

HFMA – AI in Healthcare Finance

The practical
application of AI in
the NHS

7th November 2023



Agenda

- Introduction by Lisa Goldstone
- AI overview & types of AI
- Case Studies
- Applications of AI in finance
- Enterprise considerations for scaling AI
- Discussion in groups
- Summary and Q&A

Types of AI

When to use Traditional AI capabilities

Predictive/ Prescriptive

Directed Conversational
AI

Computer Vision AI

Process Automation

When to use Generative AI capabilities

Summarisation

Conversational Search

Content creation

Code creation



Most use cases with Text/
Image/ Video/ Code
generation are good
candidates for Generative AI

Most structured data analysis,
prediction and prescription are
better served with Traditional
AI

Generative AI can augment
existing Traditional AI use
cases to enhance natural
language interactions and
summarise etc.

Intelligent Workflows

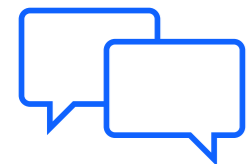
The Challenge



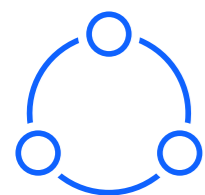
#1 | **Management of waiting lists and adherence to policies**



#2 | **Sharing best practice and learning.**



#3 | **Patient engagement and communication**



#4 | **Grouping appointments**

The Solution



Identified **opportunities for performance improvement**



Defined **interventions to realise the value**

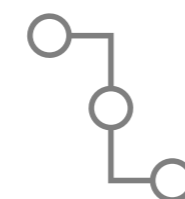


Applied changes directly follow SMS reminders.

Additional interventions initiated:



Gen AI summarisation tool



Centralised scheduling for patients on multiple pathways

Expected Results

£1.4m

Combined realisable annual benefits

17k

Appointments released through reduction in wastage

1.5 FTE

Administrative staff time saved



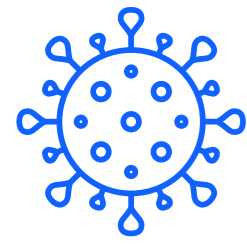
Increased access for patients in more deprived cohorts



Improved patient satisfaction

'Enquire' HR Virtual Assistant

The Challenge



Increased the number of inbound calls to the Health at Work team due to COVID-19

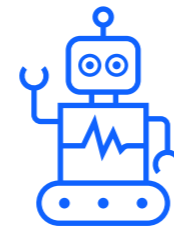


Staffing the new cloud-based call centre **remained a constant challenge**



The Trust needed a **more sustainable solution** across all People Team related services.

The Solution



A conversational assistant for all first level People Team queries.



Instant answers (24/7)



Accurate, concise information



A **paired development** approach **equips employees to become self-sufficient.**

The Results

82%

Of the 5,464 requests received met employee needs.

2,732

Forecast hours saved annually.

£107k

Estimated annual savings.



Improved experience by providing consistent responses to all employees.



The anonymised nature of 'Enquire' provides employees with reassurance and peace of mind when asking questions.

Improving Citizen Engagement – Phase 1

The Challenge



To improve patient care pathway experience



Busy phone lines, and long waits to speak with a member of staff .



48 hour+ response times for email

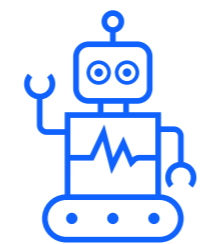


Confusing communications, with **many letters not arriving**, or conflicting messages being received.

The Solution



New **SMS confirmation service** to confirm receipt of



Virtual assistant (chatbot) implemented on the website

Prototypes developed for future implementation:



Email responder tool



Enhanced telephony capabilities supporting **patient call-back** and inclusion of **AI insights**



Content advice

The Results

2,000 p/w

SMS messages sent confirming receipt of referral

600 p/w

Patient requests managed via the virtual assistant

100 p/w

Patient requests relating to the confirmation, cancellation or rescheduling of appointments

95%

Patient requests resolved directly



Positive initial patient feedback

AI in Finance:

01



Quick 'Decision-Support'

Crafting and narrating impactful management & statutory reports

60%

reduction in manual report creation

90%

improvement in time to decision support

02



Ask 'Finance'

