

The background features a dark blue gradient with large, overlapping, semi-transparent shapes in shades of purple, pink, and orange, creating a modern, abstract design.

AWS re:Invent

NOV. 27 – DEC. 1, 2023 | LAS VEGAS, NV

FSI201

How to deliver business value in financial services with generative AI

John Kain

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Business & Market Development
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Product Lead, Product
Development, AML
Verafin, a Nasdaq company

Janet Weldon

AVP, Global Data Strategy and
Enablement
Sun Life

Zachery Anderson

Chief Data and Analytics Officer
NatWest Group



Innovation can **transform industries**



GENERATIVE AI

The tipping point for **generative AI**



Massive proliferation
of data

Availability of
scalable compute
capacity

Machine learning
innovation

Generative AI use cases in financial services



**Increase knowledge
worker efficiency**



**Enable product innovation;
market surveillance,
commentary, and sentiment**



**Improve the customer
experience**

Our speakers



Janet Weldon

AVP, Global Data Strategy
and Enablement
Sun Life



Jeremy Butt

Product Lead, Product
Development, AML
Verafin, a Nasdaq company



Zachery Anderson

Chief Data and Analytics Officer
NatWest Group

Sun Life: How to deliver business value in financial services with generative AI

Janet Weldon

(she/her)

AVP, Global Data Strategy and
Enablement
Sun Life



Agenda



The people



The problem



The process



The technology



The value potential



What did we learn?

The people

CREATING A HEALTHY TENSION BETWEEN INNOVATION AND RISK MANAGEMENT

It started with a community



The problem

FOCUS INTERNALLY TO MITIGATE THE RISK OF THE UNKNOWN

How might we improve employee productivity using generative AI?

The process

Experience-Based Accelerators (EBAs) allowed us to complete 14 generative AI experiments in 6 months, four of which will be available to eligible employees by end of year

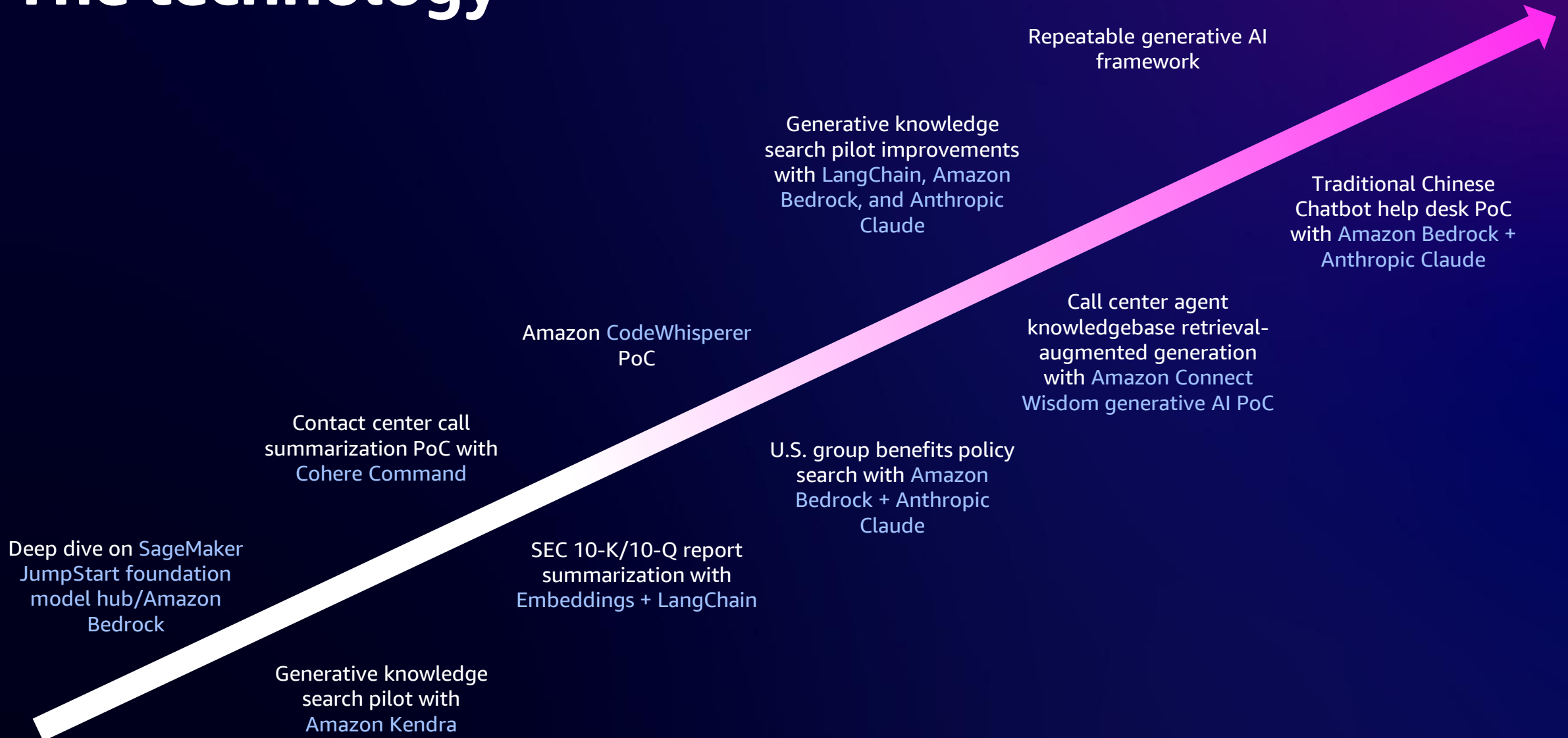
An EBA is an AWS mechanism that brings together cross-functional teams to accelerate outcomes within days

