

AI and future psychological practice

The Rise of the Chatbots: Promise or Peril, Friend or Foe

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Co-Founder, XR Health Alliance



Who am I?



NHS Mental Health Leader

Commissioner and Provider of NHS Mental Health Services



Digital Leadership

London Digital Mental Health Lead NHSE & Director of Innovation



National Incident Director

Led the Grenfell Health and Wellbeing Service



Managing Director AI Mental Health Startup

Led the scale of Wysa in the UK NHS



Govt. Health Innovation Advisory Roles

Advise the UK and UAE govts on digital, AI and Immersive Tech





The Growing Mental Health Crisis

1 in 4

Face Mental Health Issues

WHO estimate of global prevalence

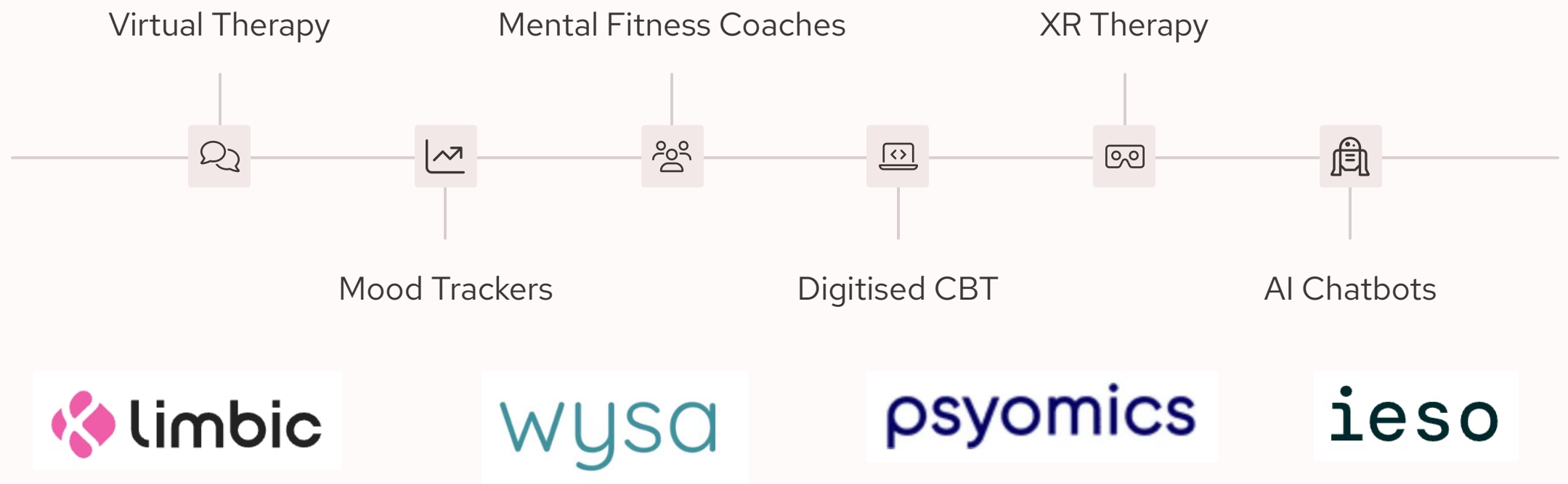
970M

People Affected

Living with a mental disorder in 2019 (1 in 8)



