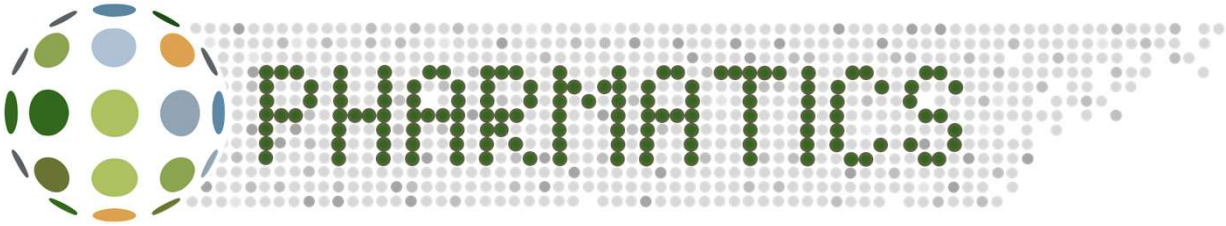



Pioneering AI for Big Biomedical Knowledge

# ACCELERATING AND IMPROVING DATA-DRIVEN BIOMEDICAL R&D

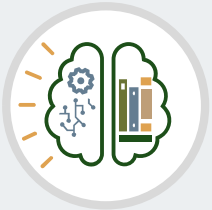
PHARMATICS

# COMBINING DATA WITH VAST AMOUNTS OF BIOMEDICAL EVIDENCE

to enable predictive, preventive, personalized health

**Augmenting big data with BIG KNOWLEDGE**

## SERVICES



Harmonized and accessible knowledge and evidence

## PROBLEMS WE SOLVE

Facilitating research, care, and knowledge sharing

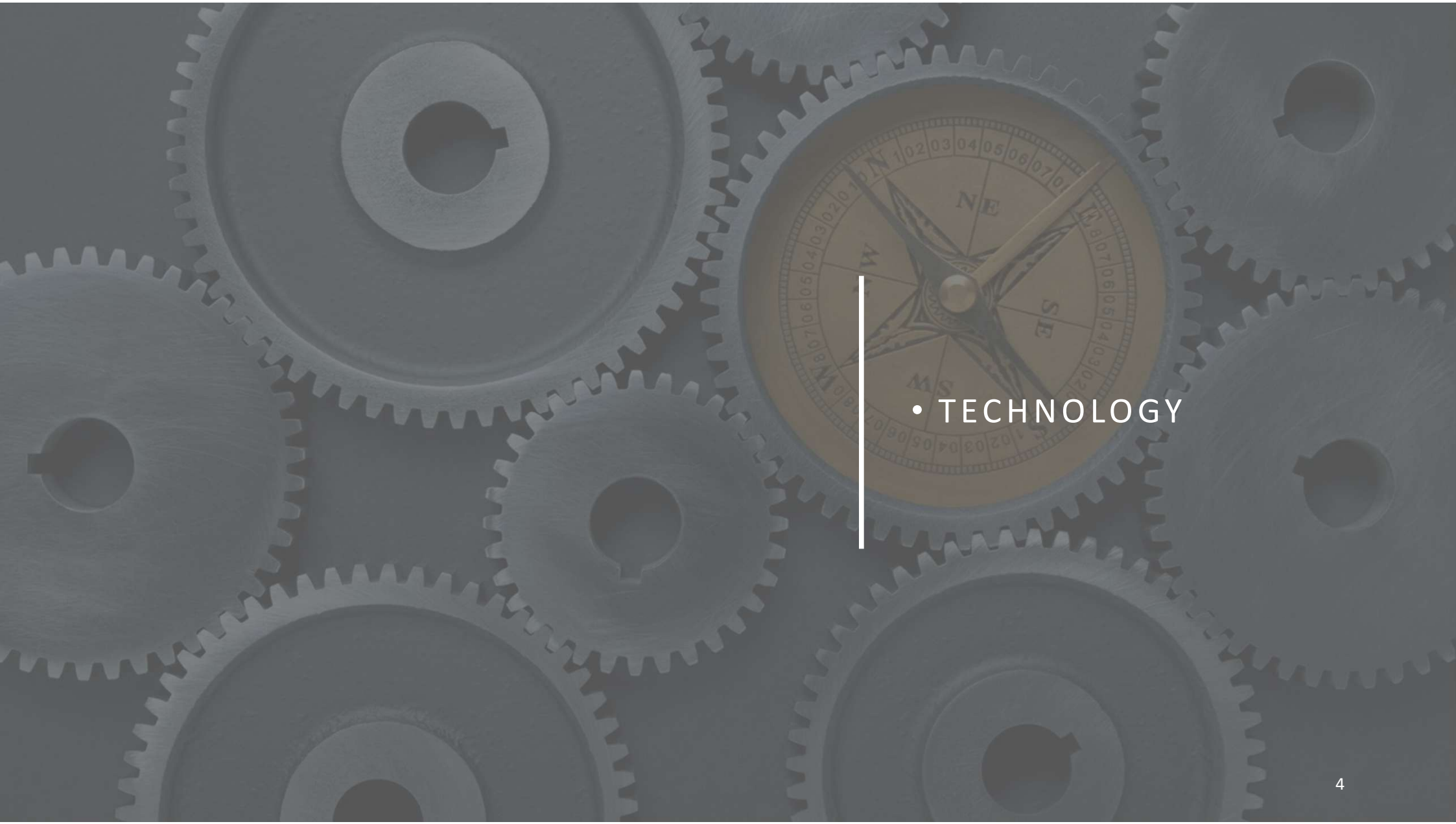
## OUTCOME

Rapid innovation and better care through knowledge integration

PHARMATICS

## OUR TEAM

- **Specialists in medical AI / Software** (including PhDs in AI and machine learning from the University of Edinburgh, UK – one of the world's leading universities in AI and Medicine)
- **Extensive network of life and health professionals** (medicinal chemists, pharmacologists, primary care physicians, clinical specialists, epidemiologists)
- **Advisors: key opinion leaders** (editors of clinical journals; directors of clinical guidelines; professors of medicine and machine learning)
- **Contractors:** extensive network of clinical researchers, health economists, regulatory specialists; patient support groups

