

The Supply-Risk Explosion

Building a business culture that can cope

a white paper from **ZYCUS**



The Supply-Risk Explosion

Ten or fifteen years ago, you could not convince most procurement and supply-chain professionals to talk about supply-risk management. Today you can not get them to stop talking about it.

So what has changed? Is it inherently riskier to do business in today's global economy? Or are procurement and supply-chain management professionals simply more aware of the risks that have been there all along?

Well, yes—and—yes.

Today's list of supply-related risks can seem nearly infinite: supplier bankruptcy, tight credit, emerging capacity constraints, commodity price inflation, low inventories, product recalls, supply-chain globalization, supply-base rationalization, corporate cost cutting, dangerous management decisions, currency fluctuations, terrorism, increased regulatory activity, outsourcing, sustainability, social responsibility, social media, unfair trade practices, and so much more.

At the same time, legions of risk-management consultants, pundits, and solution providers are making a great deal more noise about supply-chain risk management. Search the term on Google and you get 8.9 million hits. On Yahoo! you get 18.7 million.

But, with so much focus on supply risk, it's easy to become overwhelmed and to think there is no way your organization can ever be equipped to manage or mitigate it all in meaningful or successful ways. Consultants will tell you, "You can't do it without us!" Solution providers, meantime, will sell you sophisticated risk-management technologies that you have neither the internal skill sets nor the information infrastructures in place to exploit properly.

The purpose of this paper is to help sourcing and procurement executives understand where their organizations stand on the maturity curve for supply-risk management and what they can do today—regardless of company size or resource availability—to start moving in the right direction.

Our focus will be on developing a business culture—versus just a program—for systematic supply-risk management. We'll discuss: equipping people with needed skills and mindsets, building organizational and information infrastructures for risk management, and risk-proofing sourcing and procurement processes.

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More risk, different risk

While the list of things for procurement and supply-chain management executives to worry about has exploded in the past decade, the emphasis has also shifted dramatically. Fears around things like supplier-quality performance, *force majeure*, corporate espionage, price volatility, late materials and parts shipments have been supplanted by fears around things like supplier bankruptcy, low-cost country sourcing, cash flow, social responsibility, sustainability (of life on Earth), and social media. It's beyond the scope of this paper to discuss all the new risks in detail, but there are a few big trends worth noting:

Information proliferation. The Internet has brought an explosion of news and information sources with widely varying degrees of reliability, credibility, and objectivity. News—right and wrong—travels faster, spreads farther, and lives longer. Rather than searching miles of microfiche in library basements to unearth old stories, any person can now search and instantly access complete news histories in just seconds. The result is that bad news about supply-chain problems, product recalls, field failures, and so forth, now lingers for much longer in public consciousness.

A recent white paper by PriceWaterhouseCoopers (*From Vulnerable to Valuable: How Integrity Can Transform a Supply Chain*), studied a set of companies that had reported supply-chain disruptions and found their stock prices had plunged, on average, nearly 9% during the announcement periods compared to +0.11% for stock prices among a benchmark sample of companies. A year later, the same set of companies had seen stock prices appreciate only 3% compared to +22% for the benchmark sample. More frightening, perhaps,

There is risk embedded in virtually every decision, made every day, by every person in a company's sourcing, procurement, and supply-chain management organizations. The same is true for every supplier in every tier of a company's supply network.



Toyota certainly had a bad year in 2010 with four major product recalls all tied to parts or major vehicle subassemblies. Between January 19 (two days before the first Toyota recall was announced) through August 23, 2010, the automaker's stock price fell 23%.



In the coming decade, expect the effects of procurement and supply-chain strategies on carbon footprints/costs to take center-stage in the supply-risk management arena.

than the immediate effects of supply-chain disruption announcements is the persistence of those effects in key financial metrics a whole year later.

Social media. Twitter, Facebook, blogs, and so forth, will only magnify these longevity effects as any person, anywhere in the world now has the power to publish facts and/or opinions about any business enterprise. A good example is the faux BP public-relations Twitter account (<http://twitter.com/bpglobalpr>) that sprang up in the wake of that company's disastrous oil spill in 2010. Because content published on the faux Twitter account is considered parody or satire, BP is powerless to have it taken down. At last check, the Twitter feed had more than 190,000 followers.

