

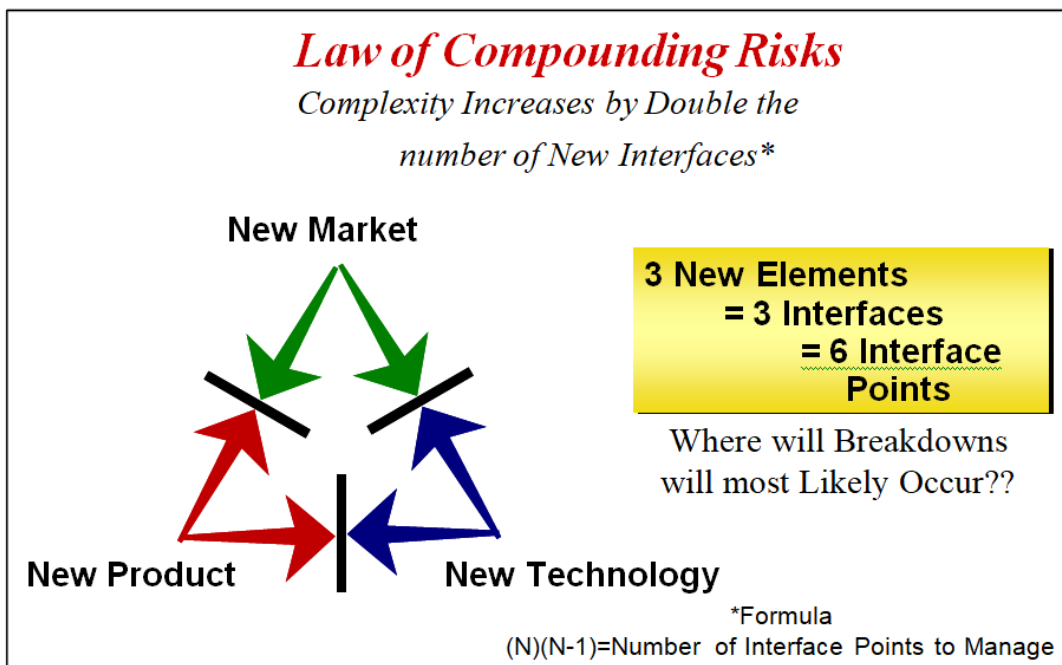
THE COMPOUNDING INTERFACE & RISK TRAP

Excerpts from *Business Alliances, the Hidden Competitive Weapon*
and forthcoming book: *Collaborative Excellence for Leaders*