How?

Generative AI flywheel



The technology



Potential business value



Cost avoidance or
generation of new revenue



Redeploy resources to
higher value work



Improved experiences

What did we learn?

WHILE OUR EXPERIMENTS TO DATE HIGHLIGHT THE IMMENSE POTENTIAL OF LLMS ENABLING PRODUCTIVITY FOR EMPLOYEES, THE PATH TO RAPIDLY PRODUCTIONIZING GENERATIVE AI IS COMPLEX

LLM behaviour

- LLM responses across models can be inconsistent, depending on our source content and prompting
- The critical need for "Human in The Loop" (HITL) oversight is evident as we do more model testing

Mitigating hallucinations

- All our experiments use retrieval-augmented generation (RAG) to minimize hallucinations
- RAG restricts LLM's context to only Sun Life data

Models matter

- Not all LLMs are created equal; model review and selection needs to be done with business
- In certain scenarios, simpler models can match or outperform larger LLMs

Where do we go from here?

GENERATIVE AI WILL EVOLVE OVER THREE HORIZONS AT SUN LIFE; WE ARE CURRENTLY IN THE FIRST HORIZON, WITH A FEW CAPABILITIES STARTING TO EMERGE IN THE SECOND HORIZON

Outcome – Experience and fundamental understanding of potential risk, costs, and benefits

Horizon 1 “Test and learn”

Experiment with new capabilities within existing business models, core ecosystems, and controls

Outcome – Improved employee productivity and satisfaction, faster speed, lower cost, improved client satisfaction through lower friction

Horizon 2 “Productivity and production”

Harden, scale, and deploy new capabilities that have productivity benefits to employees or clients

Outcome – Competitive advantage, larger market share, increased client satisfaction

Horizon 3 “Innovate and differentiate”

Create new and differentiated business capabilities (propositions, client experience, products)



I'm excited for the potential GenAI has to help us create more exceptional Client experiences, improve productivity and let our teams focus on the work they find most meaningful.

Laura Money

Executive Vice President and Chief Information & Technology Innovation Officer

Sun Life



Leveraging generative AI to fight financial crime

Jeremy Butt

Product Lead, Product Development,
AML

Verafin, a Nasdaq company



Agenda

- 01 Who is Verafin?
- 02 The industry problem
- 03 The role of generative AI in solving the problem
- 04 The benefits of Verafin's approach
- 05 Where we are today

