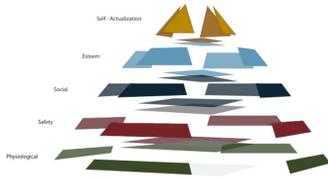


# 5 Disruptive Innovations of a Dialog-driven Risk Discovery Platform

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As a globally-experienced safety and risk engineer I've never understood how so-called leaders could expect to achieve their goals without having an "intimate business awareness" of their teams and the challenges they face. Over time, I've accepted the profound clarity of John Maxwell's statement: leaders are readers.



[Céline Schillinger](#) explains in refreshingly simple terms how to build engagement. In surgically specific ways, Systemkey™ Risk Solutions blow up Maslow's pyramid. Systemkey™ unlocks better results, as it delivers five significant advantages over current risk solutions:

- Extensible, Scalable (up AND down), with no loss of analytic rigor
- Produces truly integrated systems analysis
- Builds a knowledge-base organically and naturally across boundaries
- Provides a robust audit trail
- Provides tools to make the invisible (*something not happening*) visible, measurable and budget-friendly, which means **data-driven results!**

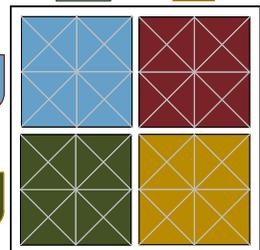
Says Esteban Kolsky: "The face-to-face and person-to-person conversations are what make the difference. I had over 1,200 conversations last year, more than I used to have at my peak times in Gartner—and that all led to one discovery: I don't know enough about anything." [1]

## Extensible

1) The Systemkey™ Risk Modeling Language (SRML) provides an extensible language (like XML, can be defined on the fly), only instead of markup (the M in XML), we develop systems risk solutions that enrich communications across organizational boundaries.

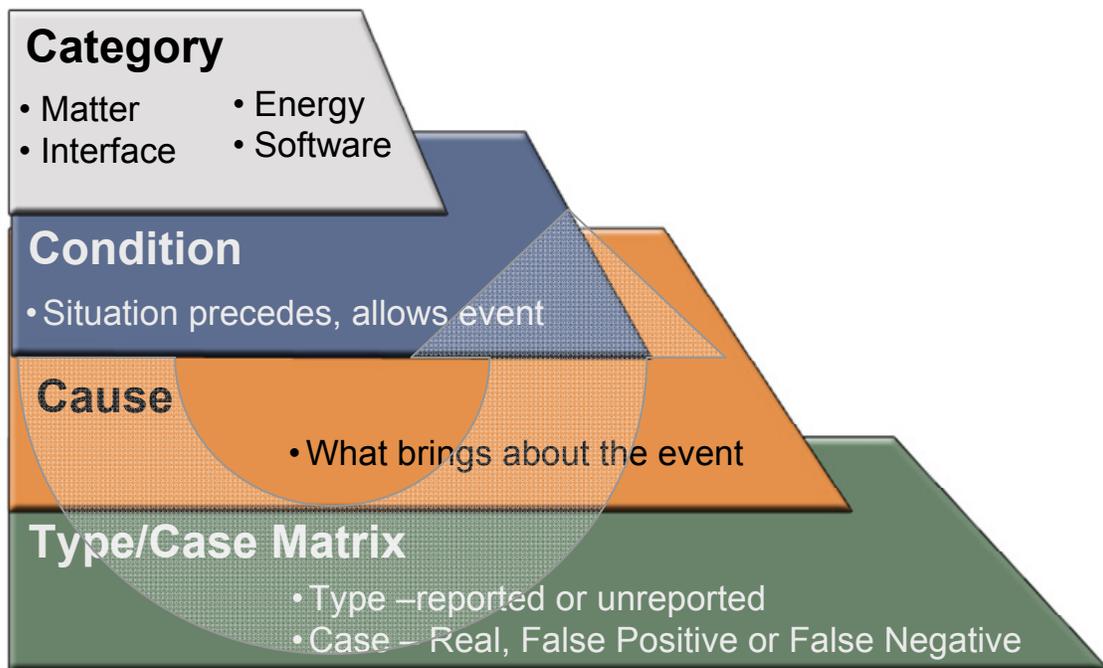
One of the most profound and most market-contradictory aspects of our dialog-driven risk discovery model is its simplicity. In this engaging clip, Ricardo Semler talks about corporate leaders reserving to themselves the privilege of being "[precisely wrong](#)."

