



Capax Smart Document Automation Platform (CSDAP)

By Capax Technology Limited

Deep Technology Enabler

4TH February, 2026

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Agenda

- 01** Who We Are
- 02** What We Do
- 03** Introducing CSDAP

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Who We Are



At **Capax** Technology Limited,
we use **AI and other deep technologies**
to help our clients solve real-world challenges
in **pragmatic and innovative** ways.



Our History

Our journey began in 2011 when Master Dynamic Ltd. (MD), a R&D focused company, was formed. MD and its group company have developed various deep technology and solutions that are commercialized and implemented in the Smart City, Healthcare, Luxury goods, and Retail industry. Our development process is different than others as it involves integration of industry domain knowledge (from customers and industry experts) into our solutions. This allows our engineers to learn relevant industry knowledge. Capax was established as a spin-off from MD in 2021 to provide technology and solutions to both public and private sectors



R&D focused, developing various deep technology including

- ✓ A.I. & Automation
- ✓ Biotechnology
- ✓ Nanotechnology
- ✓ Quantum Technology
- ✓ Material Analysis
- ✓ Precision Engineering
- Over 100 granted invention patents
- Our technology/solutions help customers generated over USD 1 Billion sales revenue since 2017
- Developed technology has won 46th Geneva International Exhibition of Inventions gold medal award

Further the technology development and create technical solutions for Smart Building/City, Process Automation and Traceability applications

- ✓ A.I & Automation
- ✓ Blockchain & Traceability
- ✓ Computer Vision
- ✓ Data Analytics
- ✓ IoT Device
- ✓ SaaS Solutions
- 3 invention patents (pending)
- Developed technology has won Nvidia's A.I. Image Recognition Competition and HK Smart Transportation Challenge champion

Our Technology Pillars

AI

Hybrid AI

- Integrate industry domain knowledge & engineering knowhow into AI training with more meaningful outcome
- Analyze customer data and provide insightful analysis and predictions for different industries
- Successfully created world leading AI analytics engine for Diamond industry and Smart City



Automation

- Utilize AI, process improvement and software to automate business and operation process
- Real time monitoring and alert
- Enhance accuracy, efficiency and productivity, and reduce human error
- Automate data recording, analysis and reporting process for government and Smart City industry



Blockchain Traceability

- Our Blockchain based traceability platform can digitize, track, and trace business process or lifecycle of an asset for automation, process improvement and traceability applications
- Platform is Blockchain Smart Contract enabled



IoT Technology

- Develop sensors, RFID, NFC empowered IoT devices for data collection and integration throughout the value chain
- Analyze collected data for consumer preference, behaviour analysis and predictions, staff performance tracking and product allotment strategy

Our Management Team

Extensive Experience in Product Commercialization and Technology Development



Mr. Patrick Zee

Managing Director

- 20+ years experience in private equity investments/developments
- 7+ years in business advisory, including strategic planning, management consulting, and process implementation, etc.
- CFA and CMA



Ms. Rosanna Man

Chief Technology Officer

- 20+ years experience in software development, and expert in big data analytics and scalable web applications
- 10 years of hands-on experience in Silicon Valley involving 2 startups being acquired by listed companies
- MS of Computer Science from Stanford University, MBA from Carnegie Mellon University



Mr. Andy Tsang

Director, AI Technology

- 7+ years experience in AI analytics, Web portal, backend system and mobile apps development
- 7+ years startup development experience
- Assistant Dean, School of A.I.
- 2+ patents and publication owner on AI & Robotics related aspects



Ms. Ashley Cheung

Director, BD & PM

- 7+ years experience in managing SaaS platform, web and mobile apps development, corporate and retail banks' digital transformation projects
- IT consultancy at banking projects such as Payme, Faster Payment
- PMI-ACP (Agile Certified Practitioner)

Our Key Clients & Business Partners

Government Departments · Reputable Industry Experts

We serve clients in both the Public and Private sectors in Hong Kong, and work closely with reputable industry experts. (The lists below are non-exclusive)

Sample client:

- Government departments – EMSD, FEHD, EPD, Hospital Authority, Transport Department
- Quasi-government and NGOs – HK Airport Authority, HKSTP, CIC, Yang Methodist Memorial Social Service
- Private – Schindler, New World Development, Chow Tai Fook, Chow Sang Sang

Strategic Partners:

- ARUP, WSP, Oceanus Strategy

Why Capax?

Proven capabilities in industry and public recognition



AI Award – Image Recognition

- Organizer: Nvidia & HKSTP
- Challenge Highlight:
 - Best engine accuracy and fastest response time among 15+ contestants
 - Best AI recognition algorithm



AI Award – Smart Transportation

- Organizer: TD, LD, Esri, MTR, KMB, HKU etc
- Challenge Highlight:
 - Best innovative technical solutions among 30+worldwide contestants
 - Best AI Analysis performance of HKSTP’s traffic



Official Endorsements

- Successful Application of Hong Kong Short Term Patent (July 2022)
- Successful Publication of Paper IEEE Blockchain 2022 Conference in Finland (August 2022)
- **Highlighted as key KPI in Chief Executive’s 2022 Policy Address Initiatives**

Why Capax?

