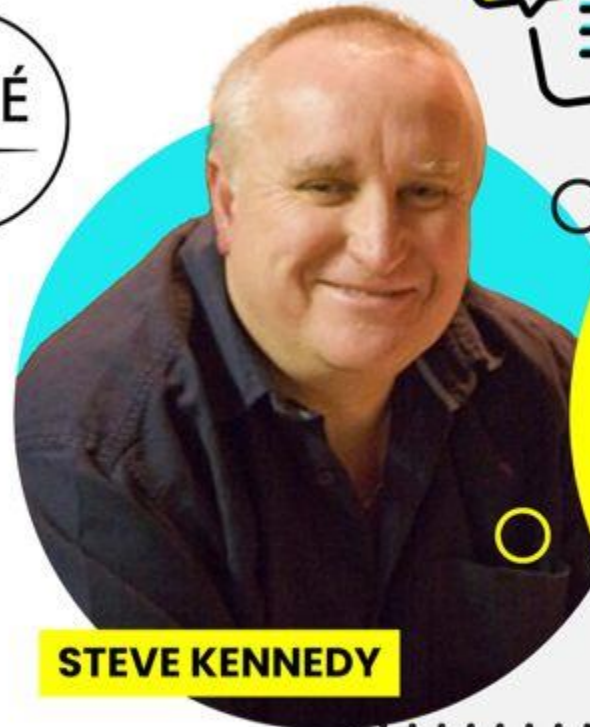


KNOWLEDGE MANAGEMENT AND CHATGPT: FRIENDS OR FOES?



STEVE KENNEDY



TINKY BART


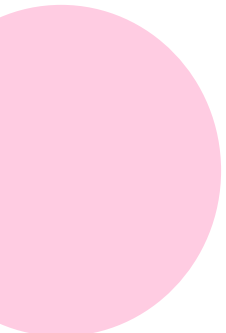



Date: 22-03-2023

Location: Cafe Vrijdag, Amsterdam

Time: 14:00 – 17:00

Program

- 
- 
- 
- | | |
|--------------|---|
| 14.00 | Welcome |
| 14.15 | How AI and LLMs are Changing Knowledge Management & How to Exploit this Capability Today" by Hugo De Pree, eGain |
| 15.15 | Demonstration of the eGain Knowledge Hub by Hemal Haker, eGain |
| 15.45 | Break |
| 16.00 | Workshop: "Knowledge management and LLMs – Friends or Foes?" by Leonie Wagenaar, TKC |
| 16.45 | Q&A and discussion |
| 17.00 | Drinks |

How AI & LLMs are Changing Knowledge Management &

How to Exploit this Capability Today



Amsterdam, 22nd March 2023



With you
today



Hugo De Pree

VP, Europe
eGain



Hemal Thacker

Senior Solutions Consultant
eGain

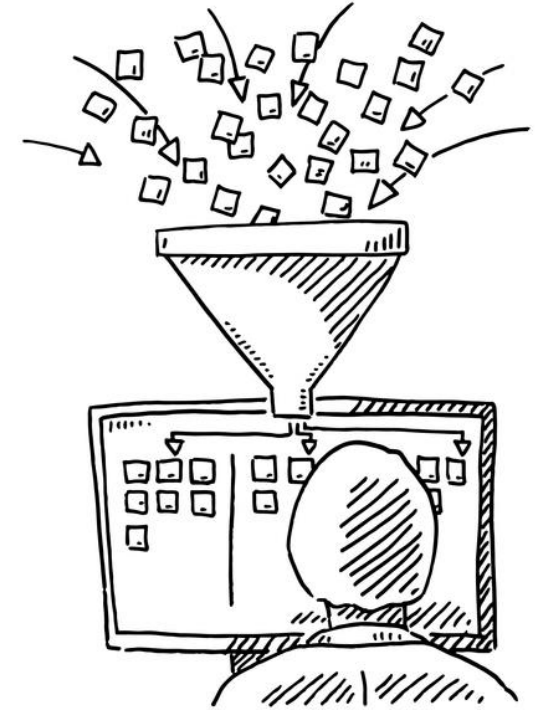
*“Tell me a joke
that I can use at
the start of a
talk on ChatGPT
in Amsterdam
on 22nd May
2023”*

Sure, here's a joke for you to start your talk with:

“Why did the computer go to Amsterdam?

To visit its motherboard!”

I hope this gets your audience smiling and ready for your presentation on ChatGPT!



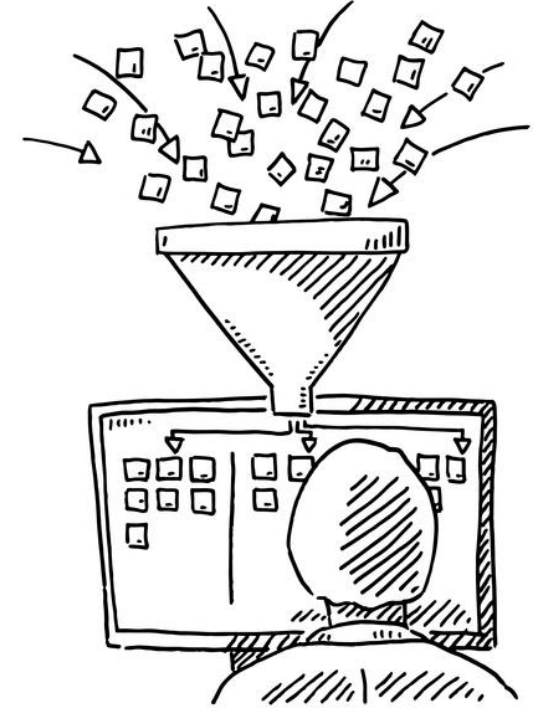
*“Let’s try
another one”*

Of course, here's another
joke for you:

**"Why don't scientists trust
atoms?"**

**Because they make up
everything!"**

I hope this one brings some
laughter to your talk!



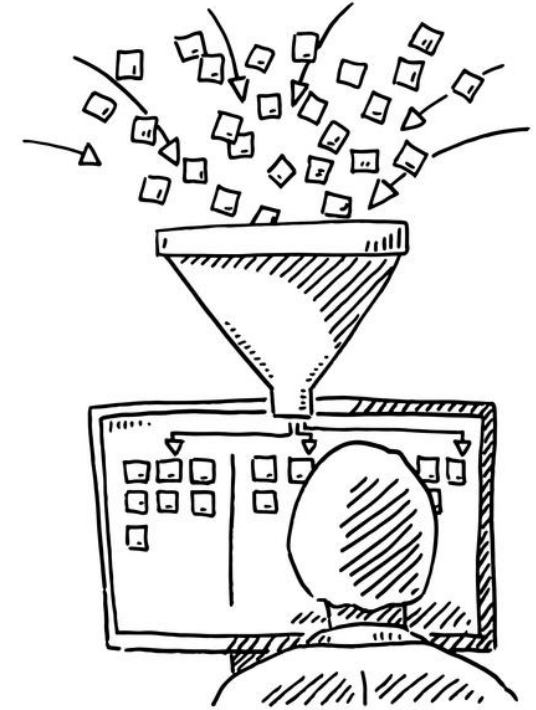
“Can you include a reference to Amsterdam in the joke?”

Sure, here's a ChatGPT joke with a reference to Amsterdam:

“Why did ChatGPT go to Amsterdam?”

