AGENTIC AI IN POWER PLATFORM

Module 02

Plan Designer & Intent-Driven Architecture

Prepared for EY Developers | BFSI Sector Delivery

Duration: 3 Hours (1.5 Hours Theory + 1.5 Hours Lab)

Status: Fully Teachable | Plan Designer in Public Preview

1. Module Overview

This module introduces Plan Designer, Microsoft's AI-powered solution architect for the Power Platform. Plan Designer represents a paradigm shift from traditional app development to intent-driven architecture — where makers describe what they want in natural language, and the platform generates a complete solution blueprint including Dataverse tables, model-driven apps, canvas apps, Power Automate flows, Copilot Studio agents, and Power Pages sites.

Why This Module Matters

Plan Designer is the entry point for the agentic development lifecycle. Before you build agents, flows, or apps individually, Plan Designer lets you orchestrate an entire solution from a single natural language prompt. This is the foundation of intent-driven architecture — the principle that the maker's intent should drive solution design, not the other way around.

1.1 Learning Objectives

By the end of this module, participants will be able to:

1. Explain the concept of intent-driven architecture and how it differs from traditional Power Platform development.
2. Describe the role of Plan Designer in the Power Platform solution lifecycle.
3. Navigate the Plan Designer interface and understand its key components (Describe, Review, Build).
4. Create a multi-component business solution from a natural language description.
5. Review and customise AI-generated Dataverse table schemas before committing to build.
6. Understand how Plan Designer generates agents, apps, flows, and Power Pages sites from a single plan.
7. Identify the prerequisites, licensing requirements, and current limitations of Plan Designer.
8. Apply Plan Designer to a BFSI-relevant scenario (e.g., loan origination, claims processing).

1.2 Module Structure

Section	Topic	Duration
Part A	Theory: Intent-Driven Architecture & Plan Designer Deep Dive	1.5 Hours
Part B	Hands-On Lab: Build a BFSI Solution with Plan Designer	1.5 Hours

1.3 Prerequisites

- Completion of Module 01 (The New Power Platform Vibe) or equivalent familiarity with the MCP-first architecture concept.
- Power Platform developer environment provisioned with Dataverse database.
- Power Apps Premium license (trial is acceptable).
- Copilot features and preview features enabled in the tenant by an admin.
- Modern web browser (Microsoft Edge or Google Chrome, latest version).
- Environment region set to US, Australia, Asia, or India (required for AI features).

2. Theory: Intent-Driven Architecture & Plan Designer

This section covers the conceptual foundations and detailed walkthrough of Plan Designer. Estimated duration: 1.5 hours.

2.1 From Manual Build to Intent-Driven Design

Traditional Power Platform development follows a bottom-up approach: makers manually create Dataverse tables, then build apps on top of them, then wire up automation flows, and finally bolt on AI capabilities. This approach works but has significant drawbacks:

- It requires deep knowledge of each component before starting.
- Solution design is fragmented across multiple tools and maker experiences.
- Data model decisions are made in isolation from the app and flow requirements.
- Iterating on the architecture often means reworking multiple components.

Intent-driven architecture flips this model. The maker starts with a business intent — a natural language description of what the solution should accomplish — and the platform generates a cohesive architecture across all components simultaneously.

Traditional Approach	Intent-Driven Approach
Start with data model design	Start with a business description in natural language
Build components one by one	Platform generates all components from a single plan
Maker owns all architectural decisions	AI proposes architecture; maker reviews and refines
Siloed design across apps, flows, agents	Holistic design: tables, apps, flows, agents, and pages designed together
Iteration requires manual rework	Iteration through conversational refinement of the plan
Requires expertise in each component	Accessible to citizen developers and business analysts

Instructor Tip: Start this section by asking participants about their current experience building Power Platform solutions. How many steps does it typically take to go from a business requirement to a working prototype? This sets up the value proposition of Plan Designer.

2.2 What Is Plan Designer?

Plan Designer is an AI-powered experience within Power Apps that generates complete Power Platform solution blueprints from natural language descriptions. It was introduced in Public Preview in January 2025 and has been progressively enhanced through the 2025 Release Wave 1 and Wave 2 cycles.

Plan Designer acts as a multi-agent collaboration system behind the scenes. When a maker describes their business need, Plan Designer coordinates multiple specialised AI agents to:

1. Analyse the business intent and decompose it into solution components.
2. Design a Dataverse data model with tables, columns, relationships, and sample data.
3. Propose application experiences (model-driven apps, canvas apps, or both).
4. Generate Power Automate cloud flows for business process automation.
5. Create Copilot Studio agent definitions for conversational AI capabilities.
6. Design Power Pages sites for external-facing portals.

