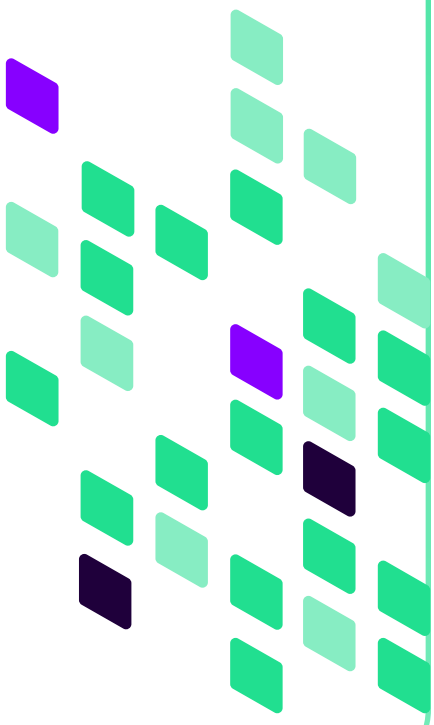
White Paper

AI

Ardoq

Prompt Engineering for Enterprise Architects: **The Conversational AI Playbook**



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Foreword

Enterprise Architecture has always been about zooming out to the bigger picture. Connecting strategy to execution, technology to business outcomes. But the pace of change today is unlike anything we've faced before. AI is rewriting the rules of how we gather insights, make decisions, and deliver value.

We're at an inflection point. Those who learn to lean in and harness AI (not as a novelty, but as a practical sparring partner) will be able to translate months of analysis into minutes, and shape strategies with unprecedented clarity and data-backed decision intelligence.

This white paper is a hands-on guide for doing just that. It's designed to help Enterprise Architects, CIOs, and strategy leaders use EA strategies and data-driven architecture with AI through skillful prompt engineering. Inside, you'll find real-world use cases, ready-to-use prompts, and practical advice for embedding conversational AI into the way you work.

The future of EA is intelligent, connected, and conversational. My hope is that this guide will help you take the first steps toward that future and inspire you to keep experimenting, refining, and sharing your own breakthroughs.

Let's lead the change, together.

Erik Bakstad
CEO at Ardoq

Contents

Introduction

The Age of AI in Enterprise Architecture

As GenAI moves from novelty to necessity, EAs are uniquely positioned to drive its meaningful application across the enterprise. Whether you're streamlining stakeholder communication, accelerating roadmap planning, or extracting insight from technical documents, prompt engineering is a powerful new tool in the EA toolkit.

This guide is designed to help you apply AI in a practical way. It uses prompts that mirror how you already work and delivers measurable speed and clarity in your day-to-day decisions. It is platform agnostic and ready to use.

While some advanced teams are exploring contextual engineering and system-level architectures, this guide focuses on more immediate, introductory opportunities. It is designed to help EAs apply prompt engineering to quick-win use cases to unlock faster clarity, stronger alignment, and real impact in the work they are already doing.

The right prompt turns AI from a novelty into an earnest intern. For time and resource-strapped EA teams, effective prompt engineering is becoming essential. It is not a side quest, but a core part of how architects turn complexity into clarity for themselves and their organizations.

Why Does Prompt Engineering Matter for EAs?
Most prompt guides currently available are built for developers, sales, or marketers, where outputs are often concrete and transactional. Architecture is different. Enterprise Architects work in ambiguity, navigating trade-offs, aligning business and technology, and asking questions that rarely have a single right answer.

To get meaningful value from GenAI, EAs need to frame prompts with context such as business domains, constraints, and goals. They must also ask for structured, reasoned outputs that reflect the complexity of their decisions. A superficial question leads to shallow insights. A well-crafted one can surface deep patterns, challenge assumptions, and unlock faster clarity.

As one architect put it: “Where developers want code, architects want clarity. Many use AI to generate content, but architects use it to reason through complexity.” [source]

We are also entering a **“zero-click” world** where leaders expect instant answers, not endless slide decks. Thanks to conversational AI, they want to be able to ask questions like “Which systems pose the highest risk?” and get a clear, actionable response on the spot. Gartner calls this the rise of “meta-tools” that make EA insights accessible to everyone, not just architects. For EAs, this means one thing: **prompting is now a core skill**. In this world, EAs who master conversational AI can make their expertise accessible across the enterprise, not just for other architects, but for all decision-makers. If you want your knowledge to drive decisions at the speed of thought, you need to speak AI’s language.