Conversing and engaging with self-service chat capabilities

70%+

Productivity Improvement

90%+

Improvement in time to decision support

03



'Financial Intelligence' Advisor

Extracting and interpreting contract financial data

85%

reduction in time spent reviewing contracts

40%

reductions in errors

04



Cash & Claims Advisor

Recovering cash by validating customer claims & deductions

~60-70%

Revenue leakage savings

50%

Deductions management FTEs reduction

05



Intelligent Invoice Management

Matching and validating vendor invoices; Intelligent 4-way match

~upto1%

Reduction in indirect spend

~400M\$¹

Reduction in indirect spend
¹based on selected client data

06



Policy & Compliance Advisor

Monitoring and enforcing policy changes, controls, and compliance

60%

productivity improvement in analysis and reporting

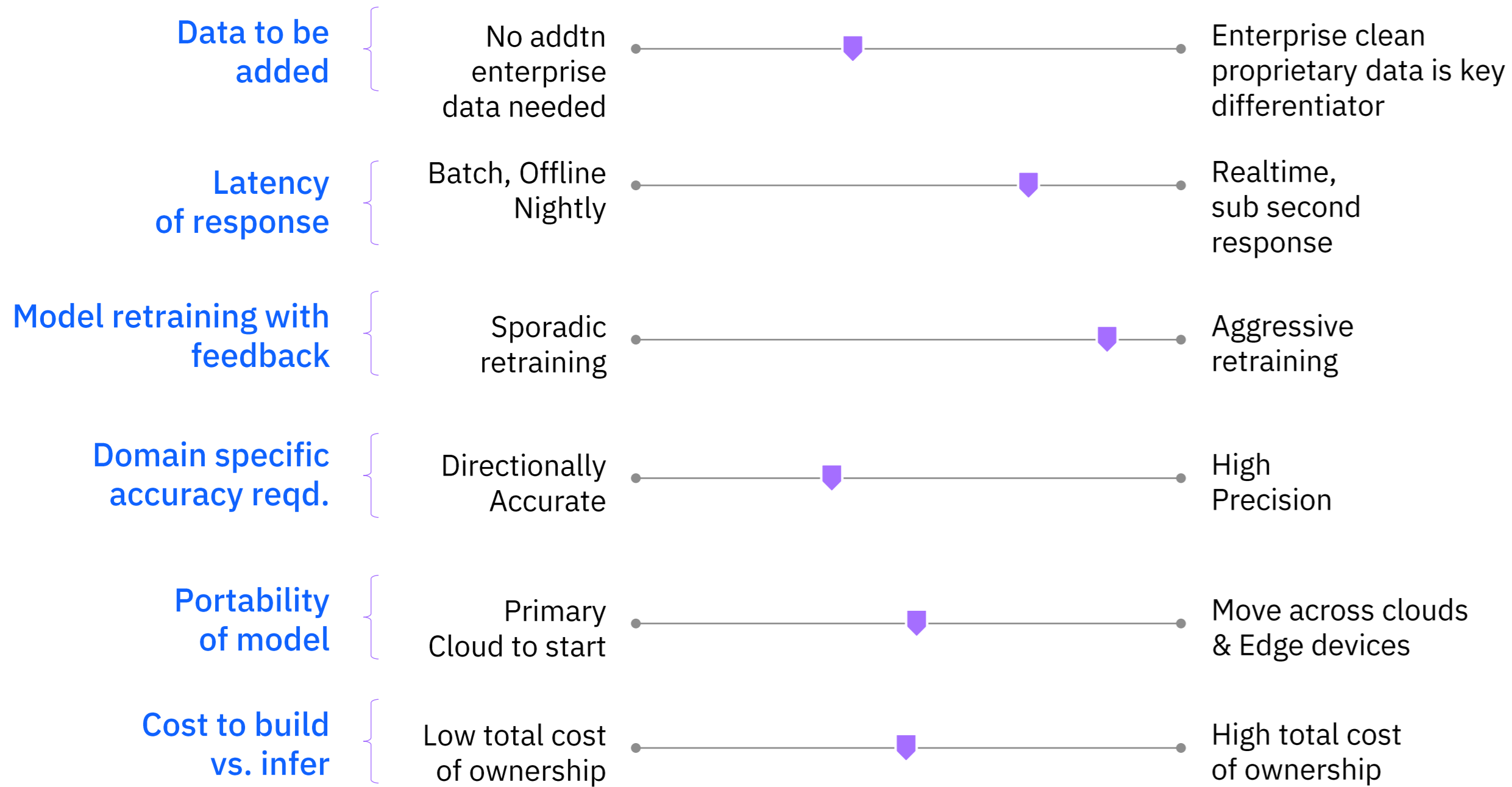
75%

improvement in quality

Built on Large Language Models (LLMs) optimizing finance workflows, fueling creativity, and innovation

