

TOP TECHNOLOGY TREND

The Digital Transformation of Procurement: Global Trends and Pakistan's Emerging Landscape

Introduction

Procurement is a function that is changing dramatically and in a radical way, from being a back-office administrative task mainly aimed at reducing costs to a highly technological process. From artificial intelligence and blockchain technology to cloud-native platforms and the Internet of Things, digital tools around the world are transforming the way organisations source, contract, and manage suppliers. This trend of innovation is being met with some special opportunities and challenges in the country as it is striving for bold reforms in public procurement through digitalization. The global wave of innovation is met with some particular opportunities and challenges in the country, which is working on ambitious digital reforms in public procurement.

Global Technology Trends in Procurement

Artificial Intelligence and Intelligent Automation

AI is poised to become the greatest game-changer in the procurement landscape. McKinsey & Company states that procurement teams are responsible for 50% more spend than they were five years ago and are under huge pressure to do more with less. AI agents are being used more and more to take care of recurring tasks, allowing procurement professionals to concentrate on higher-value tasks. This change could improve the procurement process by 25-40%, according to McKinsey. AI is already in common usage. The benchmarking report, produced by ProcureAbility, revealed that 100% of procurement leaders surveyed are using some type of AI system within their organisation, with 6% stating their level of AI maturity was "advanced" and 72% reporting that they were in the "moderate" phase of scaling AI across sourcing, supplier management and risk operations. The difference in adoption and maturity is a challenge and a big opportunity for organizations that can scale their AI initiatives. The survey of 265 CPOs from 40 countries, by global consultancy Deloitte, revealed digital transformation and the use of generative AI as key priorities. The survey found that digital leaders see an average ROI of 2.8x on their investments in generative AI, while followers see an ROI of 1.6x. The emerging trend of agentic AI is the new horizon. According to AI research at Wharton, 94% of procurement executives now use generative AI tools on a weekly basis. Agentic AI systems can find suppliers on their own, continuously track risk levels, and identify any irregularities or geopolitical threats even before they become a problem in the supply chain. Nearly half (48%) of Chief Procurement Officers allocated substantial budgets for 2026 to improve the accuracy of their forecasts, using predictive analytics.



Nagris Noman
Lecturer
IQRA University

Cloud-Native Platforms and Procurement -a s-a -Service

The services market is estimated to be worth $7.93 billion in 2025, and is expected to hit $21.23 billion by 2034 at a CAGR of 11.5%, according to industry analysis. The procurement software segment alone is expected to grow to nearly $11.14 billion in 2026 with a CAGR rate of 13.6%. Major vendors like SAP Ariba (2025 market share of more than 28.1%), Coupa, Oracle, Ivalua and Jaggaer are taking a multi-faceted approach that includes advanced vertical specialization, open-ecosystem relationships and AI solutions. The platforms are now being delivered more and more through cloud-based, SaaS models, and have capabilities like generative AI copilot assistants, real-time ESG performance monitoring, and blockchain-based provenance tracking as standard features. Movement towards connected ecosystems is a fundamental shift. Modern platforms are transitioning from being standalone platforms to integrated platforms that connect with tier-two and tier-three suppliers. But it's not without its difficulties: 74% of procurement leaders say there is low-quality or missing data that prevents them from being successful, and 67% say there are disconnected systems that make them less successful.

Blockchain for Transparency and Traceability

Blockchain technology is being used more and more to increase transparency, traceability and accountability in procurement and supply chain processes.

Table 1: Key Performance Indicators and Outcomes for EPADS

Indicator	Recent Facts
EPADS 1.0 transaction value, FY2024–25	Rs. 1.4+ trillion
EPADS 1.0 registered public-sector agencies	10,000+
EPADS 1.0 registered suppliers	51,000
EPADS 2.0 federal implementation	February 2026
EPADS 2.0 registered procuring agencies	1,824
EPADS 2.0 registered vendors	18,909
EPADS 2.0 procurements completed	~7,000
Administrative cost savings, FY2024–25	Rs. 20.52 billion
Savings for procuring agencies	Rs. 17.18 billion
Savings for vendors	Rs. 3.33 billion
Savings from 4 selected procurements	Rs. 1.86 billion
Vaccine procurement average saving	8.29%
Potential vaccine procurement saving	10–15%
Officials & vendors trained to date	14,752
Trained since EPADS launch	7,491
Procurement cells established	200+

Source: https://ppra.gov.pk/

With self-executing contracts with terms embedded in the code, smart contracts can facilitate automated and tamper-proof execution of procurement contracts. Industry 4.0 technologies, such as blockchain, Internet of Things, big data analytics and cloud computing, all work together to make procurement processes more responsible, effective and efficient, improving predictive planning and risk management. For public procurement, blockchain-based structures are being suggested as connectors that could be used as service-as-a-software to boost transparency, effectiveness and accountability, with major benefits being real-time auditing and lower corruption threats. Amazon and Toyota have used IoT and AI to help optimize supply chain processes, and blockchain technology has enhanced transparency in public procurement.

Sustainability and ESG Integration

Sustainability is now a key consideration in the procurement process. By the end of 2026, Gartner estimates that 70% of technology sourcing, procurement and vendor management leaders will have sustainable performance targets for their functions. ESG initiatives are now among the top priorities of more than half of procurement leaders (51%) for 2026. Digital procurement platforms are increasingly embedding ESG metrics into supply chain processes, providing the ability to measure carbon footprint, monitor suppliers' adherence to standards and requirements, and enforce sustainability measures within complex global supplier networks. This transition is backed by a 5.6% Technology spend increase in 2025.