doing  
being



relationships

people



### Integrated Analysis

2) Because the Systemkey™ language crosses boundaries, it provides truly integrated systems analysis. Dr. Tom English, a member of the US Navy's Weapons Board, has railed for years about not having “a bunch of separate subsystem hazard analyses stapled together with a cover letter.” With 5-layer structured questions, Systemkey™ Risk Solutions solve the issue that an integrated systems analysis is more than a mere compilation of lower-level (component) analyses.

### Builds Knowledge-base

3) Since the SRML structured question framework increases conversations, leaders and their teams will find two significant advantages get even better over time: first, it solves one of the *biggest elephants in the room*: boomer-brain-drain! Dialog-driven risk discovery powered by Systemkey™ Solutions organically harvests the knowledge of seasoned veterans (who eventually retire or fade away), while second, it also it reduces the brain drain of the best and brightest (young or old) leaving through boredom and frustration.

### The 5S Quality Model:

- **Seiri 整理** (tidiness, organization)
- **Seiton 整頓** (orderliness, process flow)

- **Seiso 清掃** (systematic cleanliness)
- **Seiketsu 清潔** (standardized work practices)
- **Shitsuke 躰** (sustaining discipline)

### **Robust Audit Trail**

4) SRML produces a structured shorthand where each character's position carries meaning. This product of the “**5S & 5Why** nested quality questions” forms a common vocabulary across—not just the organization—the entire value delivery network (sometimes still called supply chain). It also means that “how did we get here?” has a detailed and defensible answer long after the original team has dispersed.

### **Makes the Invisible, Visible**

5) One of the most novel strengths of the model is that it provides the language and tools to discuss the cost & consequences of something that's not there (something not happening). It gives Safety, Quality and Training departments the tools they need to become profit centers rather than just overhead.

“If you do not know three ways of abusing a tool, you do not really now how to use it.” *Kenneth Boulding.*

If we're not testing under conditions of actual use because none of our peers would think to abuse the system, tool or process in this or that way, chances are we'll miss something subtle that turns out to be significant.

Such blunders as a unit mix-up, or even a typo in a document “are often too subtle to be caught during routine verification and review because flight items can only be checked against known requirements. But by understanding the types of errors that can occur, mission planners can adjust their review processes to more effectively screen them out.” [2]

### ***Transcending Management Orthodoxies (MO)***

Gary Hamel (of re-engineering fame), writes that Management Orthodoxies “are so deeply ingrained...that they are nearly invisible and are so devoutly held that they are practically unassailable.”

“What’s missing it seems is a practical method... the biggest challenge is generating truly novel ideas.”[3]

### **MO: Insurance mitigates risk**

Insurance never mitigates risk, no matter how many bankers tell you so. Insurance is load shedding. Writing in *Reliability Engineering and System Safety* on the topic of North Sea Oil Platforms, Petter Osmundsen states:

“The strength of the contractor’s financial incentives for focusing on safety will depend on the degree to which he must bear the financial consequences of accidents. Generally speaking, the greater the percentage of risk associated with accidents assumed by the contractor, the stronger his focus on safety. Insurance, the spreading of risk, will reduce these incentives.” [4]

An example will make this plain. Having insurance will shift the financial burden should lightning strike your house, but it does nothing to protect your house, the contents or people in it.

Getting a lightning arrest system for a fairly large house (4000 sq ft) costs about the same as two years of insurance (depending on location), but it mitigates (resolves or removes) the risk; plus it lasts for the life of the home, there are no moving parts. Once the system is in place, if lightning strikes your house a dozen times a day, you'll be in the record books, but you'll also still be in your house unharmed!

