



Accelerating Data & Digital Transformation Strategies in Life Sciences

At Straive, we are uniquely positioned to support clients in advancing digital transformation by enhancing process efficiencies and creating robust data moats that serve as significant business differentiators. Our approach integrates domain-specific, tailored analytics and Generative AI solutions, augmented by a team of over 6000 domain experts. This synergy ensures high-accuracy, regulatory-compliant outcomes, fully unlocking the potential of data and technology to drive innovation and efficiency.



We amplify business impact of clinical and R&D processes by unlocking value from data and documents



We implement, execute, and manage enterprise-scale services that prioritize efficiency, auditability, and democratized access to data and technology



We help with personalized and faster commercial engagement with actionable insights on KOL, Pricing, HCPs leveraging unique data and GenAI tech

A proven track record of delivering successful Pharma D&A use cases

We have leveraged data and AI technologies such as ML, NLP, NER, & computer vision to improve outcomes across the pharma & life sciences value chain.



Research & Development

85% faster turnaround for anonymized document submission

Organizations need to protect data, ensuring privacy and transparency in public disclosures or else face costly lawsuits arising from errors. Also, report submission delays may lead to penalties. Our solution combines advanced NER models with anonymization techniques with a Human-in-the-loop framework. It identifies and classifies PII as direct and quasi-identifiers to ensure compliant anonymization, safeguarding confidential documents, and saving 85% of time.

The screenshot displays the AI Anonymize web application interface. At the top, there's a navigation bar with 'AI Anonymize' logo and tabs for 'My View', 'Verification View', and 'Edit View'. Below this, the document title 'Actemra Package' is shown. A 'Key Metrics' section displays 'Risk Score 0.07' and 'Recall 0.89', with a 'Re-Calculate Risk' button. A 'Go to Document' dropdown is set to 'CSR 1' and 'Go to Page' is set to '1'. The main content area is split into two panels: 'Original' and 'Anonymized'. Both panels show a document titled 'Actemra Package Clinical Study Report2'. The 'Original' panel shows a paragraph: 'The standard Lorem Ipsum passage, used since the 1500s' followed by 'Subject 9068, age 25 years observed low supine pulse rate* In this 9068 can be in yellow with the same set of options'. The 'Anonymized' panel shows the same paragraph but with 'Subject 9078, age 35 years observed low supine pulse rate* In this 9078 can be in yellow with the same set of options'. A hand cursor is pointing at the anonymized text. Below the main text, there are several 'The standard' entries with placeholder text.

Seamless templated document unification with 50% TAT reduction

Creating accurate documents manually can be challenging. There is a pressing need to expedite document creation without sacrificing quality. Our solution leverages GenAI, Data Engineering, and advanced NLP techniques, allowing users to upload target and content documents. It extracts and integrates sections based on user specifications, offering options to summarize, paraphrase, or insert content, reducing creation time by 50%.

↑
Drag a Template PDF Document/Click here to upload

↑
Drag Content Related PDF Documents/Click here to upload

PREVIEW PREVIOUS BATCHES
UPLOAD

Batch
test1

Template Document	Document	Action	Section
1 PURPOSE	Document	Action Boilerplate	Section
2 SCOPE	Document Externals_Confidentiality Agre...	Action Summarize	Section 1. Confidential Information, 2. ...
2.1 Process Scope	Document	Action	Section
2.2 Target Audience	Document	Action	Section
3 PROCEDURE	Document	Action	Section

NEXT

Batch
test1

1 PURPOSE COPY

This Standard Operating Procedure describes the process for submission and maintenance of Clinical Trial Applications to Health Authorities (HA) and Ethics Committees (EC) in Nordics. Clinical Trials Regulation EU No 536/2014 was implemented on 31-Jan-2022 with a transfer period of three years until 2025. During the transfer period, clinical trials performed in the European Union are to be conducted in either in accordance with the Clinical Trials Directive 2001/20/EC or Clinical Trials Regulation EU No 536/2014. This SOP describes the process for trials conducted under Clinical Trials Directive 2001/20/EC which at the time for this update only applies to amendment as all initial submissions are done according to Clinical Trials Regulation EU No 536/2014.

2 SCOPE

1. Confidential Information. The Recipient provides services to // and may receive or access confidential and proprietary information related to their service area. All disclosures of such Confidential Information by // or its Affiliates, or third parties at // request, are considered disclosures by //. An 'Affiliate' is defined as an entity controlling, controlled by, or in common control with // with control meaning ownership of over fifty percent or having the ability to direct the entity's management. 2. Confidentiality. The Recipient agrees to use the Confidential Information solely for providing the contracted services and to prevent its disclosure to third parties, other than as required for the services.

