STRATEGIC *Clarity*

Systematic Inventive Thinking (SIT)

Quick Reference Guide

The Function Follows Form process, five thinking patterns,

and the mental discipline that makes them work.

A companion resource to the book

Strategic Clarity in a Fragmented World
by Dr. Tobias Adam

www.strategic-clarity.site

The Innovation Sweet Spot

Most new product ideas — and most strategic options — fall into one of two traps. They are either **uninspired**: incremental variations of what already exists, too small to shift customer behavior or market dynamics. Or they are **impractical**: blue-sky fantasies that sound exciting in a brainstorming session but collapse under the weight of real-world constraints.

The innovation sweet spot lies between these extremes: ideas that are **far enough** from existing products to attract real interest, but **close enough** to fall within an organization's capabilities and positioning. SIT was designed to hit this sweet spot systematically — by drawing new ideas out of current products rather than chasing ideas that have no connection to what already exists.

As the original SIT developers put it: don't just listen to the voice of your customers; listen to the voice of your product. Traditional innovation starts with customer needs and works backward. But customers often lack the imagination to envision products that don't yet exist. SIT reverses this: it starts with the product itself — its components, attributes, and structure — and uses structured manipulation to discover value that neither customers nor developers would have imagined.

Where SIT Comes From

SIT's intellectual roots reach back to Genrich Altshuller, a Soviet engineer who spent decades analyzing over 200,000 patents. He discovered that breakthrough inventions consistently follow a small number of recurring patterns — what he called TRIZ (Theory of Inventive Problem Solving). Jacob Goldenberg, Roni Horowitz, Amnon Levav, and David Mazursky built on this foundation, developing five "templates of innovation" that are simpler to apply and designed for product development and strategic thinking. Their key finding: most successful product innovations fit at least one of these five patterns. The patterns are not just descriptive — they are **predictive**, capable of generating innovations before market signals even appear.

The Closed World Principle

SIT's most distinctive feature is the Closed World Principle: the best innovations come from working with elements already present in the immediate environment. You begin by listing the essential elements of a product or system, both its physical components and its attributes. You also look at the product's immediate environment — user context, ambient conditions, adjacent elements. This is your canvas. The "closed world" is not about reducing ambition — it's about making the problem space cognitively manageable. It works because the brain processes information more creatively under constraints than under unlimited freedom.

The Path of Most Resistance

SIT follows a creative principle called the Path of Most Resistance: the most valuable ideas often lie in directions that feel counterintuitive. When a pattern manipulation produces an idea that seems absurd, that discomfort is a signal, not a stop sign. The discipline is to stay with the discomfort and explore what value might exist in the seemingly impossible — before dismissing it.

The Function Follows Form (FFF) Process

The most important process innovation behind SIT is its reversal of conventional design logic. Traditionally, innovation follows "form follows function": identify a need (function), then build something (form) to fulfill it. SIT flips this with Function Follows Form (FFF):

1 Define the Closed World
Identify the bounded system you are working with — a product, service, process, strategy, or organizational structure. List its core components, functions, and attributes. This is your canvas.

2 Apply a Pattern
Select one of the five thinking patterns (Subtraction, Division, Multiplication, Task Unification, or Attribute Dependency) and apply it to an element of the Closed World. This creates a "virtual product" or "virtual situation" — a modified version of reality that does not yet exist.

3 Immerse Yourself in the Virtual Situation

This is the most critical and most underestimated step. You must mentally inhabit the modified reality and search for benefits within it. Do not evaluate feasibility yet. Do not ask “Is this realistic?” Ask: “What new value could this create? Who would benefit? What problem does this unexpectedly solve?”

4 Identify Challenges

Only after exploring benefits do you turn to challenges. What obstacles would need to be overcome? What risks or contradictions exist? The sequence matters: benefits first, then challenges. Reversing this order activates the brain’s natural negativity bias and kills ideas prematurely.

5 Generate Ideas and Iterate

Ask how to realize the benefits and overcome the challenges. Adapt the pattern if needed. If promising, refine. If not, switch to another pattern or redefine the Closed World. SIT is most powerful when applied multiple times with different patterns and different Closed World definitions.

THE CRITICAL DISCIPLINE

The sequence of the FFF process is not a suggestion — it is a cognitive discipline that determines whether SIT produces breakthrough ideas or recycled mediocrity. The most common failure mode is premature evaluation: teams apply a pattern, see the virtual situation, immediately judge it as “unrealistic,” and move on. They never reach the insight that lies behind the initial discomfort.

The discipline is to stay in Step 3 long enough. Immerse yourself in the virtual situation. Assume it exists. Search for who benefits, what changes, what becomes possible. The longer you resist the urge to evaluate, the deeper the insights. Only then — in Step 4 — do you bring in the critical lens.

