

Evolution AI: The new standard for automated data extraction



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OUR STORY

Our mission

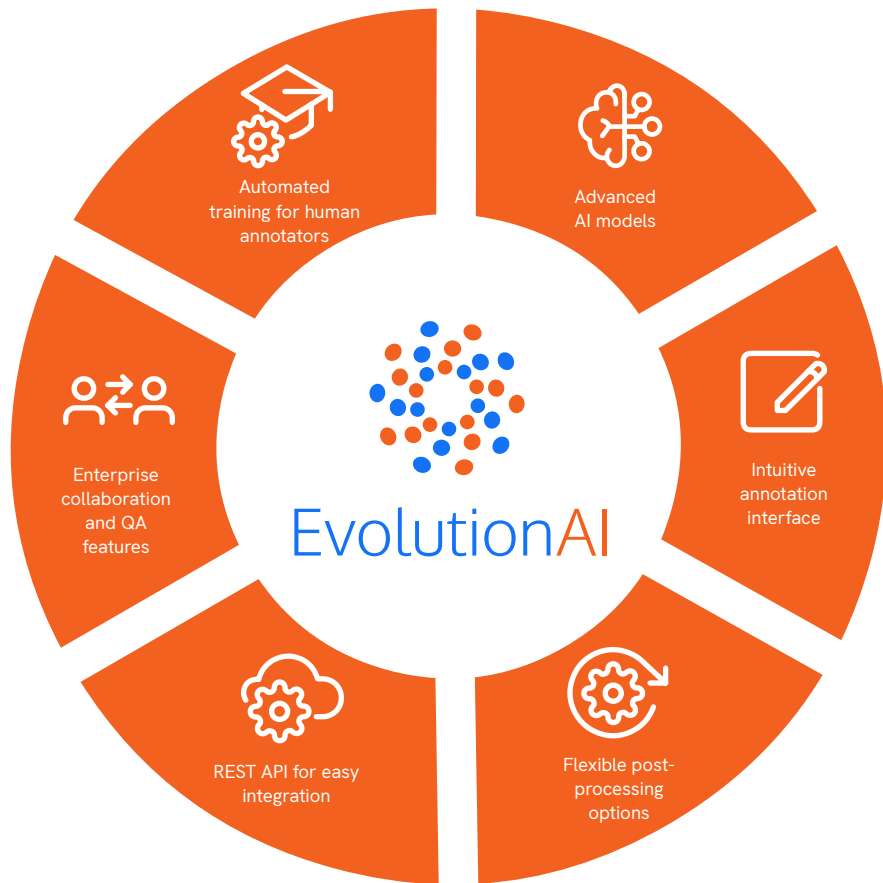
After years of frustration with ineffective solutions that delivered poor results, Evolution AI's CEO, Dr. Martin Goodson, was inspired to create a data extraction solution that 'just works'. Alongside co-founder and CTO Rafal Kwasny, he founded Evolution AI to revolutionise the field.

By combining computer vision and natural language processing (NLP), our AI models are able to understand and interpret any type of document with unprecedented accuracy.

Our technology sets a new standard for automated data extraction: human-like accuracy without laborious configuration and setup.

Simply upload documents and the system extracts the relevant information, putting structured data at your fingertips. Seamless integrations with downstream systems makes it easy to transform business processes while saving both money and time.

Our mission is to create AI capable of understanding any document - just like a human.



Innovation

Evolution AI is fundamentally a science-based company. As scientists, we believe in constant discovery and innovation. Our researchers and consortium of industry partners are focused on channelling the latest advances in AI to create a technology that understands every single document.

Proven solutions

Businesses want proven data extraction solutions that are fast, accurate, scalable and affordable. Evolution AI's products are the result of many years of pioneering R&D. We process over 1.5 million pages daily, for our customers, including well-known names like Deutsche Bank, NatWest, Dun & Bradstreet, The Economist and Fitch Ratings.

Collaborations

To create our ground-breaking technology, we formed an industry consortium of partners which includes Dun & Bradstreet, HM Government, University College London and the University of Southampton.

