

The Use of Chatbots and Conversational AI in Scaling Medical Engagement

Presented by the MAPS Digital FAWG

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Educational Objectives

This session provides a learning opportunity for our audience by:

- Discussing the current environmental landscape for conversational AI/Chatbots
- Providing practical learning through a case study presentation on how to implement conversational AI/Chatbots (KPIs, use cases, metrics, learnings)
- Identifying and debating legal and regulatory considerations when implementing conversational AI/Chatbots

Agenda

1. The Case for Change
2. What are Chatbots and Conversational AI
3. Conversational AI in Action
4. External and Internal Considerations
5. Medical, Legal and Compliance

MAPS Resources on the Topic

("chatbot" and "conversational AI" used as search terms)

- **Webinars**

- [Next-Gen Medical Information Leveraging Digital to Enable Self-Service and Omnichannel Experience](#)
- [From Support Function to a Strategic Pillar, Medical Affairs is Defying Convention by Breaking Down Silos](#)
- [Demystifying Artificial Intelligence: What is AI and Why Does it Matter to Medical Affairs?](#)

- **Podcasts**

- [DIGITAL FAWG PODCAST: Automation Opportunities for Medical Affairs EPISODE 1, EPISODE 2, EPISODE 3](#)
- [Natural Language Processing for Medical Insights](#)
- [Medical Information: A Patient Centric Approach](#)
- [Typical Challenges with Moving Digitalization Initiatives Forward for Medical Affairs](#)
- [Adapting to the Virtual Conference Experience P2](#)

- **Elevate Articles**

- [Reimagining Scientific Engagements During COVID-19](#)

- **White Papers**

- [THE FUTURE OF MEDICAL AFFAIRS 2030](#)

- **eLearning Module**

- [Essential Concepts in Patient Centricity](#)