From the insurance company's point of view, a lightning arrest system on every home would mean a *drastic reduction in policy premiums* in the category of [lightning strikes](#) (because the risk drops to near zero and premiums are largely driven by claims paid). We're not saying drop your insurance, we're saying that the motivations of invested parties should be disclosed or discovered and factored in to the decision.

*(As an aside, I avoid the term stakeholders: most of the people who say that wouldn't recognize a tent stake if a boy in knickers bopped them across the shins with one!)*

### **MO: Pressure to conform to a pre-determined result**

Maxwell says more people leave jobs because of relationship reasons than for hours, pay or workload. Dr. Philip G. Lewis, FACPM, FACOEM, corporate medical director for Rohm and Haas Company, teaches a module on environmental medicine to medical residents in which he points out, “you have to always be prepared to leave an enterprise when it persists in following a path that, while legal, is unsafe and unwise.” [5]

Dianne Jacobs of Melbourne's Talent Advisors states that “High-trust cultures use rigorous debate and discussion...Skills and mind-sets for new ways of thinking and new ways of working” come through experienced-based teaching in daily events, more than from the classroom.[6]

Since individual assessment decisions are auditable, this factor alone provides a buttress against political pressures to reach an arbitrary pre-ordained result. The model itself serves as the bulwark and shield for the novice to resist corrosive elements of corporate culture.

### **MO: Not finishing what we started**

Some eighty percent of all projects fail, according to DeMarco and many others. “Constraints are good. They focus our attention on areas where real innovation can occur...[they] steer us toward...a thorough, logical, guaranteed-to-complete-sometime method for checking them [the constraints].” [7]

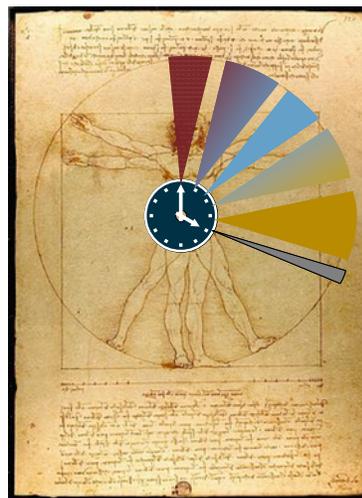
The reason that number-focused folk (finance, engineering) can miss the mark so badly in management is that 2+2 is always 4, but you put any four people together and the answer is anything but predictable!

What’s this got to do with Risk Analysis? You and I have the responsibility of delivering what our clients need even if they don’t know what they need. [Whitney Johnson](#), co-founder of Rose Park Advisors, author of the best-seller *Dare, Dream, Do*, and “investor in stocks, people, concepts and dreams” tells us exactly why we should “de-risk” the path for people to make a change:



<http://blogs.hbr.org/2013/10/make-your-innovative-idea-seem-less-terrifying/>

# Learn

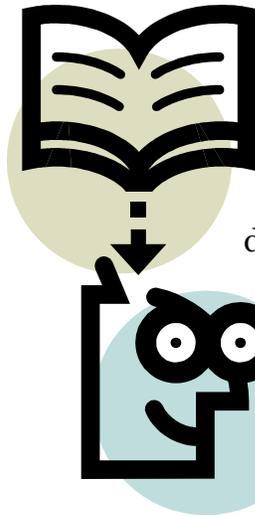


Management sage Peter Drucker, in *The Effective Executive* tells us why we have to face up to today's most favored excuse: I'm too busy! (p. 33)

“People-decisions are time-consuming, for the simple reason that the Lord did not create people as ‘resources’ for organization. They do not come in the proper size and shape for the tasks that have to be done in organization—and they cannot be machined down or recast for these tasks. People are always ‘almost fits’ at best. To get the work done with people (and no other resource is available) therefore requires lots of time, thought and judgment.” [8]

**MO: “Unknown & Unknowable”:  
Avoiding Tragedies by Seeing the Unobvious**

Gavin de Becker & Associates trains the Justice Department, a dozen governors and many private firms on incident prevention strategies. In *Gift of Fear*, de Becker relates:



“People do things, we say, ‘out of the blue,’ ‘all of a sudden,’ ‘out of nowhere.’ These phrases support the popular myth that predicting human behavior isn’t possible. Yet to successfully navigate through morning traffic, we make amazingly accurate high-stakes predictions about the behavior of literally thousands of people ... We expect all the drivers to act just as we would, but we still alertly detect those few who might not—so that we are also predicting their behavior, unpredictable though we may call it...

