Cognitive Procurement: Seizing the AI opportunity

By Bob Booth
and Amit Sharma

Talking points

Re-engineer workflows to use cognitive capabilities for instant insights and connected experiences
Use exponential technologies to recalibrate and redefine traditional roles and functions to drive operational efficiencies, enhance user experiences and increase savings.

Curate high quality, proprietary data proactively for insights that lead to actions and outcomes
Data from within the enterprise and across platforms, combined with artificial intelligence and automation, can provide insights that drive bias-free business outcomes and mitigate risks.

Integrate processes across organizational boundaries and enterprises for agility and flexibility
Develop strong procurement relationships with supplier networks and across the digital marketplace to increase value and enhance enterprise performance.

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Procurement's critical role in the Cognitive Enterprise evolution

The next big shift in business architectures is happening now: the pervasive application of exponential technologies such as artificial intelligence (AI), automation, blockchain and the Internet of Things (IoT) to core processes and workflows. This new Cognitive Enterprise is driving the digital wave to new heights, transforming how employees add value and corporations differentiate. The Cognitive Enterprise leverages proprietary data, unique platforms and specialist expertise to achieve its goals.

But what exactly does this cresting digital wave look like? What are its factors for success? Which business units or corporate functional teams drive transformation and manage changes across the enterprise?
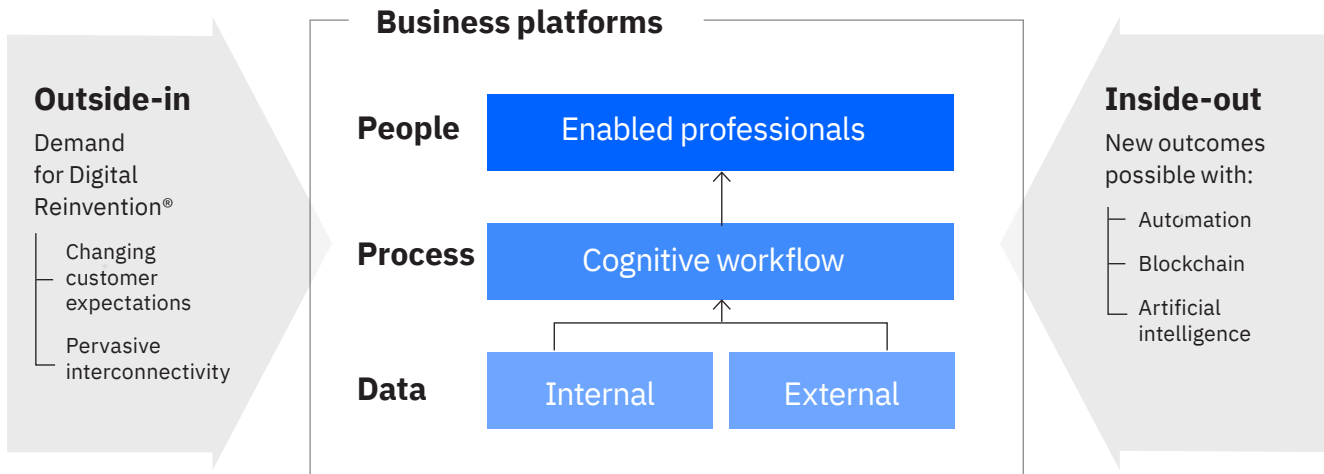
In "The Cognitive Enterprise: Part 1 – The journey to AI and the rise of platform-centric business architectures," we explored the implications of business architectures enabled and driven by new, exponential technologies.[1] We described how organizations can benefit from becoming Cognitive Enterprises, as well as what these enterprises do and how they compete. For example, a Cognitive Enterprise establishes a business platform that leverages institutional knowledge, process differentiation, and data exclusivity – creating competitive advantages that influence new business models (see Figures 1 and 2).

As business models evolve and technology advances align with them, we see an opportunity for Chief Procurement Officers (CPOs) to elevate their value across their enterprises and extended supplier networks.

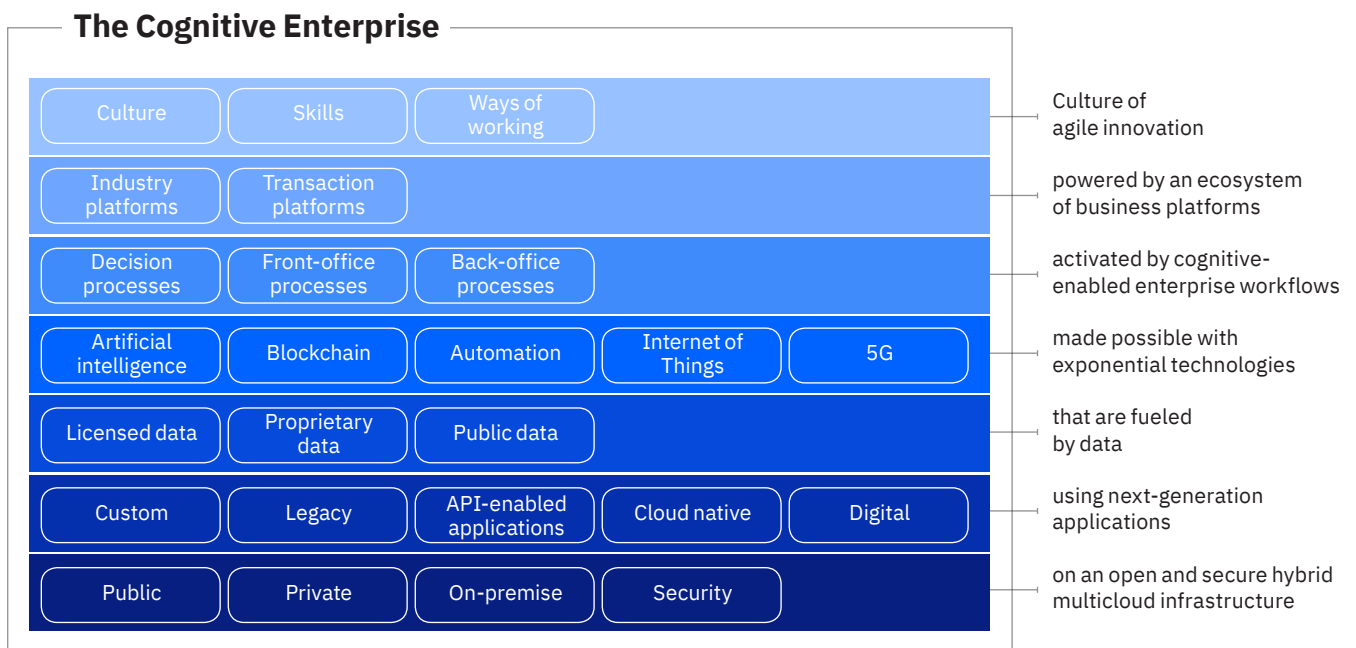# Platforms are redefining business models across industries.