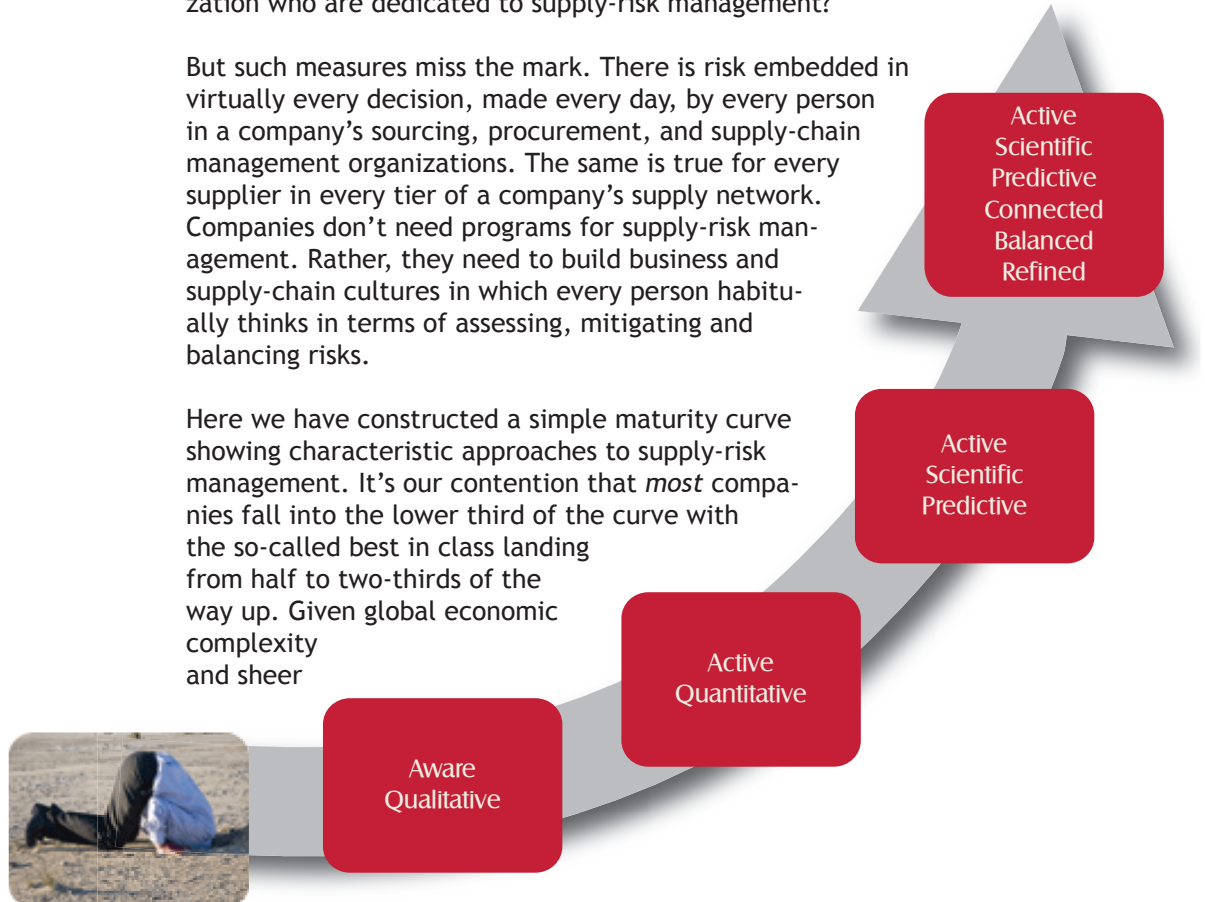
Cultural priorities. Changes in what people care about most are another big factor raising the stakes and shifting the emphasis in supply-risk management. For example, risks associated with sustainability (of life on Earth) are guaranteed to plague procurement and supply-chain managers for years to come. The key will be beating outsiders to asking and answering such questions as: what are the total carbon costs associated with where we buy, how far we move materials, and how we decide to transport them?

Risk-management maturity

Strategy surveys aimed at procurement and supply-chain management executives often pose questions like: Do you have a formal program in place for supply-risk management? Or do you have employees in your organization who are dedicated to supply-risk management?

