As AI capabilities move from offering targeted solutions like RPA to supporting end-to-end business outcomes, organizations are looking for ways AI can deliver highly intelligent and resilient business operations.

Today, AI not only helps reduce costs and boost efficiencies, it can enable connectivity and automation between data, systems, processes, capabilities, and the workforce. The result: Autonomous business processes, which have become a competitive relevancy for organizations around the world.

Autonomous business processes bring simplicity to operations while enhancing the work experience for employees at all levels of the organization—and leaving the important decisions to people and the routine tasks to machines. Simply put, they deliver better business outcomes powered by enterprise AI.
How should an enterprise leader be thinking about operations in the coming decade?

AI enables more human-centered work in enterprise operations—an important priority for executives today and in the coming years. Human-centered work is made possible by end-to-end touchless transactions that deliver autonomous operations. It’s also critical that any AI-based solution seamlessly integrates with an organization’s existing platforms.

A new Deloitte business, AIOPS.D™, an AI-fueled, modular microservices and subscription offering that autonomously monitors and operates critical business processes, is built on a foundation of those four tenets: human-centered work, touchless transactions, autonomous operations, and ecosystem orchestration.

What we offer

**Touchless transactions**
Dynamic rules-based ingestion, analysis, and processing of routine transactions with human intervention on an exception basis

**Autonomous operations**
AI augmented, in-transaction, real-time insights supporting decision-making and intelligent design to run end-to-end autonomous operations with minimal user inputs

**Human-centered work**
UX/UI that elevates the human experience through more productive interactions and decision-making

**Ecosystem orchestration**
Connect to a broad range of ERP and non-ERP applications to seamlessly orchestrate across the ecosystem

With an overarching focus on human-centered work, AIOPS.D™ enables touchless transactions and autonomous operations as it brings work to people through conversational AI, prompting human intervention on an exception basis. This creates a cooperative model between an organization’s workforce and machine-based decision-making, enabling the right action, at the right time. The potential result is an elevated workforce engine that focuses on what humans and machines each do best—and the gains of doing them together. Ecosystem orchestration is another important foundation of AIOPS.D™, as it enables scale by interfacing with existing ERP and other critical organizational platforms.
AI-fueled microservice solutions

AIOPS.D™ by Deloitte is built on Deloitte’s leading-edge CortexAI platform, designed to be highly standardized yet configurable to an organization’s unique needs across core business processes. The AIOPS.D™ platform and subscription offering currently supports the following process areas:

**Source-to-Pay (S2P)**
AIOPS.D™ Source-to-Pay (S2P) reimagines an organization’s sourcing, procurement, and payment processes and makes them autonomous and touchless. AIOPS.D™ S2P improves spend visibility and management, compliance, and supplier onboarding while helping to mitigate supplier risk.

**Billing-as-a-Service**
AIOPS.D™ Billing-as-a-Service spans the entire quote-to-cash-cycle process, leveraging artificial intelligence and machine learning to analyze historical pricing constructs to perform autonomous root-cause assessment and performance improvement points in real time. It includes end-to-end revenue management with scalable, flexible, and autonomous billing and invoicing with real-time customer insights.

**Data-as-a-Service**
AIOPS.D™ Data-as-a-Service manages master data coherently through AI/ML-powered chatbot-based workflows and assets. With Data-as-a-Service, operational data becomes an immutable record, bringing intelligent, trusted, and validated data governance to an organization.

**Planning-as-a-Service**
AIOPS.D™ Planning-as-a-Service spans finance, supply chain, and sales processes with real-time insights to align business planning with actual results. Processes involved include financial statement, cost center, capital, and integrated business supply chain planning as well as sales and operational processes.

**Finance-as-a-Service**
AIOPS.D™ Finance-as-a-Service starts with a focus on Autonomous Financial Close. Whether for month-, quarter-, or year-end reporting, the Autonomous Financial Close microservice offerings deliver an AI-based framework that takes proactive steps across the financial close process landscape to enable an accelerated and more touchless close.
AIOPS.D™ in action

Microservice 1
Source-to-Pay | Procurement-as-a-Service

Have you prepared your digital and employee workforce strategy of the future?