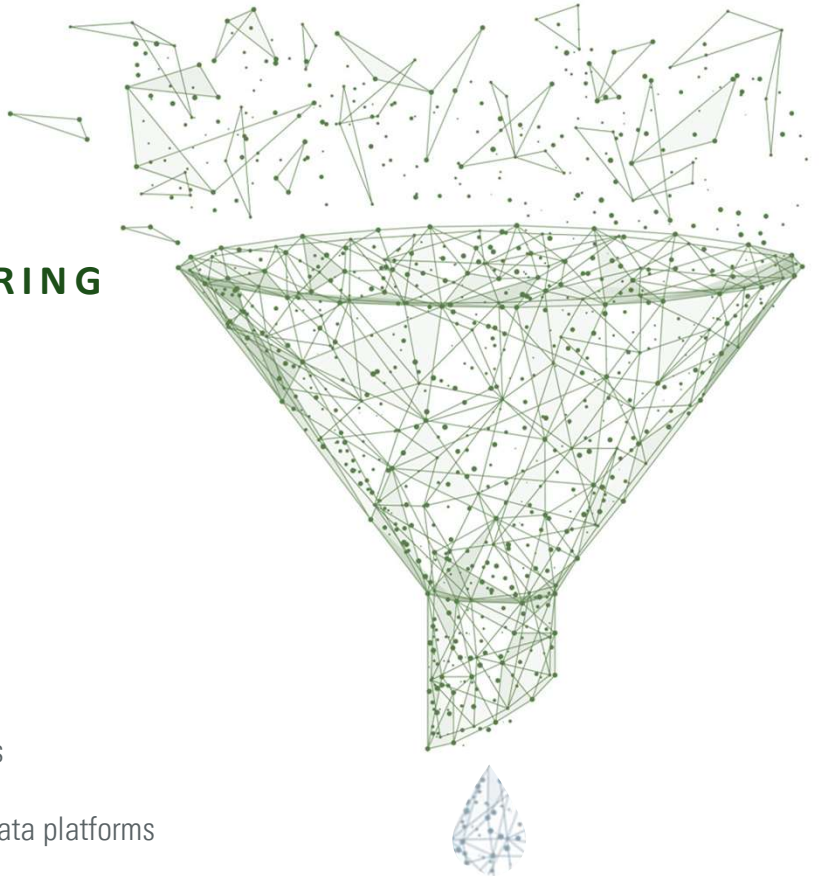


# • TECHNOLOGY

PHARMATICS

## MEDAI PIPELINE MedAI™

- **Input:** Scientific publications, data dictionaries, task descriptions
- **Output:** Knowledge-based predictive models, summaries, predictions available via an API



