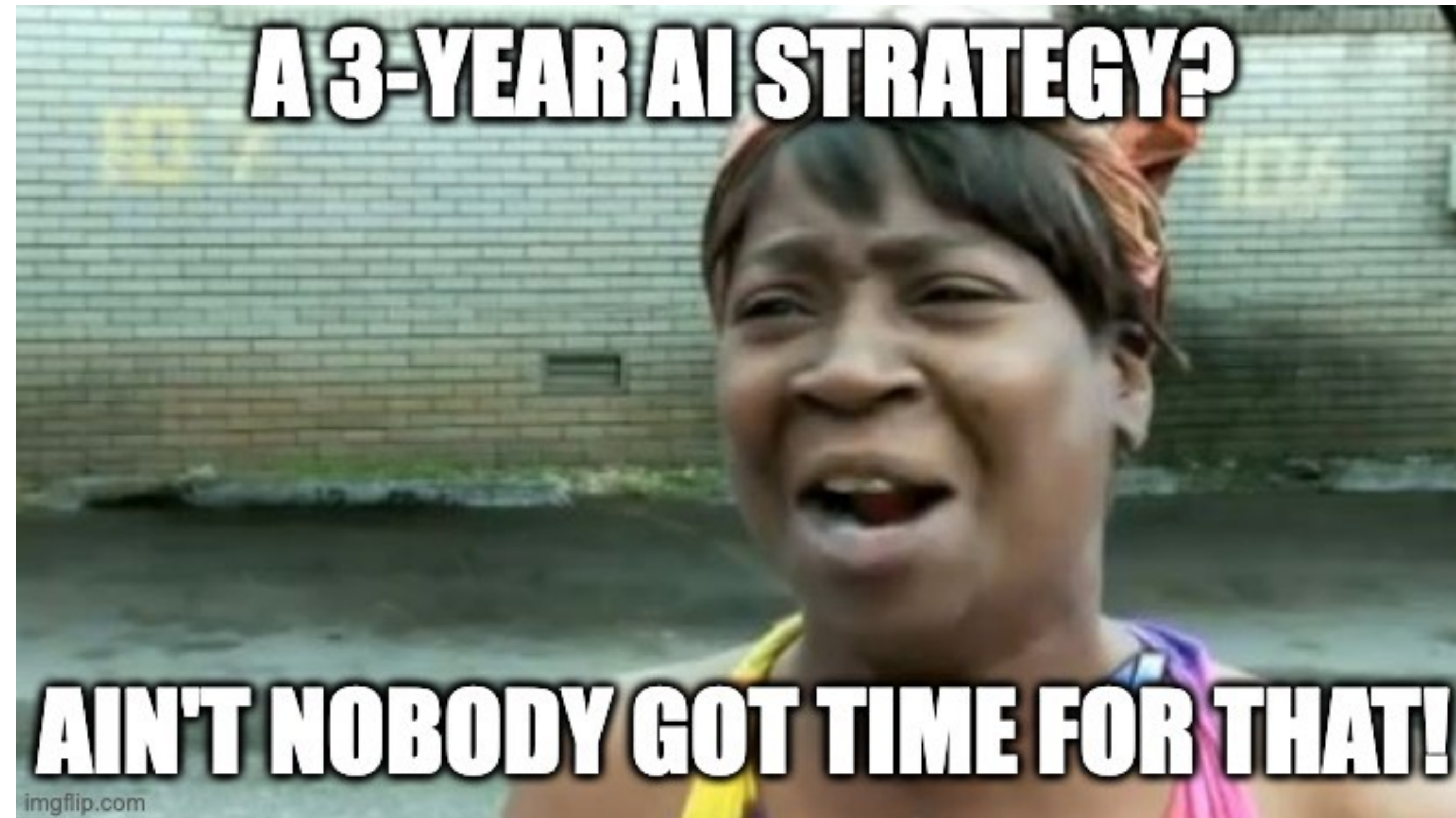


The Power of < Artificial Intelligence >

— Melio AI's Collaboration with TechTribe—

Apr 2023





Melio's Mission: Making AI Frictionless

by generating incremental value for business with AI



Merelda Wu

Co-founder & CEO @ Melio AI

Merelda's vision is to empower people to do more with AI. Her mission is to make AI frictionless by building a bridge between business, data science and engineering. Over the past 4 years, she:

- * Bootstrapped Melio to work with 20+ companies in 3 continents
- * Defined data & AI strategy for blue-chip companies and startups
- * Worked as a data scientist, ML engineer, product owner and CEO :)



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01 - Are you ready for AI?

