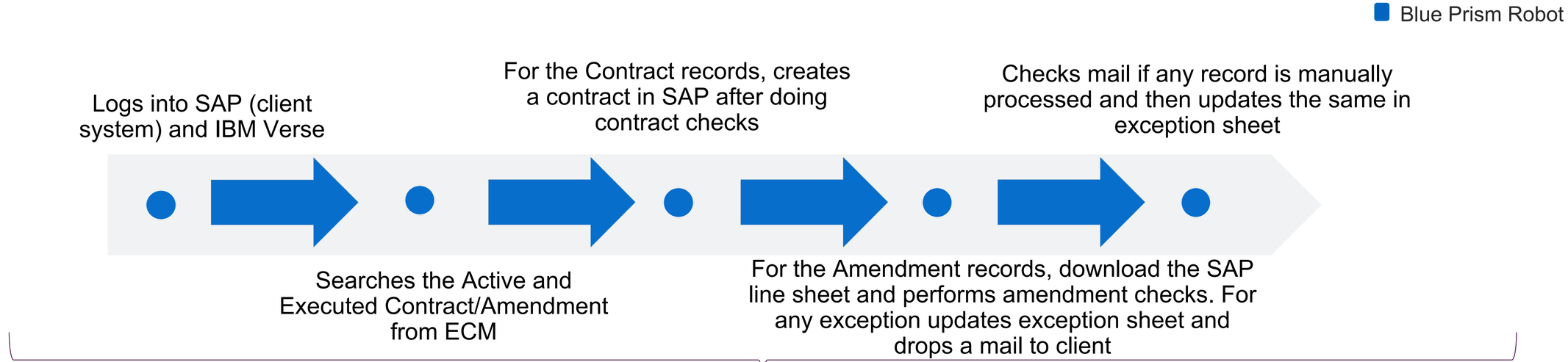
Robotic Process Automation: Contract Administration (Telecom)

Activities Performed by Robot



Business Issue:

- Team manually processes the records from ECM to SAP, which includes performing various checks and updating the records within SAP
- Low value add time is spent maintaining the exception sheet and checking mail for processing of records

RPA

Business Benefits:

- 100% productivity savings
- Cycle time reduction – 4 minutes for each record compared to 10 minutes pre-automation
- Improvement in Quality – Human Copy and Paste effort accounted for 2-3% error previously, which has now dropped to 0%

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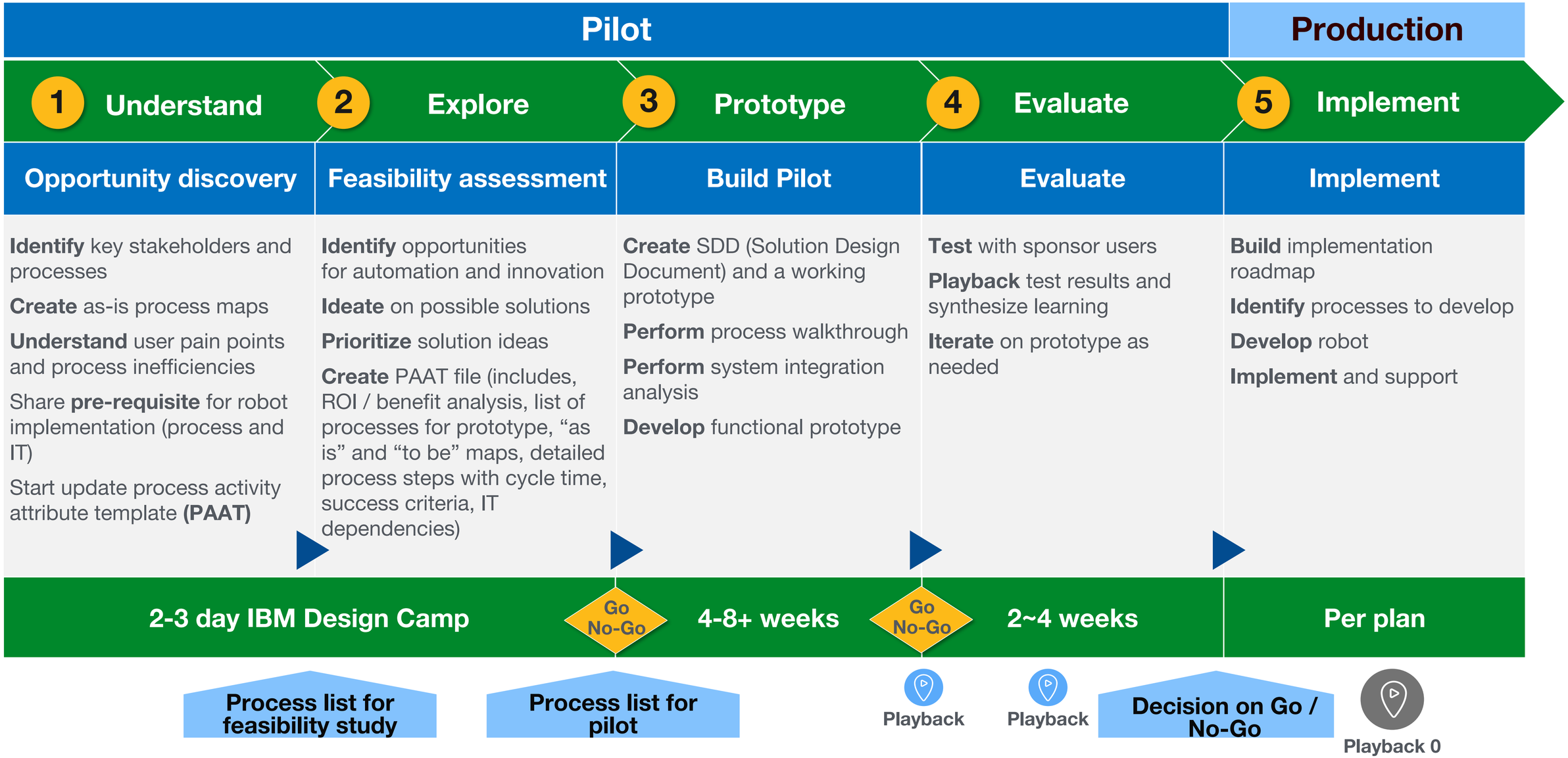
Getting started: Implementation Road Map