## FASTER RESEARCH, KNOWLEDGE ACCESS & SHARING

### *Evidence ranking*

Scientific articles
Clinical trial results
Systematic reviews

### *Model generation*

Specialized Language models
Machine learning
Meta-regression

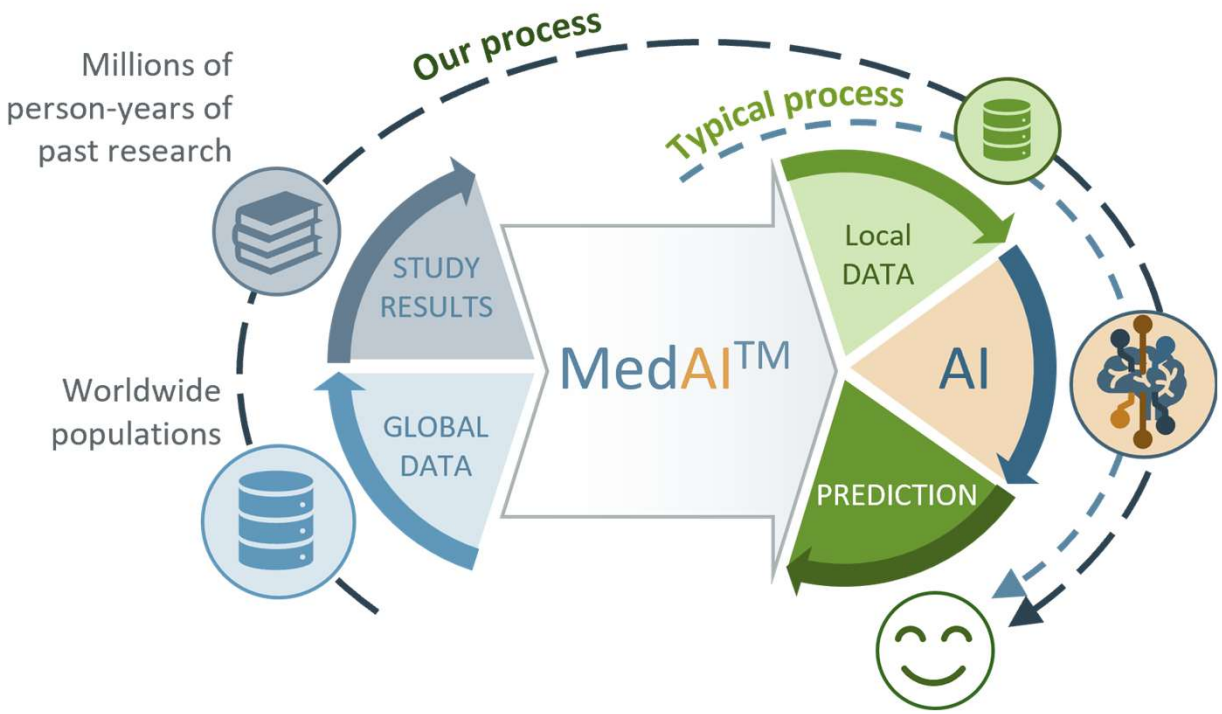
### *API access*

AI-ready backends
Cloud hosting
Integration with data platforms

## USP: RELEVANT EVIDENCE CONVERTED TO PREDICTIVE MODELS

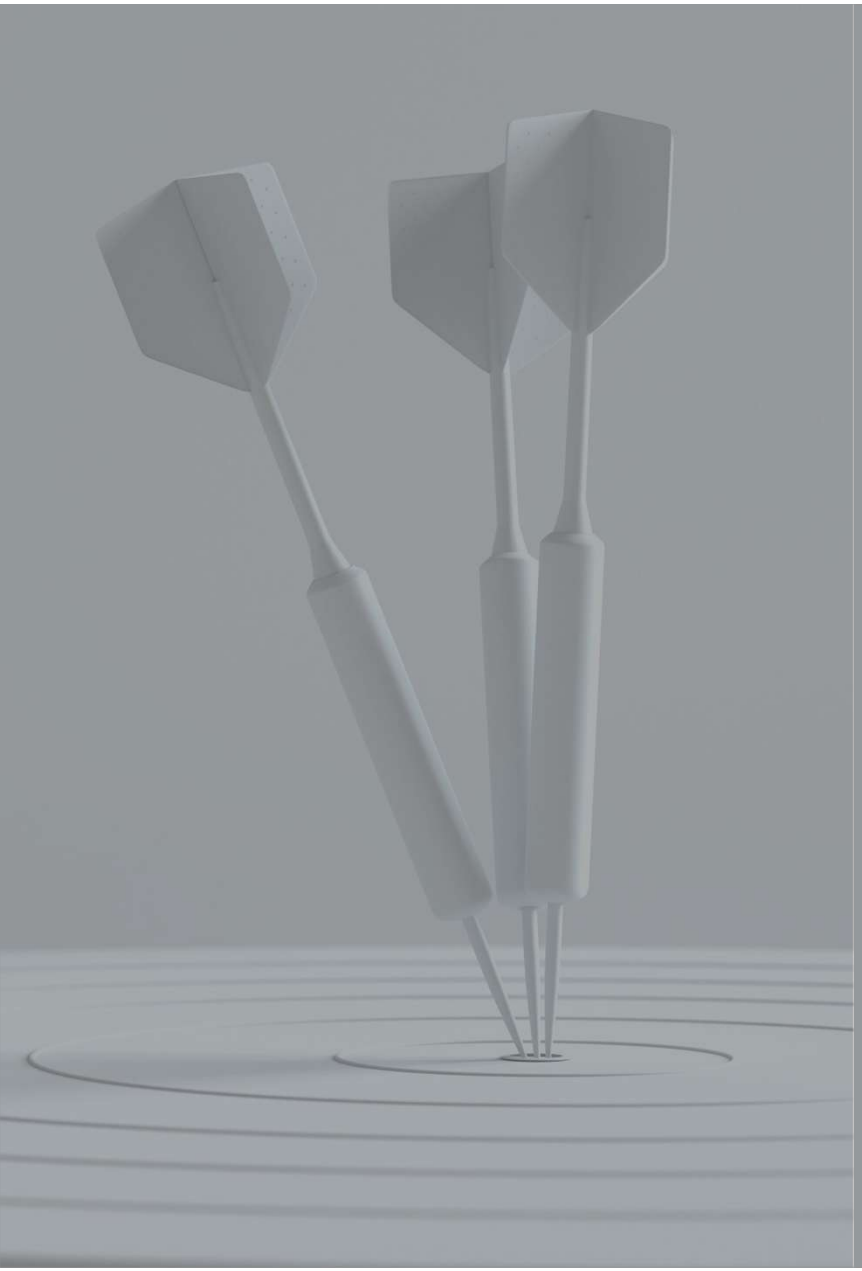
PHARMATICS

## MEDAI PIPELINE MedAI™




- Latest worldwide biomedical findings transformed to predictive models and integrated within data pipelines
- Using specialized large language models (LLMs) and cutting-edge information retrieval for knowledge integration
- Enhancing accessibility and understanding of data and the derived KNOWLEDGE for improved research and patient care

Combining data with knowledge for improved research, patient care, and knowledge sharing



# • UNITE PROJECT

## OBJECTIVES

To enable **rapid validation** and **refinement** of biomedical knowledge extracted from the literature using large-scale individual-level patient datasets within trusted environments.