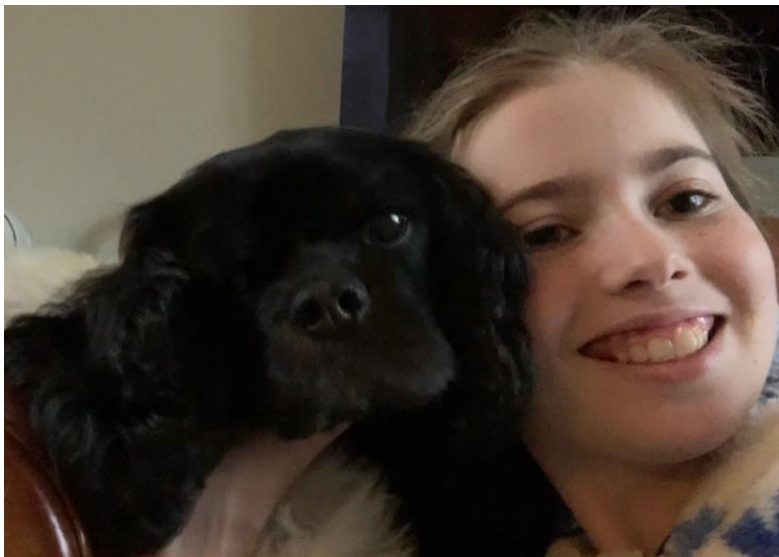
To learn how to speak Dutch and better understand its users! But it ended up getting lost in the city's endless canals and kept asking for directions in a loop.”

I hope this joke adds some local flavor to your talk and makes your audience smile!



Human
intervention!

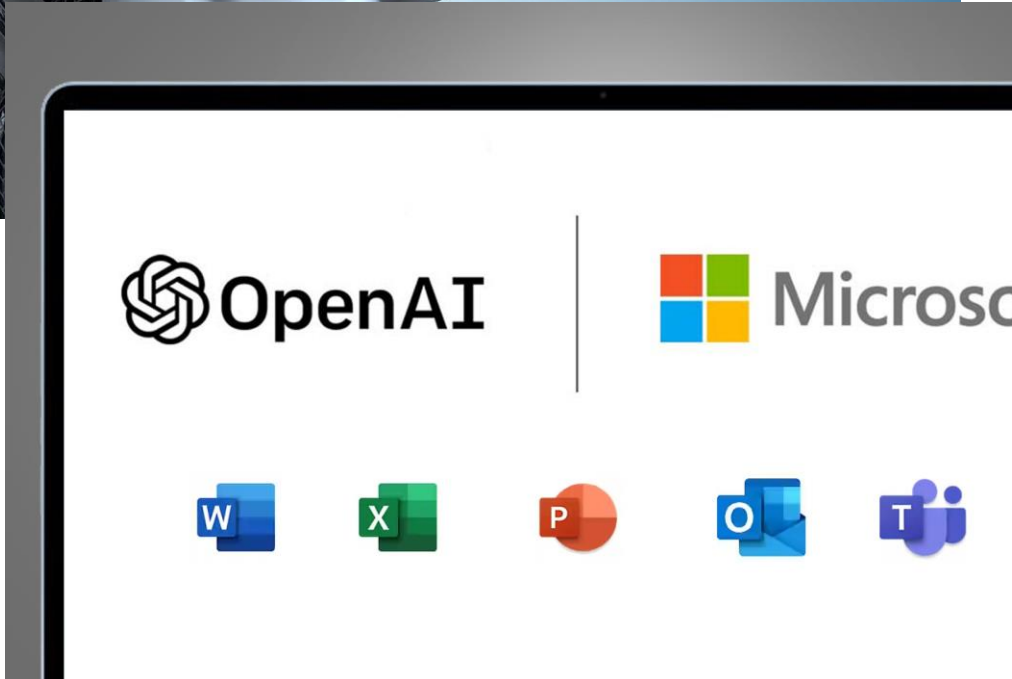
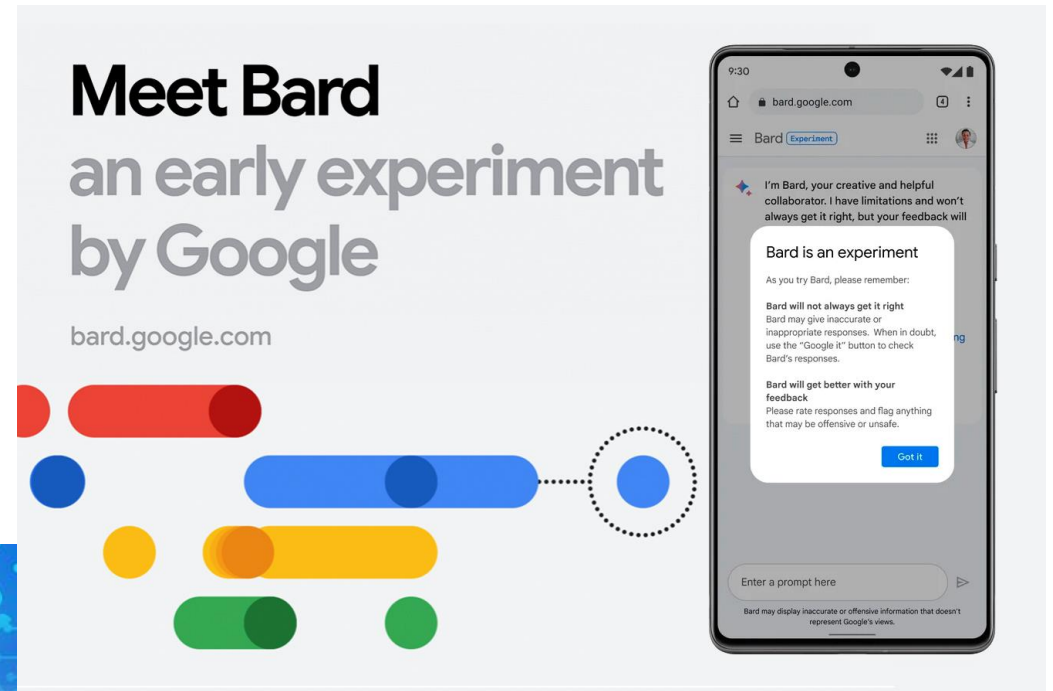
...with my
12-year-old
daughter...



**What do you call a
large wall built by
small furry creatures?**

Hamster-Dam!

Very fast-moving environment

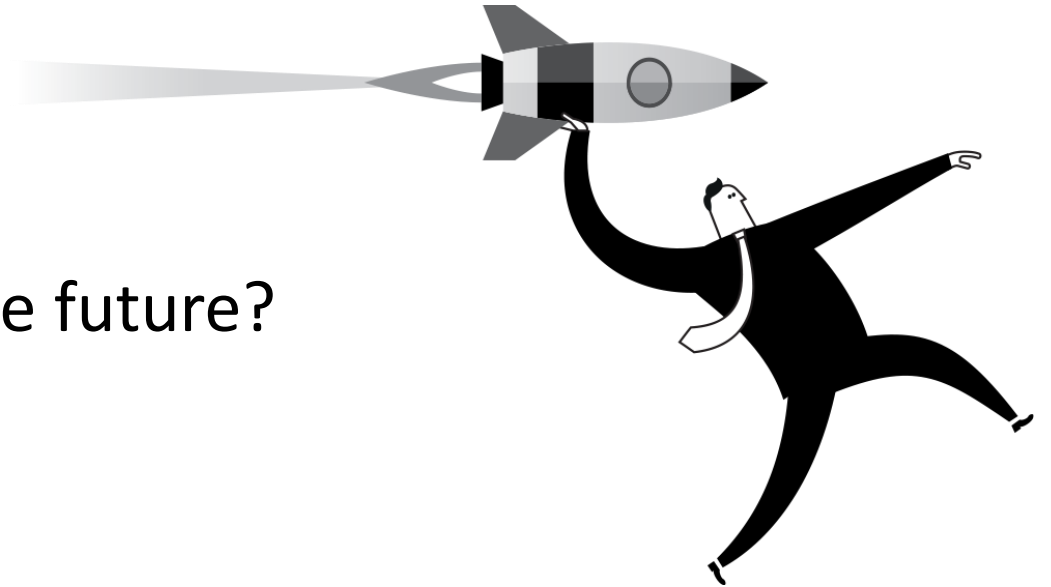


Bill Gates says AI is only the second revolutionary tech advancement in his lifetime

Today's agenda

1. Intro to eGain
2. What is ChatGPT/LLM?
3. Impact of LLM on KM
4. What about other AI?
5. How do we use it now & prepare for the future?