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Figure 1

A platform-centric business model

Business platforms

Outside-in		Inside-out
Outside-in	**People** — Enabled professionals	**Inside-out**
Demand for Digital Reinvention®	**Process** — Cognitive workflow	New outcomes possible with:
— Changing customer expectations	**Data** — Internal / External	— Automation
— Pervasive interconnectivity		— Blockchain
		— Artificial intelligence

Source: IBM Institute for Business Value (IBV) analysis.

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Figure 2

Capability layers for the Cognitive Enterprise

The Cognitive Enterprise

Layer					Description
Culture	Skills	Ways of working			Culture of agile innovation
Industry platforms	Transaction platforms				powered by an ecosystem of business platforms
Decision processes	Front-office processes	Back-office processes			activated by cognitive-enabled enterprise workflows
Artificial intelligence	Blockchain	Automation	Internet of Things	5G	made possible with exponential technologies
Licensed data	Proprietary data	Public data			that are fueled by data
Custom	Legacy	API-enabled applications	Cloud native	Digital	using next-generation applications
Public	Private	On-premise	Security		on an open and secure hybrid multicloud infrastructure

To achieve Cognitive Procurement capabilities that can sense and act, that inform and automate and build new competencies, CPOs should re-engineer existing workflows and roles. As well, curating proprietary data across the platform(s) can increase buying power and facilitate organizational agility beyond an enterprise's borders. By achieving a seamless, low-touch procurement and payment experience, they can define a core platform focus underpinned by a cognitive marketplace.

Platforms are redefining business models across industries by empowering suppliers to interact directly with consumers – without irrelevant intermediaries. The procurement function is at the center of cost, quality, sustainability and risk, as well as the customer, employee and supplier experience. As a result, it has a unique advantage in spearheading the transformation to a Cognitive Enterprise in a fast-emerging platform economy. CPOs who accept the Cognitive Enterprise challenge can help their organizations grow, manage risk and ultimately achieve sustainable competitive advantage.

How to transform into a Cognitive Enterprise

– Clarify intent of core platform focus.
– Re-engineer workflows to use cognitive capabilities.
– Reinvent the workforce proactively.
– Curate proprietary data diligently.
– Secure data, processes and platforms end-to-end.
– Integrate agility across organizational boundaries.
– Revisit and adjust technology architecture choices continually.

Access to platforms
changes the expectations
that procurement faces.

The procurement opportunity in a Cognitive Enterprise

The skills and insights required by the procurement professional are evolving, with uncertainty due to changing trade tariffs and regulations, as well as volatile commodities and exchange rates. At the same time, the enterprise faces the need for game-changing innovation while balancing cost pressure, higher expectations and faster time-to-market expectations. Because the procurement function is often held accountable for achieving ethical, sustainable and visible operations, it plays a critical role in the Cognitive Enterprise.

The Cognitive Enterprise differentiates through platforms that combine trading, enterprise resource management and analytics/decision systems with platforms that companies build and buy to provide access to exponential technologies such as automation, blockchain and cognitive. These platforms afford access to data, application functionality, and user communities and networks.

Procurement will not only be at the heart of these platform decisions, but access to platforms changes the expectations and demands that procurement faces. Skills that were once differentiating in procurement become routine. New capabilities will be demanded of CPOs and their teams.

In a recent study, over 86 percent of CxOs report that cognitive computing would either add value or transform demand management and forecasting.[2] And 90 percent of procurement executives are creating new business models to increase operational efficiency, innovation and ultimately revenue growth.[3] The study also reveals that the top AI investment priorities are revenue-driving functions such as customer satisfaction and retention. Companies in digitized industries such as financial services are accelerating AI adoption above others.[4]

While cognitive computing and AI represent a game-changing opportunity for business value, they also create risks. The IBM Institute for Business Value (IBV) Global AI Study shows that while 82 percent of businesses want to adopt AI, 60 percent are concerned about regulatory issues. Sixty-three percent lack the people skills to harness AI's potential.[5]

Procurement needs to change with a changing world

Over the past few years, procurement's focus has evolved from cost reduction only to a split between cost reduction and revenue growth. But now CPOs have a key role in collaborating with the extended enterprise to support rapidly evolving customer expectations related to quality, provenance, sustainability and ethics – without reducing the emphasis on enterprise and shareholder value. Procurement's role also extends to broader areas such as meeting modern workforce opportunities and helping coach and develop evolving suppliers.

