



Exploiting Customer Lifetime Value Through Advanced Analytics

## Executive summary

**Client:**

Financial Services

**The challenge:**

To adopt Customer Lifetime Value into the company and develop initiatives to improve and monitor it over time.

**The solution:**

Drawing on the depth and breadth of experience within Lynchpin's Data Science and consultancy teams, a suite of machine learning models and customer strategies were developed across the business which were aligned with business objectives. Utilising a test and learn framework Lynchpin were able to continuously monitor and refine the deployment of the models to achieve the core objective - Increase Customer Lifetime Value.

**The results:**

With a collaborative approach across multiple areas of the business LTV was influenced via some core KPIs

- LTV increased by 3% in the first 6 months of the initiative
- Churn was reduced by 18%
- Contact centre save rates were increased by 12%
- Call handling times were reduced by 9%

## The challenge

A financial services client was making some strides in analytics maturity and had developed a Customer Lifetime Value calculation which worked well for the business. However, they faced the challenge of how they could make effective use of this metric. Lynchpin's objective was to:

- Understand how LTV varies across the client base
- Develop a plan to create a positive impact on the LTV metric

## The solution

With Lynchpin's expertise in LTV we understood there were 3 key themes which made up the core of Customer LTV within this organisation.

- How much money do they spend?
- How long do they stay?
- How much do they cost?

In order to influence LTV we needed to draw up some initiatives focussed around these areas and develop advanced analytics solutions to address them via machine learning models.

The initiatives were broken into 3 areas to address the LTV Calculation

- How much money do they spend? -> Grow Revenue
- How long do they stay? -> Increase Customer Retention
- How much do they cost? -> Reduce Costs

For these initiatives to show true success we also consulted with the business on how they could develop customer strategies based on the outputs of the models. The final key to success was in implementing a **test and learn framework** across all initiatives which looked to constantly monitor and improve model outputs and strategic deployments.

# Grow Revenue

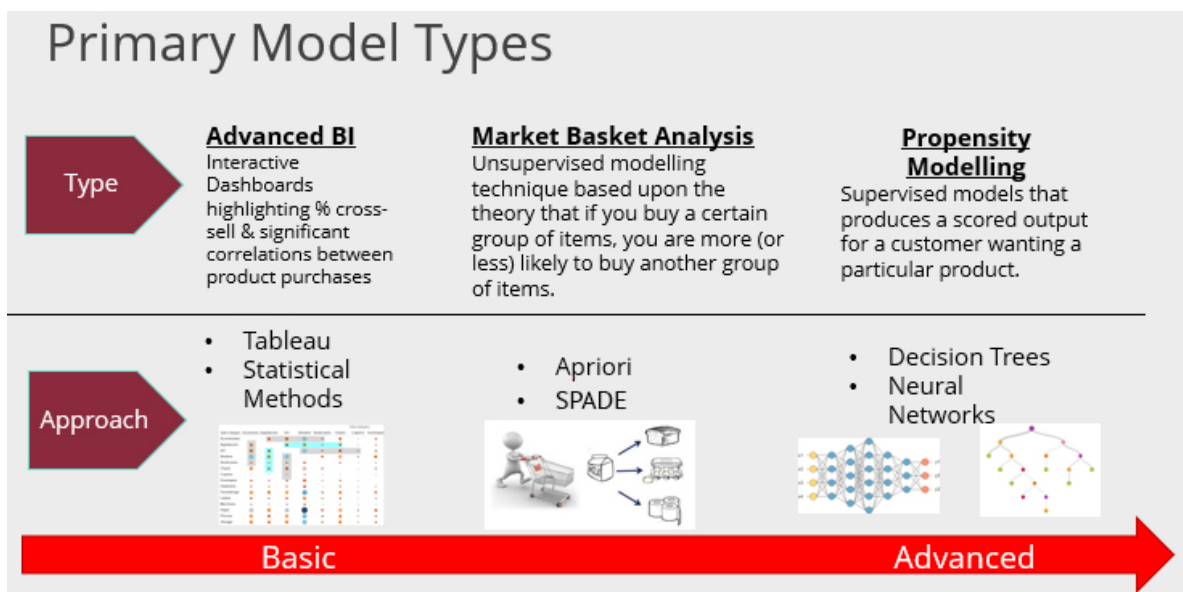
**Cross-Sell modelling** looks at effective ways to help businesses sell additional products or services to existing customers.

