2024 AI UPDATE

LESSONS LEARNED FROM OUR AI JOURNEY

PRESENTERS

Chad Hiatt
CIO
Aldridge

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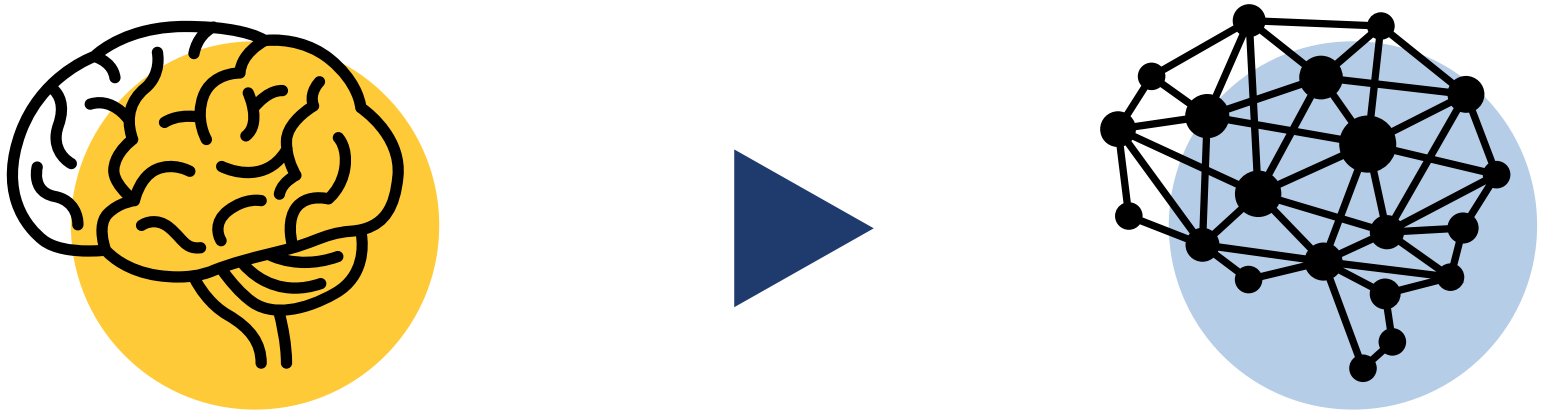
President
Aldridge

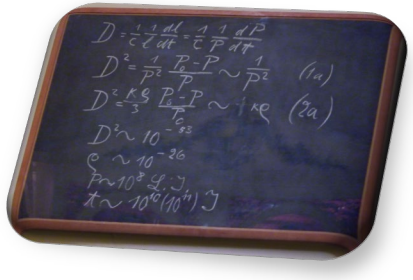
“AI” = CHANGE



AI will change…

- how repetitive or derivative tasks are worked
- the relevance and value of certain skills
- expectations of efficiency and competitiveness

“AI” = CHANGE



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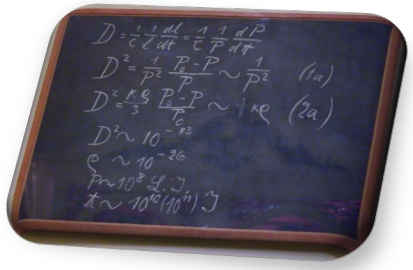

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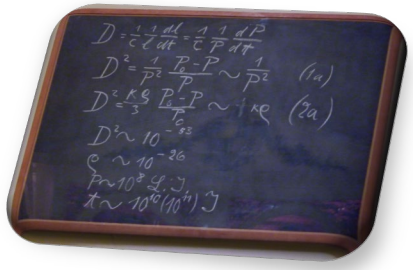

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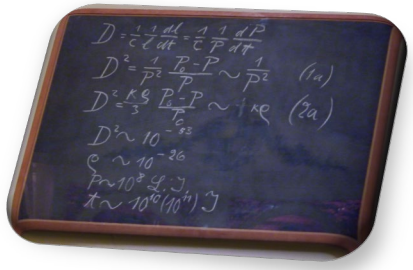


THE FUTURE OF AI FOR BUSINESS

SHORT-TERM

MID-TERM

LONG-TERM

AI IN THE SHORT-TERM

100 small changes in small ways

- You don’t necessarily have to do anything to take advantage of it
- Vendors are using AI to improve their tools, and adding AI-powered features

AI IN THE SHORT-TERM

CHALLENGES

- People don’t know quite how to use it effectively and build processes around it
- Data privacy, governance concerns – the next iteration of “shadow IT”
- Getting the most out of generative AI, today, rewards “Prompt Engineering”

AI IN THE MID-TERM

Built into your Line-of-Business applications

Specialized, function-driven AI…

- Tuned by in-market vendors…
- To understand industry-specific context, data sets, and vocabulary…
- Incorporated into natural features

“Invisible” AI that people rarely think of as AI, but that they’d miss if it wasn’t there.

MICROSOFT 365 COPILOT

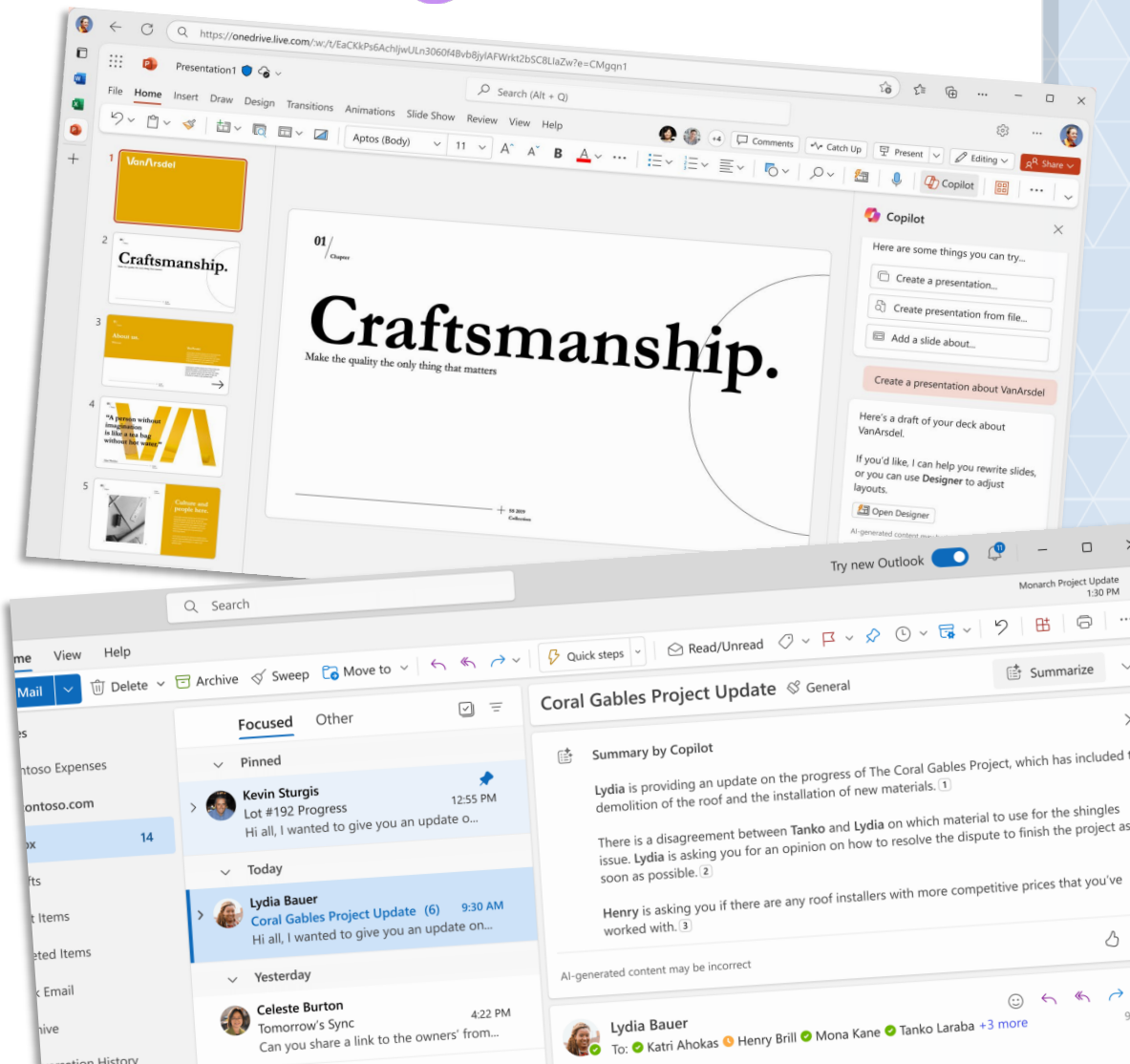
Copilot for Microsoft 365 is a generative AI, built-into your Microsoft products (Teams, Outlook, SharePoint, Word)

