i2e's gen AI offerings in R&D

R&D				
Drug discovery	Clinical	Regulatory Affairs	Pharmacovigilance	Medical Affairs
Research QA chatbot	Automated data flow in clinical trials	Regulatory document generation	Signal detection	Document translation
Internal Portfolio news flow	Digital workforce	Labelling and packaging updates	Adverse event narratives	Medical literature review
Process improvement insights				Medical imaging data capture
Predictive Analysis				
Cognitive molecule research				

I. Drug Discovery

1. Research Q&A Chatbot

Strapline: Your trusted research companion.

Designed to accelerate and optimize the way researchers interact with data and insights, our gen AI research chatbot leverages AI and NLP to provide on-demand access to scientific knowledge and research findings. By simulating conversations with a virtual research assistant, our chatbot empowers researchers to rapidly explore complex datasets, generate hypotheses, and uncover novel insights with unparalleled efficiency.

The gen AI research chatbot serves as a trusted companion throughout the drug discovery journey, offering personalized recommendations, suggesting relevant research articles, and even assisting in experimental design and interpretation. The chatbot accelerates the pace of scientific discovery, enabling researchers to make informed decisions and drive innovation in pharmaceutical R&D.

Deployment ready use cases

Accelerated literature review: The chatbot acts as a tireless research assistant, analyzing vast amounts of scientific literature and clinical trial data to identify relevant studies and potential new avenues of research. It can summarize key findings, highlight emerging trends, and surface obscure connections that might be overlooked by traditional methods.

Personalized support and on-demand insights: Researchers can interact with the chatbot in a natural, conversational way. They can ask specific questions about target proteins, disease pathways, or drug interactions, receiving immediate and tailored responses based on the latest scientific knowledge.

Read our case study about implementation of a gen AI research chatbot in a Big Pharma company <here>.

Benefits

Improved research efficiency: The chatbot automates time-consuming tasks like literature review, freeing up researchers to focus on high-value activities like designing experiments and analyzing data.

Demonstrable innovation: By facilitating creative problem-solving and identifying new research avenues, the chatbot acts as a catalyst for scientific breakthroughs. If you are looking for a demonstrable application of gen AI in discovery, get started with our gen AI research chatbot.

Data-driven decision making: <here>.

2. Internal portfolio news flow

Strapline: From news, to breakthroughs

Management of internal portfolio news flow is crucial for driving informed decision-making, optimizing resource allocation, and maximizing the success of drug discovery initiatives. i2e's internal portfolio news flow offering leverages ML algorithms and NLP techniques to automate the analysis and synthesis of internal portfolio news flow data. By aggregating and analyzing diverse sources of information, including project updates, research findings, and milestone achievements, our solution provides researchers, project managers, and senior leadership with actionable insights in real-time.

Deployment ready use cases

Personalized feed: No more sifting through irrelevant updates. Our portfolio news curation analyzes your research focus and curates a personalized feed highlighting news and developments within your specific portfolio area. This allows you to stay up-to-date on crucial details without wasting time on unrelated information.

Proactive signal detection: Early detection of critical signals from within the portfolio is essential. Our portfolio news tracker can scan vast datasets, including internal reports, preclinical data, and competitor updates. It proactively identifies emerging trends and potential roadblocks, allowing you to anticipate challenges and adjust development strategies as needed.

Predictive insights & trend analysis: i2e's portfolio news tracker assesses historical data and projects trends to predict potential milestones, delays, or resource gaps within your portfolio. This allows for proactive resource allocation and risk mitigation, ensuring your projects stay on track.

Benefits

Improved decision making: By providing a clear, personalized view of your portfolio's progress, our portfolio news tracker empowers researchers and leadership to make more informed decisions about resource allocation, project prioritization, and overall development strategy.

Improved collaboration: The i2e portfolio news tracker fosters communication and collaboration within your research teams. The AI-curated feed ensures everyone is on the same page regarding portfolio progress, promoting teamwork and streamlining communication channels.