Evolution AI is also the proud organiser and sponsor of the London Machine Learning Meetup, the largest AI community in Europe: over 10,000 AI scientists who share their collective expertise in all things machine learning and AI.

Leadership

The UK Government recognised the game-changing potential of Evolution AI for UK business and beyond. In 2017, we received the UK Government's largest ever grant for commercial AI research and development, followed by further substantial awards in 2019 and 2020.

In 2019 our CEO, Dr. Martin Goodson, was elected as chair of the Data Science and AI Section of the Royal Statistical Society. The membership group, established in 2017, represents the profession of data scientists in the UK.

In 2021, Evolution AI was named the Leading Innovators in Data Extraction - Europe at the Fintech Awards 2021. Our technology's ability to draw on visual reasoning and NLP was recognised as revolutionary.

THE FOUNDATIONS OF EXCELLENCE



THE REAL COST OF MANUAL DATA EXTRACTION

Many sectors have embraced automation across their operations to reduce costs and improve efficiency. However, for many, a significant challenge remains: extracting data quickly and accurately from documents.

Manual data extraction has long been the status quo that costs organisations time and money — and hinders their growth. Most have accepted the status quo and resigned themselves, baking it into the cost of doing business.

Lack of scalability, human error and poor quality data are all symptoms of this outmoded way of working. In the long term, these will manifest as lethargic decision-making, customer-service that falls short of competitors and lost growth opportunities. Not to mention inflated costs.

Traditional IDP solutions don't solve the problem

Many intelligent document processing (IDP) solutions claim to solve the problem of data extraction for documents. The reality is often disappointing.

That's because most IDP solutions require significant time and expense to configure and train. This means a long, protracted, and expensive journey - only to discover they can't cope with the diversity of documents most businesses use on a daily basis.

The scale of this problem represents a wealth of untapped potential. To gain a competitive edge, organisations need a revolutionary solution that unlocks the true value of their data.

Evolution AI represents such a revolutionary solution.

Cutting your costs is our priority

✔ *Using Evolution AI will cut your costs by 75-90%*

Automation is only worthwhile when it improves efficiency. Our experience, across hundreds of deployments, shows that Evolution AI saves customers between 75 and 90% of costs compared to processing documents manually.

✔ *Competitive pricing and flexible terms*

We constantly monitor the market to ensure customers receive the most competitive pricing and most flexible contract terms.

We always aim to reduce your risks

✔ *We prove our high performance before you spend any time or money*

Our philosophy is to demonstrate high performance quickly, without needing a lengthy proof of concept (PoC) project. We derisk your investment by validating performance before you make any commitment. Evolution AI will quickly complete a data quality test, presenting results that give you peace of mind.

✔ *Cast iron guarantee*

Our strict guarantee is 100% correct data. If you find a single error in the data within the first three months your costs will be fully refunded.

Your projects fully configured and production-ready in 24hrs

✔ *From zero to launch in 24 hours*

Inefficiency costs business time and money. But transforming your data and business operations doesn't need to take weeks or months. We commit to configuring and launching projects in 24 hours.

✔ *Standard models for most documents*

We've worked with hundreds of types of documents, so we understand what data is important. You can use our standard taxonomies or create new ones customised to your requirements.

You're in safe hands



Fast configuration and setup



ISO27001 certified



Data extraction from (literally) any document



Proof of performance before any commitment



Guaranteed 100% accuracy

CORE CONCEPTS & ESSENTIAL KNOWLEDGE

Zero-shot learning means no lengthy configuration process

Our revolutionary “zero-shot” algorithm enables users to extract data without lengthy training and configuration. This marks a significant breakthrough for IDP technology, which has historically required many document training examples in order to extract data from a new document type.

