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## **Beyond Demand Forecasting: Sense & Respond Organizations**

Don't Predict What You Want -- They Know It Earlier

Stephan H. Haeckel

*GLENDOWER: I can call spirits from the vasty deep.*

*HOTSPUR: Why, so can I, or so can any man; but will they come when you do call for them?*

Shakespeare, King Henry the Fourth, Part 1

### **Forecasting Demand for Products and Services**

Even in times of maximum turbulence, harried executives can always rely on the existence of some relative certainties ---otherwise the presumption is randomness, against which no strategy can prevail. The management question is: which variables are reliably predictable, within reasonable ranges, and which are not? If the preponderance of important things that change can be forecast with acceptable accuracy, a company should opt for efficiency as its organizing principle. In particular, if the firm thinks it can forecast demand for products and services with sufficient precision, the logical way to think about a business is an efficient mechanism for making and selling what it forecasts customers will want. Since the only prudent assumption is that competitors can forecast as well as we can, strategy in this case is viewed as a game against competitors. The focus on efficiency makes it important to develop tightly integrated, definable, repeatable, predictable processes. Mass producers live or die by the accuracy of their demand forecasts and by their excellence in executing well-defined procedures.

But the majority of business thinkers have long concluded that the era of predictability about products and services has ended. As Peter Drucker said in 1992:

*Uncertainty---in the economy, society, politics---has become so great as to render futile, if not counterproductive, the kind of planning most companies still practice: forecasting based on probabilities. [\[Note 1\]](#)*

### **Forecasting the Processes that Produce Products -- An Interim Solution**

For many firms, the response to increasing unpredictability about product and services has been a shift in focus from products to process. Leveraging process knowledge gained from the Quality Movement in the 1980s, many managers have made speed-to-market a primary objective. To achieve this, they are segmenting their markets, driving the predict-make-sell product cycle faster and faster, and making predictions about what processes are most crucial to speed. In process-centric organizations, processes are the important thing to accurately predict.

My own prediction is that this process-centric phase is an interim one, and likely to be relatively short-lived. There are three reasons for thinking this will be the case. First, predicting processes means placing bets that certain ways of doing things will remain stable--in the sense that they will require only continuous improvement based on best practice analysis. Process designs are almost always procedural designs--specifications of how activities and decisions should be ordered to most efficiently transform specified inputs into specified outputs. But inputs are becoming increasingly unpredictable, and the best way to do things is changing rapidly and radically as firms learn to exploit the speed and flexibility of new technologies, including the Internet.

*We will be forecasting the capabilities that, when dispatched, create the one-off processes that, when executed, deliver the product or service appropriate to this particular customer at this particular moment. And such forecasts should be a byproduct of the process of designing the system, rather than a trend analysis exercise.*

Second, the Internet, with its global reach and exponentially plummeting transaction costs, is in the process of making virtual, modular networked organizational forms devastatingly superior (in terms of their relative economics) to vertically integrated hierarchical corporate structures. People with innovative business designs can now realize them in a matter of days or weeks by striking low-cost agreements to rent capabilities over the Net. Implicit in doing business as a network is a shift of focus from activities (which take place within the nodes of the network) to outcomes (which can be used to define the relationships between nodes). In networked organizations, particularly those that require rapid response to unpredicted change, it makes sense to specify the outcomes required, and empower people to figure out how best to produce them.

Finally, an increasing number of businesses are finding that an ability to economically handle the differences, not just the similarities, in individual customer needs and preferences is where growth and profit lie. Segmentation, an exercise in grouping customers by what they have in common, is a legacy of mass production, and economy of scale economics. Mining the differences between individual customers in a profitable way requires modular disaggregation of the firm's value chain into capabilities that are recombinable into one-off customer value chains with very low transaction cost. [\[Note 2\]](#) This is an economy of scope business model, and implies dynamic, even ad hoc, processes.

The net result, no pun intended, of increasingly unpredictable inputs, rapid innovation in better ways of doing things, electronically networked organizational forms, and customized value chains is increasing futility in forecasting what processes will be required in the future.