Procurement function metrics and priorities now include:

– Engaging with cross-functional business stakeholders

– Developing a value-based category strategy

– Re-engineering workflows with a total-cost-to-deliver mindset

– Measuring the health and effectiveness of supplier relationships

– Maintaining the Net Promoter Score index for the procurement function.

What we mean by Cognitive Procurement

Procurement functions have evolved through many iterations. In the past, procurement operated as decentralized siloed groups working with "tribal knowledge" and ad hoc spend data focused on unit cost improvement. Recently, procurement has matured into technology-enabled global teams that drive strategic supplier relationships and focus on total cost of ownership. Now with exponential technologies and data proliferation, the next iteration is upon us: Cognitive Procurement.
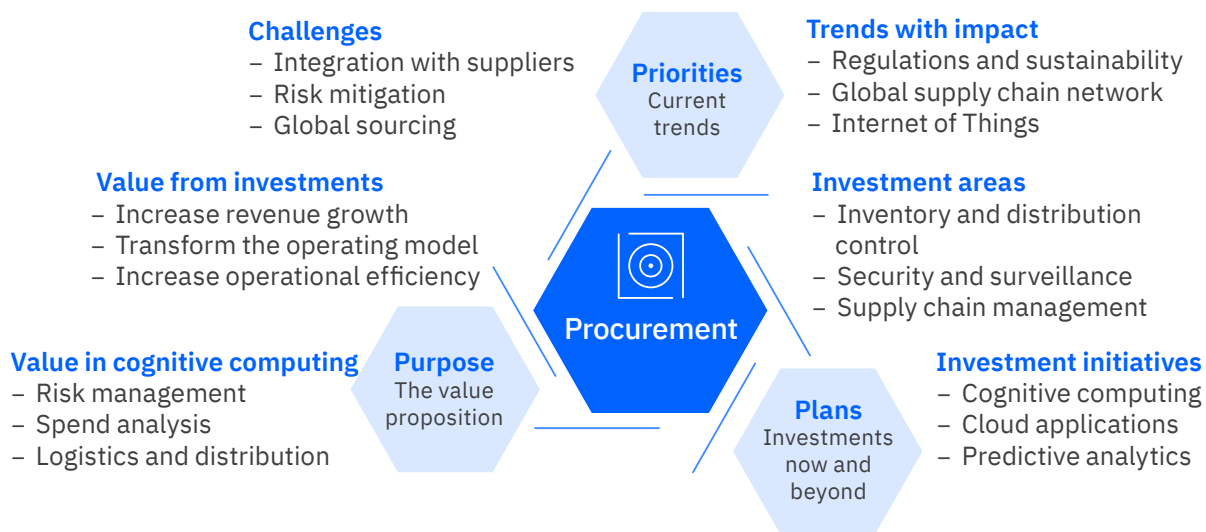
This new environment transcends the mere automation of existing capabilities. Instead, Cognitive Procurement reinvents end-to-end workflows to fully realize the potential of humans and machines working together to complement each other.

In this scenario, procurement professionals have a leading role in building strategic relationships and innovating across the value chain. New platform capabilities and cognitive technologies provide real-time insights, competitor analysis, scenario planning and market information. The cognitive function will generate instant demand-sensing data and self-learning capability to drive continuous improvement. A high degree of segmentation will allow for automated tail spend operations managed by informed strategic category specialists.

Embracing Cognitive Procurement can help organizations achieve competitive advantage.

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Figure 3

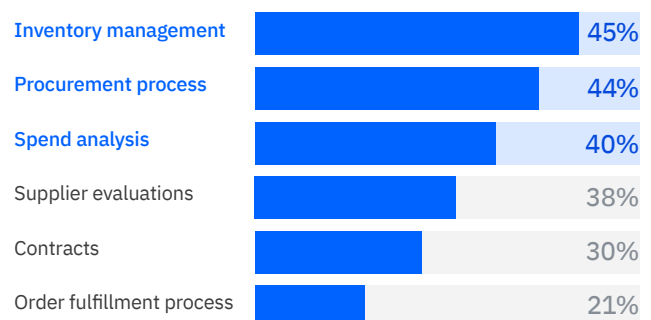Procurement priorities, plans and purpose

Challenges
– Integration with suppliers
– Risk mitigation
– Global sourcing

Priorities
Current trends

Trends with impact
– Regulations and sustainability
– Global supply chain network
– Internet of Things

Value from investments
– Increase revenue growth
– Transform the operating model
– Increase operational efficiency

Procurement

Investment areas
– Inventory and distribution control
– Security and surveillance
– Supply chain management

Value in cognitive computing
– Risk management
– Spend analysis
– Logistics and distribution

Purpose
The value proposition

Plans
Investments now and beyond

Investment initiatives
– Cognitive computing
– Cloud applications
– Predictive analytics

In recent IBM IBV research, CPOs report that their top three technology investments over the next three years will be cognitive computing, cloud and predictive data analytics (see Figure 3).[6] They are seeking value through security-rich, real-time communications and actions to source-to-settle processes, while advancing predictive analytics in global inventory optimization. We found that for many CPOs, especially in the manufacturing and distribution industries, gaining visibility, insight and understanding related to buy-and-supply functions is mission-critical.[7]

Overall, CPOs indicate concern with maintaining the health of their global supply chain networks while transforming their operating models for revenue growth. Challenges include supplier integration, risk mitigation and global sourcing.[8] When asked what data most impacts extracting value from cognitive computing, CPOs cite quality of inventory management, procurement process and spend analysis data as top priorities (see Figure 4).[9]

A digital marketplace facilitates collaboration between sell-side (suppliers) and buy-side (buyers) driven by market intermediaries such as banks, third-party logistics providers and independent software vendors within the same network. Given that the marketplace will consist of buyers who are also suppliers, and suppliers who are also buyers, analytical and connectivity tools such as AI and blockchain pave the way for multilateral netting. This is a settlement mechanism used by companies to pay for goods and services purchased from affiliated companies.