Who is VERAFIN



Our purpose is to fight crime



Our purpose is to fight crime



Our purpose is to fight crime



Human
trafficking

Our purpose is to fight crime



Human
trafficking

Terrorism

Our purpose is to fight crime



Human
trafficking

Terrorism

Elder
abuse

Our purpose is to fight crime



Human
trafficking

Terrorism

Elder
abuse

Fraud
rings

Our purpose is to fight crime



Human
trafficking

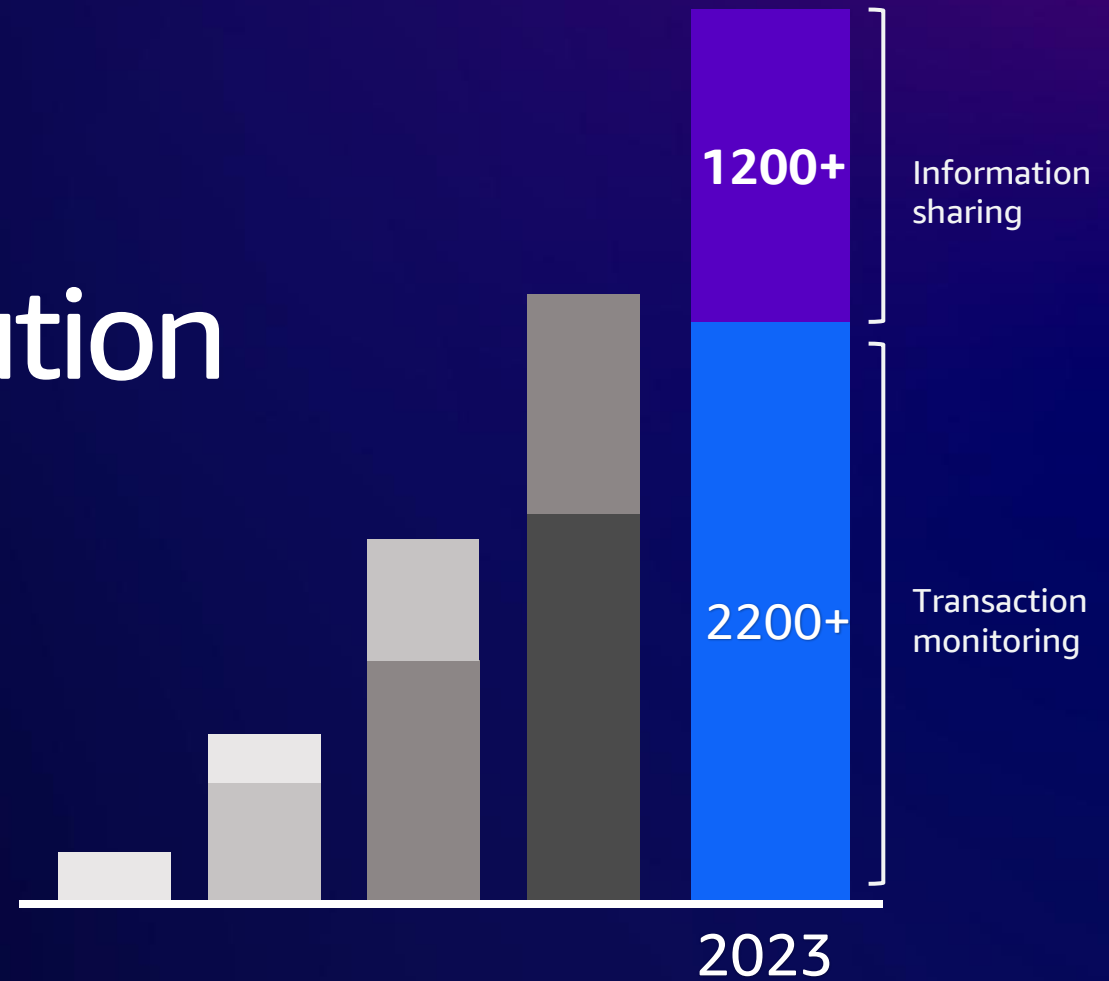