Increased efficiency: By eliminating information overload and providing focused updates, our solution frees up valuable time for researchers. This allows them to focus on core research activities, leading to increased efficiency and overall team productivity.

3. Cognitive Molecule Research

Strapline: Accelerate molecular design intelligence

i2e's gen AI capabilities in cognitive molecule research help you navigate the increasingly complex challenges of drug discovery innovation. Our customized turnkey drug discovery solution from target to preclinical development help in making drug discovery efficient. We help biopharma companies in advancing their preclinical programs through best-in-class AI driven molecular design.

Deployment ready use cases

Improved candidate selection: By predicting molecular properties, activity against specific targets, and potential adverse effects, teams can select candidate molecules with higher likelihoods of success. This reduces the risk of late-stage failures and improves the quality of the drug pipeline.

Optimized resource allocation: Insights into structure-activity relationships, synthetic feasibility, and therapeutic potential, enable your teams to allocate resources more effectively. This ensures that resources are directed towards the most promising molecules and research directions.

Accelerated drug discovery: Enable your teams to drive faster identification of lead compounds, virtual screening of compound libraries, and *de novo* design of molecules. i2e's capabilities in AI led cognitive molecule research accelerates the drug discovery process, reducing the time and cost required to bring new therapies to market.

Benefits

Reduced development risks: Identify predictors for success, reducing the risk of late-stage clinical trial failures, saving valuable time and resources.

Stronger patent portfolios: Refine and scale the ability to identify novel and patentable drug candidates to develop the next generation of cognitive therapies.

Increased success rates: Identify and optimize more efficacious, safer, and patentable drug candidates. This increases the likelihood of successful clinical trials and regulatory approval, ultimately leading to commercial success and therapy area leadership.

4. Process improvement insights

Strapline: Augmenting process intelligence

The path from initial target identification to candidate nomination is long and arduous, plagued by inefficiencies across disparate processes and teams. For early-stage drug design, our solution serves as a collaborative co-pilot by rapidly synthesizing insights, streamlines knowledge mining, protocol writing, report generation, and experiment planning, automatically generating first drafts that scientists can adapt.

Deployment ready use cases

Process optimization: Our process improvement insights offering helps to you project/create timelines, resource allocation, and project documentation based on historical data, identifying processes which have historically faced stalls or disruptions. This will help you identify bottlenecks such as slower screening, inefficient data analysis, or lack of timely communication between teams.

Predictive modeling and risk assessment: Learning from historical data, our solution can predict potential safety concerns and efficacy outcomes for candidate drugs early in the discovery process. This allows for informed decision-making and mitigation strategies for potential risks. The outcomes can then be directed for predictive modelling and risk assessment.

Data integration and collaborative research: Our analytics solutions integrate various data sources like biological databases, clinical trial data, and real-world evidence. This facilitates data-driven research, promotes collaboration within research teams, and allows for real-time optimization of the drug discovery process, improving time-to-insights for the discovery process.

Virtual screening and lead generation: Enlist our AI-powered virtual screening of massive chemical libraries to identify molecules with high affinity for the target protein. This accelerates the process of finding promising drug leads compared to traditional high-throughput screening methods.

Benefits

Proactive optimizations: You can identify potential bottlenecks or challenges in ongoing projects, making proactive adjustments before actual delays. For example, you may detect a resource shortage for a crucial stage ahead of time, allowing you to explore alternative approaches or resource allocation strategies.

Accelerated decision making: Leverage pattern identification and trend prediction to drive informed decision making quickly.

5. Predictive Analysis
Strapline: Predict tomorrow, discover today

Our solutions in predictive analytics have helped discovery teams in lead prioritization and safety assessment. Whether it is analyzing vast chemical libraries, or drug databases our predictive analytics solutions have helped discovery teams in predicting patient response to treatment options, optimizing trial design, improving patient selection criteria, endpoint selection, predicting likelihood of success for drug candidates early in the discovery process.