Proven capabilities in industry and public recognition

Second Runner-Up in OGCIO's Smart Government Innovation Lab's AI Competition 2024



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02

What We Do

Our Smart Solution

Smart Being



Physiotherapy Analytics



Food & Nutrition Analytics

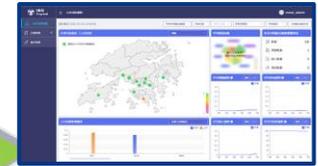
Smart Building



Trolley Detection



Face Recognition And Demographic Analysis



Digital Logbooks



Licensing & Inspection Management

Smart Governance



Vehicle Analytics



License Plate Number Recognition

Smart Traffic



Our AI Capabilities

Comprehensive AI Computer Vision capabilities in various domains

Smart Living



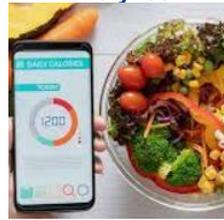
Physiotherapy Analytics



AI Robotic Dog Analytics



Shopper Analytics



Food & Nutrition Analytics



Face Recognition And Demographic Analysis



Footbridge Pedestrian Analytics

Smart Traffic/Construction



Tipping Hall Cleanliness Detection



Wheel Cleanliness Detection



Ambulance Detection



Refuse Transfer Station (RTS) Safety Detection

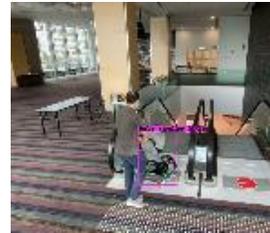


Vehicle Analytics



License Plate Number Recognition

Safety and Security



Trolley Detection



Helmet Detection



Abnormal Behaviour Detection



Fall Detection



Wheelchair Detection



Fire Detection

1) E-Inspection System for EMSD – Blockchain Core Solution

ABC (AI, Blockchain, Cloud) in Lift & Escalator Regulatory Implementation

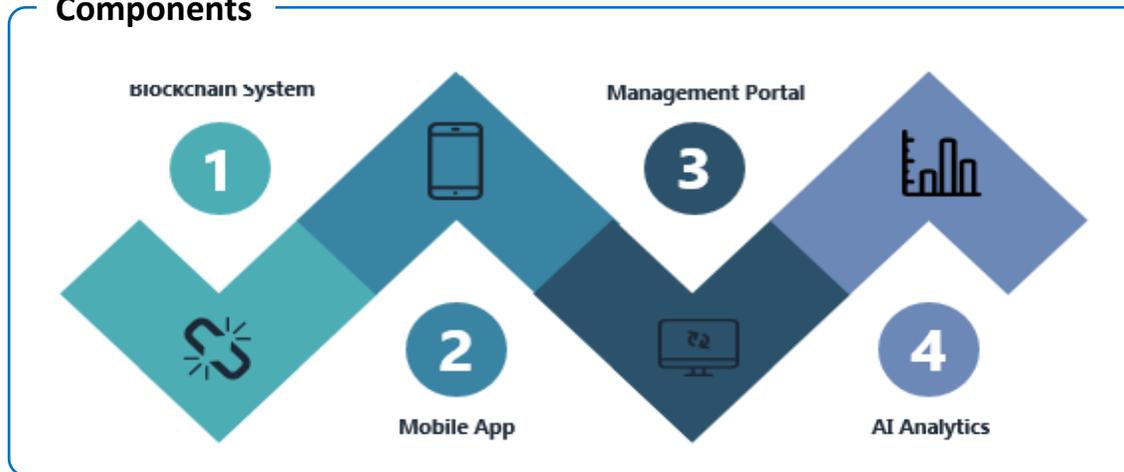
Background

- **Customer: Electrical and Mechanical Services Department**
- **Goal:**
 - Revamp existing maintenance logbook of Lift & Escalator from paper-bound to digital version
- **Pain points of Physical Logbook:**
 - 1) Accuracy: Missing information/uncontrolled amendment/deletion
 - 2) Availability: Lost / Damage
 - 3) Legibility: Poor handwritings
 - 4) Accessibility: Scattered over job sites

Our Solution for EMSD

Blockchain-Based Digital Logbook System for Lifts & Escalators in HK

Components



Benefits



Accolades and Recognitions:

Chef Executive’s 2022 Policy Address Initiatives:

- Scale: **70,000 Lifts & 10,000 Escalators**
- KPI: **Over 60% Penetration Rate by End-2024**

Patent & Academic Paper:

- Hong Kong Short Term Patent: 32022050656.4 (co-own with EMSD)
- Paper: #1570800130
- IEEE Blockchain 2022 Conference [in Finland]

International Competition:

- Bronze Medalist in the 48th International Exhibition Inventions of Geneva (2023)

Blockchain Audit:

