



Multiagent AI Systems (MAS)

Business Process Analysis

April 2025



Executive Summary

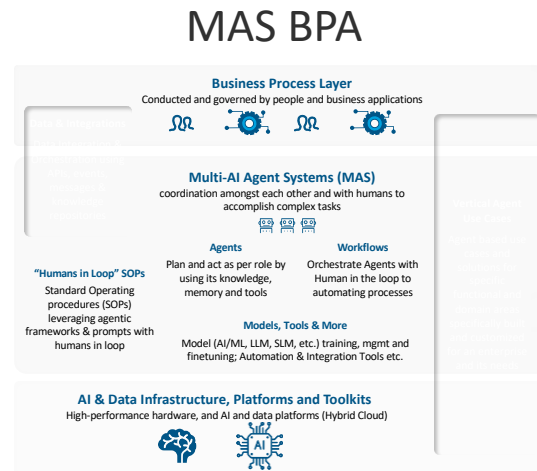
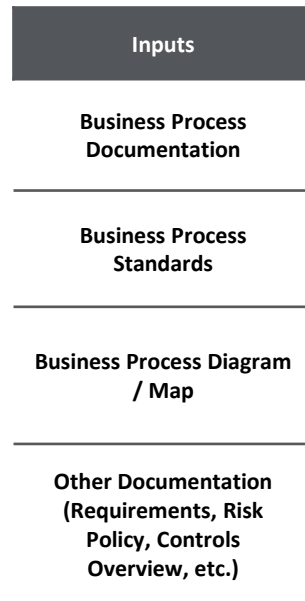
Multi-Agent System Business Process Analysis (MAS BPA) is generative AI agentic solution designed to **accelerate and automate business process analysis, documentation and process re-engineering**.

MAS BPA can enhance efficiency by 50%-80%, significantly aiding in the production of deliverables that traditionally require manual effort.



BUSINESS ANALYST

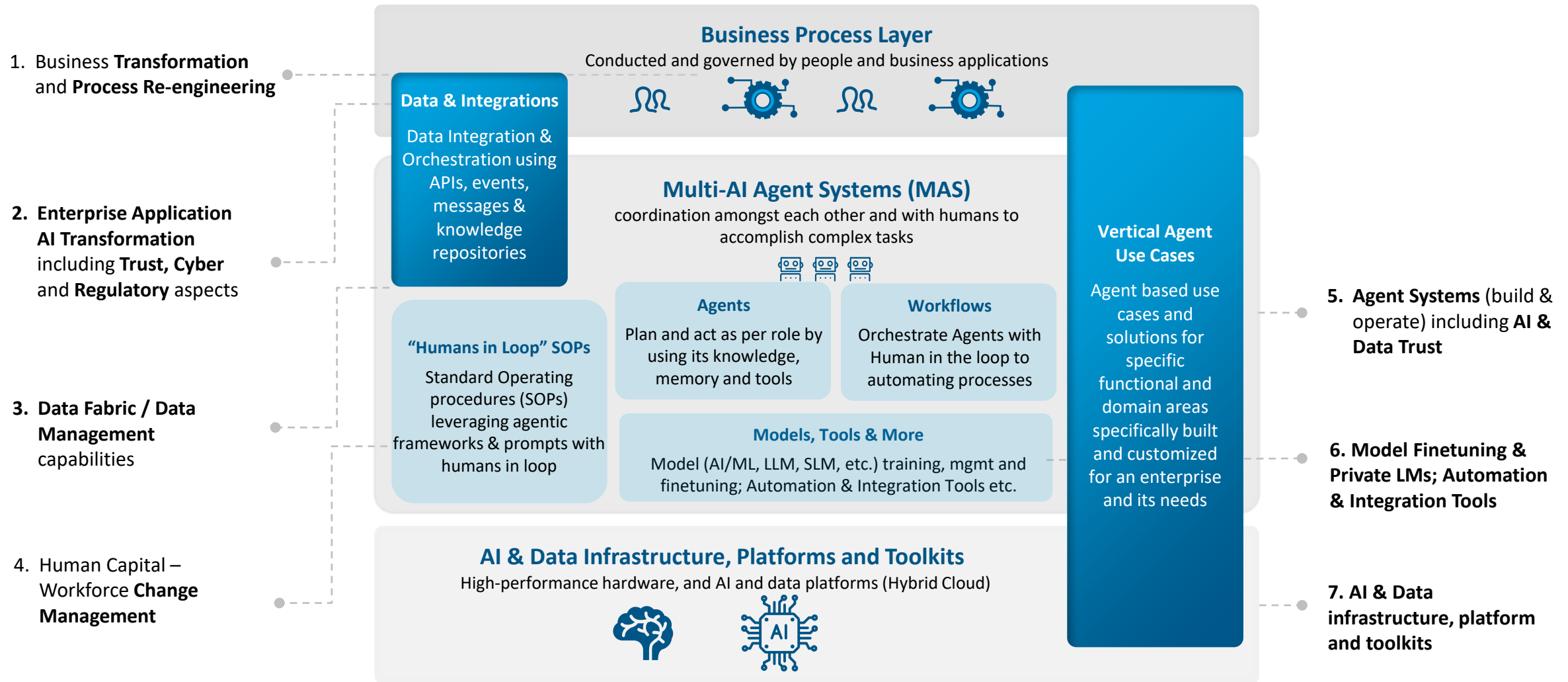
Persona responsible for defining business processes and setting mandate for future vision