In Q2 of 2024 Copilot will be available for $30 dollars to add-onto your Microsoft 365

Summarize your meetings and catch you up on calls you missed

Create content (emails, blogs, plans) using data in your Microsoft 365

Create presentations for you, convert Word docs into PPTs



AI IN THE LONG-TERM

Unique, private, persistent-session AI; built for the context of you and your business

- You’re going to have a large language model, with long-frame context, that can answer complex questions about your business
- Integrated with your tools, user friendly, and secure

START PREPARING FOR AI

Requirements to implement AI:

A SOURCE OF TRUTH

REALISTIC GOALS

MANAGEMENT MATURITY

AI REQUIREMENTS

A Source of Truth

- Your data needs to be organized and high enough quality that a person could do what you're asking the AI to given enough time
- Do you know what your sensitive data is and how it is stored?
  - Do you need to keep it separate from your AI

AI REQUIREMENTS

Realistic Goals

- Start small and achieve quick wins to build momentum and trust
- You need a specific challenge you're trying to solve, not just "how can I use AI to make more money"

AI REQUIREMENTS

Management Maturity

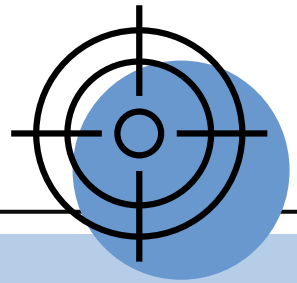
- Can you quantify requirements and expectations
- Management, stakeholder, and user buy-in
- Implementation and operating cost
- How will you interpret, trust, and refine results?

- What would perfect results enable you to do?

OUR FIRST MAJOR AI PROJECT

Project Overview
& Lessons Learned

THE VISION



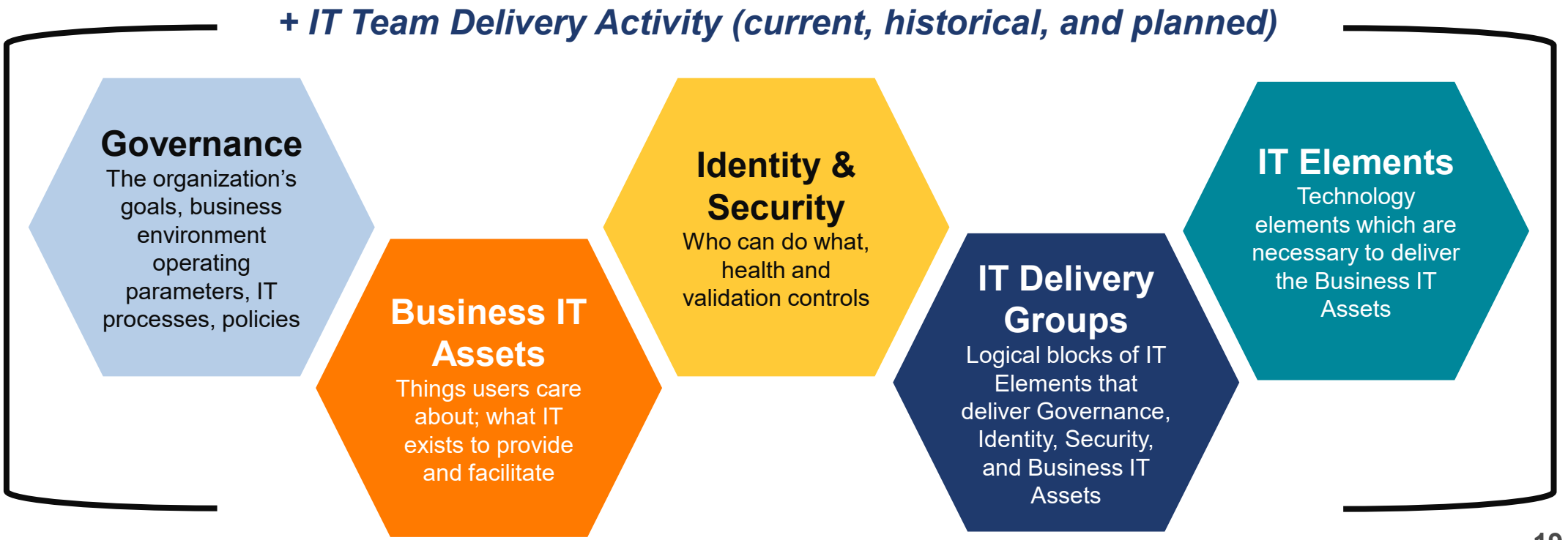
“Reduce the research time needed to apply our best service delivery knowledge, every time to every client, at scale.”

Put the current, most-relevant information about each client’s IT environment and support conversations within a minute’s reach of anyone within our organization.

Our clients would experience from us even faster response, resolution, accuracy, connection.

THE CHALLENGE

"IT Knowledge Management" encompasses the total of our **best practices** and **procedures**, client-specific **IT elements** (both automatically discovered and manually architected), client-specific **variants** of procedures, our present **service delivery activity**, our **historical service delivery** activity and **outcomes**, and our collaborative forward-looking IT **roadmaps**.



PROPOSED SOLUTION

Let's leverage a Large Language Model (LLM)-based AI engine…

- Ingest our structured ITSM (service management) data
- Ingest our semi-structured knowledge management (processes and documentation wiki platforms, SharePoint documentation)
- Provide a Natural Language Processing (NLP) interface
- Permit our team members to get quick, accurate, actionable answers from that synthesized set of knowledge.

- It must be **secure** and **private**; client IT environment security (and our entrusted knowledge of it) remains paramount.

- When we started in 2023, we didn't yet know enough to accurately forecast the effort, but there was enough perceived upside that we were willing to invest up to $100K.

3 PHASES: CRAWL, WALK, RUN

CRAWL

Internal Audience

- Short list of initial knowledge sources to ingest
- Narrow list of prepared query, response skills
- Interactive only; waits to be asked, takes no independent actions

WALK

Internal Audience

With established trust in the expert system's accuracy and relevance, enable proactive internal insights – don't wait to be asked. Contribute **guidance**, **FYIs**, & **suggestions** into our ITSM.

RUN

External Audience

With high confidence in the system's accuracy and relevance, for limited cases, permit the system to make rapid, immediate suggestion **responses to clients**.

WRITTEN PLAN

- Aldridge Target Operating Environment / Constraints
  - Target implementation should Microsoft Azure-based (Microsoft Azure OpenAI, Microsoft Azure Functions, Microsoft Azure SQL, etc)
  - Existing internal raw PSA data set is maintained in a Microsoft Azure SQL Managed Instance mirror (it's not used for transaction processing, only reporting and lake transforms; no consumption conflicts).
  - Internal audience only; a authenticated web portal created by the vendor architect/dev the Aldridge Azure tenant would be accepta will be required in the fu sensitive PSA data (HR,
  - Work output from impl
  - Implementation can be based (if we're all com start)

- "Phase 1" milestone – proof of concept
  - Implement OpenAI, configure ongoing PSA ingestion, align and tune to achieve 2 to 3 of the proof of concept candidate functions:
    - "Interface" via a private-audience (authenticated, internal users only) interactive web interface that may even use a multiple-choice format to ask one or more of the following, or permit natural-language query.
      - Microsoft Teams chatbot channel interface is the most logical choice; no front-end interface development required.
    - (1) Natural language query of PSA data (ConnectWise Manage service requests' structured RDBMS data and unstructured text work notes and client correspondence).
    - (2) Natural language "related history" query, eg "What do we know about XYZ, across all service requests?" "What do we know about XYZ, for this particular client?" "What do we know about the things service request number 4302044 is discussing?"
    - (3) Natural language suggested diagnostics/resolution path, eg, "What have we seen solve this with good outcomes in the past, for this client, or for other clients?" Requires defining a "good" outcome (client feedback, time to resolve, time to respond, time cost by role, future impact of prior resolution), based on existing data in the PSA and our lake.