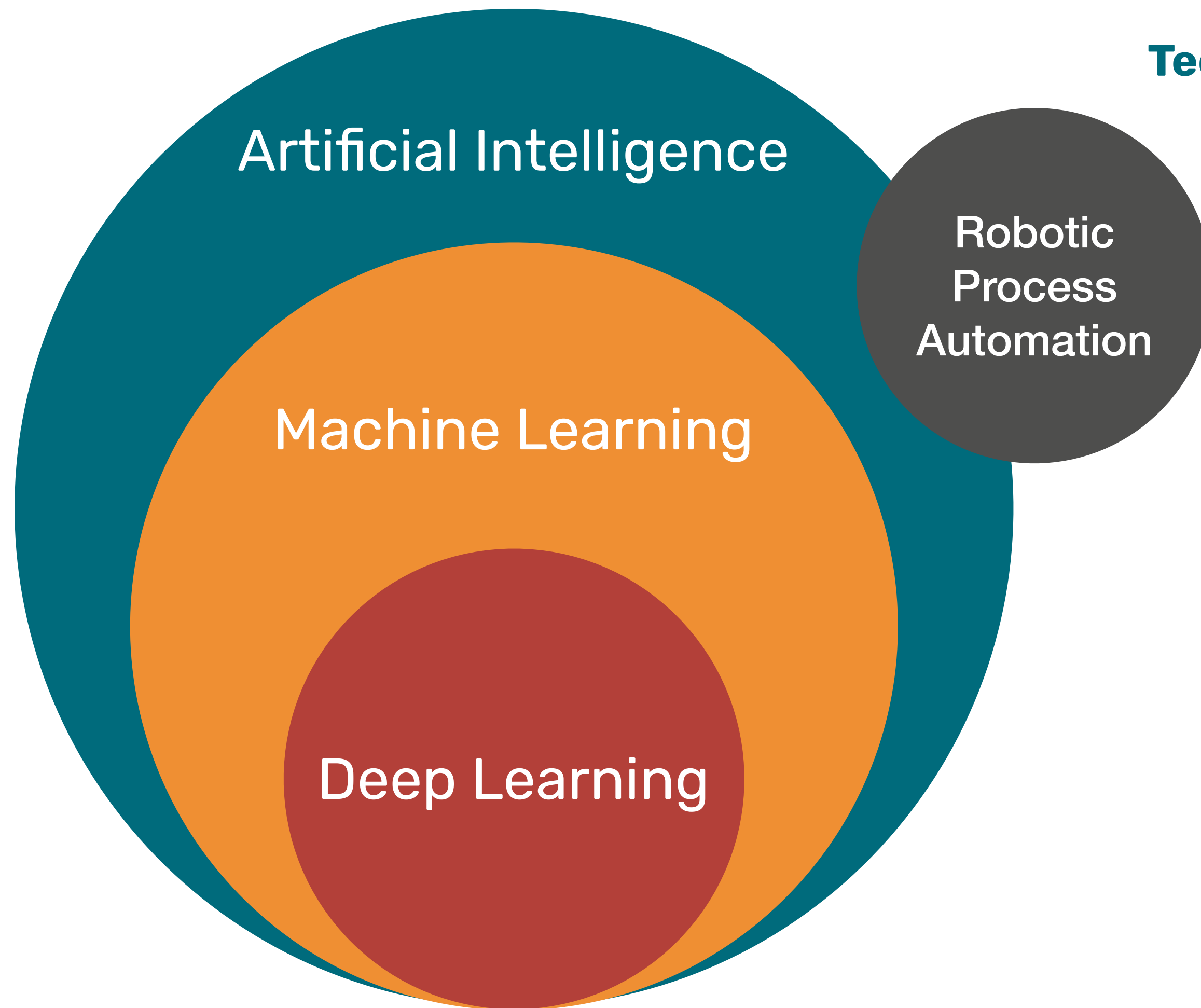


Join on [slido.com](https://www.slido.com)

#3118 077

Question 1: AI is only for businesses with very large datasets.

Answer: No, with recent developments of pre-trained AI, it is becoming more accessible for businesses



Techniques that don't need to have very large datasets

- Typically rules-engine, may or may not use AI
- May be easier & cheaper to start off with

- Decision Trees, random forests, etc.
- Predictive analytics, Recommender systems

- ChatGPT, DALL·E 2
- Generative Pre-trained Transformer // Generative AI
- Large Language Models & Foundational Models

Question 2: AI can solve all my business problems and produce tangible ROI.