Today’s enterprise procurement life cycle is manual, time-consuming, and error prone. Data inputs are frequently incomplete, resulting in inefficient purchasing, invoicing, and spend insights. Procurement operations can also lack a core managed services platform. The net result is delayed or incomplete payment cycles and impacted relationships with vendors, partners, and alliance members. What could become a core differentiator remains an often-overlooked, non-differentiated experience across the competitive landscape.

Imagine instead an operating environment where an AI buyer manages purchase requisition creation to purchase order monitoring without manual intervention. Item availability, pricing, and delivery lead time are instantly available. Requisition steps are clearly outlined, and correction steps are prompted to users. End users receive their items on time, and autonomous systems remind users to complete final documentation closeout. An employee is now able to focus on higher-value, core-competency areas rather than frustration with what should be a straightforward process designed to make employees’ lives easier.

Solution components include:
• A conversational chatbot that shares AI/ML-driven data and purchasing decisions
• A platform for procurement managed services to manage requisitions and POs with automation rules and AI-driven decision-making
• A reporting dashboard for intelligent data analytics and supplier comparison

Procurement-as-a-Service can deliver:
• Simplification of UX through AI-enabled requisitioning processes
• Better spend management and enforcement of policies through intelligent purchase decisions
• Identification of downstream purchase requisition issues and AI-based recommendations for issue resolution
• Meeting KPI expectations (e.g., requisition cycle times, contract compliance)

Microservice 2
Source-to-Pay | Invoicing-as-a-Service

What happens when employees are provided with decision support? How does the workforce experience evolve post-manual process management?

Invoice processing today is a tiered, time-consuming process that can frequently hinder timely, accurate payments to suppliers. Many enterprises lack a managed service platform for invoicing operations. At the same time, many invoices contain incorrect data used during requisition, which can delay invoice processing and backlog exception handling. Attempts to streamline, including OCR services, are frequently at substandard performance levels due to training challenges—one of a multitude of gaps leading to the inability to identify variation in data or populate missing information.

Imagine instead an A/P specialist who can convert a workday of manually processing invoices to one where computer vision accurately captures invoice data, identifies errors, and populates missing data. In the event of an invoice exception, the specialist has guided workflow on the decisions needed. In addition, suppliers have access to the
latest information on payments via an AI-enabled chatbot, which can guide them through open items, keeping all stakeholders operating on the same real-time data set.

**Solution components include:**
- Autonomous invoice conversion using computer vision and ML-based template creation, field recognition, and financial coding
- Intelligent exception management workflow using ML-based exception rules
- A fully touchless invoice, including non-PO invoices

**Invoicing-as-a-Service can deliver:**
- Improved supplier partnerships through real-time conversational feedback and timely payments to suppliers
- Reduction in invoice management manual effort and data identification/resolution

### Microservice 3
**Data-as-a-Service | Supplier Data Management-as-a-Service**

Are you demanding enough from your AI data management strategy—and can ML solve data gaps?

Supplier data streams and operational steps are increasing due to higher vendor counts and reporting or data requirements. Today’s processes are managed over communications, email, and manual recollections and data entry, frequently with low levels of data governance. Poor data governance accelerates repeat entries and missed commonalities across business units, impacting procurement, reducing opportunities for contract optimization, and increasing the placement of different product orders within or across business units or regions. Business stewards’ job satisfaction decreases as their time is absorbed in manual retracing and entry of data, and they are frequently caught in the middle of internal debates due to incomplete or manually overwritten master data.

Imagine instead a business data steward who can access one true supplier master dataset across the enterprise. Reference templates and data are readily available, minimizing manual data entry. The steward can now validate data in real time across business and regional units and provide recommendations to optimize enterprise outcome. Solving data gaps becomes a function of the past, as ML connects the dots for commonalities across the business.