## **From Forecasting to Anticipating Customer Needs and Preferences**



As the pace of change continues to increase and as the nature of change becomes less incremental and more discontinuous, business-as-efficient-mechanism is rapidly yielding to business-as-adaptive-system as the organizing principle of preference. Sensing and responding to individual customers' current requests, as opposed to making and selling offers they are forecasted to want entails a transformation--not just a reformation--of what the business is and does. A specific prescription for accomplishing this is described at length in *Adaptive Enterprise: Creating and Leading Sense-and-Respond Organizations*. Among other things, the sense-and-respond model for adaptiveness calls for leaders to design businesses as systems of capabilities and outcomes, as opposed to as collections of processes and reporting relationships. The reader is referred to the book for a complete discussion of the significant implications of thinking about businesses in terms of systems, rather than processes. For now, it's enough to say that an adaptive sense-and-respond organization dispatches its capabilities in response to a current customer request, whereas an efficient make-and-sell firm schedules them in advance in accordance with a preexisting plan to offer something that was forecast to be needed.

Does sense-and-respond imply reactivity--as in "listen and comply?" The answer is no. The strategic battles among sense-and-respond firms will be waged on much different ground: the terrain of "anticipate and preempt." But by anticipate I do not mean "predict." I mean "know earlier." To make this distinction clear in familiar terms, think of going to the doctor and complaining about stomach pain. The doctor will palpate, probe, and send you down to the lab for tests. During this process you are emitting signals that you can't interpret, but that the doctor can. And when you return to learn the result, the doctor informs you, say, that you have appendicitis, and that you need an appendectomy. Your physician is not predicting that you will need an appendectomy, she or he is telling you that you need one now. The game is no longer one of predicting better what customers need, but one of knowing earlier--ideally even earlier than the customers themselves, what their present needs and preferences are.

The implications are truly enormous. We grew up thinking about business as games against competitors, because the game typically was to do more efficiently what both you and your competitors could forecast needed to be done. Now, in the e-business age of rapid, unpredictable change, we must pay most of our attention to games with customers. Why? Because customers are the source of knowledge about value--even if they are unable to articulate it without diagnostic help-- and the ultimate arbiters of whether or not value has been delivered. Investments in knowing more about the current context of a customer request are not investments in forecasting departments and time series analysis, they are investments in market research departments and data mining algorithms.

That said, I should acknowledge that large organizations are, always have been, and always will be a collection of entities whose local environments range from the very stable (i.e., receiving highly predictable requests and needing only minor variations in required behavior from case to case) to the highly unstable milieus in which adaptiveness, rather than efficiency, is the survival trait. The sea change is not in the heterogeneity of local environment stability, but in the shift from relatively stable to highly unstable environments for the organizations themselves.

## Forecasting Organizational Capabilities

If enterprise survival and success will now depend primarily on the successful anticipation of current

customer requests, rather than forecasting demand for products and services as we did in the days of mass production; and if we will soon find it less and less helpful to forecast processes, as continuous improvement gives way to ever more dynamic change in how we do things around here, what will we be forecasting?

One answer follows from the argument made above that adaptive firms will dispatch modular capabilities in accordance with a system design that relates those capabilities in terms of outcomes: We will be forecasting the capabilities that, when dispatched, create the one-off processes that, when executed, deliver the product or service appropriate to this particular customer at this particular moment. [\[Note 2\]](#) And such forecasts should be a byproduct of the process of designing the system, rather than a trend analysis exercise. Only then can managers be assured that new capabilities can be integrated with existing ones to produce the outcome the enterprise is designed to provide. Only then can they truly and systematically come to grips with the strategic implications of unpredictable change.

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### **Notes and References**

Note 1

Drucker, P., "Planning for Uncertainty," Wall Street Journal, July 22, 1992.

Note 2

"One-off" refers to a customized process for producing a response that varies not only in terms of the product, but also (potentially) in terms of the services, terms, timing, and so on.

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