But such measures miss the mark. There is risk embedded in virtually every decision, made every day, by every person in a company's sourcing, procurement, and supply-chain management organizations. The same is true for every supplier in every tier of a company's supply network. Companies don't need programs for supply-risk management. Rather, they need to build business and supply-chain cultures in which every person habitually thinks in terms of assessing, mitigating and balancing risks.

Here we have constructed a simple maturity curve showing characteristic approaches to supply-risk management. It's our contention that *most* companies fall into the lower third of the curve with the so-called best in class landing from half to two-thirds of the way up. Given global economic complexity and sheer



pervasiveness of supply-related risk, it may be unlikely that any company will ever reach the top of the curve. But, no matter where you stand today—and regardless of the resources you do or don't have to dedicate to supply-risk management—there is plenty you can do right now to start moving up the curve. The remainder of this paper presents a framework for getting started.

Risk-management essentials

While risk-management experts would have you believe otherwise, there is no secret formula for managing supply risk. It boils down to habitually asking and answering the following questions:

- What can go wrong?
- What is the statistical probability it will go wrong?
- What will be the likely impact if it does go wrong?
- To what extent could our business (and/or management team) tolerate such an impact?
- What could we do to prevent it from going wrong (or be compensated if it does go wrong)?
- How much would that cost?
- And does the cost of prevention/compensation make sense in context of probability, potential impact, tolerance, AND in context of other—potentially greater—risks?

There are plenty of sophisticated models and technology tools to help companies ask and answer these questions, but—if you don't have the basic skill sets and information infrastructures in place—you can't really utilize and exploit these sophisticated models and tools.

Defining risk tolerance

To start building a culture of supply-risk management, the first order of business for procurement and supply-chain executives is to define enterprise risk tolerance. This is an important concept as everything the procurement and supply-chain organization does to manage risk—every assessment, every mitigation decision—must be tuned to the enterprise's real appetite for risk.

In an ideal world, procurement and supply-chain executives could simply ask senior management to define risk tolerance for them. In reality, though, risk tolerance is more of a moving target that may need to be pieced together. Some very good clues for doing so include an executive team's typical approaches to:

- Innovation and new product introduction
- Performance management
- Financial management and investment
- Accounting
- Legal matters
- Marketing
- Technology adoption
- Physical and information security
- Corporate communications, public relations, and investor relations

A second order of business is to develop job descriptions, hiring parameters, professional development requirements, and training programs that emphasize

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developing such skill sets as:

- Research and data acquisition
- Data harmonization, normalization, and visualization
- Statistics/probability
- Process mapping
- Root-cause analysis
- Performance metrics design and implementation
- Accounting and financial management

Information infrastructure

Business cultures dedicated to supply-risk management also need to evolve information infrastructures that:

- **Exploit all opportunities to capture and structure consistent information from suppliers.** For example, RFX templates requiring suppliers to provide eight readily available pieces of information—total assets, total liabilities, current assets, current liabilities, EBIT, retained earnings, net sales, and market capitalization—would enable calculation and time series tracking of suppliers' Altman Z-Scores, which are reliable for predicting supplier bankruptcy risk.
- **Enrich with information that can not be generated easily or cost effectively in house.** Examples include reliable market price and supply conditions data, databases that aggregate complex cross-border regulatory and tax information, and third-party services that aggregate historic or predictive information about suppliers' financial and operational performance.
- **Empower more people with controlled access to more information** that will help them make better, less risky decisions on a day to day basis.
- **Employ version- and audit control mechanisms** to understand how empowered personnel access, change and interact with information.
- **Track trends over time.** For example, an information system tracking suppliers' quality performance data quantitatively in monthly time series would be useful for spotting and managing risk where irregular, infrequent or qualitative report cards would have much more limited value.
- **Focus on being predictive.** A supplier's on-time delivery or leadtime performance, for example, is likely to signal balance-sheet trouble long before it shows up in a supplier's publicly available financial data.
- **Structure information so it can be taken apart, manipulated, related, and combined in meaningful ways.** For instance, combining data on suppliers' operational performance and financial risk profiles with spending data would empower a supply management organization to see and begin balancing multiple supply-risk exposures in very powerful ways.