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Figure 4

Key procurement data for cognitive computing

Inventory management	45%
Procurement process	44%
Spend analysis	40%
Supplier evaluations	38%
Contracts	30%
Order fulfillment process	21%

The netting process consolidates intercompany transactions, calculates settlement requirements internally instead of using external payment systems, and impacts the efficiencies in source-to-settle processes.

Considering Cognitive Procurement's impact on the workforce is also important. As procurement organizations seek value from these Cognitive Enterprise imperatives, they can enhance user, supplier and employee experiences. Procurement skills and talent evolve. We envision most transactional, tactical and some strategic processes being "pass through" or "lights out," with technology driving the process. This frees up procurement professionals to focus on the "art" of procurement, such as nurturing relationships, identifying strategic suppliers, understanding market dynamics and fostering innovation.

We see four key areas in which exponential technologies can reinvent the Cognitive Procurement function – and where the CPO and procurement play a leading role in Cognitive Enterprise transformation:

– Re-engineer workflows to use cognitive capabilities, including traditional roles in sourcing and category management, to drive operational efficiencies, enhance user experiences and increase savings.
– Curate proprietary data proactively from within the enterprise and across the supplier network. This can provide insights derived from high quality data sources that drive bias-free business outcomes and mitigate internal and external risks.
– Integrate agility across organizational boundaries, recognizing that procurement can enhance enterprise performance through strong relationships with supplier networks.
– Define core platform focus underpinned by a digital marketplace for a seamless, low-touch procurement and payment experience.

CPOs and procurement organizations that accept the challenge and embrace Cognitive Procurement straight on can help their organizations reduce costs, grow, manage business and platform risk and ultimately achieve sustainable competitive advantage.

Improving business agility through seven powerful cognitive capabilities[10]

IBM's procurement professionals identified a collection of seven cognitive capabilities that empower them to profile categories, develop sourcing strategies and attain absolute competitiveness when engaging and negotiating with the market. Subsequently, these capabilities help to manage operations, compliance and supplier risk. The collection includes tools for:

– Spend intelligence and analytics
– Fraud and audit management
– Supplier intelligence and assessment
– Supply risks and alert monitoring
– Contract administration and compliance
– Unit price benchmarking and should-cost prediction
– Virtual buying assistant and help desk

These capabilities use AI to integrate historical information, market intelligence, market sentiment and demand with models that apply natural language processing and machine learning. Supply chain risk and ongoing competitiveness are proactively monitored, freeing procurement practitioners to focus on enhancing client and supplier relationships, improving speed to market, helping to create revenue opportunities and innovating on continuous improvement programs.

Cognitive data enrichment and a robust data strategy that cover the full lifecycle of data – from data acquisition through the curation and consumption of data – provide a trusted source of internal and external data. Practitioners can make business decisions based on business insights delivered through our cognitive solutions with a high level of confidence.

These capabilities put a virtual subject-matter expert on practitioner desks, allowing the business to react and often anticipate. The result? Improved business agility.

As a result, IBM experienced year-over-year savings of USD 65 million in 2017 and projects similar savings for 2018. Furthermore, IBM's procurement workforce can focus on higher value activities, better engaging with suppliers and servicing business needs in a more flexible, agile way.

Cognitive analytics can provide timely, valuable insights.
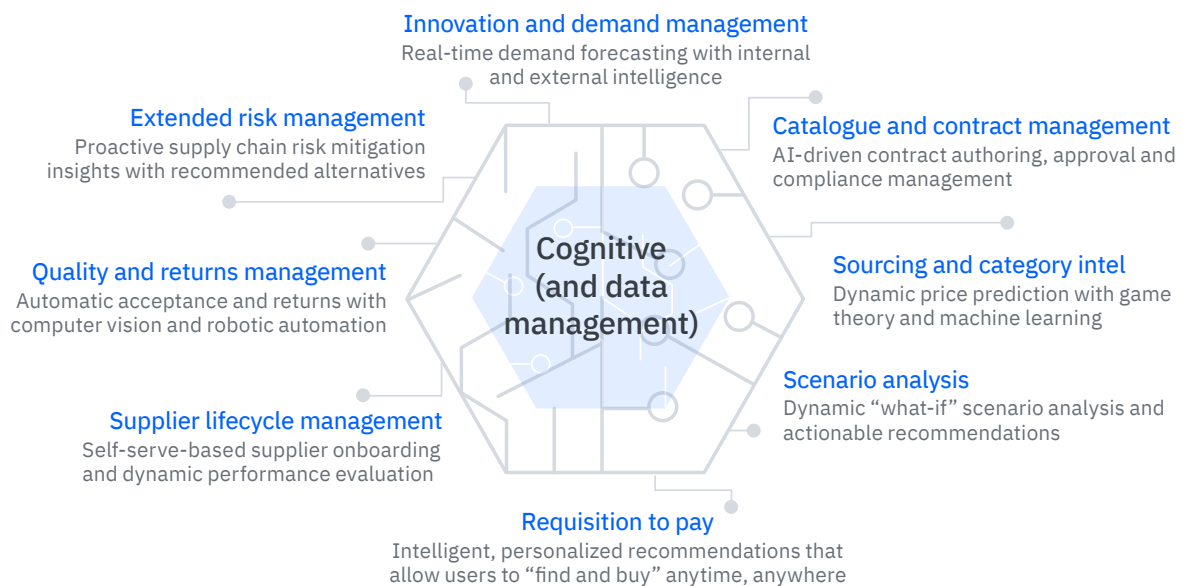
Reimagining the workflow