The Rise of Digital Mental Health Tools

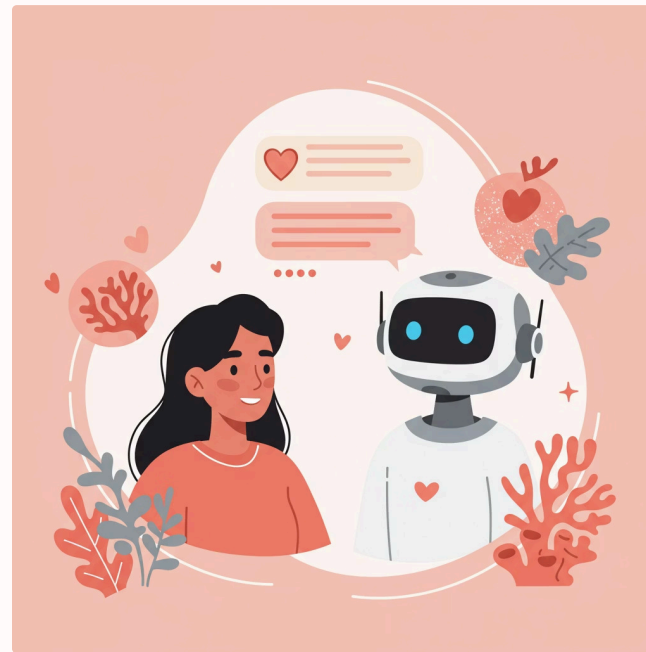


Understanding AI Chatbots in Mental Healthcare



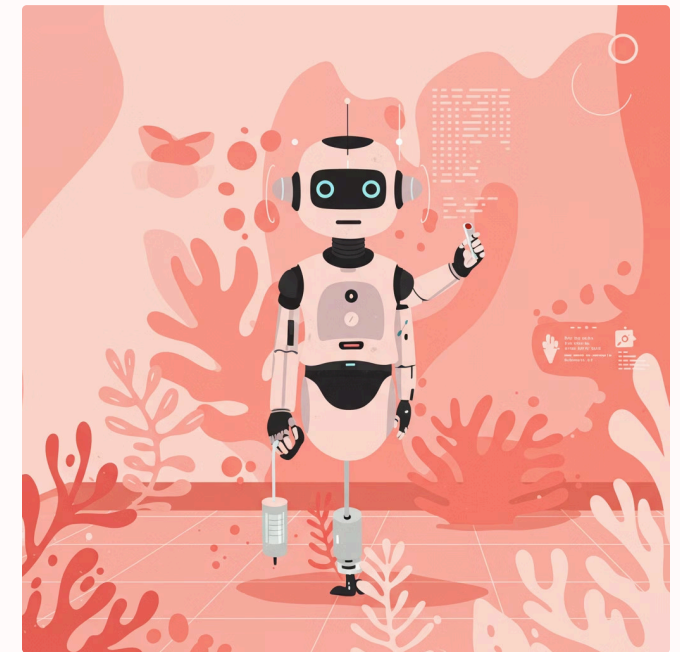
What are AI Chatbots?

Digital agents designed to simulate conversation with users.



Closed-Loop AI

Models operate within predefined rules and scripts, offering controlled and predictable interactions. So far, we have built closed-loop models offering a safe solution for AI in Mental Healthcare. Examples include early versions of Wysa and Limbic.



Generative AI

Models like Gemini, Claude, Pi, ChatGPT are Large Language Models (LLMs) trained on massive datasets, enabling them to generate novel and varied text. Some market entrants like Mindbay are moving away from closed loop to generative AI.

The AI Chatbot "Friend" Argument: Benefits and Advantages

Accessibility

On-demand support, overcoming waitlists, limited hours, remote access.