by Robert Porter Lynch

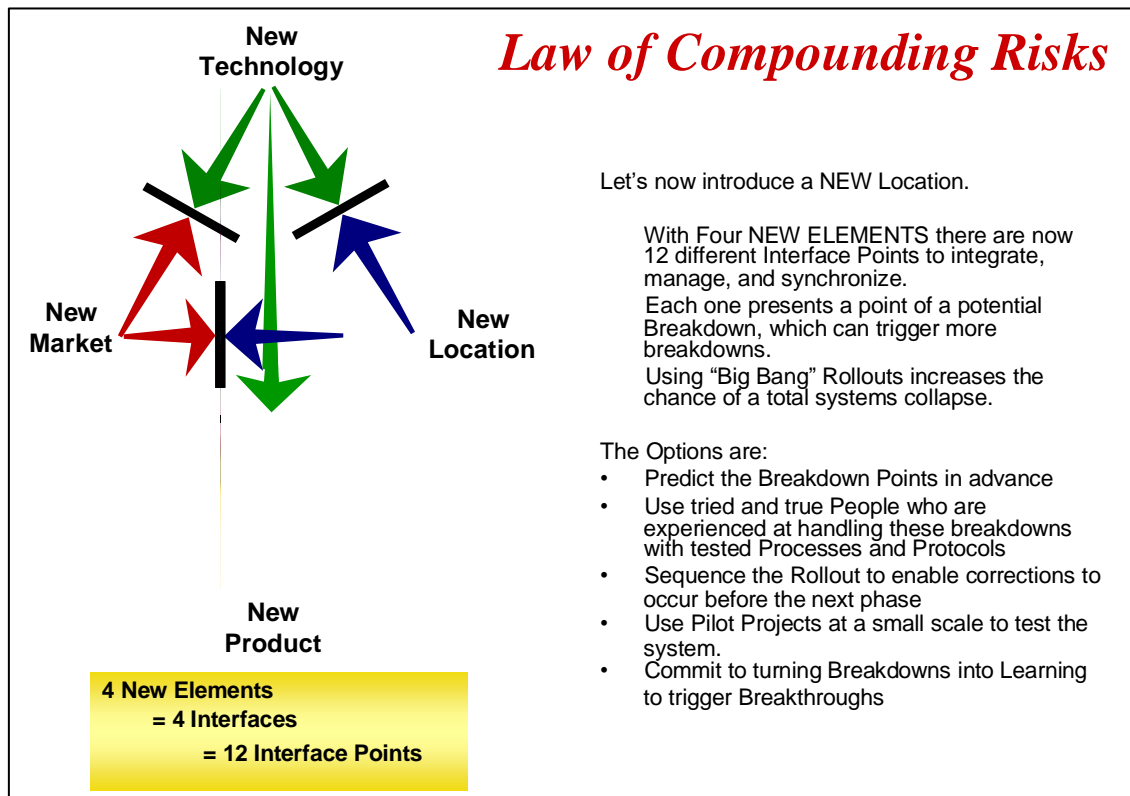
The higher the future ambiguity, the higher the probability of failure. Alliances are the step-children of uncertain risks and opportunities. Uncertainty breeds ambiguity, and ambiguity is the seed of business failures. (Note: High Ambiguity/Uncertainty REQUIRES High Trust)

Many inexperienced alliance creators fall into the trap of inadvertently compounding risks. In particular, beware of entering new markets with new products using new technological processes with new partners. Here four new factors are compounded. Rather than the risks adding arithmetically, they compound by the square of the number of new factors! It is far safer to enter a known marketplace with a tried and true product with a new partner. This is a very frequent occurrence in joint ventures which create a new, start-up corporation. Typically none of those forming the start-up joint venture have ever experienced the entrepreneurial agony and ecstasy of a start-up. As figure 1 in chapter 17 humorously indicates, perhaps they should reconsider the risks. An excellent example of this compounded risk trap was a joint venture by an American exhaust component manufacturer in Brazil who secured an order from a European auto manufacturer with a car assembly plant in Brazil. The American's new partner was in the metal fabrication business, and did not know the automotive marketplace. When the American firm decided to set up their



factory with a very new and technologically advanced production process that had been used for only a limited time in the U.S., the first seeds of failure were sown.

Then the decision was made to fabricate with special formulation of stainless steel, which is a very difficult material to start with. No one in Brazil had experience with this metal for these purposes, and the procurement of the material was improperly handled when specifications were not accurately spelled out in the bid spec. The order for stainless steel was placed with a new Italian supplier who underbid the competition to get the job, but did not recognize the problems that would occur.



Timing of production was critical, because an entire Brazilian automobile assembly line needed the exhaust components for their line of cars.

The exhaust component factory was completed, and ready to go. The stainless steel arrived, but when it was placed on the bending machines, it cracked. There was no proper steel anywhere in Brazil, and shipments from Europe or America would take weeks. Attempts to get around the cracking problem failed. Clearly the product could not be delivered on time.

As a consequence, the auto assembly line had to be shut down for nearly a week, at a horrible expense to the car manufacturer. Heavy penalties were in place for late delivery, which cost the Americans dearly.

In desperation, the problem was solved by the American firm going to one of their friendly competitors and ask the competitor to supply the parts -- at an obvious profit.

The alliance manager's job was to maintain a win/win condition, which was made impossible by building the alliance like a house of cards. The architecture was flawed. Had the joint venture limited the introduction of the number of interfaces (new risks) into the alliance, the result would have been far different.