The objective of cross-sell

- **To increase revenue per customer**

Using a combination of BI and machine learning techniques (such as Apriori and SPADE) and working with the Product team Lynchpin created a suite of models with a core focus on identifying customers with a high propensity to buy more products.

As cross-sell can be deployed at varying different levels it is important to address the business needs for different outcomes. The below diagram shows an example of how cross-sell can be achieved through different methods.



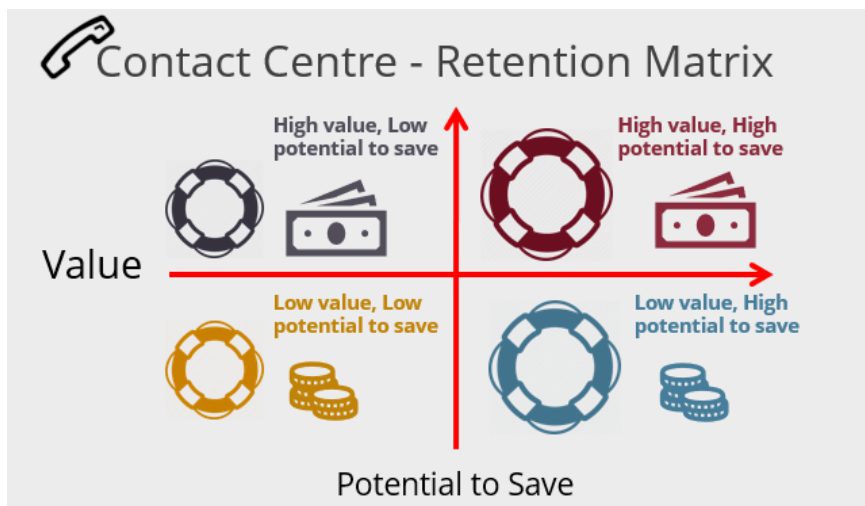
## Retain Customers

Lynchpin created **Churn models** using Decision Trees to predict when customers were most likely to leave. By selecting Decision trees as our model type the outputs were transparent and business focussed allowing Lynchpin to develop strategies for tackling customers who showed signs that they were about to leave.

The Churn model was then deployed through multiple channels including email, call centre and personalised onsite content. Incorporating the churn model with outputs from the cross-sell analyses enabled retention offers focussed on products that the customers were more likely to be interested in and creating a consistent and personalised service.

## Reducing Costs

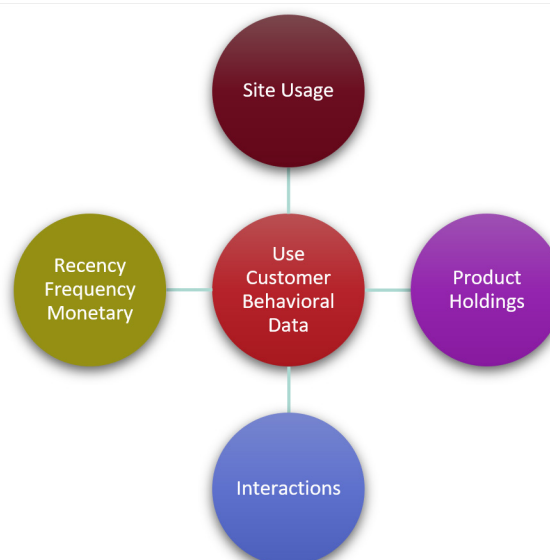
As a business working within the services industry, cost of servicing customers can have a big impact. Lynchpin worked with the Contact Centre team to build **predictive models** that scored customers on their 'potential to be saved'. Overlaying CLTV with these models we also developed a Retention matrix for the contact centre. The outputs of this model were deployed within the contact centre to allow agents to select the most relevant strategy based on the model recommendations.



