



Cygnets **Infotech**  
IT is about you

# Empowering UK Based Retail Giant

with Customized POS  
Solutions

**Cygnets Infotech**

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## Client Profile

Our client is a UK based business and a leader in providing POS services to equip owners and managers of both single and multi-store hospitality estates with live information required to meet the ever-increasing customer demand that centers on speed and accuracy.

**15**

Years in  
Business

**5**

Million  
Transactions

**97%**

Customer  
Retention Rate

**2500+**

Licenses Provided  
in UK

## Cygnets Business Engagement

- 2+ years of successful business engagement across a range of technologies and products
- 2 Technology Teams working with the client's teams
- 2 CMSs and mobile apps delivered

## Business Scenario

Client's major focus was on the eCommerce website that could seamlessly work across different browsers and enable printing of receipts and make payment using Verifone terminal. Achieving maximum automation was the key to the success of this eCommerce website.

## They wanted a technology partner who could:

- Enable website's offline use after first cache
- Ensure payment is done via Verifone
- Add products using ZEBRA scanner using a native android application
- Enable handshake between printers, terminal and website



## Cygnet's Solution

After the initial feasibility study and business analysis, our team started engineering a POS. Client was pleased with the timely communication and collaboration among global teams. While we were through with 60%-70% development work, our client wanted the website in offline mode as well, a standout feature for this project, which was crucial to attain the business bottom line.

In the past, Cygnet's engineers delivered offline websites using IndexedDB and service-worked running on different browsers. However, things were not smooth when the client wanted to print receipts and integrate the website with Verifone that works on socket technology.

*In the past, the team achieved this with jQuery and Laravel PHP framework; however, in this case socket programming and unavailability of libraries for POS was a challenge. In addition, POS system only supported Android, IOS and Microsoft technology*

Considering this scenario, our team decided to use the Android web view that could interface with Verifone, printer and the website in a multilevel communication and as a server.

Our team achieved this breakthrough performance optimization by developing a hybrid app.

In addition to the challenges and solution discussed above, network consistency emerged as a bottleneck when the application tried communicating with Verifone leading to transaction failure. To overcome this challenge, our experts indigenously developed a dual-channel handshaking mechanism. This breakthrough enabled smooth transaction even when the wi-fi blipped or Verifone was down.

*The app is successfully implemented across 15 mega shopping malls in England*





## Our solutions fulfill the following business objectives:

- Enable transactions using POS terminal
- The entire website even works offline using the caching mechanism to cache all web pages with a utility to download all the data (customer, products, settings and configuration) in the browser database which can be used for transactions
- We have covered various offline scenario, so even if the internet blips everything transactions do not fail
- We system is modular, almost everything can be controlled from the backend
- The app uses ZEBRA scanner to make entries using android app

## Technology Stack



### TOOLS AND TECHNOLOGY

- PHP
- jQuery
- Android
- Sublime
- Android Studio
- APAScrum



### PROGRAMMING LANGUAGE

- Web: Laravel PHP
- Android: MVP



### DEVELOPMENT ENVIRONMENT

- Linux



### PROJECT MANAGEMENT METHODOLOGY

- Kanban



### DATABASE ENVIRONMENT

- IndexedDB

# About Cygnet

Cygnet Infotech is one of the most trusted names in the IT space delivering technology solutions to global clients across 35 countries. Born out of a vision to create software development company where quality, innovation and personalized services trump low cost, makeshift solution, Cygnet partners with its clients to help them transform in to high performance businesses.

Cygnet has deep industry and business process expertise, global resources and a proven track record in delivering innovative technology solutions. Cygnet can mobilize the right people, skills and technologies that improves business performance.



Founded in **2000**, currently with offices across **6 continents**



**950+ Employees**  
Delivered **2000+**  
**Projects**

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**19 Years** of Experience  
Serving **750+ clients**  
in **35 countries**



**95%** Client Retention



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IT is about you