Terrorism

Elder
abuse

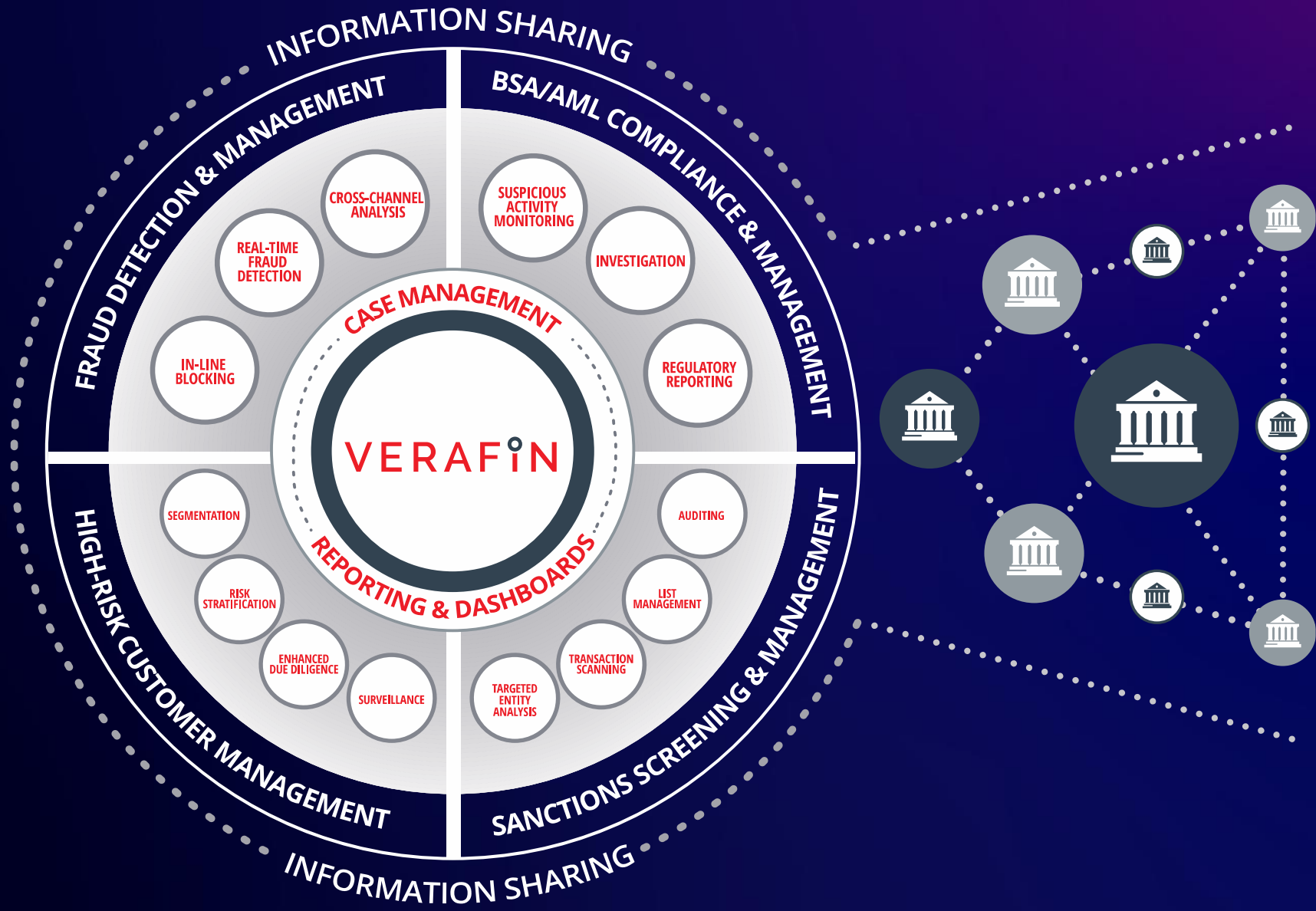
Fraud
rings

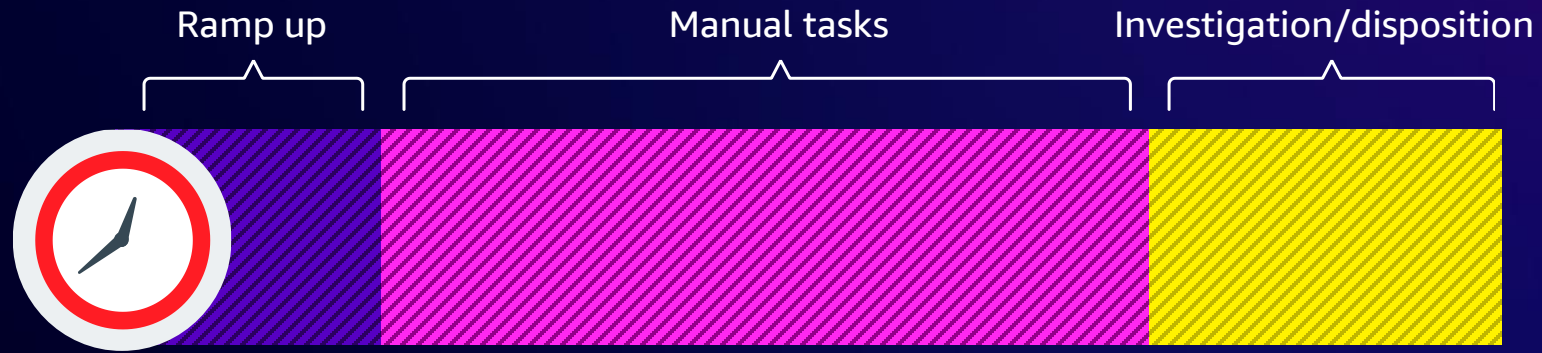
Scams

3800 financial institution customers and growing every day



Financial Crime Management Platform

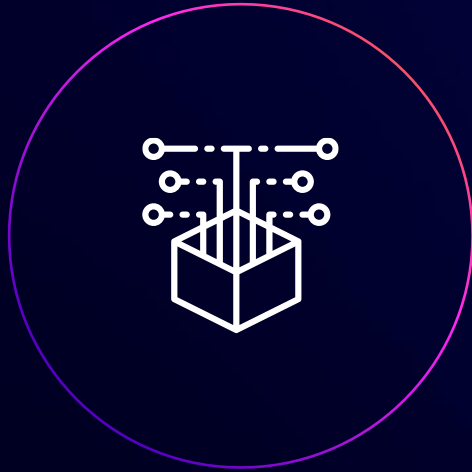




up to

60% of investigator's time
is spent on manual tasks

The industry problem



Intelligence gathering
(data management)



Entity
disambiguation