- By UST Professor Lei. Chen

2) E-Inspection System for FEHD – Licensing & Inspection Management

Workflow Digitization · Licensing Management · Inspection System

Background

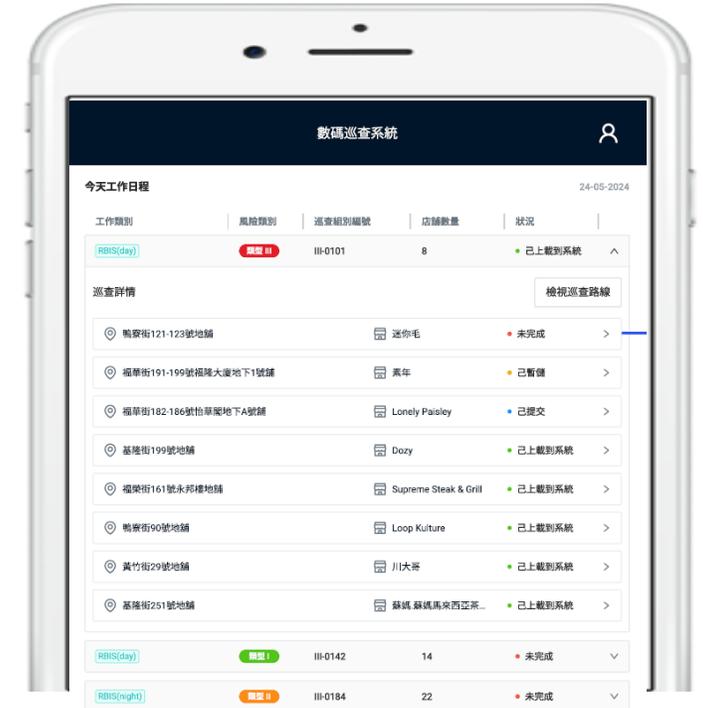
- **Customer:** Food and Environmental Hygiene Department
- **Goal:**
 - Digitize the Licensing Management System
- **Problems of Existing Operation:**
 - 1) Filling inspection forms by hand is unclear, time and resource-consuming
 - 2) Arranging inspection schedule by hand results in un-systematic and inaccurate management workflow
 - 3) Existing inspection investigation relies heavily on thick folder of physical papers, resulting in difficulty in traceability

Our Solution

Digitization of Licensing Management System for Food, Environment and Hygiene Related Area

The screenshot shows a web-based interface for the LMIS3 system. The main content area displays details for a 'General Restaurant Licence' (Form 181A [Part A & Part B]). The interface includes a sidebar menu with options like 'Home', 'Inspection Package', 'Inspection Schedule', 'Licences/Permits', 'Inspection Records', 'Test Buy', 'Unlicensed / Unpermitted Food Premises', 'Unlicensed / Unpermitted Other Trade Premises', 'Clubs & Canteens', 'Non Licence Data', 'Water Sampling List', 'Sanction', 'Letter Compiler', 'District Settings', and 'User Management'. The main content area shows the licence details, including the address (G/F, 121-123 Apliu Street, Sham Shui Po), licensee (Lee Sui Ming), hygiene manager (Chan Tai Man), and hygiene supervisor (Wong Tai Fai). It also displays the endorsement type (Frozen poultry, Frozen fish, Imported chilled chicken, Chilled mutton, Chilled pork, Chilled beef, Prepackaged chilled beef, Prepackaged chilled pork, Prepackaged chilled mutton, Others (Lorem ipsum)).