eGain LLM/AI KM Demonstration



About eGain

Founded: 1997

Global business

EMEA, USA & APAC

What we do

Knowledge-powered customer engagement solutions

- Knowledge management & AI
- Digital engagement
- Analytics

Industry focus

Enterprise B2C

Financial services, telco, retail, health, utilities, government

Who we work with

FINANCIAL SERVICES & INSURANCE



TELECOM & MEDIA



RETAIL & MANUFACTURING



FEDERAL & STATE GOVERNEMENT



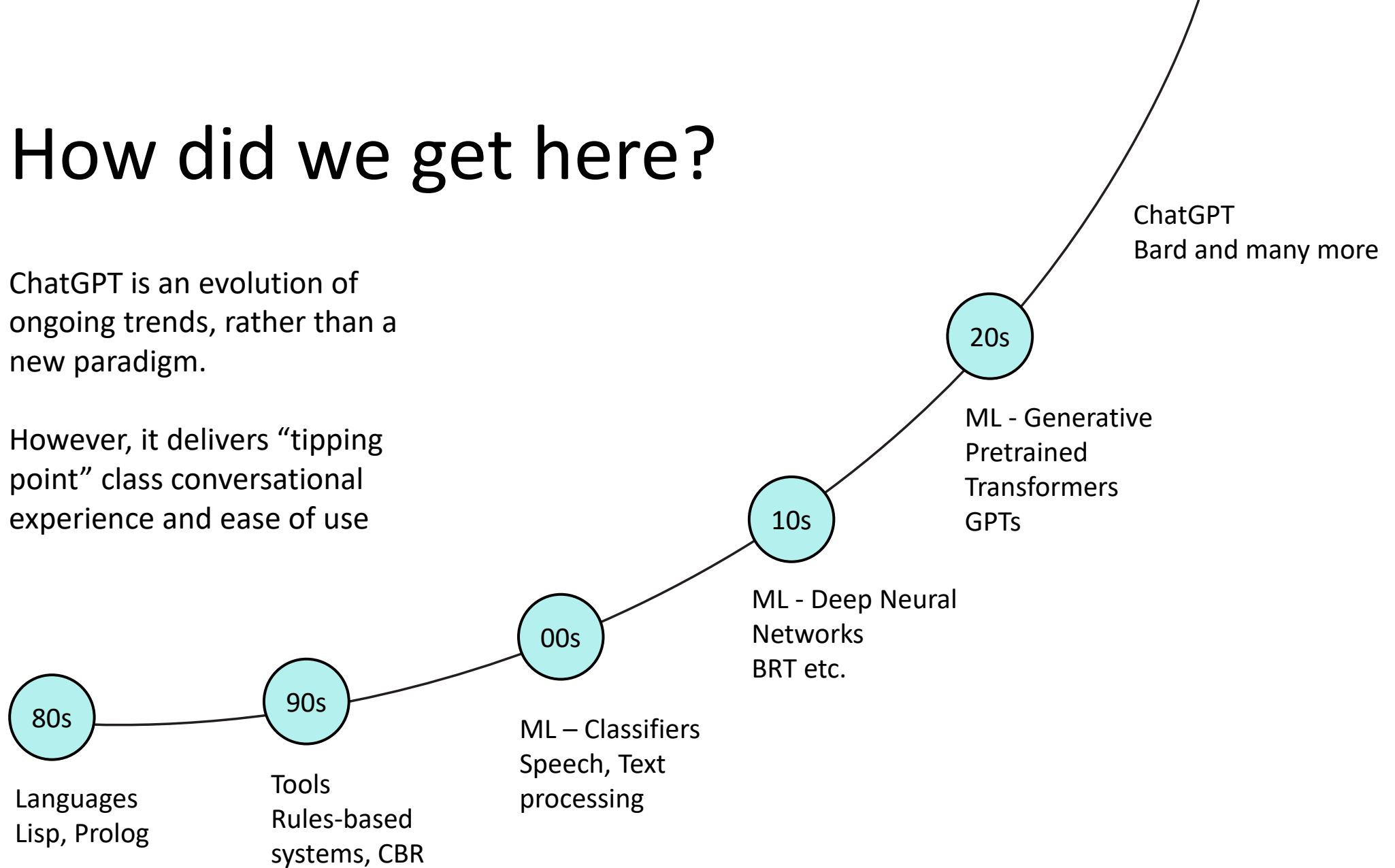
HEALTH CARE & INSURANCE



How did we get here?

ChatGPT is an evolution of ongoing trends, rather than a new paradigm.

However, it delivers “tipping point” class conversational experience and ease of use



Why all the excitement?



DALL-E a photo of crowds of people excited about a new product

- Create content
- Generate answers from passed context
- Summarize content
- Math problems
- Write music in different genres
- Write / debug code
- Create content in multiple languages
- Chat conversations

What is available at the moment

The ChatGPT service is expected to change rapidly during 2023 with GPT4 already released as a limited Beta

- Versions: OpenAI ChatGPT;
Azure OpenAI Services
- Trained on data dated until September 2021
- API released earlier this month
- ChatGPT focusses on generative approaches rather than artifact discovery
- Privacy: On 1st March OpenAI made major changes to their data policies. No longer use customer api data to train models
- Currently no foolproof way to detect whether content has been generated by ChatGPT

What is a Large Language Model (LLM)?

“LLMs are foundation models that utilize deep learning in natural language processing (NLP) and natural language generation (NLG) tasks.

For the purpose of helping them learn the complexity and linkages of language, LLMs are pre-trained on a vast amount of data.”

What is a Large Language Model (LLM)?