Outcomes

- ✓ Generates missing project documentation based on provided inputs or generates business architecture in BPMN format
- ✓ Facilitates the identification of inefficiencies, bottlenecks, and areas for improvement within the current state
- ✓ Transforms complex documentation into a clear, visual representation, making processes easier to comprehend
- ✓ Color coded matching to identify exact, close or no match between risks and controls
- ✓ Identifies opportunities to streamline operations, reducing time and resource expenditures
- ✓ Supports informed decision-making by identifying existing agents or proposed agents that can streamline business activities
- ✓ Compares the process with business standards and identifies discrepancies
- ✓ Enables early identification of potential risks and mitigation through mapping process activities to risk controls

Enterprises are building AI-Agent ecosystems and need key capabilities to come together

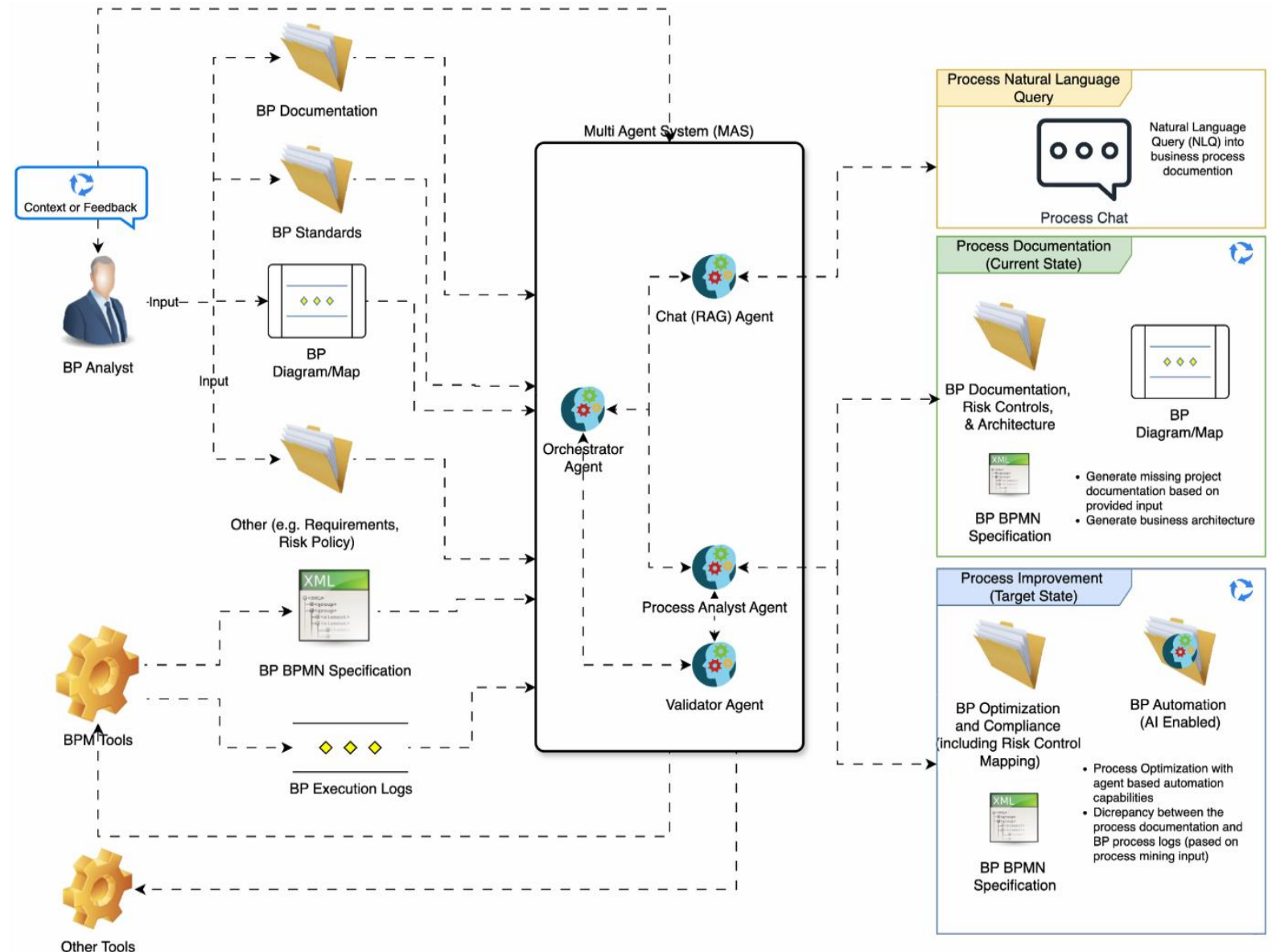


Business Process Analysis

MAS Business Process Analysis is generative AI agentic solution designed to **accelerate and automate business process analysis, documentation and process re-engineering.**

Key Features:

- Completing missing documentation (e.g. generate BPMN specification from documentation, generate documentation from process map)
- Generating business architecture/taxonomy
- Providing recommendation for process improvement
- Validating process against the policies and standards
