

## Challenges

### Cost:



Clinical trials can be prohibitively expensive, ranging from \$500 million to \$840 million, leading to significant financial risk.

### Time:



The lengthy duration of clinical trials, averaging 3-5 years, contributes to delays and extended time-to-market.

### Effort:



It typically takes 4-6 months just to write protocols for clinical trials, and patient recruitment is also labor-intensive, with a disproportionate amount of data management required for each hour of patient contact.

### Limited Patient Recruitment Efficiency:



Inefficient patient recruitment often leads to delays and increased costs.

### Availability of Poor Insights for Decision-Making:



Due to diverse applications and data landscape, there are slow and poor insights available for real-time decision-making.

## Solutions



### Clinical Trial Design:

Baioniq uses NLP applications to analyze historical data and recommend optimized trial structures tailored to investigational products and demographics.



### Clinical Trials Feasibility Management:

Baioniq employs knowledge graphs to identify best-fit patients, physicians, and sites for clinical trials, improving clinical outcomes and reducing failure risks.



### Protocol Writer:

Baioniq integrates with Document AI to auto-generate protocol sections, ensuring compliance with regulatory standards and reducing the need for revisions.



### Clinical Trial Summarization:

Baioniq leverages Gen-AI technologies to summarize key findings in a user-friendly format for clinicians and the public.

## Business Impact

### Cost Savings and Error Reduction:

Baioniq enables real-time data processing and automation, leading to up to 40% cost savings and reduced errors.

### 24x7 Virtual Agent:

Generative AI systems provide a virtual agent that continuously supports improved efficiency and responsiveness.

### Quality Control with NLP:

Baioniq utilizes NLP and cognitive computing to enhance data quality and reliability.

### Standardized Inputs and Improved Data Quality:

Data standardization through Generative AI ensures a consistent data structure across different trials and sites, resulting in higher data quality and data compatibility.

### Audit-Ready:

The automated tracking and documentation ensure regulatory compliance and readiness for audits and inspections.

### Improved Customer Experience:

Patients, physicians, and other stakeholders benefit from timely responses, and error-free processes, resulting in improved efficiency and reliability.