

Contract Digitization

Proof of concept



The better the question. The better the answer.
The better the world works.

The EY logo, consisting of the letters 'EY' in a bold, white, sans-serif font.

Building a better
working world

A large yellow trapezoidal frame with a thick border. The top-left corner is cut off, creating a slanted top edge. The bottom-left corner features a dashed line pattern.

Table extraction from Contract



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The better the world works.



Problem Statement

- ▶ Data extraction from Contract documents has been a manual/hectic process till now
- ▶ It takes a knowledgeable individual to spend lot of working hours to extract data from one document
- ▶ A document has to go through quality and finance team to be declared done
- ▶ Quality Team checks for the required contents/headings in the document i.e. format check
- ▶ Once cleared by the quality team the documents are passed to finance team for content checking

Our Objective

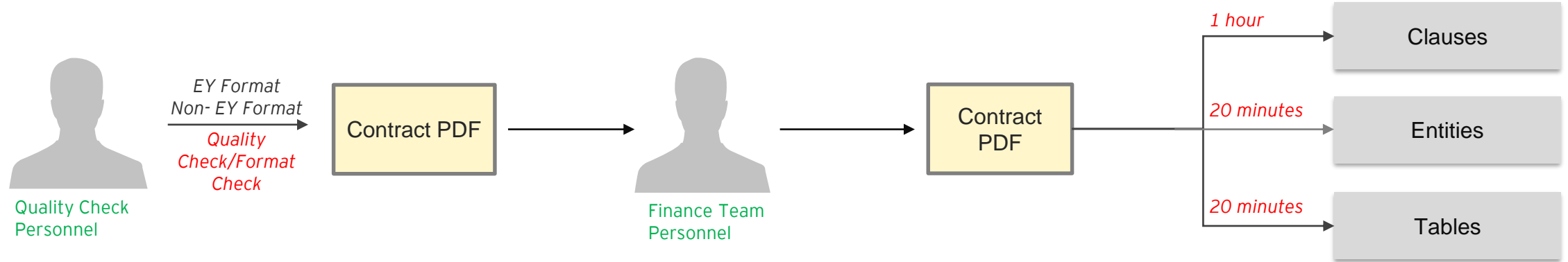
- ▶ To create a automated solution to extract contract clauses, entities and tables
- ▶ To create a scalable and robust solution to cater future requirements
- ▶ To create fastest and efficient solution (approx. one min for one document)
- ▶ To create an integrated solution that is easy to use



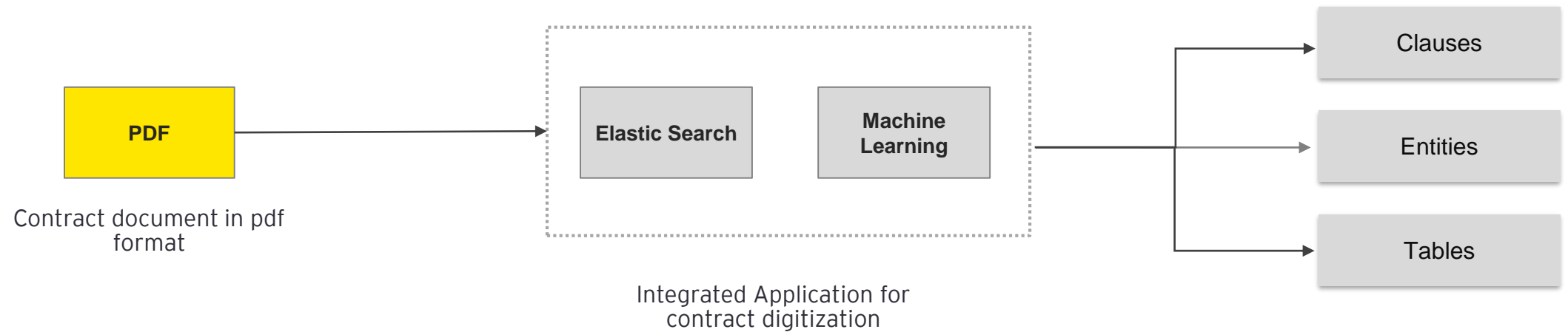
Current workflow | Proposed workflow

Process Flow

Illustrative workflow of current contract management process:

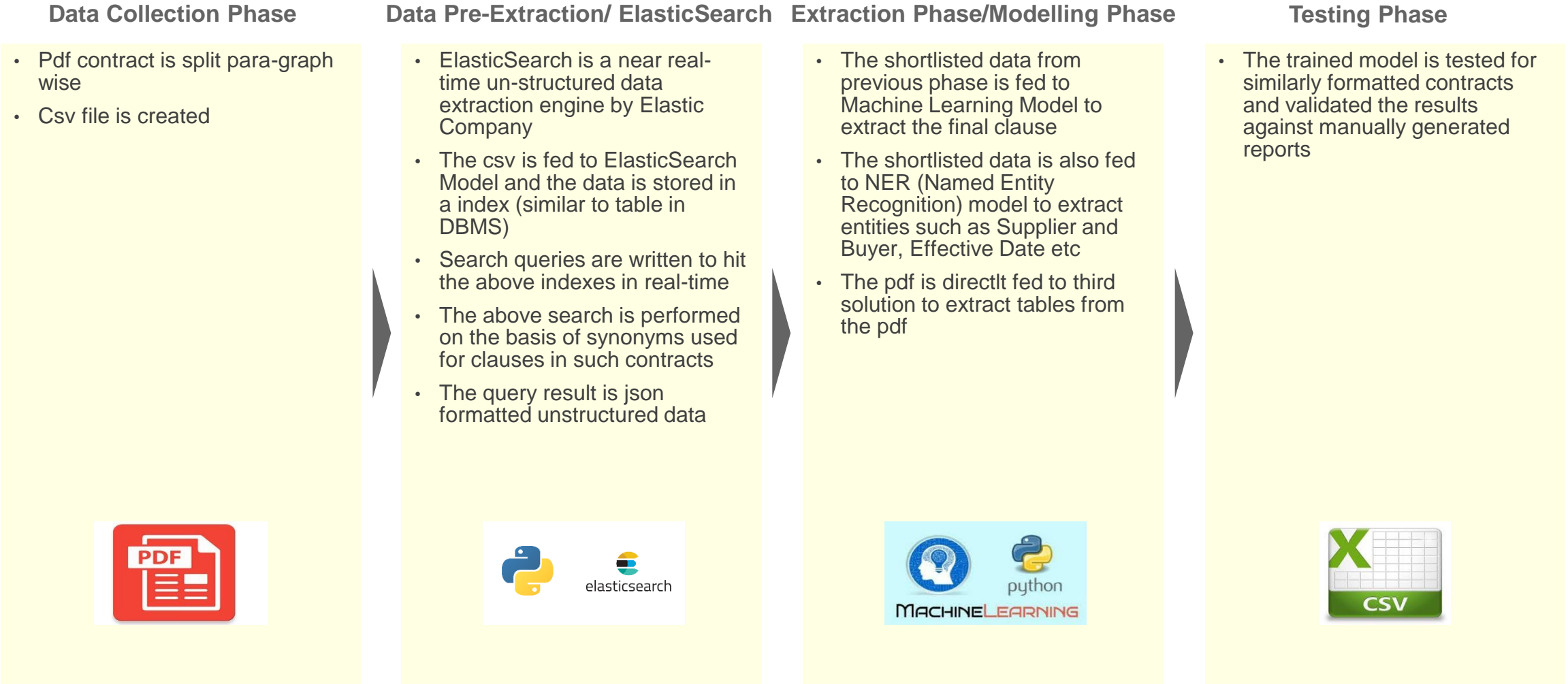


Illustrative workflow of proposed contract management process:





Solution description





Executable UI with a sample contract

Grid Manager

THIS MASTER SERVICE AGREEMENT ("Agreement") is made as of **May 08, 2017** ("Effective Date") by and between ABH LLC, a limited liability company ("CUSTOMER"); and ZL SARL, ("Strategic Provider").

WHEREAS, in response to CUSTOMER's request for proposals to innovate the delivery of certain finance and accounting business process services to CUSTOMER ("Request for Proposal"), Strategic Provider submitted to CUSTOMER its proposal to provide and innovate the delivery of such finance and accounting business process services ("Proposal"); and

WHEREAS, based on the Proposal, CUSTOMER and Strategic Provider have engaged in extensive negotiations and discussions that have culminated in the formation of the strategic relationship described in this Agreement with respect to such finance and accounting business process services in order to:

Create competitive advantage for CUSTOMER through the outsourcing of the Services (as defined below), achieve best-in-class standards and sustain and enhance such standards through continuous improvement;

Encourage and facilitate innovation in the delivery of such finance and accounting business process services;

Reduce CUSTOMER's current expenditure on the Services by obtaining significant cost reductions from the Strategic Provider;

Meet minimum Service Levels and improve Service delivery through continuous assessment and reviews of all processes and procedures for the performance of the Services, and improve CUSTOMER's overall productivity to provide significant value to CUSTOMER; and

Provide a prompt and smooth Transition (as defined below) of the Services in accordance with the Transition Plan (as defined below) without disruption to CUSTOMER's business.