Summary
writing

Challenges of traditional ML/AI



Reading



Writing



Understanding

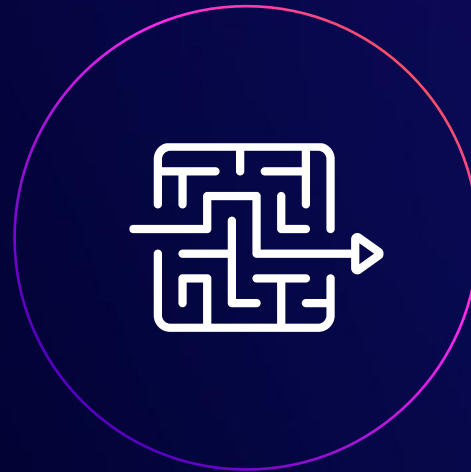
The role of generative AI in solving the problem

AI can generate huge cost reductions and allow investigators to spend their time more effectively doing what they are trained to do – **investigating financial crime**

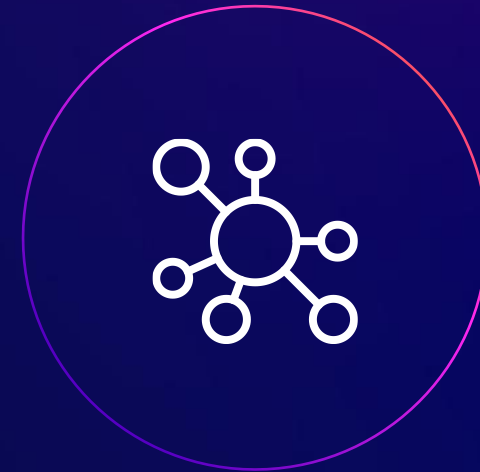
The role of generative AI in solving the problem