Affordability

Significantly lower cost compared to traditional therapy

Anonymity

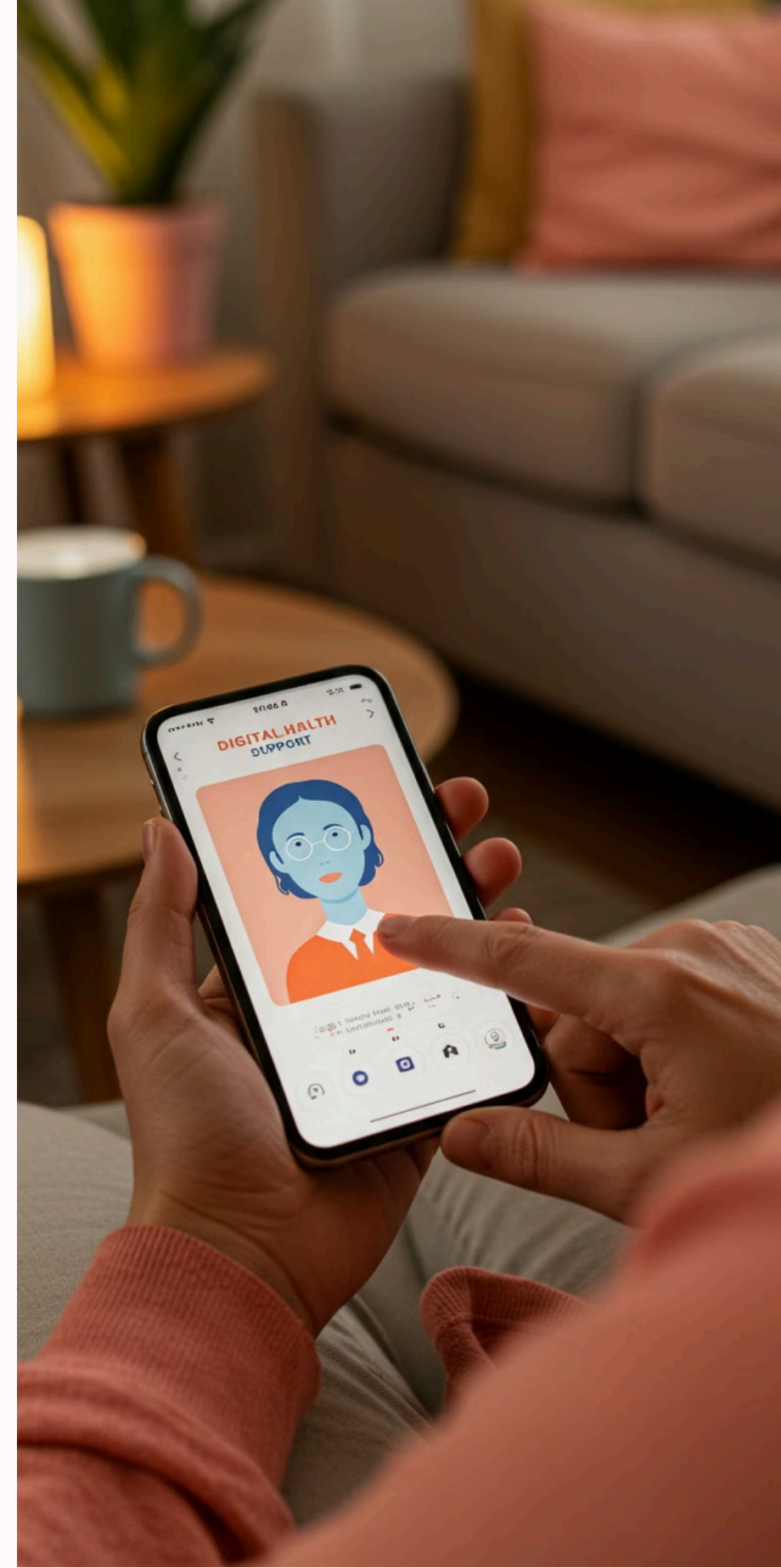
Reducing stigma and fear of judgment, acting as a first step.