Answer: No, AI is a very powerful tool but not without intentional & knowledgeable leadership

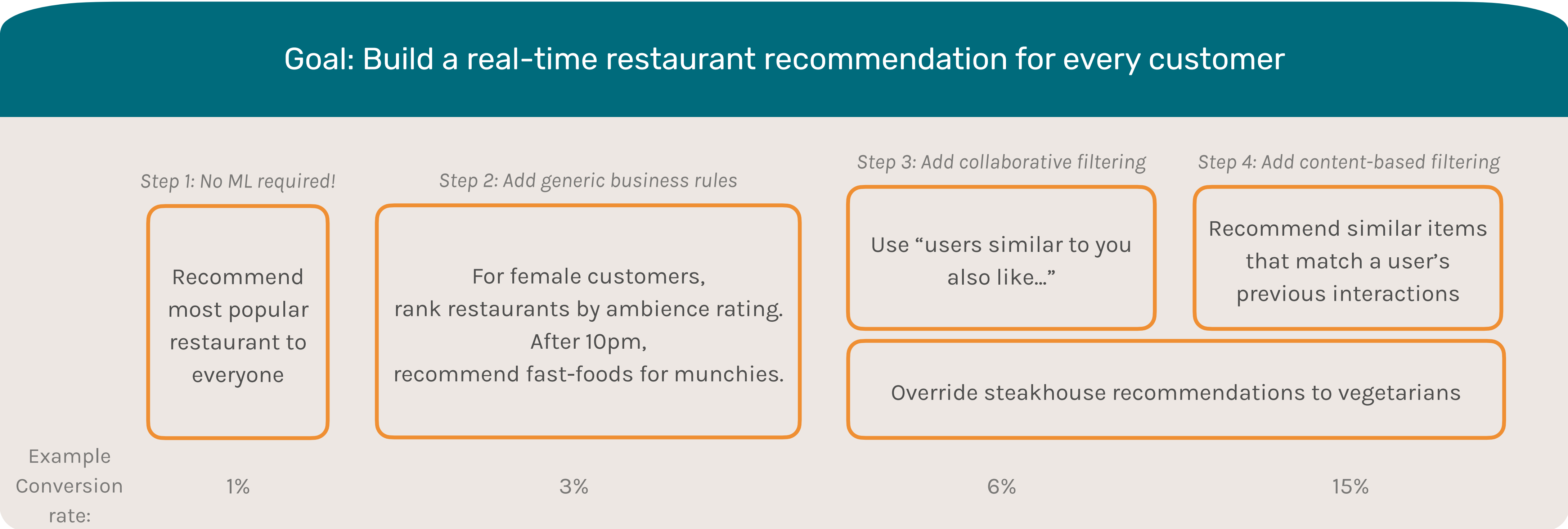


“ Maybe **1 out of 6** projects that was deployed for the past 3 years is actually being used. But nobody will say that out loud because too much money has gone into this. ”

———— Senior engineer, Group Data @ Big Company

Question 3: AI is one big system so the implementation is capital intensive.

Answer: No, AI is a collection of techniques and technologies that can be applied to solve a wide range of business problems. You can start small and later piece them into a bigger, more comprehensive system.



Starting with a rule-based system and gradually building up intelligence can be a cost-effective way to develop an AI.

Note: Only add complexity when you are ready to maintain it!!

As long as you are **willing**, thoughtful and intentional
about your **AI strategy**

you can get 40% more productivity and double the revenue

** a dubious statistic by ChatGPT, use at own risk*

Start Small.

02 - Common Challenges & Best Practices

What do **YOU** think?

Questions to assess the :

Business readiness
Data readiness
Integration readiness

Assign an
AI Maturity Level

Build an AI Strategy

Build an AI Roadmap

Melio's Data & AI Strategy Consulting

References from customers who have gone through our Data/AI Consulting



“Working with Melio has been a seamless, professional and rewarding experience. The industry of Carbon Credits generation is complicated and intricate, yet Melio met every expectation and deadline and went beyond the call of duty to deliver a quality project on budget & on time.”

Russell Holmes

Head of Data @ Climate Neutral Group

A Dutch-based carbon managing and offsetting company

Data & AI Strategy Consulting

4 weeks fixed cost, including:

- 2 Workshops
- Business, Data & Technology readiness assessment
- Data and AI strategy
 - AWS well-architected review (data / ML)
 - (Re-) architect data / ML architecture
 - Technology roadmap aligned to product roadmap
 - Skills assessment / hiring plan (if required)



“ Your team is incredible! The sessions felt like a lighthouse, shining a significant life on our roadmap and our future. We enjoyed that it's business & product-focused. You guys did a great job!”

