



Promotional Effective Analysis

Final Report

2017



Key Benefits

OPTIMIZATION AND FORECASTING

Customers can evaluate the promotional activities and gain much more insights for future investment plan.

And design the best promotional mix and resource allocation to improve ROI.

01

Better Promotional mix

Optimize [promotional mix](#) for each product with maximal ROI

02

Better budget allocation

[Allocate the budget](#) in different products, region and promotion channel based on the best promotional mix.

03

Understand business with accurate forecast

Fully understand business by different [forecast scenarios](#) to align with fitted strategy plan

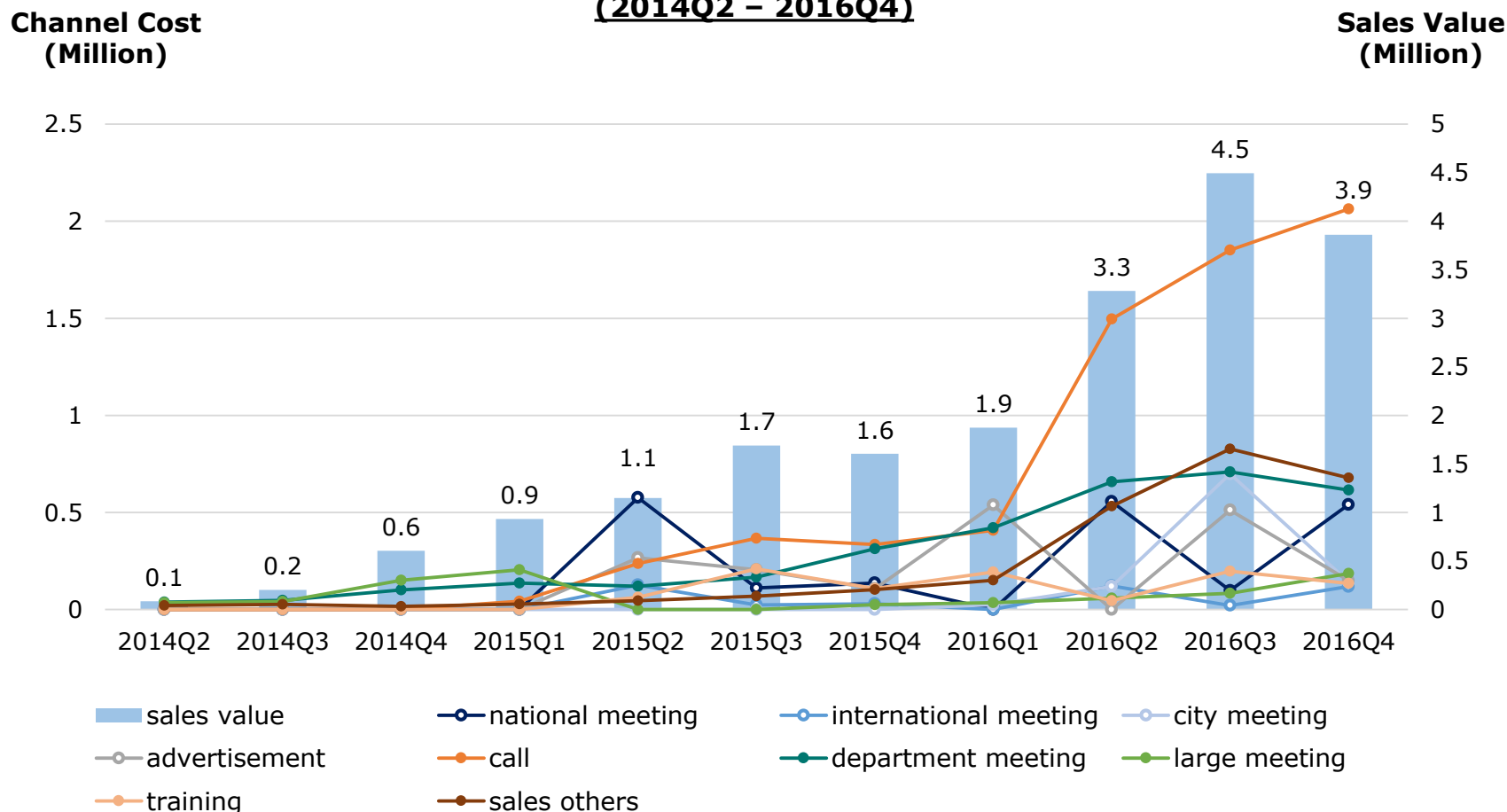
Key terminology for promotion effectiveness analysis