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RPA Deployment models

IBM Hosted

IBM managed Robotics as a Service from IBM locations

- Process discovery, assessment, development
- Deployment of robots in VDI or Softlayer
- Includes infrastructure, license (IBM owns)
- Monitoring, scheduling, support for robot execution
- Error handling, support & Break fix - for in scope process development

On Premise

Robotics as a Service from Client location

- Process discovery, assessment, development
  Deployment of robots in VDI or Softlayer in client environment
- Includes infrastructure, license (Client owned & managed)
- Monitoring, scheduling, support for robot execution (IBM owns)
- Error handling, support & Break fix - for in scope process development (IBM owns)

On Premise - Hybrid

Robotics as a Service from Client location

- Process discovery, assessment, development
  Deployment of robots in VDI or Softlayer in client environment
  Includes infrastructure, license (IBM owned & Managed)
  Monitoring, scheduling, support for robot execution (IBM owns)
  Error handling, support & Break fix - for in scope process development (IBM owns)

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IBM uses Blue Prism as a strategic tool of choice for Business Process Robotics and Automation.

Blue Prism has proven capability in delivering enterprise scale for automation
Chosen by many Utility Companies throughout Europe, for automation throughout front and back office processes
Implemented by IBM in a top 6 Utility Company in the UK
Proven integration points with Scanning and Cognitive technology for future growth

