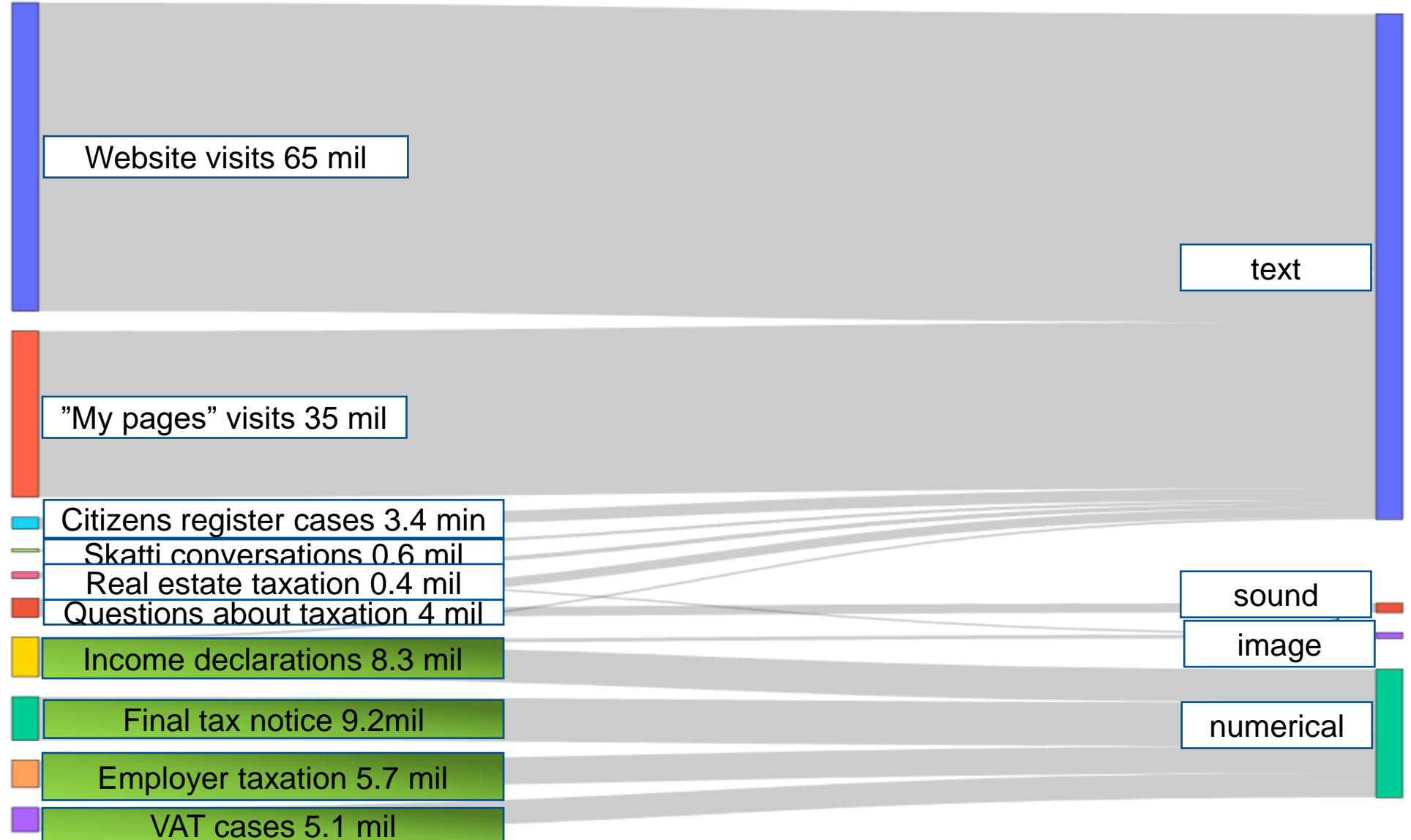


# Use of AI to create written responses to queries –

Gintare Grigonyte

# One year at Swedish Tax authority: major customer interactions and their modalities



# AI transformation



**-2016**  
Data analytics  
digitalisation

**2017-2023**  
ML AI  
applications

**2024**  
Gen AI POCs

**2025**  
Gen AI BC

**2026-**  
New  
applications &  
Scale up

# Business Cases

Total monetary value:  
115 000 000 – 400 000 000 kr  
+ other values

Enabler Epic  
**Capability for LLMs**



Total cost estimate:  
25 480 000 SEK

Business EPIC  
**CoPilot developer**



Business EPIC  
**Crime investigation  
support GPT**



Business EPIC  
**Tax email reply  
suggestions**



145 000 – 553 000 hours

# Swedish Tax Agency's Customer Service



	2022	2023	2024
Answered phone calls to the Tax Information Service	2 870 438	2 749 410	2 617 695



	2022	2023	2024
Answered email inquiries to the Tax Information Service	544 659	537 038	557 664



	2022	2023	2024
Website visits at skatteverket.se	64 355 562	65 443 521	62 285 438



