From Pilot to Production: ***Building Trust in Agentic AI for Pharma R&D***

April 20th, 2026

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progress *together*
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R&D pressures in 2025

$190B

R&D costs per annum

25%

of revenue

14+

years median launch time

Source: IQVIA Institute Global Trends in R&D 2025

The promise of AI: unlocking information

71%

believe AI will have a transformative effect[1]

98%

believe literature synthesis is the killer app[1]

40%

capacity savings from Agentic AI[2]

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[1] Attitudes to AI, Elsevier, 2024
[2] The next innovation revolution—powered by AI, McKinsey, 2025

The AI paradox: 80% companies using AI, 80% report no benefit

95% of proprietary GenAI pilots fail [1]

Trust in data

Trusted source

Rights compliance

Integration

Trust in technology

Provenance

Traceability

Transparency

1. MIT: Why 95% of Enterprise AI Investments Fail to Deliver (The Gen AI Divide: State of AI in Business 2025, 2025)

The AI trust gap

84% using GenAI in R&D

but only **22%** trusting it (1)

19.9% citations fabricated in GPT-4o lit reviews

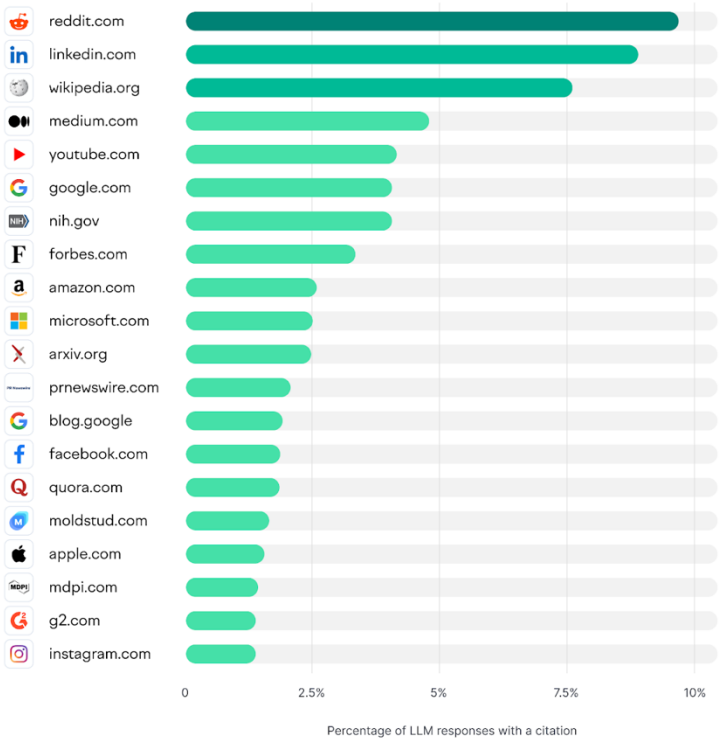
29% in less familiar or specialised topics

45.4% "real" citations had bibliographic errors

2/3 of references **fabricated or inaccurate**

Source: JMIR Mental Health, Nov 2025 (DOI: 10.2196/80371)

Top Cited Domains on LLMs (ChatGPT, Google AI Mode, Perplexity): October 2025



Based on a Semrush study of 230K prompts conducted in October 2025

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1. Confidence in Research | Elsevier (Corporate Researcher of the Future, 2025)

Why general-purpose AI tools are not yet fit for R&D

Lack Transparency

- Black box, no citations[1]
- Nearly 2 in 3 citations hallucinated or with errors[2]
- Satirical posts presented as legitimate sources[1]
- **Retracted research** rated as ‘word-leading’[3]

Erodes critical thinking

- Inflated user trust, regardless of the accuracy[1]
- Creating an **illusion of authoritativeness**[1]
- Potential for sycophantic responses[1]