Integration

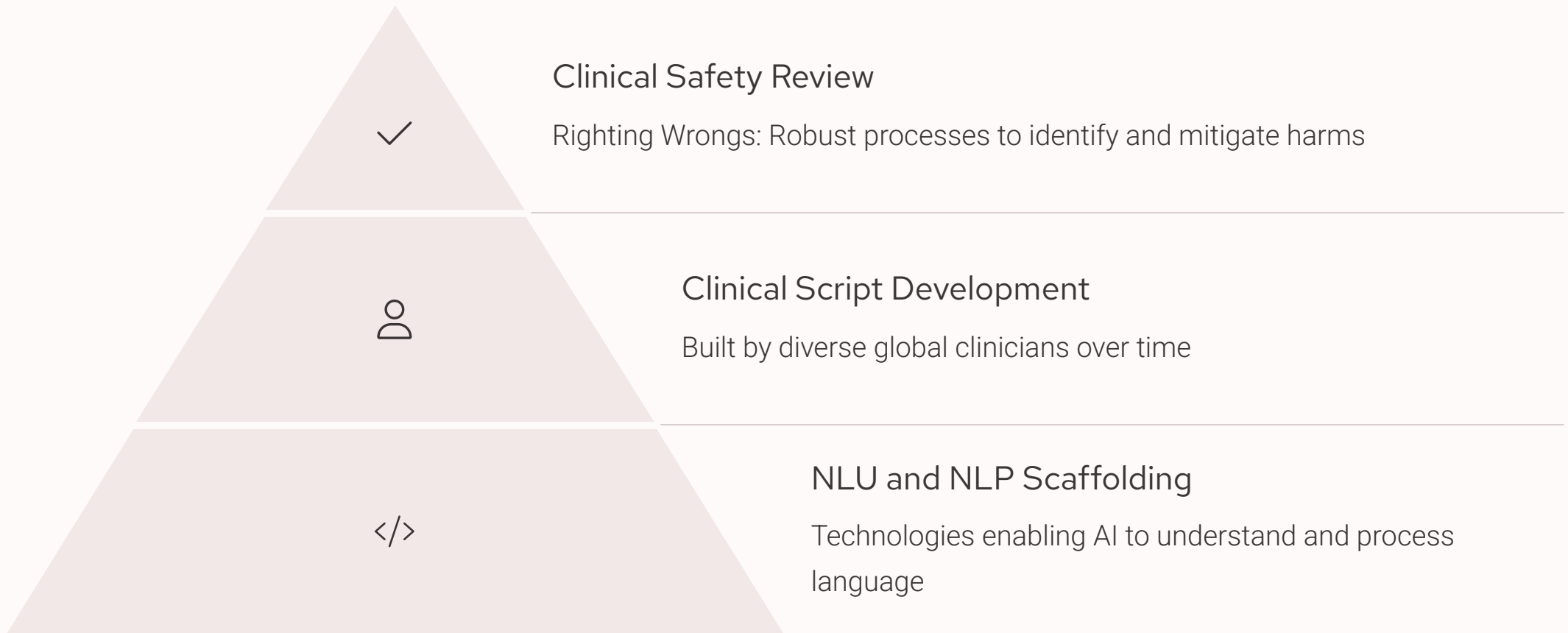
Potential to enhance traditional therapy outcomes.