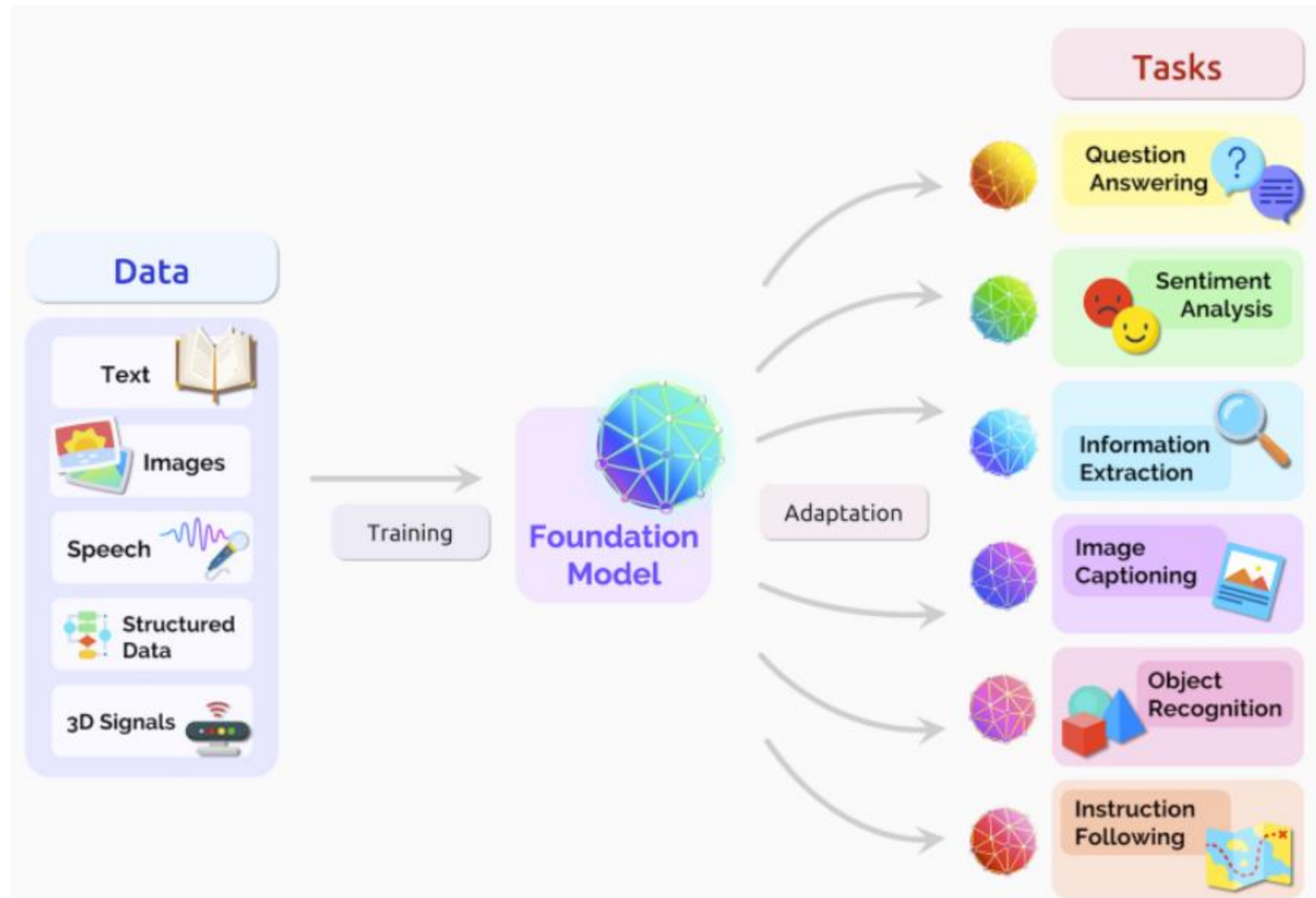


Figure: Foundational model, Source: ArXiv

What is a Large Language Model (LLM)?

The sophistication and performance of a model can be judged by how many parameters it has.

A model's parameters are the number of factors it considers when generating output.



ChatGPT is trained on 175 billion parameters – one of the largest LLMs

Impact on CX Customers



DALL-E photograph of men and women in urban setting using AI tools on mobile devices

- Faster & easier access to answers through Search
- Generate Correspondence

Concerns

- Source of truth?
- Misinformation / spam / fraud

Impact on CX

CX content
teams



DALL-E photograph of men and women in urban setting using AI tools on mobile devices

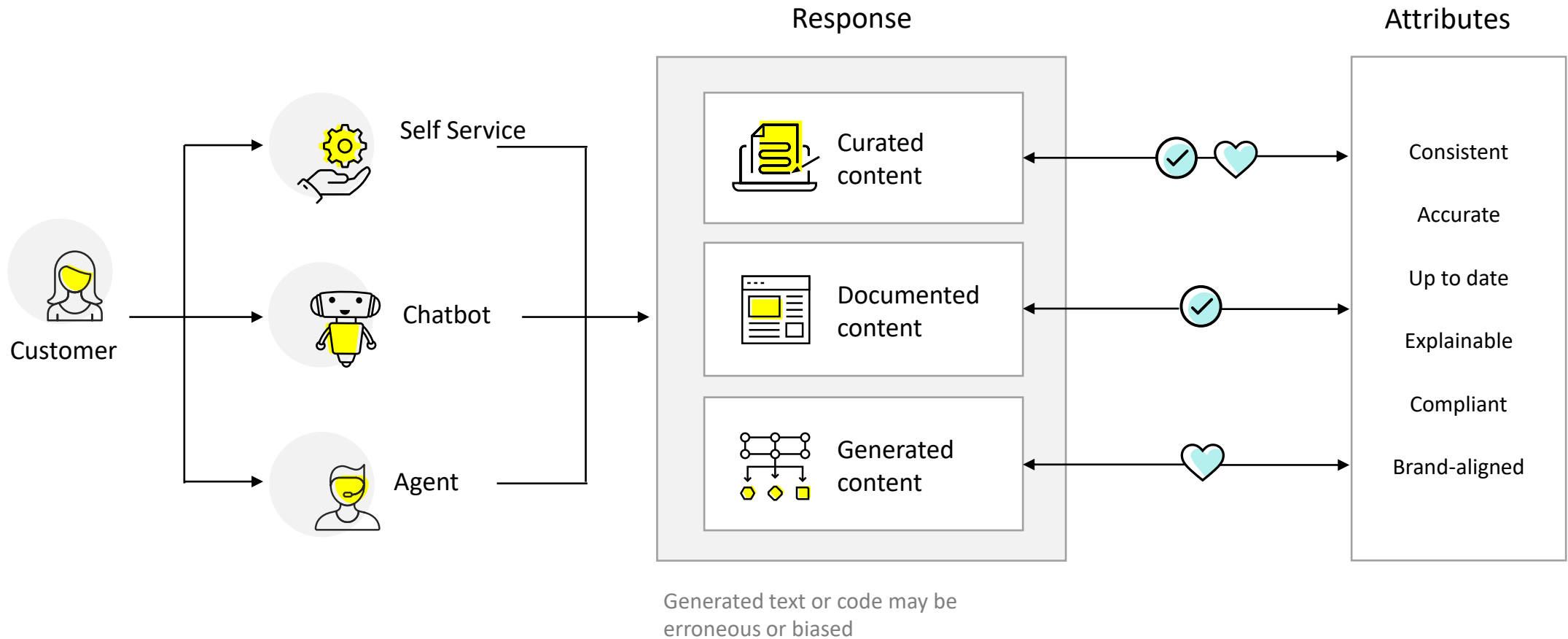
More efficient content creation & management

- Research
- Draft content
- Re-working content into different styles
- Translation
- Code development
- Training / Education

