Systemic Intelligence

Building powerful skills for high-leverage solutions

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You know the story. The brilliant engineer Daedalus and his son Icarus were imprisoned by the King of Crete. To escape, Daedalus came up with a strategy for the challenge they faced: he designed two pairs of wings using wax and feathers. Engineered with great skill, the wings were perfectly constructed to achieve the lift needed to fly from the prison tower. Once they'd taken wing, and emboldened by the initial success, Icarus decided to achieve new heights. He approached the sun. You know how it ends. Failing to appreciate the physics of the system he was attempting to conquer, his wings melted, and Icarus plummeted to his death.

So here is the question I'd like you to consider: when it comes to your strategy, how might you and your team be having an Icarus moment?

This is an important question. Organizations spend enormous resources engineering the perfect strategy, only to find, when the environment shifts, the strategy fails because it left out something critical. Research shows that 70% of strategies fail to reach their target objectives. And like Icarus, it's not that they fly to close to the sun, it's that they misunderstand the physics of the system their strategy is designed to address.

This Greek myth has a lot to teach us about failed strategies and the faulty thinking that creates them.

An essential leadership capacity, Systemic Intelligence, or what I refer to as SysQ, is a set of tools for improving the thinking you're using to craft effective strategy. It dramatically improves your ability to map the "physics" of the system you're trying to address so you can make high-leverage choices about how to engage it – and avoid watching your "perfect" strategy melt.

The Challenges We Face

The complexity of challenges we face is increasing. And they're complexifying faster and faster – at a rate beyond our ability to keep up. Organizations ranging from Fortune 100s to small businesses are overwhelmed with confusing markets and fierce competition, cultures that destroy strategies, and disruptive innovations that change industries overnight – all of which are exacerbated by the relentless speed of change. NGOs committed to improving the public well-being frequently take up innovative strategies – and abandon them just as quickly when they don't achieve immediate success.[1] Communities around the globe face an expanding range of tough, interconnected, messy problems such as poverty, violence, obesity, mental illness, police and community tensions, and the mounting impacts of climate change, just to name a few. Nations are dealing with aging infrastructure, health inequality, civil unrest, humanitarian crises, and national security threats; many are undergoing waves of populism and trending toward authoritarianism.

Why do these issues prove so difficult to resolve? Just as Icarus's thinking left out some important aspects of reality, the type of thinking we're using to address our challenges is inadequate for the task. In this article I'll describe a more robust and effective type of thinking we need to adopt if we're to address our toughest problems: *Systemic Intelligence* (SysQ). I'll provide several examples where SysQ was successfully applied, and, more importantly, I'll show you how you can build and apply this powerful competency to issues of relevance to your team, organization, community – and especially society.

> "The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking."
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> –Albert Einstein

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[1] *Eyes Wide Open: Learning as Strategy Under Conditions of Complexity and Uncertainty*, Patricia Patrizi, M.A., Elizabeth Heid Thompson, B.A., Julia Coffman, M.S., and Tanya Beer, M.A., Evaluation Roundtable

Low-leverage Policies: Unintended and Unexpected Consequences

During the early 20th Century, when India was under British colonial rule, the ruling government was concerned about the dangerous number of venomous cobra snakes. Government officials enlisted their subjects to address the problem of herds of cobras (appropriately named *quivers)*: villagers received a reward for every cobra head they brought to authorities. The strategy was a short-term success but a long-term failure. The problem? According to plan, the villagers killed large numbers of snakes for the reward. But entrepreneurial people eventually came up with the idea of breeding cobras for income. The government revoked the reward as soon as they discovered this practice, at which point the frustrated and angry breeders simply set their captive snakes free – making the wild cobra population larger than before the government implemented their strategy. Their "solution" for the snake problem made it worse and villagers were "quiver-ing" more than ever.

This "cobra effect" occurs just as easily in the private sector. Just a few years ago, Wells Fargo paid $185 million in fines. Why? Because employees had been opening accounts (deposit accounts) for current customers – without customer approval. For several months, many employees were repeating the following formula…

1. Open an account (without customer knowledge)
2. Move in a little bit of money (also without customer consent)
3. Close the account
4. Put the money back (hoping customer didn't see the whole process)

After opening enough accounts, *employees received a bonus* – an incentive to continue following the formula. Compensation and incentive programs often generate problematic employee behavior by creating perverse incentives.