Privacy & security issues

- Widespread use, 84% of corporate researchers use Gen AI tool[5]
- **User inputs being used to train models**
- Ensuring security, privacy and handling of confidential information

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1. The Era of Answer Engines (Sept 2025)
2. https://mental.jmir.org/2025/1/e80371 (Nov 2025)
3. Does ChatGPT Ignore Article Retractions and Other Reliability Concerns? https://onlinelibrary.wiley.com/doi/10.1002/leap.2018 (August 2025)
4. Towards Understanding Sycophancy in Language Models (May 2025) 2310.13548
5. Confidence in Research | Elsevier (Corporate Researcher of the Future, 2025)

Responsible AI is Elsevier's number 1 priority

We consider the real-world impact of our solutions.

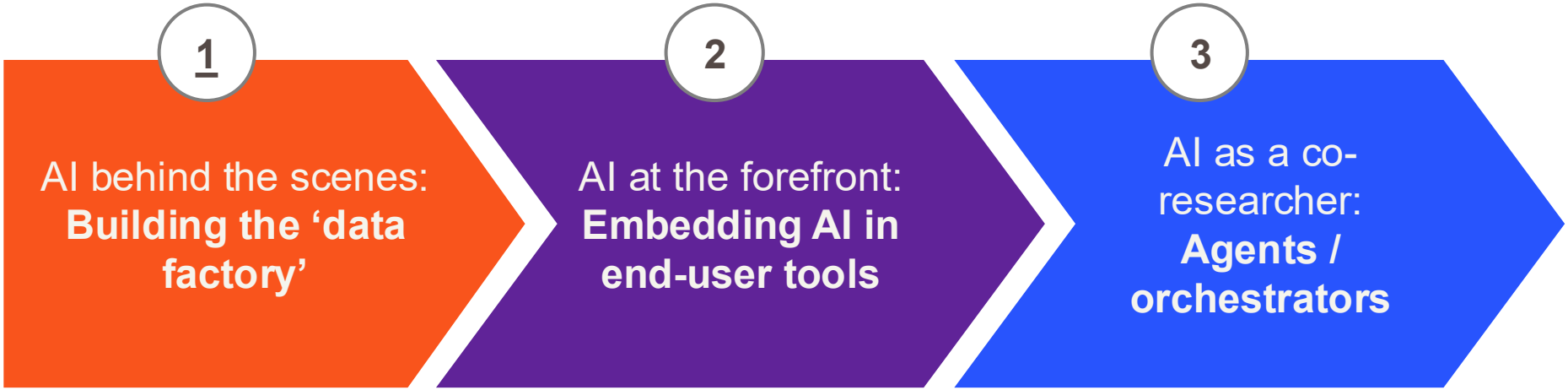
We take action to prevent the creation or reinforcement of unfair bias.

We can explain how our solutions work.

We create accountability through human oversight.

We respect privacy and champion robust data governance

Key phases in our AI journey

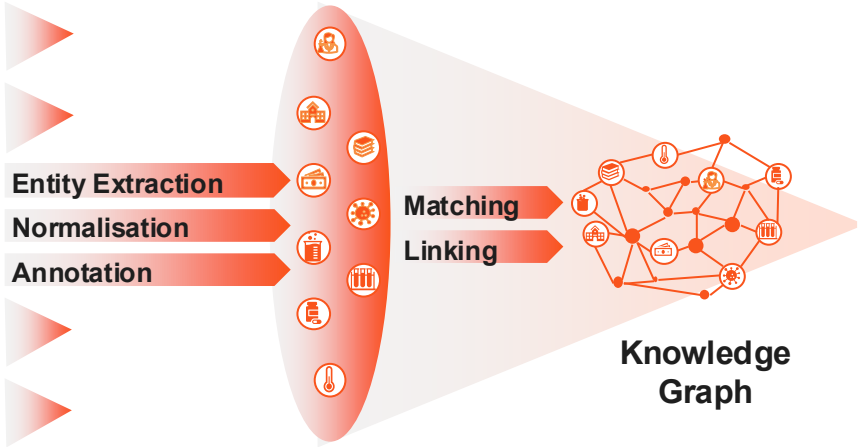


Building the data factory: Turning foundational content to insights

Data Sources

- Full text journal articles
- Book Chapters
- Clinical trials data
- FDA documents
- Drug databases
- Biomedical data
- Patents
- Conference proceedings

