

Tapping the Power of AI to Streamline Sourcing and Procurement

How AI can transform experience,
decision-making, and research in the retail, BFSI,
and manufacturing procurement pipelines.

White Paper

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COVID-19 Readiness

Supply chains around the world have been disrupted due to the COVID-19 pandemic. Where borders once stood for exchange of goods and raw materials across continents, now resemble a place where controls are enforced strictly at international, national, state, county or even at a neighbourhood level to prevent the spread. Hence it has become challenging for organizations to procure raw materials from various sources. Tasks like shortlisting vendors, contract management, supplier onboarding and supply chain tracking have been severely affected.

Against this background, it is important to look at the role of AI in sourcing and procurement and how it can enable us to tackle challenges that have propped up due to the current situation. AI can help manufacturers assess the risk profile of the vendors by shortlisting the ones that have a lower probability of default. As the number of places from where one can source materials has reduced drastically, AI can help in choosing the right vendors matching your criteria and in identifying appropriate supply chain routes. This can be done, taking into account the restrictions and blockades that have been put in place along the way.

As manpower during this time is strained, chatbots can help suppliers with the onboarding process. Optical Character Recognition (OCR) and Natural language Processing (NLP) techniques can eliminate manual intervention in sifting through invoices or contract documents. AI models can predict the demand and buying patterns during the crisis, basis a host of factors, and allow the businesses to maintain optimum inventory levels. Heat-maps can give a bird's eye view to the manufacturers of their inbound supply chain. Instead of the traditional tendering process, AI can shortlist vendors, share invites, negotiate prices while initiating the onboarding process. Artificial Intelligence, in conjunction with blockchain, can establish a secure link with the banks and vendors. Such a channel can automate contract execution, with automatic execution of the task (like payment of a transaction from bank to vendor) once a particular milestone in the contract is achieved and verified. In this whitepaper, we examine these aspects in detail.

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Challenges faced by procurement professionals

Procurement is marked by several challenges that would significantly benefit from digital transformation. Procurement faces risks from a variety of areas, from volatile prices to the probability of vendor default.

Studies suggest that more than one out of three procurement professionals have experienced a significant supply chain risk event in the last two years. These events have a negative effect on brand reputation and production timelines, ultimately impacting revenue. Yet, less than 50% have adopted a robust risk management strategy. Moreover, the average maturity level of vendor risk management programs has become stagnant.

Next is the issue of inaccurate and incoherent datasets to inform decision-making. As supply chains become more connected and technology-driven, procurement data flows in from a variety of touchpoints. But much of this is raw, unclean and hinders analytics. Data accuracy is the number one concern in procurement, followed by data validity and completeness.

CPOs are under pressure to reduce costs as much as possible. Deloitte's recent survey found that 70% of CPOs are very likely to cut costs over the next twelve months, as this continues to be a primary business strategy for large enterprises. Further, studies show that price swings of commodities are the number two driver of earnings uncertainty for publicly-traded companies. As a result, CPOs are eager to anticipate commodity prices and stay a step ahead of the competition.



How AI can reshape procurement experiences

The most noticeable impact of AI in any industry is perhaps its ability to reshape experiences. Consider a chatbot that guides suppliers across the onboarding process, without any need to fill out paper forms or email documents. The onboarding experience would become dramatically shorter, simpler, and error-free, sending useful data to the company's back-end systems. Even where documentation is absolutely necessary, AI techniques like optical character recognition (OCR) could extract data from PDFs, emails, and images to automatically populate the procurement database.

Apart from automated form-filling and chatbots, AI can enhance experiences for procurement employees as well. For instance, AI can parse supplier data to create heat maps depicting appropriate suppliers and networks. These heat maps can save employees hours of manual effort, leaving time for more valuable areas of work. Finally, AI reimagines experiences for end-customers by generating insights on purchase patterns, demand, and unfulfilled requirements. An enterprise (particularly retail or BFSI) can align its procurement functions accordingly, ensuring that each customer's need is met, creating an enhanced experience that translates into higher loyalty and lifetime value.



AI's potential in improving procurement decisions

AI interfaces can make data exploration easier for procurement professionals. In most scenarios, enterprises require a dedicated analyst to extract meaningful insights from data. These insights will change with the enablement of conversational interfaces, either voice or text. Non-technical users can enter questions in natural language, and receive useful responses such as top-recommended suppliers, predictive costs, and possible risk index. This capability introduces the power of augmented analytics, coupling AI, and machine learning (ML) with procurement intelligence to automate several aspects of data exploration and utilization.