> "Unfortunately, as variable compensation plans afford high-performers an opportunity to maximize their income, they can also come with many unintended consequences. From lawyers who paid their client billables, to the product sales reps who work in cahoots with buyers to shift the timing of purchases to help each hit their bonuses, these compensation models can be a driving force for behavior if not designed with extreme care."[2]

In both examples, we see an enormous gap between the intent of a strategy and what it produces. Wells Fargo used rewards and incentives to motivate employees to increase revenue and profitability – opening phantom accounts – but this eventually drove criminal behavior and massive fines which negatively impacted profitability. The benefit from the phantom accounts vanished. The British government's strategy to eliminate cobras backfired because it encouraged behavior that increased them. Having little impact is low-leverage; having negative impact (as occurred in India and at Wells Fargo) is worse – like wax wings too near the sun.

High-leverage: Identifying Counterintuitive Strategies

Traditionally, when a new car model is introduced, its share of new sales often peaks during the introduction year and then declines substantially over the next few years. In the mid 1990s, an international auto manufacturer was looking to avoid this trend by making the share of new sales stay at the peak for much longer. The company was advised by a consultancy that specializes in applying systemic intelligence to strategy. Working collaboratively, they mapped out traditional release policies.

Typically, during the ramp up phase, the auto parts needed to manufacture and maintain / repair these new cars become limited, constraining the rate of production. The manufacturer policy is to divert as much of the limited parts to production (away from dealerships) in order to

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[2] *Wells Fargo And The True Cost of Culture Gone Wrong*, Chris Cancialosi, Forbes, SEP 15, 2016, https://www.forbes.com/sites/chriscancialosi/2016/09/15/wells-fargo-and-the-true-cost-of-culture-gone-wrong/#78cf34b365cb

keep inventory up. This drives up (or at least maintains) the sales rate. Unfortunately, the unintended consequence is that the increased number of cars on the road also means an increase in cars needing maintenance or repairs. These cars are then kept off the road longer because the parts to repair them are unavailable. Dealership reputations erode and the negative word of mouth causes lower sales. No one wants a car that takes long to repair. With this insight, the manufacturer took a new approach when releasing the next new models – they ensured a minimum supply of parts at the dealerships. Because of this high-leverage policy – albeit counterintuitive – sales and revenue piled up…instead of cars piling up on repair lots.

Systemic Intelligence

The auto manufacturer achieved extraordinary results because they developed their strategy using systemic intelligence (SysQ). While the absence of SysQ contributed to Wells Fargo and the British government falling prey to the perverse incentives dynamic, i.e. strategies made of wax.

SysQ is the required capacity needed to build high-leverage mental models. High-leverage is the ability to generate maximum improvement and impact with minimum investment (in effort, and resources).

Our mental models are the assumptions we use to determine *the best actions to take* in order *to achieve the results we want*. If our assumptions about cause and effect are limited – or worse, just plain wrong – we will sometimes act blindly; sometimes we will create disastrous consequences. Leadership needs the capacity to ensure decisions, policies, strategies, and the resulting actions are based on the most useful mental models – ones that are consistent with how the world works. That leadership capacity is SysQ.

In order to be high-leverage, we need mental models that are rigorous and crystal clear on two elements:

1. the most important *behaviors* to improve, and
2. the *structure* needed to improve them (the behaviors)

Behaviors (Performance)

People with high SysQ will have a clear picture of the long-term *trends* they want to improve (e.g. a situation may be getting worse or there might be cyclical instability). In the private sector, important trends (behaviors) to improve might be: increasing development times, shrinking marketshare, increasing employee attrition, or responding to disruptive innovations. In the public sector, important trends to address include: rising inequity, decreasing affordable housing, increasing deadly disease outbreaks, and worsening climate change impacts. Trend over time graphs are a powerful tool for generating high-leverage mental models.