Accountability and authority

A fourth important step to building a culture for supply-risk management is defining who will be held accountable for managing (or not managing) supply risk, what that accountability entails with respect to job incentives or disincentives,

building a business culture that can cope

and how accountable people will be authorized and empowered to take real actions that mitigate or avoid risk.

For example, will buyers of energy, copper, aluminum, steel, and precious metals be empowered to hedge price volatility using futures contracts? Or will they be empowered to contract with service providers who are experts in these areas? Will supply management professionals accountable for managing risk have authority to make decisions about adding new suppliers, building inventories, or using services to expedite logistics? Too often, companies fall short on the empowerment side of the supply-risk management equation.

With empowerment, though, comes greater responsibility. Should sourcing professional be blamed or penalized when finished products fail in the field or get recalled? Probably not. They should, however, be asked to defend their actions and decisions at various stages throughout the sourcing, procurement, supply-chain and supplier-performance management processes. The more risk assigned to spend categories, the more rigorous and frequent the vetting of actions and decisions should be.

Risk-proofing processes

During the deep global economic recession of 2009-2010, many companies found themselves exposed to high numbers of suppliers with insufficient access to credit, at risk of bankruptcy, or at risk of diminished performance due to fiscal stringency requirements. And while the immediate need was to identify at-risk suppliers and to either help them or find alternative sources, the long-term imperative is to dig deep and fix the processes that allowed such high risk exposures to develop in the first place.

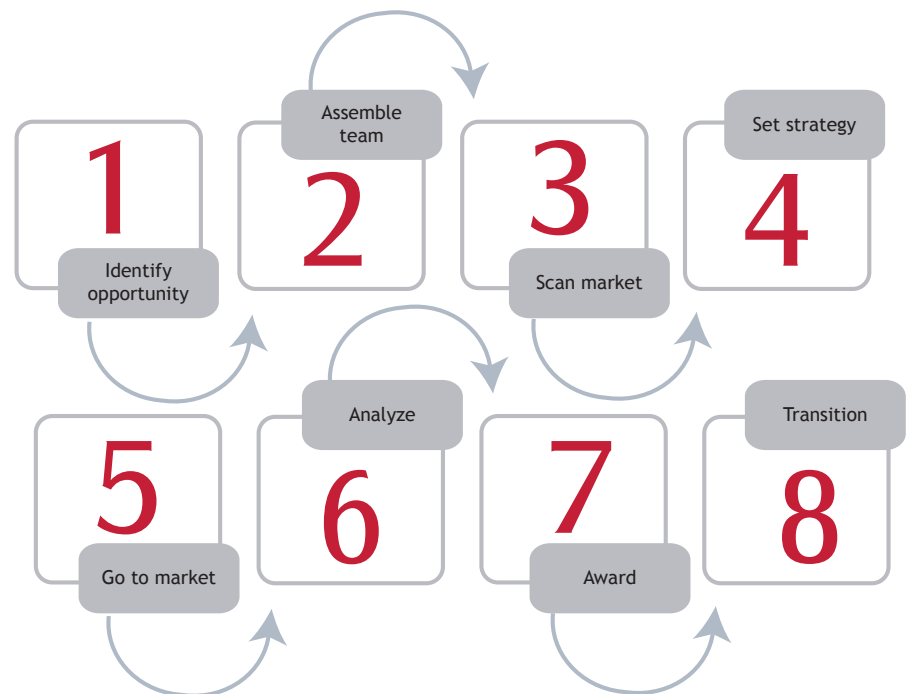
To illustrate how this might be accomplished, let's look at just a few of the potential risk sources lurking in a typical 8-step strategic sourcing process (shown to the right).

Step 1: ID opportunity. A few of the potential risk sources in the opportunity-identification stage of the strategic-sourcing process include: incomplete or inaccurate spend data, unrealistically high

cost-savings objectives, and failing to correctly prioritize spend-management opportunities (thereby wasting resources on low-return categories). Say, for example, that a company, working from incomplete spend data, underestimates total spend in a particular category. A supplier that competes aggressively for the business may not have the capacity to meet actual demand, may not have sufficient resources to extend its capacity, or may face a long cycle time for

Risk management leaders empower their people to

- Collaborate
- Communicate
- Share information
- Integrate systems
- Add suppliers
- Build inventory
- Hedge
- Develop suppliers
- Write creative contracts (using escalators, reopeners, escape clauses, etc)
- Insure
- Expedite



A typical 8-step strategic sourcing process offers countless opportunities for supply-risk prevention.