Data Extraction, Enrichment, Linking



Sample Insights

- Relationships between biological entities
- Potential adverse events
- Biomarker discovery
- Relationships between chemical structures and biological effects
- Toxicology models
- AI predictions (Multiple use cases)

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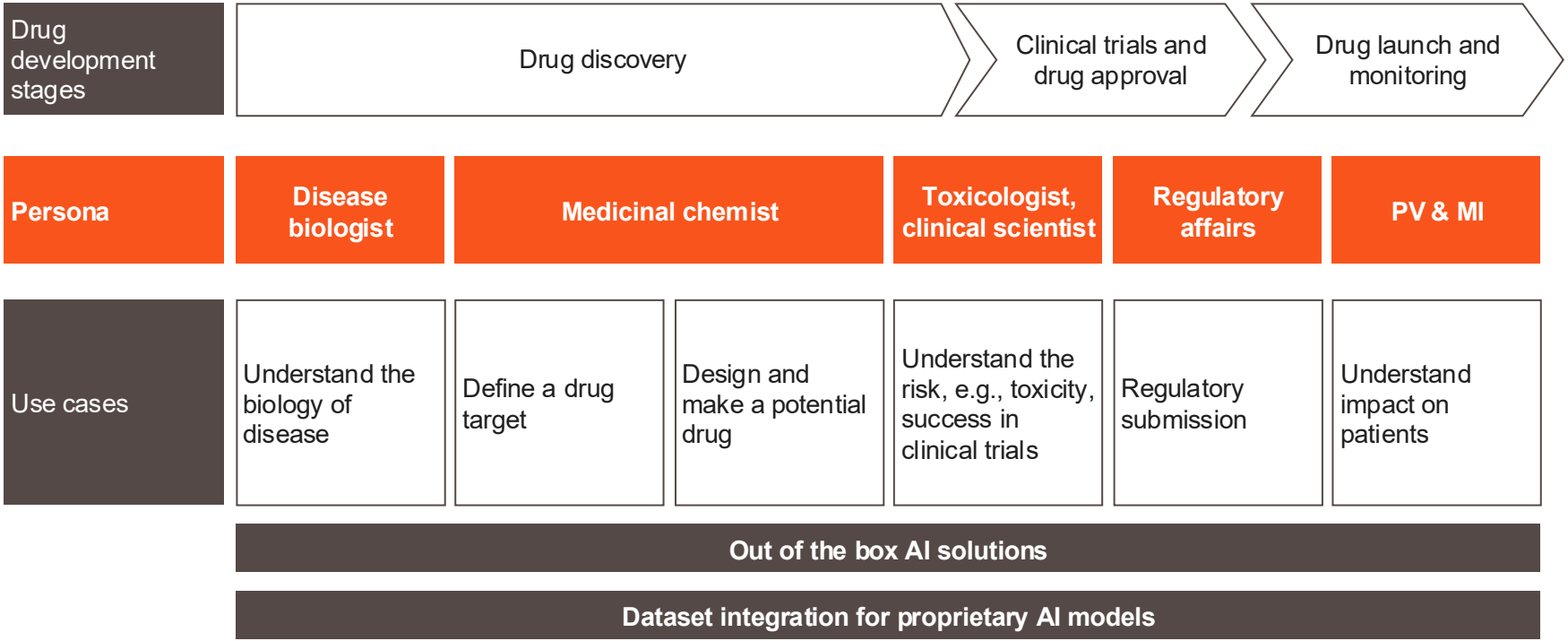
Phase 1: AI behind the scenes: **Building the 'data factory'**

