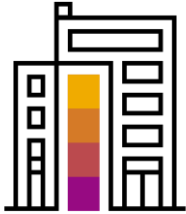




SAP® Innovation Awards 2020 Entry Pitch Deck

Innovation for Love's Financial Solutions Providing Scale and Value through Automation and Customer Experiences

Love's Travel Stops and Country Stores



Company Information

Headquarters	Oklahoma City, OK United States
Industry	Retail, Oil and Gas
Web site	www.loves.com

Founded in 1964 and headquartered in Oklahoma City, Love's Travel Stops & Country Stores has more than 500 locations in 41 states, providing professional truck drivers and motorists with 24-hour access to clean and safe places to purchase gasoline, diesel fuel, Compressed Natural Gas (CNG), travel items, electronics, snacks, restaurant offerings, and more. Love's Truck Tire Care offers heavy-duty tire care, including TirePass, light mechanical services and roadside assistance. Love's Hospitality provides a growing network of hotels and storage rental locations, and Love's Financial offers freight bill factoring and back-office support to professional drivers.

From 2013 to Present, Love's has implemented and activated a variety of SAP applications including: SAP Business Suite powered by SAP HANA, SAP Business Warehouse on HANA, SAP Cloud Platform, SAP BusinessObjects, SAP Process Orchestration, and others. Love's is currently transforming Dev/Ops leveraging SAP Rapid Application Development (RAD) by Mendix. Speed to market and value have significantly improved by delivering rich customer experiences to our business via these applications.

Love's Financial Services provides freight factoring for our customers to manage cash flow and help cover expenses. This business is behind the technical curve with no customer applications and innovation to improve efficiencies required to grow the business.

Factoring Innovation Platform

Love's Travel Stops and Country Stores



In order to scale our business we needed to adopt and implement a technical solution that provides scale and rich customer experiences. Our employees can focus on providing customer service instead of shuffling paper.

Challenge

Love's Factoring plans to double its business and cannot do so due to the manual-intensive processes and lack of a technology platform providing rich customer experiences. A technical solution is required to provide a customer application and a platform for automation to improve customer and internal efficiencies.

Solution

Leverage SAP Cloud Platform and SAP Leonardo Innovation to develop a mobile application allowing our customers to create transactions and upload necessary documentation. Create a document processing application built on SAP Cloud Platform to OCR documents and save scanned data in SAP HANA and PDF documents in object store. Create an application allowing employees to verify the data and process invoices for payment.

Outcome

Developed a technical platform that provides a rich customer experience, automation for document processing and a great employee experience.



50%

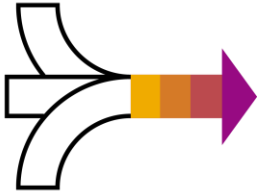
Reduction in time
for document
verification

25%

Reduction in
Operating
Expenses

2X

Revenue growth



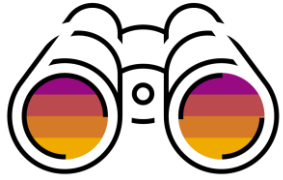
Business Challenges and Objectives

Business challenges

- Lack of customer facing technology
- Increase of business results in increase of staff and expenses
- Lack of automation
- Lack of visibility in back office processing

Project objectives

- Provide technology to double revenue and increase profitability
- Reduce cost per invoice
- Modernize customer experiences
- Modernize employee experiences
- Integrate document processing to 3rd party solutions



Project or Use Case Details

Currently the Love's Financial Solutions business (Factoring) receives documents into a central email inbox from all of their customers. Upon receipt Factoring Verifiers will review the submittals by making sure all documentation is complete, legible and accurate. If not they will follow up with the customer for additional data or attempt to improve the document legibility using a 3rd party solution. Once that is complete the Verifier then hand keys the data into a 3rd party factoring solution. Upon completion they then submit payment of the invoice to the Carrier and create a receivable for the Shipper.