- Mapping process activities to risks and risk controls



Screenshots

Application Underwriting Procedure

Input File

Process_documentation

Additional_documents

Output File

BPMN_specification

Process_diagram

Process_documentation

Risk_control

Optimization_recommendations

Created By

deloitte_admin

Created On

Mar 26, 2025 10:09 AM

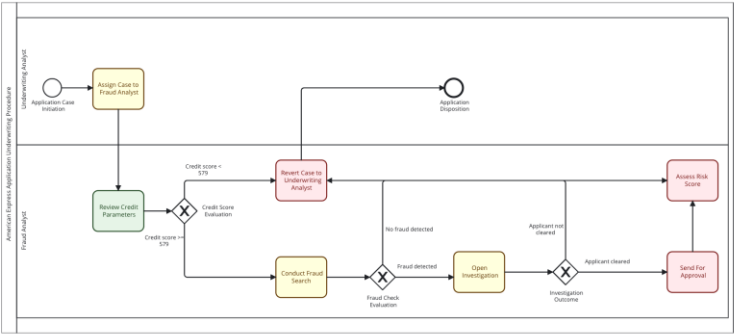
→ View

Input **Current State BPMN Specification** Process Diagram Optimization Recommendations

Current State BPMN Specification

```
<bpmn:flowNodeRef>Gateway_CreditScoreEvaluation</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_ReviewCreditParameters</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_ConductFraudSearch</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_OpenInvestigation</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Gateway_InvestigationOutcome</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_SendForApproval</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Gateway_FraudCheckEvaluation</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_AssessRiskScore</bpmn:flowNodeRef>
<bpmn:flowNodeRef>Task_RevertCaseToUnderwritingAnalyst</bpmn:flowNodeRef>
</bpmn:lane>
<bpmn:lane id="Lane_UnderwritingAnalyst" name="UnderwritingAnalyst">
  <bpmn:flowNodeRef>StartEvent_ApplicationCaseInitiation</bpmn:flowNodeRef>
  <bpmn:flowNodeRef>Task_AssignCaseToFraudAnalyst</bpmn:flowNodeRef>
  <bpmn:flowNodeRef>EndEvent_ApplicationDisposition</bpmn:flowNodeRef>
</bpmn:lane>
```