SKIPPED A STEP – DEFINING “SUCCESS”

“Today us” realizes we…

- Were enamored with the idea of an AI-based solution. “Woot! Let’s go!”
- Did not establish empirical metrics, timeline of “**is this successful**?”
- Did not establish an acceptable ROI target
- Expected contagious enthusiasm, “well, OF COURSE everyone will want to use this!” so underestimated the effort required to generate awareness, gain adoption, keep users engaged.
- Did not seek service delivery team personal investment and commitments to train, emphasize, invest, feedback, improve.

VENDOR SEARCH, EVALUATIONS

Searched and interviewed a number of vendors; three categories found…

VENDOR 1,
“The SWAT team”

Completely custom, aggressive turnaround, no outcome investment

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Experienced LLM, NLP development team, significant customer chatbot focuses

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VENDOR 2, "The Generalists"

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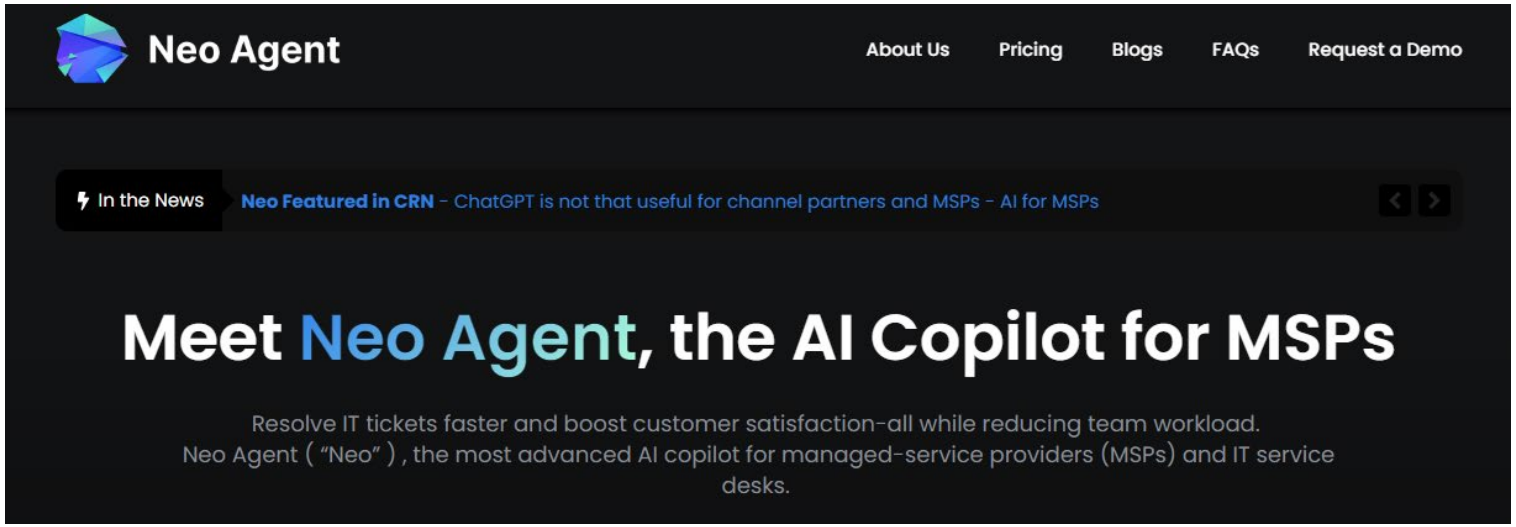
VENDOR 3, "The Partners"

MSP-savvy, agile team with a focused, packaged offer and committed, aligned independent development

NEOAGENT.IO



- (5) FT staff, (5) PT staff
- 9 out of 10 are AI experts, devs
- MSP relationships, background

- Nikhil Sehgal, Founder/CEO
- Anton Shumskih, Co-Founder/CTO

PROJECT IMPLEMENTATION

July 2023

Initial Neo integration with Aldridge data repositories

August & September 2023

- Initial Single Person Testing Phase
- Feedback and refinement process implemented
- Implementation of query and response recording

October 2023

- Company-wide 'What is Neo' introductory meetings
- Go-Live!
- Began reviewing Neo responses
- Continuous feedback and refinement

November & December 2023

- Continuous product, skills improvement
- User insight interviews
- Weekly Neo dev team collaboration

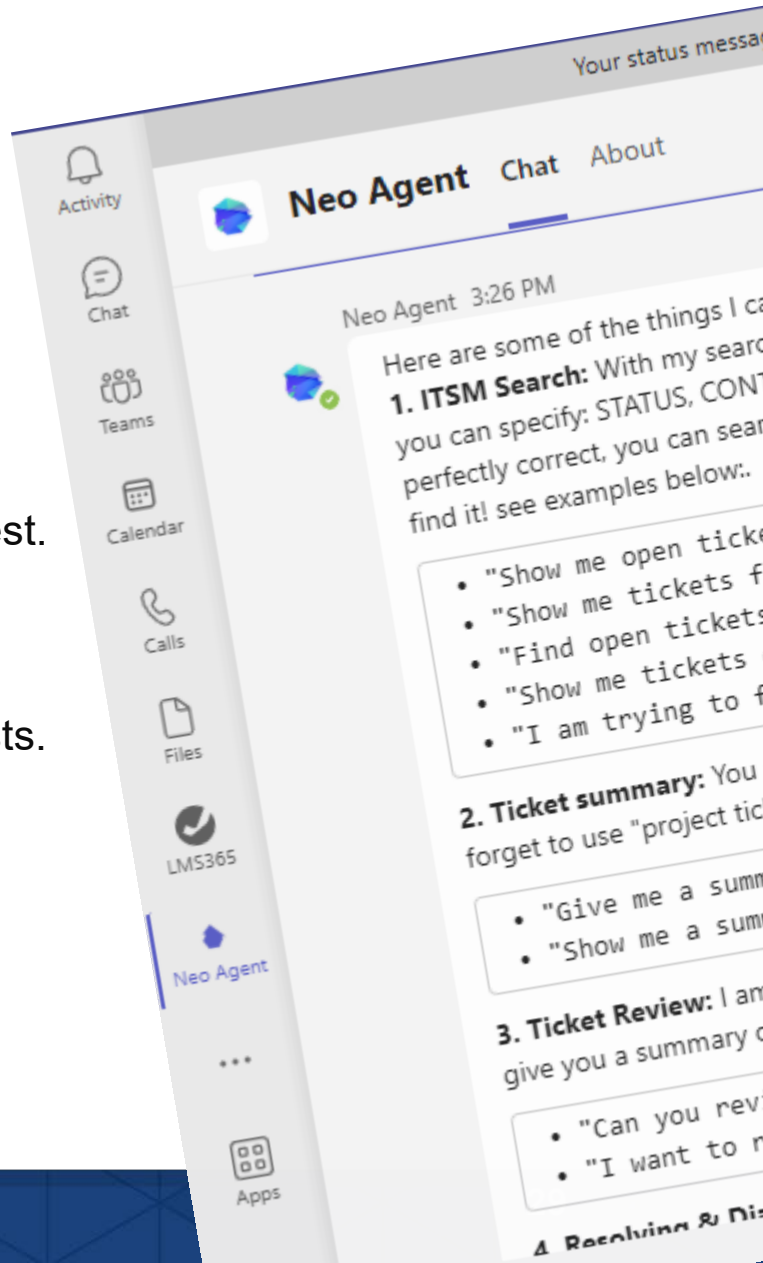
THE OOH-AHH BITS

Neo runs as a dedicated Microsoft Teams channel

- Eliminated the need for us to have a separate web interface or tool.
- Respects our Microsoft 365 Entra ID-based user authentication and security.
- Operates within our private Microsoft 365 data sphere.

Neo's top "skills" include:

- Quickly summarizing correspondence, progress, and history of a service request.
- Suggesting resolutions or next troubleshooting steps for a service request.
- Attributed knowledge search across our information management platforms.
- Client sentiment, representative communication quality analysis.
- Set aggregation; queries that require evaluating across multiple service requests.
- Interactive communication tips and suggestions.
- ITSM-event triggered and scheduled workflows.