“We want to believe that human violence is somehow beyond our understanding, because as long as it remains a mystery, we have no duty to avoid it, explore it, or anticipate it.” [9]

Writing in *Security Management* magazine, Jeff Marquart, one of de Becker's division VPs, explains:

“I cringe every time I hear these words [nothing you can do] because they are so untrue and so damaging. ...Despite much proof to the contrary, many people continue to believe that an assassin is like a force of nature... The reality, however, is that successful assassinations require that hundreds of factors play out a certain way. Even the smallest snag in an assassin's plans will make the difference between success and failure.” [10]

*In our quest to “design out” every last risk, we can create more problems with simply too much of a good thing.*

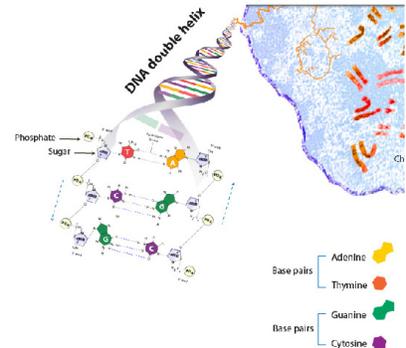
## MO: Creating problems out of thin air in a desperate attempt to retain the illusion of control



When the adventure (risk) is removed, people will just replace it with something we haven't thought of yet.[<sup>11</sup>] The Systemkey™ Risk Solution Suite can unlock the “DNA” of your organization, accurately reproducing the strengths of experience even with the inevitable scarcity of time, talent and resources. One key feature is the ability to scale the inquiry to the level of detail desired. This flexible approach minimizes process overhead while meeting the requirements of a Capability Maturity Model® Integration (CMMI®) formal process providing *traceable decision pathways* and sortable shorthand results. Practically speaking, this leads to more consistent results across the life of your projects. When deployed across the firm, or across entire multi-company consortia, the Risk Solution Suite effectively becomes a much better corporate oracle than Oracle®, making a *Raider's of the Lost Ark* final scene far less likely.

## Endless Complexity from Stunning Simplicity

Unlocking the DNA sequence has opened the door to enriching human lives through understanding more about who we are and how we function. Every living thing we know is built from only four bases which only combine in two ways (AT, GC). Because SRML is built on the same simple four base approach, targets of staggering complexity can be addressed through repeated use of the same simple analysis driven to the appropriate level of detail.



Pause to ponder a seemingly simple question:

## How many leaves on a tree?

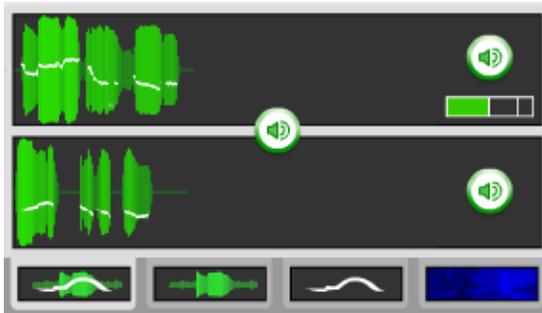
Every language has 2 parts: a syntax & a grammar. We provide the syntax: the unchanging rules for making meaning. The client's firm & industry provide the grammar: financial, chemical, manufacturing, regulatory agencies, logistics, etc.

Taken together and applied to specific cases, analysis cascades through levels of detail to produce well over 10x ROI results in such diverse arenas as [warehousing](#), defense and fleet safety.