Leveraging AI, procurement advisors can perform data clustering to equip procurement teams with highly specific recommendations. Registered vendors can be segmented by criteria such as timeliness, quality, cost, and so on. This process is different than that of chatbots, as procurement advisors can intelligently recommend the best option in an adaptive (not rule-based) model. Another function enabled by AI is sourcing auctions. Instead of the traditional tender and bid process, an AI engine can shortlist eligible vendors, automatically share invites, receive bids and negotiate prices, all while initiating the onboarding process.

A handful of platforms already leverage AI for these critical moments of decision-making, and we can expect to see more soon.



Training procurement AI engines for accurate and ethical research

As we can see from the experience and decision-making aspect, AI makes the required data accessible at the right time. Knowledge management and research activity would become radically simpler, thanks to AI-based search and retrieval. This process can uncover patterns and insights buried deep within fragmented data sets, bolstering industry research around procurement strategies, vendor selection, and enterprise expansion into new geographies. AI has the potential to dramatically impact procurement research capabilities by identifying accurate vendor profiles, which are dynamically updated per capacity, transaction, distance, and other data.

It is essential to ensure the AI engine is trained from an ethical standpoint. Ethical AI will ensure that the framework doesn't discriminate against vendors of specific demographics, allowing companies to gain from the most appropriate supply source with zero bias. However, AI engines must first be trained with the right data sets, instructing the engine to learn. The engine may go through hours of customer conversations recorded by a contact center to identify response patterns. Once the AI is trained on these patterns, it can then be fed data. If the engine falters, a human professional steps in to analyze the data. The learning process increases the AI engine's confidence levels and equips it to be a reliable research assistant for procurement professionals.

Introducing Zensar AI for EDR framework

Experience AI

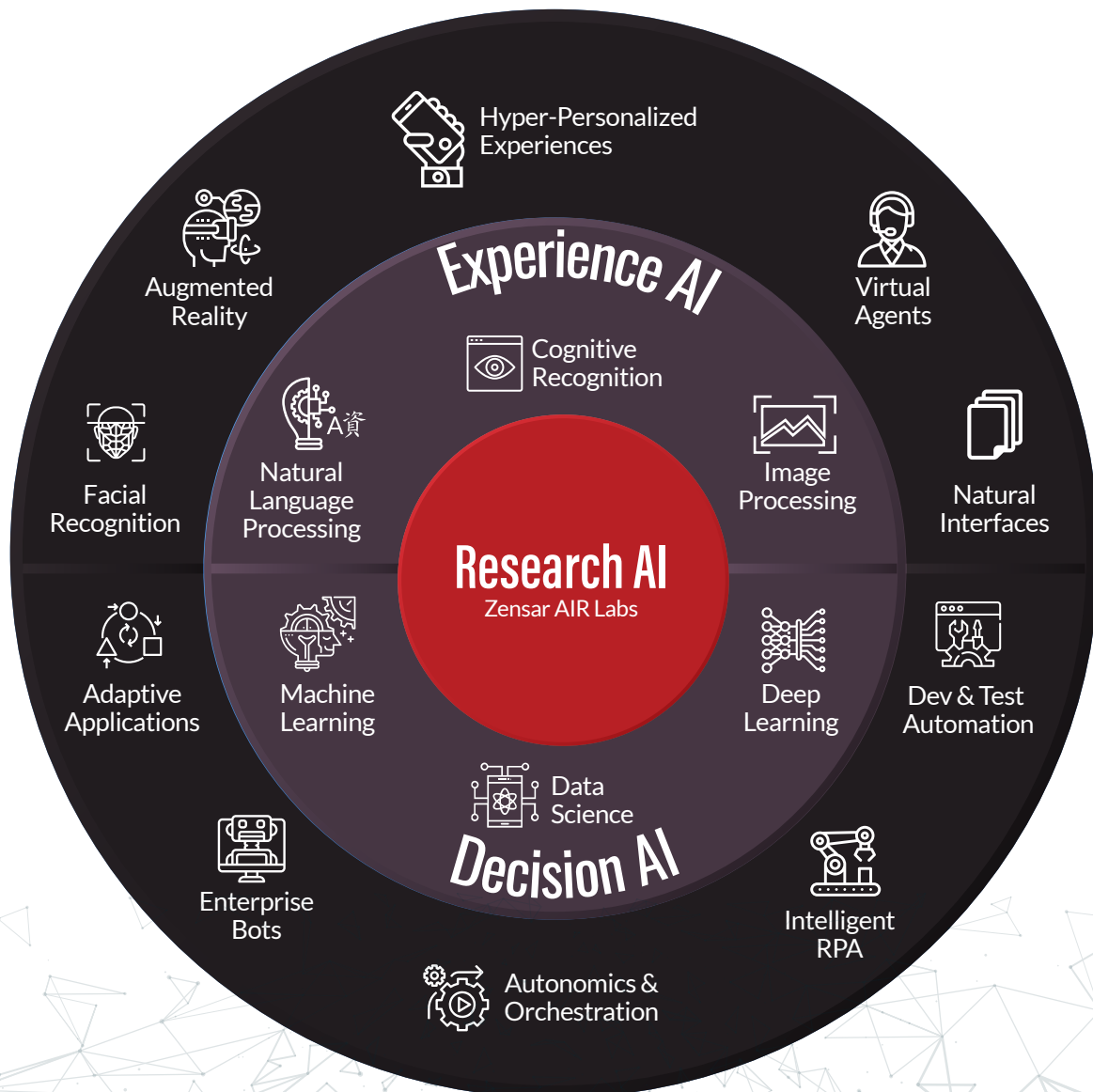
To significantly improve experiences through prediction and automation