Having direct, secure access to live data is a baseline expectation for an EA platform serving the modern enterprise. Leading EAs are leveraging much more to enhance their value to the business and need platforms that offer the latest capabilities to support this experimentation and evolution of approach. For example, Ardoq has introduced an AI Gateway using the Model Context Protocol (MCP), a secure bridge that lets AI assistants directly query the architecture model in plain English. With such tools, an EA or even a CIO could ask, “What’s the downstream impact of removing Salesforce?” and get a structured answer drawn from real architecture data. This playbook will show not only what prompts to use for common EA scenarios, but how to pair them with your data to drive tangible outcomes.

We’re at a turning point. Those who quickly master prompt engineering will be able to reduce months of analysis to minutes and translate complexity into action. This playbook helps Enterprise Architects, CIOs, and strategy leaders apply GenAI with precision to move faster, think strategically, and deliver measurable impact. The skills you build today will define your effectiveness tomorrow.

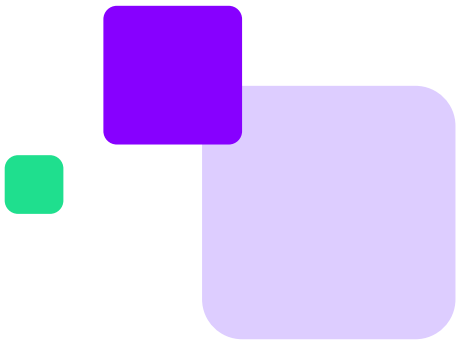
Let’s dive in.

Prompt Engineering 101 for Enterprise Architects

Before diving into use cases and templates, let's cover the basics of effective prompting as they apply to enterprise architecture.

How LLMs "Think": Large Language Models such as ChatGPT, Claude, or Gemini do not store or retrieve facts in the way a traditional database would. Instead, they predict the next most likely word based on the patterns they have learned from massive datasets. This makes them highly effective at synthesizing information and generating coherent text, but they rely entirely on the context you provide.

For Enterprise Architects, this means prompts must be clear, grounded in real organizational data, and structured with intent. When questions are vague or too open-ended, responses can be inaccurate or entirely fabricated. This is known as hallucination. The quality of the output depends heavily on the clarity and completeness of the prompt.



Prompting Best Practices: To apply AI effectively in an architectural context, keep these five principles in mind.

1. Ground Prompts in Context
Include the relevant business domain, scope, goals, and known constraints. For example, recommendations will vary depending on whether you are referencing a bank's IT portfolio or a retail landscape. Without this context, AI will generalize or default to irrelevant assumptions.

2. Be Explicit About the Outcome You Want
Clarify whether you need a list of options, a ranked recommendation with rationale, or a structured risk assessment. Define the output format when possible. For instance, consider requesting tables, bullet points, or narrative summaries to enhance precision and usability.

3. Prompt for Reasoning and Trade-Offs
Architectural decisions are rarely binary. Ask the AI to outline multiple options, explain its reasoning, and highlight pros and cons. This enables you to explore the design space and evaluate alternatives, rather than receive a single default response.

4. Treat Prompting As Iterative
LLMs rarely provide the perfect answer on the first attempt, especially for complex, domain-specific queries. Expect to refine your prompts, build on prior outputs, and drill down into details. Effective prompting should be treated as a dialogue, not a one-off transaction.

5. Retain Final Judgment
AI can accelerate your thinking, but it cannot replace your architectural standards, organizational priorities, or professional accountability. Use it as a strategic assistant that supports your analysis, not as the final authority.

By applying these principles, AI becomes a practical tool for accelerating clarity and improving decision-making. The next section introduces real-world EA scenarios with ready-to-use prompt templates. Each one outlines when and how to use it, what information to include, what kind of output to expect, and how to refine results for greater impact.