	2022	2023	2024
Skatti conversations	466 741	584 021	577 947

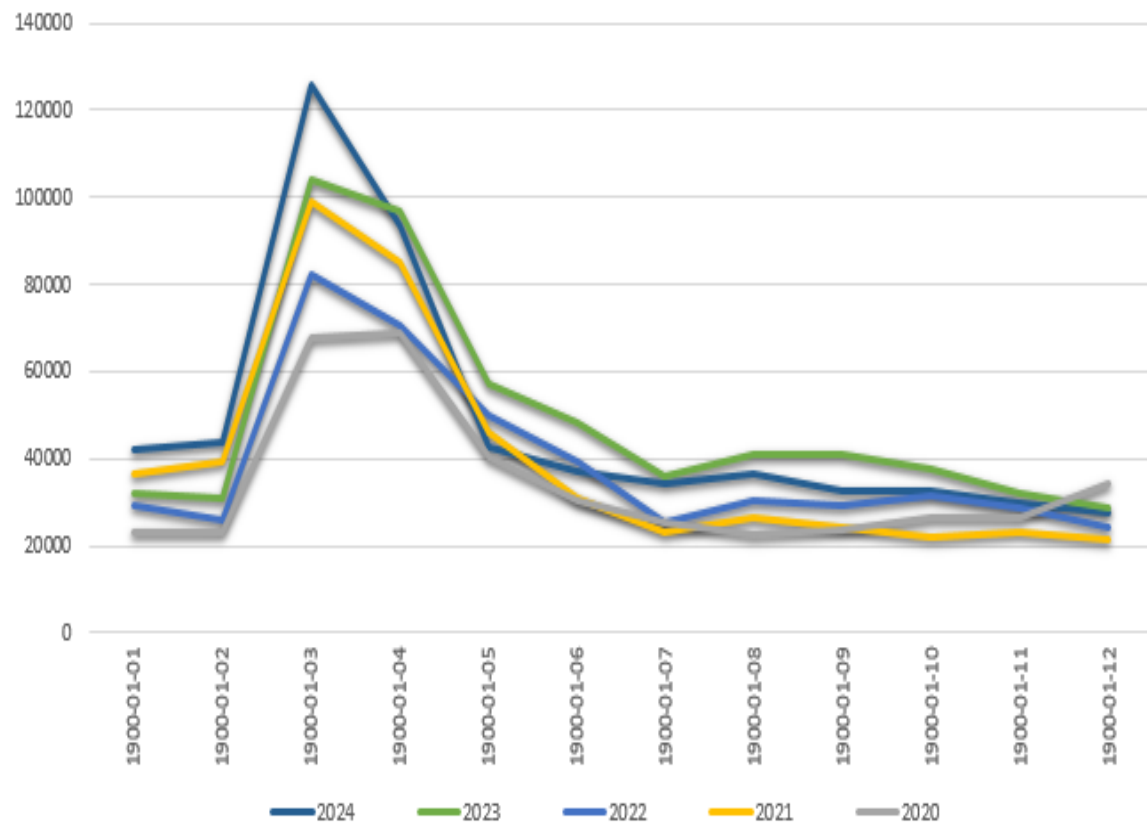


# NLP chatbott conversations