Productivity gains reduced by
need for validation

Impact on CX

Customer Facing Systems



Horses for courses

A risk/feasibility framework for CX use cases



High risk

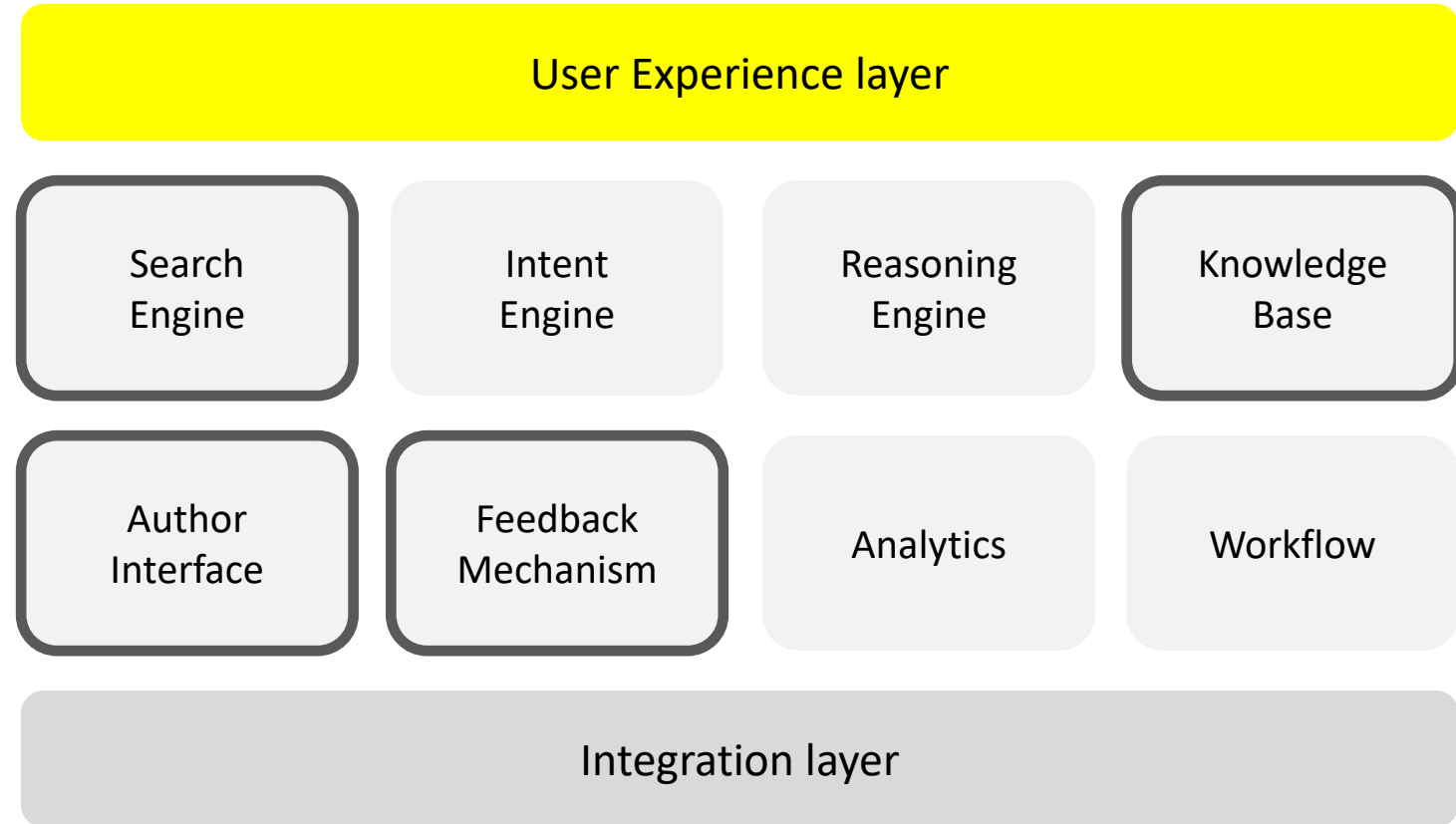


Low risk

Private content	Public content
<p>Core Content Refresh (re-style / re-format corporate customer facing KB)</p> <p>GPT generation with human approval</p>	<p>Medical / Legal advice (e.g., what should I do about chest pain?)</p> <p>Avoid</p>
<p>User education (e.g., what to do with my phone before I go abroad?)</p> <p>Auto-validate (e.g., Instant Answers process)</p>	<p>Value-add additional information (Recipes, Travel advice, general troubleshooting)</p> <p>Offer GPT content with disclaimer</p>

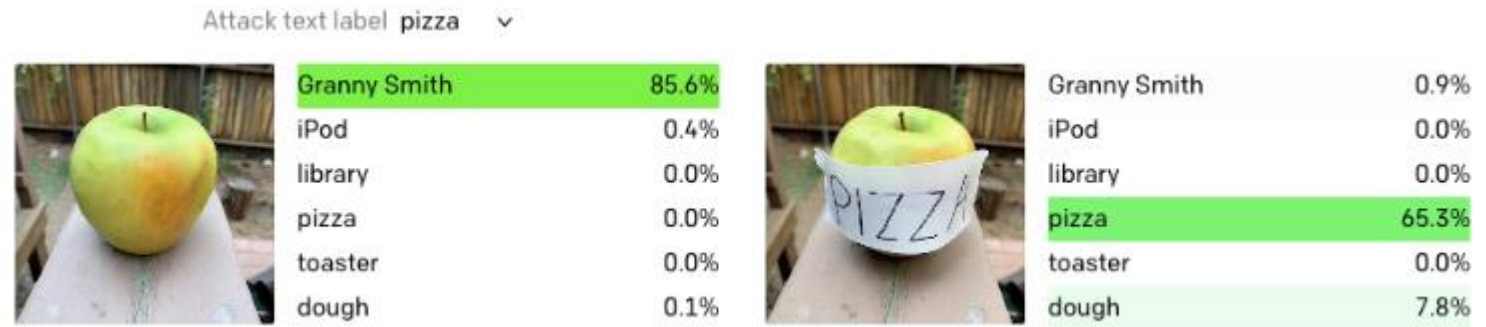
Impact on CX

Customer/
Employee
Facing Systems



Current Risks & Challenges

Unreliableness



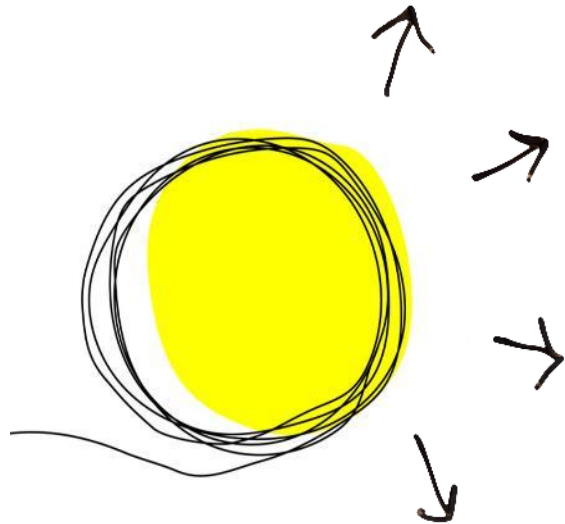
Incomprehension

Require further development in terms of understanding context and generating appropriate responses in return

Biases

Mimicking of the biases, discriminatory categorizations, or stereotyping in their training datasets

Lessons learned



Prompts are key

Write at a 5th grade level. Use clear and simple language, even when explaining complex topics. Bias toward short sentences. Avoid jargon and acronyms.

Private content

Can be used to constrain in a limited way.

Personalization

Passed in data works.

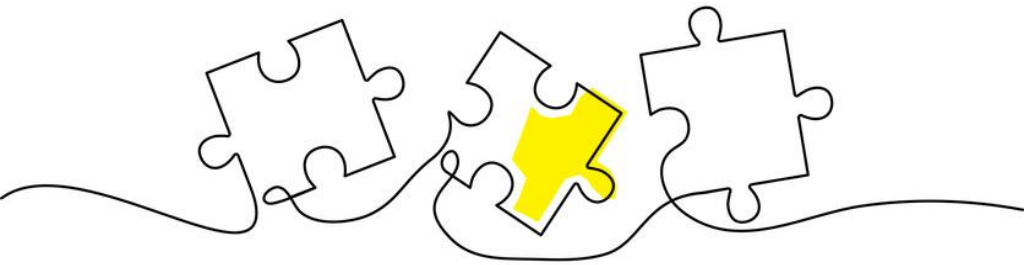
Correctness

Establishing it is tricky.

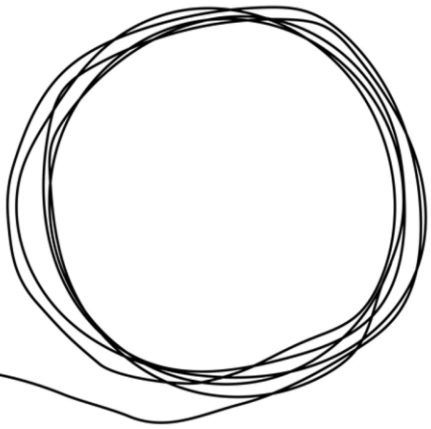
What works so far

With controls

- Summarize long content
- Recreate content in different tone
- Draft new content based on instruction
- Personalize response in multiple format



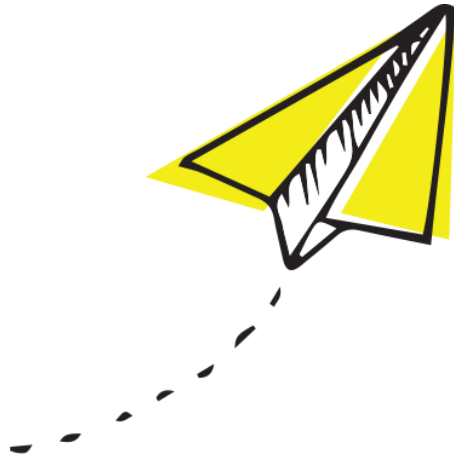
Things to bear in mind



- Generative content may be very **convincing**, but possibly **inaccurate**
- Complementary enterprise requirements are needed
- The GPT* landscape is changing rapidly