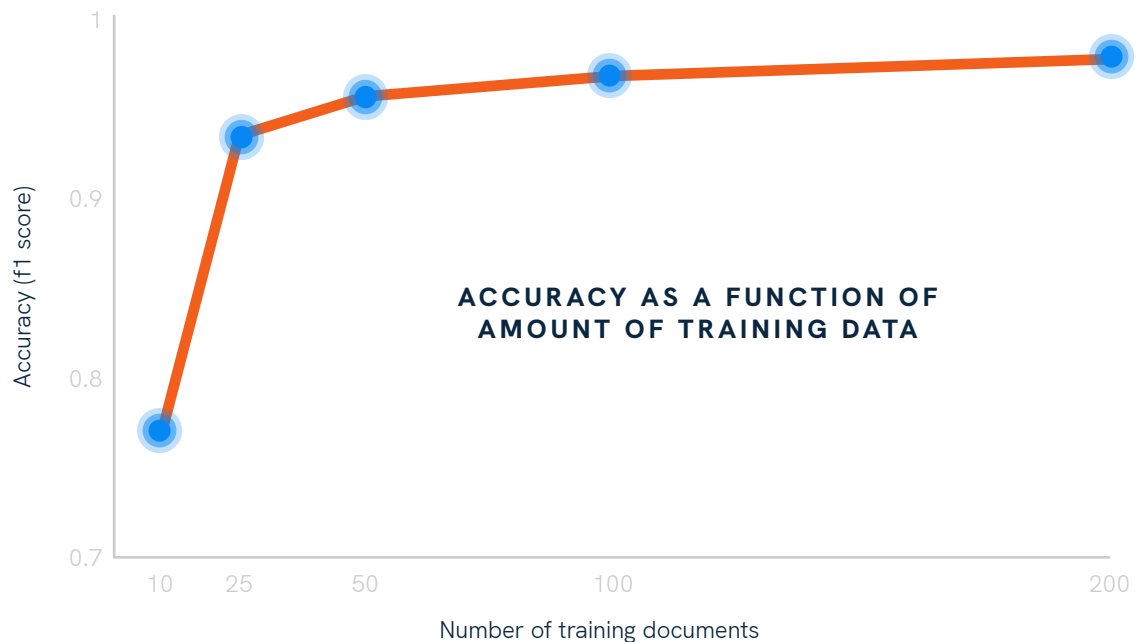
The term “zero-shot learning” comes from the world of machine learning. Zero-shot algorithms are able to transfer understanding from previously-seen training examples to completely new tasks. They can take on new tasks without needing any additional training data at all.

Zero-shot learning fundamentally changes how organisations approach the adoption of IDP solutions. Because training data is not needed, you won't need to spend days or weeks searching for thousands of documents to train AI models.

Self-learning systems improve over time

Zero-shot learning is powerful but not infallible. So, to ensure optimal performance, Evolution AI also includes a self-learning algorithm. The AI model improves its understanding every time a user corrects an error, and will never make the same error again. The software performs self-learning automatically. Unlike competing IDP systems, there is no need for a cumbersome “training” stage.

Testing of our self-learning technology shows that after processing just 25 documents the self-learning model quickly improves accuracy to over 90%, reaching 98% once the system has seen 200 documents (Figure 1). During the first few days of production usage, accuracy will quickly reach 98-99%. Any remaining errors can be corrected by human annotators and accuracy will continue to improve over time.