NICE Guidance Clinical Congruence

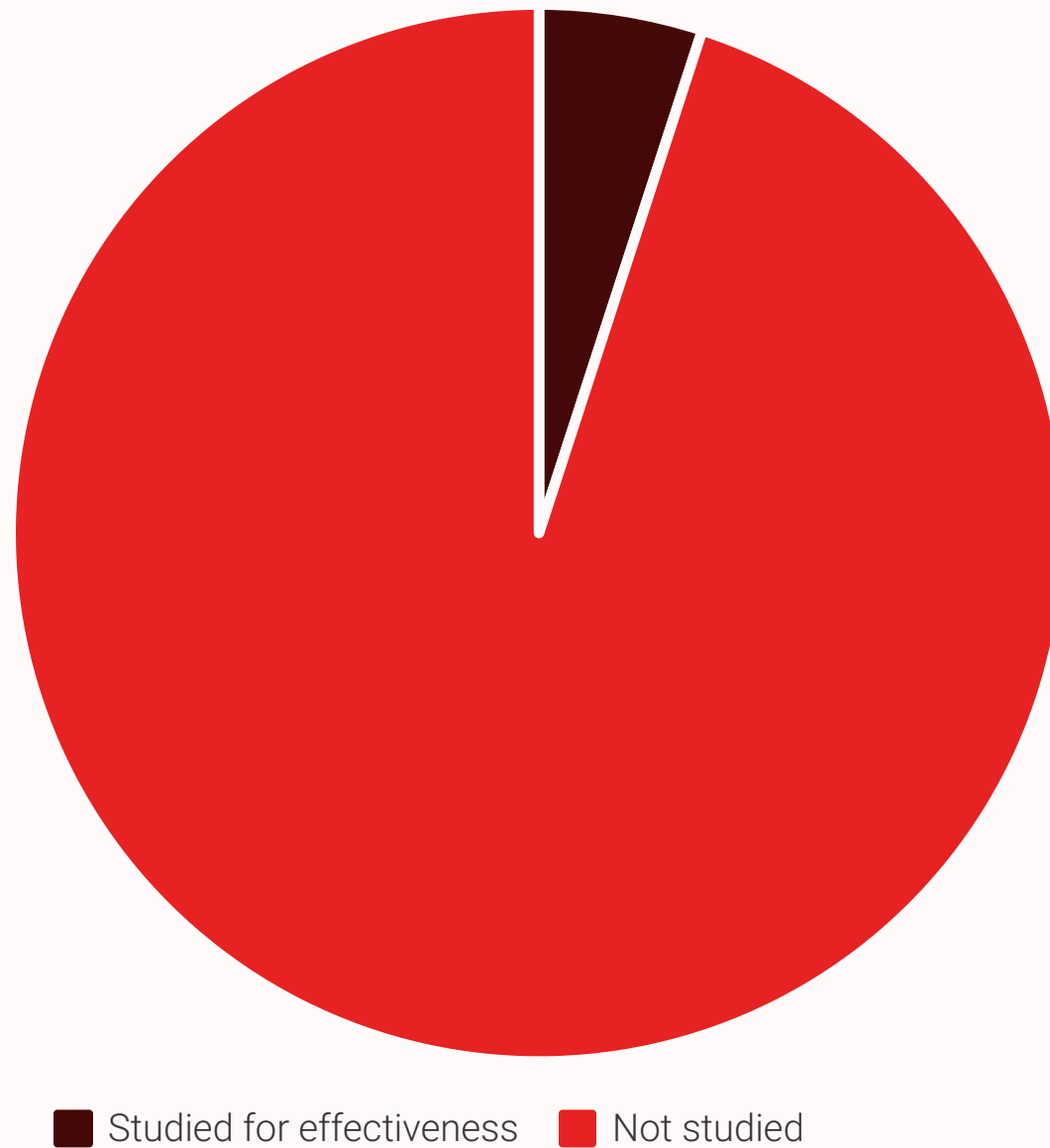
'Stick to the Script' - David Clark



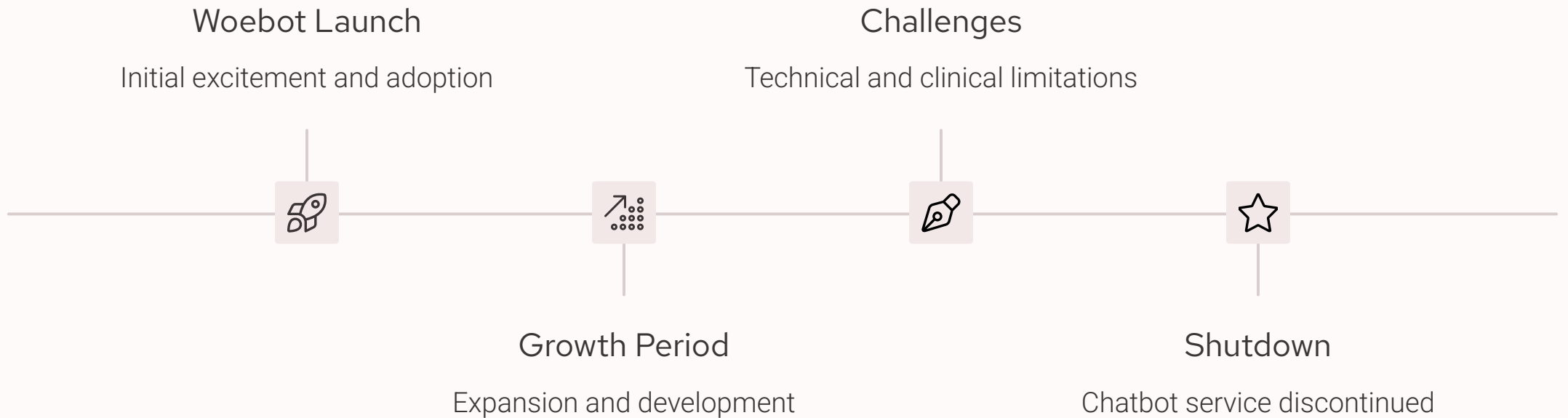
The "Friend" Argument: Safe Approaches to Replicable Treatment options



The "Foe" Argument: Incomplete Evidence & Efficacy of AI Chatbots



A Case Study: The Rise and Fall of a Closed Loop AI Chatbot - Woebot



The "Foe" Argument: Transparency and the Nature of Generative AI LLMs

What is an AI Large Language Model (LLM)?

Gemini, Claude, Pi, ChatGPT etc are all large language models (LLMs), which are artificial intelligence (AI) systems that are trained on massive datasets of text and code. They can generate text, translate languages, write different kinds of creative content, and answer your questions in an informative way.