Enterprise Considerations for Scaling AI

Various decision points to evaluate the application of AI

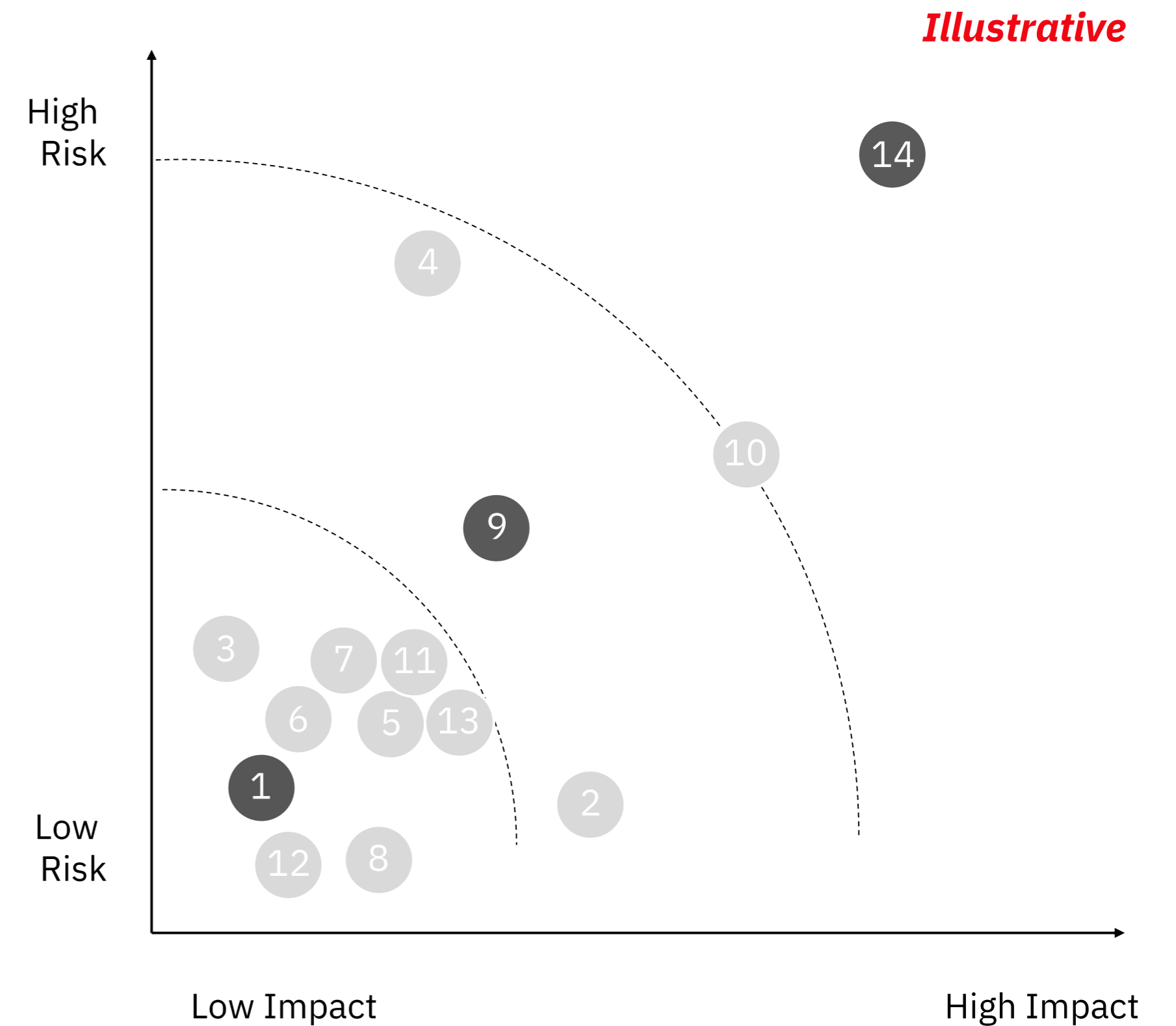


Common scaling issues

- 1** Data privacy, residency and IP
- 2** Risk appetite and myth busting
- 3** Mitigating and managing Hallucinations (with enterprise data tuning)
- 4** Compute and cloud usage understanding and active management
- 5** Carbon footprint – this doesn't come for free