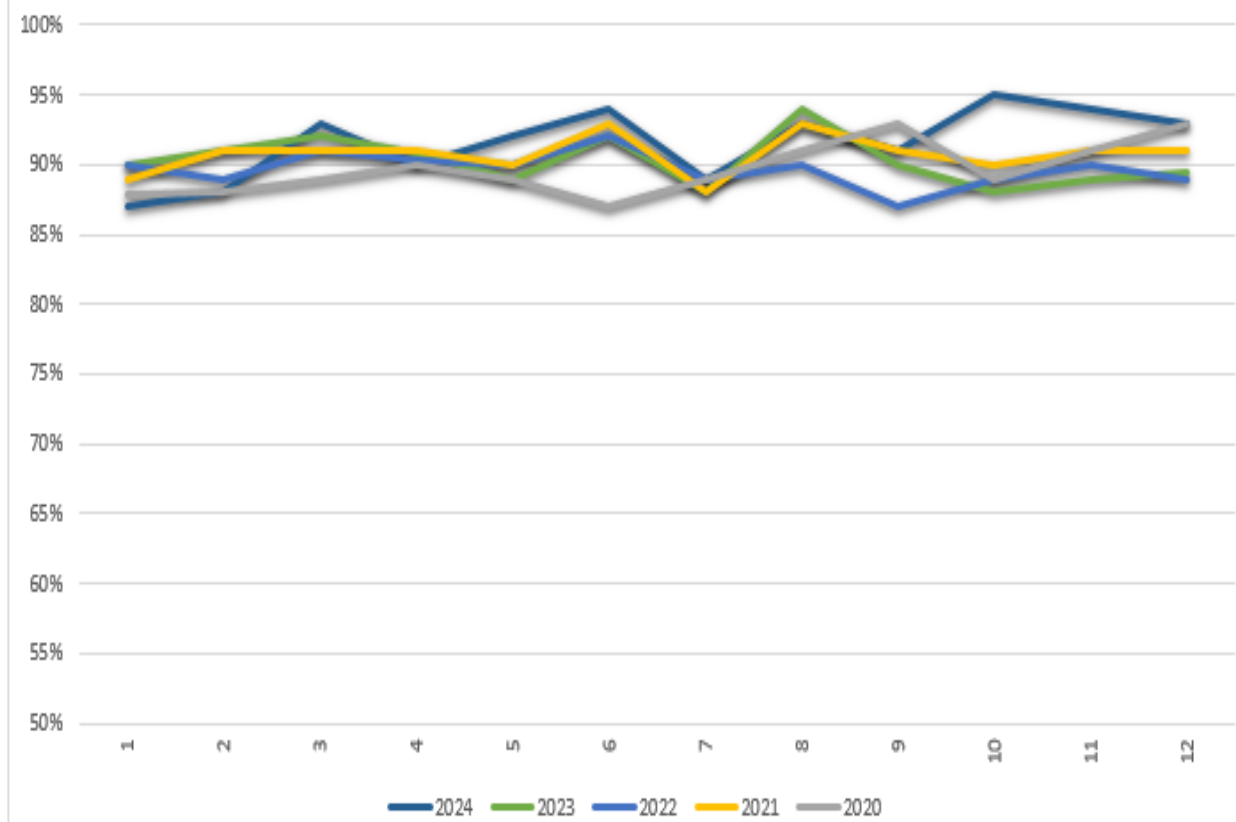
2017-2023

ML AI  
applications

Antal konversationer



Procent korrekt svar



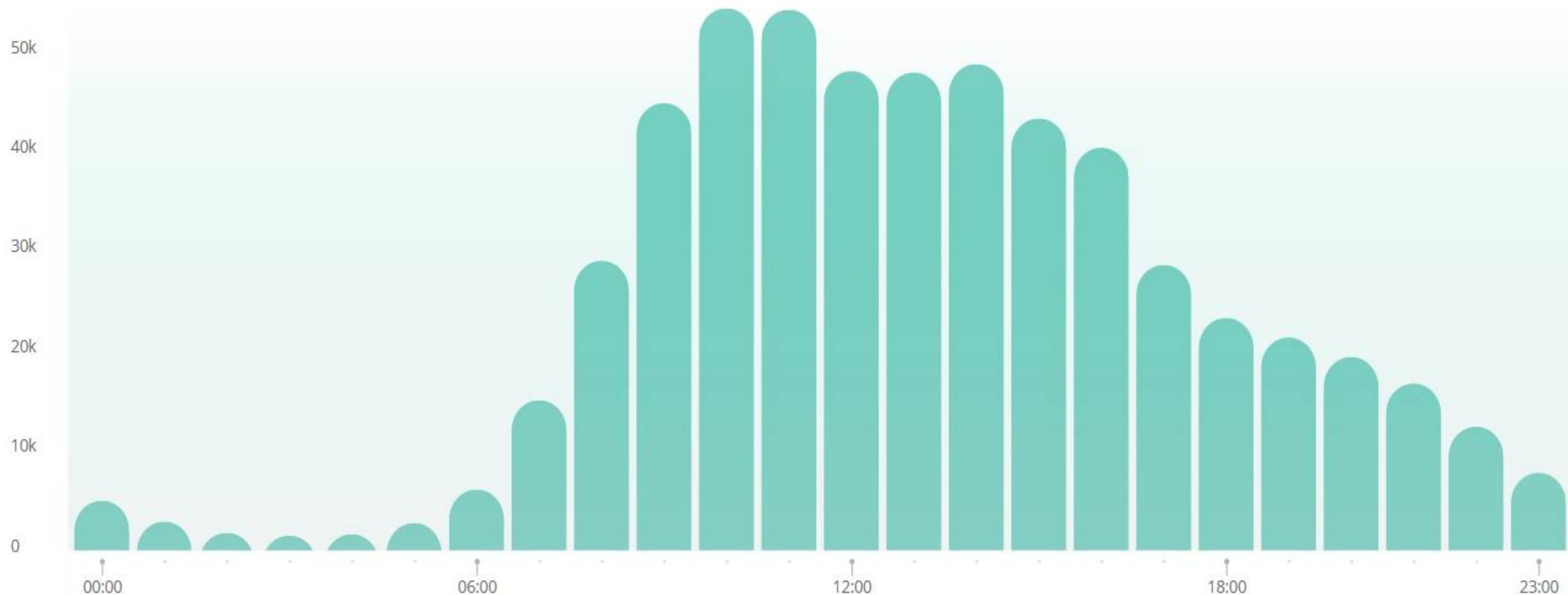