Decision AI

To improve core processes and functional areas through machine learning and advance data science

Research AI

Applied AI Research to advance impact of AI to fine new applications and new challenges to solve



AI use cases in procurement for retail, BFSI, and manufacturing



As can be seen, AI-enabled procurement can play an essential role in enhancing experiences, improving decisions, and furthering research for the organization. At Zensar, we believe that AI in procurement has immense potential, even though it is still at a nascent stage of progress. According to Supply Chain Dive, AI has already unlocked an impressive 61% of cost savings in supply chain planning. Procurement can expect similar benefits. We have established a three-pronged framework for AI implementation, aimed at transforming the experiential, decision-making, and research aspects of procurement.

While AI-led procurement can benefit nearly every industry, retail, BFSI, and manufacturing are among the prime candidates for implementation.



AI-led procurement in retail

The leading uses for AI in retail are market prediction and customer demand mapping. Both B2B and B2C retail follow specific seasonal cycles, with demand witnessing periodical upswings and dips. Currently, forecasting errors are a significant challenge for retail, and this is immensely critical for companies dealing with fast-moving perishable goods (FMCG) and seasonal sectors like apparel. According to some estimates, the margin forecast error in retail can go as high as 32%.

One retailer leveraging AI is Alibaba. Alibaba has AI algorithms embedded in its search engine, customer service center, and dynamic website. Amazon Prime relies entirely on AI to analyze data, predict demand far into the future, procure products, and deliver to customers in short periods of time.



AI-led procurement in BFSI

The role of AI for procurement in the BFSI sector is slightly different. BFSI's reliance on physical material is relatively lower. Still, in the digital era, banks and service providers must transact with multiple third-party vendors to offer a full suite of services to customers. This cooperation involves a large number of contracts, frequently changing in response to regulatory requirements and banking trends.

AI modernizes contract management, and in conjunction with blockchain, it can create a low-touch, secure, dynamically updated transaction channel between a bank and its vendors. This channel can dramatically improve automation of milestones, with banks processing supplier transactions after a procurement milestone is attained, verified, and validated through AI and blockchain frameworks.



AI-led procurement in manufacturing

Finally, efficient procurement and distribution form the cornerstone of the manufacturing sector, and the application of AI can significantly help to drive revenue. For instance, AI can study price variations of rare earth materials and recommend the best time for purchase, boosting the bottom line for a hi-tech manufacturing company. AI can also assess the many combinations of distance, price, and availability to identify optimal routes for product parts.

UPS uses the AI-powered GPS tool, ORION (On-Road Integrated Optimization and Navigation). ORION allows UPS to identify the most efficient routes for its fleet. While UPS uses this tool for delivery purposes, similar technology can be applied to supply movement. This type of technology can consolidate weather, traffic, and fleet data to optimize routes. AI can revolutionize procurement for both service and material supply, impacting both profitability and customer experience.