Effective mechanisms for risk-proofing processes

- Training
- Templates
- Standards for execution
- Process stops/reviews
- Process compliance tracking and reporting
- Workflow
- Oversight
- Rules
- Decision matrixes/trees
- Version/audit controls and tracking

ramping up production. The resulting supply-chain disruption would be a direct result of a process-based risk that could have been managed and controlled at the source.

Step 2: Assemble team. Potential risk sources here include recruiting team members with insufficient domain expertise, with too-close relationships to suppliers, or who may be unaware of proper ethics and laws related to sourcing.

Say, for example, that a company starts a strategic sourcing process, which includes a highly detailed and time-consuming RFP. They invite a group of suppliers, including the incumbent, to participate. New competitors prepare what—they believe—are aggressive strategies to win the business. Then, an improperly trained team member tips off the incumbent on what it would take to keep the business. The incumbent wins the bid while losing suppliers walk away feeling they have wasted time and resources participating in the complex and expensive bid. Fast-forward to a *force majeure* situation where the incumbent supplier suddenly cannot deliver; all of its customers are in the market scrambling for backup supply. Will the wronged suppliers help? What premiums will they charge the company that failed to vet and train sourcing team members properly?

Step 3: Scan market. So much supply risk is tied to how thoroughly sourcing teams research their markets prior to conducting sourcing events. Potential risk sources include: defining the supply universe too narrowly; failing to comprehend long-term volatility in things like supplier prices, leadtimes, and delivery performance; failing to define upstream supply risks that can affect supplier performance, and failing to capture innovation in the supply-market pipeline.

It's easy to imagine, for instance, how a sourcing team might neglect to include in a three-year-contract bid a supplier who is on the verge of a major technology breakthrough if the market-scan process does not demand they investigate and document suppliers' technology roadmaps. Such lurking risks can be addressed by setting and executing high standards for market research, documenting, checking and validating sourcing teams' research, and equipping sourcing teams with the means to store, structure, and analyze market information they collect in relation to suppliers and spend and over time.

Step 4: Set strategy/develop specifications. Potential risk sources at this stage in the process include: poor go-to-market timing, setting specifications too rigidly, and allowing too many variables into the RFX process (undermining analysis and decision making capabilities).

Say, for instance, that poorly led cross-functional sourcing team creates an RFP with 85 questions for suppliers to answer. Some suppliers might drop out of the bid. Others may answer only a subset of the questions, making it impossible for the sourcing team to properly evaluate suppliers' responses. The result would be an expedient or suboptimal sourcing decision which could lead to poor compliance as team members walk away believing the process to be tainted. Standard RFP templates, proper process oversight and vetting, strong training and sourcing team leadership would go along way to preventing such outcomes.

Step 5: Go to market. Potential risk sources at this stage include: engaging with insufficient numbers of suppliers, using the wrong types of engagements (eAuction rather than negotiation and vice versa), failing to communicate properly or fairly with all parties, failing to control information flows, and failing to capture important information from suppliers when they are most likely to provide it. Example: A sole supplier suddenly declares bankruptcy, causing a major supply and revenue disruption. While the client company typically vets suppliers using a third-party financial profiling service, the risk has gone undetected because the supplier is privately held. A risk-proofed process would establish the public/private nature of suppliers in the profiling stage, would store that information for future reference, and would require provision of key financial metrics by privately held firms before allowing them to participate in bids (when they are most likely to willingly provide confidential data).

Step 6: Analyze. A key risk source at this stage in the strategic sourcing process would be poor or inconsistent weighting of various decision factors. Example: A company fails to establish clear guidelines and standards for sourcing professionals to use in weighting and prioritizing sourcing decision factors or to link those guidelines to enterprise objectives. In the vacuum, different category managers drive sourcing decisionmaking according to their own personal priorities, ambitions, commitments and visions for enterprise success. Spend stakeholders notice, but—rather than correcting flawed decisionmaking—they use it to justify noncompliance down the line. Clearly established priorities and defined decision matrixes would guard against such outcomes.