Start with the fewest number of interfaces/risks, achieve success, then incrementally add new interfaces/risks.

This problem is the basic difficulty faced by the mergers and acquisitions profession. While the integration of the interfaces in an alliance may be limited to several hundred, in an acquisition the interfaces are in the tens of thousands, or more. No wonder the acquisition success rate is about 30%. Add to this the fallibility that many acquisitions are either transactional or adversarial, and you spell the recipe for a failure.

***** Updated 2015 Excerpts from *Future of Mega-Projects* with George Jergeas *****

First, let's look at a very complex project:

Thousands of Complex Interconnected Interfaces Mega Oil Sands Projects

On \$2.5 Billion project

<ul style="list-style-type: none"> • Engineering Effort <ul style="list-style-type: none"> – 3.5 million man-hours – 40 - 50,000 design drawings – 10 - 20,000 vendor & shop drawings • Supply Chain Logistics <ul style="list-style-type: none"> – Organize, order, store and retrieve 80,000,000 material items • Construction Effort <ul style="list-style-type: none"> – 15 million construction hours – Labour force of 8,000 workers with a turnover of 200% – Supported by 500 - 800 staff personnel 	<ul style="list-style-type: none"> • Management Effort <ul style="list-style-type: none"> – Managing a craft mix of 8,000 workers working in pairs doing at least two different activities per day results in a never ending 80,000 Individual jobs in a 10 day shift. • Operational Requirements <ul style="list-style-type: none"> – Each job requires a combination of the correct, materials, location, access, tools, equipment, scaffold, safety, quality, rigging, consumables, welding, x-ray and many other inputs to allow the worker to get his job done.
---	--

This task is the Challenge for Project Directors in the future. How can we solve this?

THE WARREN COMPANY
Copyright 2015

2

Seeking a Robust Systems Design Architecture

What's needed is a “robust systems design architecture” that delivers on-time/budget, *aligning* the delivery of construction services which currently manifest as having "broken parts".

But this requires we first understand the conundrum: “Why has the construction industry been so impervious to change?” Underlying these difficulties is an interwoven set of three different belief systems and supporting methods that cause fragmentation and misalignment within the construction industry”

adversarial, transactional, and collaborative

each founded on different philosophies, each producing different results, each with different advantages and disadvantages, and a right and wrong time and place for their use. (following) illustrates the three distinctly different models of project delivery and provides further details of its characteristics.

	Adversarial	Transactional	Collaborative
Key Beliefs	Business is a "Psychological War Game;" Winning comes from Power	Trading, Bargaining, & Differential Views on Value Produces Economic Exchange	Extreme Value is Generated when people work in teams to Push the Envelope on Performance
Behaviors	Argumentative, Money Rules, Use Age, Experience, Position or Budget to get your way, "dog eat dog"	Squeezing & Positioning enables you to get the best result in Negotiations, throw a bone to sweeten the deal	Co-Creative, Teamwork, Trustworthiness, Highly Ethical & Honest; Maximize what's in the best interests of the whole
Rules of the Game	Pressure others; Winning is a result of Cunning & Craftiness; Hype your importance; Protect your backside; Don't Trust Others or you will get screwed; Everything is Win – Lose	Take advantage of every opportunity, Exploit weaknesses; Timing is critical; Perception is everything; Trust but verify; Use lawyers to ensure protection; Everything is in the "deal"	Create value & competitive advantage by using Teamwork (internally) & Alliances (externally). Close integration between operating units, suppliers & Close attention to customers/client; Strive for Win-Win
View about Risk Management and Creating "Synergy"	Synergy is an impossible dream, (don't even think about it.). Manage Risk with tough contracts & tougher legal team empowered to litigate	Synergy is derived from High Efficiency and elimination of Non-Value Added Work. Risk Management, insurance, and shedding risk will limit losses	Synergy is a result of high levels of trust, teamwork, and alignment of goals & values. Use high trust architecture to reduce risk. The biggest risk is failure to adapt & innovate to emerging risks and opportunities
Value Proposition	Minimum Required to Close a Sale; Squeeze vendors in supply chain	Competitive Price, Acceptable Quality; transact through supply chains	Performance Excellence thru Value-Networks, Good Price, Speed, and Innovation
Framework for Negotiations	Winning is essential for me; I get more if I push, squeeze, and threaten to ensure I leave nothing on the table. I'm stronger if you're weak	What happens to you is your business. Long term relationships are only the product of me getting what I need/want. Switch suppliers to get best deal.	A Win/Win is essential to create productive long-term relationships to mutually thrive. Use our different needs & perspectives as the source of collaborative innovation.
Competitive Advantage	Gained from Size & Money	Gained from Proprietary Information & Bargaining	Gained from Value Co-Creation and Sharing
Information Sharing	Horde Information – It is Power	Contractor responsible for interpretation of information	Share Information to create more new ideas
Trust Level	Distrust, Deception, Aggression, & Manipulation Prevalent	Caveat Emptor (buyer beware) Trust is elusive and unsustainable	Trust is essential to generating a continuous stream of new value