To advance research and patient care by improving the **understanding**, **accessibility**, and **reuse** of harmonized biomedical **knowledge** across European health data infrastructures.

## SOLUTION

**Seamless integration** of continuously expanding biomedical knowledge for evidence-based learning across health data ecosystems.

## ALIGNMENT WITH THE SCOTTISH MISSION

- **Research and development leadership** in Scotland, with demonstration, validation, and deployment in other regions.
- **Creation of high-growth investment opportunities** in evidence-based biomedical AI, by enhancing language models with automatically integrated quantitative evidence from scientific literature validated using large-scale patient datasets.
- **Acceleration of international market access** through collaboration with multinational partners in AI and digital health, enabling global deployments.

## PROJECT PARTNERS

- **Data custodians** (safe havens) for secure access to individual-level data for model validation and recalibration.
- **End-user / deployment partner** (provider or vendor) to test integration and assess usability in R&D or clinical setting.

PHARMATICS

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## MedAI™ :

Foundation Models for Big Biomedical Knowledge

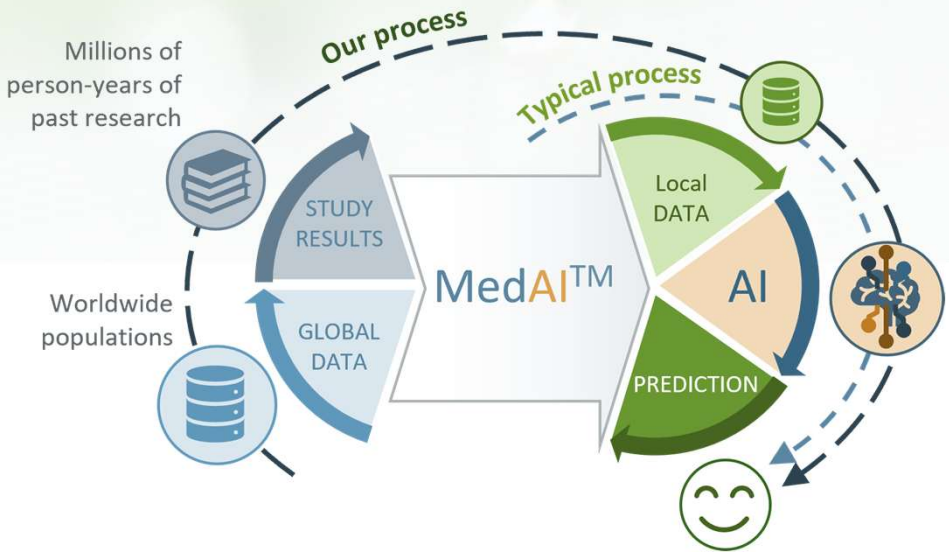
## Global Evidence Integration:

Enhancing preclinical and clinical research in precision medicine and digital health

## Knowledge-driven biomedical AI:

- Multimodal Predictive and Generative modelling
- >11M publications
- >100K trials and protocols

Bridging medical data and knowledge




MedAI
PIPELINE AND API

**USP:** Beyond LLMs - quantitative evidence for medical AI

- **Knowledge understanding**: converting quantitative results from medical research into harmonised predictive models and risk calculators for science and medicine.
- **Knowledge integration:** seamlessly integrating scientific knowledge and clinical evidence with **health data platforms** and AI development pipelines.
- **Knowledge access:** facilitating research and patient care by sharing research outcomes (over and beyond individual-level data records).