To support the speed and flexibility needed by the Cognitive Enterprise, procurement should re-engineer its workflows to provide instant insights and connected experiences with automated and cognitive solutions. According to the most recent IBM IBV C-suite study, operations executives state that cognitive computing will help their enterprises compete in the next two to three years by optimizing business processes and workflows (49 percent), personalizing customer experiences (46 percent) and enhancing workforce capabilities and productivity (45 percent).[11] Forty percent of CPOs expect cognitive computing to add value with risk mitigation, spend analysis and global logistics and distribution.[12] Figure 5 illustrates high potential areas for improvement by leveraging cognitive technologies throughout the source-to-settle workflow.

Leading organizations are building the new capabilities needed to transform operations. We found that 80 percent of CPOs apply real-time information to optimize processes and networks for immediate actions and outcome. Eighty-seven percent are constructing business strategies and operating models to achieve agility and flexibility for enhanced response and operational efficiency.[13]

CPOs are also buying capability by leveraging new platforms in areas such as demand forecasting, contract management, sourcing, buying and risk management. For example, IBM has built a virtual buying assistant that uses natural language processing. This virtual assistant can guide a requester through a non-catalogue request for indirect goods and services, and carry out the "three bids and a buy" process. This not only provides a great user experience. It also drives higher quality, data consistency and efficiency for both the buyer and seller.

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Figure 5

How cognitive technologies can improve procurement capabilities

Innovation and demand management
Real-time demand forecasting with internal and external intelligence

Extended risk management
Proactive supply chain risk mitigation insights with recommended alternatives

Catalogue and contract management
AI-driven contract authoring, approval and compliance management

Quality and returns management
Automatic acceptance and returns with computer vision and robotic automation

Cognitive (and data management)

Sourcing and category intel
Dynamic price prediction with game theory and machine learning

Supplier lifecycle management
Self-serve-based supplier onboarding and dynamic performance evaluation

Scenario analysis
Dynamic "what-if" scenario analysis and actionable recommendations

Requisition to pay
Intelligent, personalized recommendations that allow users to "find and buy" anytime, anywhere

Advanced analytics and machine learning will inform and empower future procurement professionals in areas such as strategic sourcing, supplier negotiations and supplier risk. For example, cognitive analytics can provide timely and valuable insights related to market dynamics, categories and supply base changes. It can also provide real-time information about competitor activities, supplier performance and quality feedback, helping procurement to build trusted relationships with chosen strategic suppliers. Procurement can access new ways to collaborate, share forecast and plans, and develop products and other improvements in key process steps and workflows.

Curating and protecting data

Ideally, insights lead to actions and outcomes. With enriched data for analytics and cognitive insights, both human and machine workers make better-informed, timely, bias-free decisions that can directly impact business performance and deliver business value.

The availability of information-enriched data is exploding. The Cognitive Procurement professional can access a myriad of data sources from real time to historic and from structured to unstructured. Structured data needs to be captured from enterprise processes, industry groups and supplier networks, as well as from external market platforms. Unstructured data can be harvested from IoT, speech, video, text and social channels – again from both across and outside the enterprise.

Leading paint manufacturer fuels procurement decisions with cognitive insights[14]

One of the world's leading paint companies procures more than 450 raw materials from over 300 global vendors.

A team of 40 procurement specialists makes dynamic decisions using market research reports, chemical industry news, geopolitical and business trends, commodity prices and more.

This team is empowered by a cognitive decision-support system that provides insights on price fluctuations and supply chain risks such as the impact of a plant shutdown, supplier disruptions or country-specific supply tightening. Without this cognitive learning platform, it would not be possible for an individual to synthesize myriad structured and unstructured data and derive meaningful, timely inferences.

With increased scale comes increased data security risk. Procurement needs to assure protection of shared data, delegated decision making and communications within supplier and logistics partner networks. It needs to initiate and deploy security-rich practices across the network by working closely with Chief Security Officers and Chief Information Officers. Adding intelligence is imperative. We found that 79 percent of executives expect cognitive computing to either add value or transform risk and security management.[15]

Additionally, many organizations are struggling to develop a single, comprehensive view of vendors, materials, categories and associated ledger accounts. The European General Data Protection Regulation (GDPR) and other measures are encouraging many organizations to resolve data issues.[16] However, creating "data centricity" – an architecture where data is the primary permanent asset that applications use – is challenging. In a recent IBM report developed with the analyst firm Horses for Sources (HFS), "Making AI the Killer App for Your Data,"we discuss the importance of robust data as a basis for AI.[17] When enterprise data is coupled with external data and made accessible via a platform, you can unlock endless AI opportunities. Without accessible data in the right format, there is no AI.

Data integrity and authenticity are even more critical within business networks that share data beyond the enterprise. Blockchain makes it easier to integrate multiple network platforms among enterprises, suppliers, distributors and customers. Applications on these platforms can implement previously unattainable "no touch" processes that provide the highest levels of transaction and data security.