Improving Clinical data accuracy by 50% with automated quality control

Inconsistent and incomplete data for clinical trials across 20 countries resulted in a time-consuming manual verification process and inefficiencies in identifying and disambiguating trial details, affecting trial outcomes. Our solution integrated ACQUIRE, OCR Engine, and SPiZone to enrich clinical trial data by aggregating missing information and enhancing quality. It also reduced the time needed to collect and verify clinical trial location data, improving scale and speed.

Speech Transcription for effective information retrieval analysis

Existing speech-to-text technology may misinterprets medical terms and accents, causing transcription errors. Our Gen-AI enhanced transcription capabilities capture medical terminology, diverse accents, and discussion context, improving overall clinical trial document accuracy.



Enhancing CX with GenAI-powered Summarize Assist

Handling adverse events accurately is crucial, but summarizing investigation reports is labor-intensive and costly. Thus, reducing TAT for customer complaints is essential. GenAI-powered Summarize Assist automates report summarization into concise, four-line paragraphs for quick customer communication. Multi-shot prompting ensures sensitive information is protected, enhancing regulatory adherence, while reducing TAT.

Model Configuration

Max Tokens: 256 (range 10 to 2048)

Temperature: 0.50 (range 0.50 to 1.00)

Record Details

Record ID: CN-029400

Product: Product/Material_Name

Country: Argentina

Sample Available Indicator: Yes

Replacement Request Detail: nan

Initial Product Name: No

Complaint Close Out Letter Generator

Upload Excel Sheet

Drag and drop file here (Limit 200MB per file • XLSX, XLS) [Browse files]

QEMdata_transposed.xlsx 35.4KB

Select Record ID: CN-029400

Generated Closure Letters

Like Dislike Regenerate Letter Reset Process

Generated Letter:

Ref. N: CN-029400

2024-03-18

Dear xxxx,

Thank you for contacting us regarding the occurrence of [redacted] PEN A/P - UNKNOWN - Locked Pen detected in our Product/Material_Name, NA (As per short_desc, batch is unknown). This information was considered important to our investigation by the Novartis Group's technical team.

During manufacturing of all products marketed by [redacted] all applicable process steps are properly monitored and accurately documented from

50% TAT reduction in integrating physician data with accuracy

Gathering comprehensive physician data from diverse international sources poses significant challenges, especially with non-scrapable websites and incomplete physician records. A robust validation system is must to ensure accuracy of physician information. Our solution automates data collection from primary and secondary sources, supplements it with manual research for non-scrapable sources, and completes partial records. A scoring system and established rules validate data, resulting in a comprehensive database with, reliable information.

Savings \$5.2 Mn/yr using advanced NLP for auto uploading drug labelling docs

Pharma writers manually fill product information by referring to documents before uploading labelling documents that need to be classified by type and country, with attributes manually sourced from various systems and languages. We developed advanced NER models on client data, offering better accuracy and resource utilization than cloud alternatives. Integrated with a quick-view UI, it reduced the time required for writers to process each document 45 minutes to 2 minutes.

The screenshot shows a web application interface for uploading drug labelling documents. At the top, there is a file upload area with a blue arrow icon and the text "Drag a Document/Click here to upload", and a blue "Upload" button. Below this are four filter buttons: "All" (selected), "PII", "Drug", and "Demographics".

The "Available Entities to Extract" section contains a table with the following entities:

First Name	Last Name	Patient ID	Race	Drug Form	Mobile Number
Drug Units	Drug Name	Age	Gender	Site ID	Weight
Drug Strength	Country	Ethnicity	Address	BMI	

The "Entities Selected" section shows a list of selected entities with delete icons:

- Drug Strength
- Drug Name (Dragon DB)
- Drug Name (XDB)
- Ethnicity

At the bottom right of the entity selection area is a blue "Submit" button.

The form below is titled "Country: USA" and contains two columns of input fields:

File Name 1	File Name	Country*	India
Document Type	NPI	Dosage*	2
Document Language	English	Effective Date*	12/01/2020
Document Comment	Lorem Ipsum has been the industry's standard dumm..	Reason for New NPI*	Lorem ipsum has been the industry's standard dumm..
		NPI is HA Approved*	Yes
		Local Brand Name*	ABC
		Variation Number	1234
		Core Labelling Package*	Package
		Tracking Number	5678
		New/Existing Package*	New

At the bottom right of the form are two buttons: "Submit" and "Cancel".