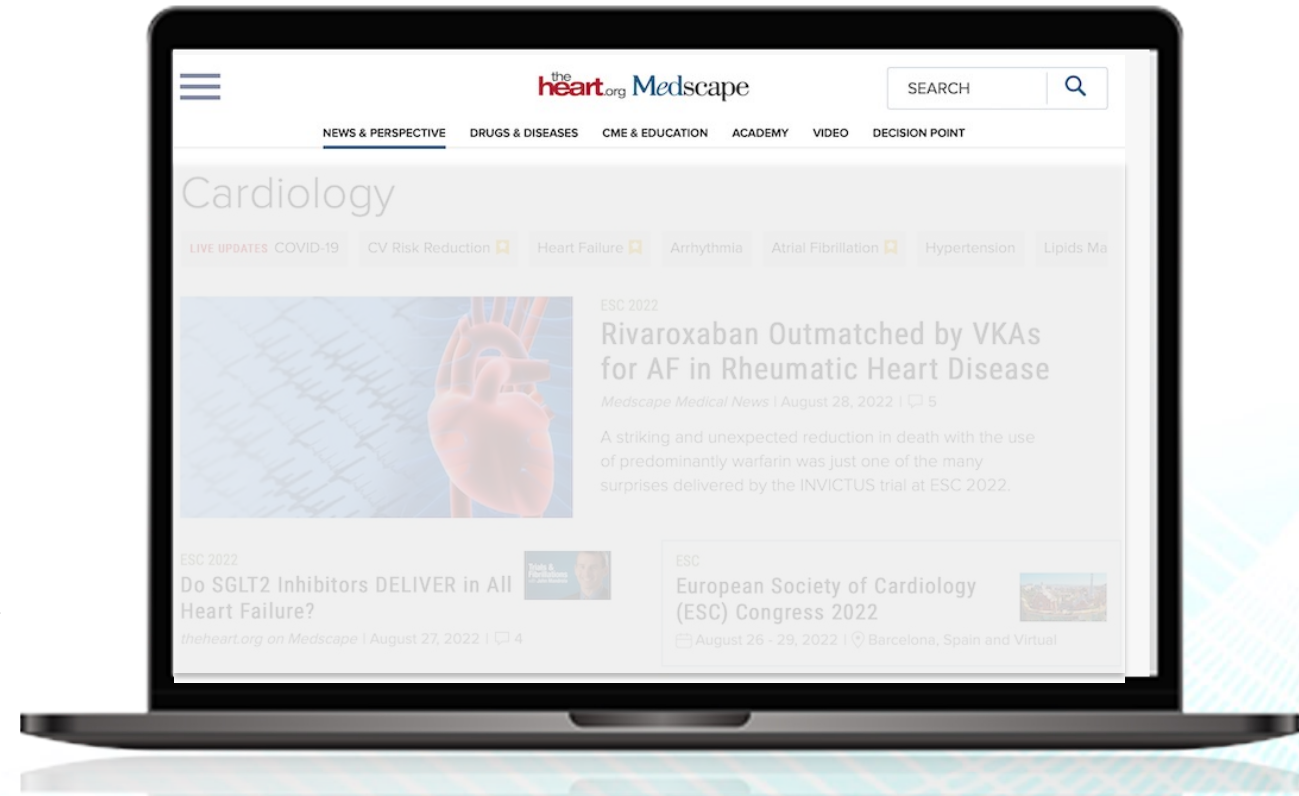
1. The Case for Change

Pharma-HCP engagement post pandemic

Era of the “Always On” Customer

Customers are search oriented

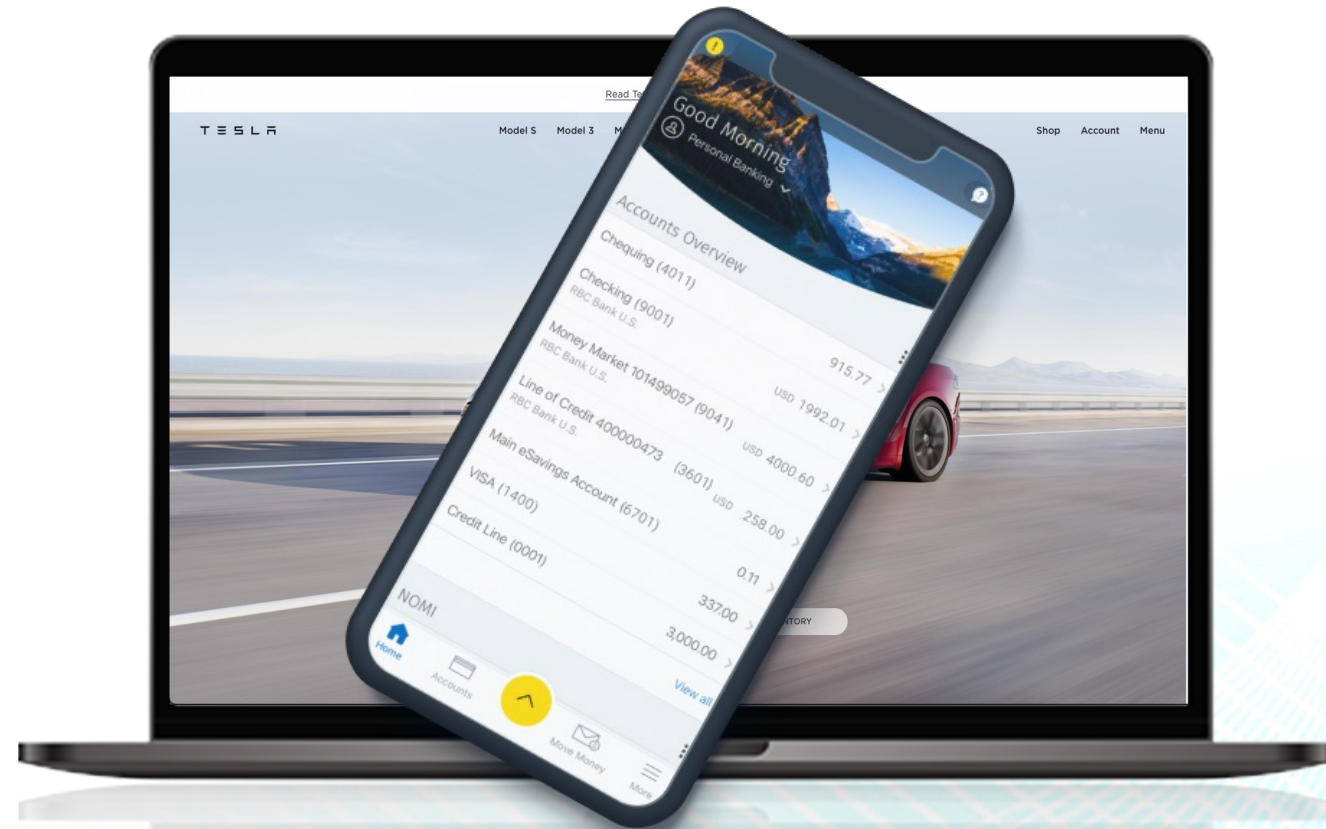
- Digital is not sufficient
- Search as the go-to destination and benchmark for ease of use
- Ask-answer, not search-scroll
- What value can a manufacturer bring beyond search engines, e.g. educational, personalized and off-label content, hand offs to experts, etc.