(Note: The prompts can be used with your AI of choice, whether OpenAI's ChatGPT, Anthropic's Claude, Google's models, etc. We'll also highlight how using Ardoq can enhance many of these prompts by providing real-time architecture data.)

Core EA Use Cases and Prompt Templates

This chapter focuses on **six high-impact use cases** that reflect common challenges faced by enterprise architects. These scenarios are drawn from patterns we see across our customer base, and are designed to be broadly relevant to EA teams working across industries and maturity levels.

Use Case #1: Application Rationalization

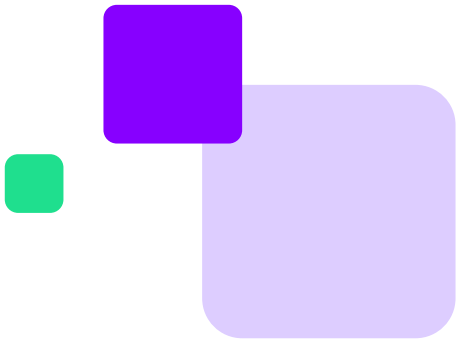
For an EA looking to move from reactive reporting to proactive portfolio management, this workflow is a game-changer in smarter IT cost management.

WHAT: Identify redundant, underused, or costly applications in the portfolio for consolidation or retirement.

WHY: Reduce IT spend, eliminate duplicative functionality, and free up budget for innovation. This is often a quick win for cost cutting and simplifying the IT landscape.

WHO: Enterprise Architects, IT Portfolio Managers, CIOs, and Transformation Leads who need to trim the application portfolio and communicate decisions to stakeholders.

Why Move to an AI-Assisted Way of Working?
Rationalizing applications means looking through loads of data. What apps you have, how much they cost, how often they're used, and whether they're still valuable. Normally, this takes **weeks of digging through spreadsheets**. But with the right AI prompt, you can feed in that data and quickly get a clear list of which apps to keep, retire, or combine. It's like having an assistant scan your entire portfolio and say, "Here's where you're wasting money, and here's what to do about it." This saves time and helps you **make smarter decisions, faster**.



Prompt 1
Accelerate Application Portfolio Triage

Goal:
Quickly triage an application list to to spot potential redundancies or retirement candidates. Start small, validate the approach, then scale to the full portfolio.

Context:
Connect MCP Server or export a short list of applications you know well. Export basic attributes such as owner, cost, usage, and criticality. Run the prompt, then review the AI's reasoning against your own knowledge. Once you're confident, expand to a larger set of apps. To improve the quality of recommendations, add more attributes over time (e.g., business capability mapping, integration data, technical lifecycle stage, or compliance requirements). Ardoq makes this easier by keeping these attributes connected in one place.

The Prompt (for the AI):

"You are an enterprise architect reviewing our application portfolio. Here is a table of applications with their business capabilities, annual cost, usage frequency, and criticality. Analyze this data and recommend which applications should be considered for rationalization or decommissioning, and why. Provide the output as a table with columns for Application, Recommendation (retain, retire, migrate), Reason, and Risk Level."

Expected Output:
The AI should produce a table of recommendations with clear reasoning. This gives you a starting point for further analysis. For example:

Application	Recommendation	Reason	Risk Level (Impact)
App A	Retire	Low usage, high cost	Low (isolated system)
App B	Retain/Migrate	Critical system, but legacy tech – plan upgrade	High (core business process)
App C	Retire	Duplicate functionality with App B	Medium (needs data migration)

How to Refine:
If the output feels too shallow, add more context into the prompt. For example:
- "Include which business capabilities or processes each app supports."
- "Consider dependencies and downstream systems before making recommendations."

Ardoq's help articles on Application Rationalization provide detailed criteria and rationale you can copy into prompts to improve reasoning quality. This ensures AI outputs are grounded in industry best practice, not just surface-level patterns.

Prompt 2
Get a Stakeholder-Ready Executive Summary for Rationalization

Goal:
Summarize the rationalization plan for executive stakeholders (CIO, CFO, etc.) in a concise, persuasive way. Use this prompt after you have identified candidates to prepare high-level talking points or slide content.

