

# Telecom Churn Prediction



## Objective

To develop a 'Churn Probability' scoring model and an accompanying DSS to :

- Review and recalibrate scorecard
- Use insight data to improve alignment between underwriting rules and scores
- Effective targeting in reaching and retaining high value customers
- Cross-selling or up-selling based on specific customer needs



## Solution

Built a DSS system to drive better decision-making for one of the largest telecom companies in India with annual revenues of \$110 millions enable the client to :

- Identify significant variables
- Build predication model
- Test and validate models

The techniques used were Neural Network, Decision Tree and Logit. The DSS allows managers to control and analyze using a 'What if' simulator, the return on investments in churn management.



## Conclusion

The company had subscriber base of more than 2.6 million spread across 209 cities. Each month's data comprised of more than 150 variables and 65,500 records, wherein each record represents an individual customer. The DSS provides a comprehensive comparative assessment of customer profitability as measured by 'Average Revenue Per User' (ARPU) vis-à-vis customer loyalty indicated by the 'Tenure Base' of the customer on its network.

**Jack-knife Matrix**

Actual	Predicted			Accuracy	
	0	1		0	1
0	8311	707	11083	80%	6%
1	243	1222	1465	17%	83%
	9154	1929			

No. of Customers predicted by the model (points to 707 and 1222)  
Total No. of Customers (points to 9154 and 1929)  
Correct predictions (points to 1222 and 1465)  
Prediction Accuracy (points to 83%)  
Actual Quitters (points to 1465)