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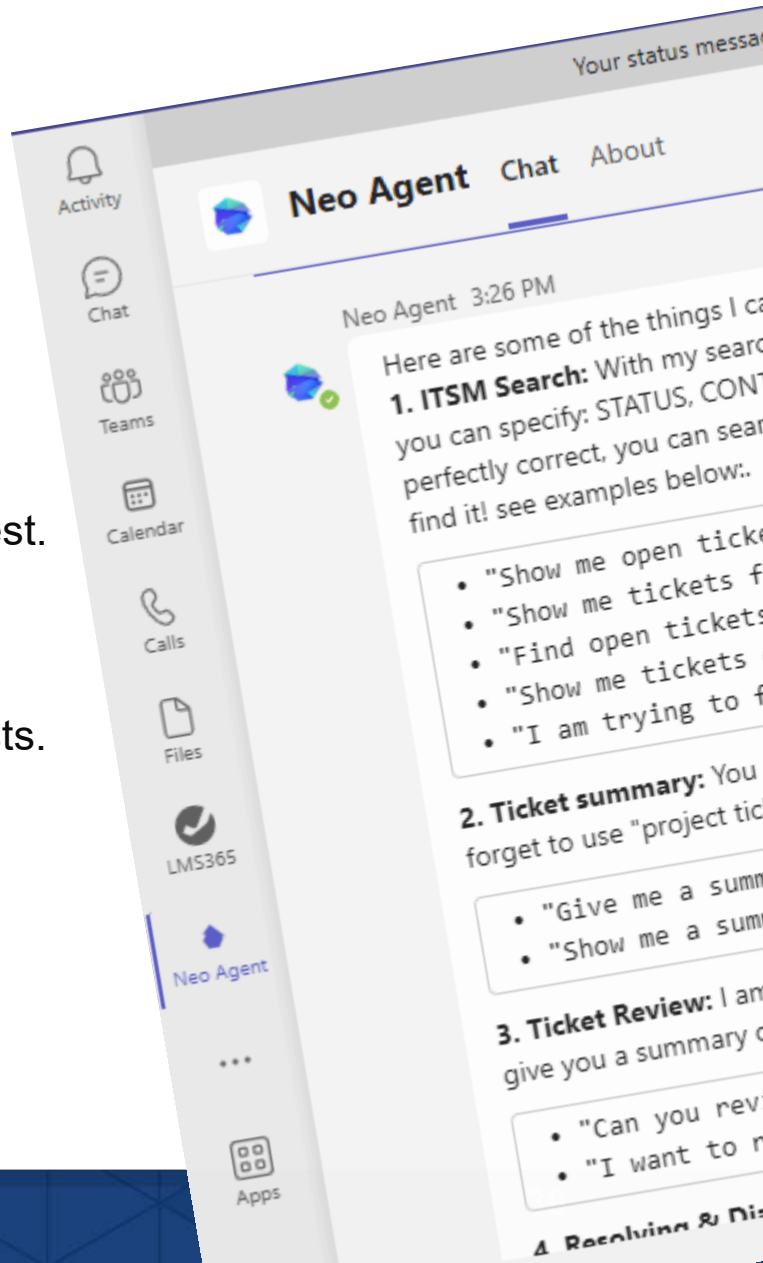
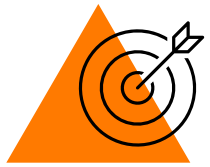


CHALLENGE #1
VOCABULARY

The vocabulary of the question depends on the role of the person asking. A front-line person, manager, and director may ask a similar question, but are expecting a different answer

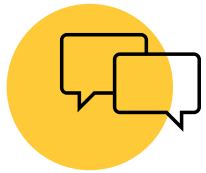
- What does “**our**” & “**we**” mean to AI?
- People shorten client names or use an abbreviation; the AI system must be able to understand what the right one is
- Must teach the AI to be conversational and to ask questions – i.e., if we have two clients with the same name the AI needs to ask a question to clarify

CHALLENGE #2
“AI CAN DO ANYTHING!”



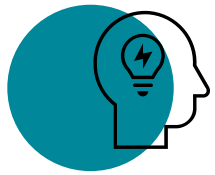
“AI CAN DO ANYTHING”

If you provide a tool with an open, blank text box for an interface, everyone assumes they can be very creative with what the tool can do.



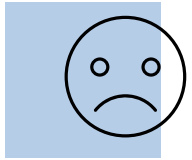
TRIBAL KNOWLEDGE

Shorthand and tribal knowledge references are natural for people but very difficult for AI.



WORK VS. PLAY

Many (most?) people have experimented with AI for fun. Trying to interact with an AI system to accomplish meaningful work versus a real deadline changes the feel of it.



GIVING UP

If the tool doesn’t live up to each user’s expectations within the first few queries, they won’t have the confidence to invest more effort to use it later.

CHALLENGE #3
DATA, SKILLS REFINEMENT

- Even though Neo is developed for MSPs, business processes and approaches to information management and service delivery still vary.
- The “skills” the Neo engine has; and how it responds to queries even after it’s understood them; required ongoing training and development.
- Empirical usage review has been one of the most valuable refinements.
  - Review every query, talk through the answers the model gave with the developer, refine response paths. As appropriate, close loops with the requesting user(s) to share what’s been refined or provide suggestions on how to leverage Neo’s skills.
- Neo had to be taught to weight our information the way we do – timeliness, author and author’s job role and experience, specificity – and cite sources.

CHALLENGE #4
ADOPTION

- Each day, Neo is only used by fewer than 10% of our service team, even 2 months after launch.
- Each day, Neo is used for only 10 to 35 conversation sessions.
- Using Neo today requires “pause” and “effort” – adding the Neo app, deciding to go to the Teams channel to interact with it or pose a query.

Course Adjustments

› Administrative deploy of Neo app as a Teams add-on.
› Neo weekly Teams channel updates on new skills, best recent uses.
› Technical leadership call-outs, examples, headlines of Neo use.

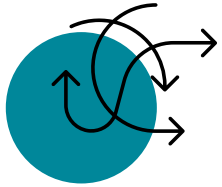
WHAT'S NEXT FOR OUR PROJECT

1. Validate business teams' investment in success.
2. Establish ongoing operating cost, investment rate (product cost + refinement attention).
3. Establish adoption **make** or **break** deadlines.
4. Establish performance outcomes **make** or **break**.
5. Reach critical mass, or conclude the present effort.

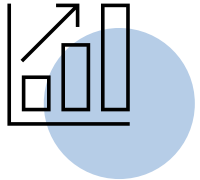
LESSONS LEARNED

Up-front buy-in, commitment from intended adopters for the expected outcome is critical.

AI excels at shining light on your information sources quality, conflicts, depth.



LLM and NLP AI models have been richly trained on grammar and common topics. Specialized examples and single-case-specific knowledge demand higher accuracy.



New skills integrated directly into people's existing tools and workflow are much easier to adopt than systems requiring purposeful new work habits.