## Coordinated Customer Strategies

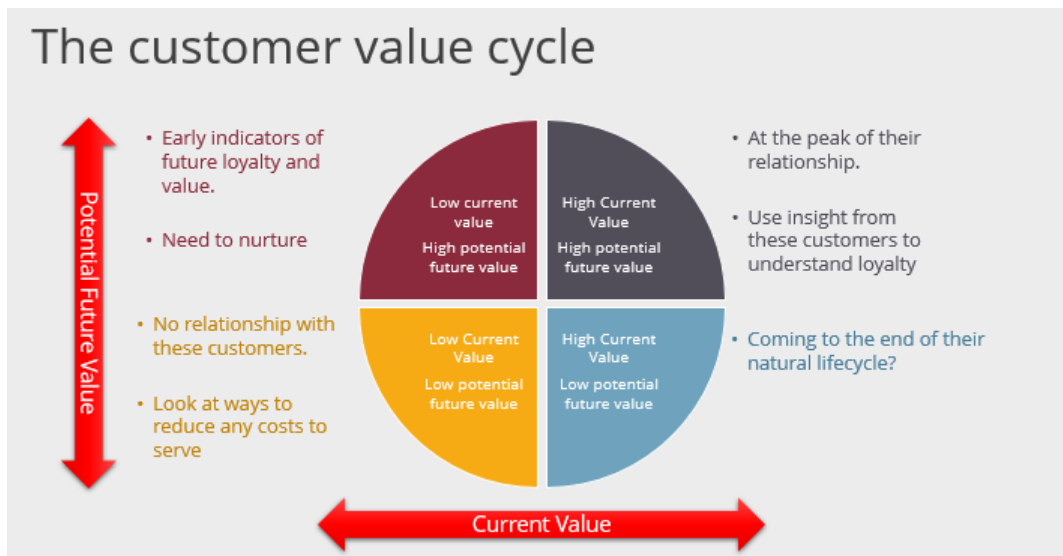
Recognising that the customer's needs are at the heart of the solution, it was important that we enabled targeting and personalisation through consistency and timeliness of messaging and propositions across all customer touchpoints.

Lynchpin applied K-means clustering techniques on customer behavioural data to identify naturally occurring groups of customers.



This resulted in 6 distinct groups of customers with a clear understanding of who they were. The outputs were uploaded to the customer database and made available across the company. Importantly the clusters were also used to refine and update models for churn and upsell allowing for contact strategies to be tailored to the individuals.

Another important aspect of a customer behaviour is in understanding where they are on their customer life cycle. Working with the Customer Marketing team Lynchpin created a Customer Value Cycle Matrix. The Customer Value cycle utilised aspects of LTV based on their current and future potential value to the business. Drawing on outputs from our other initiatives further refinement of customer strategies was enabled.



## The results

With the ability to pull many levers on the Customer Lifetime Value metric the organisation was able to have a big impact on overall LTV while also helping to impact core KPIs across multiple areas of the business.

<p><b>Increase Revenue:</b> LTV increased by 3% in the first 6 months of the initiative</p>	<p><b>Retain Customers:</b> Churn was reduced by 18%</p>	<p><b>Reduce Costs:</b> Contact centre save rates were increased by 12% Call handling times were reduced by 10%</p>
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An important outcome of the entire project was also felt across the teams in terms of the collaboration and consistent approach to servicing the customer. With the outputs of each model available across the business and coordinated strategies built which resulted in enhancing business area KPIs as well as the over-arching goal of increasing Customer LTV.

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