NOW THEREFORE, in order to reflect the foregoing the Parties hereby agree as follows:

1. INTERPRETATION

1.1 **Defined Terms.** The defined terms used in this Agreement will have the meanings set forth in Schedule 1 or stated where they first appear, unless the context clearly requires otherwise.

1.2 **Reference to Statutes.** A reference to any statute, enactment, order, regulation or other similar instrument will be construed as a reference to the statute, enactment, order, regulation or instrument as amended by any subsequent statute, enactment, order, regulation or instrument or as contained in any subsequent re-enactment thereof.

1.3 **Headings.** Headings are included in this Agreement for ease of reference only and will not affect the interpretation or construction of this Agreement.

1.4 **Interpretation.** The recitals above are (i) intended as a general statement of purposes for this Agreement; and (ii) are not intended to expand or contract the scope of the Parties' obligations or to alter the plain meaning of this Agreement's terms and conditions. However, the Parties do intend that the Agreement be interpreted and performed in a manner consistent with these objectives.

1.5 **Section References.** References to Articles, Sections, Schedules and Appendices are, unless otherwise provided, references to articles, sections, schedules and appendices to this Agreement and any applicable Project Agreements.

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Process



Processes results- Entities, Clauses, Table

Grid Manager

1.6 Group Members. As Services are to be provided and paid for by Strategic Provider Group Members and CUSTOMER Group Members, respectively, all references to Strategic Provider will be construed to include the applicable Strategic Provider Group Members providing the Services, and all references to CUSTOMER will be construed to include the applicable CUSTOMER Group Members receiving and paying for Services, in each case whenever the context so requires or admits.

1.7 Waiver of Presumption. The Parties are sophisticated and have been represented by counsel during the negotiation of this Agreement. As a result, any presumption or rules of construction relating to the interpretation of contracts against the drafter thereof should not apply. The Parties hereby waive any such presumption or rule.

2. AGREEMENT STRUCTURE

2.1 General. This Agreement sets out the Parties' agreement as to the provision of Services from Strategic Provider or a Strategic Provider Group Member to CUSTOMER or a CUSTOMER Group Member.

2.2 INTENTIONALLY LEFT BLANK.

2.3 Project Agreements. With respect to each Service and each Country or group of Countries, if applicable, the Parties may agree upon or will cause, where relevant, a Project Agreement to be executed by the appropriate Strategic Provider Group Member(s) and the appropriate CUSTOMER Group Member(s) to (i) provide and pay for Services pursuant to this Agreement, respectively and (ii) set forth any supplementary provisions either (a) required by local law ("Local Law Matters") or (b) appropriate due to local practice; provided, however, that any changes due to local practice must be approved in writing by the CUSTOMER Contract Executive and Strategic Provider ("Approved Local Provisions"). Project Agreements shall be substantially in the form of Schedule 6, Project Agreement Template. Each Project Agreement executed pursuant to the terms of this Agreement will be subject to this Agreement and effective no later than upon the commencement of the provision of Services by Strategic Provider Group Member in such Country.

2.3.1 The CUSTOMER Contract Executive and the Strategic Provider Contract Executive must approve each Project Agreement prior to its execution by the appropriate CUSTOMER Group Member and Strategic Provider Group Member. Any Project Agreement or modification to a Project Agreement will be of no force or effect unless the CUSTOMER Contract Executive and the Strategic Provider Contract Executive have previously approved it in writing.

2.3.2 The Parties will cause their respective Group Members that enter into any Project Agreement to observe and perform the obligations of such Party as set forth in the Project Agreement. Each Party will be liable for all obligations and liabilities accepted or incurred by its Group Members under each Project Agreement.

2.3.3 Each Project Agreement will be deemed to be a separate divisible contract both in respect of this Agreement and in the case of other Project Agreements, except to the extent specified in this Agreement.

2.3.4 The Project Agreement will be interpreted in accordance with New York law and practice and in contemplation of New York law applying, except in respect of personnel and pension issues relating to Transferring Personnel and other Local Law Matters. Any Project Agreement and related schedules, including changes to the Agreement and related Schedules, as incorporated or copied into the Project Agreement will be amended only in writing and as necessary to reflect the specific legal requirements and business practices from time to time applicable in the relevant jurisdiction in order to produce the legal and business result intended by the Parties in this Agreement and must be approved by the CUSTOMER Contract Executive and Strategic Provider, as well as the applicable CUSTOMER and Strategic Provider Group Members.