2.2.1 Key Capabilities

Capability	Description
Natural Language Input	Describe your business solution in plain English. Plan Designer interprets the intent and generates the appropriate components.
Dataverse Table Generation	Automatically creates Dataverse tables with appropriate columns, data types, relationships (1:N, N:N), and even sample data rows.
Multi-Component Plans	A single plan can generate tables, apps, flows, agents, and Power Pages sites — all architecturally connected.
Review Before Build	The plan is presented for review before any components are created. Makers can modify table schemas, remove or add components, and refine the design.
Iterative Refinement	Makers can converse with Plan Designer to add requirements, modify components, or restructure the plan before committing to build.

Environment-Aware	Plan Designer checks for existing tables in the environment and can incorporate them into the plan to avoid duplication.
Integration with Copilot Studio	Agents defined in the plan are created in Copilot Studio with pre-configured knowledge sources and actions.

2.2.2 Accessing Plan Designer

Plan Designer can be accessed through multiple entry points:

- Power Apps Home Page:
  - Navigate to make.powerapps.com and select “Start with a Plan” or “Describe your app” from the home screen.
- Power Apps Vibe Experience:
  - Access vibe.powerapps.com and use the natural language prompt area. Plan Designer activates when the description implies a multi-component solution.
- Direct URL:
  - Plan Designer functionality is embedded within the standard Power Apps maker portal when preview features are enabled.

2.3 The Plan Designer Workflow

Plan Designer follows a three-phase workflow: Describe, Review, and Build. Understanding each phase is critical for effective use.

Phase 1: Describe

In this phase, the maker provides a natural language description of the business solution they want to create. The quality of the output is directly proportional to the specificity of the input.

Poor prompt: “I need a claims app.”

Better prompt: “I need an insurance claims management solution. Customers submit claims through a portal with claim type, amount, description, and supporting documents. Claims are assigned to adjusters based on claim type. Adjusters review claims in an internal app, request additional information if needed, and approve or deny claims. Approved claims above $10,000 require manager approval. The system should track claim status and send email notifications at each stage.”

Best practices for writing effective Plan Designer prompts:

- Be specific about the business process, not just the tool you want.
- Mention the roles/personas involved (e.g., customer, adjuster, manager).
- Describe the data you need to capture (claim type, amount, status, etc.).
- Include workflow rules (e.g., approval thresholds, assignments, notifications).
- Specify if you need external-facing portals (triggers Power Pages generation).
- Mention if you want a conversational/chat interface (triggers agent generation).

Phase 2: Review

After processing the description, Plan Designer presents a detailed solution plan for review. This is the most important phase — makers should carefully inspect every component before proceeding.

The review phase displays:

- Dataverse Tables:
  - Each proposed table with its columns, data types, and relationships. Makers can add/remove columns, change data types, rename tables, or delete entire tables.
- Applications:
  - Proposed model-driven apps and/or canvas apps with their target entities and layouts.
- Flows:
  - Power Automate cloud flows for automation (e.g., approval workflows, notifications, scheduled tasks).
- Agents:
  - Copilot Studio agent definitions with knowledge sources and suggested actions.
- Power Pages Sites:
  - External-facing portal designs if the description implied customer/partner-facing interfaces.

Critical Review Checkpoint

Always review the generated data model carefully. Plan Designer makes intelligent guesses about column types, relationships, and required fields — but it cannot fully understand your business constraints. Check for: correct primary name columns, appropriate option set values, proper relationship cardinality (1:N vs N:N), and whether lookup fields are pointing to the right tables.

Phase 3: Build

Once the maker approves the plan (with any modifications), Plan Designer creates all components in the Power Platform environment:

- Dataverse tables are created with the defined schema and sample data.
- Apps are generated and saved in the environment (ready for further customisation).
- Flows are created in Power Automate (may need connection configuration).
- Agents are published to Copilot Studio (ready for testing and refinement).
- Power Pages sites are created (if included in the plan).

After the build phase, all components appear as a Power Platform solution in the environment and can be further customised using each tool's native editor.

Instructor Tip: Emphasize that Plan Designer is a starting point, not an end point. The generated components typically need refinement — additional business rules in Dataverse, UI polish in apps, connector configuration in flows, and topic customisation in agents. This is intentional: Plan Designer accelerates the 0-to-60 phase; makers handle the 60-to-100 phase.