**Reduce
manual workload**

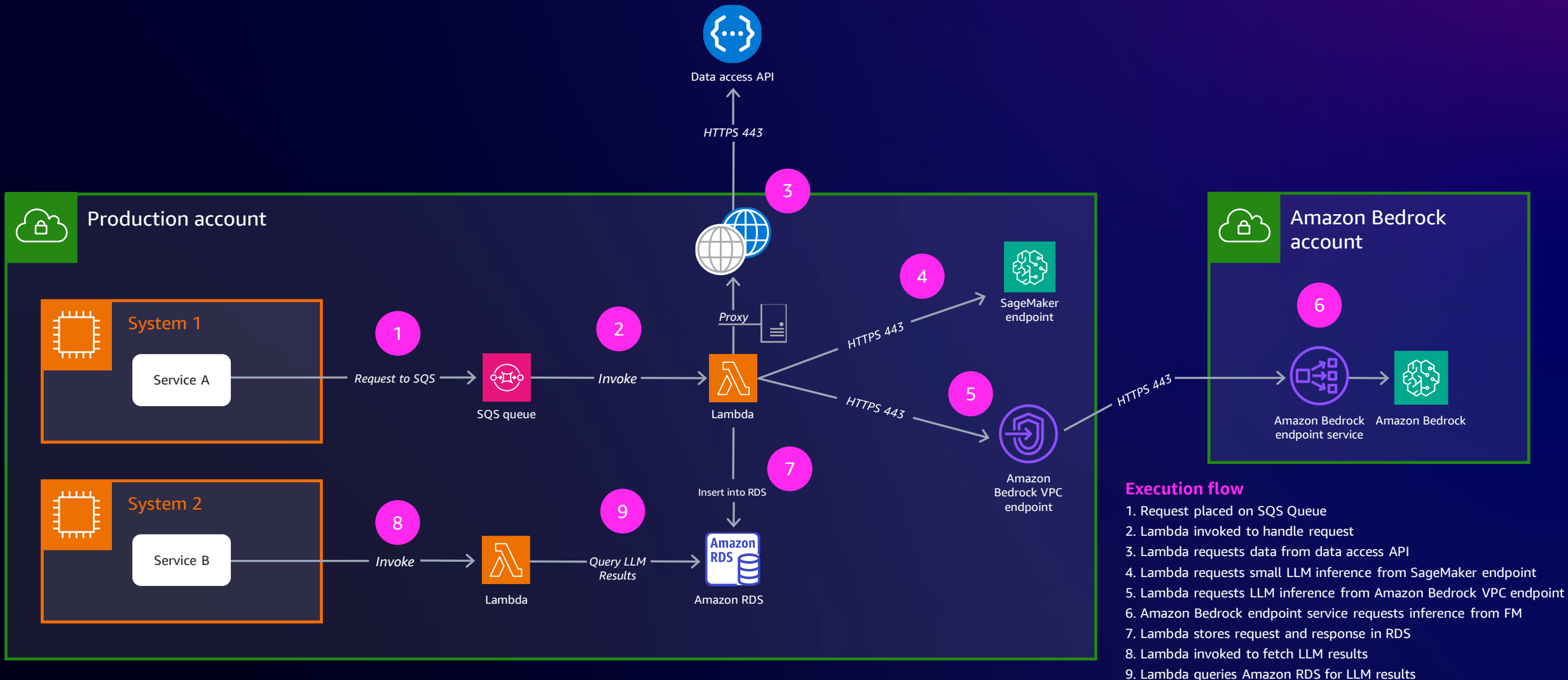


**Expedite
decision-making**



**Utilize
unstructured data**

Verafin's approach



The benefits of Verafin's approach



Batch processing



Small LLM preprocessing

The benefits of Verafin's approach



**83% reduction
of input tokens**

Problems encountered: Hallucinations



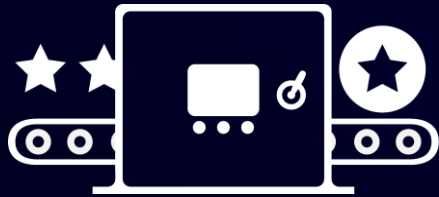
How we overcame

Prompt engineering with
validation and testing datasets



How we overcame

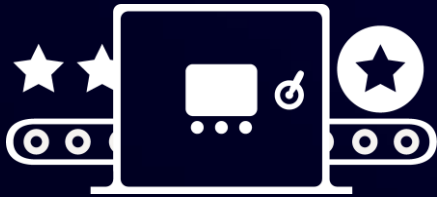
PROMPT ENGINEERING WITH VALIDATION AND TESTING DATASETS



Multishot

How we overcame

PROMPT ENGINEERING WITH VALIDATION AND TESTING DATASETS



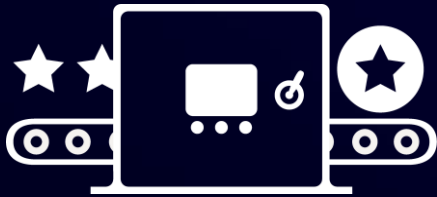
Multishot



**Thinking
step-by-step**

How we overcame

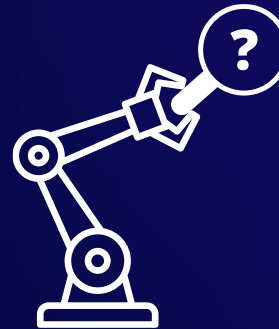
PROMPT ENGINEERING WITH VALIDATION AND TESTING DATASETS



Multishot



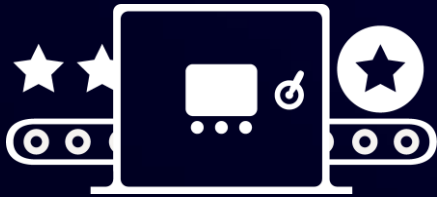
**Thinking
step-by-step**



**Assigning roles
(role prompting)**

How we overcame

PROMPT ENGINEERING WITH VALIDATION AND TESTING DATASETS



Multishot



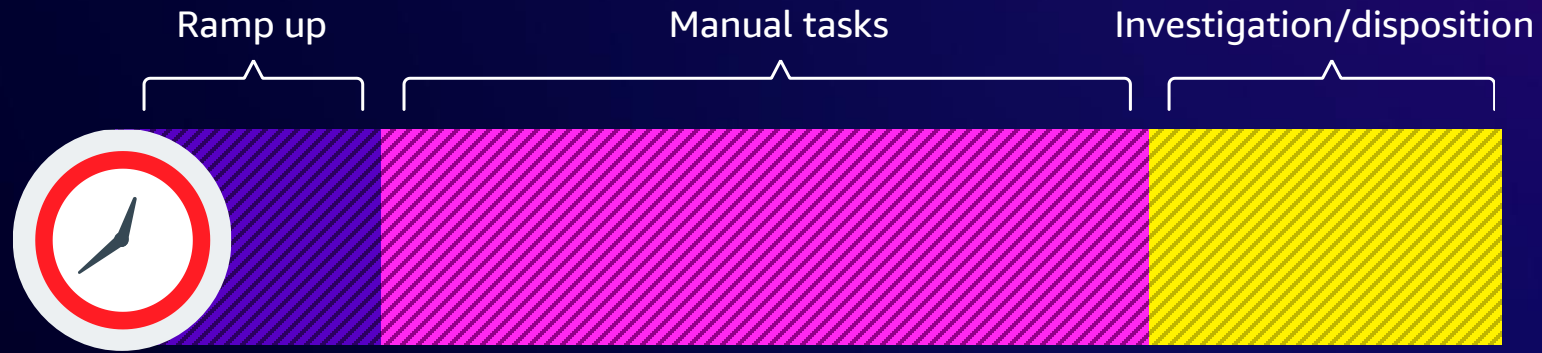
**Thinking
step-by-step**



**Assigning roles
(role prompting)**



**Retrieval-augmented
generation**



up to

60% of investigator's time
is spent on manual tasks



reduced to

5-10% of investigator's time
is spent on manual tasks

Where we are today

Shifting human resources' focus towards fighting crime instead of following manual processes



How NatWest is using generative AI to deliver hyper-personalized customer experiences

Zachery Anderson

NatWest Group



Our journey

WE CHAMPION POTENTIAL, HELPING PEOPLE, FAMILIES, AND BUSINESSES TO THRIVE