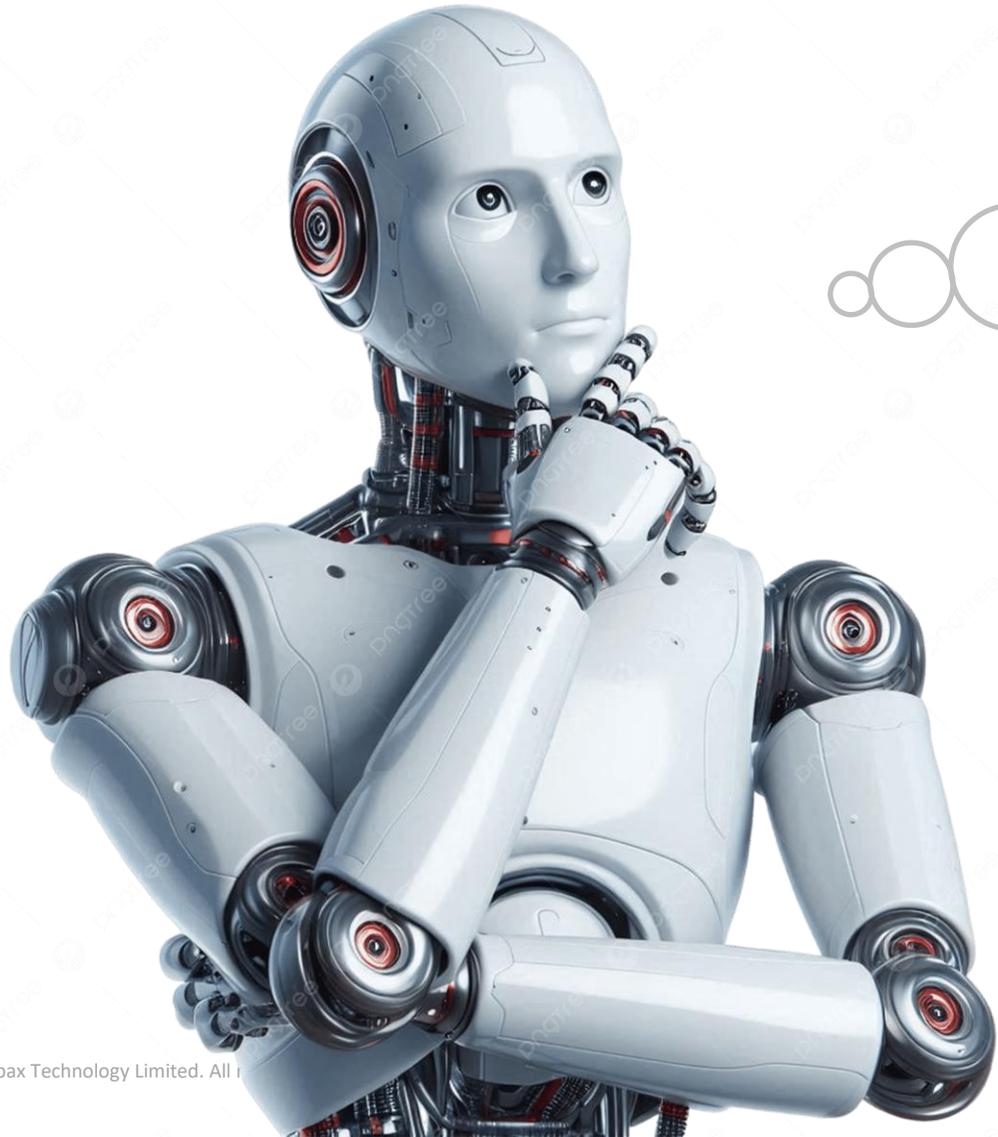
Actual Interfaces



iPAD

The number "03" in a white, bold, sans-serif font, centered within a dark blue square.

Introducing CSDAP

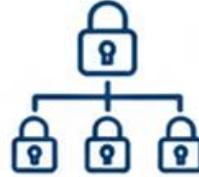


How can A.I. be more effectively used to improve my productivity

Background - Common Pain Point



1. NOT SCALABLE:
Separate systems for new features



2. RIGID WORKFLOWS:
Only basic, predefined processes



3. DISCONNECTED SYSTEMS:
Multiple platforms for one task



4. SECURITY CONCERNS:
Open-source & cloud reliance



5. TIME CONSUMING:
Manual data entry & reporting



6. LACK OF INTEROPERABILITY:
Difficulty sharing data

Introduction of Capax Smart Document Automation Platform (CSDAP)

Document Classification & Categorization

Involve automated processing and smart storage of filing and categorizing according to designated business requirements

Document Summarization & Verification

Involve textual OCR and AI semantic analysis of various types of documents; e.g., patent, medical lab report, ESG report, industry-specific document etc.

Complex Workflow Analysis

Involve analysis of various types of workflow diagram formats; and Chatbot-Q&A-Based interface for enquiry of analysis result

Complex Engineering Diagram Analysis

Involve state-of-art AI technology, e.g., Large Language Model (LLM) in object segmentation and detection of E&M schematic diagrams



CSDAP – Semantic Search for documents

Search with semantic meanings

The screenshot displays the DigiDoc.ai interface. The main area is titled 'Document Upload' and includes a 'Choose Files' button. A modal window is open, showing a 'Home' dashboard. The dashboard features a 'Classified by File Type' section with four categories: PDF File (24 files), PNG File (24 files), JPG File (24 files), and TIFF File (24 files). Below this is a 'Recent' section showing four file thumbnails. The 'All Uploaded Files' section contains a table with the following data:

File Name	Create Date	Nature	Aspect	Category	Create by
File Name	06-08-2024, 10:45AM	Support	Planning	Planning	JW Jams Wong
File Name	03-08-2024, 11:34AM	Object	Land-related	Planning	AC Amy Chan
File Name	01-08-2024, 02:45PM	Support	Planning	Village Issue	HM Helen Ma
File Name	01-08-2024, 02:45PM	Providing Views	Land-related	Village Issue	JL Joe Lo
File Name	01-08-2024, 02:45PM	Object	Land-related	Village Issue	HM Helen Ma

CLASSIFICATION

SUMMARIZATION

- Categorize data sources by predefined business rules
- Simplify electronic filing process
- Enhance efficiency and accuracy in managing and storing documents
- Search document with Words Semantic instead of keywords

CSDAP – Key Points Extraction from Reports

Extract all semantic informations with LLM

Logoipsum Home > Key Points Extraction > ESG Report

Key Points Extraction

Extraction Result Preview

Keywords	Extracted Key Points
A1.1	Energy Consumption: Total energy consumption decreased by 23.03% year-on-year, due to initiatives like optimizing elevator algorithms and adjusting air conditioning temperatures. Water Consumption: Total water consumption slightly increased by 1.92%, with a notable decrease in water consumption per employee of 4.78%. Greenhouse Gas Emissions: Total GHG emissions reduced significantly by 38.52%, with both direct and indirect emissions showing decreases of 11.63% and 43.73% respectively. Non-hazardous Waste: Overall production of non-hazardous waste went up marginally by 8.91%, but there's a slight increase in paper waste recycling. Hazardous Waste: There was a minimal change in the total production of hazardous wastes, showing a slight reduction of 0.50%.
A1.2	Greenhouse Gas Emissions: Total GHG emissions (Scope 1 and 2) amounted to 178,668.84 tonnes, a decrease of 38.52% from the previous year. Direct GHG Emissions: Direct GHG emissions (Scope 1) reached 47,488.68 tonnes, showing a decline of 11.63% compared to the prior year. Indirect GHG Emissions: Indirect GHG emissions (Scope 2) were reported at 14,480.96 tonnes, which is a significant reduction of approximately 43.73% from the last reporting period. GHG Emissions Intensity: The total greenhouse gas emissions per employee (Scope 1 and 2) was calculated to be 1.33 tonnes/employee, indicating a substantial intensity decrease of about 42.90%.
A1.3	Hazardous Waste Production: Total production of hazardous wastes (tonnes) Hazardous Waste Intensity: Production of hazardous wastes per employee (kg/employee)
A1.4	Total production of non-hazardous waste: The total production of non-hazardous waste for the group was 101.84 tonnes. Production intensity of non-hazardous waste: The intensity in terms of production of non-hazardous waste per employee was 7.74 kg/employee.
A1.5	Greenhouse Gas Emission Targets: Company achieved notable results in energy conservation, water saving, and emission reduction through refined energy consumption management. Energy Conservation Steps: Optimized elevator riding algorithms, adjusted air conditioning temperature and lighting technology, conducted in-depth inspection of "Five Switches" every day. Water-saving Initiatives: Modified drip irrigation and installed water recovery systems; adjusted restroom tap outlet pressure. Waste Reduction Tactics: Outsourced printing services, recycled used papers for office meetings, recycled waste batteries per national standards, limited supply of non-essentials at the fitness center. Energy Conservation Measures: Of Securities set energy conservation and emissions reduction targets for 2022, specifically aiming to reduce office space electricity consumption by approximately 25%. They plan to achieve this through adjustments in air conditioning temperatures, operation hours of major air conditioners, and the addition of a refrigerant-cooled air conditioner for data center cooling. Emissions Reduction Efforts: The company outlines steps taken to meet their emissions targets such as adjusting lighting levels according to WELL standards for reduced cost and increased efficiency, along with