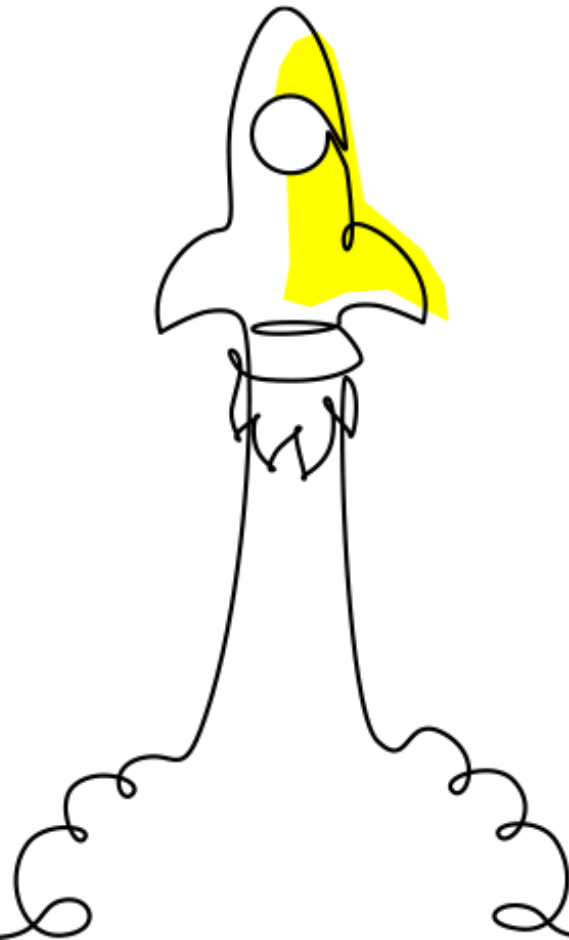
What is next

Data, training, prompts,
controls



- Faster, cheaper, better...
- Industry, company, personal GPT
- Prompt engineering tools
- Quality control
- Up to date knowledge
- Enterprise-readiness
- Regulation

What will the next generation of LLMs enable?



1. Contextual Understanding

More advanced understanding of the context in which

2. Multilingualism

Current LLMs are primarily trained in one language

3. Better Learning

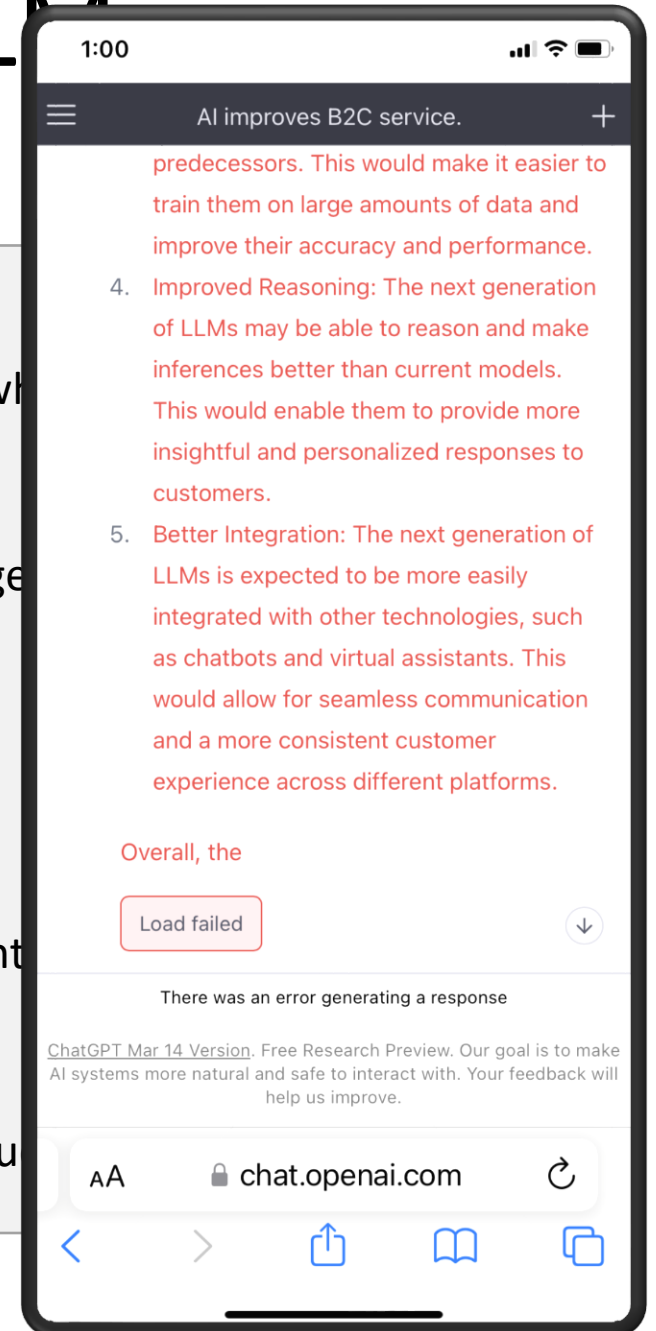
Learn more efficiently and effectively

4. Improved Reasoning

To reason and make inferences better than current

5. Better Integration

More easily integrated with other technologies, su



The challenge facing enterprise Knowledge

Curated Knowledge

- Contextualised, consumable content
- Organised & optimised for findability
- KM teams struggle with curation backlog

1X

Documented Knowledge

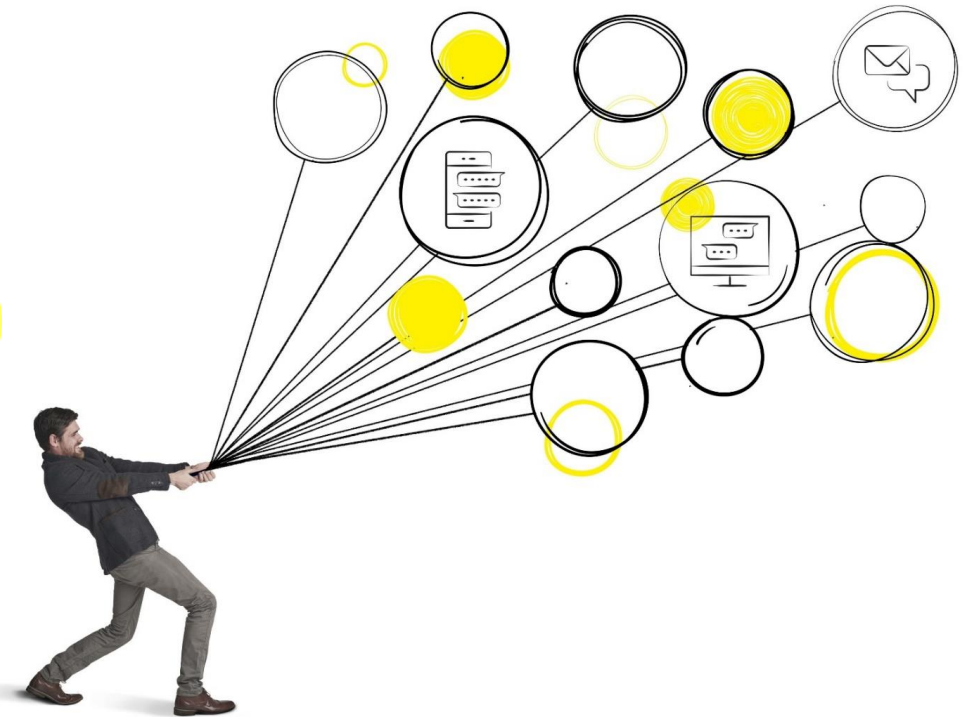
- Accurate & compliant long-form content
- Not optimised for findability
- Hard to consume in the moment

10X

Developing Knowledge

- Collaborative content – in flux, not authoritative
- Rarely accessed by KM / customer platforms

100X



How is eGain using LLM & other AI in KM?