We are a leading UK relationship bank in a digital world, combining the best digital experience with access to the best people, to help customers thrive

19 million
customers

16.4m
positive customer interactions

96%
retail sales through digital channels



1
ranked NPS of UK major banks

1 in 4
UK transactions processed by NatWest Payments



Our evolution of AI/ML over the last 3 years means we are well placed to leverage AI at scale

Leverage emerging gen AI opportunities



- >100 use cases identified
- 10 prioritised for initial focus
- Targeting 10x ROI

Scaling up value delivery from AI



- 5x increase in AI/ML models
- Robust model risk controls
- Tangible customer / business value

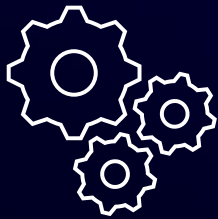
Strong foundational capabilities



- AWS for AI & ML analytics
- Cloud data migration
- 300 data engineers / scientists hired

Generative AI is helping us evolve experiences, delivering customer and business value

Colleagues



- New ways of working
- Upskill on technology and tooling
- Enhance risk frameworks

Customers



- Hyper-personalized communications
- Predictive analysis

Outcomes



- Lower cost to run platforms / functions
- Faster idea to value
- 10x increase in positive customer interactions

We are leveraging ML and generative AI to deliver a step change in positive customer engagement

< 2020

Segment personalization



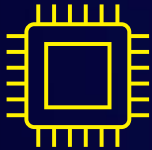
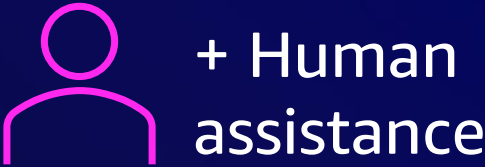
2020 - 2023

Limited individual personalization



2023+

Hyper-personalized



ML personalized insights



NWG Brand Adherence Guardrail Platform

Which campaign would you like to generate and review content?