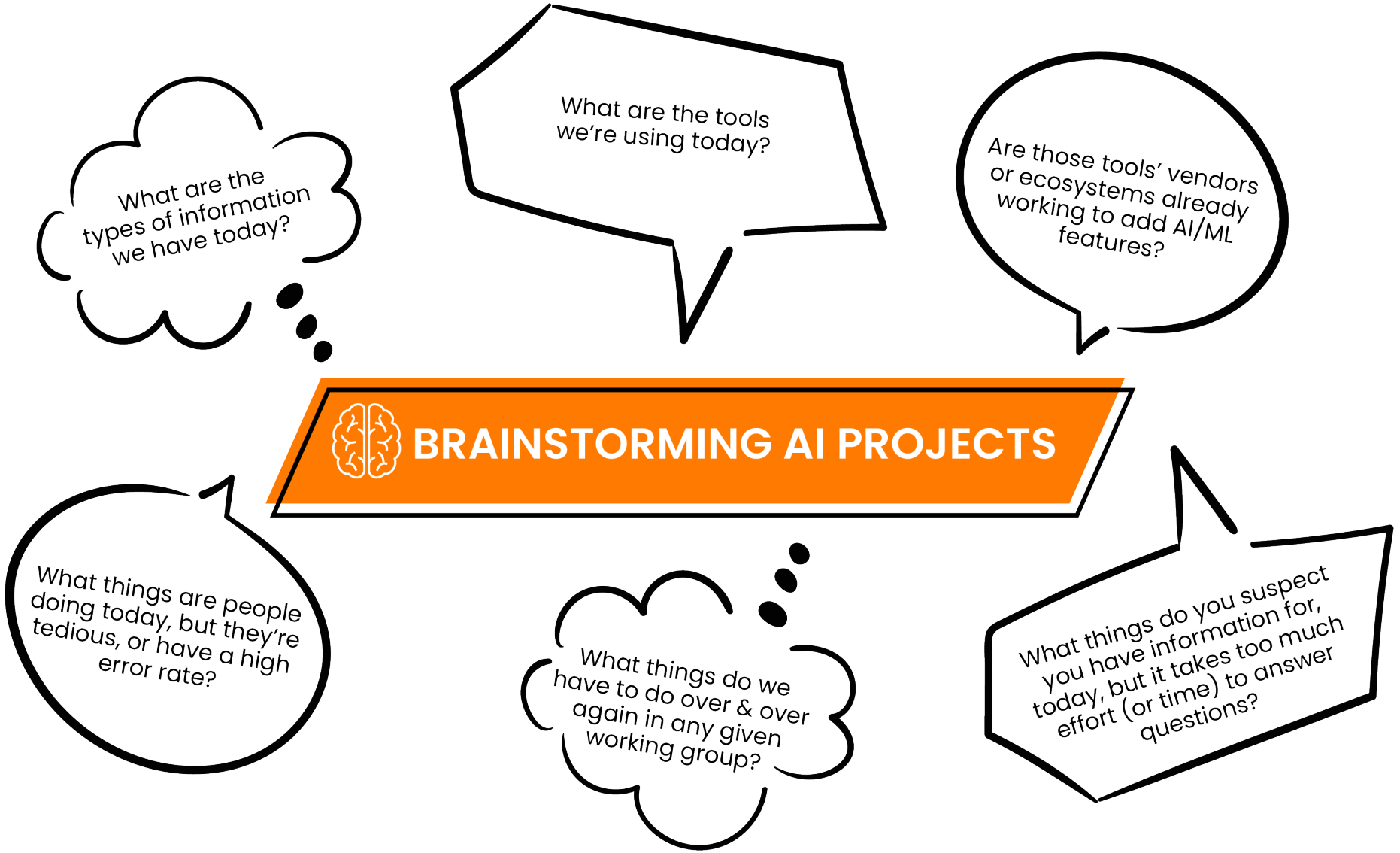
STARTING YOUR OWN AI PROJECT

Brainstorm project ideas

Quantify your ideas

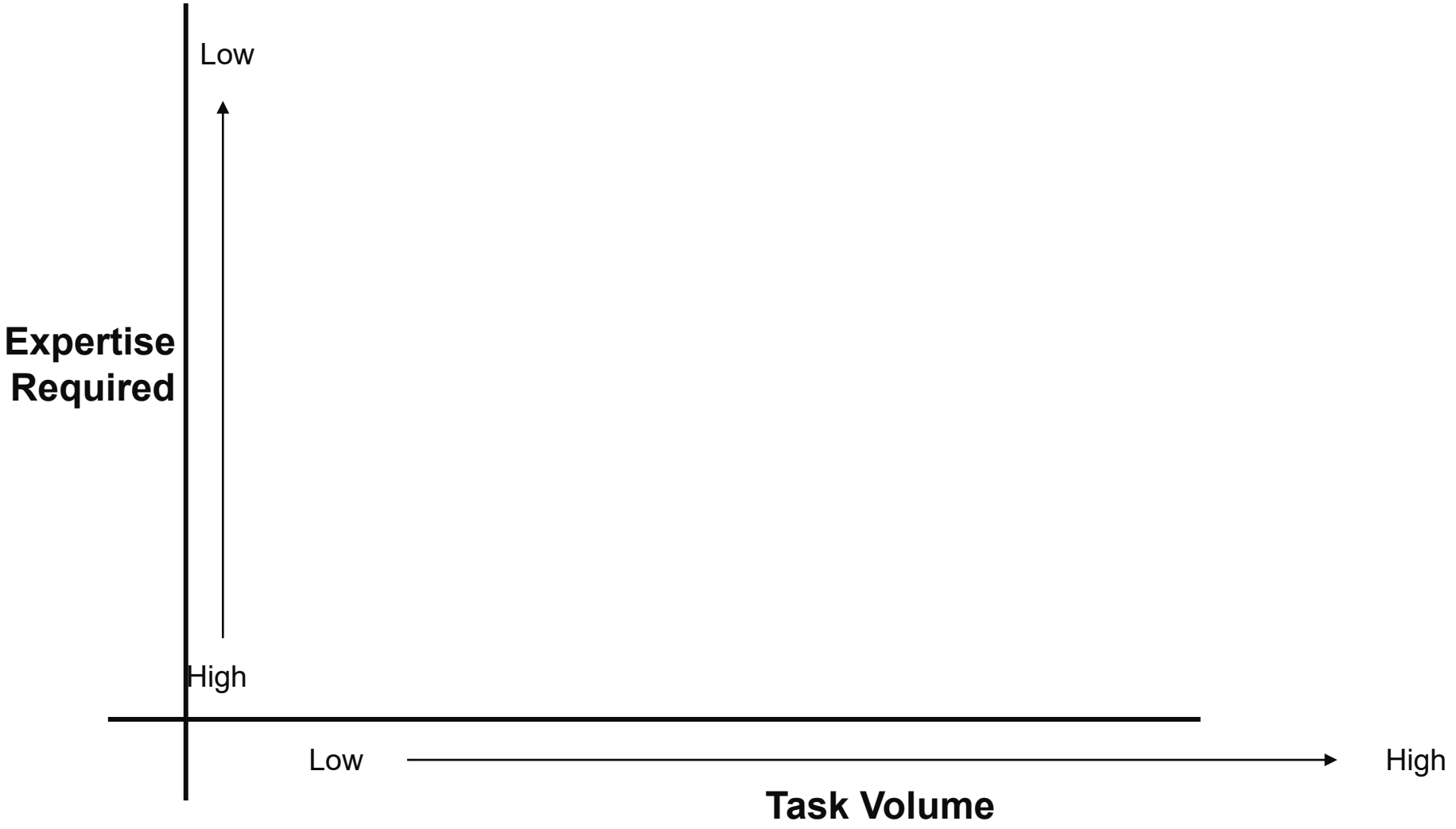
Filter highest value and lowest cost ideas

Prioritize amongst your other initiatives



Consider projects that will **make money**, **save money**, or **reduce risk**.

QUANTIFY YOUR IDEAS



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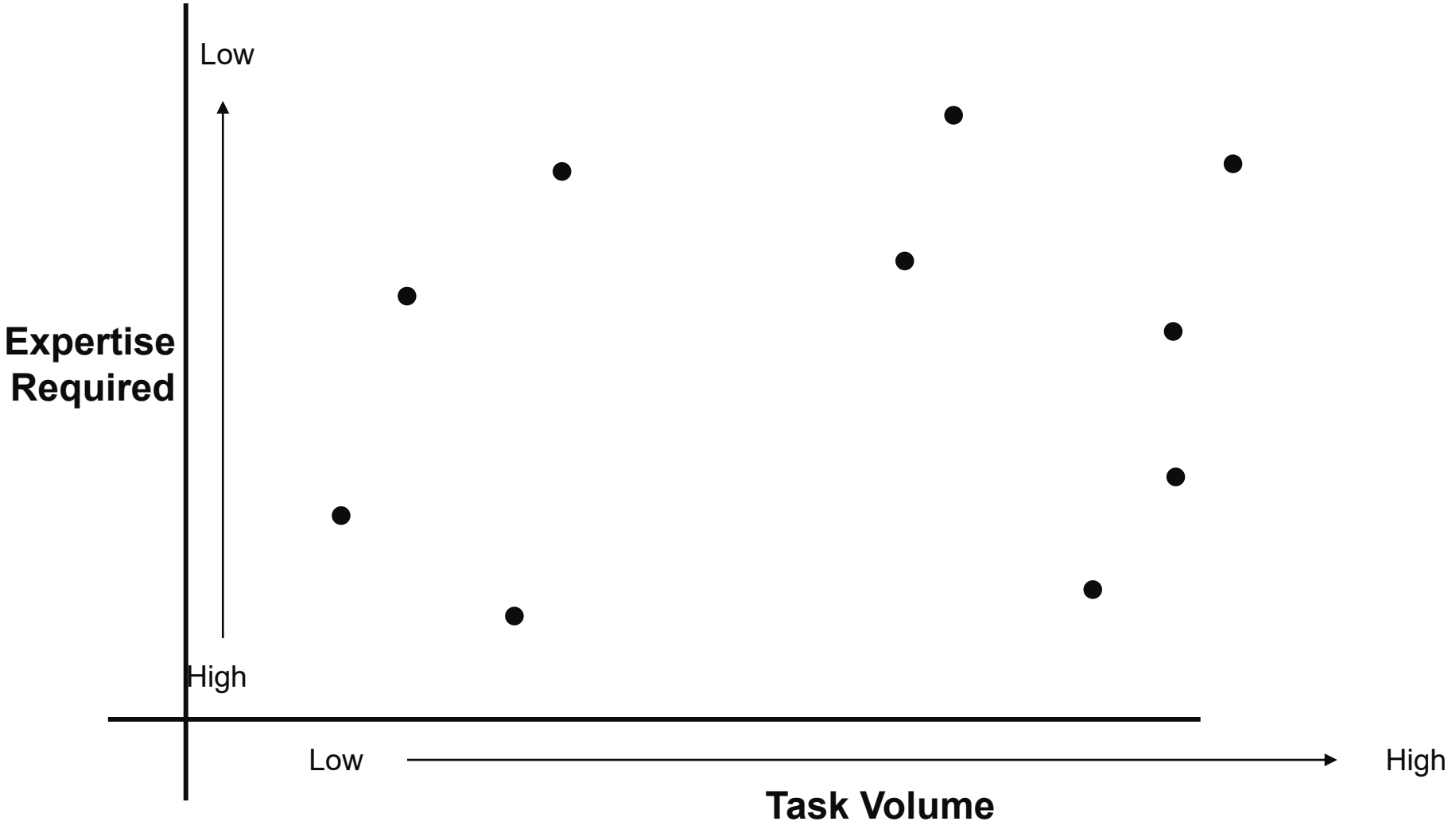