2.4 Architecture Deep Dive: How Plan Designer Works Internally

Understanding the internal architecture of Plan Designer helps participants appreciate its capabilities and limitations.

2.4.1 Multi-Agent Decomposition

Plan Designer uses a multi-agent system internally. When a maker submits a description, it is processed by several specialised agents:

- **Parses the natural language description, identifies entities, relationships, roles, and workflows.**Intent Analyser Agent:
- **Designs the Dataverse table schema — tables, columns, data types, option sets, and relationships.**Data Architect Agent:
- **Determines whether model-driven or canvas apps (or both) are appropriate and designs the app structure.**App Designer Agent:
- **Identifies automation opportunities and designs Power Automate flows.**Flow Designer Agent:
- **Determines where conversational AI adds value and designs Copilot Studio agents.**Agent Designer Agent:

- **Coordinates the outputs from all agents into a cohesive plan and resolves conflicts.**Orchestrator:

This multi-agent approach is itself an example of the agentic architecture pattern that the course teaches. Plan Designer is, in essence, a multi-agent system that designs multi-agent systems.

2.4.2 Dataverse as the Foundation

Every Plan Designer output is anchored to Dataverse. This is a core design principle:

- All data models are created as Dataverse tables (not SharePoint lists, Excel, or external databases).
- All apps read from and write to Dataverse.
- All flows are triggered by or act upon Dataverse events and records.
- All agents use Dataverse as their knowledge source and action target (via MCP).

This Dataverse-first approach ensures that the generated solution has a single source of truth, enterprise-grade security, and is immediately compatible with the MCP architecture taught in Module 04.

2.4.3 Environment Awareness

Plan Designer inspects the target environment before generating the plan. If relevant tables already exist (e.g., standard Account or Contact tables, or custom tables from previous projects), Plan Designer will:

- Recognise existing tables and incorporate them into the plan rather than creating duplicates.
- Propose additional columns on existing tables if the description requires new data points.
- Create relationships between new tables and existing tables where appropriate.

This makes Plan Designer suitable for iterative development — you can run it multiple times on the same environment to progressively build out a solution.

2.5 Plan Designer and the Agentic Development Lifecycle

Plan Designer is not an isolated tool — it is the entry point for the entire agentic development lifecycle that this course teaches. Here is how it connects to subsequent modules:

Subsequent Module	Connection to Plan Designer
Module 03: Power Apps Vibe	Apps generated by Plan Designer can be further refined using the Vibe experience for rapid UI iteration.
Module 04: MCP Dataverse	Tables created by Plan Designer are immediately accessible via the Dataverse MCP Server for agent-driven CRUD operations.
Module 05: Agent Builder	Canvas apps generated by Plan Designer can be converted into Copilot Studio agents using Agent Builder.
Module 06: Copilot Studio	Agents defined in the plan are created in Copilot Studio with pre-configured MCP tools and knowledge sources.
Module 07: Agent Flows	Flows from the plan can be enhanced with Agent Flow capabilities for AI-first automation.
Module 08: Human-in-the-Loop	Approval workflows from the plan provide the foundation for advanced human-in-the-loop patterns.
Module 12: Governance	The solution structure created by Plan Designer follows Dataverse solution patterns, making it ALM-ready from the start.

2.6 Licensing and Requirements

Requirement	Details
License	Power Apps Premium license (trial acceptable). Dataverse database must be provisioned in the environment.
Copilot Features	Copilot and preview features must be enabled in the Power Platform Admin Center by a tenant admin.
Environment Region	The environment must be in a supported region: US, Australia, Asia, or India.
Dataverse Database	A Dataverse database must be created in the developer environment. Plan Designer creates tables in this database.

Feature Status	Plan Designer is in Public Preview as of January 2025. UI and capabilities may evolve between course preparation and delivery.
Browser	Microsoft Edge or Google Chrome (latest version). Plan Designer is a web-based experience.

2.7 Current Limitations

As Plan Designer is in Public Preview, participants should be aware of the following limitations:

- Generated data models may need refinement (e.g., option set values, calculated columns, business rules are not generated).
- Complex many-to-many relationships may not always be correctly inferred from natural language.
- Generated flows may require manual connection configuration (e.g., Outlook, Teams connectors).
- Agent generation creates a skeleton in Copilot Studio; topics, generative answers, and advanced orchestration need manual configuration.
- Power Pages sites generated are basic templates that require significant design work.
- Plan Designer does not generate security roles, business rules, or environment variables.
- The quality of the output is heavily dependent on the quality and specificity of the input prompt.
- Generated solutions do not include automated testing, monitoring, or ALM pipeline configuration.