# Service outside opening hours

2017-2023

ML AI  
applications

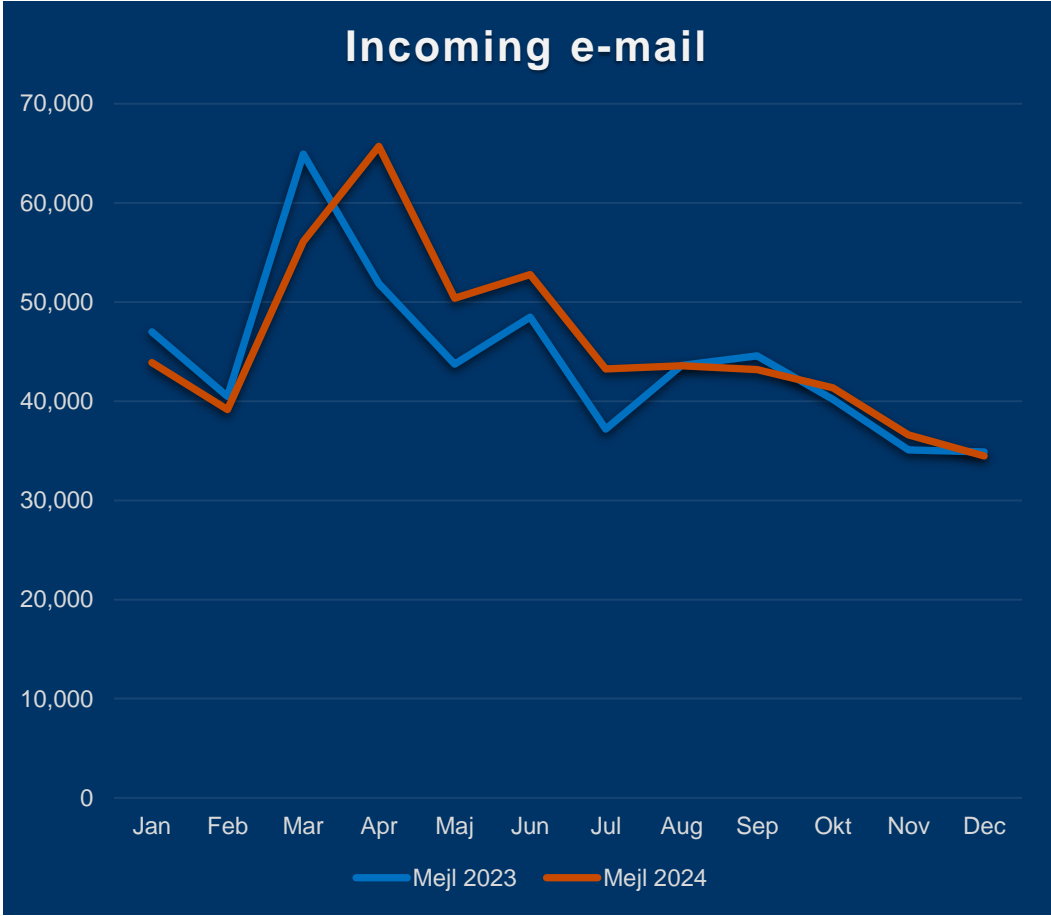
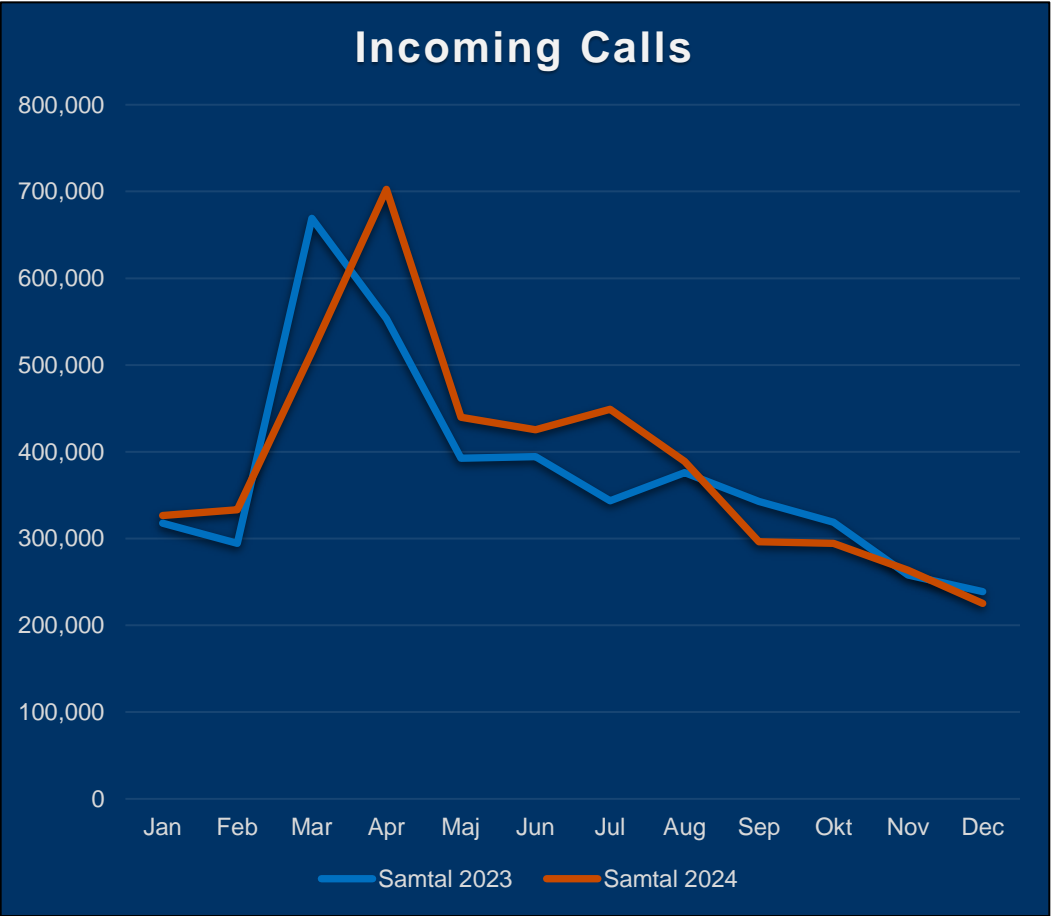