Fitting use cases and processes

Key use cases throughout the drug development process



Phase 1: AI behind the scenes:
Building the 'data factory'

AI in our end user tools: Enhances efficiency, productivity & quality

Improve workflow

*I'd rate these features a solid **9 or 10** for how much they enhance my workflow*

Director Medical Affairs,
Leading biotech

*Highly valuable … Research that normally takes **days is done in hours***

Research Scientist, Large pharma

Save time and improve productivity

*In **two minutes** … we can do what normally takes one hour [using other available sources]*

Medical Affairs Lead,
Large Pharma

***Saves >50% of time** we spend answering physicians' questions*

Medical Affairs Manager,
Large Pharma

Improve the quality and depth of research

*I estimate I've **increased my paper reading from 2-3 to nearly 10 per week**, enhancing both the quality and depth of my research*

Scientist,
Leading biotech

Next problem to solve: Connecting data silos to better support drug discovery efforts

The big issue – life sciences insights are accessed in disparate ways for distinct use cases, from multiple sources and products – they are not interconnected

Why is this an issue?

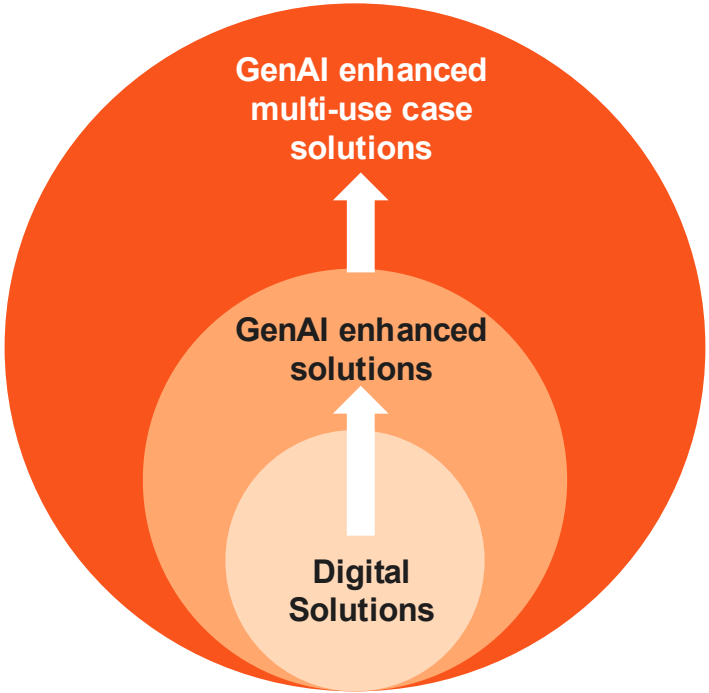
Many drug development problems in **require data from multiple sources**

Researchers **need to rapidly synthesise** only the most pertinent insights from this complex landscape to **guide hypotheses / decisions**

Users of focused solutions **miss critical insights** from adjacent disciplines and **miss scientific connections** across disciplines

Researchers and decision makers in different groups **need a holistic view to drive collaboration and decision making**

Next: Deploying generative AI across multiple content sets to deliver increased value



- Faster from insight to impact
- Less friction
- Higher efficiency
- Shorter time to market

Phase 3: AI as a co-researcher:
Agents / orchestrators

LeapSpace is Elsevier's next-generation AI-assisted workspace that delivers publisher-neutral insights to help researchers move faster from ideation to impact while safeguarding *research integrity*, *transparency* and ***trust***.

Thank you

Learn more

Presentation – *From Pilot to Production: Building Trust in Agentic AI for Pharma R&D* – **Available *Via The Link***

Talk more

Elliott Parris, Advanced Data Solutions Manager, EMEA

Rosa Ambrosio, Senior Account Manager, South Europe

Let's talk
Book a meeting
via the link

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