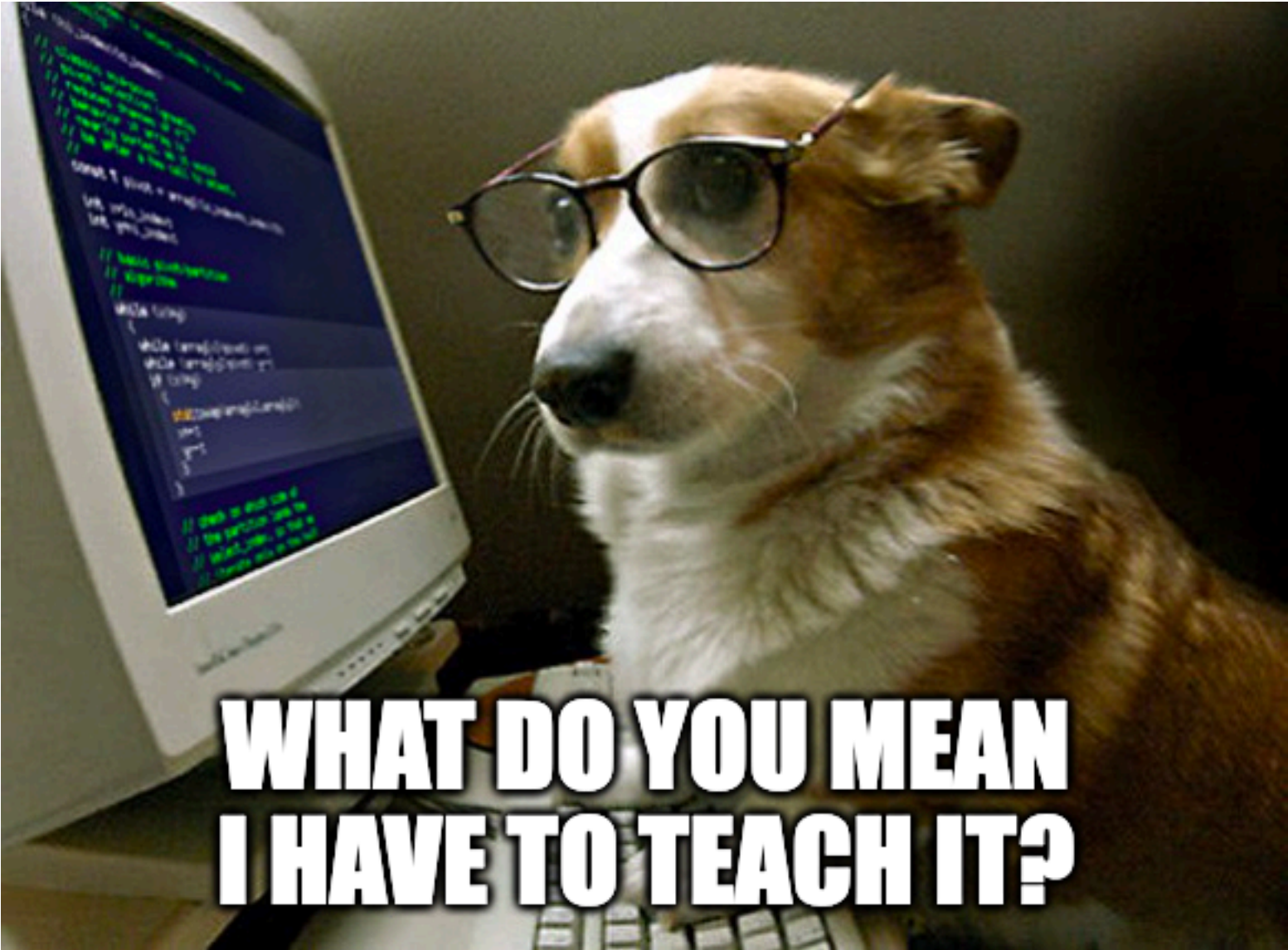
Kgololo Lekoma

Co-founder @ Credipple

Find trusted creative and digital services on Credipple!

Challenge 1: What can AI do for me?

Until we have AGI, you will have to be the one in the driver-seat.



To assess **Business Readiness** ask:

What do I want AI to do for me?
Make it a SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goal

Example: Increase the conversion rate of our e-commerce platform by 15% in 6 months

- Do you know what your current conversion rate is?
- Can you track the conversion rate week-on-week?

Do I have the time and money to support an AI use case?
Conduct a cost-benefit analysis.

Example: 15% increase of conversion rate -> R500k, AI costs R200k = R300k profit!

- Cost: salary and technology cost on building and integrating the AI + ongoing maintenance cost
- How much does your revenue, conversion rate, customer satisfaction, etc. have to increase?

Challenge 2: Do I have the right data to start?

Having a lot of data does not mean they are the right data...



To assess **Data Readiness** ask:

Can I easily search the data to find answers to my hypothesis?

Example 1: You dig around spreadsheet & maybe get an answer?

- You might have the right data, but not ready with AI

Example 2: You have a data warehouse and business reporting

- You are way more than ready for AI, what are you waiting for!

Can I do these in a repeated, automated fashion?

Will I know if the AI product is performing better than human?

Example 1: You have the ground truth (labelled data)

For sales forecasting, you will know at the next time interval how accurate your forecast has been.

Example 2: You have a way to measure the KPI reliably

For recommendation engines, you will know by measuring a “proxy” such as CTR (but CTRs are bad, Conversion Rates are better)

Challenge 3: How do I integrate with the rest of my stuff?

If you have a data-person(s), ask them. If not, go no-code.



To assess **Integration Readiness** ask:

Anything can (mostly) technically be integrated, but the use cases vary too much to be able to summarise effectively. Instead, use current skills in the company as a proxy:

Is my application built by software developers/engineers?

