

The Model Deployment Continuum™: A Guide To Harnessing Predictive Marketing Models

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Identifying the Pain

As graduate students of management and marketing science, Chris and I were exposed to a myriad of statistical models designed to aid the management decision process. However, as we returned to workforce, we witnessed first hand how relatively infrequently sophisticated statistical marketing models were employed, if at all, at many of the worlds leading companies - including the ones that employed us! We noticed that most of these companies had little or no in-house management and/or marketing science capabilities at key functional areas.

Even at companies that had such capabilities, we saw the inevitable disappointment of management scientists as senior management ignored their models and science. We attribute the inertia of senior management to act on the science to the following factors:

- Statistical models require tremendous human and computing resources with commitment to data collection, needing not only qualified marketing scientists but also dedicated data analysts and data warehousing.
- Despite the best in model building technologies, model validation remains a tricky art form few marketing scientists have mastered. The reality is that senior management must have sufficient understanding and trust in the models before basing management decision on them. They will not accept black box model recommendations. Senior management may relent if the marketing scientist is conversant in management practices and able to explain the inner workings of the respective models in practical terms.
- The time elapsed from data collection to model results generation often occur over a period of months. This is simply unacceptable in fast-paced competitive corporate environments.

A New Framework for Overcoming the Obstacles of Model Deployment

Model building is just one portion of a greater continuum that we call the Model Deployment Continuum™. A given model is not fully deployed until some expected output from the model, such as a sales forecast, is delivered to the intended audience, such as senior management. This is the last step of the continuum that we call "Model Predictions & Results Generation" shown in Figure 1. The Model Deployment Continuum™ is based on the collective experience of ETS consultants and addresses the sequence of obstacles that stand in the way of successful model deployment.

Optimizing Marketing ROI through Marketing Analytics

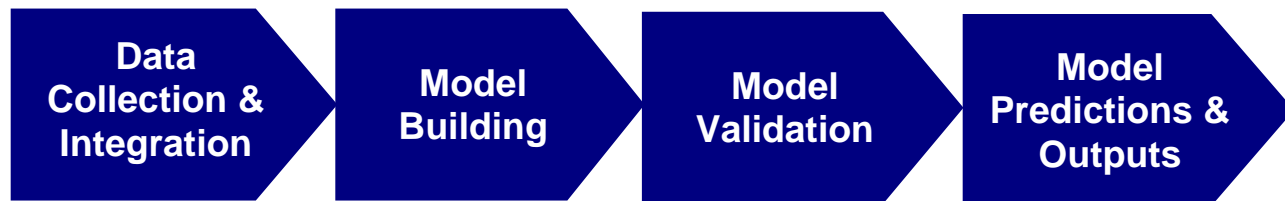


Figure 1. The Model Deployment Continuum™

At each of the four steps of the continuum, there are ample opportunities to falter. This brief discussion identifies the specialized capabilities of ETS to overcome these obstacles:

1. **Data Collection & Integration.** The “Extract Transform Load” (ETL) paradigm in the CRM world differs by industry. ETS data management and industry specific experience will help you determine which data elements are essential for model inclusion and statistically assess data quality and the impact of missing or incomplete data on the respective models. Where appropriate, ETS is experienced in utilizing advanced statistical techniques to effectively compensate for incomplete data.
2. **Model Building.** ETS consultants leverage the combined experiences in the state-of-the-art of model building across a wide spectrum of industries. ETS is well versed in both customer targeting and marketing mix modeling. You will not only be able to optimize your direct response programs, but also optimize the contribution of the respective component of your marketing mix, including advertising, promotion, and pricing, on overall business results.
3. **Model Validation.** ETS models are developed with validation in mind. ETS models are vigorously tested with an assortment both standard and proprietary methodologies. The results of these validations are expressed in easily digestible non-technical terms. ETS consultants are corporate veterans in supporting senior management decision-making. ETS consultants adapt a management oriented mindset and place a special premium on the art-form of explaining difficult analytical concepts to non-marketing scientists.
4. **Model Predictions & Results Generation.** Often ignored and misunderstood are the inherent difficulties of extracting insights from model results. A model by itself has no utility. Experienced model builders are realizing that computing tools and specialized analytical algorithms are needed to harness the models. To harness a model, deployment tools are needed to generate predictions, compute returns on marketing investment and similar profitability metrics, conduct simulations, optimize model results, or to simply to create graphical presentations based on model results. Furthermore, there are inherent difficulties in expediently transporting a

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model from modeling software to a corporate production decision support system such a real time credit decision system.

ETS has the software design and algorithm development experience to recommend the appropriate options based on client requirements and resources. ETS will enable you develop your own desktop model result generation tools in-house or with the assistance of third party solutions providers.

ETS Overcomes Barriers to Model Deployment

The key to successful and timely model deployment lies in the experience and capability to overcome the four distinct barriers in the Model Deployment Continuum™. Gone are the days of delivering model insights via a slide presentation based on data several months out of date. The fast moving and competitive business environments demand model deployment with current data, current models and current insights that ETS provides.

About ETS Marketing Science

ETS Marketing Science is dedicated to helping marketers optimize their Return on Marketing Investment (ROMI) across the entire marketing mix and across all customer segments.

ETS develops marketing analytics and decision support solutions for clients across a broad spectrum of industries including financial services, automotive, and consumer packaged goods.

ETS distinguishes itself by providing, not only a full suite of marketing analytics capabilities, but also a true marketing optimization framework through our integrated 4Optimizer™ solution, unifying the four most sought after components of marketing optimization under a single integrated framework:

1. **Customer Relationship Management** (targeting, valuing, acquiring, growing, and retaining profitable customers)
2. **Marketing Mix Modeling** (measuring, forecasting and optimizing the contribution of the media mix, pricing, and promotion to sales)
3. **Brand Equity Tracking and Optimization** (using traditional survey based or proprietary non-survey based methods)
4. **New Product Sales Forecasting** (using proprietary extensions to Marketing Mix Modeling)

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