Table 1: Spectrum of Three Competing Models of Project Delivery & Their Characteristics

Each model has very different beliefs, underpinnings, motives, outcomes, and advocates. These three themes act as interwoven threads in the fabric of the construction industry. The result is often that a project entraps the participants in a cross-fire, the "muddle" of different philosophies, objectives, and ways of management. The end result is misalignment and fragmentation resulting in missed deadlines, budgets, and objectives. Here's a description:

Adversarial Project Delivery Model

The *adversarial* model's objective is winning at all costs. Based on self-interest, strong-armed bargaining, and strong self-protection, it places barriers between each entity in the value chain. When placed under stress, the lack of trust typically fractures at the interface between organizations, pitting one against the other, with the strong chance of degenerating into hard-nosed adversarial disputes. This battleship model, in the extreme, relies on negotiations driven by win-lose bargaining and an army of lawyers to shift risks to contractors along with onerous contracts that assure the destruction of joint problem solving and trust-building at the outset.

While logical in game theory, win-lose is irrational in the realities of real human interaction, driving those people on the losing end to get even, to form unions, to file grievances, withhold information, to fail to cooperate, and to hunker down in silos, all the while adding layers of non-value added work to the project equation.

In dealing with highly unethical people, an *adversarial* approach may be appropriate, positioning to fight, apply win-lose gaming, and protecting one's territory. But dealing in a prolonged adversarial manner with a critical union or contractor relationship will ultimately end in a "loselose" for both parties; producing litigation and being unprofitable for both.

Adversarial relationships generate significant after-shocks which manifest as law suits, high employee turnover, customer churn, and projects that consistently run over-time and over-budget. Productivity is severely jeopardized and innovation grinds to a halt in this model; high concern with self-protection results in defensive, not innovative, behavior. Many attribute this decline to the introduction of layers of "Non-Value Added (NVA)" work from excessive accumulation of *adversarial* and *transactional* and protection mechanisms over the years.

An Owner/Investor typically seeks about a 15% ROI (Return On Investment), which doesn't commence until after the project commences delivery.

On a Mega Project, where the investment is in billions of dollars, it is to the Owner's/Investor's advantage to bring the project in ahead of schedule and under budget.

But adversarial contracts emphasize liquidated damages and litigation, rather than incentivizing all the firms and their employees involved in project delivery to cooperate for the long term benefit of the Owner/Investor.

Transactional Project Delivery Model

The *transactional* model focuses on bargaining, trading, and price-driven exchange. A business model like eBay or Amazon benefits from an efficient transactional system. But this seldom *creates* value, not being conducive to innovation, which is essential in complex environments.