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Fields	Value 1	Value 2	Confidence Score
Document Type	MASTER SERVICES AGREEMENT		80.63
Customer Name	ABH LLC	← ENTITIES →	78.21
Supplier Name	ZL SARL		65.97
Effective Date	May 08 2017		75.69
Renewal_Term	15.3 . Unless CUSTOMER provides notice that it intends to renew this Agreement this Agreement will not automatically . CUSTOMER may renew this Agreement and all or any Agreements for up to three (3) three - year Renewal Terms by giving notice		93.78

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Processes results- Entities, Clauses, Table

Grid Manager

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Limitation_of_liability

23.5 Limitation on CUSTOMER's aggregate liability for damages to Strategic Provider during the entire Term of the Agreement will not exceed the lesser of Strategic Provider's actual proven direct damages or the total Fees for the Ten (10) months

23.2.5 payments fines penalties or interest imposed by a governmental body or governmental regulatory agency and other direct damages in each case solely to the extent attributable to Strategic Provider's failure to comply with CUSTOMER's approved Standard

59.25

Key_personnel

7.3.3 If CUSTOMER decides that the Strategic Contract Executive or any of the KABC Personnel should not continue in that position then CUSTOMER may in its sole discretion and upon notice to Strategic Provider require removal of the Strategic Provider Contract

7.2 KABC. The individuals specified in Schedule 9 will be the initial KABC Personnel. All KABC Personnel will be dedicated to the CUSTOMER account for the time set forth in Schedule 9. Additional KABC Personnel may be set forth in the applicable Project Agreement

84.56

Governing_Law

32.1 This Agreement will be governed by and construed in accordance with the laws of the London and applicable U.K. federal laws without giving effect to its principles of conflict of laws

32.2 Project. Unless otherwise agreed in a Project Agreement and approved by the CUSTOMER Contract Executive each Project Agreement will be governed by and in accordance with the laws of the State of New York and applicable U.S. federal laws without giving effect to

99.99

Confidentiality

18.2 Confidentiality. Without prejudice to any additional requirements contemplated under the Security Protocol the recipient of Confidential Information will maintain its confidentiality at least to the same extent and manner as the recipient protects its own Confidential

18.3 Unauthorized Use or. Without limiting either Party's rights in respect of a breach of this Article each Party will (i) promptly notify the other Party of any attempted or actual unauthorized possession use or knowledge of the other Party's Confidential Information by any person

90.64

Commencement_date

13.1 At any time after twenty-four (24) months following the relevant Service Commencement Date and thereafter no more frequently than once during any ensuing twelve (12) - month period CUSTOMER may request a benchmark of the cost and

3.1.2 the services functions and responsibilities being performed within the twelve (12) - month period prior to the Effective Date of the Project Agreement by CUSTOMER's personnel or contractors whose services functions or responsibilities are displaced or

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Fields	Value 1	Value 2	Confidence Score
11.3 Payment, undisputed Fees will be due and payable to Strategic			
14. Price . If the Benchmarking Results indicate that the charges paid ER to Strategic			
Table	32PC	DPKXIJ.10CZSEEC	31.94
	32PC	DPKXIJ.15CZSEEC	24.27
	32PC	DPKXIJ.20CZSEEC	26.14
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	E113	E113.89X400	2.80
	Fortel Plus 115	EFLPs115x1o	2.33
	PowerfracTM 25 x 200 mm	EDPF25x200S1	7.23
	PowerProTM 50 x 400 mm	EDPP50X400C1	6.05
	PowerfracTM 65 x 400 mm	EDPF65X400C1	5.72

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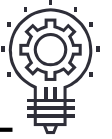
SSI Solution



The better the question. The better the answer.
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Table digitization



Across organizations there are various documents containing tabular data in different unstructured formats coming from different sources which require human intervention for standardization and further processing. EY has built a customisable solution which can be leveraged to extract tabular information efficiently from different document formats automatically henceforth reducing processing time and saving manual effort.

