



**Case Study for**

**Online Invoice Trading Platform**



# Introduction

-  Invoice Trading Platform is an online marketplace where Suppliers can put their invoices on sale in order to avail funding from prospective Funders.
-  The invoice sales is further bolstered by the introduction of Agents in the application who invite Suppliers, Funders and Buyers making it a complete ecosystem.
-  E-wallet is provisioned for all users and realtime information dashboard is provided to showcase the investments details and information about all transactions.
-  The platform supports multi-currency and cross border trading extending the market reach exponentially.
-  It also provides real time foreign exchange conversion of currencies.
-  Application allows a bidding model for Funders to invest partially or fully on Supplier invoices.



# Our Roles

-  business analyst
-  project manager
-  ui/ux designers
-  technical lead
-  senior developers
-  quality assurance team



# The Challenge

-  All invoice trading was done manually without an online platform. This process was inaccurate, time consuming and challenging to keep track on statuses.
-  Funders had no direct access to the information about their investments.
-  Single currency was used for trading, so potential funders had to do FX conversion first before engaging in bidding process for invoices.





# The Insight

-  Online trading platform was suggested by Coddle to ease the trading process and to extend market reach through technology.
-  Cloud based infrastructure with a highly scalable application architecture including automation on deployment allowing continuous integration, code version management was derived by our architects which best suited an application of this magnitude.
-  Multi-currency feature was implemented to extend the target audience's preferential choice. Foreign exchange conversion was introduced to assist potential funders while trading with different currencies.
-  Automation of Invoice bidding is implemented as Auto Investment Module which helps funders in automatic bidding on new invoices with predefined preferences.
-  Use of cutting edge technology and frameworks to ensure blazing performance as well as robustness and scalability and integration with Salesforce CRM.