Deployment ready use cases

Market forecasting: Analyze market trends, competitor data, and patient demographics to forecast the commercial potential of drug candidates. We enable you to make informed decisions about investment priorities, licensing opportunities, and market entry strategies.

Clinical trial optimization: We enable your teams to analyze historical clinical trial data to identify factors associated with trial success, such as patient demographics, treatment protocols, and endpoint selection. This helps optimize trial design, patient recruitment strategies, and resource allocation to maximize the likelihood of trial success.

Disease modeling: We can integrate multi-omics data and clinical information to develop predictive models of disease progression, patient response to treatment, and disease outcomes. This enables researchers to simulate different scenarios, identify biomarkers, and personalize treatment approaches for improved patient outcomes.

Benefits

Early efficacy and safety insights: We enable your teams to identify potential issues before they derail clinical trials. Our predictive analytics solution parses vast datasets, including historical clinical data, protein structures. This allows for early prediction of a drug candidate's potential efficacy and safety profile, enabling researchers to focus on those with the highest chance of success and minimize the risk of late-stage failures.

Optimized lead selection: Our predictive analytics solutions help you select promising drug leads removing guesswork. By predicting a candidate's potential for success in clinical trials, it guides researchers towards the most promising leads, optimizing resource allocation and accelerating the development process.

Better clinical trial outcomes: We empower your team to design more efficient trials by predicting patient response rates and optimizing trial parameters such as dosage and duration. This leads to smaller, more targeted trials that provide conclusive results faster, and help you improve time-to-market.

II. Clinical

1. Automated data flow in clinical trials
Strapline: Driving trial data flow excellence

i2e's solutions for data flow in clinical trials ensure data acts a unifier allowing for seamless integration and analysis across all sites. We enable clinical trials teams to have access to high quality data, comprehensive dashboards, and interactive data visualizations throughout the trial lifecycle, accelerating clinical decision making. However disparate the data sources may be, be it Patient Reported

Outcomes (PRO) or data from wearables, our data flow offering can extract relevant data points, standardize formats, and integrate disparate data sources seamlessly, reducing manual data entry errors and ensuring data consistency and completeness.

i2e's data flow solutions act as the guardian of data quality, identifying anomalies and inconsistencies, prompting for corrections, or suggesting potential missing values based on historical data. This real-time cleaning process ensures data integrity and avoids delays in downstream analysis.

Deployment ready use cases

Data standardization: Clinical trials often involve multiple clinical sites with varying data formats. Our data flow solutions for clinical trials can convert data into a standardized format, allowing for seamless integration and analysis across all sites. This eliminates the need for time-consuming manual data harmonization efforts.

Intelligent data enrichment: i2e's data flow solutions can analyze unstructured data like patient notes, imaging reports, and wearable device readings. It continuously evaluates data streams, extracts relevant information, standardizes formats, and flags potential anomalies for review. This enriches existing data sets, reduces errors that could jeopardize trial validity, providing a more comprehensive picture of patient health and trial progress.

Early risk identification: Early detection of potential risks is crucial in clinical trials. i2e's data flow solutions analyze historical data and identifies patterns that might indicate patient safety concerns or potential trial delays. This allows for proactive intervention and mitigation strategies, ultimately improving patient safety and trial outcomes.

Automated data visualization and real-time insights: Generate insightful visualizations from complex datasets that provide you with real-time insights into key performance indicators, recruitment trends, and potential areas of concern.

Benefits

Improved decision making: Improved data quality and visualizations enable clinical trial sponsors and investigators to take proactive measures to address issues to improve trial outcomes.

Improved efficiency: Enable your researchers to focus on critical analysis and decision-making, not data wrangling. Automating data flow eliminates manual tasks, leading to significant cost savings and improved operational efficiency.

Regulatory compliance: Real-time data validation ensures data integrity, minimizing the risk of errors and delays during regulatory submissions. Our solutions helps you meet stringent regulatory requirements and avoid setbacks.