Terminology	Definition
Carryover Rate	Proportion of sales that would be achieved in the following year if all promotion is to stop
Incremental Sales	Sales contribution from different promotions
Response Curve	Response curve is the relationship between channel investment and sales
ROI	ROI measures return relative to expenditure
mROI	<p>mROI measures marginal return per additional unit of spend:</p> <ul style="list-style-type: none">• mROI < 1 means overspending• mROI > 1 means increasing spend will increase profits• mROI = 1 means profits are maximized



Data from different sources were processed and analyzed - Allelock

Allelock quarterly channel cost and sales value data (2014Q2 – 2016Q4)



Data from all sources were processed and checked before fitting into model for KPI calculation

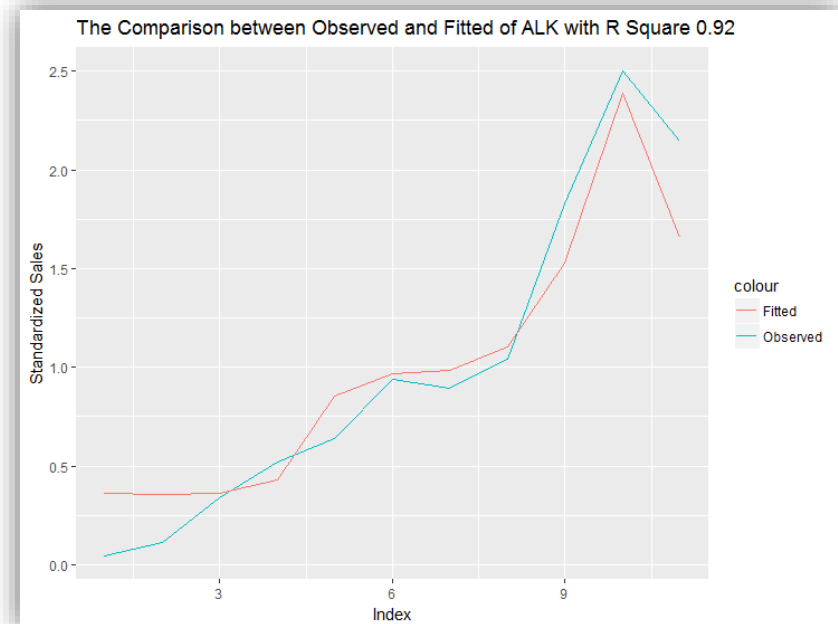


Model R square for Allelock is 92%

- Hundreds of models with different combination of response curve with retention rate will be fitted to check which one is best fit and best align with business objectives
- Final Modeling result is picked from top fitted model and best business application

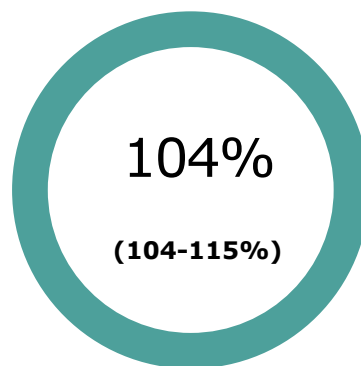
Example for Model Fit

Product	Model R square
Allelock	0.92



As a new launch product still in the growing stage,
carryover rate for Allelock is over 100%