SysQ vs. Systems Thinking

SysQ captures the original intent behind the pioneers of system thinking (which arose from the field of system dynamics). Perhaps the biggest stumbling block to successfully learning the discipline of systems thinking is the discipline's name: *systems* thinking. The term systems thinking is so commonly used – and everyone claims they are working on systems. I'll hear (especially the case in health these days), "We already do systems thinking. We are always trying to improve our systems. This systems stuff isn't new."

True. They are working on systems, but that doesn't mean they are *thinking* in systems. That's why renowned systems thinker, Donella Meadows, titled her book *Thinking in Systems*. The much more important term in the discipline's name is *thinking*. To apply high SysQ, reduce the focus on systems. It's the THINKING that matters.

Another stumbling block to achieving high SysQ – because of the history of systems thinking – is the overemphasis on tools. In particular, practitioners from *The Fifth Discipline* school of systems thinking often only apply their preferred tool (e.g. systems archetypes). Often rigorous (and creative) thinking is hindered by using only one tool.

SysQ practitioners don't emphasize "systems" or "tools", instead they emphasize the *SysQ Principles* and *Process* to ensure collaborative learning that generates mental models more consistent with reality.

"You can observe a lot by just watching."

— Yogi Berra

Structure (Causal Relationships)

Once they are clear on what's high-leverage to improve – framing the most important performance metrics as long-term trends – people with high SysQ develop a picture of what's causing the trend(s). What really generates these trends? What are the reasons for the issue… the cause and effect…and how might we influence different behavior? In short, they develop a useful theory, or what SysQ practitioners call a mental model.

This mental model will include the interdependent relationships responsible for behavior. For example, how might an organization's policies be impacting employee productivity and on-the-job stress – and how do those factors contribute to poor development times? Or how might the investments made to improve neighborhood conditions lead to gentrification and the loss of the very population those investments were made to serve? Or…
how might flying too close to the sun with wax wings lead to catastrophe?

Only when we have a clear picture of the relationships (between people, resources, assets, equipment, conditions, and environment) contributing to the behavior(s) we wish to improve, can we identify the leverage point(s) for making those relationships work better.

> "Shallow men believe in luck or in circumstance. Strong men believe in cause and effect."
>
> — Ralph Waldo Emerson

SysQ Principles

High-leverage mental models include two rigorous and operational elements: the *behavior* (performance) you wish to influence and the *structural factors* that drive that behavior. When it comes to creating such high-leverage models, people with high SysQ have the SysQ Mindset. The mindset includes four foundational principles; the principles are observable activities:

1. Building a Shared, Useful Picture
2. Expanding Field of Vision
3. Focusing on the Physics
4. Seeking Leverage

1. Building a shared, useful picture

I once consulted to a national public health institution responsible for addressing the high prevalence of diabetes. Their objective: develop and disseminate an effective, evidence-based diabetes self management education. In short, help those with diabetes and pre-diabetes better manage the disease. Leadership worked on a strategy for six months but made no progress – even though they had hired one of the top international consulting firms and diligently followed that consultancy's patented, multi-step strategy process. Leadership had dug into multiple entrenched positions and argued around vastly different ideas.

Over the course of two days the leadership team developed a stock-and-flow map of their self management education program. The process of building the shared picture reduced the emotions and the team reached consensus. The map identified constraints contributing to the lack of impact. More importantly, they found a powerful feedback loop that could – when consciously activated – lead to achieving their desired impact. The map was the basis for their strategy; they continue using the map as they implement and update the strategy.

This principle of *building a shared, useful picture* is essential in steering a successful collaborative learning process. In order to create the most systemic understanding, it is almost always the case that we *only see a part of the issue* we're trying to improve – so we need to include other perspectives in building shared understanding.

> "Most people do not fully appreciate the systemic nature of their problems. We think and act parochially. The cultures of our respective groups and the respective roles we play in these groups often cause us to view problems through the narrow and myopic lens of immediate self- or group interest."
>
> -- Dean Williams, *Leadership For A Fractured World*

Further, we often argue our positions using words or spreadsheets. Explaining our thinking with words leads to ambiguous, jargon-laden and emotion-filled discussions that often derail or go nowhere. Working with numbers gives the appearance of rigor. But spreadsheet logic is usually hidden and inscrutable, so only spreadsheet jocks and math types can understand and contribute.