Semantic AI

Keywords List

Keywords	Extraction Area	Actions
A1.1	1-62	
A1.2	1-62	
A1.3	1-62	
A1.4	1-62	
A1.5	1-62	

New Item

Add to Extract

CLASSIFICATION

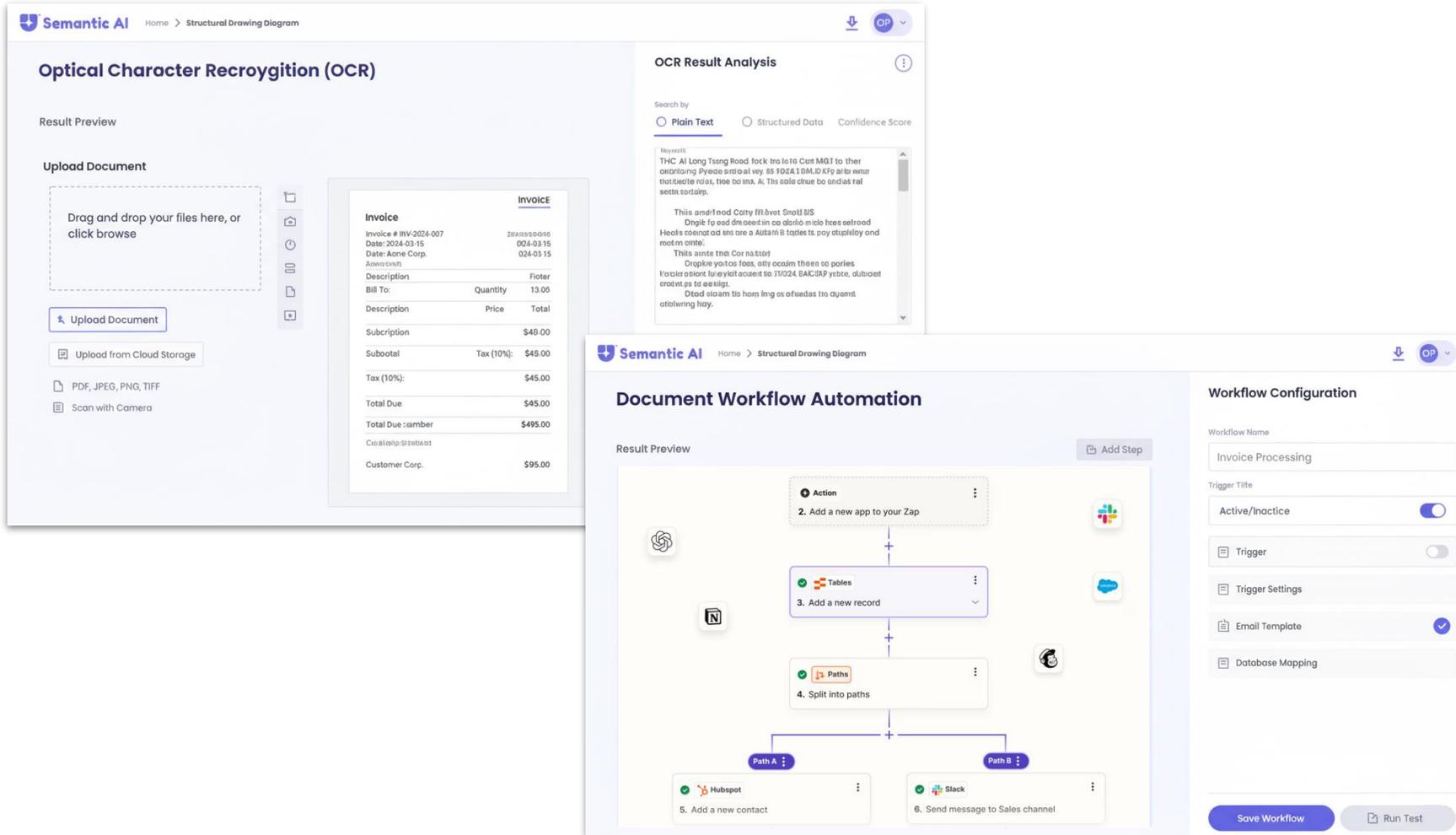
SUMMARIZATION

- Extract information from report with Semantic Understanding
- Create table of extracted information across whole document
- Applicable to: certification, lab report, etc
- Other feature
 - High similarity with other documents and Inconsistent in English & Chinese
 - Inappropriate terms
 - Page number loss

CSDAP – Document Recognition with Workflows

WORKFLOW

Extract all semantic informations with LLM



The screenshot displays the Semantic AI interface, divided into two main sections: OCR and Document Workflow Automation.

