

Foundation Principles for Supply Chain Partners

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Steve Morlidge's *Guiding Principles* form a timely and useful chronicle of ideas which an organization can use to improve its forecasting process. However, much of the discussion is restricted to the design and execution of forecasting processes *within* the organization.

Technology, specifically the Internet, has revolutionized the way firms do business with each other. The usual stumbling blocks of poor information availability and the high costs of collaboration are being brought down by tailored supply chain initiatives and web-centric applications. Consequently, firms are finding they can streamline their supply chains and improve their bottom lines by collaborating with suppliers and other supply chain partners. (Boone & Ganeshan, 2008)

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While many of Steve Morlidge's principles apply in a supply-chain context, they will have to be extended to include supply-chain partners as stakeholders of the forecast. I will focus on the three *foundation principles* to illustrate the need for supply-chain extensions.

SUPPLY-CHAIN COLLABORATION

For fast-moving consumer goods (FMCG) like diapers and shampoos, forecasts based on historical demand typically have small errors at the retail level. However, as one moves back in the supply chain, to the wholesalers, distributors, manufacturers, and suppliers, errors in the forecast tend to increase (called the "bullwhip effect") largely because the end-user demand gets distorted as it moves up the supply chain. For a description of the

bullwhip effect, see the recent *Foresight* article by Ali and Boylan (2010).

To streamline supply chains and mitigate the bull whip effects, retailers are sharing point-of-sale (POS) data and planning forecasts and replenishment jointly with suppliers. Typical solutions include a joint forecast and a vendor-managed inventory system with pre-agreed contracts.

While such collaboration benefits both partners by reducing the cost of product delivery, it raises many questions:

- What data should we share?
- How do we address differences in forecast opinions?
- Does the retailer get more of a say?
- How do we set replenishment parameters?



EXTENDED FOUNDATION PRINCIPLES

While all good questions, solutions can be difficult: both intra- and inter-organizational issues need to be addressed. From a supply-chain context, the collaborating firms must

not only have a “*sound grasp and shared set of beliefs about the nature and role of forecasting*” (**Principle #1.1**) but also need to define and structure the relationship between them.

Products with short life cycles, like fashion apparel and electronics, on the other hand, are characterized by large forecast errors at the retail level. Underestimating demand leads to product shortages while overestimating leads to markdowns. The challenge of matching supply to demand is complicated by the long supply-chain lead times relative to the product life cycle. Typical strategies include the establishment of fast and flexible supply chains, the use of early sales data to adjust production quantities to match demand patterns for the season.

“*Gain agreement on how the forecasts will be used.*” (**Principle #1.2**) takes on a different role in this context, requiring honest and open conversations with suppliers and contractors on how the initial forecasts will be used. For example, the suppliers must agree on which SKUs to make, how capacity is optioned for future use, and how production will be updated based on early market data.

Finally, collaborating companies also need to “*agree on how forecasting performance will be judged*” (**Principle #1.3**). In the FMCG sector, for example, retailers must set standards in contractual agreements with suppliers on vendor-managed inventory programs. “Is inventory performance adequate?” “Are customer service levels satisfactory?” “How best to share savings of the programs?”

For short-life-cycle products, on the other hand, collaborating companies can agree on how best to achieve supply chain flexibility. The higher the initial forecast, the greater are the flexibility and response speed warranted from the suppliers.

My intent in this commentary was to show that much of Steve Morlidge’s forecasting principles can be applied in a supply-chain context. However, one needs to reinterpret who does the forecast, who the customers are, how the collaboration needs to be



executed, and how to monitor the efficacy of the collaborative planning.

REFERENCES

- Ali, M. & Boylan, J. (2010). The value of forecast information sharing in supply chains, *Foresight*, Issue 18 (Summer), 14-18.
- Boone, T. & Ganesan, R. (2008). The value of information sharing in the retail supply chain: Two case studies, *Foresight*, Issue 9 (Spring), 12-17.



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