If **yes**, your developers/engineers should be able to answer “**how** to integrate X into our current system”
Engineers typically use APIs to integrate systems

Do I have a data analysts / BI / data scientists in my team?

If **yes**, your data person should be able to answer “**where** to integrate X into our current system”
Data scientists typically use SDKs to interact with an API

If **no**, your application is not built by software developers, then you probably don't need to build any AI in your startup (yet). If you find a really good use case for AI, then your choices of integration should be limited to using no-code / low-code tools.

Tech-savvy product managers can use Zapier to automate workflows

What is Your Ambition?

A strategy must be responsive to innovation and guided by your ambition



* ChatGPT said it's by Sam Altman, use at own risk

To assess **Ambition** ask:

Do (can) you collect data to drive competitive advantage & build IP?

Example 1: You collect data to automate industry experts

- The “data + logic” that the industry experts use to do certain tasks

Example 2: You collect and organise data in a unique way

- Weather + carbon emission measurement in remote areas

Are you prepared to leverage your data as a strategic asset?

Example 1: You have intention of building & growing a data function

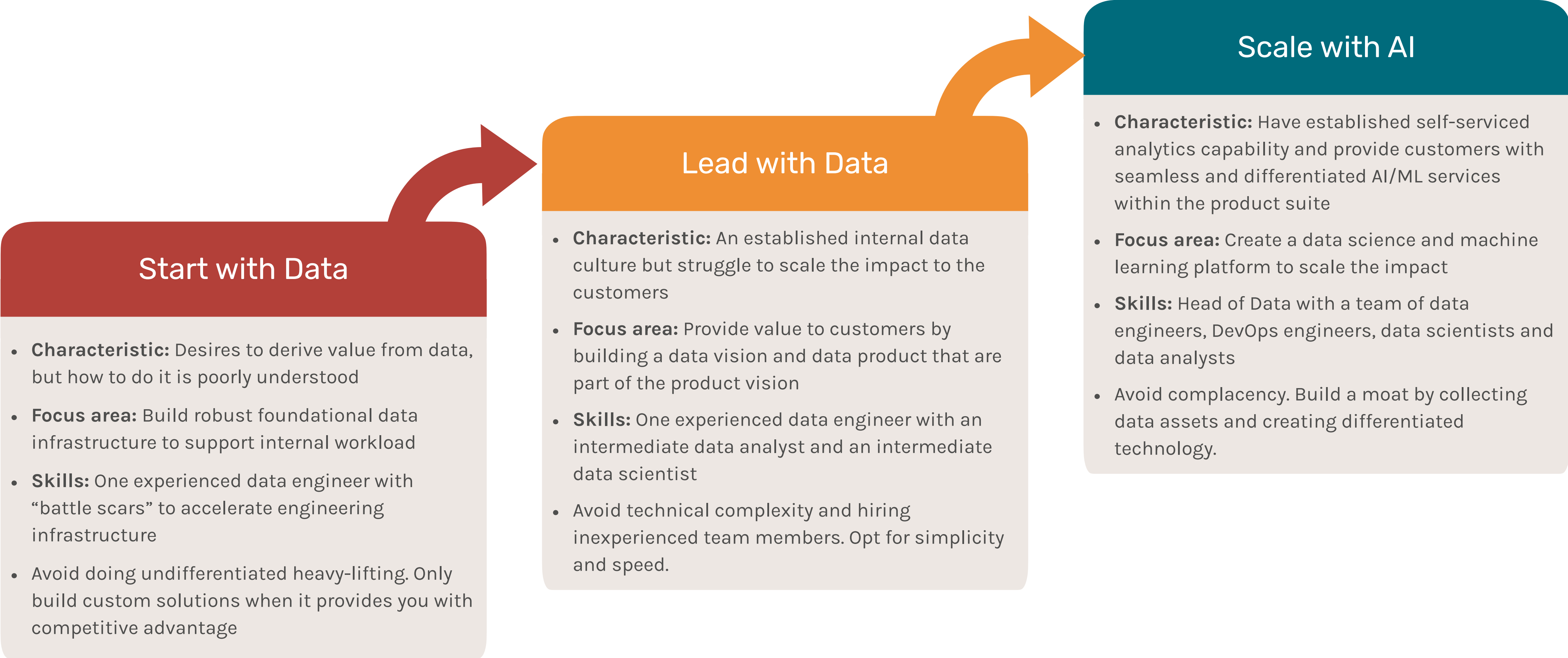
- In at least the next 6 - 12 months

Example 2: You have intention on investing in data infrastructure

- In the next 3 months

Data and AI as a Journey

View your data & AI strategy as a journey: build your platform today for your users of tomorrow





03 - Case Studies





CASE STUDY

Improve sales forecasting to better predict demand and optimise inventory management

Industry E-Commerce

Company Size 1 - 10 employees

Mission / Ambition

Become the most well-known and customer obsessed health foods E-Commerce site in Southern Africa

Business Readiness

- Defined a clear & measurable outcome
- Benefit derived will be greater than cost

Data Readiness

- Can easily pull data out for analysis
- Can compare human vs. AI performance
- Can automate the analysis of data

Integration Readiness

- Software engineer has capability to integrate use case with current stack
- Data scientist has capability to use / build AI solutions

AI Readiness

Level 1

Two of the readiness assessment scores low. Organisation should focus on business fundamentals for now.