Faster time to market: By streamlining data management and facilitating faster analysis, our AI solution accelerates clinical trial timelines. This allows you to get life-saving treatments to patients sooner.

2. Digital Workforce
Strapline: Smart teams, smarter results

Drive better trials outcomes by deploying virtual assistants that can manage repetitive tasks like data entry, scheduling patient visits, and managing regulatory documents. i2e's digital workforce solutions not only automate and execute repetitive tasks but also analyze vast datasets to predict potential enrolment roadblocks and suggest recruitment strategies. By freeing up researchers' time and streamlining workflows, our digital workforce solutions empower you to focus on what matters most – scientific innovation and patient care.

Right from streamlining patient recruitment, data collection, scheduling patient visits, data entry, and adverse event reporting, our digital workforce solutions are designed to accelerates trial timelines. Advanced analytics capabilities provide real-time insights into trial progress, patient outcomes, and protocol adherence, enabling proactive decision-making and risk mitigation. We help your clinical trial teams can maximize productivity, improve data quality, and ultimately expedite the delivery of life saving therapies to patients.

Deployment ready use cases

Enrolment experience: Imagine a tireless assistant handling administrative tasks like scheduling patient appointments, collecting routine data, and generating standard reports. Our digital workforce offering automates these repetitive tasks, freeing up valuable time for human researchers to focus on high-level analysis and patient care.

Enhanced patient engagement: Our AI chatbots can connect with patients remotely, answering basic questions, providing medication reminders, and collecting patient-reported outcomes. This not only improves patient experience but also increases data collection efficiency.

Recruitment diversity: Traditional recruitment methods often have geographical limitations. Our solutions can leverage diverse language capabilities and cultural awareness to expand patient recruitment efforts globally, leading to more representative trial populations.

Benefits

Enhanced patient safety and monitoring: i2e's digital workforce chatbots can monitor patient progress remotely, detecting potential adverse events early on. This enables proactive intervention and improved patient safety throughout the trial.

Improved clinical trial outcomes: Our AI digital workforce reduces operational costs and streamlines clinical trial processes, leading to faster completion times.

Enhanced data quality and compliance: Our digital workforce offering ensures data consistency and reduces human error in data collection. This enhances data quality and facilitates compliance with regulatory requirements.

Read more about our digital workforce offering in this whitepaper <here>

III. Regulatory Affairs

Strapline: Approach regulatory submissions with greater confidence.

Streamline compliance processes and enhance decision-making for your teams by helping them automate document management, submission preparation, and regulatory intelligence gathering. i2e's regulatory solution analyzes vast amounts of regulatory data, and provides real-time insights into evolving requirements and precedents, enabling proactive compliance strategies. Advanced analytics capabilities identify potential risks and opportunities, guiding regulatory strategy and decision-making. With i2e's by their side, regulatory affairs teams can improve efficiency, accuracy, and agility in navigating complex regulatory landscapes, ultimately accelerating product approvals and ensuring compliance with global regulations.

1. Regulatory Document Generation

Strapline: For more focus on the science.

i2e can help you approach regulatory submissions with confidence. Our regulatory offering helps you in generation and formatting of regulatory documents, such as submissions, dossiers, and reports. We help you streamline content creation and review processes, reducing time-to-market and minimizing errors. Regulatory affairs teams can leverage i2e's regulatory document generation capabilities to

efficiently produce high-quality documents, optimize resource allocation, and maintain compliance with regulatory authorities, ultimately expediting the approval of life-saving therapies for patients.

Deployment ready use cases

Enhanced dossier preparation: Assembling comprehensive regulatory dossiers can be a time-consuming task. Our AI automates data extraction from clinical trials and pre-clinical studies, ensures consistent formatting, and generates compliant regulatory documents. This frees up valuable time for your team to focus on strategic analysis and review.

Predictive modeling and risk assessment: Anticipate potential regulatory hurdles through insights generated by analyzing historical data and identify potential areas of concern within your regulatory submissions. Drive proactive mitigation strategies and smoother interactions with regulatory agencies.