The *transactional* model is based on economic beliefs that everything is a "deal" and lowest price paid with highest return governs decision choices. Fundamentally, *transactional* thinking has a very narrow objective: increase shareholder value and profits. It treats those who deliver projects as vendors. Vending is a set of beliefs that drives decisions based on cost, not value, choosing the lowest price even though a contractor may be deficient in quality, safety and productivity practices that result in cost overruns and project delays. It's what's "missing" from this thinking that is disconcerting; there is:

- No regard for ensuring that the entire project delivery system is aligned in terms of goals, measures of

The consequence of increased proliferation of transactional and adversarial models in the construction industry is severe: over the last forty years -- despite computers, better equipment, and improved materials -- productivity has decreased (see [Error! Reference source not found.](#)) using the Transactional Project Delivery Model

success, integration between delivery specialties, or how rewards will be fairly allocated to ensure everyone is acting together.

- No method to ensure the contractors/employees/supply chain of a project, who invest time and commitment, are treated fairly or given any security, such as a favorable rating on the next project, in exchange for their full engagement and successful achievement.
- No support for building high levels of trust, teamwork, or innovation which create the competitive advantage that enables sustained project improvement and delivery success.

Because these safeguards are not built into *transactional* thinking, when difficulties and conflicting objectives arise, too frequently the project begins to breakdown under stress, spinning out of control as it degenerates into an *adversarial* game that sets participants against each other. The consequence of increased proliferation of *transactional* and *adversarial* models in the construction industry is severe over the last forty years, despite computers, better equipment, and improved materials. According to many analysts, productivity in the construction industry declined, while within the manufacturing & industrial market sectors it has more than doubled.

Collaborative Project Delivery Model

In contrast, the *collaborative* model aims at working together, sharing ideas, aligning interests, fairly apportioning risks, and developing fast innovation. It is best used in long-term projects where the stakes are high, ambiguity or uncertainty is likely to arise during delivery and there are innumerable complex interfaces.

The *collaborative* approach is designed to align the interests of all major contributors, create an environment where trust, teamwork and innovation prevents disputes, foster a cooperative bond to everyone's benefit, and facilitate the successful completion of projects on-time/budget. It typically entails a considerable up-front investment in time and resources to forge a common team identity

Oil Sands Projects Thrive with Collaborative Construction

Sometimes it takes the exception to prove the rule. In the case of Devon Energy of Alberta, they built three 35,000 barrels/day facilities. The first phase (named “Jackfish 1”) was built based on *transactional* contracting. Jackfish 2 was a “hybrid” using *transactional* and *collaborative* approaches.

By the third edition, Devon had converted to a *collaborative* construction model; the results were very gratifying: ahead of schedule, on budget, and a stellar safety record – the three hallmarks of project excellence.

Steve Bass, Supply Chain Director at Devon comments:

Collaboration has been underrated and unfairly ridiculed

– look at the evidence –it produces the best results.

among participants from different organizations.

The *collaborative* construction model sees that the purpose of a project is to deliver in a cost effective manner, on-time, on-budget, on-target, competitively, safely, ethically, and sustainably at a fair profit for all. Unlike the *transactional* model that asserts the independent protection of self-interest and seeks a fair *exchange* of value, the *collaborative* strategy *aligns* the interests of the stakeholders, and seeks the *expansion* and *creation* of value through collaborative innovation. Project stakeholders include clients, investors, engineering and construction contractors, subcontractors, employees, and suppliers, and the larger community in which the project resides.

Best-in-Class Collaboration Results

Based on the authors' analysis of 90 Canadian projects, we have assessed success rates of each type of construction model, indicated in Table 2.