BUSINESS OBJECTIVE

EasyHealth Pty Ltd. relies on manual forecasting methods that are time-consuming and often inaccurate. They want to adopt an AI-based solution to provide accurate sales forecasts and help them make data-driven decisions. The owner can save time on building manual forecasts and focus on growing the business.

Measurable Result



Improve forecasting accuracy by 30%, saved **R 5,000** pm due to overstocking/stock-outs





Industry E-Commerce

Company Size 11 - 50 employees

Mission / Ambition

Become the most well-known and customer obsessed health foods E-Commerce site in Southern Africa



No-code / Low-code Recommendations

Tradeoff considerations: Speed vs. Flexibility vs. Tech Debt



No-code Guru

<https://www.nocode-guru.co/>

A free chatbot to help you find the right no-code tool to start building your business idea

- Use at Maturity Level 0

THERE'S AN AI FOR THAT

<https://theresanaiforthat.com/>

A free search tool to help you find the right AI-powered tool

1. <https://alexvnotes.notion.site/AI-Tool-Kits-eec176f96a83466280643c44e2e0e305>
2. <https://boardofinnovation.notion.site/boardofinnovation/AI-Tools-for-Innovators-7a80ab30bcfd4a15846436aa347d5af2>

- Use at Maturity Level 1+
- Cool productivity tools: Beautiful.ai , Copy.ai , Grammarly





Obviously AI

<https://www.obviously.ai/>

A free chatbot to help you find the right no-code tool to start building your business idea

- Use at Maturity Level 1.5 - 2
- As all AutoML tools (i.e. AWS SageMaker, Google AutoML) all need basic knowledge of ML to build anything worthwhile

< Code-first AI >

- Open AI 
- HuggingFace 
- Foundational: tensorflow/pytorch

- Use at Maturity Level 2.5+



CASE STUDY

Provide timely and accurate responses to customer queries and reduce the workload on their customer support team

Industry E-Commerce

Company Size 11 - 50 employees

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Become the most well-known and customer obsessed health foods E-Commerce site in Southern Africa

Business Readiness

Defined a clear & measurable outcome

Benefit derived will be greater than cost

Data Readiness

Can easily pull data out for analysis

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Can automate the analysis of data

Integration Readiness

Software engineer has capability to integrate use case with current stack

Data scientist has capability to use / build AI solutions

AI Readiness

Level 2

Lead with data: focus on curating data & building good data infrastructure. Use AI tools that are extensible for the future.

BUSINESS OBJECTIVE

EasyHealth Pty Ltd. has grown and were struggling to handle the volume of queries and providing incorrect answers to their customers. Because of this, they were getting negative reviews on social media and were losing customers. They want to use a no-code platform to create a chatbot to handle customer queries.

Measurable Result



Improve average time per request by **60%** per support staff and saved R 25,000 pm

Phases	Business Validation 2 weeks	Technical Validation 6 weeks	Deploy MVP 8 weeks
Data	Data for cost-benefit analysis, such as how many messages per day, average time per request, customer satisfaction score. etc.	Use only the the most popular channel from customer support, i.e. email to sales@easyhealth.co.za	* May extend the chatbot to use data from other channels, i.e. twitter
Technology	Spreadsheet and BI dashboard	No-/Low-code platform to create chatbot that can be easily integrated to the E-Commerce platform	Integrate the chatbot to the E-Commerce platform
Skills	Product owner conducting cost-benefit analysis	Software developer, product owner and customer support to work together	Software developer & team to continuously monitor chatbot's performance & tweak if necessary
Description	<ol style="list-style-type: none"> Analyse how much time and hence cost is spent on customer support Define how much reduction of time & cost needs to be achieved for POC to make business sense 	<ol style="list-style-type: none"> Software developer export existing customer email data Test the response extensively If the response beats the benchmark defined by business, integrate with own website 	<ol style="list-style-type: none"> Integrate the chatbot to the website Build in option to transfer to human agent when necessary Build in dashboard to monitor the chatbot's performance

Note:
Be sure to build it in a modular way so you can extend it in the future



Industry E-Commerce

Company Size 51 - 200 employees

Mission / Ambition

Become the most well-known and customer obsessed health foods E-Commerce site in Southern Africa





CASE STUDY

Improve customer engagement by generating personalised recommendations based on each customer's browsing and purchase history

Industry E-Commerce
Company Size 51 - 200 employees

Mission / Ambition

Become the most well-known and customer obsessed health foods E-Commerce site in Southern Africa

Business Readiness

- Defined a clear & measurable outcome
- Benefit derived will be greater than cost

Data Readiness

- Can easily pull data out for analysis
- Can compare human vs. AI performance
- Can automate the analysis of data

Integration Readiness

- Software engineer has capability to integrate use case with current stack
- Data scientist has capability to use / build AI solutions

AI Readiness

Level 3

Scale with data: focus on building differentiated AI-products to support the holistic product vision and win against competition.