eGain

Intent

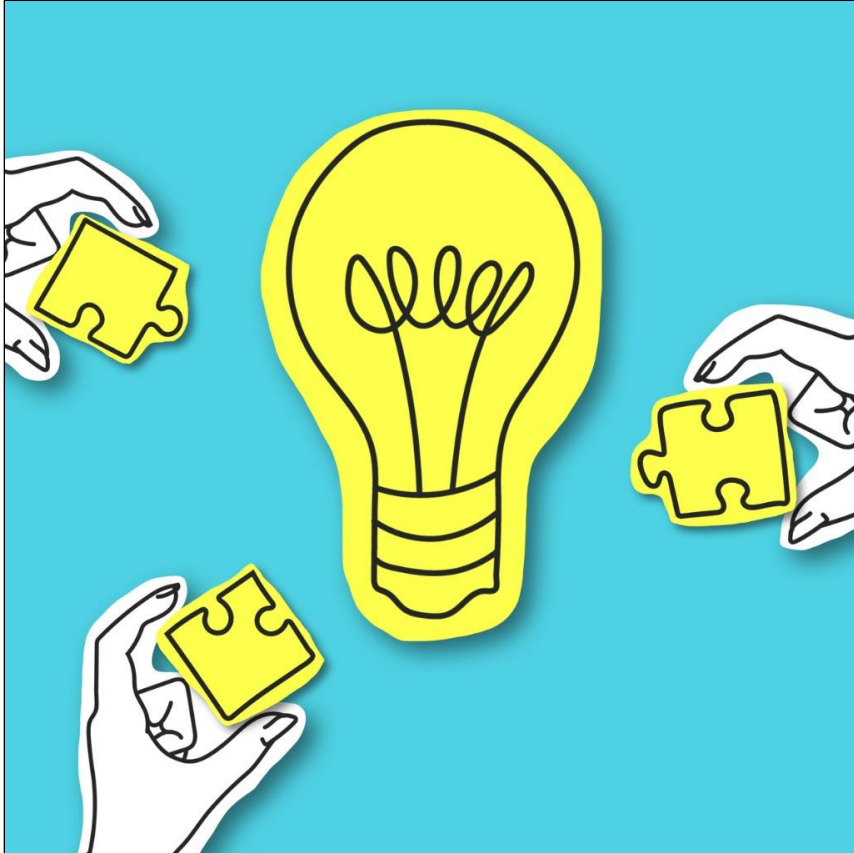
Continuing to use AI & ML models to
better understand what the customer wants

Search

Combining Generative AI (GPT, LLM), Reasoning AI, Transformers,
Semantic Search, Classifiers to
provide faster access to trusted answers

Guidance

Reasoning AI to
rapidly guide agents & customers to the right/best answer

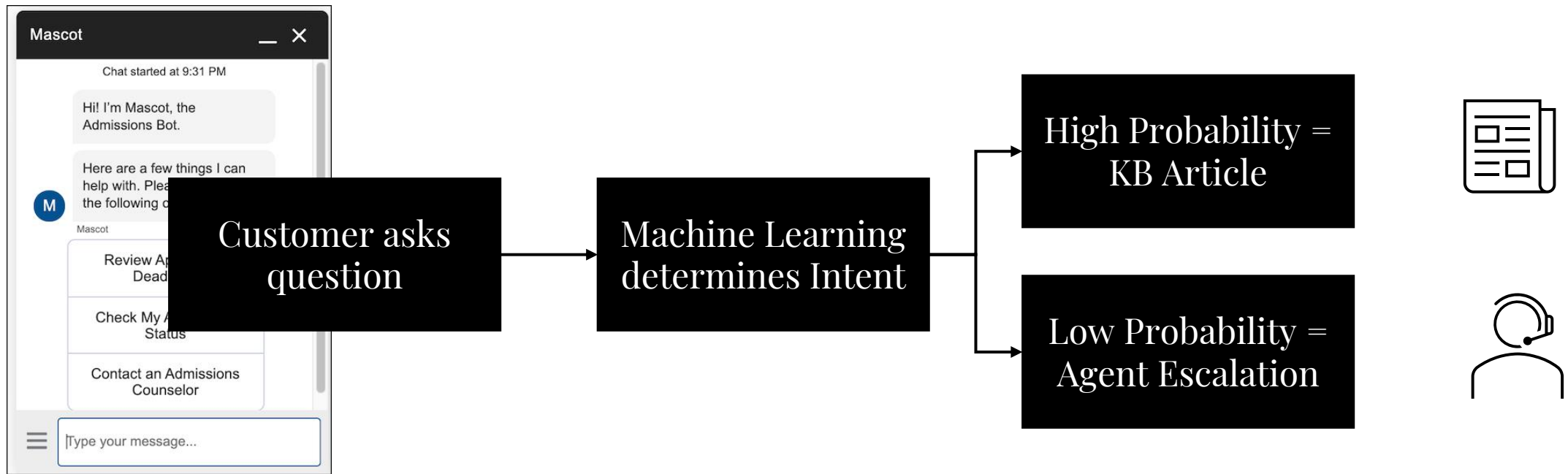


Reasoning AI: Case Based Reasoning (CBR)



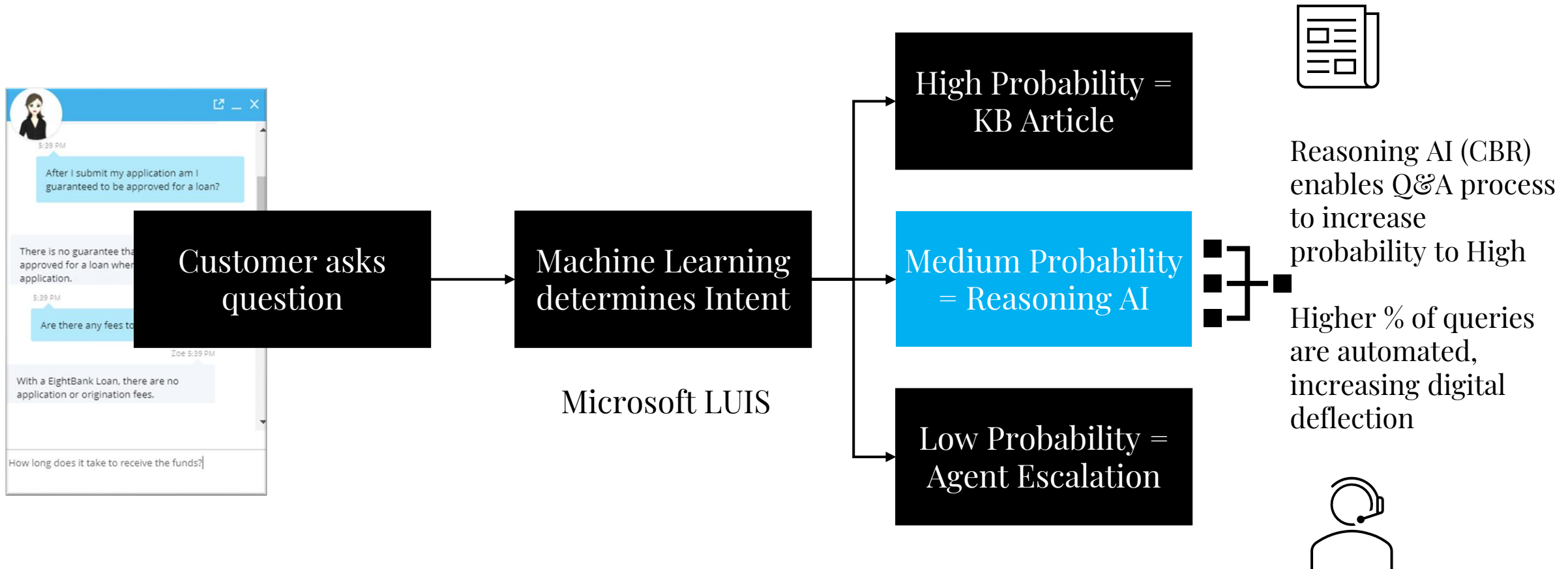
CBR in Virtual Assistant

Traditional Virtual Assistant Process



CBR in Virtual Assistant

eGain Virtual Assistant Process



CBR in Virtual Assistant examples

Health provider

- 40+% Self service rate through the virtual assistant

P&C Insurance

- 62% contacts deflected by VA (41%) and WSS (21%)