Organizational Challenges

Multiple documents in different formats from multiple sources

Bottlenecks in end to end process automation plan

Data is mostly unstructured, unsearchable and requires huge processing time

Manual dependency and error prone

Our Solution

User friendly interface and validation supported

Customisable to any standard format

Converts any unstructured tabular data to structured tabular format

Lower handling time, high accuracy*

Application

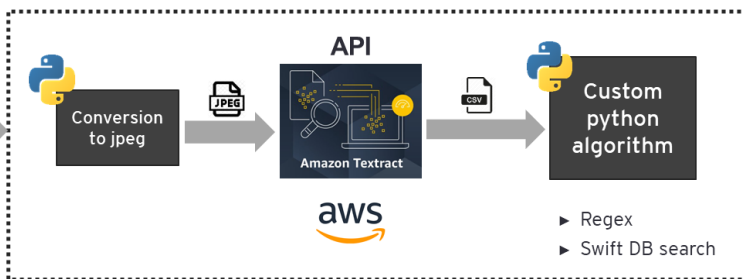
Any industry specific process which require digitizing tabular data from unstructured formats

Solution Architecture

Sample Client SSI received in different formats



- PDF
- Mail
- Tiff



Standard output format for all client SSIs

CURRENCY	COUNTRY	BANK	CITY	SWIFT CODE	ACCOUNT NAME/ NUMBER
EUR	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
EUR	Germany	Deutsche Bank	Frankfurt	DEUT3333	1000254800
GBP	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
JPY	Japan	Bank of New York	Tokyo	BOFYJP33	8844483950

Output table



Overall integration in python

Demo

Demo

A finance use case where SSI (Standard Settlement Instruction) comes from different banks to the clearing banks in different formats (PDF, jpeg, etc.) containing settlement instructions in tabular format. Our solution can read through all these formats and extract the data in any required standard output layout.

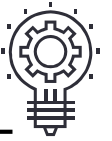
Sample Client SSI received in different formats

CURRENCY	COUNTRY	BANK	CITY	SWIFT CODE	ACCOUNT NAME/ NUMBER
EUR	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
EUR	Germany	Deutsche Bank	Frankfurt	DEUT3333	1000254800
GBP	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
JPY	Japan	Bank of New York	Tokyo	BOFYJP33	8844483950

CURRENCY	COUNTRY	BANK	CITY	SWIFT CODE	ACCOUNT NAME/ NUMBER
EUR	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
EUR	Germany	Deutsche Bank	Frankfurt	DEUT3333	1000254800
GBP	England	Standard Chartered Bank	London	SCBLGB33	58 01 2044139 96
JPY	Japan	Bank of New York	Tokyo	BOFYJP33	8844483950


EY

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A finance use case where SSI (Standard Settlement Instruction) comes from different banks to the clearing banks in different formats (PDF, jpeg,etc.) containing settlement instructions in tabular format. Our solution can read through all these formats and extract the data in any required standard output layout.

Sample Client SSI received in different formats



Standard Settlement Instructions for Treasury Transactions

CURRENCY	CORRESPONDING BANK	A/c NUMBER	SWIFT CODE
EUR	STANDARD CHARTERED BANK LONDON	56 01 2544199 96 IBAN GB64SCBL60910412544199	SCBLGB2L
EUR	DEUTSCHE BANK FRANKFURT	100953543600 IBAN DE245007 0010 0953 5436 00	DEUTDEFF
GBP	STANDARD CHARTERED BANK LONDON	00 01 2544199 01	SCBLGB2L
GBP	ROYAL BANK OF SCOTLAND PLC	160034/100006005	RBOSGB2L
JPY	BANK OF NEW YORK,TOKYO	8946483950	IRVTJPJX
CHF	UBS AG ZURICH	02300000036645050000K	UBSWCHZH80A
NZD	ANZ NATIONAL BANK LTD.	881169/00001NZD ACCOUNT NO. 1.	ANZBNZ22058
AUD	ANZ BANKING GROUP LTD.	81169/00001 CURRENT A/C NO.1.	ANZBAU3M



Standard output format for same type of documents

CURRENCY	COUNTRY	BANK	CITY	SWIFT CODE	ACCOUNT NAME/ NUMBER
EUR	England	Standard Chartered Bank	London	SCBLGB2L	56 01 2544199 96 IBAN GB64SCBL6091041 2544199
EUR	Germany	Deutsche Bank	Frankfurt	DEUTDEF	100953543600 IBAN DE245007 0010 0953 5436 00
GBP	England	Standard Chartered Bank	London	SCBLGB2L	00 01 2544199 01
GBP	England	Royal Bank of Scotland		RBOSGB2L	160034/10000600 5
JPY	Japan	Bank of New York	Tokyo	IRVTJPJX	8946483950