Integration is quick and simple

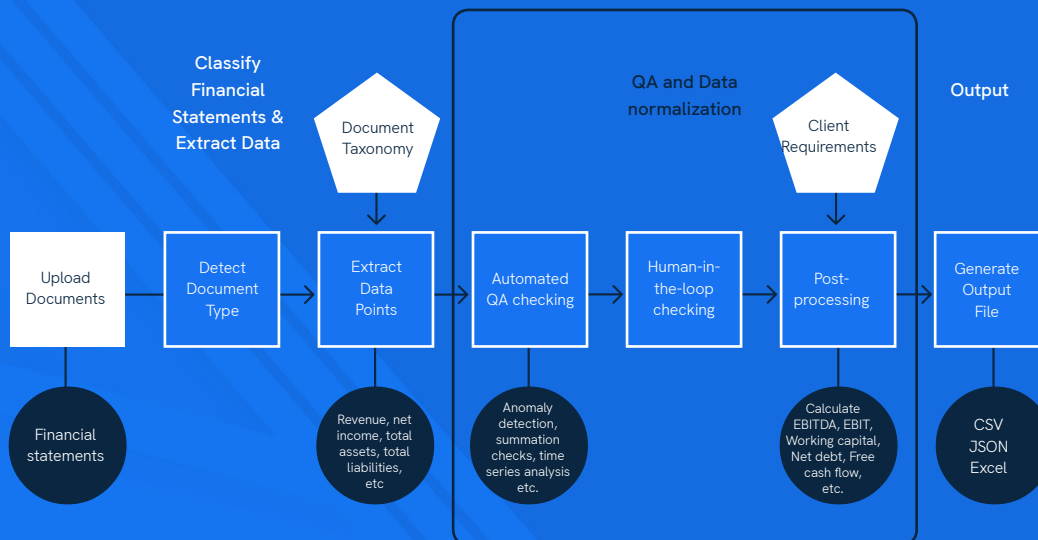
Data needs to be accessible to the right systems to create value. Flexible integration via REST API makes it easy to upload documents and send the output to downstream systems. Or just integrate by file transfer using SFTP.

Evolution AI can apply several data post-processing rules to improve and enrich data quality, such as standardised date formats and calculating inferred fields. If you need something unique, just tell us. We do everything to ensure you have your data, your way.

We don't settle for less than 100% accurate data

Evolution AI understands accurate data is of the utmost importance: our software supports fully configurable QA workflows. That includes multiple teams, spot or comprehensive checking, customising confidence thresholds, double-checking mandatory fields, and even requiring double-user sign-off prior to data extraction.

A series of automated checks and balances also identifies anomalies in the data. For example, 'time series analysis' is used to detect greater variation than would normally be expected and flag potential errors.



Example workflow for financial statements: Evolution AI supports all required financial concepts such as reporting periods; and currency and multipliers.

Advanced AI models work hand in hand with a fully-featured annotation interface.



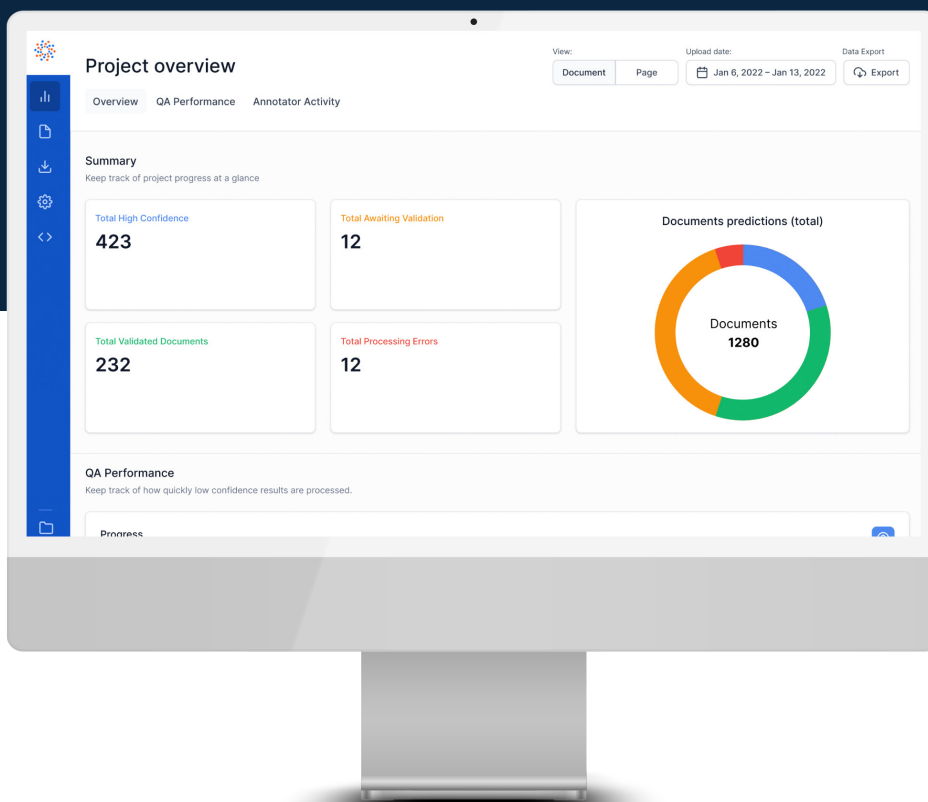
Advanced AI models and annotation interface