SysQ emphasizes the use of visuals to build understanding. Visuals allow everyone to participate and contribute to the thinking – they avoid jargon. Further, visual diagrams are unambiguous. Assumptions are clearly articulated and can be consensually changed. Finally, building visuals together reduces the emotion. Participants begin focusing on *making the diagram right* – contentious finger-pointing and arguing magically disappear.

2. Expanding the Field of Vision

The previously mentioned auto manufacturer had an incomplete picture of how different parts of the business worked together. The sales and marketing team needed to expand their field of vision and see how current dealership maintenance – and in particular a bad reputation for lengthy maintenance and repairs – would feedback to stifle new sales and market share months later. It was literally "outside their realm of thinking" – outside their boundaries of awareness – that production policies could be limiting sales a year later. It's like they never thought about what it might be like if they got near the sun.

We aren't trained to address systemic issues. We design our organizations to work in silos. We develop our expertise by focusing on narrow and detailed aspects of an issue. Our educational training usually focuses on deep, narrow, and detailed knowledge of one discipline. *Systemic issues transcend silos*; they reach across an organization, community or society. *They require big picture thinking*.

Corporations are maneuvering in uncharted territory: disruptive innovations, market consolidation, competition from non-traditional competitors (think Google and Amazon), and political instability lead to uncertainty as they make high-risk decisions.

The adaptive challenges we now face as a society – like climate change, inequality, rising global authoritarianism – are long term trends (decades) impacting us far into the future – and include multisectoral aspects of our society and environment. Expanding the Field of Vision means to lift our perspective of the issue so that the boundaries of our analysis – our problem-solving lens – covers the longest time period we need to understand the issue.

And we move beyond thinking about an issue with just our limited, myopic perspectives. In the private sector, we look to other departments or expertise within our organization. In public policy, we apply multiple perspectives (science, engineering, economics, political / social science, psychology, and most importantly, the perspectives of those populations affected the issues). To find leverage, we not only must increase our temporal boundaries, we must include elements of our organizations, community and society we often exclude in our understanding of the issue.

3. Focusing on the Physics

A national non-profit has a mission to improve neighborhoods by investing in infrastructure and increasing the stock of affordable

My colleague and SysQ practitioner, Michael Goodman, tells the following to illustrate the perils of limiting our field of vision.

A man was walking home late at night when he came across another fellow crawling around on the ground underneath a street light. Perplexed, the man asks "What are you doing?" The fellow on his hands and knees answers "Looking for my keys. I lost them." Wanting to be helpful, the first man asks, "Would you like me to look with you?" "Yes! That would be great!" So the first man also gets on his hands and knees and begins crawling around on the ground looking under the street light. After about 10 minutes he starts to think they've covered most of this limited area and that it would be a good idea to focus the search. "Can you help me to help you better? Where did you lose them over here?" To which the other fellow says, "I didn't lose them over here. I lost them over there" and points into the dark where it appears there may be some heavy underbrush. "Well, why are you looking here and not over there?!" the first fellow asks. "Because there's no light over there!"

And this is how we often approach problems. We continue searching for solutions in the same obvious "well lit" places, often trying the same old solutions – over and over – expecting a different result. It's like being stuck on an insane hamster wheel of thinking and acting. There's no leverage in this.

housing. Through experience they have learned a major challenge associated with this work: *the principle of relative attractiveness*. As they facilitate good-intentioned investments, the neighborhood improves. But it becomes more attractive to outsiders and then property values increase because new residents move into the neighborhood. More expensive housing is more desirable than affordable. And the residents who lived there at the time of the investment are slowly pushed out. Improving well-being for current residents requires the ability to deliberately create strategies that manage affects such as increased attractiveness, property taxes, and expensive housing. Those wishing to help – to invest in the neighborhood – need to understand the physics.

It's like we're Icarus and have not investigated the sun's heat. Barry Richmond often said, "Fighting the physics is useless. It's like spitting into the wind, swimming against the current, or tugging on Superman's cape.[3] Yet sometimes it seems like we do this 24/7.

