

10xDS Multimodal Digital Workforce Framework

The background of the slide is a vibrant purple gradient. It features a conceptual illustration of a digital workforce. Several business professionals in business attire are shown interacting with various digital elements. In the foreground, a man in a suit points at a large, transparent digital screen displaying charts and graphs. To his left, a woman and a man are looking at a tablet. Further back, another group of three people is gathered around a table. The scene is filled with floating icons representing different business functions: a calendar, a bar chart, a pie chart, a gear, a cloud, and a network diagram. A winding path leads from the bottom left towards the center, suggesting a journey or process flow. The overall aesthetic is high-tech and modern.

From Systems of Record to Business
Outcomes

The AI industry is moving beyond simple chatbots and single-agent solutions. The next generation of enterprise platforms must be able to **see, hear, read, understand, reason, verify, act, learn, and escalate**. This aligns perfectly with the 10xDS vision of creating Digital Workforces that operate alongside Human Workforces.

See & Hear

Perceive the world through vision and voice

Read & Understand

Extract meaning from documents and data

Reason & Verify

Make grounded, trustworthy decisions

Act & Learn

Execute work and continuously improve



Layer 1: System of Record (Truth Layer)

Everything starts with trusted enterprise data. This is where business facts live. Without this layer, AI becomes guesswork.



Banking

- ☐ T24
- ☐ BCRM
- ☐ AFS
- ☐ AML Systems



Manufacturing

- ☐ SAP
- ☐ MES
- ☐ SCADA
- ☐ Maintenance Systems



Healthcare

- ☐ EHR
- ☐ EMR
- ☐ LIS
- ☐ RIS



Enterprise

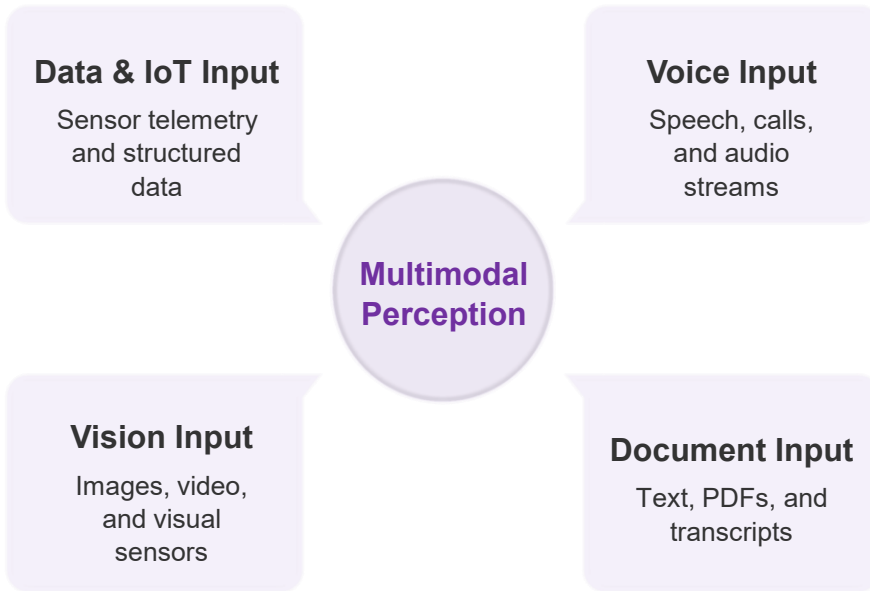
- ☐ ERP
- ☐ CRM
- ☐ HRMS
- ☐ Document Management

📘 Purpose: Provide trusted business context. Every AI decision must be anchored to verified enterprise data, not assumptions.



Layer 2: Multimodal Perception Layer

The Digital Workforce must perceive the world the same way humans do: through voice, sight, text, and data signals. Different inputs require different specialized models working in concert.



Each modality brings a unique dimension of business reality into the AI system, enabling a truly comprehensive understanding of enterprise operations.