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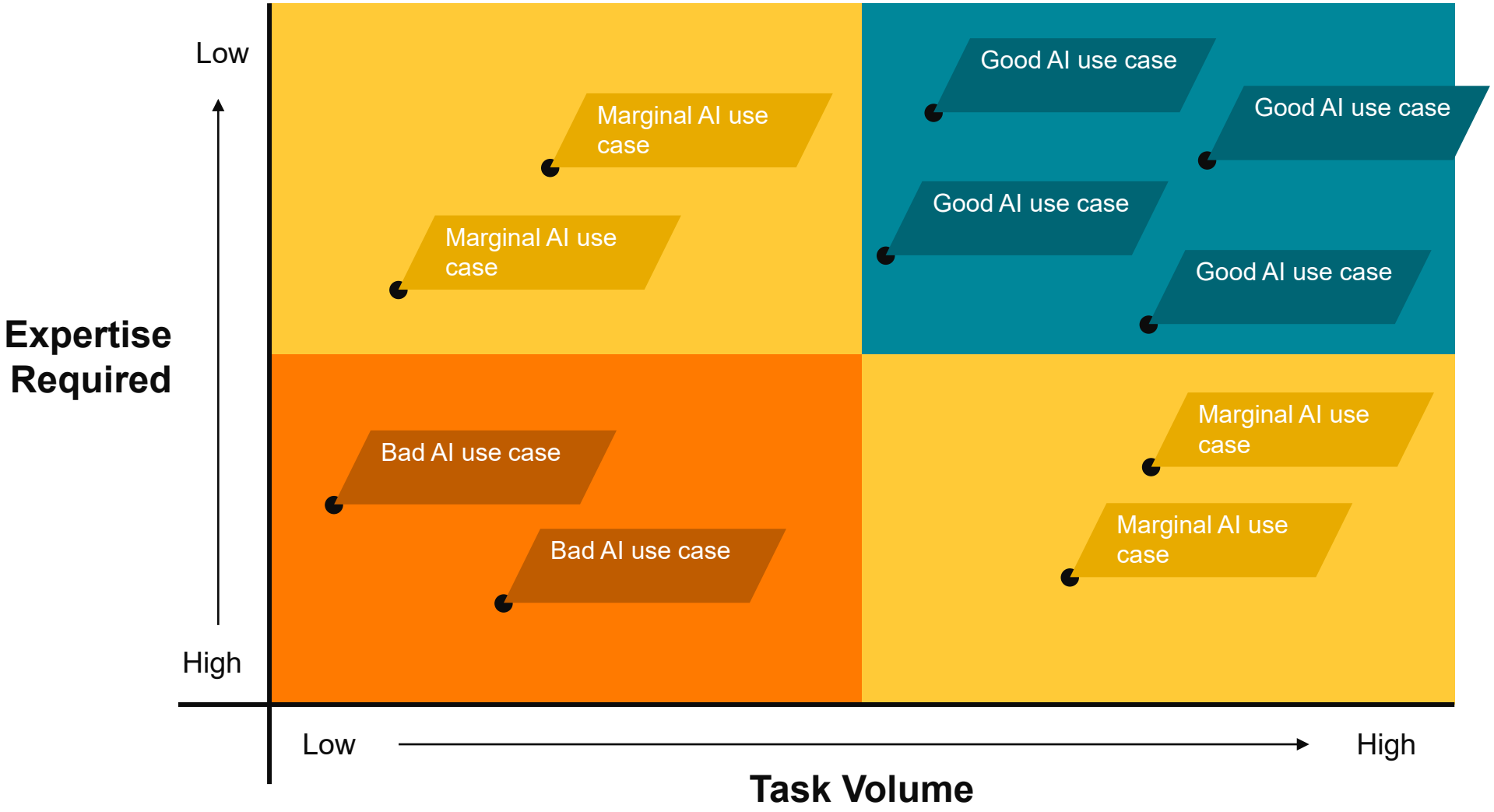

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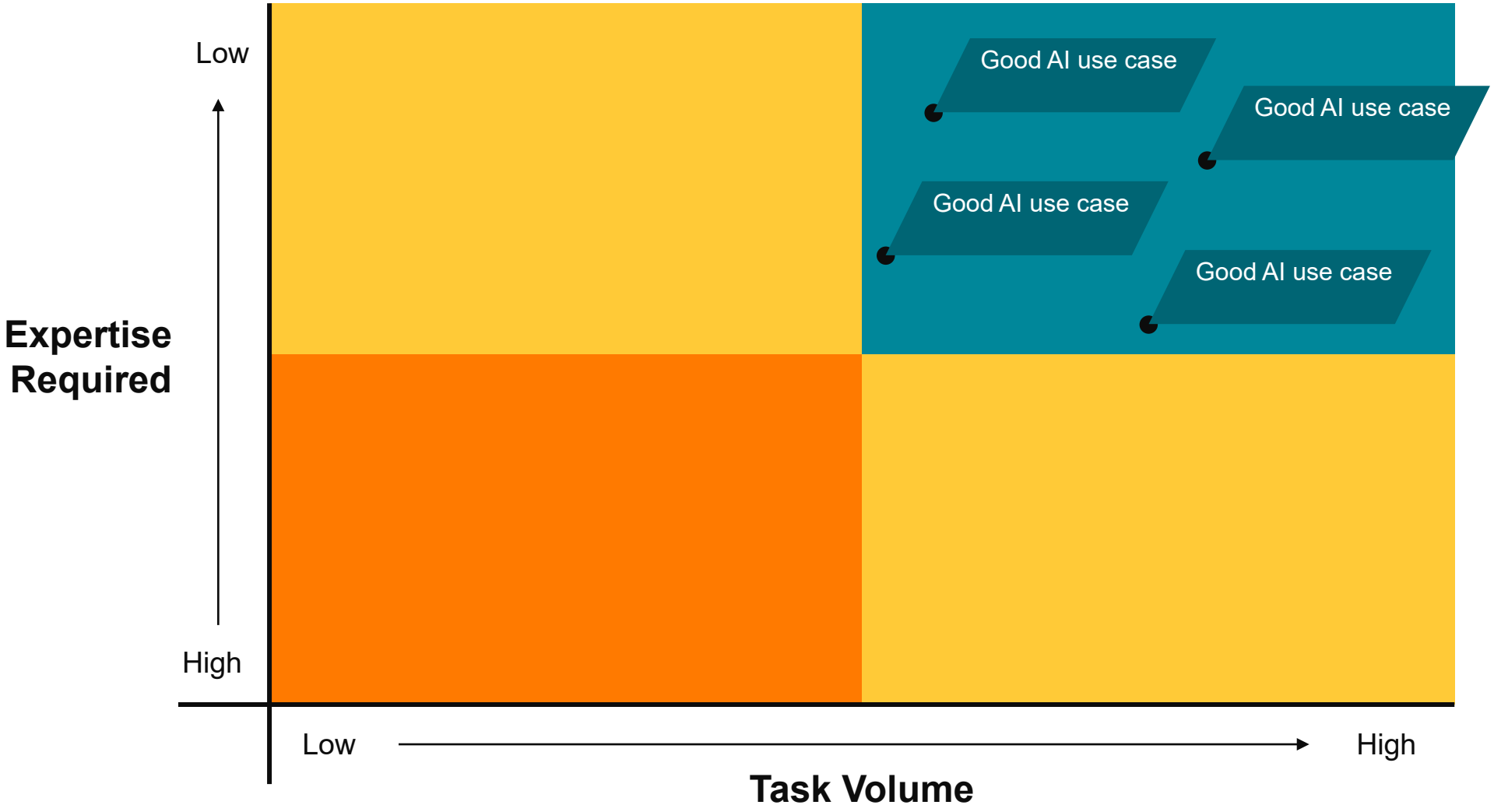