Process Diagram



Optimization Recommendations

Process Step: Assign Case to Fraud Analyst

- **Current State:** Manually assigning cases to fraud analysts within 24 hours.
- **Improvement Opportunity:** Automate case assignment to reduce time and human error.
- **Agent Recommendation:**
 - **Proposed Agent Type:** Case Assignment Automation Agent
 - **Required Capabilities:** Automatically assign cases based on credit score
 - **Expected Benefits:** Faster case assignment, reduced manual effort
 - **Development Priority:** Medium

Process Step: Review Credit Parameters

- **Current State:** System-assisted review of credit parameters using manual input.
- **Improvement Opportunity:** Enhance accuracy and speed of credit review.
- **Agent Recommendation:**
 - **Recommended Existing Agent:** Credit Card Validation

Standards Analysis for Gaps and Improvements

** Current State Process Mapping Guidelines.docx**:

- **Activities:** Activity names must follow a verb-noun structure in the present tense (Activity: 'ApprovalByFraudLead' should be 'Approve Fraud Lead')
- **Activities:** All activities must have an associated activity type (Activity: 'Assign Case to Fraud Analyst' does not have an associated activity type)
- **Gateways:** Exclusive and Inclusive gateways must contain question labels (Gateway: 'Credit Score Check' does not contain a question label)
- **Gateways:** Paths stemming from gateways are labelled (e.g., "Yes" or "No") and "happy path" is always on the top (Gateway: 'Credit Score Check' paths are not labelled)
- **General Formatting & Appearance:** Activities should be in Camel Casing with 1st word as capital (Activity: 'Assign Case to Fraud Analyst' should be 'Assign Case To Fraud Analyst')

Identified Risk Control Details

Activity Description	Matching Status	L2 Risk Name	L3 Risk Name	Risk Description	Control Type	Control Type Description	Control Instance Name	Control Description
Open Application Case	Close Match	Transaction Processing and Execution risk	Customer Account Errors	Inaccurate, incomplete, or untimely response to customer notification for Address Confidentiality program or compliance with mailing requirements and restrictions caused by mistake or judgement error or due to infrequently performed process may result in legal actions, regulatory fines, customer or reputational impact.	Tracking and Reporting Irregular/Incomplete Transaction Status	Monitoring of metrics designed to identify transaction status identifying irregular or incomplete status.	Manager Employee Review - Phone	General Purpose Credit Card Underwriting Manager conducts phone monitoring reviews of a sample of credit requests
Assign Case to Fraud Analyst	Close Match	Fraud Risk	External Origination Fraud	Identity impersonation or misrepresentation of applicant by an external party during submission of a credit request via digital or non-digital channels, caused by crime innovation, cyber attack, or organized crime may result in legal actions, regulatory fines, customer or reputational impact.	Tracking and Reporting Irregular/Incomplete Transaction Status	Monitoring of metrics designed to identify transaction status identifying irregular or incomplete status.	Manager Employee Review - Production	General Purpose Credit Card Underwriting Manager conducts decision quality reviews on a sample of credit requests
Review Credit Parameters	Exact Match	Financial Crimes Risk	Inadequate BSA/AML Program	Inaccurate, incomplete, or untimely identification of customers, confirmation of customer address, or identity theft prevention and detection as required by Bank Secrecy Act and Office of Foreign Assets Control Global Sanctions Program, caused by mistake or judgment error or inadequate enforcement of policies or standards may result in legal actions, regulatory fines, or reputational impact.	Tracking and Reporting Irregular/Incomplete Transaction Status	Monitoring of metrics designed to identify transaction status identifying irregular or incomplete status.	Manager Employee Review	Fulfillment Manager conducts phone monitoring reviews of a sample of credit requests