# Demand for Service



2024  
Gen AI POCs







## 4 mil yearly cases

questions answered via call, email, chat and Facebook

2024  
Gen AI POCs

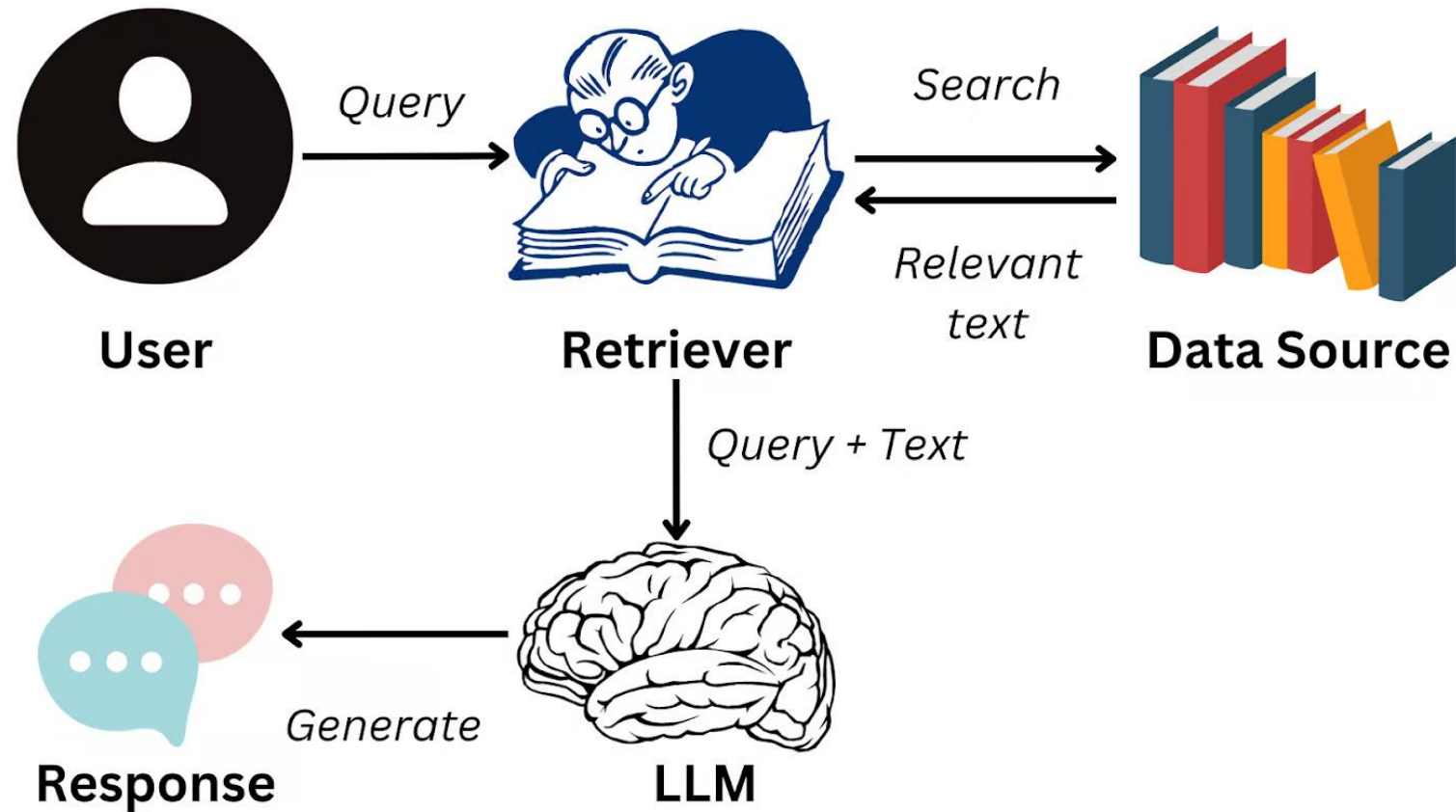
- What is the VAT for the guided tour at the museum?
- Hello, I work as an accounting economist and manage the accounting for a community association with 36 row houses in the association. I have understood that community associations must be liable for VAT, but I cannot find from which date this applies?
- I have my own company. I will initially sell, via the web-shop, two products. Training plan via pdf. (where the buyer pays online and gets a pdf. file sent to them with text and instructions for training. I've heard before that the VAT rate that applies there is 6% as it counts as an e-book, are they correct? The other product is customized so the buyer fills in a payment form and answers pre-made questions from me that I need to know in order to write an individualized training plan. Then they pay and I send them a pdf file with the same type of content as under my first question also here as an e-book and thus 6% VAT?

A-question

B-question

C-question

# RAG (Retrieval Augmented Generation)



## Question

# Should annual VAT be reported in May or February?

## Expert answer

It depends on what kind of company you have. For a full taxation year, the VAT return must be submitted in connection with the income return. Which date applies is determined by the end of the account (see table on website). If the company has EU trade, it must declare and pay the VAT no later than the 26th of the second month following the accounting period. A sole trader who does not have EU trade but must submit an income declaration must submit a declaration by 12 May at the latest. If the company has hired help and received an agency reprieve, they have until June 26 at the latest.

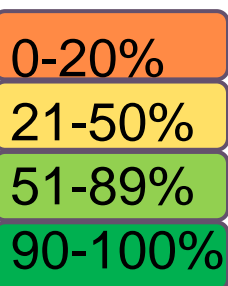
## LLM answer

The annual VAT must be reported in February.	The annual VAT must be reported in February, related to the previous year's turnover. This is evident from the contexts where it is mentioned that "full year VAT report...the VAT for the financial year ending on December 31, 2015 must be booked on the Tax Agency's account..." (February 26), and similar descriptions for other dates.	Annual VAT must be reported in May if the company has an annual turnover of no more than 1 million and does not conduct EU trade. If the company conducts EU trade, the annual VAT must be reported in February.	It depends. If the company has an annual turnover of up to SEK 1 million and does not conduct EU trade, VAT can be reported once a year, and this can be done in February. However, if the company has a larger turnover or is involved in EU trade, VAT should be reported quarterly or monthly, which may mean that a report takes place in May. In some cases, based on when the transaction takes place, it can also affect the timing of accounting.
20%	20%	84%	52%

# Evaluation method

Scale	Criteria	Explanation
0-5	<b>Accuracy</b>	How accurate is the model's answer compared to actual laws and regulations?
0-5	<b>Relevance</b>	How well does the answer relate to the specific question?
0-5	<b>Clarity</b>	How well is the answer structured and worded?
0-5	<b>Completeness</b>	Does the answer cover all aspects of the question?
0-5	<b>User friendliness</b>	Is the answer easy for the user to grasp?