Real-time regulatory intelligence: Stay up-to-date with evolving regulations through regulatory updates and alerts that might impact your submissions. This will ensure your regulatory strategy remains compliant and adapts to the ever-changing landscape.

Benefits

Enhanced consistency & error reduction: Manual drafting can lead to inconsistencies and errors, jeopardizing regulatory approval. i2e's regulatory document generator ensures consistent formatting and terminology across documents, minimizing human error and maximizing compliance.

Adaptive and customizable output: Keep up-to-date with evolving regulations with adaptive AI that incorporates the latest regulatory guidelines into document generation. Additionally, it allows for customization based on specific drug types and submission requirements.

Improved regulatory confidence: Approach regulatory submissions with greater confidence, knowing your documents meet the highest standards of accuracy and completeness.

2. Labelling and packaging updates

Strapline: Intelligent labelling automation

Creation and verification of packaging and labeling materials, ensuring adherence to regulatory requirements and industry standards can be tedious. Leverage our gen AI capabilities to analyze product

specifications, regulatory guidelines, and labeling requirements. We help you ensure accuracy, consistency, and compliance throughout the labeling lifecycle. Our advanced image recognition capabilities verify label accuracy and integrity, reducing the risk of errors and regulatory non-compliance. With i2e's regulatory adherence solutions, regulatory affairs teams can streamline labeling workflows, mitigate risks, and accelerate time-to-market for critical therapies.

Deployment ready use cases

Automated content generation: Regulations change and labelling and packaging workflows need to adapt. We can analyze regulatory updates and automatically generate compliant content for your product labels and packaging inserts. This eliminates the need for manual updates, minimizing human error and ensuring accuracy.

Batch record documentation: Our regulatory adherence solutions can assist in the creation and maintenance of batch record documentation by automating data entry, verification, and compliance checks. This improves data integrity, traceability, and audit readiness for regulatory inspections.

Labeling standardization: Our packaging and labelling solutions can help you standardize labeling formats and content across product lines and regions to ensure consistency and compliance with regulatory requirements. This enhances brand identity, reduces labeling errors, and facilitates global market access.

Regulatory reporting: Generate regulatory reports and submissions related to packaging and labeling, such as safety updates, labeling changes, and regulatory notifications. This streamlines regulatory reporting processes and ensures timely compliance with regulatory requirements.

Benefits

Improved efficiency: Maintaining consistency across different languages and regional regulations can be complex. Automating content generation and updates significantly reduces the time and resources required to maintain compliance. Our solution tailors labelling and packaging content to specific regulatory requirements, ensuring global compliance and minimizing the risk of market access delays.

Faster time-to-market: Proactive identification of potential issues and streamlined updates minimize delays in getting compliant products to market. This allows you to capitalize on market opportunities and enable treatment access to patients sooner.

Proactive risk assessment and mitigation: Our solution can identify potential regulatory concerns with existing labelling and packaging based on historical data and regulatory trends. This allows you to proactively address potential issues before they escalate into expensive product recalls.

Enhanced regulatory confidence: By ensuring accurate and compliant labelling and packaging, we empower you to navigate regulatory interactions with greater confidence, minimizing the risk of non-compliance issues.

III. Pharmacovigilance

Use i2e's signature offerings in PV to become an active co-pilot in all of your PV processes. Whether it is reducing data overload or manual processing, or signal identification and prioritization, leverage our advanced gen AI capabilities to drive PV transformation. Our capabilities can perform contextual analysis to evaluate severity, onset, or potential life-threatening situations, enabling you to assign human interventions for high priority cases first. Beyond individual reports, our solutions can analyze broader trends within the data, uncovering hidden patterns and potential safety signals that might go unnoticed with traditional methods. This proactive approach empowers pharmacovigilance teams to stay ahead of potential issues and ultimately improve patient safety.

