

# Proactive Risk Management



## About Dr. Johnson



Blake Johnson (Ph.D., Stanford University, Engineering Economic Systems) is a Consulting

Professor with Stanford University, studying the quantification and management of risk and flexibility for industrial companies. Blake is also a key thought leader at **Stanford's Global Supply Chain Management Forum**. Teradata.com recently interviewed Blake about his ideas in Proactive Risk Management, based on over 20 years of proven experience.

## How Your Enterprise Can Benefit from this Emerging Methodology

*Blake Johnson, Ph.D., Consulting Professor Stanford University*

**Teradata:** Let's start by focusing on the word "proactive" – what do you mean by this in terms of risk management? And why is "proactive" an important modifier of risk management as a practice?

**Dr. Johnson:** Today most of the investment and the focus in risk management, particularly on the operational side, have been on capabilities that enable companies to respond more effectively to unexpected events *after* they occur – essentially *reactive* capabilities.

However, if you think about that, once an event has occurred or is in the process of unfolding, your options are limited. To use an analogy, if your house is on fire, it's good to find that out as soon as possible, but at that point it's too late to buy insurance. Of course, with something like fire we usually do take a *proactive* approach, such as by following building codes, purchasing insurance, using smoke alarms or having extinguishers handy.

In business, we follow a similar approach for risks that are well understood and shared by many businesses, such as "insurable" risks like fire or liability, and "hedgeable" risks, such as commodity prices or interest or exchange rates.

But more important in terms of bottom-line results is uncertainty about the performance of relationships with key external partners, such as customers, suppliers, and other supply chain partners. These are the uncertainties that drive core operating performance. Managing the risks and opportunities they create is more important and more challenging, but very possible, and requires a proactive approach. Developing the ability to manage these risks effectively offers great opportunity.

**Teradata:** How does shifting the view of risk management as a proactive discipline impact current and past approaches to risk management?

**Dr. Johnson:** The risk examples we tend to think of first – like fire, or political and natural events – are external risks that are outside of our direct control. Clearly, every company wants to be diligent in protecting itself against these risks.

However, **proactive risk management** extends the focus of risk management to the many important business risks, such as uncertainty in supply, demand, and key relationships, that we can influence and

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control, and that drive day-to-day operating performance. When managed well, these risks actually become opportunities to *deliver quantifiable business value*, and create sustainable competitive advantage.

So what we're really talking about is extending the current risk paradigm to include core operating and relationship risks.

**Teradata:** What conditions have given rise to the need for proactive risk management? In your view, do these conditions make proactive risk management an imperative for business success?

**Dr. Johnson:** Yes, proactive risk management is imperative now, and there are two important reasons. One is the increasing uncertainty and rate of change in the business environment. It's become essential to success in every industry to be able to manage and thrive in conditions of great uncertainty and change.

The second reason is closely related: the increasingly distributed nature of supply chains, and the internationalization of business. Combined, these factors increase the complexity of managing a business, and the number of external participants involved. Both increase uncertainty, and the importance of being able to structure and execute relationships to manage it. Each participant in a distributed supply chain has a fair amount of independence and autonomy, and their own information, influence and incentives, particularly when spread across companies and geographies. That creates an uncertainty about how they will perform which needs to be understood and managed.

**Teradata:** What is proactive risk management, really – meaning what is the practical process for making it happen?

**Dr. Johnson:** There are three key steps:

1. Capture and quantify the key sources of uncertainty your business is exposed to, such as demand uncertainty for a key product, or uncertainty about the performance of key component suppliers.
2. Identify how your current business strategies leave you exposed to those uncertainties. For example, how is your supply relationship structured for that key component? How will the terms of that supply relationship impact our future performance if demand turns out to be high, or low, or if prices change significantly?
3. Choose the strategies and relationships that drive performance and risk exposures best matched to business objectives. To do this, a company must have the ability to quantify how alternative strategies and relationships will impact its future performance (step 2), and use that capability proactively to take its business to the next level.

**Teradata:** What role does IT and Enterprise Data Warehousing play in implementing proactive risk management?

**Dr. Johnson:** Data and the EDW systems to support it are absolutely critical to successfully implementing proactive risk management. The reason is that core enterprise systems, such as ERP systems, are currently designed to support implementation of a single, best guess plan and the forecasts that drive it, and can't accommodate the range of possible outcomes that businesses know can occur, which they must plan for. So, most systems will need to be re-architected to support planning for and execution across the *range* of possible supply and demand outcomes.

As with most change management processes, that's not going to happen overnight. That is both a problem and an opportunity. Between where we are today and that future state, companies can and will differentiate themselves by how effectively they leverage their data to begin capturing the benefits of proactive risk management. Having the necessary data centralized in one place greatly accelerates the reuse of data to address risk management.

As an example, today major ERP systems only retain the current business forecast, and discard prior forecasts. One of the easiest ways to get started with proactive risk management is to analyze historical forecast error to understand uncertainty, but this isn't possible in the ERP environment. Even to take this first step a business needs an EDW and analytic functionality. If all the data is in an EDW, you can look at the historical forecasts, see the errors you're typically exposed to, and start proactively planning for that level of forecast uncertainty going forward.

**Teradata:** What are the benefits of implementing proactive risk management?

**Dr. Johnson:** Today, core management processes are based on best guess plans, which serve as the basis for all key decisions, from investments to operational planning and execution, as well as for performance goals, compensation and accountability, and so forth. That means they are poorly matched to the reality of today's uncertain and dynamic business environment.

To draw an analogy, if we drove our cars this way, it would be like driving with visibility through only a small clean spot in an otherwise dirty windshield. Obviously, that's not how we drive. Instead, we rely on visibility through the entire windshield to provide a complete view of the road ahead, and the risks and opportunities it presents. That allows us to drive much faster, and with fewer accidents.

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Proactive risk management provides the same benefits for running a business. It extends your visibility and control to the *range* of potential supply and demand outcomes, which give a complete view of the reality your business faces. You can move much faster, avoid risks, and capture opportunities, all of which drive bottom line benefits.

**Teradata:** What are the challenges which must be faced in order to implement proactive risk management?

**Dr. Johnson:** What we're talking about is really a quite different way of looking at and managing your business, including key relationships. So, it requires change. And change takes work.

We've already talked about the three basic steps of proactive risk management. But the real issue is not so much the concept of proactive risk management, but the reality of making it happen. How does a company set the process of change toward this methodology in motion?

My experience is that it's best for enterprises to start with a few key high impact activities and establish the process there, develop some organizational familiarity with the concept, and then expand. What that amounts to is identifying key sources of uncertainty that are impacting the business, and starting by proactively addressing one or two of those.

### Related Resources

**On-Demand Web Seminar, "Beyond Epidemics and Disasters: Managing Supply Chain Risk In Your Core Business,"** with Blake Johnson and Mark Hillman, Research Director from AMR Research.

**White Paper, "Making Supply Chain Risk Management Part of Your Core Management Process,"** by Blake Johnson.

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