Create an application that will allow our customers (Carriers) to create loads and supporting documentation. Once submitted the application leveraging SAP Cloud Platform will OCR the documents and store the data scanned in the SAP HANA database. The images will also be refined and converted into a PDF and stored in an object store in SAP Cloud Platform. Once the document processing is complete the loads submitted will be assigned to a Verifier queue to be reviewed. Once reviewed an integration with 3rd party factoring solution will be created to automatically create the payment and invoice. Finally the AR and AP data will be fed into SAP.

The machine learning capability will score the process and train the model to improve the score. Once the score is within a tolerance the payment will be automated to the Carrier and an Invoice to the shipper will be created.



Benefits and Outcomes

Business or Social

- Improved customer experience
- 25% reduction in operating expense
- 50% improved verifier efficiency

IT

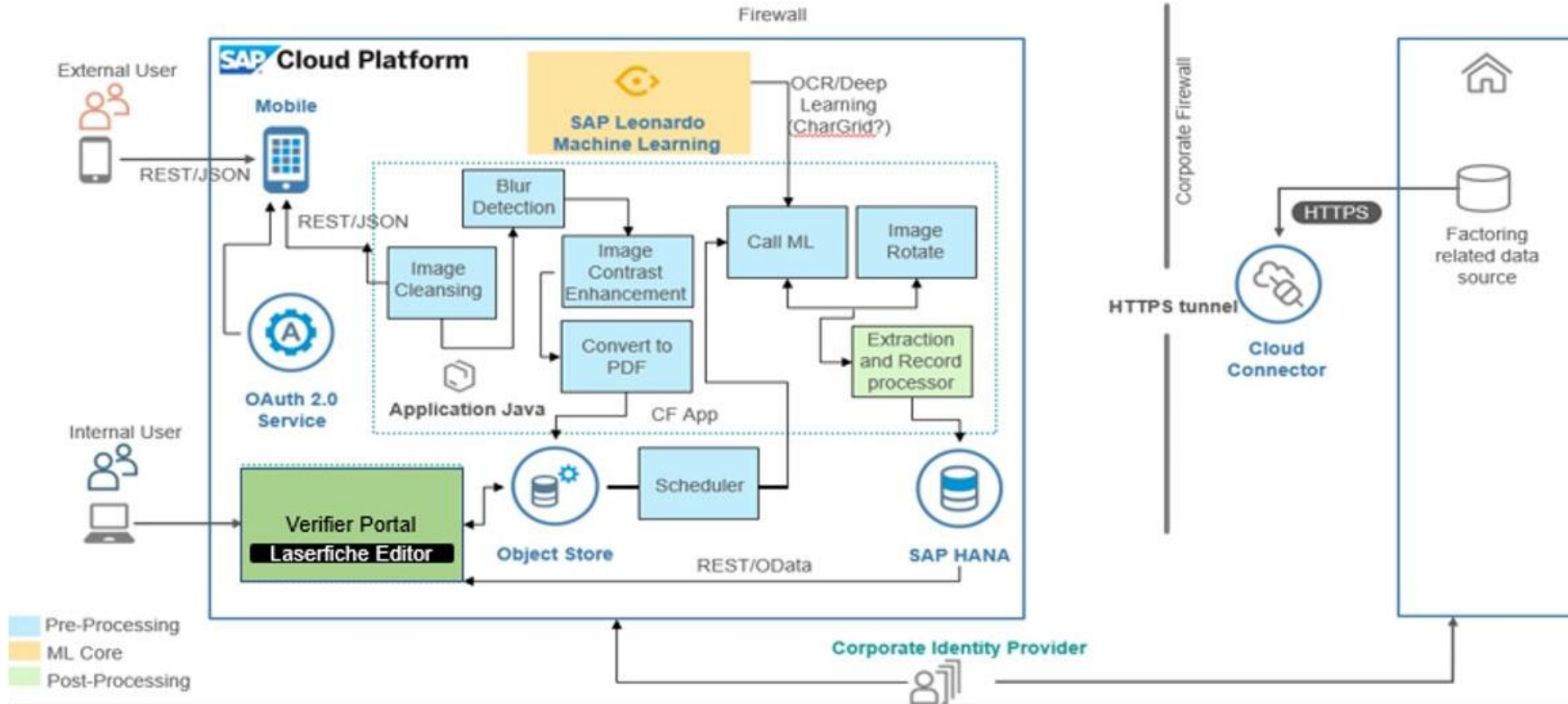
4x increase in development productivity, using SAP Rapid Application Development by Mendix

