

Use Case: Consumer Online Credit

“Digital disruption is forcing banks and other financial service companies toward new ways of delivering data and apps...”

— *Forbes*, 26th January 2017

Client

A major UK consumer finance company, focused on sub-prime, online lending. The client was an early, FinTech innovator experiencing problems in handling its rate of growth.

The client's existing systems were constructed using mainly traditional banking components, e.g. decision engine, range of credit/default scorecards, loan management system, CRM and general ledger system etc. The client was collecting a limited range of predictive data.

Whilst the client was using well proven banking modules, in the context of on-line lending they lacked functionality and imposed a number of restrictions.

The main issues were:

1. Insufficient data capture in front end processes to support accurate and granular predictions for defaults, fraud, retention and limits.
2. Lack of straight-through-processing (STP) functionality in decision engine and related components, resulting in insufficient automation and therefore lack of scalability.
3. Inability to dynamically drive the customer journey via intelligent AI/ML workflows.
4. Lack of predictive data capture from client behavior.
5. Lack of feedback loop data from LMS and other systems to AI/ML decisioning.

As a result, portfolio performance was sub-optimal and operating costs per loan were high. Also, while market response was good, the system was unable to cost effectively cope with portfolio growth.

Problem

The subprime lending portfolio base KPI's required improvement. Our Decision Engine (DE) and Models Library (ML) were used to rapidly construct a parallel decisioning system to baseline the client's current KPI's.

These were:

- Average loan size - £260.00
- Number of online applications processed daily - 70
- % of manual processing - 76%
- Operating costs per new loan - £8.30
- Operating costs to provide repeat loan for an existing customer - £2.50
- New customer acquisition costs averaged - £42.00
- Fully loaded, semi-automated retention marketing costs per loan - £2.20
- Portfolio default rate was very high - 28%
- Acceptance rate could not be accurately calculated due to data quality issues, estimated at 19%
- Customer retention rate - 51%
- Fraud rate - 6%

Solution

After the baseline KPIs were calculated, an enhanced customer journey was constructed using our Dynamic Customer Journey Framework (DCJ), Behavior Data Warehouse (BDW) and Decision Engine (DE) intelligent workflows. This captured additional, predictive data and significantly improved data collection and quality. A further range of additional predictive data was captured over a two month period. This included behavioral, social, device and bureau data.

ML default, fraud, retention, limit management models were tuned on an enhanced range of predictive portfolio data. This was done using Acquired Insights Analytical Data Warehouse (ADW) featuring our workbench with advanced engineering techniques, and robo-underwriter.

The following were automated, using DE intelligent workflows and ML:

- KYC verifications
- fraud detection / prevention and
- underwriting
- retention prediction and management

Initial Results

After three months, the client's subprime lending portfolio KPI's improved as follows:

- Average loan size increased to £310.00
- Online applications processed daily increased to 500
- % of manual processing reduced to 15%
- Operating costs per new loan reduced to £2.80
- Operating costs for repeat loans dropped to £0.60
- New customer acquisition costs, due to TV advertising, increased to £120
- Fully loaded, optimized and automated retention marketing costs dropped to £0.34 per loan
- Portfolio default rate, (new customers), reduced to 18%
- Acceptance rate increased to 25%
- Customer retention rate increased to 78%
- Fraud rate was reduced to 2%

The client's profitability and scalability rapidly improved. However, further optimization was required for new customer acquisition costs, defaults, limit management and acceptance rates.

Plus manual processing needed to be further reduced.