Carryover Rate for Allelock



	Industry Benchmark	Regression Method	Actual Hosp. Analysis	Hospital Ranking
Allelock	105-115%	104%	139% ¹	103%

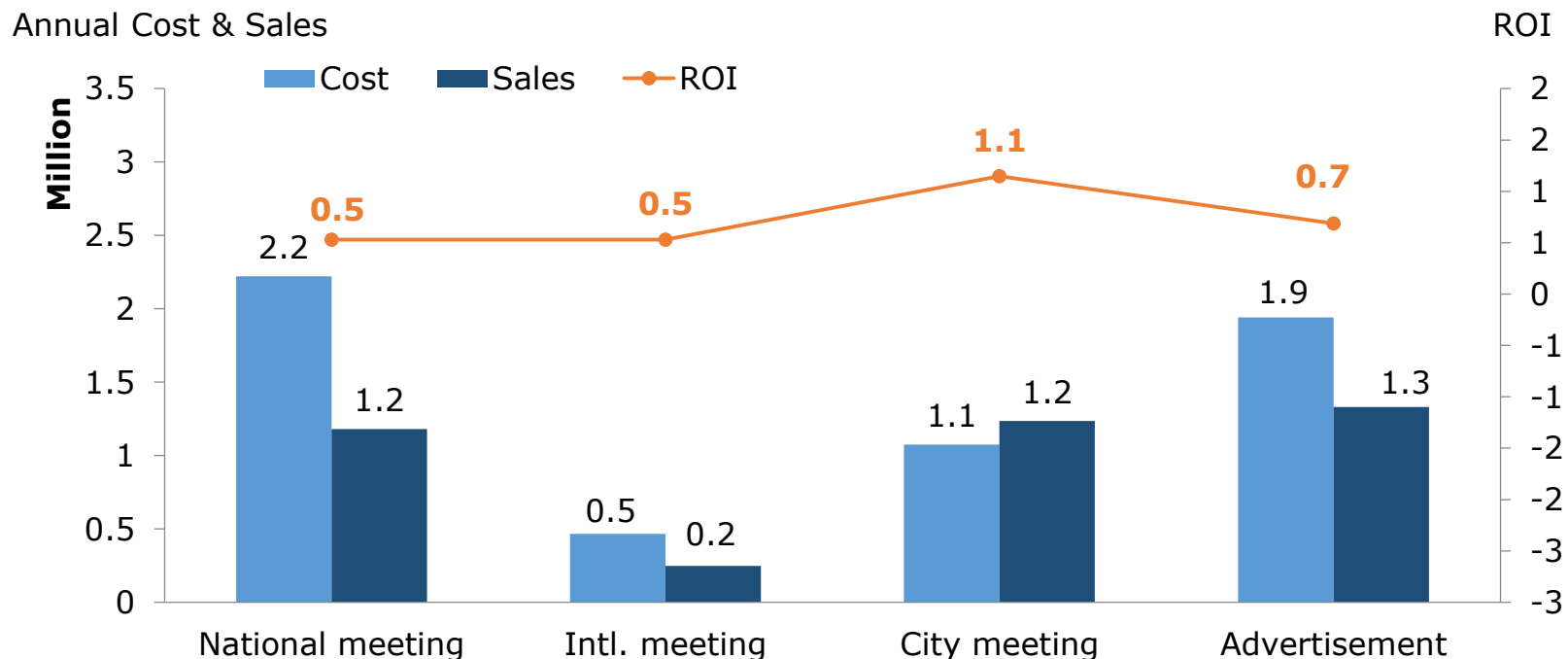
- Allelock has carryover rate inline with industry benchmark

1. 5 hospitals with call activities dropped 20% in 2016 were used. This method is not included in final carryover calculation



Promotion ROI for new launch product tend to be low as it's still in the brand building stage