According to the most recent IBM IBV C-suite study, operations executives understand the importance of blockchain in supporting their enterprise strategy of providing security, transparency and ultimate visibility into global trade transactions. Thirty-nine percent of operations executives report that blockchain would verify data quality and accuracy and improve security against fraud and cybercrime. Thirty-six percent say that blockchain will increase trust in transaction reliability and increase transparency, while 35 percent report that blockchain will simplify and automate business processes.[18]

Logoplaste integrates and automates using real-time insights[19]

A Portuguese plastic manufacturing company optimizes costs, delivers comprehensive process transparency and facilitates information integration and automation. This company consolidated its procurement, production, planning and IoT data into a common platform to provide real-time insights to virtually all supply chain partners. Data flows in both directions, from shop floor to top floor, with financial data a click away. The solution is expected to prepare the company for the future as its manufacturing volumes grow.

What makes a good use case for blockchain?

- Multiple parties in the ecosystem benefit.
- Trust between parties has been difficult to achieve.
- Transaction sequence and provenance are valuable.
- Shared data and business logic create value.
- The process traditionally has had handoff inefficiencies.
- Data privacy and security are paramount.
- Business contracts and service level agreements are complex.

Applying organizational agility

An agile organizational structure, supported by cognitive technology, offers teams new ways of working and liberates employees to innovate, develop relationships and drive increasing levels of value while leveraging the digital marketplace. When we asked operational executives about the impact of AI/cognitive computing on elements of their enterprise's business model in the next two to three years, 55 percent cite organizational structure as a moderate to significant impact.[20]

Component business modeling (CBM) is useful in analyzing enterprise processes and identifying areas for reinvention and enhanced agility. Procurement processes can be broken down using a CBM framework that identifies prospects for re-engineering by AI and automation technologies (see Figure 6). This directs CPOs to opportunities for reducing cost or building capability.

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Figure 6

Using a CBM framework to identify processes for AI/automation re-engineering

	Client collaboration	Strategic sourcing	Supplier and commodity management	Operational procurement	Business strategy and administration
Direct	Client relationship strategy Procurement integration strategy	Procurement strategy Sourcing strategy Supplier portfolio and selection strategy	Commodity strategy Supplier relationship strategy	Procurement operational strategy **Supply assurance** Logistics strategy	Business planning **Policies, procedures and governance**
Control	**Client relationship monitoring and management** **Requirements and specification management**	**Supply and supplier market analysis**	**Cost monitoring and management** **Supplier relationship monitoring and management**	**Performance monitoring and tracking** **Compliance monitoring**	**Risk management and fraud detection** **Intellectual property** Business reporting Skills/education
Execute	**Client relationship operations** Procurement integration	**Supplier selection (RFx)** **Negotiation and closure contract**	**Spend analysis** **Supplier relationship operations**	**Procurement operations** **Contract management** **Catalog management** **Help desk**	**IT systems and operations** **Facilities management**

AI/Automation opportunity

High

Medium

Low

Bold indicates high shared services opportunity

Increasingly, companies will choose business-critical platforms to help them differentiate.

Working with IT, procurement will have a much bigger role in gaining organizationwide agility, connecting internal and external capabilities across the business. Procurement can help colleagues decide what capabilities to build, what to buy and how to assimilate these. A successful collaboration relies on procurement's ability to identify, qualify and manage suppliers and strategic business partners effectively and at pace.

As Figure 7 shows, CPOs are expanding partner networks, creating value from collaboration and sharing resources with their partners. Some are even collaborating with their competitors. Reconstructing their operating models for greater agility and responsiveness helps facilitate this broader collaboration.

By using cognitive technologies, organizations can uncover comprehensive insights into supply chain disruptions and risks. With this new level of understanding, procurement professionals can predict outlier events and automate actions before those events occur. This responsiveness elevates Cognitive Procurement – and the enterprise – to increasingly higher levels of agility.

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Figure 7
Expanding collaboration across procurement and supply chain functions

We collaborate with partners to develop new products and services
51%   33%

We collaborate with partners to target specific customer segments
50%   34%

We share common business values and practices with our partners
49%   36%

We collaborate with our customers on new product/service design
47%   36%

We collaborate selectively with our competitors
40%   36%

We share resources (people, skills, assets) with our partners
37%   36%

■ To large extent (4/5)   ■ Somewhat agree (3)

Defining core platform focus

Increasingly, companies will choose business-critical platforms to help them differentiate. Procurement will actively engage in supply-side platforms related to innovation, collaboration, risk and buying of external goods and capabilities. The most obvious example is creating a buying experience through a marketplace – an online community of buyers, sellers and content.

With the increasing adoption of online purchasing, buyers expect a user-friendly, social, mobile marketplace experience. The transaction becomes touchless, automating the purchase order to invoice process. The data for transactional procurement is housed within the marketplace while also retaining transparency and controls for strategic analysis. For forward-thinking procurement organizations, a truly automated environment within a private marketplace is a key objective. These organizations are implementing platforms that simplify experiences and connect buyers and suppliers.

For each element of the supplier value chain, organizations need to decide whether they want to build their own marketplace capability or buy capability from a marketplace owner or service provider. Their own marketplace could be made available either vertically to their industry or horizontally across industries.