Layer 2: Perception

Modalities in Detail

Voice

Examples: Customer calls, employee conversations, meetings

Technology: Speech-to-Text, Voice Biometrics, Emotion Detection

Documents

Examples: Invoices, contracts, tax returns, claims

Technology: OCR, IDP, LLM Extraction

Vision

Examples: CCTV, factory cameras, medical images, retail shelves

Technology: Computer Vision, Object Detection, Activity Recognition

Structured Data

Examples: ERP data, CRM records, transactions

Technology: SQL, Analytics, Data Models

IoT Signals

Examples: Temperature, pressure, vibration, energy consumption

Technology: Sensor Processing, Time-Series Analytics



Layer 3: **Modality Router**

Not every input should go to the same AI. The router intelligently directs each signal to the appropriate engine.

- ☐ Is this voice?
- ☐ Is this an image?
- ☐ Is this a PDF?
- ☐ Is this sensor data?
- ☐ Is this structured data?

Outcome: Routes each input to the appropriate AI engine.

✓ **Example: Factory Safety Incident:**

Input:

- CCTV feed
- SOP PDF
- Temperature Sensor
- Voice Alert

Router sends each input to the correct processing engine.



Layer 4: Context & Memory Layer

AI should remember. Most agents fail because they have no memory; they treat every interaction as if it were the first. The 10xDS framework solves this with three distinct memory tiers.

Short-Term Memory

Holds the current conversation context in real time.

Example: Customer support interaction: the agent recalls what was said earlier in the same session.

Long-Term Memory

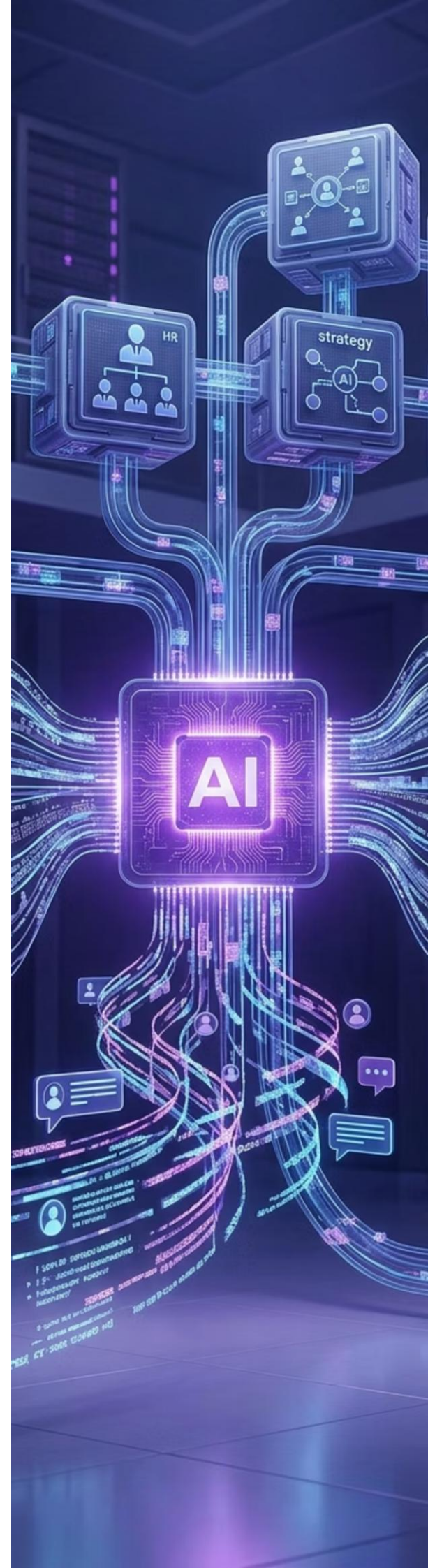
Retains historical knowledge across sessions and time.