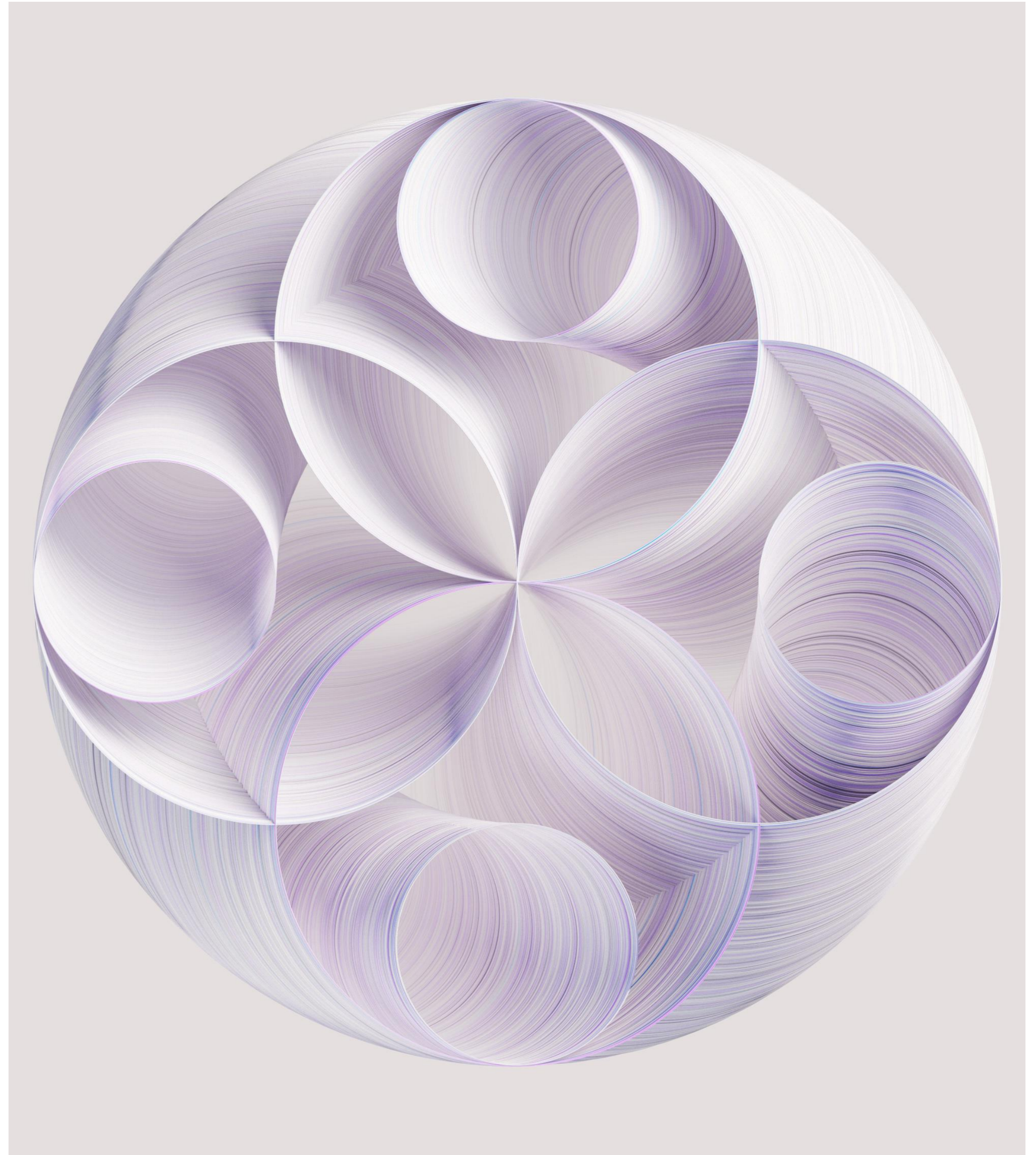
Programmatically prioritise those applications by a combination of impact & feasibility.

- 1** Drug Discovery
- ...** ...
- n** 'Ask Finance'



Question:

Where do you see opportunities for the application of AI across your Trust?



IBM