Technology Trends in Pakistan's Procurement System

EPADS: Digital Procurement at Scale

EPADS 2.0 is the main technology platform for Pakistan. It already features automated supplier registration, beneficial ownership verification, e-invoicing, payment in electronic form, e-bidding, system-based evaluation, integration into databases, and control dashboards. AI analytics, OCDS, contract management and M&E dashboards are also part of PPRA's 2026-31 roadmap.

Integration and Real-Time Oversight

EPADS is developed in collaboration with FBR, NADRA, SECP, Pakistan Engineering Council, and DRAP, and comes with built-in verification and automated checks. Real-time monitoring is enhanced with dashboards provided by the Auditor General, NAB and CCP. The system also provides for grievance redress, black listing and real-time transmission of high-value procurements.

PPRA's Five-Year Reform Roadmap

Public Procurement Regulatory Authority (PPRA)'s Five-Year Reform Roadmap (2026–2031) includes implementing EPADS 2.0 across the country, embedding Open Contracting Data Standard (OCDS), digital contract management, and AI analytics to enhance transparency, monitoring and decision-making. It also suggests specific procurement units for the multilateral development banks (MDBs) funded procurement and state-owned enterprises (SOEs), along with a National Procurement Strategy and Sustainable Procurement Policy. The reform agenda will cover, by 2031, the reduction of the time required for procurement processes and the number of non-compliances, as well as the creation of a more professional and technologized procurement workforce.

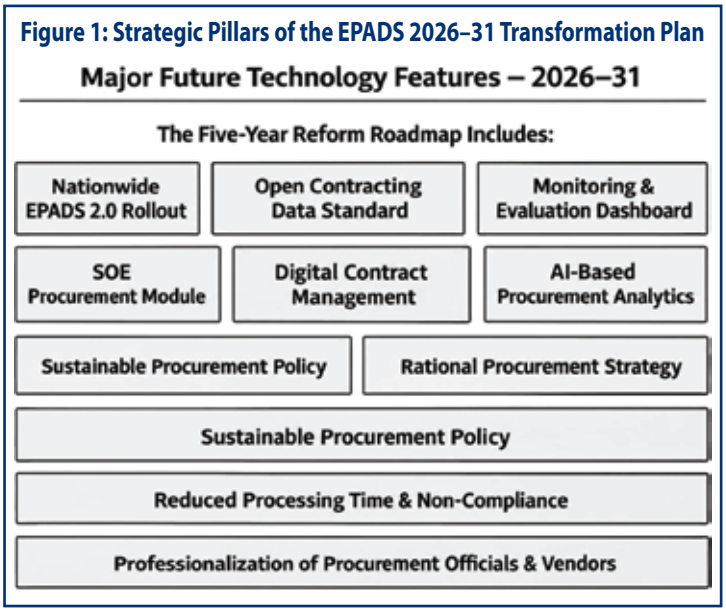


Figure 1: Strategic Pillars of the EPADS 2026–31 Transformation Plan

Regulatory Modernization

New regulations are accompanying the procurement digitalization. The Public Procurement Rules 2025 provide for a more robust grievance process, faster tendering, accreditation of experts, third-party evaluation and clearer institutional responsibilities.

Challenges and Persistent Gaps

While there is considerable progress, procurement digitalization still faces problems in Pakistan. However, the study found that many challenges remain, such as partial automation, a lack of digital literacy, resistance from institutions, and the lack of a regulatory framework for AI implementation in Pakistan, as published in the Journal of Pakistan Administration. The integration of AI with EPADS is not yet a reality at federal and provincial levels, and Pakistan is still working on an AI policy and regulations yet to be approved. The International Monetary Fund (IMF) has highlighted some governance issues in the procurement system in Pakistan, such as the need to remove preferences for state-owned enterprises. IMF's evaluation points to vulnerabilities in public-sector processes and procedures such as budgeting, fiscal reporting and procurement. The EPADS system has some limitations that have a negative impact on its effectiveness and accessibility, such as limited accessibility for external or foreign users because of geographical constraints, and a need for a national registration tax number. The Pakistani Senate has also raised concerns about security issues, wondering if the digital procurement system is robust enough to safeguard government contracts, public funds and information.

Conclusion

AI, cloud-based platforms, blockchain and sustainable analytics are driving change in the global procurement technology market. Public procurement digitization has also made remarkable progress in Pakistan. The Electronic Public Procurement System (EPADS) has been deployed across more than 9,800 public procurement agencies, facilitating over 500,000 transactions valued at Rs. 1.4 trillion. The platform has also attracted more than 43,000 registered suppliers. The upcoming EPADS 2.0 and AI integration are the next steps in this metamorphosis. But there are still daunting obstacles to be overcome. The lack of a regulatory framework for AI, limited digital literacy, institutional resistance, and governance gaps identified by international financial institutions need to be tackled. While Pakistan moves towards a fully digital, AI-driven procurement system, the key takeaways from best practices in the international market will play a crucial role in achieving procurement transformation's true potential, alongside the ongoing efforts of investing in capacity building, regulatory improvements, and technological infrastructure.

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About the Author: ***Nargis Noman*** *is a Lecturer at Iqra University and a PhD scholar in Economics, with nine years of teaching and industry experience, including work at SMEDA. Her expertise spans economic modelling, labour economics, international trade, and sustainability. She has published 16 research papers in national and international journals.*