Feature	Description
Pre-built models	Access to a library of pre-trained models
Automatically classify documents	Automatically classify documents according to configurable categories
Confidence scores	Flag extracted data points whose confidence score falls below the confidence threshold and requires human-in-the-loop intervention and validation
One click model retraining and self-learning	After QA is complete, a single click submits corrections and retrains the model. The model learns immediately from the corrected document
Self-learning	Self-learning AI recognizes patterns in data and learns as it sees more data. Corrections from a human in the QA process improve the model immediately to prevent the same error happening more than once
Zero-shot learning	System can make predictions on new types of documents without requiring any training examples
Extract data in paragraphs of text	Capturing the exact information contained within a text paragraph
Support for financial data	Support for reporting period (e.g. YTD, LTM, FY), currency and multipliers (eg. thousands and millions)
Complex table extraction	Accurate extraction from complex tables, including nested tables and tables spanning multiple pages
Preview screen	View the uploaded document and extracted / missing fields. Option to view all pages or only those with extracted fields
Split document	Divide a document into separate sub-documents
Easy to use annotation interface	Simply select the data field from the menu and click and drag to select the data point on the page. Checks and approvals ensure the user has selected the correct data field and specified the correct data format where relevant (e.g., date: DD/MM/YY vs MM/DD/YY)
Text filter	Search for specific words within the document
Document alignment	Rotation of pages and automated deskewing

Data Post Processing & Transformation

Feature	Description
Pre-built models	Data can automatically be standardised to meet requirements, such as date standardised to ISO8061 format
Split monetary fields	Monetary fields can be split into three letter currency code and the value multiplier
Time series anomaly detection	A series of checks and balances are in place to identify anomalies and ensure data quality, such as: <ul style="list-style-type: none"> • Identify variables with great than expected variation • Compare current revenue to last quarter revenue • Check to see all multipliers on the page are the same
Summation consistency	Automatic checks to ensure that the sum of extracted field values equal the totals
Apply custom business logic	Clients may require specific rules. A custom workflow can be set up for HITL validation to ensure data is extracted correctly.

After data is extracted from the document, Evolution AI performs a series of checks and balances to validate data accuracy and standardise the output to your requirements.



Evolution AI has all the enterprise IT and management features your IT team would expect.

Enterprise IT and Integration Features

Feature	Description
Roles based permissions	Add new users and configure permissions to one of three levels (annotator, user, admin)
ISO27001 certified	Compliance with the highest level of information security
Configurable QA workflows	Configure QA workflow allowing flexible approval process for document sign off
Set metadata	Metadata feature enables supplementary data to be included at the document/batch level
Upload log and filter	A full and searchable history of all uploaded documents and details including upload data, processing status and document type
Extract data	Generate an output file in CSV or excel, or JSON via API
Easy auditability	Every extracted data point comes with a hyperlink to the document and the page the data point was extracted
API access	Upload documents and download output via RestAPI
Workato integration	Workato connector means we are integrated with over 1,000 software platforms including all widely used ERP and accounting systems.
Webhooks	Post status updates regarding your documents via API
Support downstream automation	Integration via well documented REST API.
History log	A date and time-stamped record of all actions taken and by which user for every document. Includes classification, prediction and human-in-the-loop (HITL) annotation
Notes	Annotators can leave comments with each document, making it easy to store communications and document intelligence in one place
Dashboard	Monitor and track all project metrics, such as the number of documents processed by document type and total number of pages processed
Golden Set for team training	Train new members using a special set of pre-annotated documents

““ What we’ve loved about working with Evolution AI is how intensely focused they are on the customer. They spent a lot of time understanding our specific needs.