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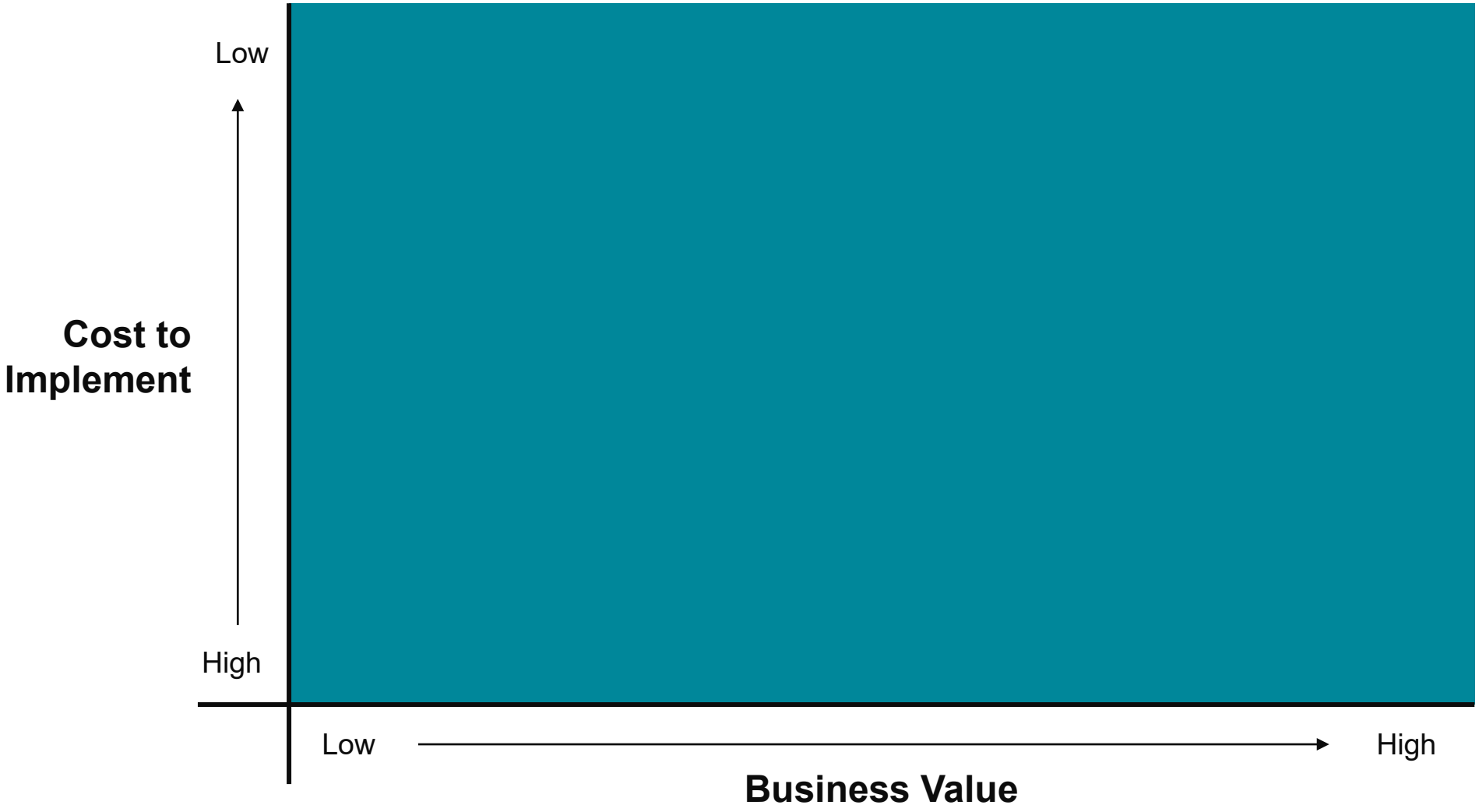

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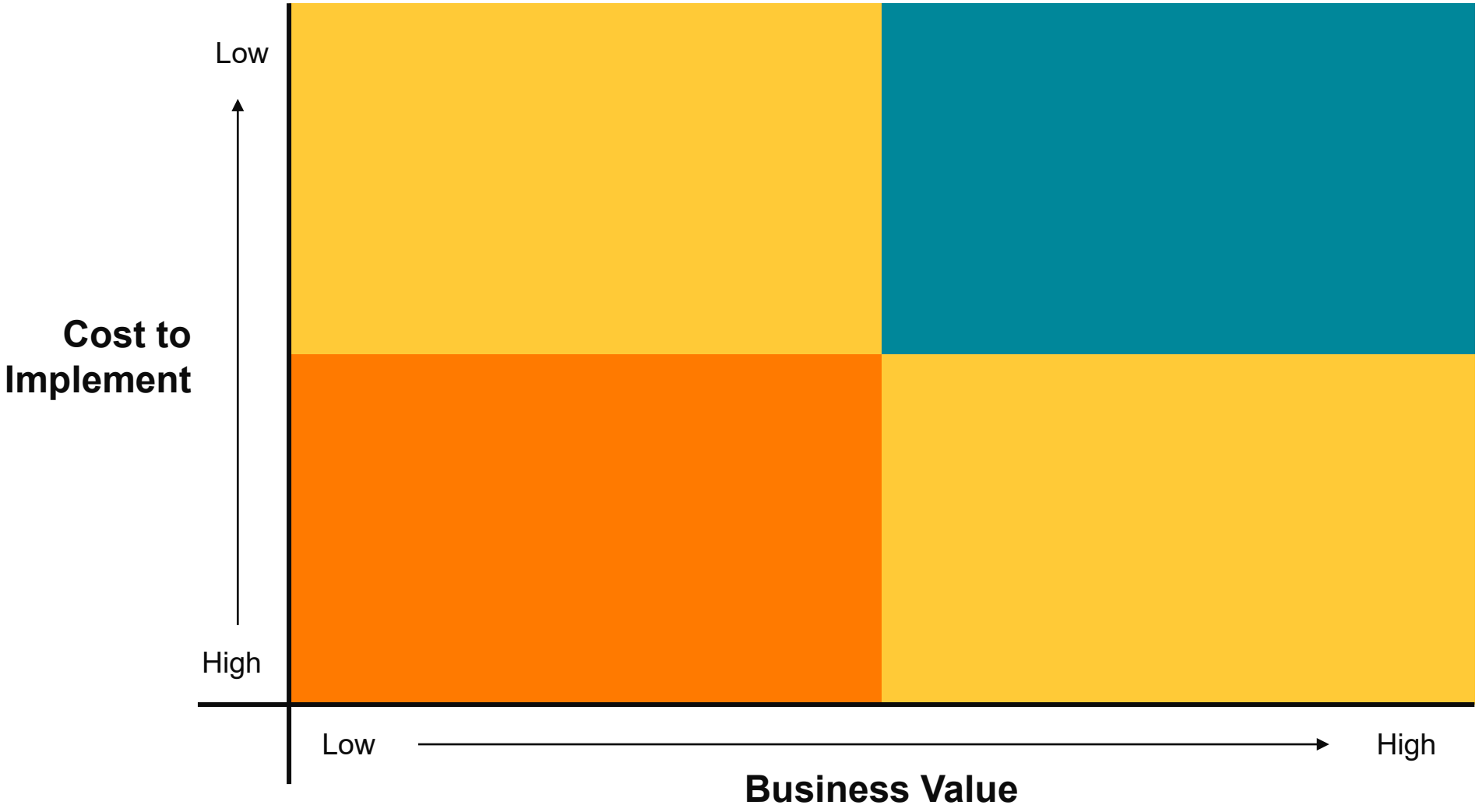