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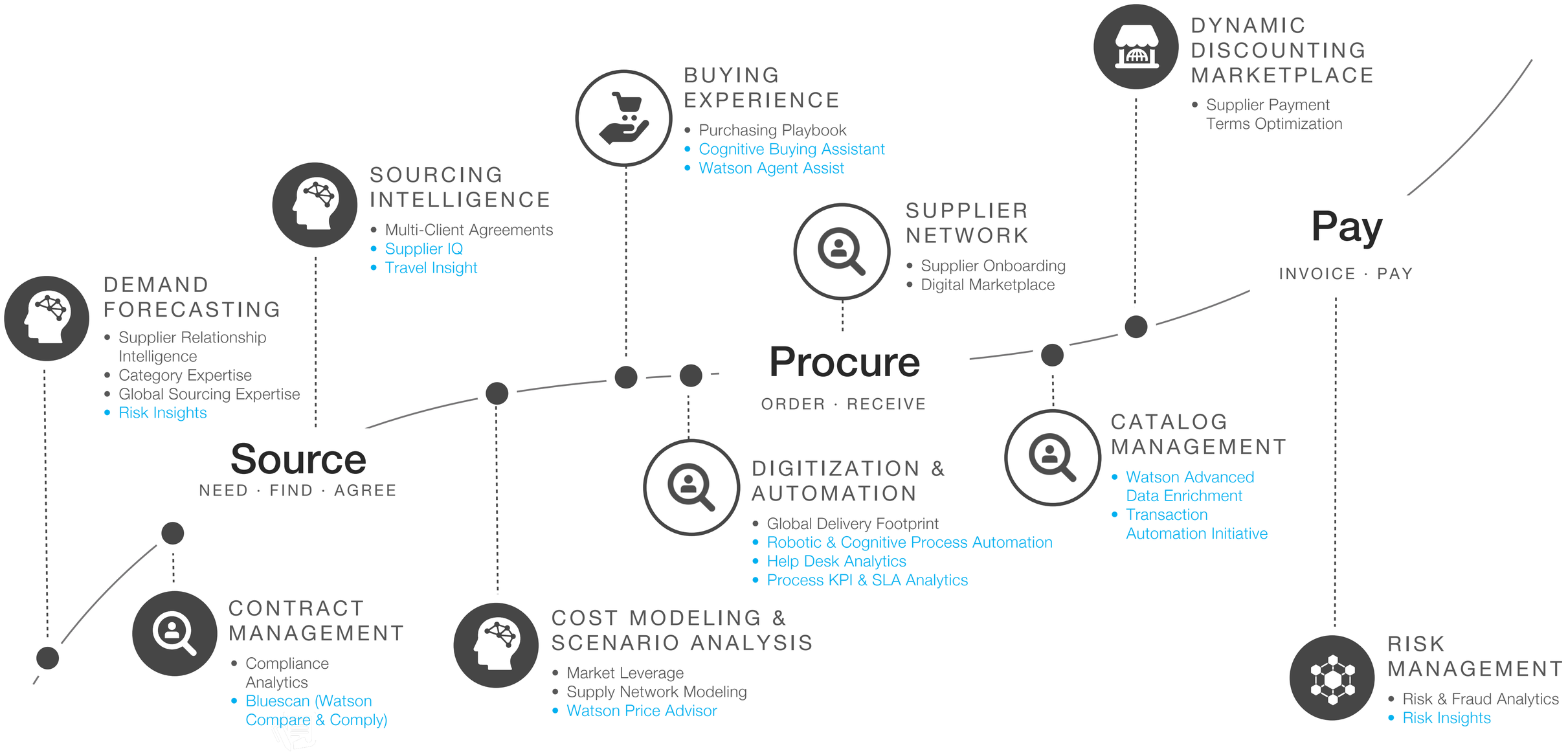
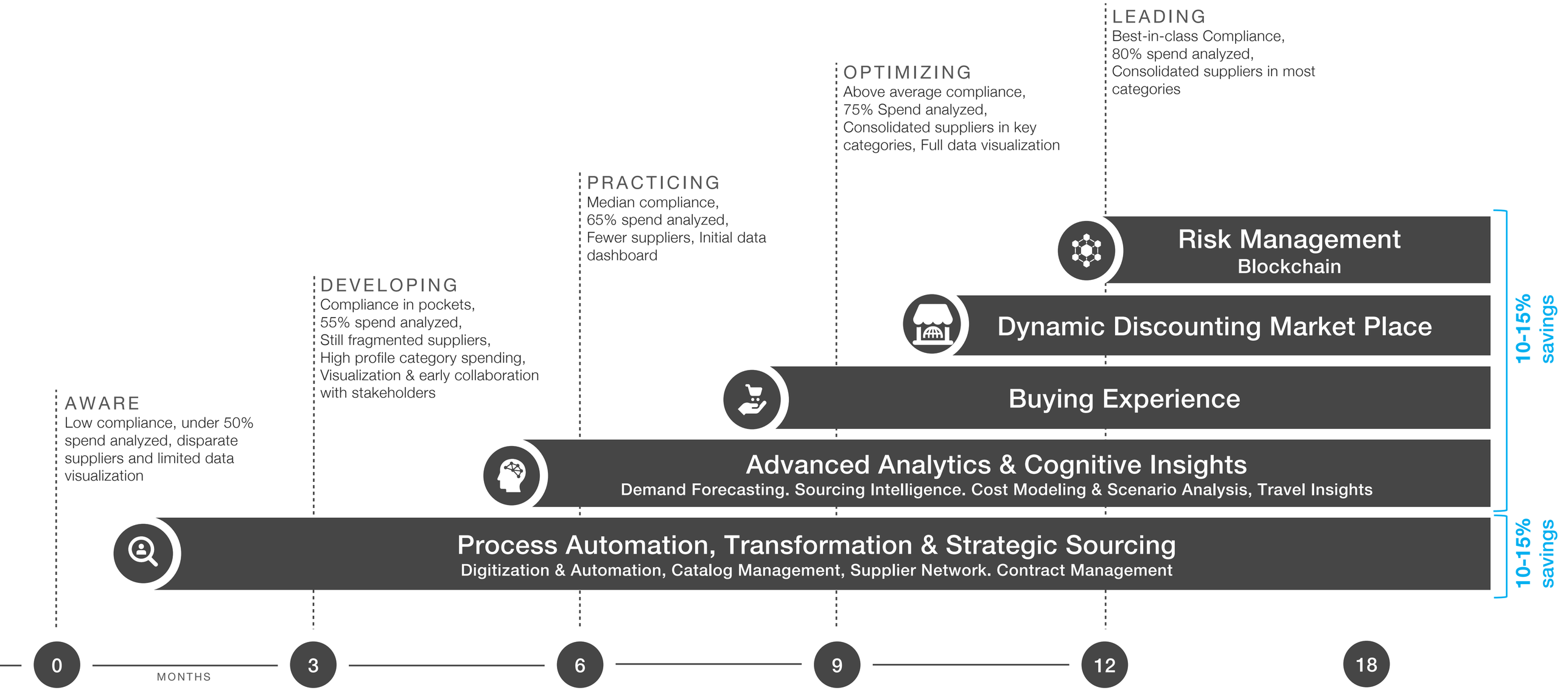
Digital Source to Pay: Enabled by cognitive

Cognitive capabilities



Cognitive Procurement Reinvention Leads to the following Benefits



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THANK YOU