Human Empowerment

Improved employee efficiency by 25%



Architecture





Deployment

Deployment status Live

Date 10/01/2019

Number of users 150 in Beta for Customers
potential 2,000 and 50 employees

SAP technologies used:

	SAP product	Deployment status (live or proof of concept [POC])	Contribution to project
1	SAP Cloud Platform, SAP HANA, Cloud Foundry app, SAP Leonardo Machine Learning, Object Store, SAP API Management, Postgres	Live	Provided data store after documents went through OCR process, Document Processing, Machine Learning to train model on document processing, Stores PDF documents
2	SCP Cloud Foundry App	Live	Mendix Runtime for Carrier and Verifier Applications
3	SAP Identity Management	Live	Employee Identity Provider and SSO
4	SAP Process Orchestration	Live	Integration
5	SAP Rapid Application Development by Mendix	Live	Integrated Development Environment

If you have used one of the services or support offerings from SAP Digital Business Services during the implementation or deployment phase, please select with one or more of the following offerings:

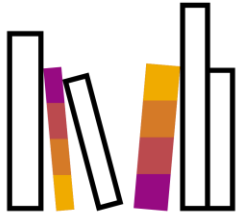
- | | | |
|--|--|---|
| <input type="checkbox"/> SAP MaxAttention™ | <input type="checkbox"/> SAP ActiveAttention™ | <input type="checkbox"/> SAP Advanced Deployment |
| <input type="checkbox"/> SAP Value Assurance | <input type="checkbox"/> SAP Model Company | <input checked="" type="checkbox"/> Others: SAP Leonardo Innovation Services
SAP AppHaus |
| <input type="checkbox"/> SAP Innovation Services | <input type="checkbox"/> SAP Innovative Business Solutions | |



Advanced Technologies

The following **advanced technologies** were part of the project.

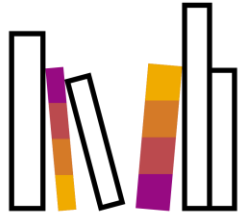
	Technology or use case	Yes or No	Contribution to project
1	3D printing	No	
2	Blockchain	No	
3	Internet of Things (IoT)	No	
4	Machine learning or AI	Yes	Provided document processing application to score document OCR and learn document types for processing
5	Conversational AI	No	
6	Robotic process automation	No	
7	Data anonymization	No	
8	Augmented analytics	No	



Additional Information

- Power Point for executive update after SAP Leonardo Open Innovation Process





Additional Information

Carrier Mobile Application

9:52 94%
Love's Financial

LEX Account Summary
as of 10/16/2019, 9:52 AM

Current Balance	\$-36,496.74
Credit Available	\$42,501.74

[View details on the Love's Website](#)

Submit Current Loads

[Resume](#)

Transaction History

Total Quality Logistics, LLC Load No. 72637 Submitted at 1:19 PM on August 19, 2019 Submitted	\$500.00
Elite Logistics Load No. 124 Submitted at 11:15 AM on August 19, 2019 Submitted	\$1,111.00
Total Quality Logistics, LLC	\$500.00

9:54 93%
Back Load Documents Edit

Total Quality Logistics, LLC
Bill of Lading No. 1223

Invoice No. Qss	
Load Amount	\$500.00
Advances	\$0.00
Total Accessorials	\$0.00

^ Rate Confirmation

+ Add Pages

^ Bill of Lading

+ Add Pages

^ Miscellaneous(e.g Lumper, Scale Ticket, Accessorial)