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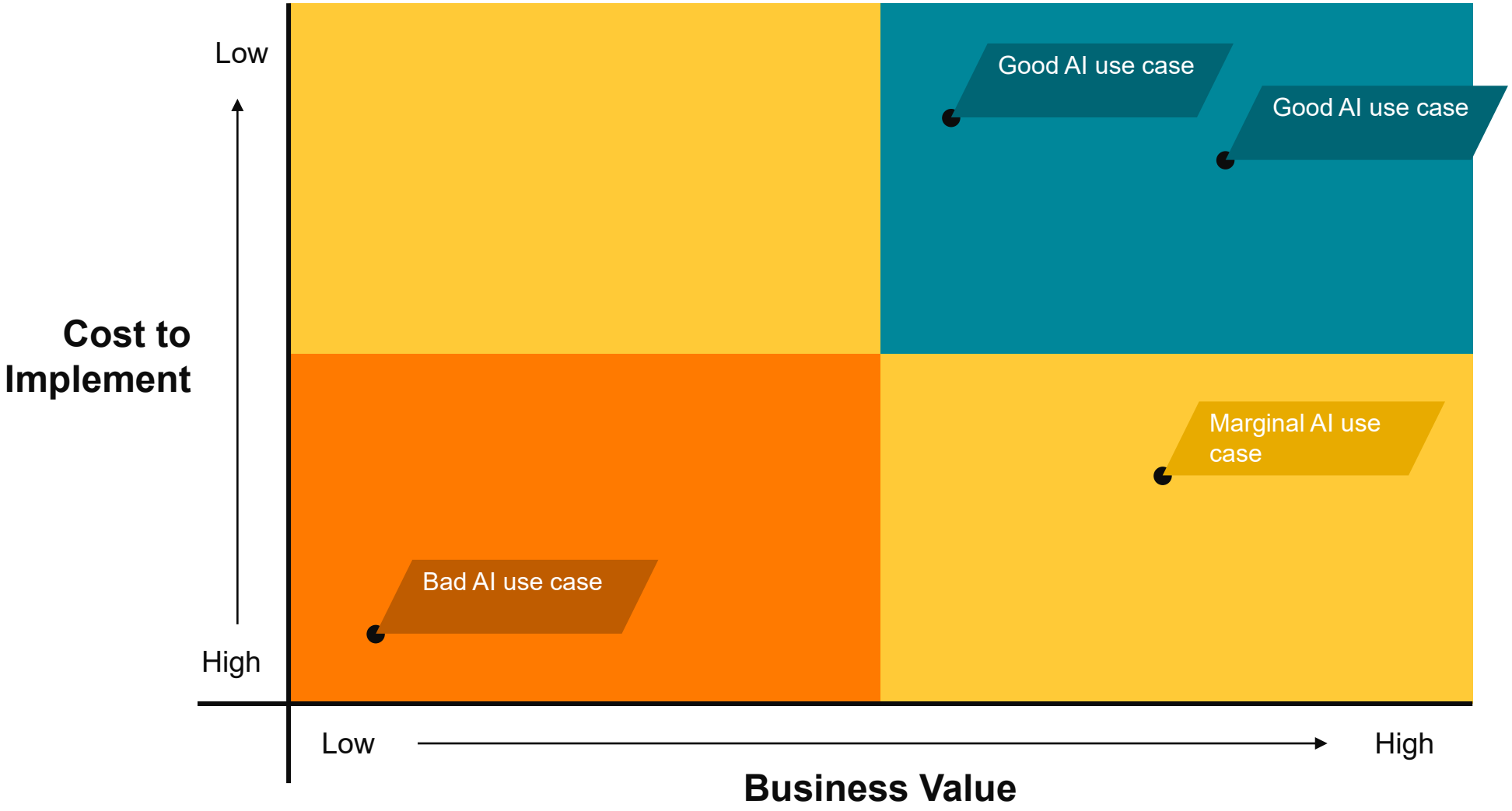

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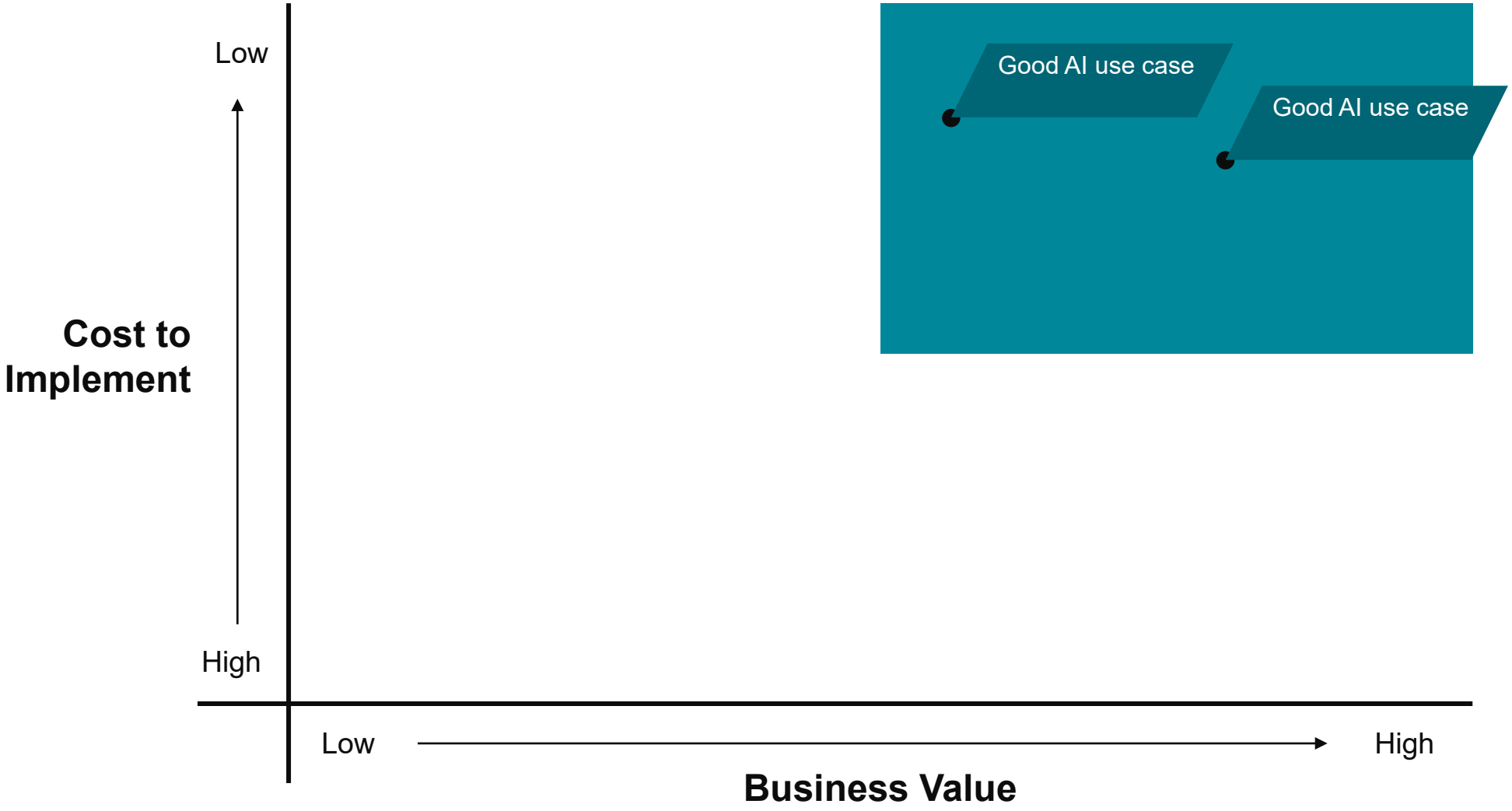

PRIORITIZING AI INITIATIVES

AI initiatives are as intense as any other business initiative of similar scale

- Process Leader
- Process Stakeholders / Users
- Process Outcome Requirements / Expectations
- Process Prerequisites
- Process Training, Testing, Validation
- Process Maintenance, Refinement

"Prioritizing" = Prioritizing in context versus every other activity that demands your business attention and efforts

PREPARE FOR YOUR AI PROJECT

1. Prepare and organize your data
2. Set a realistic goal, with tangible success metrics
3. Create a plan to manage it
4. Purposeful vendor selection