Example: Patient previous visits, medical history, and prescriptions; enabling continuity of care.

Organizational Memory

Encodes enterprise-wide institutional knowledge.

Example: Policies, procedures, compliance rules, and SOPs; ensuring every agent acts within defined boundaries.



Layer 5: Knowledge & Grounding Layer

Every answer must be connected to evidence.
Hallucination is eliminated by grounding every AI response in verified enterprise sources.



Enterprise Documents

Policies, SOPs, regulatory content



Databases & Records

Historical records, transactions, structured data



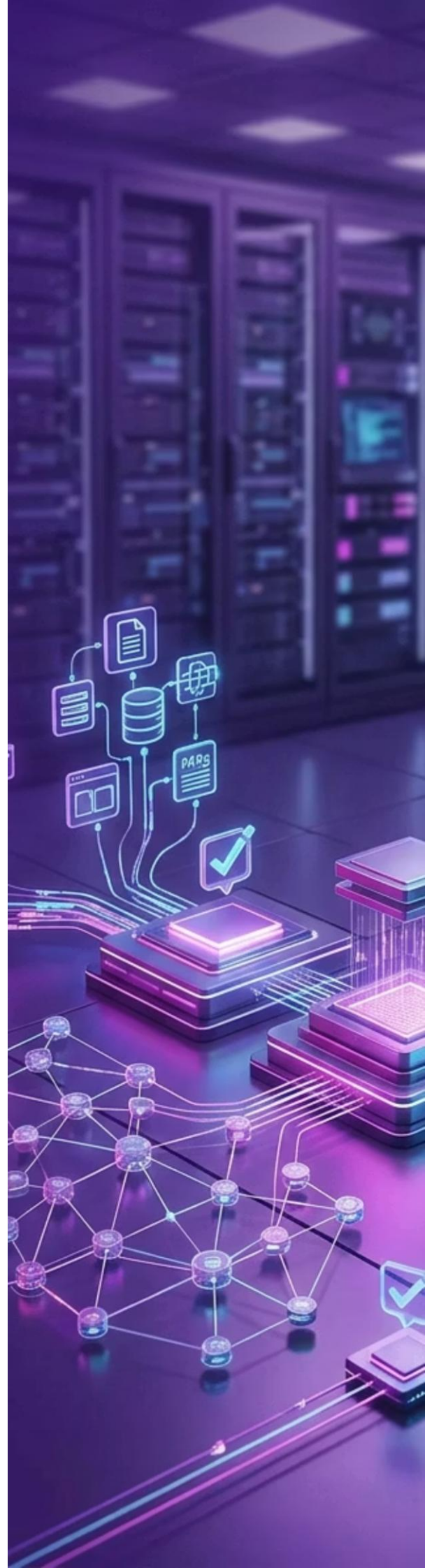
Regulatory Content

Compliance frameworks, legal requirements

Key Principle

No answer without evidence.

- ❏ **Example:** When an agent states, "Revenue declined by 8%," it must cite the specific report, chart, period, and calculation method; traceable to the source.





Layer 6: Reasoning Layer

Digital Workforce

This is where intelligence happens. The agent reasons over voice, vision, documents, data, memory, and knowledge simultaneously to produce grounded decisions and actions.

Voice Worker

Handles conversations and spoken interactions

Vision Worker

Understands images and video streams

Knowledge Worker

Answers questions from enterprise knowledge

Compliance Worker

Checks regulatory and policy requirements

Finance Worker

Processes transactions and financial data

Operations Worker

Monitors processes and operational metrics

Supervisor Agent: Coordinates all workers: routing tasks, resolving conflicts, and ensuring coherent multi-agent execution across the entire Digital Workforce.

Layer 7: **Verification & Trust Layer**

AI should never trust itself. Every decision is challenged before it reaches production. This layer is the enterprise's safety net; ensuring that only validated, high-confidence outputs drive business actions.