Subsequent Results

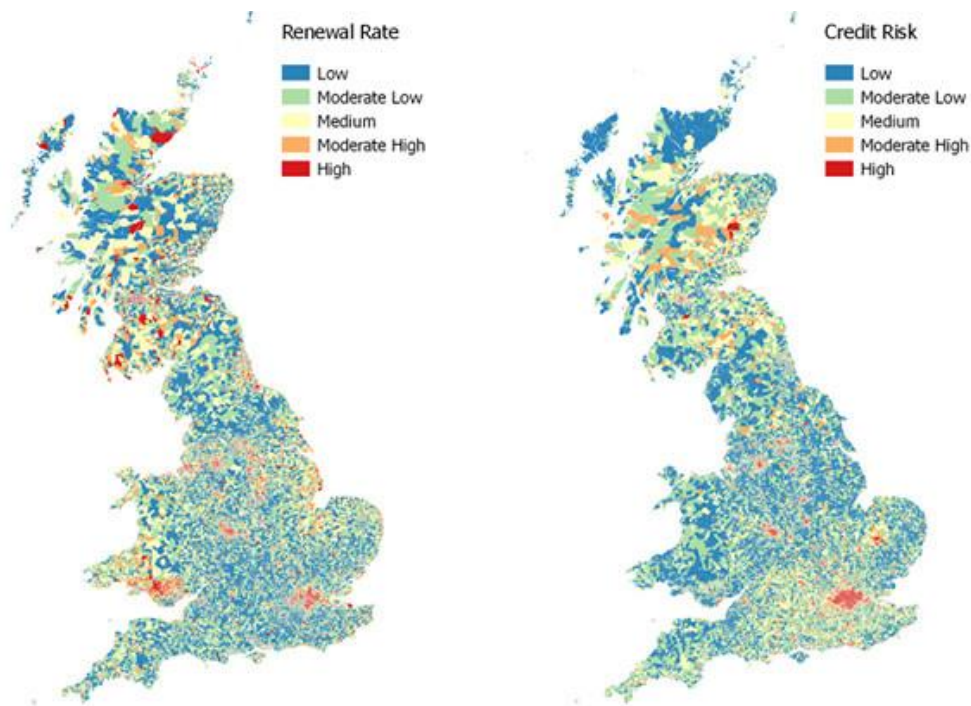
ML models and workflows were further tuned after four months' data collection and a number of A/B testing initiatives. A number of additional models and intelligent workflows were introduced, including:

- ML lead evaluation
- targeted marketing
- conversion
- collection optimization and
- data cost optimization models

Also, using our ML and DE, intelligent automation was applied to:

- customer acquisition across a number of digital channels, including social, search, and through integration with a number of UK lead generators
- customer conversion and acceptance
- collections
- 3rd party data acquisition costs

These supported automated, optimized customer lifecycle management.



The results of implementing Acquired Insights platform components are summarized below:

KPI	Prior to using Acquired Insights platform tools	After 5 months	After 12 months
Average loan size	£260.00	£310.00	£540.00
Number of online / mobile applications processed & approved per day	70	500	10K+ per day (subsequently daily volumes peaked at over 100K per day worldwide)
% of manual processing	76%	15%	< 2% (some manual intervention retained due to regulatory requirements)
Operating costs per new loan	£8.30	£2.80	£1.30 (primarily data acquisition costs)
Operating costs to provide another loan for an existing customer	£2.50	£0.60	£0.40
New customer average acquisition cost	£42 (non-scalable)	£126 (scalable, but expensive)	< 12% of loan face amount, across all digital channels
Retention marketing cost for each portfolio customer identified for retention	£2.20	£0.34	£0.21
Portfolio default rate	28%	18%	Sub 8%
Acceptance rate new customers	Estimated at 19%	25%	29%
Customer Retention Rate	51%	78%	87%

KPI	Prior to using Acquired Insights platform tools	After 5 months	After 12 months
Fraud rate	6%	2%	< 0.1%
Summary	Small innovative finance company, sub-optimal KPI's. platform not scalable, high operating costs per loan	Implemented Acquired Insights platform robo-underwriter and intelligent STP. Increased profitability, significantly improved scalability and core KPI's	One of the most successful financial (FinTech) startups in Europe. Low operating costs, intelligent robo- underwriter, effective digital targeted marketing, optimized customer lifecycle management £400+ mil online revenue

Overall Improvements

The overall improvements achieved are summarized below:

Results

- 53% increase in acceptances
- 97% reduction in manual effort
- 72% reduction in default rate
- 82% reduction in fraud rate

© Zoral Limited 2017. All rights reserved.

Contact us for additional information



Gary L. Melling
 President & CEO
 Mobile: +1.905.467.1495
 Email: Gary.Melling@Alinc.Cloud
 LinkedIn: <https://www.linkedin.com/in/gamelling>
 Website: <https://www.Alinc.Cloud>