Know your credit score



NWG Brand Adherence Guardrail Platform

Campaign: Know your credit score

Create Content

- Generate using AI
- Provide human drafted message

Submit

Personalized content

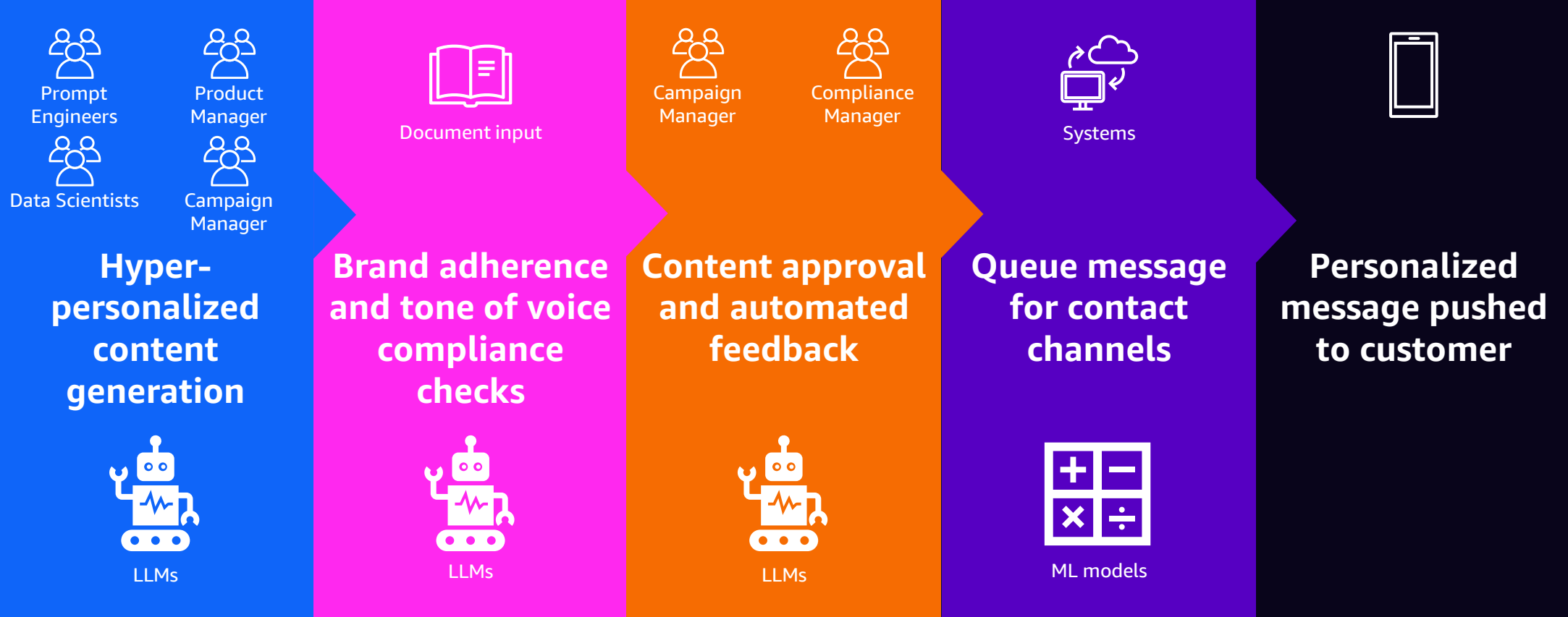
Review

No Content to review

Rewrite messages with advices

Rewrite and Review

Using generative AI to create hyper-personalized brand compliant content to be delivered at scale



We are already seeing significant results from hyper-personalization

>2m

customers
starting to
save for the
first time

900%

increase in
high interest
saving
account
applications

4x

improvement
in **click**
through rate
on messages

Thank you!



Please complete the session survey in the mobile app

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