Integration Timeline – Phase-wise

This timeline focuses only on system integration activitie**s** (AI agents, BIM, ERP, dashboards, orchestration), not functional descriptions, so it fits neatly into your proposal.

Phase 1 – Pre-Contract Integration Timeline

Duration: ~7 Months

Objective

Establish the core Multi-Agent System (MAS), integrate all pre-contract tools, and deliver a fully automated, pilot-ready AI tendering platform.

Integration Scope

- AI Agents (10 agents + Central Orchestrator)

- BIM, ERP, Planning, Procurement, Analytics systems

- Unified Dashboard

- Security, governance, and audit layer

Phase 1 Integration Timeline

Integration Stage	Duration	Key Integrations
Architecture & Integration Blueprint	1 week	Agent graph, data contracts, SAP–BIM–Primavera integration design
Core Platform & Orchestration Setup	1 week	LangGraph/CrewAI/ADK, event bus, identity & access
Document & BIM Integration	3 weeks	ACC, Revit, BIM Collaborate Pro, Bluebeam, OCR/CV pipelines
Design, Cost & Planning Integration	4 weeks	Generative Design, Spacemaker, BIM 5D, SAP ERP, Primavera, SYNCHRO
Procurement & ICV Integration	4 weeks	SAP Ariba, Coupa, SRM, OCCI databases, KYC/AML

| Monitoring, Dashboards & Orchestration | 3 weeks | Power BI, ACC workflows, SAP milestones, cross-agent triggers |
| End-to-End Integration Testing & Pilot Deployment | 2 weeks | Full tender simulation, UAT, production rollout |

Phase 1 Outcome

✔ Fully integrated Pre-Contract AI platform
✔ Automated tender-to-submission workflow
✔ Validated pilot on real tender

Phase 2 – Contract Execution Integration Timeline

Duration: ~5.5 Months

Objective

Extend the same MAS and orchestration layer into live project execution, enabling real-time monitoring, automation, safety, sustainability, and procurement optimisation.

Integration Scope

- 13 Execution-phase AI agents

- Digital Twins, robotics, IoT, site systems

- Financial, ICV, safety, and sustainability controls

- Execution dashboards

Phase 2 Integration Timeline

Integration Stage	Duration	Key Integrations
Execution Architecture Extension	1 week	Extend MAS, agent graph, execution data models
Execution Platform Foundation	1 week	ACC/Build, Procore, Digital Twin, SAP execution projects

Core Execution Engine Integration	3 weeks	Primavera P6, SYNCHRO 4D, SAP ERP, cost & ICV live feeds
Automation, Safety & Sustainability Integration	4 weeks	Robots, wearables, drones, IoT, energy & waste tracking
Methodology, VE & Client Reporting Integration	4 weeks	Digital Twin, SYNCHRO, Salesforce, 3DEXPERIENCE
Procurement & Economic Gardening Integration	4 weeks	BIM–SAP–SRM, blockchain, OCCI, financing & training systems
Dashboards, Testing & Go-Live	2 weeks	Full execution dashboards, UAT, production rollout

Phase 2 Outcome

✔ Real-time execution intelligence
✔ Live cost, ICV, sustainability, and risk control
✔ Automated corrective actions across projects

Phase 3 – Closeout Integration Timeline

Duration: ~5 Months

Objective

Consolidate execution data into auditable closeout records, compliance reports, and reusable insights for future tenders and projects.

Integration Scope

- 12 Closeout-phase AI agents

- Financial, ICV, sustainability, VE, procurement closeout

- Regulatory and stakeholder reporting

- Continuous improvement feedback loop

Phase 3 Integration Timeline

Integration Stage	Duration	Key Integrations
Closeout Architecture & Data Model Setup	1 week	Closeout schemas, audit & approval flows
Closeout Data Foundation & System Sync	1 week	SAP, ACC, Digital Twins, SYNCHRO, Ariba, Coupa
Documentation, Quality & Compliance Integration	3 weeks	BIM as-built, blockchain logs, compliance dashboards
Financial, ICV & Sustainability Reporting Integration	3 weeks	SAP ERP, Power BI, ICV & carbon tools
VE, Procurement & Economic Gardening Review Integration	3 weeks	VE/lean analytics, SRM, SME impact tracking
Insights, Client Reporting & UAT	3 weeks	Client dashboards, Salesforce, 3DS Max visuals
Final Integration, Testing & Knowledge Transfer	3 weeks	End-to-end validation and handover

Phase 3 Outcome

✔ Fully auditable digital closeout
✔ Authority-ready ICV & sustainability reports
✔ Lessons learned fed back into future bids

Overall Integration Timeline Summary

Phase	Duration
Phase 1 – Pre-Contract	~7 months
Phase 2 – Contract Execution	~5.5 months
Phase 3 – Closeout	~5 months
Total Program Duration	**~17.5 months**