

# Nobi Group Case Study

## RETAIL SALES | Innovation During A Recession

An international manufacturer of home, office and hotel products had experienced negative sales “comps” during recession. Reinvention, more so than improvement, occurred suddenly and was sustained using statistical design. This turned about 25% of the stores to positive “comps” **during** the study, which showed clear solutions in 30 days. A 9.8% increase in sales followed after results were implemented in all stores.

Implementation in the first quarter used empirical feedback as well as statistical significance to catch the bump that all stores enjoyed during the study. This feature of human subject statistical design: that performance usually improves during the study, was exploited to the full here and helped fuel the successful implementation.

By The Numbers:

11

INTERVENTIONS  
TIMES 2 PRODUCTS

4,194,304  
COMBINATIONS

9.8%

SALES INCREASE  
SUDDENLY (30 DAYS) AND SUSTAINED

Eleven interventions from in-house sales, marketing, media and merchandising experts were assembled for the test. A 16-run design, randomized by store, ran with light-touch compliance monitoring so that the intent-to-treat model ensured results that would carry to full implementation.

**WHY WORK WITH NOBI?** The management team had one shot at solving the problem. Although the story reads simply now, precision use of high-end problem solving under these conditions needs experience and strong theory. The analysis used a noise reduction technique then translated back to traditional “comps”. The false alarm risk was precisely assessed, using a distribution-free approach, and this was important to cracking the problem and explaining it to everyone simply.

**AMONG THE FINDINGS:** Consistent with the theory that half of what’s tested will help and half will hurt, 5 of the 11 hurt. More importantly though: a couple of changes increased sales significantly--the largest with just a 0.4% “false alarm risk” against a pre-set 5% decision criterion. This is as real as improvements get in practice, with chance or luck essentially ruled out. One change allowed salespeople to better work with shoppers. The other was in how the products were presented. Media mix was modified to reduce cost while maintaining the same effectiveness. A more complex way to arrange the product was found to hurt. Price elasticity was tested for the two main products within the overall line, and both were found insensitive to price in the range tested.

The intent-to-treat model is a vital component of this case. One of the findings was surprising and remained controversial for a few days. It was fully explained as the field saw it, using a standard method. Had a laissez-faire style of experimentation not been promoted, it is unlikely the problem would have yielded. Additionally, it would not have been accepted by the hundreds of employees who needed to implement with conviction – which is tantamount to not solving the problem technically. This underlines a general principle that many interventions where people are involved may not be appropriate 100% and while the intent must be managed, the decision is left to the eyes on the ground. Nobi is finding that successful interventions may be employed 2/3, 1/2 or even 15% of the time to greatest effect. Testing changes while embracing their real-world imperfections is fundamental to how things really work.