- **Data Validation**
Confirms source data integrity and accuracy
- **OCR Validation**
Verifies extracted text against original documents
- **Policy Validation**
Checks outputs against enterprise rules and SOPs
- **Confidence Validation**
Flags low-confidence outputs for human review
- **Cross-System Validation**
Reconciles results across multiple enterprise systems

Unverified outputs never reach production.





Layer 8: **Action & Orchestration Layer**

Intelligence without action creates no value. Agents must execute real work across enterprise systems, communication channels, and automation platforms.



Enterprise Systems

SAP, Oracle, Dynamics,
Salesforce, T24



Communication

WhatsApp, Email, SMS,
Microsoft Teams



Automation

Power Automate, UiPath, Blue
Prism, n8n

Example Actions



Create Purchase Order



Update CRM



Schedule Appointment



Generate Invoice



Raise Ticket

Layer 9: Human Workforce Layer

Humans remain in control. The Digital Workforce augments human capability; it does not replace human accountability. Critical decisions always involve a human in the loop.

Human-in-the-Loop Examples

- ☐ Loan Approvals
- ☐ Medical Decisions
- ☐ Tax Filings
- ☐ Contract Reviews

Escalation Triggers

- ☐ Low Confidence
- ☐ High Financial Impact
- ☐ Regulatory Concerns
- ☐ Ethical Concerns
- ☐ Safety Risks

AI automates execution. Humans retain accountability.



Layer 10: Governance & Security Layer

Enterprise AI requires governance. Every action, decision, and model output must be auditable, secure, and compliant with applicable regulations.



Security

- ☐ Authentication
- ☐ Authorization
- ☐ Encryption



Audit

- ☐ Decision Logs
- ☐ Prompt Logs
- ☐ User Logs



Compliance

- ☐ GDPR
- ☐ HIPAA
- ☐ PCI-DSS
- ☐ Banking Regulations



Model Governance

- ☐ Model Versions
- ☐ Drift Monitoring
- ☐ Accuracy Monitoring



Layer 11: Learning & Optimization Layer

Every interaction improves the Digital Workforce. Unlike static software, the 10xDS framework continuously learns from real-world feedback to become smarter, faster, and more accurate over time.

Feedback Sources

Human Corrections

Agents learn from expert overrides

Customer Feedback

Real-world satisfaction signals

Business Outcomes

Revenue, cost, and risk results

Process Performance

SLA, cycle time, accuracy metrics

Continuous Learning Areas

- ☐ Prompt optimization
- ☐ Workflow optimization
- ☐ Agent optimization



Layer 12: Business Outcome Layer

This is the layer that matters to CEOs. The measure of success is not the number of agents deployed; it is the measurable business value delivered.

Revenue

- ☐ Growth
- ☐ Cross-Sell
- ☐ Upsell

Cost

- ☐ Reduction
- ☐ Productivity

Risk

- ☐ Compliance
- ☐ Fraud Reduction

Experience

- ☐ Customer Satisfaction
- ☐ Employee Satisfaction

Operations

- ☐ SLA Achievement
- ☐ Cycle Time Reduction

⊗ Not measured by:

- ☐ Number of Agents
- ☐ Number of Automations
- ☐ Number of AI Models



The 10xDS Enterprise AI Stack



From Systems of Record to **Business Outcomes**

10xDS helps organizations transform Systems of Record into Multimodal Digital Workforces that can perceive, reason, verify, act, and continuously learn; working alongside humans to deliver measurable business outcomes.

Revenue Growth

Cross-sell, upsell, and new revenue streams powered by intelligent agents

Cost Reduction

Productivity gains and operational efficiency through automation

Risk Management

Compliance assurance and fraud reduction at enterprise scale

Customer Experience

Faster, smarter, more personalized interactions across every channel

The 10xDS Digital Workforce doesn't replace your people, it amplifies what they can achieve.





Talk to our Experts