$$((a+b+c+d+e)/25)*100$$



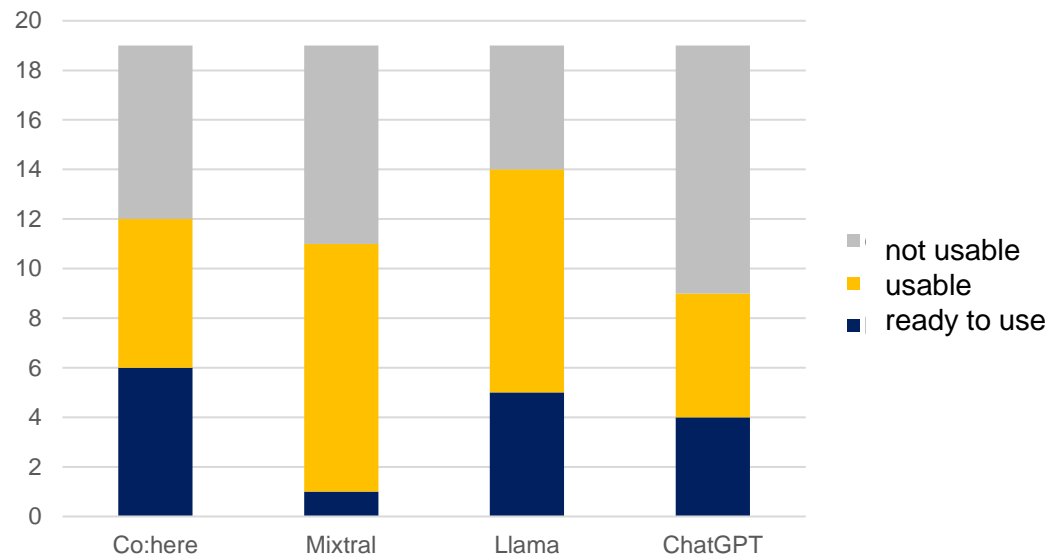
cannot answer/hallucinations

answers with major errors that cannot be changed / hallucinations

answers that can be modified to be correct without big effort

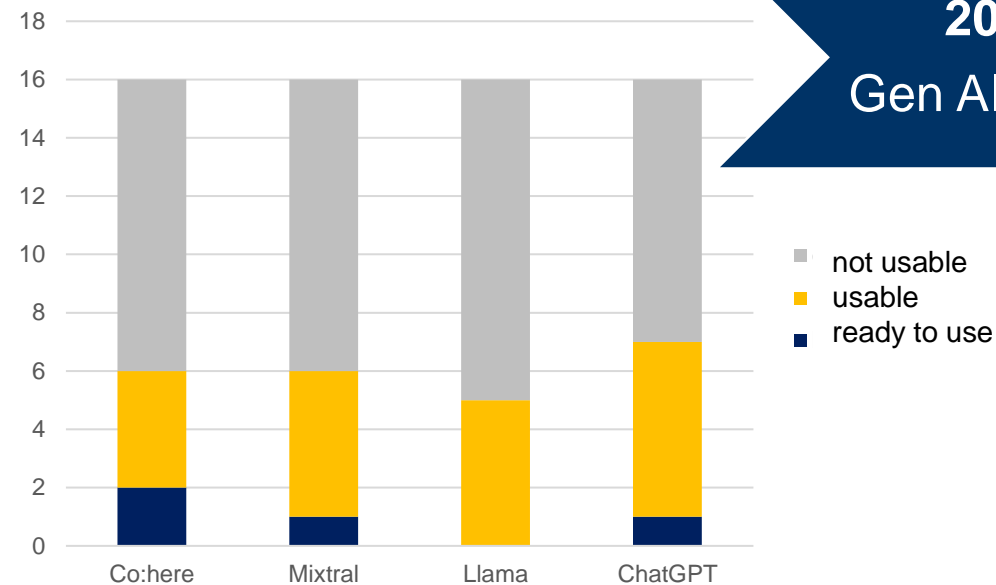
good enough to use as an answer

A questions



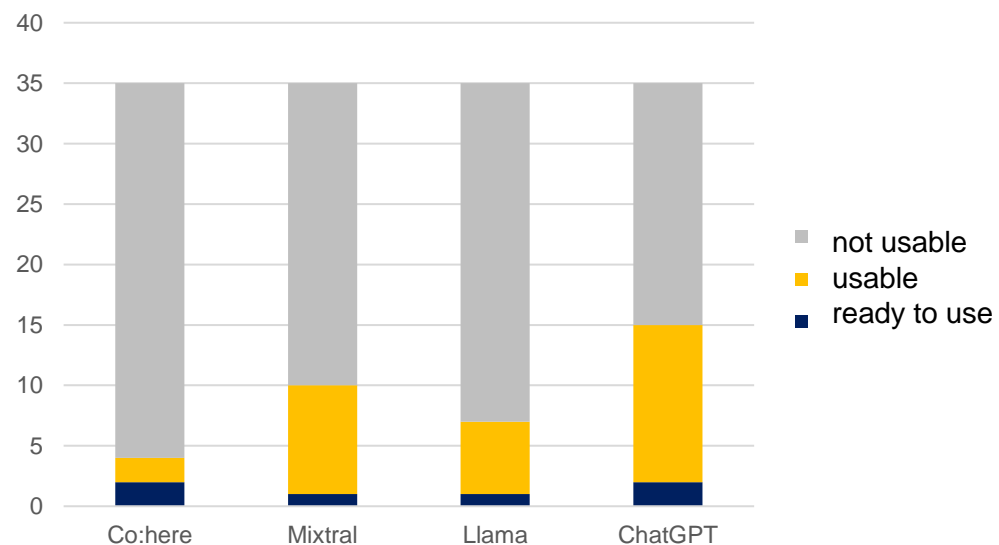
co:here MISTRA AI\_ Meta OpenAI

B questions



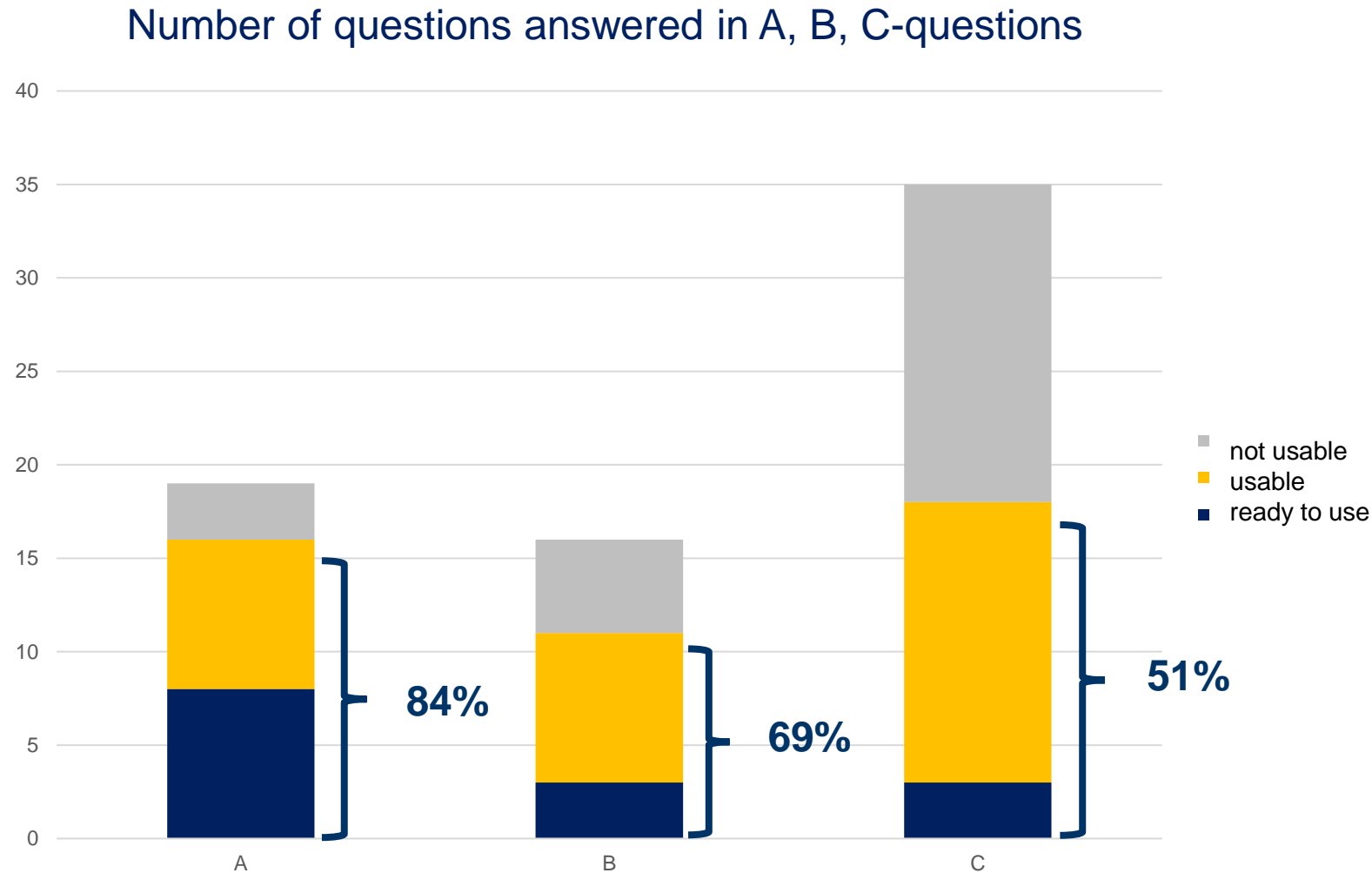
co:here MISTRA AI\_ Meta OpenAI

C questions



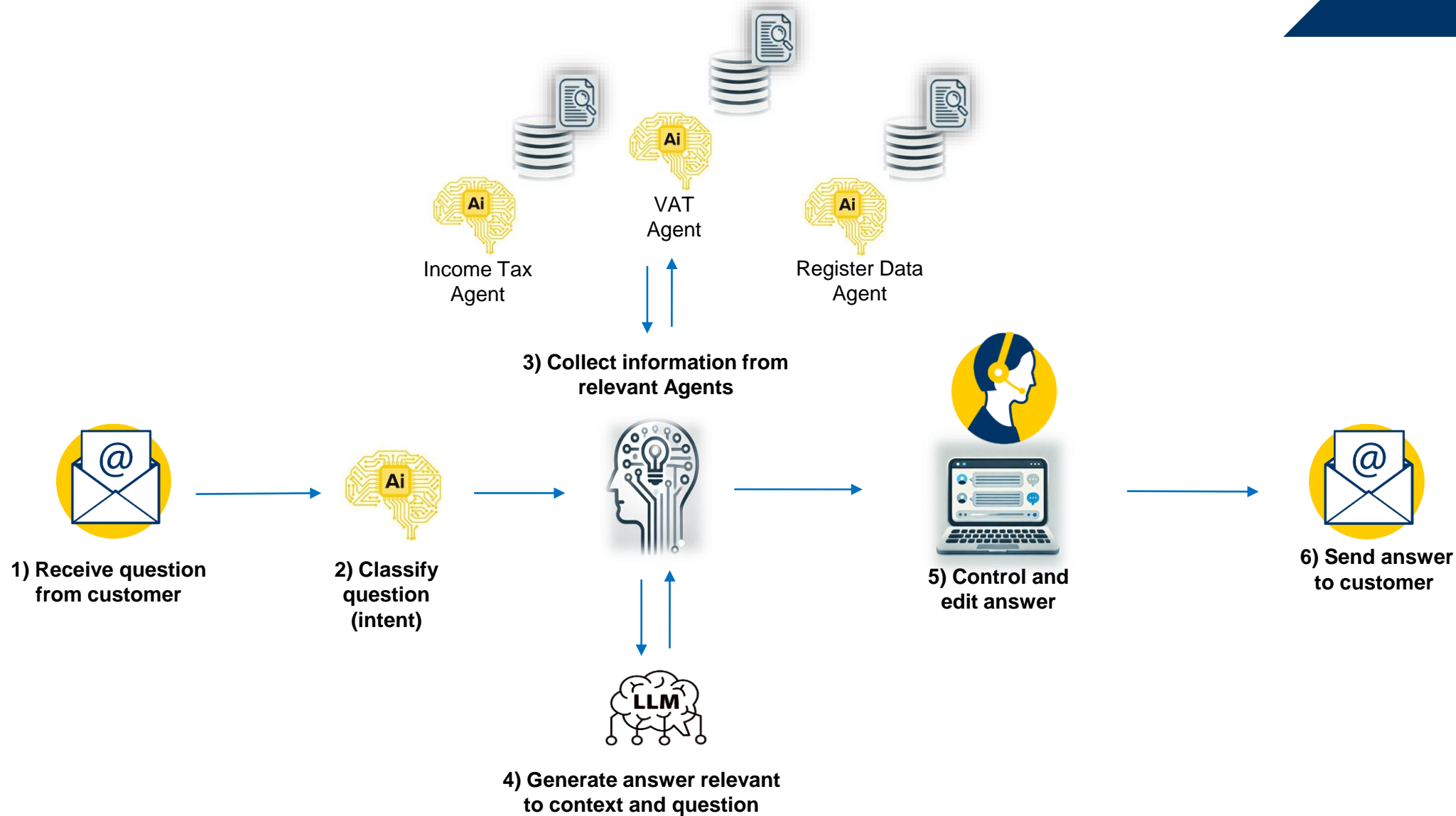