1. Signal Detection

Proposed name: SignalFinder

Strapline: Drive proactive signal vigilance

Conventional methods of signal detection from adverse event reports are time-consuming, resource-intensive, and can miss important signals, compromising patient safety. i2e's PV offerings help optimize PV signal detection processes, by leveraging advanced ML algorithms and NLP techniques to analyze vast amounts of real-world data, including adverse event reports, electronic health records, case reports, medical literature, FDA communications, clinical trials data, and social media mentions. By identifying patterns, trends, and anomalies within these data sets, we enable you to identify signals of potential safety concerns quickly and accurately.

Deployment ready use cases:

Automated case screening & prioritization: Leverage our AI solutions to analyze vast amounts of data on adverse drug reactions (ADRs) reported from various sources, automate the initial screening of these reports, filter them based on pre-defined criteria like specific patient demographics, drug combinations, or reported symptoms.

Real-time signal identification and pattern recognition: Process incoming ADR reports to identify potential emerging signals – clusters of similar adverse events that might indicate a safety concern. By identifying potential signals early on, design interventions for human review and investigation before the issue escalates. This allows for faster intervention and minimizes potential patient harm.

Text mining and automated extraction of key information: Drive extraction of key information from ADRs, such as specific symptoms, timelines, and suspected medications through our advanced text mining capabilities. Drive faster analysis and categorization of ADRs, facilitating the identification of potential signals and trends within the data. Reduce workload for human reviewers and allow them to focus on interpretation and insights.

Automated data visualization and interactive reporting: Leverage our data visualization and reporting capabilities to summarize ADR trends, signal patterns, and potential safety concerns. These reports can be interactive, allowing human reviewers to drill down into specific details.

Benefits

Improved decision making: SignalFinder parses unstructured text data within Adverse Event Reports (AERs), social media mentions, can identify hidden patterns and false positives, and uncover insights undiscovered by human review, improving chances of early detection. Early detection of safety signals allows for quicker intervention, flagging easily missed symptoms, potentially preventing serious adverse events and improving patient safety. This enables PV teams to focus on higher-level analysis and critical decision-making.

Automates case triage: SignalFinder can automate the initial sorting of reports, categorizing them based on pre-defined indicators of severity, rapid onset, or potential life-threatening situations. This frees up human expertise for more complex analysis and decision-making.

Enhanced compliance: Proactive identification of safety signals demonstrates a commitment to patient safety and facilitates smoother regulatory interactions.

Download our whitepaper on the role of AI in signal detection here.

2. Adverse Event Narratives
Proposed Name: ADRWatch

Strapline: Faster insights, better decisions.

Improve safety monitoring and patient experience by automating the detection, analysis, and reporting of adverse drug reactions. i2e's ADRWatch analyze adverse events from diverse data sources, such as patient reports, social media, and electronic health records. Real-time monitoring and predictive analytics enable early detection of potential safety concerns, empowering proactive risk management strategies. By streamlining adverse event identification and assessment, we help you prioritize patient drug product quality, regulatory compliance, and patient safety.

Deployment ready use cases

Entity recognition and case prioritization: Our NLP led solution analyzes the narrative text within ADR reports. It can identify and extract key entities such as medications, symptoms, and patient demographics. unstructured text data, saving time and minimizing human error during data entry. Extracted information can then be used for signal detection, trend analysis, and case prioritization.

Sentiment analysis and early warning system: Leverage ADRWatch's gen AI capabilities to analyze the language used in ADR narratives to gauge the severity and urgency of reported events. Prioritize rapid response to narratives with high emotional distress, rapid symptom onset, or potential life-threatening situations. By analyzing sentiment, you can prioritize response time for serious events for immediate review and investigation. This allows for earlier intervention and minimizes potential patient harm.

Automated text summarization and risk factor identification: Drive summarization of key points and relevant details from the narrative text of ADR reports, identify potential risk factors for adverse events from text, such as specific patient characteristics or drug interactions. Automated summarization allows reviewers to quickly grasp the essence of each report and prioritize those requiring more in-depth analysis. Identifying potential risk factors in the text can further guide investigation and signal detection efforts.