Step 7: Award/Contract. A few potential risk sources in this stage of the strategic sourcing process include: suboptimal allocation of business among suppliers, too little legal protection, too much legal protection, too much time in the contracting process, and a failure to compel or ensure compliance.

Say, for example, that a strategic sourcing exercise leads to a very favorable deal with a new supplier that, due to market and other circumstances at the time, has been exceptionally aggressive in winning the new business. Absent an established legal template or process for putting the contract into place, however, the two companies' legal teams get involved and six months elapse before the contract is finally ready to be signed and implemented. In the meantime, market conditions change. The supplier, much less hungry for the business—and unhappy with onerous legal terms that have been added in—backs out at the last minute. The risk-proofed process in this case would establish all legal terms at the front end of the deal and would focus on moving from deal to contract in a much shorter timeframe.

Step 8: Transition. Potential risk sources in this final stage in the strategic sourcing process include: failure to capture incumbent suppliers' acquired or undocumented knowledge and failure to communicate properly with internal stakeholders about how a transition will roll out.

Say, for example, that a strategic sourcing exercise leads to a situation where client-owned tooling must be transferred from an incumbent to a new parts supplier. In the eight years the incumbent has held the contract, its machine operators have acquired specialized knowledge about using the tooling to generate acceptable parts, which they choose not to pass along to the new suppli-

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er. Multiple quality problems ensue, forever tainting the relationship between the customer and its new supplier. The only opportunity for the customer to record the incumbent supplier's undocumented knowledge was *before* the business was put out to bid. A risk-proofed process would ensure this happens. Ideas outlined above barely scratch the surface of what might be done—with very little investment—to risk-proof strategic sourcing subprocesses. Other key procurement and supply management processes ripe for risk-proofing include contracting and supplier performance management.

Balancing risk

Companies moving toward cultural or holistic supply-risk management will go the extra step of attempting to balance their various risk exposures in much the same way that fund managers balance investment portfolios. Functional risk portfolios would be rolled up and balanced at an enterprise level as well. So, for example, a company's executive management team might look at the enterprise's global portfolio of risk exposures—supply, financial, tax, research and development, legal, sales/marketing, etc.—and decide to balance aggressive exposures in some areas with more conservative exposures in others.

Given the complexity of most business enterprises, it may be idealistic to believe that companies can actually do this effectively. But risk balancing is an idea that can and should be internalized by procurement and supply management personnel. So, for example, high exposure to currency exchange risk in one spend category might be balanced by low exposure in others. Or high exposure to sole sources might be balanced by supplier development investments aimed at diversifying available supply sources.

Getting to systematic supply-risk management

There is no getting around the fact that supply-risk management is simultaneously complex, daunting, necessary, and gaining in importance. The *only* effective way to cope is to teach and equip every involved person to habitually assess and address risk in every process they execute, every business decision they make and to embed risk management deep into work processes rather than treating it as an *ad hoc* activity. Procurement executives looking to build business cultures dedicated to supply-risk management will focus first on cultivating:

- **People who are** aware, analytical, visionary, responsible, motivated, authorized, and empowered to manage risk.
- **Information that is** accurate, complete, consistent, structured, accessible, enriched, sequential, historic, and predictive.
- **Processes that are** rigorous, standardized, fact-driven, refined, and executed consistently.

By methodically planning and putting into place the components for systematic or cultural supply-risk management, companies, regardless of where they stand today, can easily start moving up the curve to risk management maturity.

About Zycus

Zycus is the world's leading provider of Spend Management Solutions to Global 1000 companies. The Zycus solutions suite—comprising Actionable Spend Analysis, eSourcing, Contract Management, and Supplier Performance Management—combine cutting-edge technology and domain expertise to enable greater user adoption and sustainable savings.

Innovation and ease of use are at the core of every Zycus offering. Zycus solutions facilitate greater process planning, control, and increased corporate alignment of spend management initiatives. Zycus Spend Management solutions help procurement departments of Global 1000 companies analyze, plan, and source through an intuitive and objective-driven process.

With proven spend management deployments across the globe and with over 100 implementations, Zycus solutions have emerged as global favorites. Zycus has over 250 employees across North America, Europe, and Asia Pacific.

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