HCPs are in the Driver's Seat

Frictionless engagement

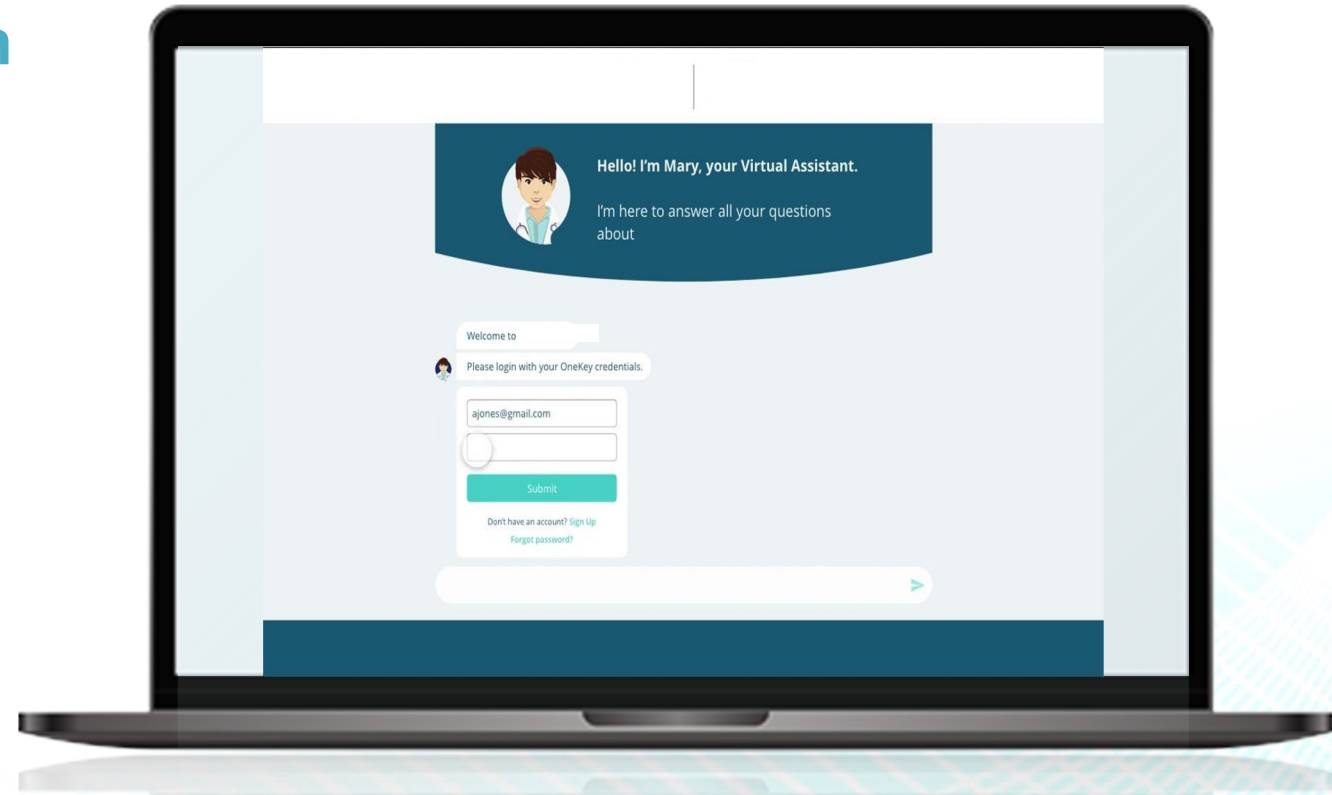
- Digital-first, digital fast experience
- Self-service 24/7/365
- Still want access to humans – when needed
- Be there in moment of need, from owned to third-party assets