+ Add Pages

Notes to Account Rep

+ Add Note

[Save](#)

9:53 94%
Back Load Documents Edit

Total Quality Logistics, LLC Submitted
Load No. 72637
Submitted at 1:19 PM on August 19, 2019

Load Amount	\$1,000.00
Advances	\$500.00
Total Accessorials	\$0.00

Rate Confirmation

IMG_1566238550067.jpg

Bill of Lading

IMG_1566238593267.jpg

Miscellaneous(e.g Lumper, Scale Ticket, Accessorial)

carrierDispatch-SHenson-1566223580968.pdf

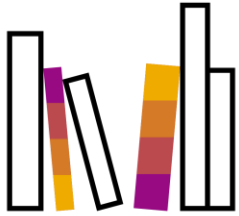
Notes to Account Rep

No note Found

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Back Review Image

Business Process Flow

The diagram illustrates the 'Business Process Flow' involving three main components: Carrier App, Document Processing App, and Verifier Portal. The Carrier App captures carrier data and documents. The Document Processing App handles data ingestion, extraction, and formatting using SAP Leonardo. The Verifier Portal uses this data for invoice processing. The Cadence system handles back-end system-to-system invoice processing. All components are supported by the Mendix Cloud Platform. A feedback loop exists from the Verifier Portal back to the Carrier App.



Additional Information

Employee Verifier Portal.

Loves VERIFIER PORTAL LOG OFF

32 UNCLASSIFIED DOCUMENTS | 6 BATCHES IN PROGRESS | 2 BATCHES PENDING VERIFICATION | 0 BATCHES READY FOR PURCHASE | 0 BATCHES SENT TO INVOICE | MY STATS FOR TODAY Edit

Carrier: Client Name A (3984753485)
Account Rep: Jenny Williams | Client Contact: Jim Morgan
Alternate Account Rep: Dave Rogers | Alternate Client Contact: Tina Warner
DON'T BILL | VIEW CLIENT INFO

Batch 1 02/20/2019 at 01:30pm
Assigned to: Paul Stanner
Pay Loads Verify? Incl. Revision?
+ ADD NOTE
billofsale.png + tag
987435638746.pdf + tag

Loves VERIFIER PORTAL LOG OFF

34 UNCLASSIFIED DOCUMENTS | 6 BATCHES IN PROGRESS | 2 BATCHES PENDING VERIFICATION | 0 BATCHES READY FOR PURCHASE | 0 BATCHES SENT TO INVOICE | MY STATS FOR TODAY Edit

Carrier: start typing

34 UNCLASSIFIED DOCUMENTS | 7 BATCHES IN PROGRESS | 2 BATCHES PENDING VERIFICATION | 0 BATCHES READY FOR PURCHASE | 0 BATCHES SENT TO INVOICE | MY STATS FOR TODAY Edit

< back
XXX Company
Pay Loads Verify? Incl. Revision?
Wire 3 No No
Load 1 02/20/2019 at 01:30pm
Load # 1234567 Debtor Office Max, Inc
Invoice #
Do Not Bill
Line Item Description Amount
Invoice Total \$ 0.00
+ line item Total: \$ 0.00
Drag and Drop Files Here
Mark as Verified
Load 2
Load 3
ADD LOAD

Account Rep: Jenny Williams | Client Contact: Jim Morgan
Alternate Account Rep: Dave Rogers | Alternate Client Contact: Tina Warner
VIEW CLIENT INFO

Assigned to: Paul Stanner
Notes
Ethan Verifier: 8/2/2019 @ 1:15pm
Waiting on XXXX
+ Add Note
billofsale.png + tag
987435638746.pdf + tag
billofsale.png + tag
987435638746.pdf + tag
billofsale.png + tag
987435638746.pdf + tag
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