

GMI Agentic Agents



Version	Modified	By	Action
1.0	13/08/2025	Ashok Kumar, Vinitha, Akash	Project Proposal Report



1. Executive Summary

Organizations generate countless **rough ideas**, but many never progress due to ambiguity, misalignment, and lack of structured validation.

The **GMI Advanced Agentic AI Framework** transforms an **initial rough idea** into a **clear high-level concept**, then into a **validated execution-ready project plan** through a coordinated team of specialized AI agents powered by **A2A** and **MCP** protocols.

The system ensures:

- Factually grounded decisions via **RAG & GraphRAG**.
- Role-specialized communication via **instruction tuning & fine-tuning**.
- Continuous improvement via **Reinforcement Learning (RL)**.
- Rich, multi-format input handling via **multimodal ingestion**.
- Seamless collaboration via **A2A Protocol**.
- Universal, secure data access via **MCP Protocol**.

2. System Overview

The framework runs as a **dynamic, sequential, and partially asynchronous multi-agent pipeline**:

1. **Idea Capture** → **Stakeholder Agent** expands vague input into a strategic high-level concept.
2. **Requirement Definition** → **BA General** translates the concept into detailed functional/business requirements.
3. **Domain Validation** → **BA Domain Expert** ensures compliance and feasibility.
4. **Strategic Planning** → **Product Manager** builds the roadmap and prioritizes features.
5. **Execution Design** → **Agile Project Manager** creates the **Project Execution Plan (PEP)**.

Each stage:

- Receives structured inputs via **A2A**.
- Uses **MCP** to access relevant tools and data.
- Updates a **shared knowledge graph** for unified context.



2.1 Example: From Rough Idea to Execution

Input: “Time management for business persons” (raw idea)

1. Stakeholder Agent → **High-Level Vision:** “AI-powered productivity and scheduling assistant for SMB executives.”
2. BA General → BRD with goals, KPIs, and functional requirements.
3. BA Domain Expert → Compliance checks for regional data privacy and time-tracking laws.
4. Product Manager → Roadmap with MVP features like calendar sync, focus mode, and analytics dashboard.
5. Agile Project Manager → PEP with resource allocation, timelines, and risk mitigation plan.

3. Agent Roles, Capabilities & Tasks

1. Stakeholder Agent

Purpose: Transform rough idea → High-Level Vision.

Key Capabilities:

- Multimodal ingestion (text, PDFs, images, audio).
- MCP integration for retrieving strategic references.
- Early risk signal checks via A2A.
- RL-optimized clarifying questions.
- Knowledge graph logging.

Tasks:

1. Receive raw idea from user.
2. Identify unclear elements and generate clarifying questions.
3. Retrieve similar past projects via MCP.
4. Extract goals, constraints, and KPIs.
5. Draft **Stakeholder Brief**.
6. Register briefly in the shared knowledge graph.
7. Query Domain Expert for early feasibility concerns.
8. Refine vision using RL insights.
9. Approve high-level concepts for the next stage.
10. Hand over to BA General via A2A.



2. Business Analyst (General)

Purpose: High-Level Vision → detailed business requirements.

Key Capabilities:

- Fine-tuned LLM on historical BRDs.
- MCP retrieval of templates/checklists.
- Hybrid RAG + Query Routing.
- A2A collaboration for pre-validation.

Tasks:

1. Receive high-level concept via A2A.
2. Identify business objectives and KPIs.
3. Map user personas and use cases.
4. Access requirement templates via MCP.
5. Draft functional and non-functional requirements.
6. Retrieve similar BRDs for benchmarking.
7. Flag high-risk requirements to Domain Expert.
8. Integrate BA Domain feedback into BRD.
9. Finalize and version-control BRD.
10. Pass BRD to Domain Expert via A2A.

3. Business Analyst (Domain Expert)

Purpose: Validate business requirements for compliance, feasibility, and domain fit.

Key Capabilities:

- GraphRAG via MCP for regulations and standards.
- Hierarchical indexing of compliance data.
- RL adaptation to changing standards.

Tasks:

1. Receive BRD from BA General.
2. Retrieve relevant regulations via MCP.
3. Validate features against legal/technical constraints.
4. Map industry best practices.



5. Run compliance simulations.
6. Highlight high-risk or prohibited features.
7. Suggest compliant alternatives.
8. Approve requirements for Product Manager.
9. Update knowledge graph with compliance notes.
10. Notify BA General & Product Manager via A2A.

4. Product Manager

Purpose: Validated requirements → strategic product roadmap.

Key Capabilities:

- MCP market data retrieval.
- A2A context enrichment.
- RL trade-off optimization.
- Feature prioritization frameworks.

Tasks:

1. Receive validated requirements via A2A.
2. Analyze market trends and competitors via MCP.
3. Retrieve historical launch data from Project Manager's knowledge base.
4. Prioritize features using MoSCoW/RICE scoring.
5. Balance MVP delivery with long-term goals.
6. Map release phases and timelines.
7. Coordinate with Domain Expert for ongoing compliance checks.
8. Draft **Product Strategy & Roadmap**.
9. Version-control roadmap in shared knowledge graph.
10. Send a roadmap to Agile Project Manager via A2A.

5. Agile Project Manager

Purpose: Roadmap → executable, version-controlled PEP.

Key Capabilities:

- MCP integration for past timelines, risks, velocity.
- RL-based scheduling optimization.
- Parallel scenario simulations.



Tasks:

1. Receive roadmap via A2A.
2. Retrieve past project data from MCP sources.
3. Allocate resources based on skill and availability.
4. Plan sprints and milestones.
5. Simulate multiple delivery scenarios.
6. Identify and mitigate risks.
7. Integrate compliance checkpoints.
8. Draft version-controlled **Project Execution Plan**.
9. Confirm scope and deliverables with all prior agents.
10. Approve PEP for deployment.

4. Protocols in Action

- **A2A:** Orchestrates structured, traceable inter-agent collaboration with task IDs.
- **MCP:** Enables secure, universal access to external tools, APIs, databases, and repositories.

5. Governance & Safeguards

- Version-controlled knowledge graph with changed history.
- Human review for high-risk outputs.
- Automated compliance alerts.
- Continuous RL policy updates post-project.

6. Conclusion

This framework delivers **end-to-end transformation**:

Rough Idea → High-Level Concept → Validated Plan → Execution-Ready PEP,
ensuring clarity, compliance, and strategic alignment at every stage.