Derek Ferguson,
Head of Technology, Fitch Solutions

““ Evolution AI has had a fantastic reception from senior management. They’re seeing significant improvements to our data, which are globally scaleable and at a very reasonable cost.

Andy Crisp,
Data Engineering Leader, Dun & Bradstreet

““ Evolution AI really ‘get’ working in the banking environment. This is a long-term Relationship for us.

Mark St John Qualter,
Head of AI, NatWest

““ We saved 75% of our costs, the data quality is excellent and time was halved.

Cyril Kirschwing,
Head of Change and IT Solution Architecture, Unigestion

““ Evolution AI is essential to our future growth ambitions.

Jakub Sokol,
Financial Manager at LitFin

TESTIMONIALS

Best-in-class technology. Exceptional customer service.

Evolution AI is serious about providing you with high quality data. That's why we combine innovative and groundbreaking data extraction technology with exceptional customer service.

Each project has a dedicated project manager and a data quality manager who ensures your onboarding experience is seamless and data quality is to the highest standard.

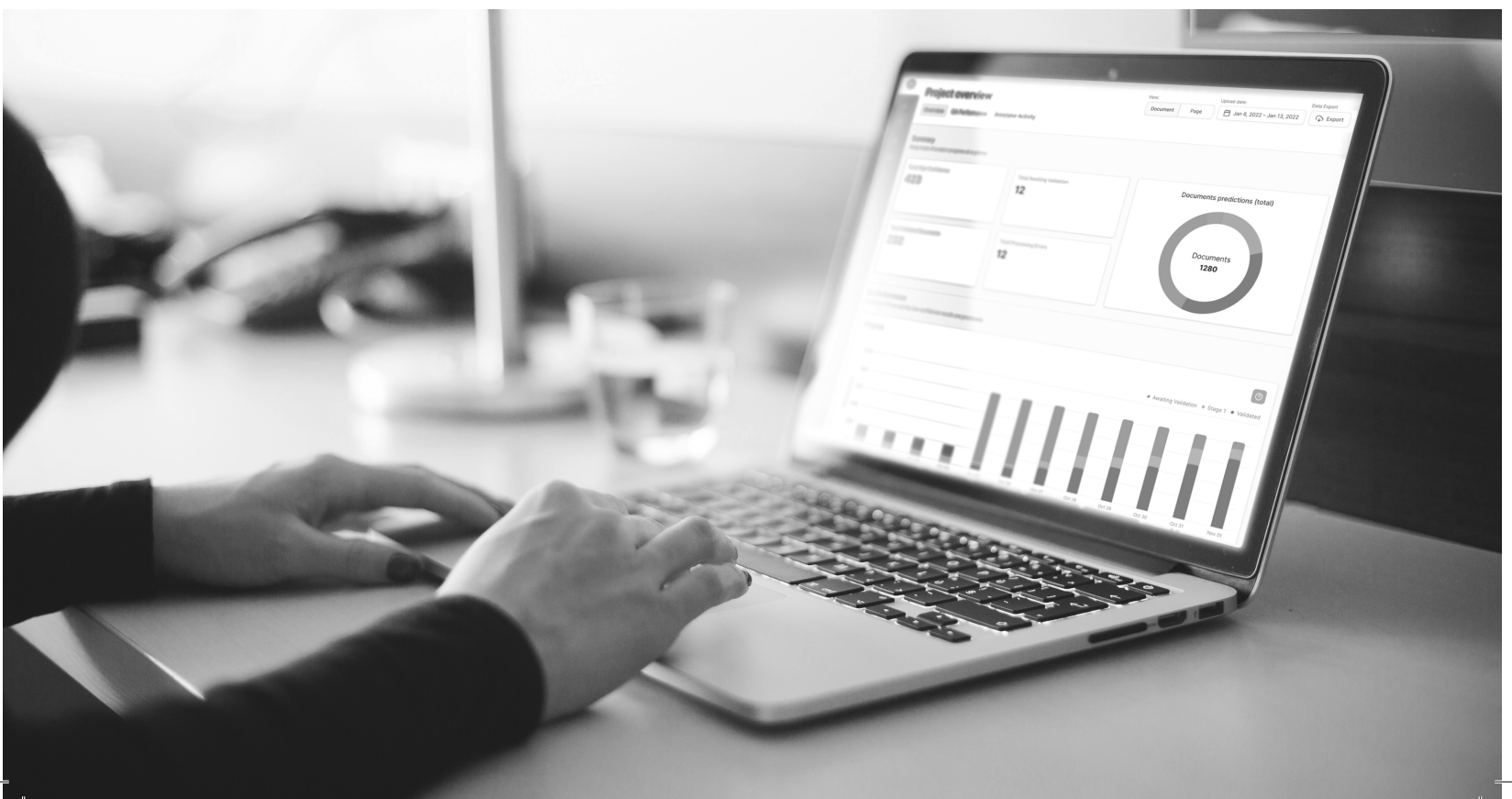
For self-service customers, we provide comprehensive training and on-going support to ensure you have full confidence in managing your project. For our managed service, all you need to do is upload documents and download high-quality data.