Gaps in What Customers Want and What We Offer

HCP needs for medical information

- Primary point of entry to the business
- Rich, broad, deep content
- Short responses and long-form content
- Product, condition and services
- Text, rich media & voice/IVR



Moving from Simple Digital to AI+Humans Support

Pharma at its best

- Speed, 24/7 with expert support
- Simplicity, power, personalization
- Focus on virtual and hybrid models
- Enable global scalability
- Drive Medical-to-Medical innovation
- Local owns “final mile” CX



2. What are Chatbots and Conversational AI

Pharma-HCP engagement post pandemic

Why Chatbots and Conversational AI Now?

- **Conversational AI allow a computer or mobile device to mimic and carry out conversational experiences with people**
- A chatbot is a program that can (but doesn't always) use conversational AI
- AI enables devices to understand conversational inputs - whether text or voice - and in turn provide an expert approved response that feels completely human and personalized, 24/7, at moment of need



A Chatbot is NOT Conversational AI



Basic Chatbot

You must follow a scripted conversation path, with if/then logic it delivers automated answers within predefined rules and fails if it cannot proceed to the next part of the dialogue

Button Driven and Transactional (static input/output)

Simple, linear and structured conversations

Low sophistication of product/service (click to self-serve)

Basic data & metrics



Conversational AI Agent

You tell the cAI Agent what information you want or need, powered by NLP, NLU & ML, it answers dynamically with efficiency & accuracy and can react to steer a conversation

Open Text and Conversational (uses AI/ML and taxonomies)