As marketplaces dramatically improve user experience and leverage industry-leading controls and automation, these platforms will redefine how CPOs plan and prioritize business objectives, as well as how the procurement workforce buys. Platforms are also redefining business models. They are changing the supply-and-demand equations across industries by allowing manufacturers to interact directly with consumers. This provides a great opportunity for businesses to re-think value creation in the context of an industry platform play as well as a connected global economy. CPOs can lead the way by opening enterprise workflows to a wider network of suppliers, driving faster, better business performance at a lower cost.

Strength in numbers[21]

The TradeLens blockchain-enabled shipping network that recently scaled to more than 100 ecosystem partners promotes more efficient and secure global trade, supports information sharing and transparency, and spurs industrywide innovation.

TradeLens is backed by a collaboration agreement between Maersk and IBM, and lays the foundation for digital supply chains by empowering multiple trading partners to collaborate – publishing and subscribing to events data – establishing a single shared view of a transaction without compromising details, privacy or confidentiality. TradeLens enables digital collaboration among the multiple parties involved in international trade. Shippers, ocean carriers, freight forwarders, port and terminal operators, inland transportation, customs authorities and others can interact more efficiently through real-time access to shipping data and shipping documents, including IoT and sensor data.

TradeLens is setting up an Industry Advisory Board comprised of ecosystem participants to help govern the growing network, shape the platform and promote open standards. The network is working with bodies such as United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and industry groups such as OpenShipping.org to help ensure interoperability. At a future stage, third parties can build and deploy applications to a TradeLens marketplace – unlocking new value for network members.

How to start now

The rewards of evolving to a Cognitive Enterprise can be immense – and Cognitive Procurement can play a pivotal role. Here are three steps for a fast start.

1. Develop a transformation map

Mapping business strategy to procurement strategy allows the CPO to establish goals while identifying new and evolving capabilities. Procurement can then create a transformation map to articulate distinct steps and investments needed to deliver these capabilities. This map should be supported by a business case and benefits tracking approach to deliver return on investment, cost reduction, risk mitigation and revenue growth.

Ultimately, enterprises that reimagine "how" to achieve value-adding outcomes can have significant competitive advantage. For example:

– How to leverage the new platform economy, one that is disrupting traditional business models by putting the end user at the ecosystem center?

– How to create a network of suppliers and buyers that collaborate seamlessly on intelligent platforms? These platforms can create new levels of cross-organization visibility by combining source-to-settle systems and other enterprise applications with e-commerce marketplace solutions.

– How to make the most of data and analytics while allowing users to benefit from strategic insights? These real-time insights are harvested from exponential technologies such as blockchain, cloud and machine learning.

– How can an integrated platform significantly improve cycle time and throughput by removing intermediaries that don't add direct value in the supply chain?

2. Engage executive sponsorship

Because Cognitive Enterprise initiatives span the entire organization, this transformation needs a C-suite executive sponsor. To drive the procurement agenda, the CPO would ideally serve as this sponsor, bringing together leaders from lines of business, finance, IT and operations. Many leading companies have established centralized innovation teams such as task forces and centers of excellence to accelerate understanding and adoption of these solutions. Yet these teams could aim for even higher goals: driving business leaders to take ownership of ideas and changes, motivating employees to work toward objectives and aligning resources to create one team.
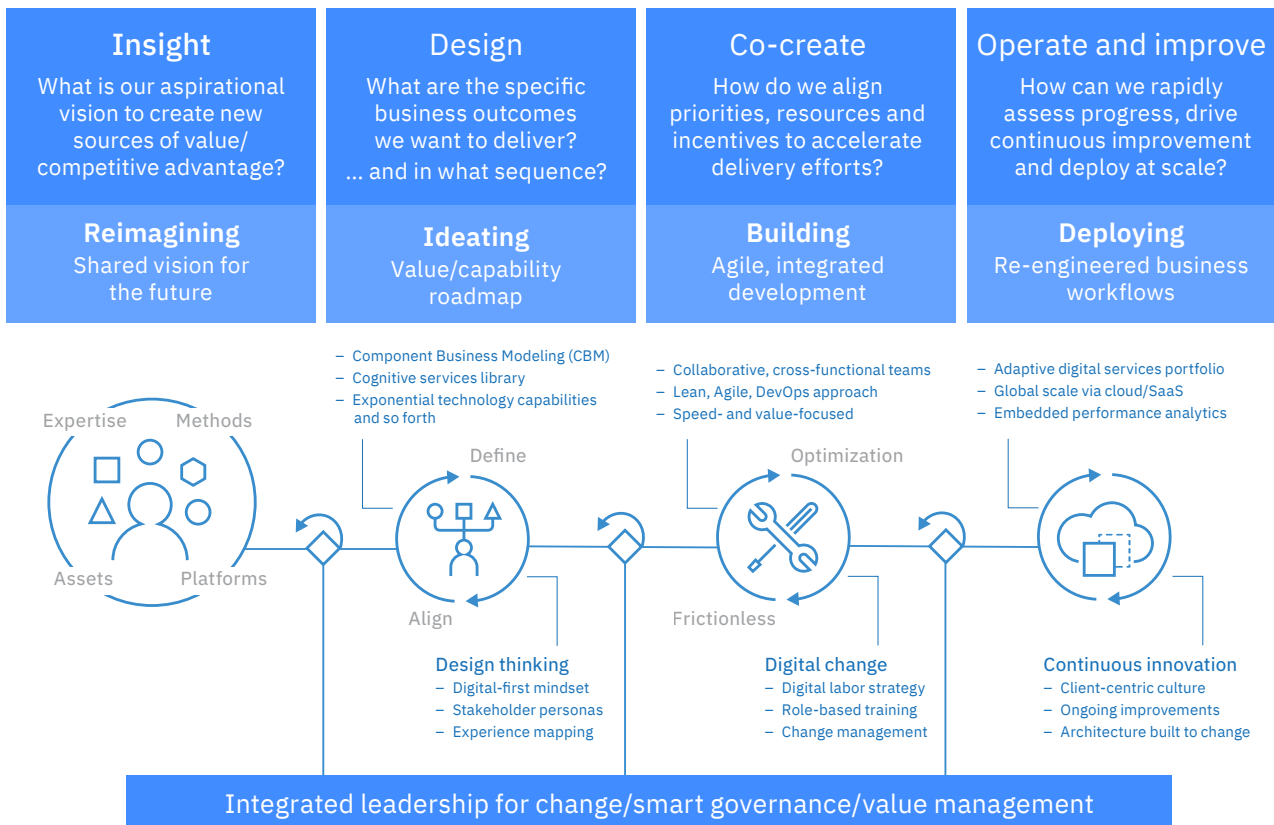
3. Leverage the "garage" concept