Benefits

Improved data quality: Data volume can mask genuine safety signals compromising patient safety. Limited resources and time constraints can overload PV teams, potentially leading to missed or delayed detection of critical safety issues. ADRWatch enables you to isolate signal from noise, improve data quality, identifying triggers that can lead to escalations.

Balancing risk and benefit: Our gen AI solution enables you to weigh the potential benefits of a drug against the identified safety concerns. Improved and accurate data along with considerations of patient needs, the severity of the condition being treated, and the availability of alternative therapies enables balanced decision making.

Enhanced regulatory compliance: Proactive identification of safety signals demonstrates a commitment to patient safety and facilitates smoother regulatory interactions.

Our gen AI led offerings in medical affairs help in improving scientific exchange, mitigating compliance risks, and enhancing patient/HCP communication. Right from a virtual assistant that can scan comprehensive research papers, clinical evidence reports, and various scientific journals, translate findings into actionable insights, to more unstructured problems such as sourcing KOLs, analyzing physician sentiments, our offerings help MSL teams to improve medical affairs productivity.

1. Document Translation

Proposed name: IntelliScript

Strapline: Global insights, local precision

Translating scientific literature accurately is crucial and IntelliScript helps in translation of all kinds of scientific assets, be it regulatory documents, product labels, patient information leaflets, regulatory submissions, into multiple languages. Our high-fidelity translation ensures compliance with international regulatory requirements and facilitates market access for pharmaceutical products across diverse regions.

IntelliScript can translate data from clinical trial protocols, consent forms, study documents, research articles, medical information leaflets, enabling global collaboration and participation in clinical research studies. Leverage IntelliScript to drive better global scientific exchange, foster collaboration among researchers across sites, and facilitate evidence-based medical practice worldwide.

Deployment ready use cases:

Multilingual content creation: Whether it is creating clinical trial materials or patient safety and adherence documents, effortlessly reproduce high quality medical information across multiple languages to support global medical teams. Ensure consistent and accurate medical terminology across translated documents by integrating your portfolio/organization's specific glossaries.

Social listening: Get global market insights for your medical affairs team. Get access to information translated and analyzed from different sources such as social media discussions, news articles, and

healthcare forums in various languages, providing you with a comprehensive understanding of local prescription trends, HCP surveys.

Multilingual chatbots: AI-powered chatbots or virtual assistants can answer HCP questions and provide medical information in multiple languages. These tools can offer 24/7 support and personalized guidance, regardless of location or language.

Benefits

Increased efficiency: Drive communication standardization and collaboration between distributed medical teams and reduce time-to-market for launching in new markets.

Enhanced regulatory compliance: Submit translated documents for regulatory approvals faster. Leverage AI-driven accurate translations that comply with specific regional regulations, minimizing the risk of delays or rejections.

Improved patient care: Accurate and timely translations facilitate communication with international healthcare professionals, regulatory bodies, and potentially, patients themselves. This global reach allows you to share critical medical information more effectively, ultimately contributing to improved patient care worldwide.

2. Medical Literature Review

Proposed name: Literature review accelerator

Strapline: From insights to intelligence

Keeping up with the ever-expanding body of biomedical research and evidence is no longer a challenge with i2e's medical literature review accelerator. It offers advanced capabilities to accelerate and enhance medical literature review processes across medical journals, case reports, conference proceedings, clinical trials data, and more. With the review accelerator, medical and frontline teams can receive rapid updates and insights about new developments in therapy areas.

Automated literature search and prioritization: Amplify your literature review process with i2e's literature review accelerator which can parse vast clinical databases, identifying relevant publications based on pre-defined criteria and automatically filtering out less pertinent studies. This saves time and ensures you focus on the most impactful research.

Automated data extraction and summarization: Leverage i2e's literature review accelerator to enable your teams to extract key findings from complex scientific papers. Our solution automatically summarizes key findings, highlights emerging trends, and identifies potential areas of interest for your specific therapeutic area or drug candidate. It can also parse competitor publications, clinical trial data, and social media mentions to identify opportunities and threats in a particular therapy area.