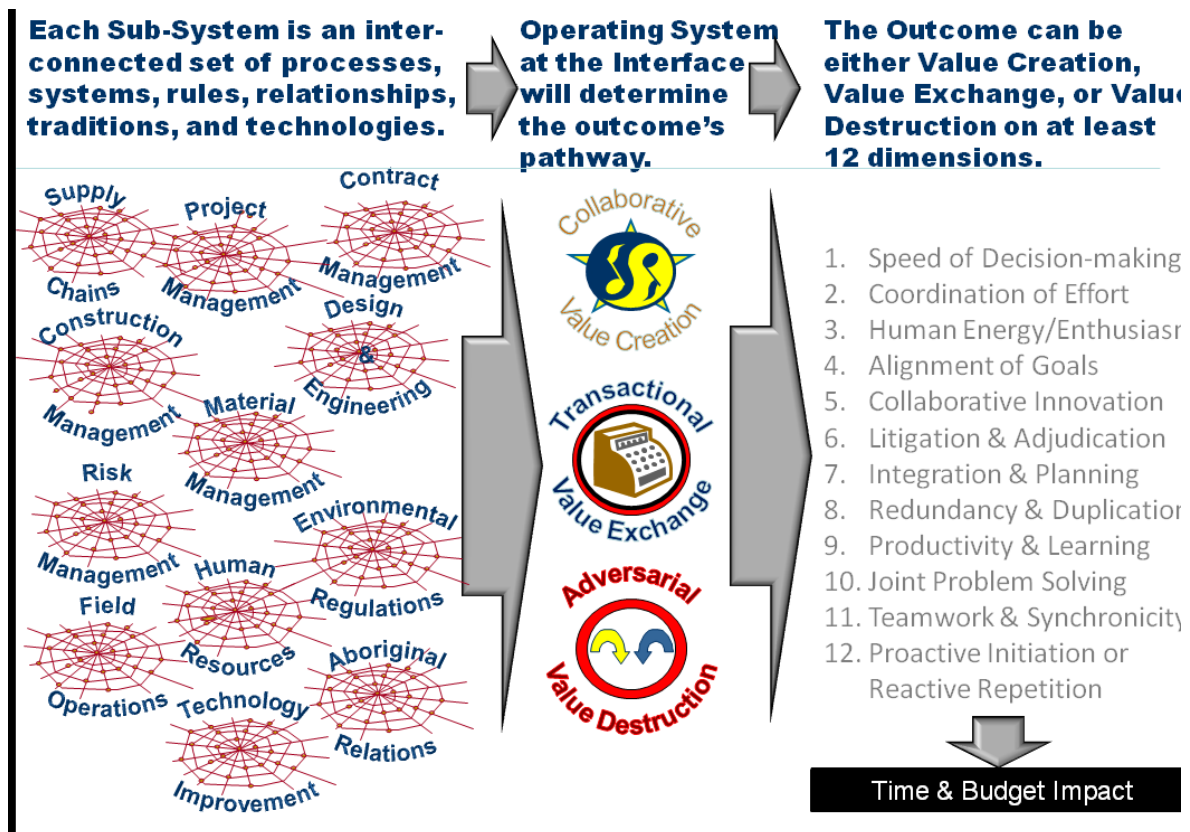
MODEL	ADVERSARIAL	TRANSACTIONAL	COLLABORATIVE
% chance of On-Time, On-Budget, On-Target Project Delivery	Under 10%	20-30%	80-100%

Table 2: Typical Success Rates

Under the weight of complexity and risk, *transactional* and *adversarial* systems are far more likely to break down. Our estimates are supported by other research at the Construction Industry Institute at the University of Texas at Austin. Their research team examined those companies that were truly committed to a “partnering” relationship in construction projects. These “best in class” companies had a profound competitive advantage.

Figure 2 graphically depicts the complex interfaces in a mega-project. Each of the sub-systems has internal and external interfaces where people manage objectives and outcomes. In collaborative cultures, the systems interfaces are far more likely to flow quickly, create less non-value added work, solve a myriad of problems quickly, and generate innovative ideas. Adversarial and Transactional cannot meet this standard. Adversarial systems actually add more interfaces.

Figure 2: Complex Organizational Systems Interfaces



Creating Value Starts with Commitment to the Values of Integrity & Fair Play

Gaining competitive advantage through collaborative relationship must start with senior leadership making a powerful commitment to building trust. Devon's Steve Bass' perspective:

Our philosophy is a "value delivery model" – it looks at total value with suppliers working together as a team, not just low cost. Productive supplier relationships are essential for value delivery to work.

Our Corporate Values are central to our supply chain; this means having integrity, being open, forthright and honest with our suppliers, and being committed to our mission and purpose – to have passion in improving our business and building trust with our suppliers.