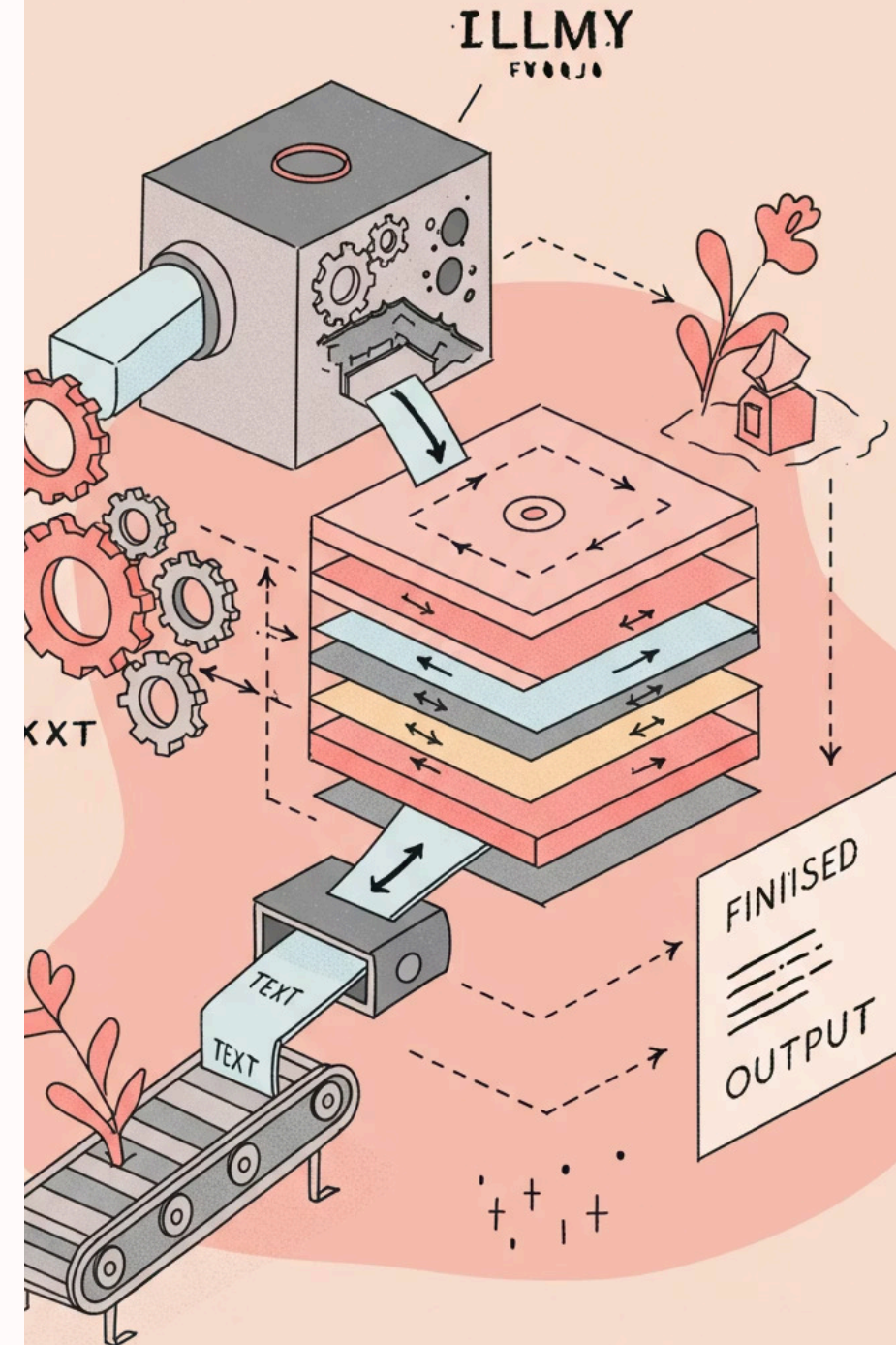
People will use them for support if they are or aren't safe!

How LLMs Work

These models process and generate text based on patterns learned from vast amounts of training data.