BUSINESS OBJECTIVE

EasyHealth Pty Ltd. has received some funding and is in an aggressive growth stage. They want to increase market share by offering personalised product recommendation to each customer. They decides to build an AI-powered recommendation engine based on the customer's browsing & purchase history.

Measurable Result

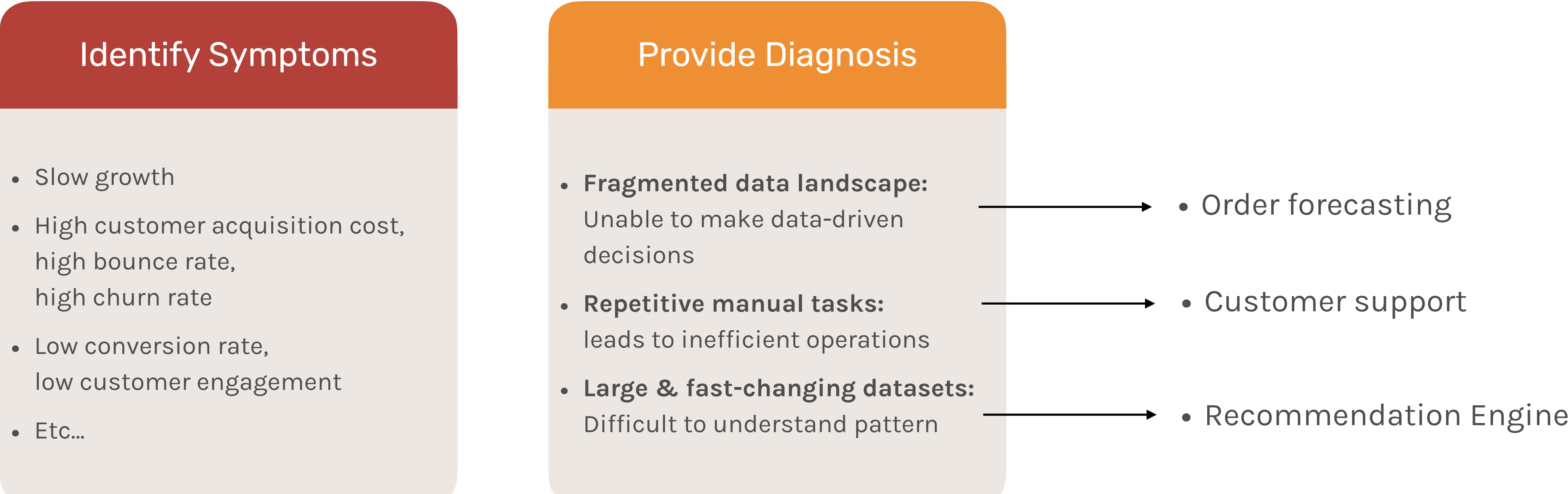


Improve conversion rate by 20% and increased average order value by **R 800**, which equates to R 2,400,000 pm

Phases	Business Validation 2 weeks	Technical Validation 4 weeks	Deploy MVP 6 weeks
Data	Aggregated analysis of customer's purchase history	Limit to use one data source, i.e. customer's purchase history	* May extend the recommendation engine to use more data sources, i.e. customer browsing history
Technology	Data analysis tools (python) Data visualisation tools (Tableau)	Open AI's embeddings API	<ul style="list-style-type: none"> Open AI's embeddings API A host of software engineering tools required for integration
Skills	Data analysis with product owner's guidance	Data science / machine learning with product owner's guidance	<ul style="list-style-type: none"> Machine learning engineering Software engineering & DevOps
Description	Identify the current baseline based on some KPIs, i.e. Click-through-rate, Conversion rate, Average order value, Bounce rate, etc.	<ol style="list-style-type: none"> Test whether the product recommendations generated is reasonably good Conduct a cost-benefit analysis of using the API or build own model 	<ol style="list-style-type: none"> Deploy recommendation engine API Deploy backend service to use the recommendation API Deploy frontend to call the backend Measure KPIs and iterate

How to select use cases?