## The Clarifying Effects of Creative Destruction

Joseph Schumpeter's classic quote from 1942 is still relevant more than sixty years later:

“Every piece of business strategy acquires its true significance only against the background of that process and within the situation created by it. It must be seen in its role in the perennial gale of creative destruction; it cannot be understood irrespective of it...”<sup>[12]</sup>



Just as we can impress intelligence (music, voice, video) upon a carrier wave, we can “embed experience” into the design of the tools we use so that we lower the threshold of experience required to achieve useful results. The recursive SRML risk discovery process provides a path for less-experienced engineers to recognize when specialized

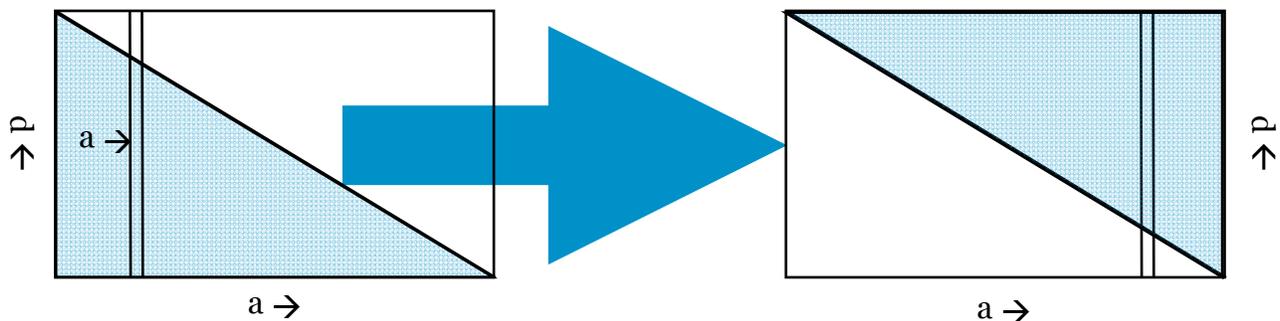
system analysis is required. The nested question design “embeds experience in print” to help mentor and mature novices about the discipline at hand, while it provides seasoned veterans with a common vocabulary and a set of tools to streamline communications.

## Getting organizations to scale through federated knowledge

“When we say that computer services are available ‘on demand,’ we mean that the amount of computing capacity companies need is available when they need it... they pay for only what they use. On-demand computing is often referred to as “utility computing” because it is analogous to how consumers are billed for utilities, such as electrical power or telephone service.”<sup>[13]</sup>

Systemkey™ Risk Solutions' capacity to scale up or down, makes it suitable for companies of all sizes, not just enterprise-class firms with two million dollars and two years to throw at implementation.

As you increase the level of Abstraction, you reduce the level of Distraction.



James Gosling, creator of the Java language, on scalability: So, the way you do scaling is you step back from any particular implementation, abstract from what the service is, and then as you run up and down the scaling chart, you switch from one implementation to another.” [14]

### **Data in Context References**

<http://www.wired.com/wired/archive/11.09/ppt2.html>

<http://www.cs.york.ac.uk/nature/tangent/stats.pdf>

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As you increase the level of Abstraction, you reduce the level of Distraction.

Sort of like removing layers of detail in a CAD program, SRML allows people who are not naturally abstract thinkers to mask descriptive detail to keep the focus on the level it needs to be: System discussions no longer involve piece-part details, yet the freedom to scale up or down as needed remains.

The risk resolution data from every business level need only interact at the specific level of the matter at hand. This is what Esteban Kolsky has labeled [federated knowledge](#).

***Awash in an ocean of "big data,"***



***how do we keep from drowning?***

Structured questions, proven for decades in power transmission & military air traffic control, are one way. Your headcount defines the amount of value that structured questions can bring to tame the chaos of too-much data and too-little time. The larger your business, wider range and deeper scope of tools we make available in the Systemkey™ Risk Solutions Platform. Tailored solutions equip you to focus on what you do best: serving your customers.

Easy question: which is more useful: a list of cities or a map showing cities, roads, rivers, topography and population density in context?

What is more intuitive: a parts list of a vehicle in development or an exploded view diagram of the vehicle, showing the parts in their relative positions?