OCR Section: Titled "Optical Character Recognition (OCR)", it includes an "Upload Document" area with a "Drag and drop your files here, or click browse" instruction. Below this are buttons for "Upload Document" and "Upload from Cloud Storage". A list of supported file types includes PDF, JPEG, PNG, TIFF, and an option to "Scan with Camera". The "Result Preview" shows an extracted invoice with the following details:

Invoice		
Invoice # INV-2024-007	2FA03950098	
Date: 2024-03-15	024-03-15	
Date: Acme Corp.	024-03-15	
Description	Floter	
Quantity	13.05	
Description	Price	Total
Subscription		\$48.00
Subtotal	Tax (10%):	\$48.00
Tax (10%):		\$45.00
Total Due		\$45.00
Total Due +amber		\$495.00
Customer Corp.		\$95.00

Document Workflow Automation Section: Titled "Document Workflow Automation", it shows a "Result Preview" of a workflow diagram. The workflow steps are:

2. Add a new app to your Zap
3. Add a new record
4. Split into paths
5. Add a new contact (Path A)
6. Send message to Sales channel (Path B)

The "Workflow Configuration" panel on the right includes fields for "Workflow Name" (Invoice Processing), "Trigger Title", "Active/Inactive" (toggle), "Trigger" (toggle), "Trigger Settings", "Email Template" (checked), and "Database Mapping". Buttons for "Save Workflow" and "Run Test" are at the bottom.

- Apply OCR to extract value or context from documents
- Available for hand written with high accuracy
- Generate workflow automatically replace daily paper works routines (e.g. email, messaging, report generation etc...)

CSDAP – Image-to-Text Engine (for diagram)

Detect all components at all once

Purpose

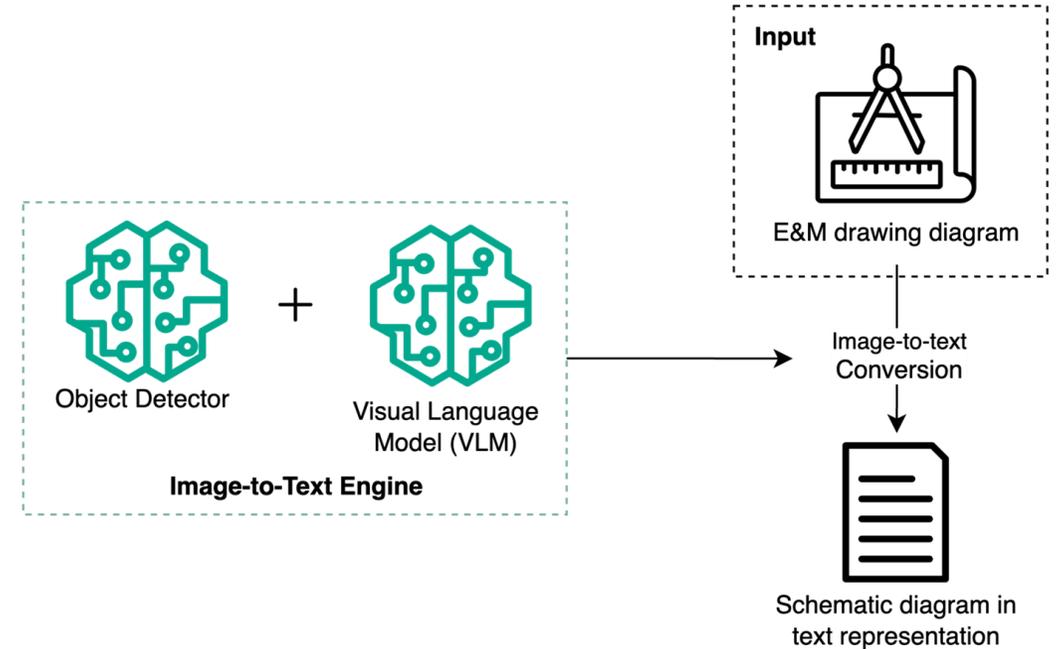
- Detect all components following legends shown on the diagram
- With small quantity of example data

Algorithms

- YOLO based object detector, with two modification made

Image-to-Text Engine input & output

- Input: original E&M diagram
- Output: E&M diagram with bounding boxes +
- Detected results in JSON format