> "Most of you will have heard the maxim "correlation does not imply causation." Just because two variables have a statistical relationship with each other does not mean that one is responsible for the other. For instance, ice cream sales and forest fires are correlated because both occur more often in the summer heat. But there is no causation; you don't light a patch of the Montana brush on fire when you buy a pint of Haagan-Dazs."
>
> — Nate Silver

People with high SysQ apply the Focusing on the Physics principle. They relentlessly pursue understanding "how things work". It's insufficient to say there are factors contributing to the behavior to improve; a high-leverage model is clear on the string of causal relationships. The auto manufacturer learned that increased production leads to increased sales and then more cars needing repairs. At the same time increased production leads to less parts available for repairs which causes lengthy repair times, bad reputations, and then decreased sales.

A rigorous mental model avoids simplistic, linear thinking. The real world is composed of dynamics that include time delays, feedback loops, inertia, nonlinear relationships, "worse before better" performance, fixes that fail (perverse incentives), and more.

Useful mental models – by useful I mean a mental model that can help determine how to make something better – must provide rigorous clarity on how things work. In developing strategies, organizations, communities, and governments use myriad types of maps promoted by leadership consultants, organizational development professionals, process improvement specialists, and social network developers. You've likely seen one or more of the following:

- Stakeholder maps
- Influence diagrams
- Sector maps
- Low charts
- Balanced scorecard bubble charts
- Fishbone charts

These charts can be useful; they can help to show some of the elements you might consider in your strategy. But they lack any ability to rigorously describe causality. Causal maps – like the gentrification causal loop diagram shown here – depict the causal relationships, often with feedback loops, that generate the behavior identified in trend graphs.

SysQ Tool Example: Causal Loop Diagrams
A mental model to understand how community investments can lead to gentrification

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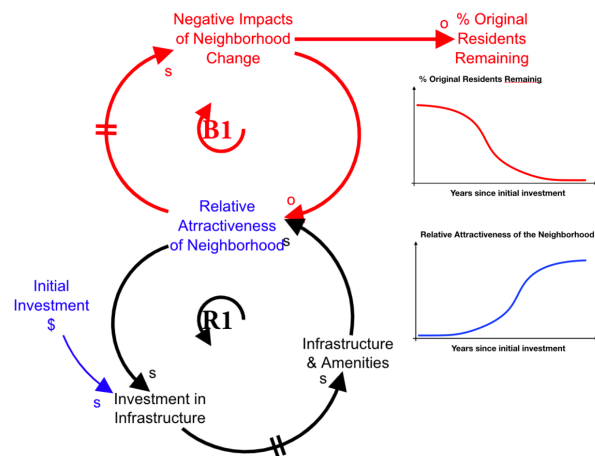
[3] Barry Richmond was a pioneer in system dynamics and developer of STELLA (the first PC-based system dynamics software).

The goal of applying the SysQ Mindset is to improve our ability to see with a realistic lens what's happening and what we can do about it. This third principle – Focusing on the Physics – must be applied to build mental models more consistent with the way the world works. These mental models become more realistic and operational.

4. Seeking Leverage

A financial services company had a strategic priority: improve internal customer experience with the IT system. In particular, they were eager to reduce employees having what was defined as "remembered bad experiences" (RBEs). These RBEs often occurred when the system became inaccessible or unresponsive –

> "Those who cannot change their minds cannot change anything. "
>
> –George Bernard Shaw

when it "went down" – for long periods of time. By employing a SysQ learning process, they discovered that their multi-year focus of investing in resources and procedures to "bring the system back up" rapidly was low-leverage. After investing millions of dollars they had only reduced average down time by roughly 10-15%. Given how hard it had been to make that much progress, the leadership team determined it would take an almost astronomical amount of resources to reduce to what was needed. The SysQ mapping process identified a major source of downtime – increasing system complexity – and the team was able to generate a much higher leverage strategy. High-leverage solutions fundamentally improve the behavior you wish to address with minimal effort and resources – and will avoid negative, unanticipated, unintended consequences. Sometimes the reason we can't find leverage is that the lever (policy, investment, intervention) is counterintuitive. It goes against our engrained and unquestioned mental models about what should be leverage.