The "garage" concept supports business transformation from the "inside out," with enterprises aligning to their organization's strategic business imperatives (see Figure 8). The approach brings together business, technology, design thinking and data scientists to drive an agile innovation incubator for creating automated and

AI-enabled procurement capabilities. This diverse group of functional, technical and industry professionals obtains buy-in through agreed-upon business cases and roadmaps for reimagined processes, technology and operating teams. For more information, read the IBM IBV report "Opening the garage door: Innovate like a startup; scale like an enterprise" at ibm.biz/garagefactory.

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Figure 8

The garage model drives continuous innovation

Insight	Design	Co-create	Operate and improve
What is our aspirational vision to create new sources of value/ competitive advantage?	What are the specific business outcomes we want to deliver? … and in what sequence?	How do we align priorities, resources and incentives to accelerate delivery efforts?	How can we rapidly assess progress, drive continuous improvement and deploy at scale?
Reimagining Shared vision for the future	**Ideating** Value/capability roadmap	**Building** Agile, integrated development	**Deploying** Re-engineered business workflows

– Component Business Modeling (CBM)
– Cognitive services library
– Exponential technology capabilities and so forth

– Collaborative, cross-functional teams
– Lean, Agile, DevOps approach
– Speed- and value-focused

– Adaptive digital services portfolio
– Global scale via cloud/SaaS
– Embedded performance analytics

Expertise   Methods

Define

Assets   Platforms

Align

Optimization

Frictionless

Design thinking
– Digital-first mindset
– Stakeholder personas
– Experience mapping

Digital change
– Digital labor strategy
– Role-based training
– Change management

Continuous innovation
– Client-centric culture
– Ongoing improvements
– Architecture built to change

Integrated leadership for change/smart governance/value management

Getting started requires strong executive sponsorship and a commitment to design thinking.

Procuring a competitive future

Establishing a business platform that encompasses people, processes and data is a critical component of a Cognitive Enterprise. Organizations also need to build on previous investments related to their Digital Reinvention® and core enterprise systems. With Digital Reinvention, exponential technologies such as AI, automation, blockchain and IoT help enable organizations to re-engineer workflows, leverage vast amounts of proprietary data and create platform-centric business models – and perhaps emerge as an incumbent disruptor in their industries.

Getting started requires strong, visible senior executive sponsorship, as well as a commitment to adopt design thinking and agile development methods that depend upon stakeholder participation. Interactive and iterative engagement with the workforce, supported by change management programs, is essential. Rapid deployment is also important. This can be facilitated with a roadmap of incremental functionality that is mapped to the business case and includes a timeline. Finally, comprehensive governance of participation, data integrity, measurements and validation of benefits is critical.

The procurement organization has a strategic role to play as steward of two important factors impacting supplier and business partner performance: data and relationships. Ideally, procurement can also lead the way in transforming its own operational processes. It can accomplish this by curating proprietary data and reinventing its workforce to deliver on expectations for real-time insights, on-the-spot product and service provision and all-encompassing operational efficiency. CPOs who accept the challenge can help their organizations grow, become more agile and responsive, manage risk and ultimately achieve sustainable competitive advantage.

About the authors

Bob Booth

linkedin.com/in/bobebooth
Twitter @bobebooth
bob.e.booth@ibm.com

Bob Booth is the European Lead for Cognitive Process Re-engineering, IBM Global Business Services. He has a background in global finance and procurement organization and technology transformation spanning more than twenty years. Bob has designed and delivered transformation programs involving various technologies including ERP, automation and analytics for captive, business process outsourcing (BPO) and hybrid shared services, as well as retained organizations. He is passionate about technology-enabled change.

Amit Sharma

linkedin.com/in/amitsharmaprocurement
Twitter @_amitsharma
Amit.Sharma@ibm.com

Amit Sharma leads the Global Procurement Practice for IBM Cognitive Process Services (CPS). His background in procurement, supply chain, finance and accounting, source-to-pay technology design and shared services transformation spans 24 years. Amit is an expert in re-imagining, designing and delivering integrated consulting, technology and outsourcing propositions. He holds an MBA degree from the International Management Institute (IMI), New Delhi, India, and is a result-focused leader with an emphasis on people and client values.

Contributors

Tony Menezes
Global Leader, Cognitive Process Re-engineering
IBM Global Business Services

Jonathan Wright
Global Lead Cognitive Process Re-engineering and
Global Lead Supply Chain Management
IBM Global Business Services

Prasant Parida
Cognitive Solutions Offering Portfolio Leader
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Notes and sources

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