What Blocks Innovation: Three Forms of Mental Fixedness

Even with the right tools and the right process, innovation can be blocked by deeply ingrained cognitive patterns. SIT is specifically designed to break through these barriers — but understanding them makes the method significantly more effective.

1. Functional Fixedness

The tendency to see objects, services, or systems strictly in terms of their known function. A hammer is for hammering. A supply chain is for delivering goods. A strategy team is for producing strategy documents. Functional fixedness prevents us from recognizing that existing elements could serve entirely different purposes.

> *Example: Most organizations see their customer feedback process as a quality tool. Functional fixedness prevents them from recognizing it could simultaneously serve as an early warning system for market shifts — the data is already there, but the assumed function blocks the insight.*

How SIT breaks it: Task Unification deliberately assigns new functions to existing elements. Subtraction removes an element to force the remaining system into unfamiliar configurations. Both patterns bypass functional fixedness by making the familiar strange.

2. Structural Fixedness

The assumption that the current structure of a system is the only possible arrangement. Components must stay where they are, processes must follow their current sequence, roles must remain assigned as they are. Structural fixedness makes us blind to reconfiguration possibilities that could unlock significant value.

> *Example: In traditional education, teaching, examination, and certification are structurally bundled into a single institution. Structural fixedness prevents the insight that these could be divided: one entity teaches, another examines, a third certifies — each optimized for its specific function.*

How SIT breaks it: Division separates components and rearranges them in space, time, or function. Multiplication duplicates an element but changes it, revealing that the original structure was not the only option.

3. Relational Fixedness

The belief that the relationships between variables in a system are fixed and cannot be changed. Price must correlate with quality. Risk must correlate with reward. Seniority must correlate with authority. Relational fixedness locks organizations into assumed dependencies that may no longer serve them.

> *Example: For decades, perfume manufacturers assumed that scent must correlate with gender — floral for women, musky for men. CK One broke this "sacred" dependency and created an entirely new market category: the unisex fragrance. The relationship was not a fact; it was a fixation.*

How SIT breaks it: Attribute Dependency creates, removes, or modifies relationships between variables. It asks: "What if these two things that have always been linked were independent? What if these two things that have never been connected responded to each other?"

RECOGNIZING FIXEDNESS IN YOUR TEAM

- "We've always done it this way" — the classic signal of all three fixedness types.
- "That's not what X is for" — functional fixedness, blocking Task Unification.
- "You can't separate those" — structural fixedness, blocking Division.
- "Those two things have nothing to do with each other" — relational fixedness, blocking Attribute Dependency.
- "That's interesting but unrealistic" — premature evaluation, killing the FFF process at Step 3.

When you hear these phrases, you have found the exact point where SIT should be applied. The resistance is the compass.

The Five Thinking Patterns

These patterns emerged from the analysis of hundreds of thousands of successful innovations across industries. They are not brainstorming prompts — they are structured provocations derived from empirical research into how breakthrough ideas actually arise. Most successful product innovations fit at least one of these five patterns — making them useful not just for generating ideas, but also for predicting the emergence of new products before market demand signals appear.

1 Subtraction

Remove an essential component. Then find new value in what remains.

Instead of adding features, take away something everyone assumes is necessary. People intuitively add — driven by customer requests or "feature creep." Subtraction reverses this: remove components or attributes, particularly those that seem indispensable. The key is to pick the element that conventional logic tells you never to touch.

Everyday: Philips removed the display and most buttons from their DVD player, creating the award-winning ultra-slim Slimline Q-series. A children's furniture maker subtracted the legs from a high chair — the Sassy Seat attaches directly to kitchen tables.

Strategic: What if we removed our most popular product line? What new positioning would emerge? What if we eliminated the annual planning cycle? What if we subtracted the assumption that all decisions need full consensus?

2 Division

Split a component or process and rearrange the parts.

Divide an existing element into sub-parts, then reorganize them. Division takes three forms: physical (cutting along a line), functional (separating different roles), and preserving (each part retains the character of the whole). Each form reveals hidden modularity and new configurations.

Everyday: Separating a car stereo's front panel created a theft deterrent. Caesarea Creation Industries divided a rug into four "ruglets" — each with a different seasonal design, usable alone or combined as a puzzle — creating an entirely new children's product category.

Strategic: What if we split our strategy into three independent time horizons with different governance? What if we separated strategy formulation from strategy evaluation into different teams?

3 Multiplication

Copy a component but change it in a meaningful way.

Duplicate an existing element, then modify the copy. The key: the copy must differ from the original in some important way — otherwise you merely have more of the same. Simply adding another identical unit is not multiplication. The meaningful change is what produces innovation.