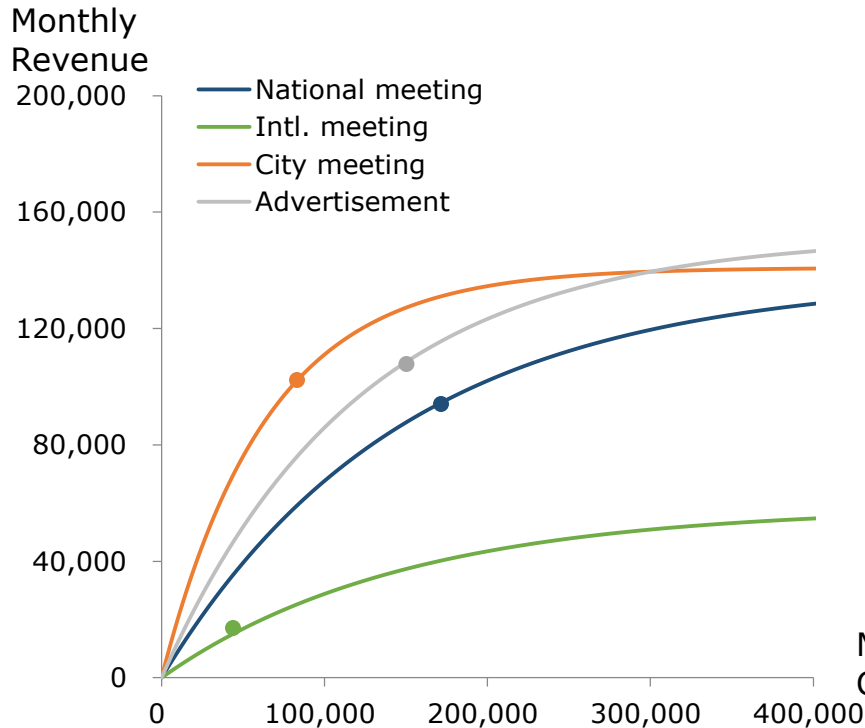
Marketing promotions ROI for Allelock



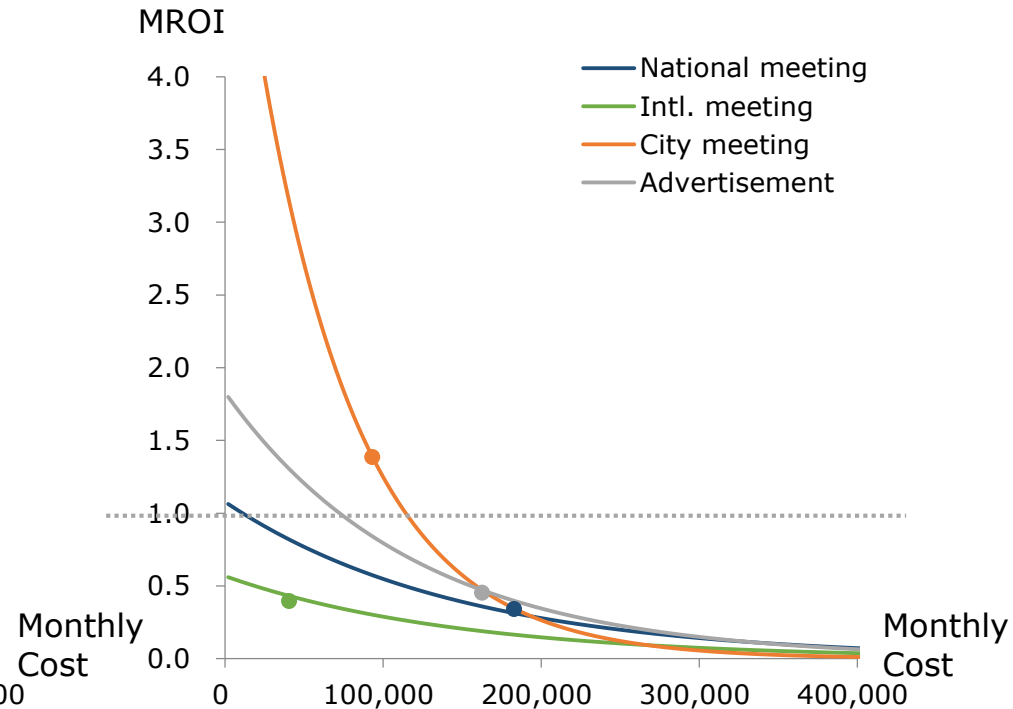
- As Allelock is still in the growth stage, lots efforts are still needed to boost Allelock sales. Promotion ROIs will pick up once the initial brand building stage is over