A classic example is growing demand for a product or service. In business this occurs when using price to accelerate business growth. Often when feeling a cash crunch, organizations will reduce price to increase demand. But if capacity is an issue, the additional demand sometimes exceeds the ability of the organization to fulfill it. This eventually frustrates customers – through lower quality, or longer fulfillment times – or both. And then the business loses customers. Short-term gain leads to long term pain.

The counterintuitive strategy is to raise price. Raising price can increase revenue, while simultaneously suppressing demand growth to a manageable, more sustainable pace. This gives time to invest in additional capacity so that eventually lowering price could increase demand and sales…and the organization will also have enough capacity to meet the higher demand. This is a far more sustainable strategy. It requires pulling the right lever – just in an unconventional, and uncomfortable, way.

The process of applying SysQ is designed to increase the likelihood we will find the highest leverage places to intervene. If rigorously applied, with a broad enough set of perspectives, the likelihood of achieving maximum improvement with minimal effort increases.

Principles and Process First – Before Tools

Nate Silver is a famous statistical prognosticator and the author of *The Signal and the Noise*. He wrote a chapter in that book titled *Becoming less and less…and less wrong*.

That is the most elegant definition of the purpose behind the scientific method. As the foundation of science – the source of all technology we benefit from – the scientific method can never prove a theory (mental model) is 100% true. We apply the method to continuously increase confidence in the theory by eliminating other possible explanations. We attempt to get closer and closer to capital T Truth; alas, we can never arrive. We may find out at any time we are missing something…or even on the wrong path.

Persons with high SysQ avoid the addiction to tools or techniques. They focus on collaborating with others – they join learning journeys – with curiosity and humility. They realize they may be

missing something...or wholly wrong. As Craig Weber[4] would say, Members on a team high in SysQ – in order to be more effective – are willing to sacrifice their individual need to feel or appear right." They would rather engage in a process of learning that helps them become less and less…and less wrong.

The SysQ Process is a learning methodology based on the scientific method. It is a rigorous – yet flexible and rapid – hypothesis-testing method, using collective wisdom from multiple perspectives to decrease the risk we're wrong. We iterate from one step to another, sometimes feeding back to a previous step because of some new insight. We decide what behavior is important and study it, then develop a mental model about how it's generated. Along the way we may decide another behavior is more important and circle back – and there may be delays from what we observe and what we choose to improve or address later. Along the way, our confidence increases *because our mental models become more and more useful* during the process. We become less and less…and less wrong.

Having high SysQ means being aware that we build high-leverage mental models by steadfastly adhering to the principles of the SysQ Mindset while facilitating an ongoing learning process. During that process we may use various tools such as graphs, maps, or simulation models to build our understanding. But a tool is only chosen to support one or more principle. Organizations with high SysQ avoid using only systems archetypes, or only causal loop diagrams. Instead, they have the internal capacity to access the full toolkit and employ the best tool for the job.

As a young statistician entering the field of TQM, I heard my boss repeatedly say, "Don't just do something, sit there." We've all experienced problem-solving meetings where even before people sit down – and definitely before they've clearly defined the problem – participants are throwing out solutions like rice at a wedding. Following the SysQ Process means that you'll:

- *Better frame the issue* so that it's the most appropriate to address
- *Collaboratively build* the most useful mental model by pooling perspectives of those with experience and expertise
- *Develop* the most *important measures* – especially leading indicators – to observe during implementation
- *Select* the *appropriate SysQ Tool(s)* to achieve the above

The learning journey can be rewarding. It can also be frustrating – even terrifying. You'll challenge cherished assumptions (deeply engrained mental models). Often people are not only blind to, and invested in, the status quo, their egos are attached. Like the Israelites caught between Pharaoh's army and the Red Sea, it's tempting to want to turn back – to return to the familiar ways of thinking.

SysQ Tools
Many who dive into the field of Systems Thinking learn a few tools (right) to help them apply the SysQ Mindset. Some are easy to learn and apply. Others require a substantial investment in time and money to develop proficiency.

