Schedule Development Input

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Project: ADPA – Advanced Document Processing & Automation Framework
Version: 3.2.0
Prepared for: Project Scheduling & Implementation Team
Date: July 2025

1. Document Overview

Purpose & Scope

This document consolidates all critical inputs required to develop an effective and realistic project schedule for the ADPA Framework. It covers activities, sequencing, dependencies, resources, constraints, risk factors, and assumptions relevant to the multi-phase ADPA initiative, with a focus on compliance-driven, AI-powered document automation and enterprise integrations (e.g., Adobe, SharePoint, Azure).

Relationship to Other Planning Documents

- **Project Charter:** Defines high-level goals, deliverables, and milestones.
- **WBS (Work Breakdown Structure):** Source for activity identification and decomposition.
- **Requirements Traceability Matrix:** Ensures schedule alignment with compliance standards (BABOK v3, PMBOK 7th, DMBOK 2.0).
- **Risk Register:** Identifies and tracks risks impacting schedule.

Input Consolidation Methodology

Inputs are drawn from:

- Project documentation and roadmap
- Technical architecture and implementation guides
- Resource and dependency analysis from integration partners
- Historical data from prior phases (e.g., Adobe PDF pipeline success)
- Expert judgment from technical/product leads

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2. Activity Information

Activity List Summary

- **Total Activities:** 42 (estimated; see breakdown below)
- **Activity Categories:**
    - **Development:** Core features, AI integration, new module creation
    - **Testing:** Unit, integration, performance, and compliance testing
    - **Documentation:** User guides, API docs, integration manuals
    - **Deployment:** API server, CLI, web/admin interface, Docker/Kubernetes
    - **Management:** Planning, review, stakeholder demos, compliance reporting
- **Activity Sources:**
    - WBS decomposition
    - Implementation guides (see Adobe Phase 2, Azure API Center)
    - Standards templates (BABOK/PMBOK/DMBOK)
    - Expert input from architects and product owners

Activity Attributes

Activity ID	Activity Name	Type	Complexity	Priority
A1	Adobe Creative SDK Registration	Development	Medium	Critical
A2	InDesign API Integration	Development	High	High
A3	Illustrator API Integration	Development	High	High
A4	Photoshop API Integration	Development	Medium	Medium
A5	Template-Driven Document Generation	Development	High	Critical
A6	SharePoint Integration Setup	Development	Medium	High
A7	SharePoint OAuth2 Authentication	Development	Medium	High
A8	Azure API Center Registration	Management	Low	Medium
A9	Compliance Template Creation (BABOK/PMBOK)	Documentation	Medium	High
A10	Automated Testing Suite Expansion	Testing	High	High
…	…	…	…	…

3. Activity Sequencing

Dependency Types

- **Finish-to-Start (FS):** Most development activities (e.g., authentication must precede integration)
- **Start-to-Start (SS):** Parallel config/testing (e.g., CLI and API server enhancements)
- **Finish-to-Finish (FF):** Documentation and release notes tied to code freeze

Major Dependencies

Predecessor	Successor	Dependency Type	Lag/Lead	Rationale
A1: SDK Registration	A2/A3/A4: API Integrations	FS	0 days	API keys/credentials required first
A5: Template Gen Core	A9: Compliance Template Creation	FS	2 days	Framework must support template structures
A6: SP Integration	A7: SP OAuth2 Authentication	FS	1 day	Auth must be configured after SP integration
A10: Test Suite	Release/Deployment Activities	FF	0 days	All tests must pass before deployment

External Dependencies

- **Vendor:** Adobe, Microsoft (API availability, rate limits), Azure (resource provisioning)
- **Client:** Stakeholder feedback on branding/templates, access to enterprise SharePoint
- **Regulatory:** Compliance checks with GDPR, SOX, Basel III, etc.