Calling SRML a 'systems risk pattern language' gives homage to Christopher Alexander's pivotal book by the same name. *A Pattern Language* is part two of his Timeless Way of Building series. [15]

## A Practical Method

A methodical technique means that the structure of the analytical method serves to bring focus to and reduce the randomness in early stage systems analysis sessions, which are often characterized by *ad hoc* undocumented processes. This structured approach produces sortable shorthand labels for the results, which leads to more consistent classification. As a project management tool, the structure can do the "heavy lifting" in maintaining a working group agenda; getting people back on track who love to wander aimlessly.

SRML gives us the "Rosetta Stone" so we can translate the language of our industry brethren in other domains: engineering, design, even finance, insurance & HR, because risk is a value expressed in terms relative to the industry-at-hand. By equipped with with a rigorous structure, we've given the newest person in the field (or just in the room), the ability to ask penetrating questions of the subject matter expert. The experienced members of the committee then rank the risks that have been scribed previously, reducing total committee time.

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<sup>1</sup> Kolsky, Esteban, Bio on CRMsearch website, <http://www.crmsearch.com/esteban-kolsky.php>

<sup>2</sup> Paul Cheng and Patrick Smith, "Learning from Other People's Mistakes" Crosslink Magazine, Fall 2007, p. 19. <http://aerospace.wpengine.netdna-cdn.com/wp-content/uploads/crosslink/V8N2.pdf> Additional reading: Crosslink Magazine, Fall 2007, pp. 6-9, 19-24.

<sup>3</sup> Gary Hamel, "The Why, What & How of Management Innovation," *Harvard Business Review*, Reprint R0602C

<sup>4</sup> P. Osmundsen et al., *Reliability Engineering and System Safety* 93 (2008) 138.

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<sup>6</sup> Comment on Mangelsdorf, Martha, “For radical innovation, corporate culture matters more than location”, *Sloan Management Review*, blog 9 Dec 2008, retrieved 29 July 2009 from <http://sloanreview.mit.edu/article/for-radical-innovation-corporate-culture-matters-more-than-location/>

<sup>7</sup> Bob Colwell, “The Art of the Possible,” *Computer*, vol. 37, no. 8, pp. 8-10, Aug., 2004, <http://doi.ieeecomputersociety.org/10.1109/MC.2004.106>

<sup>8</sup> Saylor, Larry, “Peter F. Drucker” deck on Slideshare website, <http://www.slideshare.net/guest410f0b/peter-drucker>, Slide 25.

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<sup>11</sup> Cairns, Warwick, *How to Live Dangerously: The Hazards of Helmets, the Benefits of Bacteria, and the Risks of Living Too Safe*, (New York: Macmillan, 2009): 155-158, ISBN 978-031253389-2, <http://is.gd/dl4wk8>

<sup>12</sup> Joseph Schumpeter, *Capitalism, Socialism and Democracy* (New York: Harper, 1975): 82-85, [orig. pub. 1942], <http://transcriptions-2008.english.ucsb.edu/archive/courses/liu/english236/materials/schumpeter.html>.

<sup>13</sup> Paul Humler, On-Demand Utility Computing for ERP Systems: A Conceptual Overview of the Utility Computing Design, p.5, [http://www.meritalk.com/uploads\\_legacy/whitepapers/USi-On-DemandUtilityComputing.pdf](http://www.meritalk.com/uploads_legacy/whitepapers/USi-On-DemandUtilityComputing.pdf)

<sup>14</sup> Venners, Bill, “James Gosling on Java” *JavaWorld*, June 1999, p. 11. <http://artima.com/intv/gosling111.html>

<sup>15</sup> Alexander, Christopher, Sara Ishikawa, Murray Silverstein, Max Jacobson, Ingrid Fiksdahl King and Shlomo Angel, *A Pattern Language*, (New York: Oxford University Press, 1977), ISBN: 978-019501919-3, <http://www.patternlanguage.com/leveltwo/caframe.htm?../ca/vitae.htm#books>

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