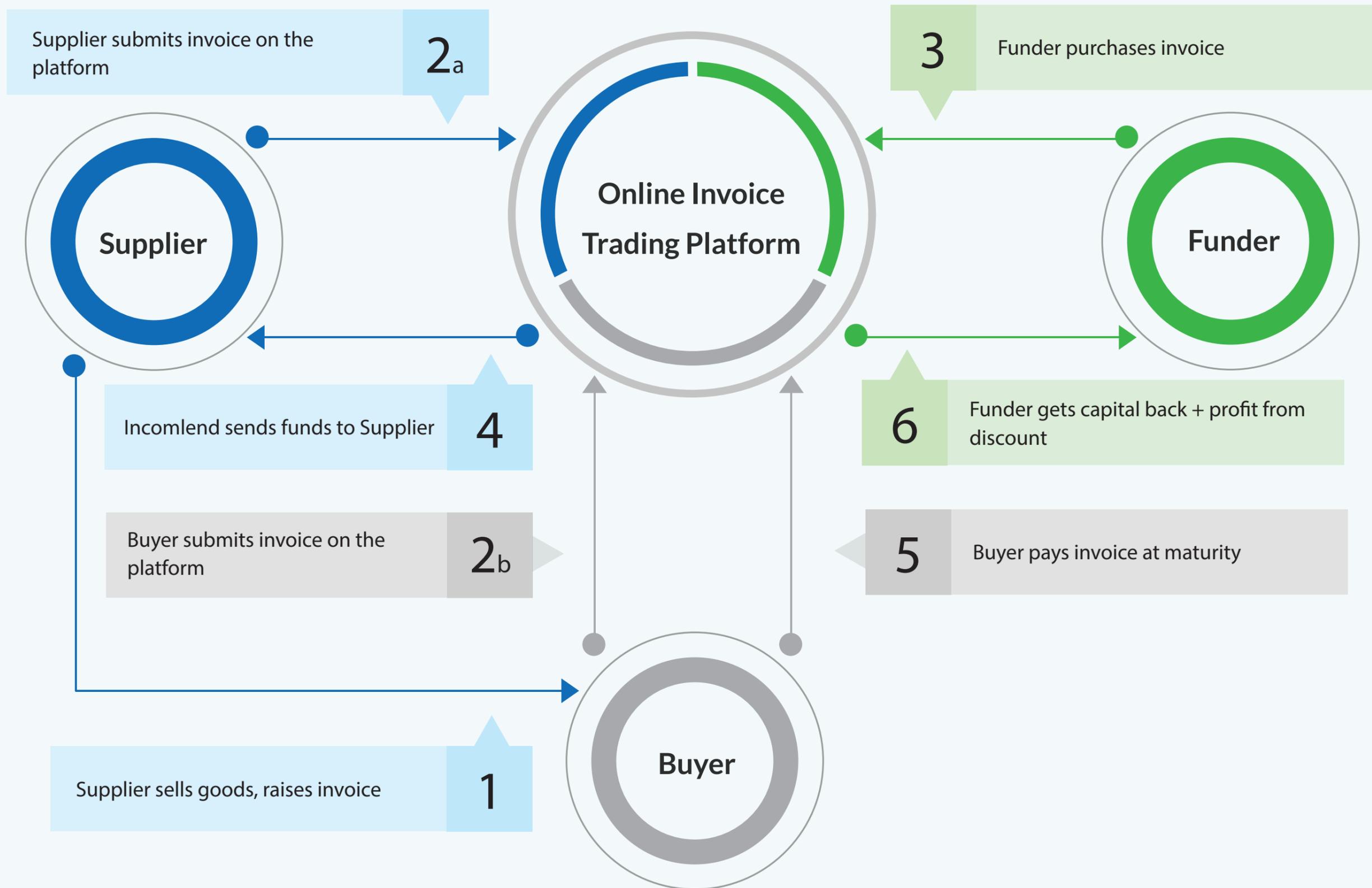


# The Solution

- Amazon Web Service for infrastructure management. Multi instance for development, staging and production environment.
- Frontend to be powered using the robust Google developed AngularJS javascript framework which is rich in UI and has blazing performance.
- Backend to be setup as a Data proxy layer to be built in Symphony based Silex micro framework which connects to the Salesforce CRM via REST based API calls.
- Addition of Jenkins for continuous integration and use of Automation testing methodologies leveraged using Selenium with TestNG framework.
- AWS Lambda was used for building API services, API gateway for managing API's, Cognito for user authentication and of course Cloudfront caching mechanism to ensure seamless end to end quality user experience.
- Load Balancer for better bidding request handling.
- Different marketplace based on currency.
- Salesforce CRM was integrated for User and Invoice management as well as eWallet management.
- Integrated FX conversion module for currency exchange.
- Auto trade module to ease funders intervention while bidding.
- Individual dashboards for Suppliers (to add invoices), Funders (invoice trading) and Agents (Who bring in Funders and Suppliers).



# The Workflow



# The Audience



# The Application



Online Invoice Trading Platform Marketplace Buyer Dashboard All Buyers Coddle Buyer 1 (Big Buyer International)

XXX Marketplace

Average Gross Discount Rate (All Time) <b>0.10 %</b>	Total Funded (All Time) <b>X\$ 9,000</b>	Payment Schedule	
Average Invoice Value (All Time) <b>X\$ 59,750</b>	Number Of Defaults (All Time) <b>0</b>		
Days Without Default <b>0 (Never Had A Default)</b>			

Available To Buy (x\$ 27,000) In Progress (x\$ 9,000) Repaid (x\$ 0)

Invoice	Gross Discount Rate (Per 30 Days)	Expected Repayment Date	Requested	Remaining To Fund
Big Buyer International (003955)	0%	24 Oct 2017	HK\$ 15,000	HK\$ 15,000
Big Buyer International (003954)	0%	31 Oct 2017	SG\$ 12,000	SG\$ 12,000

1 - 2 Of 2 Items

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Online Invoice Trading Platform Marketplace Buyer Dashboard All Buyers Coddle Buyer 1 (Big Buyer International)

All Buyers Buyer - Big Buyer International

**BIG BUYER** Big Buyer International

Onboarded Date	Number Of Repaid Invoices
-	0
Number Of Defaults	Days Without Default
0	<b>0 (Never Had A Default)</b>

Payment Schedule

Overview On Marketplace (2) In Progress (0) Repaid (0)

Industry	Turn Over	Country Of Incorporation	Year Of Incorporation
-	<b>Not Available</b>	-	-
Countries Of Operation	Location Of HQ	Goods Or Services Offered	Homepage
-	-	-	-
City	Country		
-	-		

Public Profile  
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Online Invoice Trading Platform

Withdraw Deposit

eWallets (Atom & Pop SME)

eWallet	US\$ 1,000	SG\$ 0
HK\$ 0	€ 0	
USD Equivalent	US\$ 1,000	

Available eWallet

US\$ 1,000	SG\$ 0
HK\$ 0	€ 0
USD Equivalent	US\$ 1,000

Discount Earned

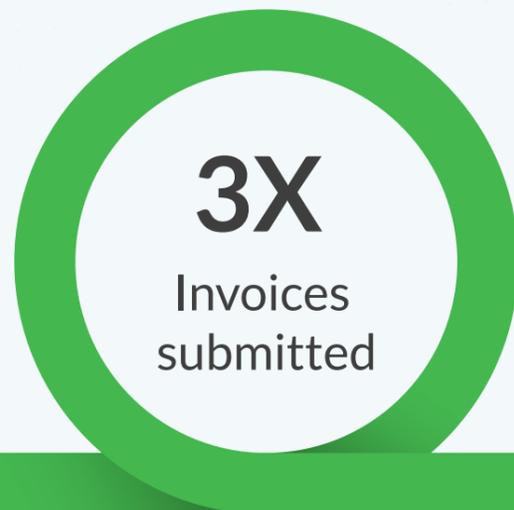
US\$ 0	SG\$ 0
HK\$ 0	€ 0

Unconfirmed Withdrawals



# The Results

-  Online Trading Platform achieved the market reach it deserved and still growing beyond boundaries. It turned out to be a successful product and Client was able to bring in multiple rounds of venture capital funding as one of the Top Fintech Solutions in the year 2017-18.
-  TAT for invoice bidding reduced from several weeks to a few seconds with Bidding model presented to the Funders along with Auto trade module and with strong digital marketing campaigns.
-  Invoice trade volumes increased exponentially.
-  Number of users availing services of the platform increased exponentially.



# Contact



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