SysQ Process
A learning journey
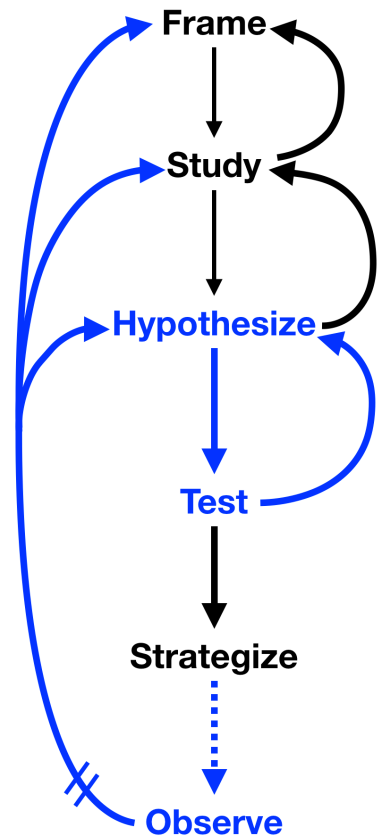
The SysQ Process adds *or* emphasizes the activities in blue.

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[4] Craig Weber is an organizational psychologist and author of *Conversational Capacity* (McGraw-Hill)

Further, some practitioners encourage the use of just a few of these tools. While others suggest that only in building simulation models can you really be applying SysQ. Still other practitioners suggest modeling skills are beyond most, and that people should focus on Systems Archetypes.

The following Venn diagram (modified from a diagram by Barry Richmond) arranges the tools by answering a question: *What % of an organization (or coalition) should have competency with that tool?* From my experience, most ought to understand and apply the basic SysQ Mindset (guiding principles) and the ability to draw trend graphs. A large % ought to be able to read maps. A smaller percentage would be competent mappers. Only a small percentage (1-2%) would need simulation modeling skills.

> **You may have experience with some of these SysQ Tools:**
>
> - The SysQ Questions
> - Behavior Over Time Graphs (BOTGs)
> - Multi-solving Principles
> - Systems Archetypes
> - Causal Loop Diagrams (CLDs)
> - Stock and Flow Main Chains
> - Stock, Flow and Feedback Maps
> - System Dynamics models (simulation)

% of an organization (or coalition) needing competency with a tool
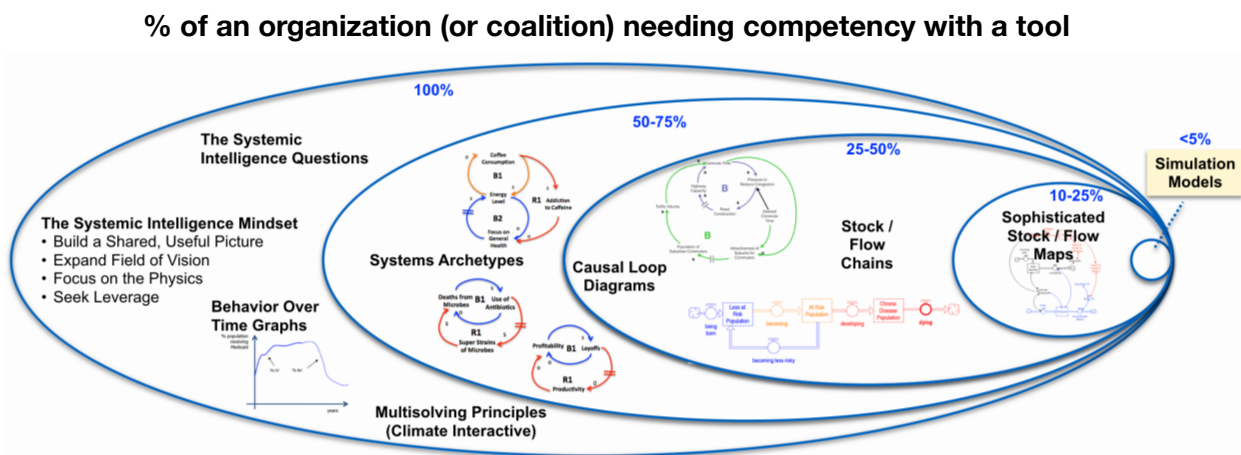
Building SysQ

Our life experiences and interactions – with our families, through training and education, and on-the-job experiences – determine our SysQ capacity. The bad news, as we've already discussed, is we typically interact and experience life in ways that reinforce siloed, compartmentalized, linear and simplistic thinking. The good news is that we can, just like with emotional or social intelligence, build our SysQ.