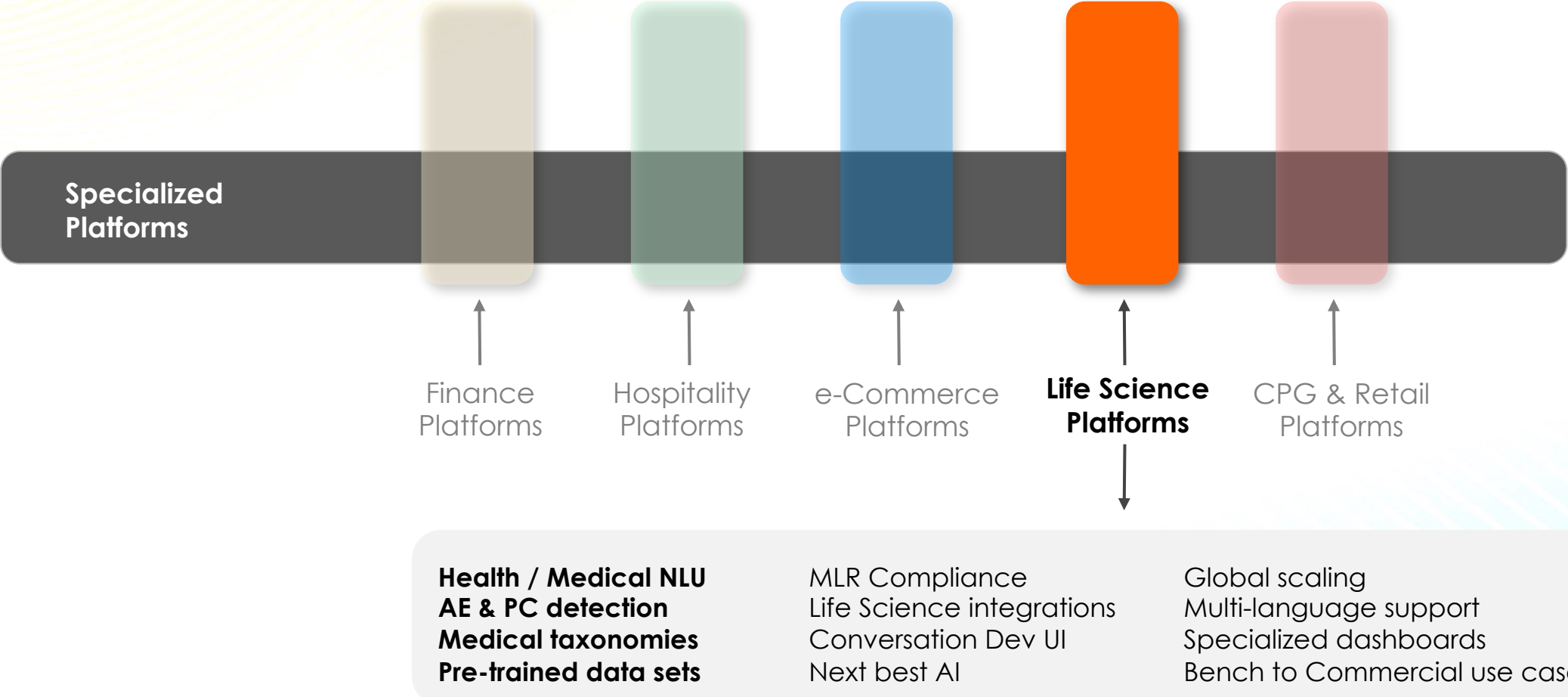
Human-like, personalized and fluid conversations

High sophistication of product/service (Med Info, e-detail, PSP...)

Rich data, RWE & Insights (SA, MVOC, Ratings, References)