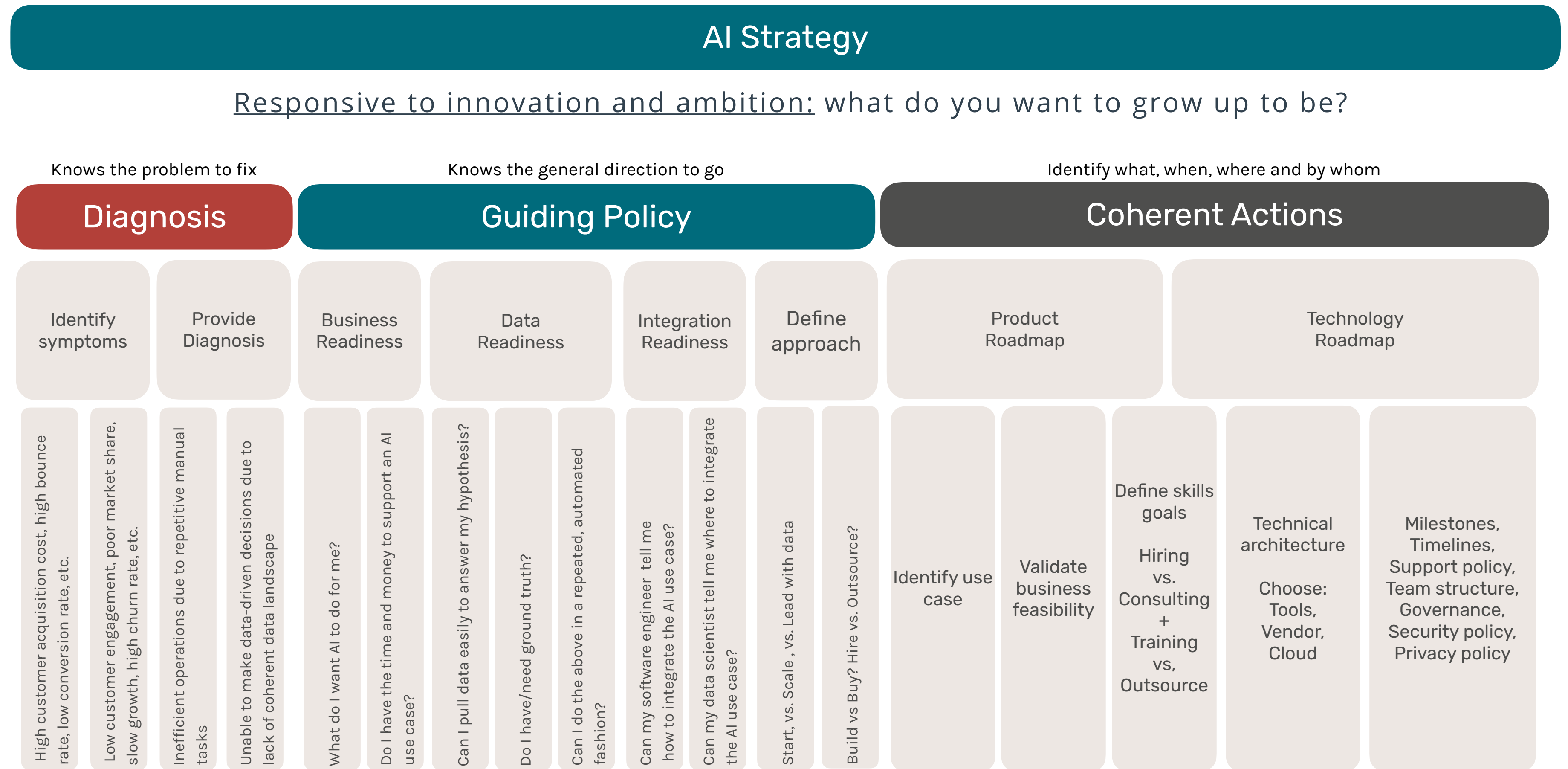
Select common AI use cases based on your symptoms & diagnosis



04 - AI Framework Summary

Framework to roll your own AI Strategy

AI can be simple and cost-effective to start, but there are some prerequisites to make it successful



Advice before starting your next AI project

Research for existing tool, conduct business & technical Validation (with experts) before building anything

Cost-benefit analysis

- Will the investment generate revenue or **differentiate** your business in a way that gains real market share?
- **Do it manually** twice before automating it

No/Low-code & Existing Tech

- Opt for **speed** & avoid technical debt when possible
- Select flexible and **extensible** no-code tools

Build POCs

- Make sure it's **technically feasible** and you have data to support it before investing in more time / capital
- Invest in your **data stack**
- **Start small, without AI**

Consult Experts

- Hire **seniors** before hiring juniors
- Hire data / software **engineers** before data scientists
- Consult experts before incurring technical debt
- Work with a **technology partner** to train your internal team to keep cost down & quality high

As long as you are **willing**, thoughtful and **intentional**
about your **AI strategy**

you can get 40% more productivity and double the revenue

** a dubious statistic by ChatGPT, use at own risk*

Treat it as a Journey.
Start Small.

THANK **Y**OU!

We look forward to working with you



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