Possibilities on the way forward

One key roadblock to maximizing AI's potential in procurement is the indisputable skills gap. Only 3% of procurement leaders believe their personnel has the skills required for digital transformation, according to Deloitte. And despite 53% of respondents feeling optimistic about AI's potential, 45% said they are unsure about the availability of the skills needed to utilize AI.

This skills gap underscores the need for partnership with field-proven experts in AI. Intervention at the right time can lead to significant cost savings and new business opportunities, particularly given AI's current level of technological maturity.

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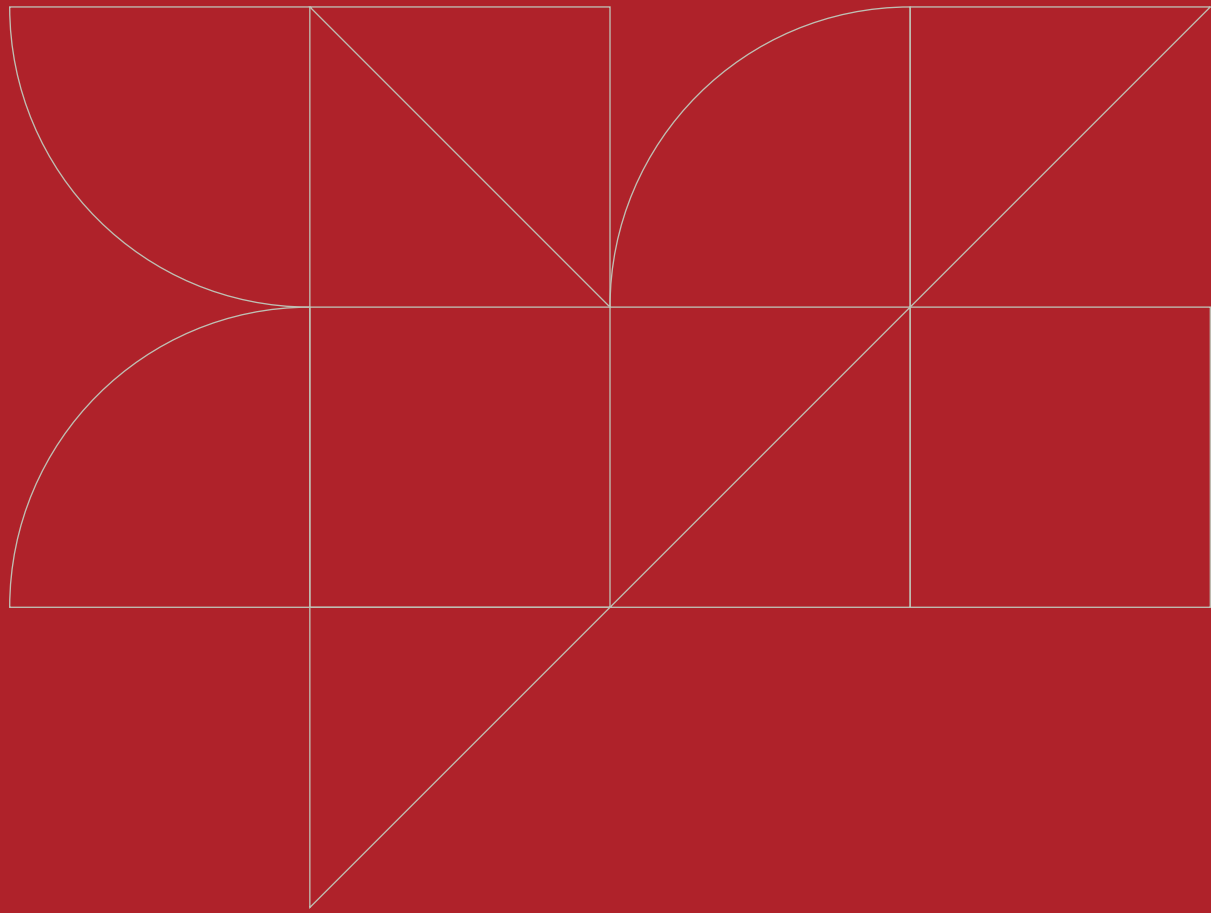
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