Transparency Concerns

Generative AI models often lack transparency in how they arrive at outputs compared to the rule-based nature of closed-loop systems.



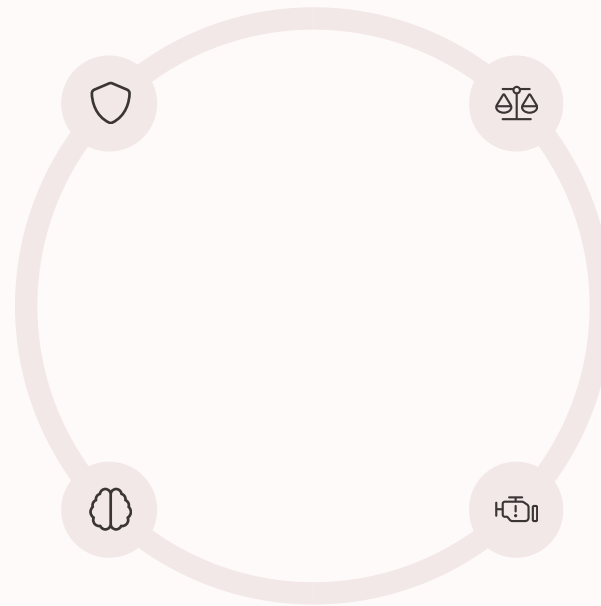
The "Foe" Argument: Privacy, Safety, and Inappropriate Interactions with LLMs

Privacy - GDPR

The massive datasets used to train LLMs raise significant privacy concerns under GDPR.

Hallucinations

LLMs sometimes generate plausible but false or misleading information, which can be harmful in sensitive contexts.



Safety - Training Data Bias

What data set was used to train the algorithm? Bias in training data can lead to unfair or harmful outputs.

Inappropriate Interactions

Negative or Abusive Responses: LLMs can generate negative or abusive responses if exposed to such content in their training data.

The Regulatory Landscape (or Lack Thereof) & The Emergence of LLMs in Research



Limited Regulation

Only six FDA-approved apps as of November 2024



User Difficulty

Identifying trustworthy and effective apps



Promising Research

Evidence of first AI Mental Health LLM passing an RCT with good results.
But what of clinical safety, hallucinations etc?