Everyday: Kapro Industries multiplied vials at different angles in their leveling tool, creating TopGrade — a level that measures slopes. Gillette's double-blade razor added a second blade at a different angle, not just a duplicate. Multi-lens smartphone cameras use the same component modified with different focal lengths.

Strategic: What if we created two versions of our strategy — one optimized for growth, one for resilience — and let them compete? What if we ran two parallel planning processes with different assumptions?

4 Task Unification

Assign an additional task to an existing component.

An element that already exists in the system takes on a new, previously unrelated function. The rationale: if something exists in the closed world anyway, why not see whether it can do double duty? This avoids adding complexity while expanding capability. Task Unification directly attacks functional fixedness.

Everyday: A car windshield's defrosting filament repurposed as a radio antenna — same wires, entirely new function. A car side mirror that doubles as a turn-signal light. An automobile's defogging system reassigned to also heat the seats.

Strategic: What if our customer feedback process also served as an early warning system for market shifts? What if our onboarding program doubled as a strategy alignment tool? What if scenario exercises simultaneously served as team-building events?

5 Attribute Dependency

Create a new relationship between previously unrelated attributes.

Link two variables that currently have no connection, so that when one changes, the other responds. Or break a dependency that everyone assumes is fixed. Attribute Dependency is often the most provocative pattern, because breaking a "sacred" dependency challenges deeply held assumptions about how a system must work.

Everyday: Transition lenses — darkness changes with sunlight intensity. CK One broke the historical dependency between perfume scent and gender, creating an entirely new market: the unisex fragrance. The relationship was not a fact; it was a fixation.

Strategic: What if our investment level automatically adjusted based on scenario probability signals? What if team composition shifted based on the strategic phase? What if resource allocation was dynamically linked to early warning indicators rather than annual budgets?

SIT Beyond Products: Applying SIT to Strategy

SIT was originally developed for product innovation, but its power extends far beyond physical products. In strategic contexts, SIT becomes a tool for challenging the assumptions that constrain how organizations think about their future. The “closed world” is no longer a product — it is a strategy, a business model, an organizational structure, or a set of policy assumptions.

SIT for Stretching Scenarios

SIT can challenge and enrich scenario spaces by applying patterns to underlying assumptions. Applying Subtraction to a baseline scenario that assumes functioning global supply chains forces the team to explore: what if supply chains break down? This is not a polished scenario but a provocative extension that surfaces blind spots and “unthinkable” futures that conventional scenario planning would never reach.

SIT for Option Development

When generating strategic options (e.g., for a morphological box), SIT patterns produce alternatives that conventional thinking would never surface. Subtraction asks: what if we removed what we take for granted? Division asks: what if we reconfigured our structure? Task Unification asks: what if existing capabilities served entirely different purposes? Each pattern systematically breaks a different layer of functional fixedness in the strategy team’s thinking.

SIT for Problem Solving

SIT is equally powerful for resolving complex problems. Rather than jumping to solutions, SIT encourages tracing the chain of undesired effects, understanding the underlying mechanisms, and then using the five patterns to intervene creatively. This often leads to counterintuitive solutions where the problem itself becomes part of the answer — such as the oil pipeline example, where sand accumulation (the problem) was redirected to form a protective layer inside the bends (the solution).

The Awareness Curve: Why SIT Is Strategically Superior

Traditional innovation relies on external feedback — customer interviews, focus groups, market research. But in the early stages of a new concept, awareness follows an S-curve: it starts low, grows slowly, then accelerates. During the early phase, potential users lack the context to evaluate what they cannot yet imagine. By the time awareness reaches useful levels, first-mover advantage has faded. Finding the right moment to engage customers is, as the SIT founders describe it, like shooting a moving target, blindfolded, while riding a galloping horse in a foggy night.

SIT sidesteps this dilemma entirely. Because it starts from within the current reality — applying structured patterns to existing systems — it generates viable innovations independent of user awareness. Organizations can create value ahead of the curve, without being paralyzed by uncertainty or misled by premature market feedback.

What’s Next?

This quick reference gives you the concepts, the process, and the patterns. For detailed case studies — including how the Novaria foresight team used SIT to stretch their scenarios and design resilient strategies under compounding pressures — explore *Strategic Clarity in a Fragmented World* by Dr. Tobias Adam.

For the original research behind SIT, see Goldenberg, Horowitz, Levav, and Mazursky: “Finding Your Innovation Sweet Spot” (Harvard Business Review, March 2003) and Goldenberg and Boyd: *Inside the Box* (Simon & Schuster, 2013).

Visit **www.strategic-clarity.site** for additional resources, workshop templates, and insights.

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