co:here MISTRA AI\_ Meta OpenAI

# Effects of 4 models



# BC: Tax email reply suggestions

2025  
Gen AI BC





Hur fungerar tjänsten? 

## 1 Klistra in text

How much tax does a zoo have to pay for a lion?

 Generera svar

## 2 Svarsförslag

The tax a zoo pays for a lion varies depending on location, tax type, lion's value, and the zoo's tax status.

Possible taxes include:

Import duties (0-10% of lion's value)

Sales tax (0-8% of purchase price)


Property tax (varies by location, not directly related to lion's purchase)

Assuming a \$10,000 lion purchase:

Import duty: \$500 (5%)

Sales tax: \$800 (8%)

Keep in mind that zoos may be exempt from certain taxes or receive tax benefits as non-profit organizations or charities.

 Kopiera svar

# Focus on augmentation

2026-  
New  
applications &  
Scale up

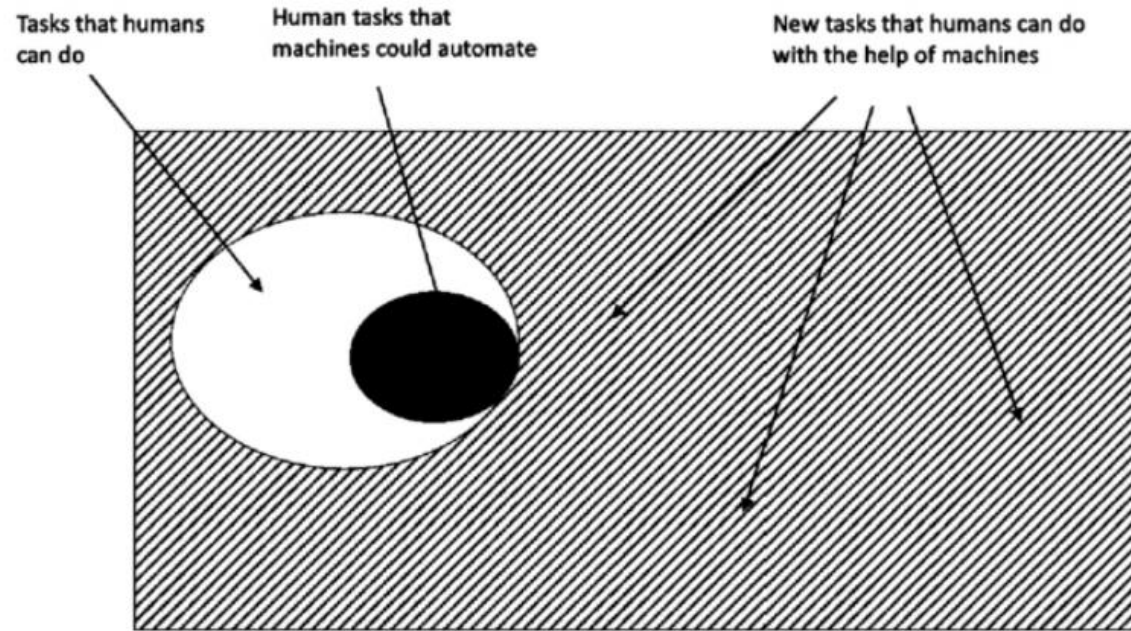


Figure.1

## Labor Automation and Augmentation

There is far more opportunity in augmenting humans to do new tasks rather than automating what they can already do.