Instructor Tip: Frame limitations positively: Plan Designer is not meant to replace the maker — it's meant to accelerate the initial design phase. The maker's expertise is still essential for refinement, business rules, security, and production readiness. This is true of all AI-assisted development.

2.8 BFSI Context: Why Plan Designer Matters for Financial Services

For participants working with BFSI clients, Plan Designer offers specific advantages:

- **Financial services organisations often need to demonstrate solutions quickly during sales or discovery phases. Plan Designer can generate a working prototype in minutes.**Rapid Prototyping:

- **BFSI processes like loan origination, claims processing, and KYC workflows have well-understood data structures. Plan Designer can generate baseline schemas that align with common patterns.**Standardised Data Models:
- **By generating a complete solution architecture (data + apps + flows + agents), Plan Designer ensures that compliance-relevant components (approval workflows, audit trails, status tracking) are considered from the start.**Compliance Starting Point:
- **Plan Designer is an excellent tool for live client demonstrations. Describing a client's process in natural language and instantly seeing a solution blueprint is a powerful sales and discovery technique.**Client Demonstrations:

3. Module Summary

3.1 Key Takeaways

- Plan Designer enables intent-driven architecture: describe your solution in natural language and get a complete blueprint.
- It generates Dataverse tables, apps, flows, agents, and Power Pages sites from a single description.
- The three-phase workflow (Describe → Review → Build) ensures the maker retains control over the final architecture.
- Plan Designer is a multi-agent system itself, coordinating specialised agents for data modelling, app design, flow design, and agent design.
- Everything Plan Designer creates is anchored to Dataverse, supporting the MCP-first architecture taught throughout this course.
- The quality of Plan Designer output is directly proportional to the quality of the input prompt.
- Plan Designer is a starting point for development — generated components require human refinement, business rules, security, and testing.
- For BFSI scenarios, Plan Designer is a powerful tool for rapid prototyping and client demonstrations.

3.2 Knowledge Check Questions

7. What are the three phases of the Plan Designer workflow?
8. Name at least four types of components that Plan Designer can generate.
9. Why is it important to carefully review the generated data model before clicking Build?
10. What is the relationship between Plan Designer and the Dataverse MCP Server (Module 04)?
11. List three best practices for writing effective Plan Designer prompts.
12. What are two current limitations of Plan Designer that makers should be aware of?
13. How does Plan Designer handle existing tables in the environment?
14. In a BFSI context, describe one scenario where Plan Designer would accelerate solution delivery.

3.3 What’s Next

In Module 03: Power Apps Vibe – Copilot-First Creation, you will explore the Power Apps Vibe experience at vibe.powerapps.com. You will learn how Vibe generates full-stack React-based apps from natural language, and how apps created by Plan Designer can be further refined using the Vibe experience for rapid UI iteration.

4. References and Resources

4.1 Priority 1 Sources (Primary)

- Microsoft Learn: “Use Plans to Create AI-Powered Business Solutions” — learn.microsoft.com/en-us/power-apps/maker/plan-designer/plan-designer
- Microsoft Blog: “Introducing Plan Designer in Power Apps (Preview)” — microsoft.com/en-us/power-platform/blog/power-apps/introducing-the-plan-designer-in-power-apps-preview/

4.2 Priority 2 Sources (Supplementary)

- Databear: “Plan Designer in Power Platform: Build Intelligent Apps Fast” — databear.com/plan-designer-power-platform-guide/
- IW Mentor: “Meet the Power Platform Plan Designer” — iwmentor.com/pages/blog/meet-the-power-platform-plan-designer

4.3 Priority 3 Sources (Additional)

- Vipul Jain MVP: “Power Apps Plan Designer 2025” — YouTube video walkthrough

4.4 Related Course Modules

- Module 01: The New Power Platform Vibe (prerequisite)
- Module 03: Power Apps Vibe – Copilot-First Creation (next module)
- Module 04: MCP Dataverse in Power Apps (uses tables created by Plan Designer)
- Module 05: Agent Builder (converts Plan Designer apps into agents)
- Module 06: Copilot Studio Agents (refines agents generated by Plan Designer)