From POC
to Production

90 Days
3 Failed Attempts / **1 Success**
A Real Client Case Study

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The Setup

90
Days of Development

$40k
Budget Burned

3
Failed Attempts

0
Systems Deployed

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Attempt #1

1

Complex Multi-Agent System
❌ **FAILED**

THE APPROACH
Planner agent → Research agent → Writing agent →
Review agent

WHAT LOOKED GOOD
Clean separation of concerns. Impressive in demos.
Followed "best practices."

WHY IT FAILED
Too slow (5-8 seconds per request). Debugging was
hell (which agent failed?). State management
nightmare. Production readiness: 0%.

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Attempt #2

2

Simple Single Agent

❌ **FAILED**

THE APPROACH
One agent with a very long prompt. All logic in prompt engineering.

WHAT LOOKED GOOD
Fast (1-2 seconds). Easy to deploy. No orchestration complexity.

WHY IT FAILED
Couldn't handle edge cases. Every new requirement = prompt surgery. Prompt grew to 8,000 tokens. Quality degraded. Inflexible.

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Attempt #3

3

LangGraph Orchestration

❌ **FAILED**

THE APPROACH
State machine with conditional routing. Graph-based orchestration.

WHAT LOOKED GOOD
Flexible routing. Handle complex flows. Framework recommended approach.

WHY IT FAILED
Debugging was impossible (state transitions unclear). Graph logic became spaghetti. Team couldn't understand flow. Every bug took hours to trace.

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What Finally Worked

✓

Single Agent + Worker Pattern
✅ **SUCCESS**

ONE PLANNER
Routes requests to specialized tools. Clear decision logic. Easy to debug.

SPECIALIZED TOOLS
Each tool does ONE thing well. Tools are deterministic. Easy to test.

CLEAR SEPARATION
Planner = routing logic. Tools = execution. No overlap.

PRODUCTION READY
Deployed in 3 weeks. Actually debuggable. Team understands it.

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The Results

3
Weeks to Deploy

500
Requests/Day

99.4%
Success Rate

From $40k burned and 0 deployed systems... to a
production system handling real traffic in 3 weeks.

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Lessons Learned

Lesson 1
Complexity Kills POCs
Multi-agent systems look impressive in demos. They die in production debugging.

Lesson 2
Simplicity Has Limits
Single agent couldn't handle edge cases. Every new requirement required prompt surgery.

Lesson 3
Hybrid Approaches Win
One planner (routing logic) + Multiple tools (specialized execution) + Clear separation of concerns = Production architecture

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Architecture isn't about "best practices."

It's about constraints and trade-offs.

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https://community.nachiketh.in

🎓 **Learn Production Architecture**
bootcamp.nachiketh.in

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Speaker notes