Signal detection and trend analysis: Our advanced AI capabilities analyze the content of publications to identify emerging scientific trends and potential breakthroughs relevant to your therapeutic area. This allows you to anticipate future directions in medical research.

Benefits

Improved decision making: With i2e, your medical affairs team delivers higher quality evidence-based insights, regarding product development, clinical trial design, and can drive scientific exchange with healthcare providers for better clinical outcomes.

Faster time-to-market and increased ROI: By accelerating the literature review process and facilitating informed decision-making, we help you bring innovative treatments to market faster.

3. Medical imaging data capture

Proposed name: MediPix

Strapline: Imaging intelligence, redefined

Analyzing imaging data accurately improves trial design, leading to more reliable and reproducible results. Accurate analysis helps drive efficacy and safety, enables early risk detection, and improves patient safety.

Conventional medical imaging analysis can be complex and time-consuming, often leading to delays in diagnosis and patient care. Our team of data scientists has been working on AI-led diagnostics, enriching insights generation with interpretive intelligence. Through our work in AI-led diagnostics we aim to help further develop the practice of digital /computational pathology, helping teams reduce time and bias in diagnosis, improve quality and time-to-insights, drive higher diagnostic accuracy, and ultimately help design better clinical trials and improve patient experiences.

Deployment ready use cases:

Image preprocessing and enhancement: Detect and remove noise artifacts from digital pathology images, such as scanner noise or staining inconsistencies. This improves image clarity and allows for

more accurate analysis by pathologists. Normalize staining across images, ensuring consistency and facilitating comparison between slides. Benefit from image sharpening and resolution enhancement allowing for better visualization of finer cellular details crucial for diagnosis.

Improved patient selection: Identify patients who meet specific inclusion criteria more accurately and efficiently. Empower your teams to streamline the patient recruitment process, ensuring that clinical trial cohorts are well-defined and representative of the target population.

Enhanced end point detection: Leverage AI led analysis to detect and quantify disease-related endpoints, such as tumor size, lesion volume, or tissue inflammation. This objective assessment of endpoints improves the reliability and reproducibility of trial outcomes, reducing variability and enhancing statistical reporting.

Anomaly detection and early risk identification: Use early detection of potential treatment side effects to identify subtle anomalies that might be missed by human eyes. Design early interventions to minimize patient risk.

Improved trial outcomes: Monitor treatment response effectively, make proactive adjustments to treatment regimes, reduce bias and subjectivity, and improve the patient outcomes, trial success rates, reliability, and regulatory acceptance of trial results.

Benefits:

Improved clinical trial outcomes: Use better imaging data to empower researchers to design more targeted clinical trials and select patients most likely to benefit from a specific treatment.

Accelerated drug approval and patient access: Faster data analysis and improved clinical trial design leads to quicker regulatory approvals, allowing patients to access life-saving treatments sooner.

Read our whitepaper on gen AI applications in medical imaging here.

Why i2e for gen AI offerings?
Value proposition

Extensive domain expertise: Leverage i2e's extensive domain expertise combining AI/ML capabilities with deep R&D knowledge to develop bespoke solutions that augment your existing workflows and

processes. Our AI is purpose-built to identify and eliminate bottlenecks and accelerate innovation across drug discovery, clinical development, regulatory, and safety initiatives.

Responsible AI: i2e is commitment to ethical, explainable, and responsible AI that prioritizes human-machine collaboration. Our solutions empower scientists by expanding innovative capabilities while ensuring humans remain in control with AI serving as a co-pilot. Transparency and trust are core principles built into our AI solutions.

Demonstrable value: Our AI solutions span data infrastructure to operationalization and change management. We support full lifecycle AI deployments, from LLM training on proprietary datasets to embedding AI into production, PV, clinical ops, and chemistry platforms via APIs and systems integration. Our services ensure sustainable AI adoption and value realization.