Context:
Use the output of your rationalization analysis, either by using Prompt 1 and refining the output or the result of your own analysis. This analysis should include a list of target apps to retire or consolidate, with key facts such as savings and impact. If using Ardoq, you might already have a report or tags on apps marked for retirement along with cost-saving estimates.

The Prompt (for the AI):

"You are preparing a brief for the CIO on our application rationalization. ***Based on the following list of applications and the rationalization recommendations*** *(provide the list or summary from Prompt 1), draft an executive summary. For each targeted application, give 2-3 bullet points highlighting: what the recommendation is, the key business benefit (such as cost saving or risk reduction), and the next step (e.g., timeline or action owner). Use clear, professional language suitable for a board-level presentation."*

Expected Output:
The AI should produce a series of bullet points, grouped by application. These bullets are executive-ready, focusing on savings, risk, and action, which is what leaders care about. For example:

App A:
Retire – Eliminating this redundant system will save ~$50k annually; No critical dependencies identified, minimizing business impact. Next: Decommission by Q4 after migrating remaining data.

App B:
Migrate (Modernize) – Legacy core system that poses increasing risk; Moving to a supported platform will reduce outage risk and improve scalability. Next: Initiate replacement project planning (target Q1 kickoff).

How to Refine:
If the tone or details aren't correct, you should adjust the prompt. For instance: "Make the tone more formal and remove any technical jargon." Or: "Add one bullet explaining what happens if we don't take this action, to underscore urgency." This can make the output more compelling and persuasive. Lastly, once you have the draft, prompt the AI: "What might a skeptical CFO push back on in this summary?"

Prompt 3
Challenge the Plan (Devil's Advocate)

Goal:
Avoid blind spots by stress-testing your rationalization plan. Use this prompt to have the AI generate counterarguments or risks for retiring a given application - essentially playing devil's advocate. This ensures you're prepared to address objections and mitigation strategies when finalizing recommendations.

Context:
Select an application you are planning to retire or consolidate. Gather any available context on it, e.g., whether it's tied to a specific process, has a user base, etc. In Ardoq, you can pull up dependency maps or integration info for this app to feed the AI more insight into what depends on the given application.

The Prompt (for the AI):

*"As an enterprise architecture assistant, **list the top 3 reasons we might regret retiring [App X]** (for example, hidden dependencies, stakeholder resistance, compliance issues). For each reason, suggest how we could mitigate that risk if we proceed with decommissioning."*

Expected Output:
A list of potential pitfalls and mitigations. For example:

1. **Unseen Dependencies** - App X might be feeding data to an undocumented downstream HR system. Mitigation: Conduct a thorough impact analysis using application dependency data (e.g., from Ardoq) before retiring, or run parallel systems for a transition period.
2. **Compliance Requirements** - App X retains historical data needed for regulatory compliance. Mitigation: Archive the data in a read-only repository or migrate it to compliant storage before decommissioning.
3. **User Resistance** - Some departments rely on App X's unique features. Mitigation: Engage those users early, provide an alternative solution or workarounds, and include them in testing the replacement.

This output helps you preempt the "Yes, but—" questions from stakeholders by having answers ready. It brings a balanced perspective to your plan and demonstrates that you are effectively preempting risks and broader operational concerns beyond just cost.

How to Refine:
If the AI misses a known concern, you can prompt further: "What about data migration concerns? Include any data loss risks in the reasons." Or ask for more mitigation ideas if the suggestions are too high-level. The goal is to flesh out a robust risk plan around the rationalization decision.

Bonus: How Ardoq Powers Smarter App Rationalization

Rationalizing apps works best when your application portfolio's data is current and connected. With Ardoq, you can feed your live application inventory straight into AI prompts. For example, Ardoq's MCP integration lets you include app costs, owners, and usage details so the AI can base its answers on real, up-to-date information. You can even ask questions like "Which apps should we eliminate and why?" and get grounded, auditable answers using Ardoq's metadata. The result is faster, fact-based decisions you can stand behind.

Get the Full White Paper

Including:

- 18 prompts across 6 use cases
- Advanced prompt techniques
- How to build an AI-enabled EA practice

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