“ We really appreciate that Evolution AI were available practically 20 hrs a day 7 days a week.

Reka La Roze,
VP Change Management at Unigestion

“ I would say the customer care was the biggest selling point for us.

Jakub Sokol,
Financial Manager at LitFin



OUR CLIENTS AND USE CASES

We read 1.5 million pages a day for our clients



A simple and straightforward commercial model

We combine high-performing products and flexible service with competitive pricing. Our pricing is transparent and straightforward: we charge on a per-page basis. To calculate the total cost, simply tell us:

1 | Managed or self service*

2 | The type of document(s)

3 | Approximate annual page volume by document type

That's it. No annual licence fees. No implementation costs. No hidden fees.

*Managed service: all QA is performed by our team of expert annotators. We guarantee 100% data accuracy from day one. Self-service: manage the process with support and training from Evolution AI.

APPENDIX

Questions to ask an IDP vendor

Models and algorithms

- Can your system extract data from a new type of document without needing any training?
- Do you have your own proprietary OCR and data extraction technology or do you rely on a 3rd party?
- Can you adapt the algorithms to our requirements, if needed?
- Can the algorithms extract complex elements such as multi-page tables, dense nested tables, etc?
- Can the algorithms automatically extract important financial elements such as currency and units (i.e., thousands, millions, etc)
- Can it extract date ranges (reporting periods) for each extracted value (e.g. EBITDA)
- Is the system self-learning? Does it learn immediately when corrected or is training performed separately?

Accuracy and performance

- In a recent project, how many errors were there per 100,000 data points supplied to the client?
- How much training data is required to learn to extract from a new type of document?
- How long does it take to configure new types of documents?
- How quickly can documents in the QA workflow be reviewed and validated?
- What measures do you have in place to ensure data confidentiality, integrity and availability?
- What data accuracy will you guarantee via SLA?

Software features

- Is your software ISO27001 certified (ISO27001 is the international standard for information security)
- Where are the data and the service hosted?
- Does your service support API integration with downstream systems?
- Do you support Human-in-the-loop Quality Assurance? Is it possible to configure multiple teams with different permissions?
- Please explain the key features and functionalities of your IDP platform and solution offerings.

Credibility

- Please submit the top 3 case studies to improve our clarity of understanding.
- Please provide the names of the top 3 customers with large-scale deployments.

Service options and support

- Do you provide a fully-managed end-to-end service? Please detail what this service includes.
- If you do provide a managed service, what time zones can you offer service up-time?
- Can you provide a team of annotators? Do they have subject matter expertise with financial documents?



The next steps

Please get in touch for a quick demonstration of our groundbreaking technology - our team are always happy to help.

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