CSDAP – Semantic Analysis for E&M Diagram

OTHER DOMAIN

Semantic AI, Large Language Model (LLM), E&M Diagram

E&M Diagram Analysis

Image Preview

Semantic AI

E&M Diagram Analysis

Image Preview

Uploaded Image Preliminary Analyse

Preliminary Analysis Result

Summary Gantt chart Pie Chart

Preliminary Analyse

Description	Data Type	Count
Value	String	TAI LUNG VETERINARY LABORATORY
Drawing No.	String	1344EM2PM-AC01
Pumping Arrangement	String	PRIMARY ONLY
Type of Chiller	String	AIR-COOLED
No. of Auto Air Vent	Integer	0
No. of Butterfly Valve	Integer	19
No. of Chiller	Integer	4
No. of Compressible Pressure Bypass Valve	Integer	1
No. of Double Regulating Valve	Integer	0
No. of Drain	Integer	4
No. of Electric Motorized Butterfly Valve	Integer	4
No. of Electric Motorized Modulating Actuator Butterfly Valve	Integer	2
No. of Flow Meter	Integer	7
No. of Flow Switch	Integer	4
No. of Globe Valve	Integer	18
No. of Globe Valve	Integer	1
No. of Non Return Valve	Integer	0
No. of Pressure Gauge	Integer	16
No. of Pressure Transducer	Integer	9
No. of Stainless Steel Flexible Connector	Integer	14
No. of Water Tank	Integer	3
No. of Temperature Sensor	Integer	0
No. of Thermometer	Integer	7
No. of Y Type Strainer	Integer	0
No. of Chilled water pump	Integer	0

← Back Summarize Next →

- Upload chiller plant E&M Schematic Diagram
- Detection of Logical Relationships among All Components
- Output the Analyzed Results into Engineer-friendly TTL Formats
- Generate components summary with multiple format (e.g. texts, infographic, chart etc ...)

CSDAP – Semantic Analysis for Building Structure Diagram

OTHER DOMAIN

Semantic AI, Large Language Model (LLM), BS Diagram

- AI learning Schematic information of different building structural components
- Decomposition of the workflow into graphical mind map format
- Output analysis result according to users' required formats

Case Study – Certification/Report Validation and Automated Workflow

Leverage CSDAP to complete multiple task in one secure and workflow environment

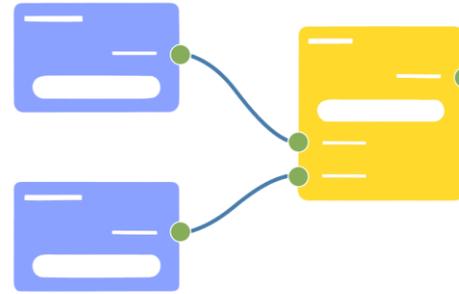
The image shows two overlapping document images. The top one is a 'LAB REPORT' from Luton High School, dated May 25, 2028, by Ms. Sally Jackson. The bottom one is a Chinese 'Annual Return' form (NAR1) for Capax Technology, with company number E661232. The form includes fields for company name, business name, type of company, and registered office address.



```

{
  "chineseName": "NA",
  "englishName": "Capax Technology Limited",
  "address": "Unit 105, 1/F, Lakeside2, Phase",
  "email": "info@capax-tech.com"
}
    
```

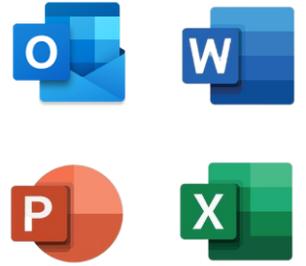
Extract Data with Semantic AI



Workflow with AI and dynamic task block



Store and Retrieve with Semantics



Visualise data in various format

Current Use Case (1) – Government Client

Government Client:

Electrical & Mechanical Service Department (EMSD)

Project Name:

Conversion of Knowledge Graph for E&M Equipment from Designated Data Source Using AI

Tender Quotation:

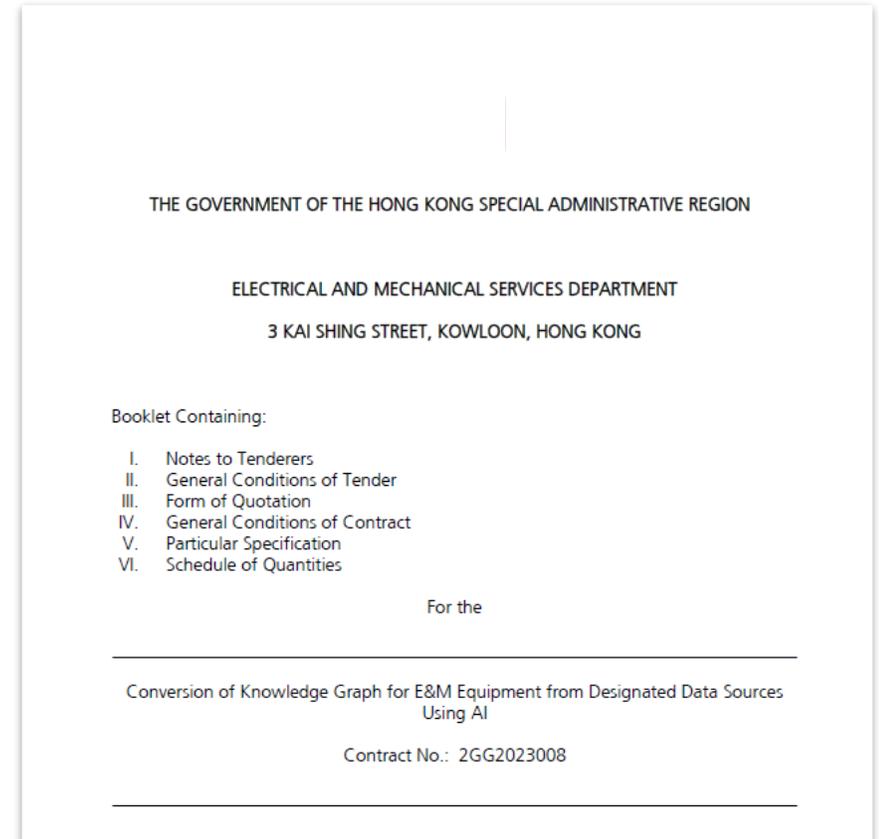
2GG2023008

Goal & Result:

To analyze complex chiller plant E&M diagram and significantly reduced analytics time by 50% comparing to human analysis

Achievement:

Won Second Runner-Up in OGCIO's Smart Government Innovation Lab's AI Competition 2024



Current Use Case (2) – Commercial Client

Commercial Client:

Smooth Biz Limited (A corporate secretarial company as well as a B2B ESG consulting service company)

Project Name:

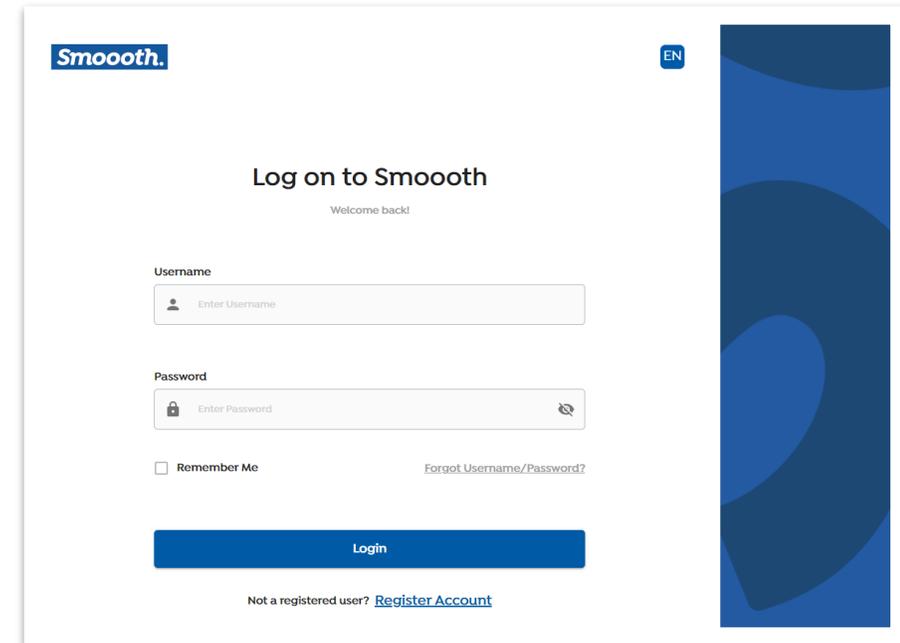
Customization of Capax Smart Document Automation Platform for Smooth's Company Secretary Workflows

Goal & Result:

To utilize Capax Smart Document Automation Platform regarding workflow analysis, document summarization, to streamline their company secretary workflow as well as to powering their ESG analytics engine for SME companies

Achievement:

Assisted Smooth to acquire 100%+ growth of SME users via the user-friendliness of platform



The screenshot shows the login interface for Smooth. At the top left is the Smooth logo, and at the top right is a language selector set to 'EN'. The main heading is 'Log on to Smooth' with a sub-heading 'Welcome back!'. Below this are two input fields: 'Username' with a placeholder 'Enter Username' and a user icon, and 'Password' with a placeholder 'Enter Password', a lock icon, and an eye icon for toggling visibility. There is a 'Remember Me' checkbox and a 'Forgot Username/Password?' link. A blue 'Login' button is positioned below the fields. At the bottom, there is a link for 'Not a registered user? Register Account'.



| Thank you

For more information,
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Product Comparison: CSDAP vs N8N

Comparison Dimension	CSDAP	N8N
Core Positioning	Focus on end-to-end intelligent automation of documents (classification, analysis, extraction, compliance), <u>deeply integrating semantic AI and domain knowledge</u>	General-purpose open-source workflow automation tool, focusing on cross-application task orchestration and <u>process triggering</u>
Document Processing Capabilities	<u>Supports multiple document types</u> (e.g. patents, medical reports, ESG reports, etc.), providing semantic search, key point extraction, and multilingual consistency verification	<u>No native intelligent document processing</u> functions; only supports basic file transfer/format conversion
Engineering Diagram Analysis	Support for E&M schematic diagrams and building structure <u>drawing analysis, enabling component detection, logical relationship identification</u> , and output of engineer-friendly formats (TTL, charts, etc.)	<u>No specialized</u> engineering <u>diagram processing capabilities</u> ; unable to identify diagram components and semantic associations
OCR Functionality	Supports high-accuracy recognition of <u>printed text + handwritten text</u> , combining LLM to achieve semantic-level content extraction and context understanding	<u>No built-in OCR module</u> ; relies on third-party plugins for character conversion only, with no semantic analysis
Semantic Analysis Capabilities	<u>Embeds LLM and domain knowledge</u> , supporting document semantic retrieval, cross-document similarity comparison, and terminology compliance verification	<u>Lacks semantic analysis capabilities</u> ; only triggers workflows and relies on third-party plugins for searching keywords/fixed rules
Security Certification	<u>Compliant with ISO 27001 Security Standard</u> (To-Be), ensuring compliant storage and transmission of document data	Open-source tool with <u>no native industry security certification</u> ; requires self-configuration of compliance protection
Deployment Method	Supports enterprise-level <u>private deployment</u> , adapting to confidential document processing needs	Supports self-hosting/cloud deployment, mainly for <u>lightweight deployment in general scenarios</u>