Expense on marketing promotions for the Allelock needs to be optimized

Response Curve for Allelock

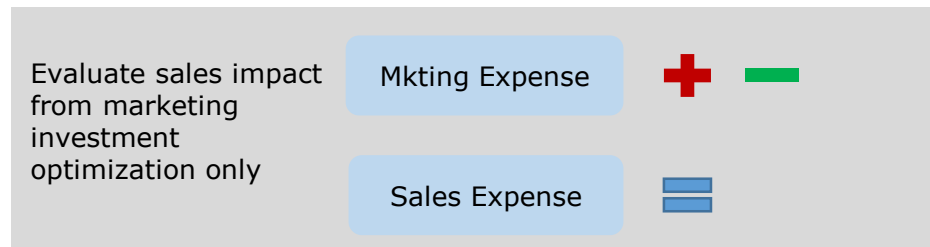
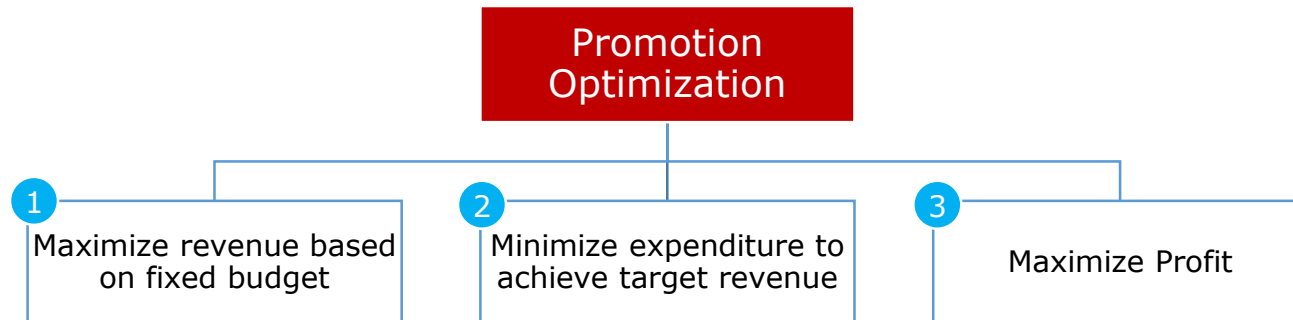


MROI for Allelock



	National meeting	Intl. meeting	City Meeting	Advertisement
Current monthly cost	185,095	38,762	89,601	161,775
Current monthly sales	98,335	20,593	102,862	110,958
MROI	0.3	0.3	1.4	0.5

Three types of optimization can be achieved to guide resource allocation



Channel	Mkting Cost % before opt	Fixed Budget Scenario		Fixed Revenue Scenario		Max Profit Scenario	
		Mkting Cost % after opt	Budget Change	Mkting Cost % after opt	Budget Change	Mkting Cost % after opt	Budget Change
National meeting	52.9%	42.9%	-19%	42.6%	-22%	49.9%	15%
Intl. meeting	21.4%	25.5%	19%	25.6%	17%	22.8%	30%
Mkting Others	25.6%	31.6%	23%	31.8%	21%	27.3%	30%
Call		Sales Operation Cost Keeps Constant					
Dept. meeting							
Large meeting							
Training							
Sales others							
Opt results		Total Revenue +3.4%		Mkting Cost -2.6%		Total Profit +5.0% Mkting Cost +22.2%	

1

2

3