Building SysQ must be done through an active, disciplined, conscious learning process filled with experimentation, analysis, conversation, and deep reflection. It's not learned in any classroom or workshop. In their book *Transforming Your Leadership Culture*, McGuire and Rhodes[5] argue that for an organization to transform itself – to achieve outstanding results –

leaders must first transform their capacity to think. They claim that learning occurs by bumping up against issues and problems that are just beyond a person's current ability to handle them. They define this type of learning as "increasing headroom". Further, this hard work of capacity building must start with leadership. It cannot be assigned or delegated.

> "The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them."
>
> – Sir William Bragg

In working with organizations to build their capacity, I'll introduce them to the basic concepts, including mental models, the guiding principles, and process. That's easy. The hard work of capacity building comes when the leadership team applies the concepts to one or more of their most pressing challenges. They create headroom through this "workshopping" approach by applying new concepts and skills

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[5] McGuire, J. and Rhodes, G., *Transforming Your Leadership Culture*, Jossey-Bass; 1 edition (March 30, 2009)

needed to solve an important, sometimes wicked challenge. This reinforces the concepts and generates more SysQ capacity they then apply to other issues, facilitating more learning.

First the Wall, then the Ladder

The famous mythologist, Joseph Campbell[6] once said "There is perhaps nothing worse than reaching the top of the ladder and discovering that you're on the wrong wall."

> "Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
>
> –John Kenneth Galbraith

All too often, our organizations, communities, and governments do this by implementing well-intended but misguided strategies. They spend time and resources developing and executing strategies – diligently measuring their progress along the way – often investing many years and millions of dollars, all while working on the wrong goals. It's not that these strategies don't sometimes achieve the results they're designed for; it's that they are working on the wrong things. *Far too much time, money, and creativity are squandered because we diligently, yet blindly, build our strategic ladder against the wrong wall*.

NASA implemented a complex strategy to change rules and procedures after the Challenger disaster. Unfortunately, they didn't focus on the culture, which was the real wall they needed to climb. The result: they lost the Columbia and its crew in a subsequent disaster. Similarly, when an organization uses simplistic thinking that lacks SysQ, they will spend time creating strategies focused on improving something either unimportant – or on something that's counterproductive. This can lead to disastrous unintended consequences.

If we're to make progress on the challenges of today, we must *determine the right thing to work on* before we develop our strategy. We need to make sure we're leaning our strategic ladder against the right wall. Then, once the proper wall is identified, applying the concepts and skills of SysQ will ensure you build the best strategy for climbing it. These two powerful benefits of SysQ – the ability to choose the right wall *and* to then build the appropriate ladder – is how *you create high-leverage change.*

Chris Soderquist (Pontifex Consulting) has over twenty years' experience as a strategy and leadership consultant, coach and educator, with a diverse set of clients from the private and public sectors. He is a Visiting Executive Lecturer at UVa's Darden School of Business, an instructor for the Boeing Engineering Leadership Program, and faculty member for the Georgia Health Policy Center legislative training program. Chris is a contributing author to *The Change Handbook* (Berrett-Koehler, 2008). He is the creator of an award-winning video, *Finding Leverage* for NACDD and a systems thinking video series for the CDC.

His clients include: Aramark, Boeing, Centers for Disease Control and Prevention, Cincinnati Child Poverty Collaborative, Colorado Health Foundation, Dow Chemical, Fannie Mae, Georgia Health Policy Center, Hewlett-Packard, Mayo Clinic, Nissan, Northwestern Mutual, Robert Wood Johnson Foundation, State of New Mexico, UNDP, US Department of Housing and Urban Development, World Bank, World Economic Forum and Yale School of Medicine.

To learn more about Chris and his work visit findinghighleverage.com.

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[6] Watch Joseph Campbell's inspiring interview by Bill Moyers in *The Power of Myth* PBS series.