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4. Resource Information

Resource Requirements Summary

Resource Type	Total Required	Peak Demand	Availability	Constraints
TypeScript Developers	4	Integration Phases	100%	Limited senior AI/Node.js expertise
DevOps Engineers	2	Deployment/Scaling	50-75%	Competing infra projects
QA/Test Engineers	2	Testing/Release	100%	Test automation ramp-up
Business Analysts	1	Template Review	50%	Limited BA resource
UI/UX Designer	1	Branding/Presentation	30%	Needed for template design
Project Manager	1	All Phases	100%	Single PM across multiple projects

Resource Calendars

- **Standard Work Calendar:** Mon-Fri, 09:00–17:00, excl. public holidays
- **Resource-Specific Calendars:** Flex hours for remote devs, BA part-time
- **Equipment Calendars:** Dev/test environments – subject to maintenance windows (monthly, 1 day downtime)

5. Duration Estimates

Estimation Summary

Activity Category	Total Duration	Confidence Level	Estimation Method
Development	8 weeks	Medium	Expert judgment, Analogous
Testing	3 weeks	High	Parametric, Historical
Documentation	2 weeks	Medium	Expert judgment
Deployment	1 week	Medium	Analogous
Management/Review	1 week	High	Expert judgment

Duration Assumptions

- **Productivity:** 80% effective hours (allowing for meetings, reviews)
- **Resource:** Dedicated core developers, shared QA/BA
- **Quality:** 10% rework rate assumed, 2 review cycles per deliverable

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6. Project Constraints

Time Constraints

- **Project Deadline:** August 29, 2025 (aligned to roadmap Q3 deliverables, e.g., Adobe Phase 2, DMBOK in progress)
- **Milestone Dates:**
    - SDK Registration Complete: July 18
    - Core API Integrations: August 1
    - Feature Complete: August 15
    - Testing Complete: August 22
    - Production Release: August 29
- **Phase Gates:**
    - Phase 1 signoff (completed)
    - Phase 2 go-live approval required

Resource Constraints

- **Budget:** $230,000 for phase (est.), includes licensing, cloud infra, and resource costs
- **Availability:** Senior developer and DevOps capacity shared with other enterprise projects
- **Skills:** Niche skills in Adobe/AI integration in short supply

Quality Constraints

- **Compliance:** Strict adherence to standards (BABOK, PMBOK, DMBOK, GDPR, SOX, PCI DSS)
- **Testing:** 100% automated test coverage for critical paths; regression testing required
- **Reviews:** Stakeholder and compliance officer approval pre-release

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7. Risk Factors

Schedule Risk Sources

- **Technical:**
  - API changes/deprecation (Adobe, Microsoft Graph)
  - Integration complexity with multi-provider AI
- **Resource:**
  - Key personnel turnover
  - Competing project priorities
- **External:**
  - Vendor outages or rate limiting
  - Regulatory changes (e.g., data privacy updates)

Risk Impact on Schedule

Risk	Probability	Impact	Schedule Effect	Mitigation Strategy
Adobe API quota/changes	Medium	High	+7 days	Early engagement, buffer, fallback paths
Resource unavailability (key	High	High	+14 days	Cross-training, backup

Risk	Probability	Impact	Schedule Effect	Mitigation Strategy
developer)				assignments
Compliance audit delay	Low	Medium	+3 days	Early prep, pre-audit reviews
Vendor authentication issues (OAuth2, Azure, etc.)	Medium	Medium	+5 days	Early testing, vendor support contacts

Schedule Buffers

- **Activity Buffers:** Add 1–2 days to high-risk API integration tasks
- **Project Buffer:** 10% of total duration (approx. 2 weeks)
- **Management Reserve:** 1 week reserved for critical path slippage

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8. Assumptions and Constraints

Key Assumptions

- **Resource:** Dedicated core team available for duration; BA and QA part-time but on call for critical reviews
- **Technology:** Stable APIs/SDKs from Adobe, Microsoft, and AI providers through August 2025
- **Process:** Template-driven development will accelerate compliance documentation

Project Constraints

- **Scope:**
  - Must deliver Adobe Phase 2 enhancements (InDesign, Illustrator, Photoshop API integrations)
  - DMBOK 2.0 features are secondary, delivered as capacity allows
- **Time:**
  - August 29, 2025, is a hard release date due to enterprise commitments
- **Cost:**
  - Budget must not be exceeded; any overages require executive approval
- **Quality:**

- Compliance and security standards are non-negotiable; no go-live without passing all compliance checks

9. Reference Materials

- **Adobe Phase 2 Implementation Guide**
- **Azure Portal API Center Setup Guide**
- **BABOK Enterprise Demonstration Guide**
- **Collaboration Tools Roadmap**
- **SharePoint Integration Usage Guide**
- **Project README and Metadata**

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