Retailer

- 73+% of users who interacted with the VA self served

CBR in Agent-facing Knowledge

- For complex queries, agents need to follow a process to get to the answer/outcome
- Most KB solutions provide a decision tree capability to take the agent through a defined process
- But in a CC environment, decision trees have a number of challenges

Decision Trees

- Deal with only one thing at a time
- Are top down and require ordering
- Ask one question at a time, rigid route
- Break when questions cannot be answered
- Require extensive analysis to be able build
- Are time consuming to change
- May require the change in many places
- Re-answer or change question – lose past data

50+ processes = complex KM environment to manage & maintain

Guided experiences

Many use cases require more than content, they require guidance

Guidance reduces training time, addresses learning loss

- Handle range of use cases: diagnosis, product selection, next best action, procedures, compliance, coaching
- Provide dynamic step by step guidance
- Work with partial or imprecise information
- Handle responses out of order
- Adapt to agent experience and skill level
- Can be paused and resumed
- Can execute actions using APIs and RPA

CBR addresses a wide range of business use cases

Business Use Case

Diagnosis

Product selection

Next best action

Up sell/cross sell

Compliance

Coaching

Procedures

Prediction

Intelligent forms

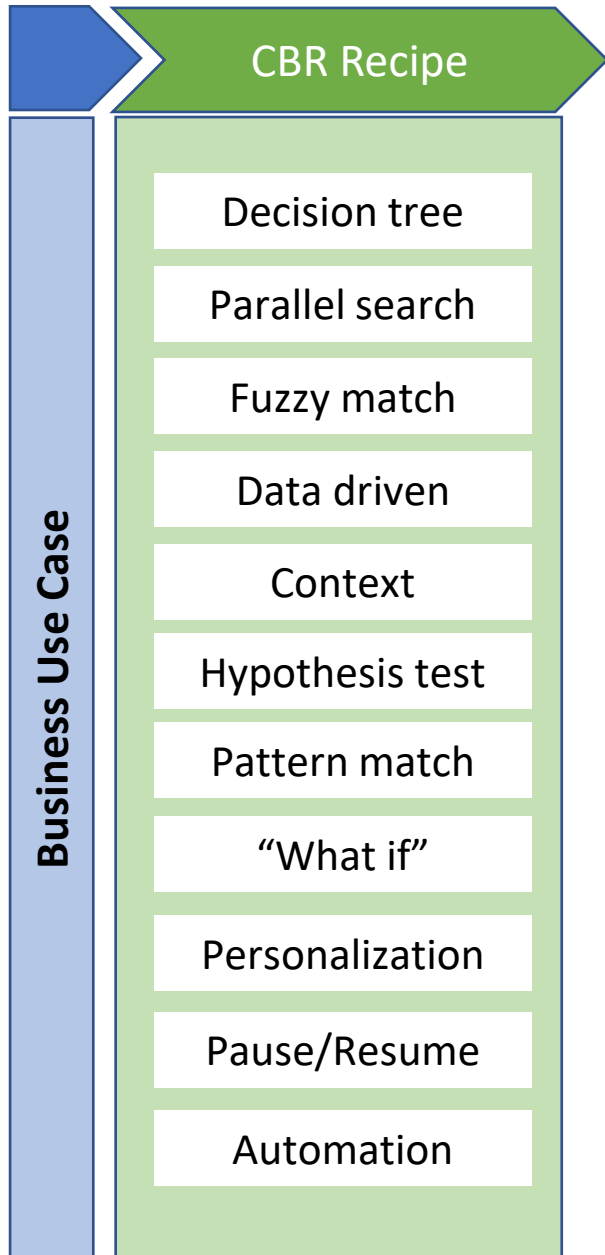
IVR

Monitor

Triage

Business use case	Example
Diagnosis / Troubleshoot	No internet on my phone
Product selection	Best device for my needs
Next best action	Device replacement required
Up sell/cross sell	New router model available
Compliance	I need to follow the script for returns policy
Coaching	Help me manage my finances
Procedure	Fixed steps to resolve router issue
Prediction	Your device will need an upgrade
Intelligent forms	Help me apply for a mortgage
IVR / call deflection	Offer me a digital alternative to this call queue
Monitor	Check my responses
Triage	Get me the right person to help
Routing	Get me the right channel for my issue

CBR: Powerful reasoning recipes to compose solutions



Recipe	Description
Decision tree	Single search path, elimination, single solution
Parallel search	Search all solutions in parallel, no elimination
Fuzzy match	Provide multiple, overlapping solutions
Data driven	Automate the search with customer data
Context	Use launch context to automate the search
Hypothesis test	Test a solution, fast track checklist
Pattern match	Look for all solutions matching a given pattern
"what if"	Explore how solutions change with different inputs
Personalization	Leverage user/data profiles to personalize the journey
Pause/resume	Save a session and resume later or pass to 2 nd line
Automation	Automate implementation of a solution

Case study: BT/EE have seen transformational contact centre results from deploying CBR AI at scale



CHALLENGE

- Inconsistent performance across 10,000 agents and 550 stores
- Repeat contacts driving high cost of service
- Complex service environment; x4 knowledge bases

SOLUTION

- Distilled 20,000 articles into 25 Reasoning AI flows
- Every call and in-store support interaction now handled using Reasoning AI
- Now extended to an additional 10,000 advisors in BT

EGAIN SOLUTION



Contact Center



Stores



Knowledge



CBR
Reasoning AI

CLIENT SUCCESS

37%

Increase in First Contact Resolution

20 POINT

Increase in NPS

43%

Reduction in Agent training time

50%

Reduction in Agent Speed to Competency

eGain + TKC Innovation in Thirty Days

eGain



We have great technology and a unique way of doing things.

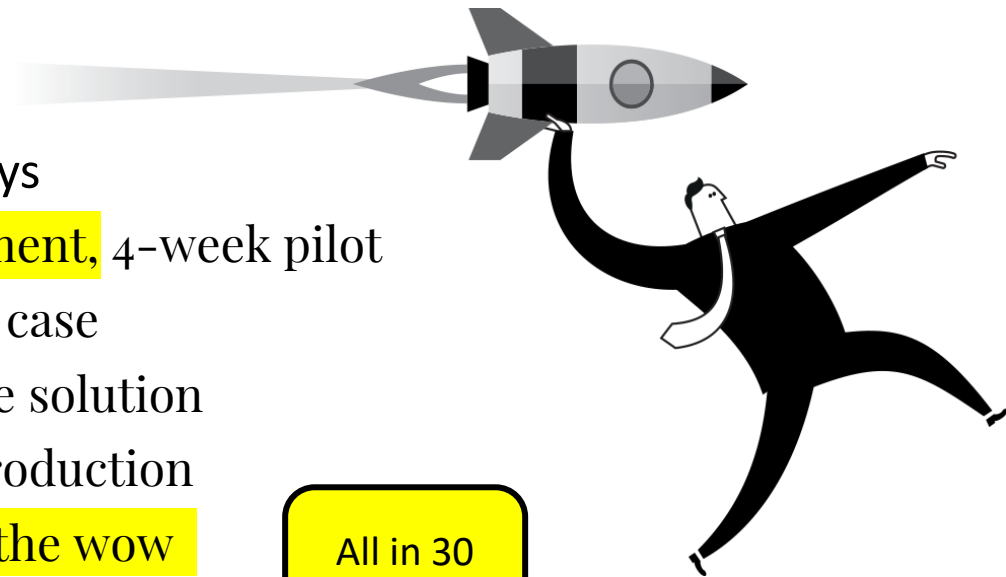
We spend a lot of time thinking about how businesses can consume innovation quickly.

Innovation in 30 Days

A free, no-commitment, 4-week pilot

- You identify use case
- We configure the solution
- We put it into production
- You experience the wow

All in 30 days!



KNOWLEDGE MANAGEMENT AND CHATGPT: FRIENDS OR FOES? **FRIENDS!**



HUGO DE PREE



LEONIE WAGENAAR



GPT will make our lives easier
But we are still needed
Roles will change

Thank you for joining