Implementing LLM models for automated alt-text generation saving 50% of time taken

Inadequate alt-text for complex life science images limits content accessibility, with manual generation by SMEs being time-consuming and not scalable, lacking detail, and affecting user comprehension. Our LLM for automated alt-text generation, integrates multiple ML models for context and object recognition. The QC module reviews and refines auto-generated alt-text, increasing the detail and accuracy of alt-text for life science images, improving content accessibility.

Home / Workbench / Alt Text Writing / 519832_1_En | Chapter 14 PDF Page 3 4 5 6 8 9 10 11 13 14 15 16 17 »

Patients With Short-Term Mechanical Circulatory Support indications, and outcomes. *Clin Med Insights Cardiol* 2015 Feb 3;8(Suppl 1):25-85. doi: 10.4173/CMI.315718

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Fig. 14.4 The influence of cardiac load on the pathophysiological process of severe myocarditis. Cited from Spillmann F, Van Lindhout S, Schmidt G, et al. Mode-of-action of the PROPELLA concept in fulminant myocarditis. *Eur Heart J*, 2019, 40 (26): 2164–2169. doi:10.1093/eurheartj/ehz124

Table 14.1 Comparison of the effects of VA-ECMO, IABP and Impella on cardiac function

Equipment	VA-ECMO	IABP	Impella (2.5, CP, RP)
Flow rate/L.min ⁻¹	4–6	0.3–1	2.5–5
Continuous support time (FDA standard)	6 h	9 day	4 day (2.5, CP) 14 day (RP)
Supporting ventricle	Left ventricle and Left ventricle	Left ventricle	Left ventricle/Right

Discard suggestion? Yes

Image + Caption + Surrounding Text

The image shows a schematic diagram of V-A ECMO, with labels indicating the parts involved in the process. The process involves taking non-oxygenated blood from the venous system or right atrium using the V-A ECMO line through the drainage tube, and passing it through the oxygenator for gas exchange. The oxygenated blood is then pumped back into the arterial system through the perfusion tube, which can be achieved through femoral vein-femoral artery cannulation. The image is accompanied by a caption that explains the process and mentions the potential risks and complications associated with V-A ECMO.

Image + Caption

The image shows a schematic diagram of V-A ECMO, which stands for venoarterial extracorporeal membrane oxygenation. The diagram highlights the femoral vein-femoral artery cannulation technique used in V-A ECMO. The cannula is inserted into the femoral vein to withdraw deoxygenated blood from the patient's body, which is then oxygenated using a membrane oxygenator before being returned to the body through the femoral artery. This technique is used in adults with severe cardiac or respiratory failure that is not responsive to conventional treatment. The diagram is cited from two medical articles as a reference.



Commercial Pharma

Accurate KOL identification to reduce communication gap by 15%

Our client required an automated KOL management solution to compare industry experts based on parameters such as subject matter expertise, sphere of influence, etc. An analytics-powered visual app improved communication between sales and marketing users- Marketing users efficiently planned scenarios, while sales leads operationalized them. Clustering, variable associations, and NLP powered the dashboard, increasing KOL satisfaction and decreasing rejections.

24 Experts Found Export Results Add to Plan

Name	Degree	Specialty	Institution	State/Region	Country	Aggregated Score	
Ahluwalia, Manmeet S	MD	Neuro-Oncology	Cleveland Clinic	Ohio	USA	13.37	<input type="checkbox"/>
Wen, Patrick Y	MD	Neuro-Oncology	Dana-Farber Cancer Institute	Massachusetts	USA	10.34	<input type="checkbox"/>
Reardon, David A	MD	Neuro-Oncology	Dana-Farber Cancer Institute	Massachusetts	USA	8.23	<input type="checkbox"/>
Vogelbaum, Michael A	MD	Neuro-Oncology	Erasmus MC Cancer Center	Newyork	USA	7.86	<input type="checkbox"/>
Nabors, Louis B	MD	Neuro-Oncology	University of Alabama	Alabama	USA	7.82	<input type="checkbox"/>
Grossman, Stuart A	MD	Oncology	Johns Hopkins University	Maryland	USA	7.10	<input type="checkbox"/>

Automating drug pricing monitoring with 99% accuracy

Manually tracking drug prices across multiple sources is time-consuming and error-prone, compounded by rapidly changing prices and new drug introductions, creating challenges in maintaining up-to-date records to ensure compliance. Our solution employs automated price tracking. Its human-augmented validation ensures data accuracy and regulatory adherence. This approach enables swift adaptation to market changes for strategic pricing decisions, and regulatory compliance and through timely drug price monitoring.