**Solution components include:**
- Coherent master data management supported by AI/ML-powered chatbot-based workflows
- Self-generating, touchless, AI-driven master data management
- Self-healing data supported by ML-driven data quality standards
- A trusted master data ledger, featuring an intelligent, automated, validated data governance structure across the enterprise
- Cross-ERP support

**Supplier Data Management-as-a-Service can deliver:**
- Reduced effort for data governance
- Data TCO reductions
- AI/ML-based predictive algorithms to autonomously pre-populate high volumes of data attributes
Microservice 4
Data-as-a-Service | Material Data Management-as-a-Service

Is your cross-platform data management strategy keeping stakeholders and vendors aligned?

Today, material data management for new material procurement requires a complex work process across a multitude of internal groups, including finance, R&D, sales, supply chain, and procurement. Business analysts today frequently are faced with managing and resolving inconsistent, inaccurate, or incomplete data entries made more complex by non-standardized data governance or data approval processes. The net result is poor reference data, manual data population, missed vendor negotiating opportunities, and an inconsistent, internal book of record.

Imagine instead a business unit analyst who can eliminate phone calls and email-based data aggregation with data governance, collection, and resolution being managed through chatbot-based workflows. Vendor attributes and owners are cleanly aligned, with automated prompts across the diverse stakeholders to keep records up to speed.

Solution components include:

• Coherent material data management supported by AI/ML-powered chatbot-based workflows
• Self-generating, touchless, AI-driven master data management
• Self-healing data supported by ML-driven data quality standards
• A trusted master data ledger, featuring an intelligent, automated, validated data governance structure across the enterprise
• Cross-ERP support

Material Data Management-as-a-Service can deliver can deliver:

• Reduced effort for data governance
• Data TCO reductions
• AI/ML-based predictive algorithms to automate pre-population of high volumes of data attributes
Next-level operations with AIOPS.D™

To enable autonomous business operations, AIOPS.D™ builds on an organization’s existing technology foundation—no matter where a business is on its enterprise transformation journey. As detailed in the image below, the most fundamental layer is cloud-connected data and technologies. Most businesses today have established this layer, although Deloitte works with alliances to deliver this foundation if it is not yet in place. From there, another fundamental layer involves an organization’s underlying enterprise applications, which are then layered with process-specific applications like those supporting supply chain, finance, and customer processes. Again, Deloitte leverages ecosystem and alliance relationships to build these if needed.

On that foundation, AIOPS.D™ introduces cognitive intelligence and autonomous processing, which drive insights and outcomes and enable more human-centered work. AIOPS.D™ can also add a managed business services layer, which resides at the intersection of intelligent automation and operational excellence.

**AIOPS.D™ | Building to “Outcome-as-a-Service”**

- **Outcome-as-a-Service | Deloitte Operated Managed Business Services**
  The intersection of intelligent automation and operational excellence. Deloitte-executed simplified workflows, business operations service, and process area advisement enabling real-time decision-making.

- **AI-as-a-Service | Cognitive Intelligence and Autonomous Processing**
  “Intelligent” layer of business applications, microservices, modular packages, and solutions to keep processes connected in real time to drive insights and outcomes.

- **Software-as-a-Service | Modular Packages for E2 Business Processes**
  AI-enabled supply chain, finance, and customer applications that integrate through and across existing and new client-based boundary systems.

- **Platform-as-a-Service | Underlying Enterprise Applications**
  Utilize ecosystem and alliance partnerships with ERP platforms to offer traditional enterprise application platforms to develop intelligent, connected solutions.

- **Infrastructure-as-a-Service | Connected Data and Technologies**
  Utilize ecosystem and alliance partnerships with hyperscalers to offer best-in-class cloud-based infrastructure services.
Start the conversation

Contact Deloitte’s AIOPS.D™ leaders and visit www2.deloitte.com/us/aiopsd for more information.

Jagadish Bandla
US Enterprise Performance
CTO, Innovation & Assets
and AIOPS.D™ leader
Deloitte Consulting LLP
jbandla@deloitte.com

Nitin Mittal
US Artificial Intelligence
(Al) Strategic Growth
Offering leader
Deloitte Consulting LLP
nmittal@deloitte.com

Abdi Goodarzi
US Enterprise
Performance
Offering leader
Deloitte Consulting LLP
agoodarzi@deloitte.com

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