Improved customer experience & actionable insights

Banking is Not Hospitality is Not CPG is Not Pharma



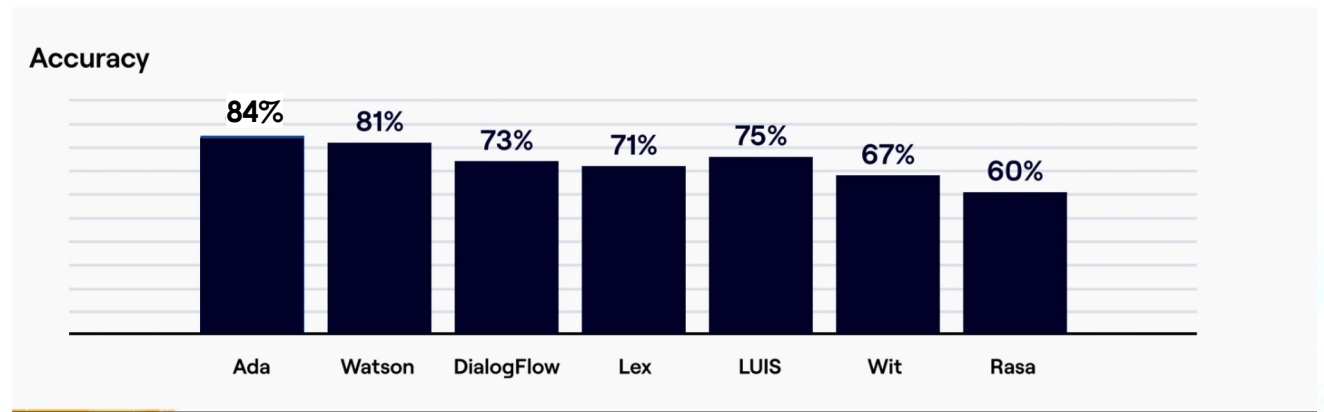
Specialization Matters in Pharma

Table 1. NLU performance of Vertical versus Horizontal platforms

NLU Engine	Accuracy
Life Sciences NLU Engine (vertical)	98%
RASA (horizontal)	77%
Google DialogFlow (horizontal)	70%

* Cross validation testing with 100M training data points

Table 2. NLU performance across Horizontal platforms



* Excludes off-label and complex medical content

3. Conversational AI in Action

From development to deployment

Customer-Driven Need

What User Experience do you want to create?

- Research
- Benchmark industry best and emerging practices
- Customer Ad Boards
- Understand – and socialize –customer wants and needs



Developing Business Case

What do you want to cause?

- Define ambition and be ambitious!
- Plan strategically, and work the plan
- Establish transformation team, from exec sponsor to peers to tech partners
- What does success look like



Assessing Technologies

How will the technology support your strategy?

- Leverage transformation team
- Do a landscape review, internally and externally
- Be realistic about buy versus build
- Ensure appropriate Medical focus
- Build for growth
- More than technology, i.e., corresponding people and process transformation



Building for the Future

Scaling and Integration

- Consider portfolio and market growth paths – and leverage
- How to integrate with existing and future systems, processes, and HCP touch points
- From Medical Information - Medical Affairs - Medical Science Liaisons
- Manage data, don't just collect it



Socializing and Educating Business

Communicate, Communicate, Communicate

- Senior Management
- Medical Affairs Stakeholders
- Legal, Regulatory, and Compliance
- Safety
- IT/Digital Innovation Teams
- Local Market Teams
- Commercial Colleagues



Process Integration

People + Process + Technology

- People role in development and maintenance
- Conversational content development in/over time
- How to integrate AI-first engagement and escalations to Medical Experts
- How to integrate conversational AI with CRM, content management, safety and reporting systems



4. External and Internal Considerations

Continuous optimization and growth

Continuous Learning and Improvement

Adaptable learning systems

- Conversational AI by itself
- The integration of AI and humans for best customer experience
- Rapidly evolving capabilities
- Data & insights driving Medical-to-Medical innovation



Leveraging across the organization

What's next

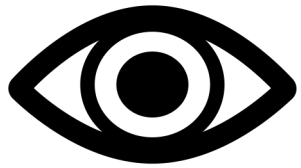
- Other customer segments, e.g., patients
- Other markets, e.g., countries, regions
- Other lines of business, e.g., Commercial
- Other applications, e.g., internal training



5. Medical, Legal & Compliance

Dotting i's and crossing t's

Consideration



**Perception
Management**



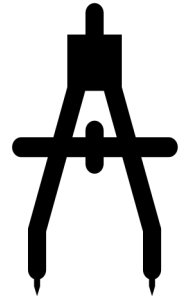
**Regulatory
Considerations**



**Quality
Management**



**Medical
Review**



**Scope
Creep**

Summary

Medical Affairs in 2022-23

1. The recovery is digital
2. Self-service is key to meeting customer needs
3. Conversational AI streamlines customer engagement, externally and internally
4. Bridge conversational AI to human teams
5. Think local and global
6. Ask for help – from CX to IT to business case
7. Same compliance requirements apply but issues are unique