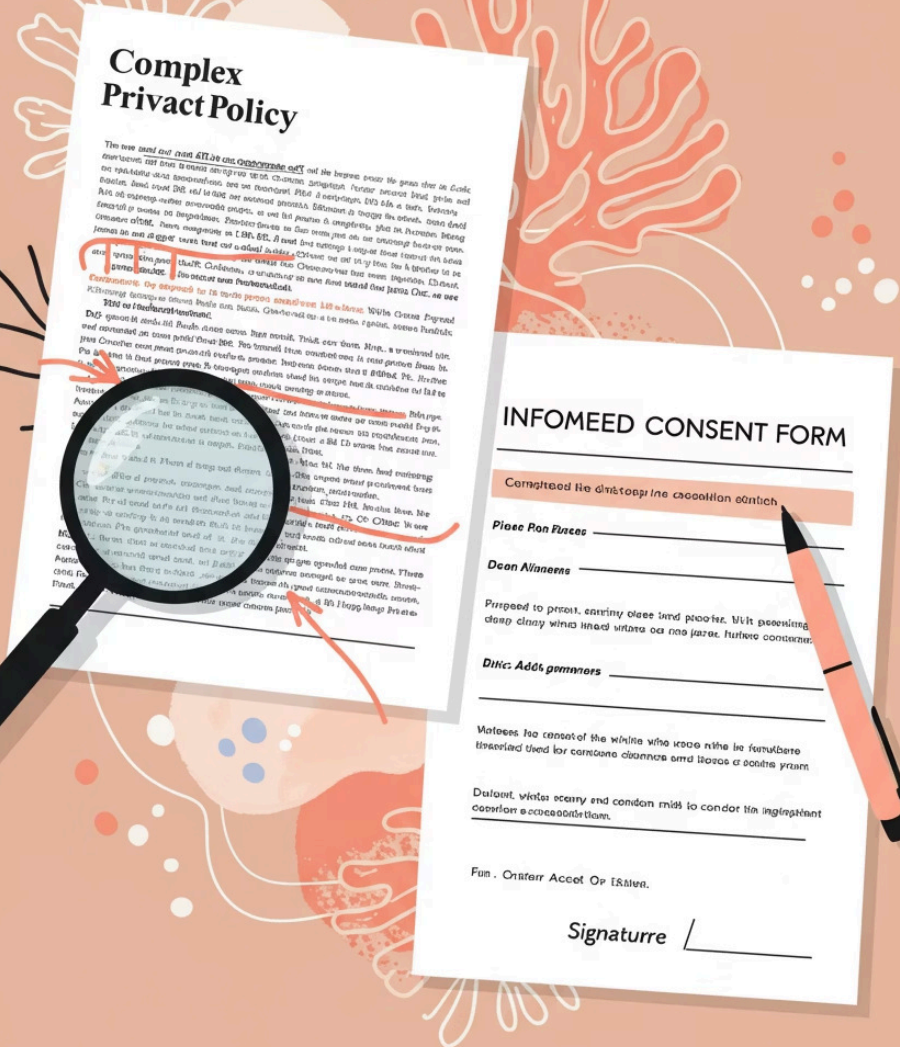


Standards Needed

Established frameworks for AI in mental healthcare

Link to NEJM article: <https://ai.nejm.org/doi/full/10.1056/Aloa2400802>.

The Privacy Policy Problem



Hidden Policies

Complex terms buried in lengthy documents



User Confusion

Difficulty understanding how data is used



Healthcare Comparison

Contrast with informed consent in traditional healthcare



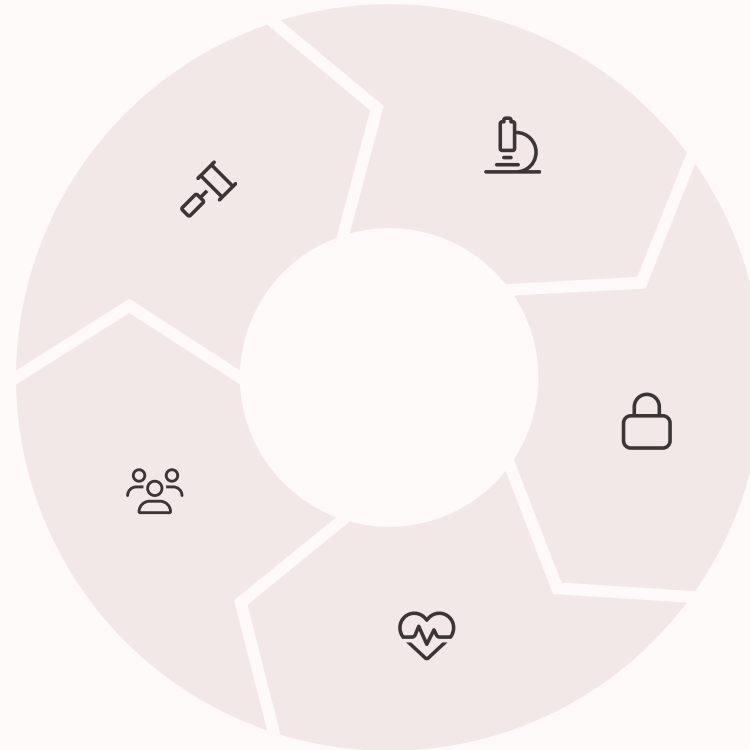
Need for Protection

Call for stronger protections and transparency

The Path Forward: Towards Responsible Innovation

Stricter Oversight
Urgent need for guidelines and standards

User Empowerment
Resources for informed choices



Research Emphasis

Rigorous studies on efficacy and safety

Privacy Protections

Strong regulations like GDPR

Clinical Safety

Established protocols and ongoing review

Conclusion: A Balanced Perspective

Potential

- Increased accessibility
- Lower costs
- Reduced stigma
- Integration with traditional care

Challenges

- Evidence gaps
- Safety concerns
- Privacy issues
- LLM-specific risks

Path Forward

- Prioritise user wellbeing
- Ensure clinical safety
- Promote responsible innovation
- Develop appropriate regulation

Thank You & Questions



Thank you for your time and attention throughout the presentation.

Please feel free to ask questions or to reach out to connect further.

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