GenAI automated content generation such as images, texts, and training material for the sales force

The generation of promotional content for sales and marketing activities needs to be done in compliance with regulatory and governmental policies. It also requires a rapid pace for execution so collaterals can reach HCPs in time. Our GenAI-powered solution helps sales and marketing teams to produce marketing and POS collaterals at scale and speed with an aim to cut down the TAT from 4-5 weeks to 8 days.



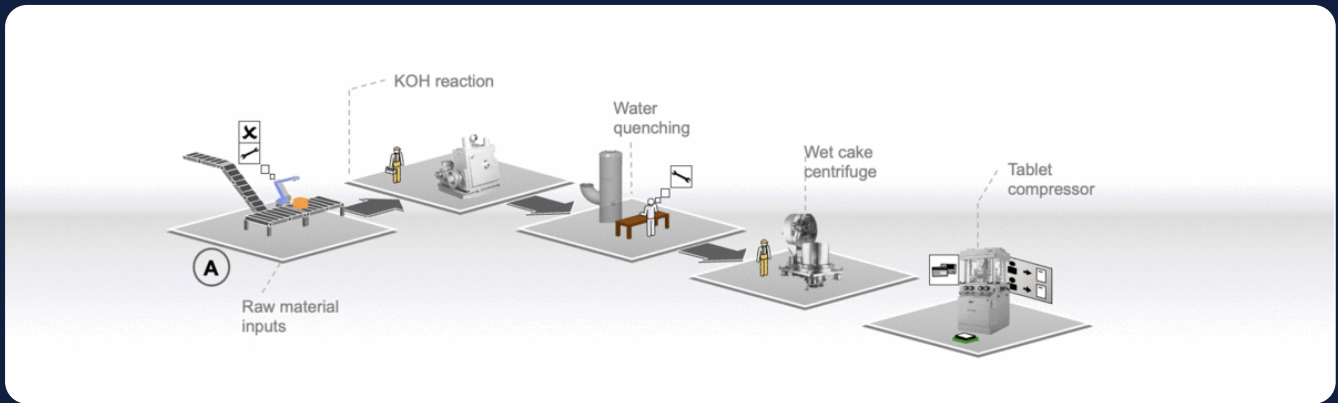
Manufacturing & Logistics

Effort to quantify innovator drug's excipient concentration cut down by 95% with computer vision solutions

The R&D department of a pharma company faced challenges with manually counting cells in liposome images from Transmission Electron Microscopes, leading to a 30-35% error rate, high costs, and a manpower requirement of 500-600 hours/month. We developed a Deep Learning counting model based on Convolutional Neural Networks (CNN) combined with a RANSAC model to detect and count cells in specific regions of liposome images. With an interactive UI emphasizing human-computer interaction, this solution reduced the effort required for morphology image processing by 450 person-days per month and achieved over 90% accuracy.

Advanced ML helped identify golden batch with 3-5% yield improvement

Maintaining high and consistent production of the Golden Batch is daunting. It requires identifying the operational and material parameters crucial for optimal production yield. We conducted Exploratory Data Analysis to understand various patterns and applied classification and regression models to determine rules and variable importance. Our solution established the relationship between operational and material parameters, leading to improved production yield and \$2 million savings.



Advanced analytics-driven digital twin model help improve manufacturing process steps

Automation in Order Creation and Management with 99% time savings

Manual order processing for academic publications was slow, error-prone, and required significant human effort for non-value-adding tasks, resulting in high turnaround times due to manual entry across multiple systems. Our unattended bot offered end-to-end order processing, integrated with SAP for real-time order updates and creation, and enabled 24/7 service to automate updates and manage exceptions, resulting in an automated order processing system.

About Straive

Straive helps clients operationalize the data → insights → knowledge → AI value chain. Straive's clients extend across industries that include Financial Services, Insurance, Pharmaceuticals & Life Sciences, Scientific Research, Information Providers, EdTech, and Logistics. Straive has a global presence across the United States, Canada, UK & Europe, Singapore, South Africa, India, Philippines, Nicaragua, and Vietnam.



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