innovator mindset

MAKE THE WORLD BETTER

DEVELOPING YOUR INNOVATOR MINDSET

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Developing Your Innovator Mindset is a guidebook that is designed to accompany your Innovator Mindset Snapshot. Begin by reviewing your Snapshot. It contains personal guidance and other important content that may not be repeated here. It will give you a grasp of your current mindset and how that impacts your innovativeness. Your Snapshot also explains what shifts you can make to strengthen your innovation capabilities.

Use this guide to broaden your understanding of what your scores mean. It provides additional insights into how to tap into your innate genius, and how to use the Innovator Mindset approach to design and enhance robust innovation processes. Whether you are an entrepreneur, an executive, a new product designer, a student or someone who simply wants to make the world better in whatever role you are in, Innovator Mindset will help you optimize your ability to create new value, and become an elite innovator.

FREE YOUR NATURAL GENIUS

Innovator Mindset (IM) is a strategy for enhancing your capacity to innovate. You were born knowing how to do everything that innovation requires and there are times when you do it spontaneously. But all too often, we get in our own way. Without realizing it, we interfere with this important capability.

> ***The goal of Innovator Mindset is to reveal how you can apply your innate genius.***

Innovator Mindset reveals the patterns you fall into when you innovate and when you fail to. By making you more aware of your mindset and of what innovation requires, you gain the ability to recognize these patterns and make conscious shifts that can dramatically improve your innovativeness.

Your journey begins by taking the Innovator Mindset assessment. This will give you a Snapshot of your current mindset. However, how you score initially is less important than where you choose to take yourself. A low first score reflects how much you can improve your ability to create new value. If you score high, IM will enable you to more consciously leverage abilities you may not fully recognize.

The goal of Innovator Mindset is to reveal how you can apply your innate genius, on demand, at any time, in any context, with any challenge.

THE IMPORTANCE OF MINDSET

Research has found that the most effective innovators have a specific mindset. Mindset is one of those terms that gets tossed around a lot—usually undefined. The definition used here is one articulated by Stanford Educational Psychologist Carol Dweck, and the subject of decades of seminal research. Dweck defines mindset as "implicit theories." That is to say that it is the assumptions and beliefs you have about how the world works. These theories or "mental models" are implicit because they are frequently subconscious and unexamined.

> ***Research has found that the most effective innovators have a specific mindset.***

A useful analogy is the operating system on your smartphone or computer. It functions in the background and is largely invisible. Yet how that system is designed impacts everything that device does. We each have our own operating system or personal paradigm, and it is also largely invisible to us. Yet it can profoundly impact our decisions and actions. You increase the performance of your phone by upgrading its operating system, and you can upgrade your own operating system to increase your performance.

You may be someone who is already using one or more innovation or entrepreneurship processes. Don't confuse your ability to apply those processes, with your mindset. Your mindset is like a muscle that you can develop with training and practice. Think of innovation tools and processes as your athletic equipment. To perform well, you need good equipment and you need to be skilled at using it, but what matters most is your personal strength and fitness. Innovator Mindset is a strategy for developing your mental fitness, so you can use those tools most effectively.

THE BENEFITS OF AN INNOVATOR MINDSET

An innovator mindset enhances your ability to create value in any role or context. As an entrepreneur, researcher, inventor or new product developer. As a team member or leader. As someone working for a for-profit, non-profit or government enterprise. As an executive or student or spouse or artist. With the insights you gain you will not only generate better ideas. You will improve your ability to learn from experience, make discoveries, manage your personal and professional relationships and handle conflict. Think of it as a way to boost your mental agility.

A DIFFERENT KIND OF ASSESSMENT

Most of the self-assessments that people are familiar with (Meyers Briggs, Insights Discovery, DISC, Strengthsfinder, etc.) are designed to measure personality. The same is true of many instruments used to assess creativity and innovativeness (Creatrix, FourSight, KAI). Psychologists believe that your personality inncludes innate traits that are hard-wired into you and do not change. Mindset is different. Everything that Innovator Mindset measures is something that you can choose to change. That makes IM a uniquely powerful tool for personal development—a tool you control.

Rather than describing your personality, Innovator Mindset reveals your choices and what adjustments you can make to your mindset to become more innovative. Instead of focusing on who you are, Innovator Mindset focuses on who you choose to become.

WHAT IS INNOVATIVENESS?

The human contribution to innovation is often assumed to be creativity. It is important to be creative, but innovation requires a much broader range of behaviors. Innovator Mindset takes a holistic approach that includes not only creativity, but things like risk taking, astute observation and openness to new interpretations and approaches.

> ***Instead of focusing on who you are, Innovator Mindset focuses on who you choose to become.***

In addition to your overall score or Innovativeness Index, IM measures 12 dimensions that together make up the essential attributes of an effective innovator. This feedback points to specific adjustments you can make to achieve a more innovative mindset.

CREATING VALUE

There are many definitions of innovation, and many ways that it can be categorized. The Innovator Mindset approach defines innovation as simply ***valuable novelty***. If something is new and provides value, it counts as an innovation. If it does not meet those criteria, it is not an innovation. This expansive approach includes all types of innovation, regardless of the application. If you or your organization have a preferred definition of innovation, think of valuable novelty as a way to practice innovation in the broadest sense, one that almost certainly includes your current strategies.

Take Note...

Detect and Correct

All your life, you've been taught to "Detect & Correct," and for good reason. It's how you were socialized from the time you were born, when your parents told you to stop hitting your brother and to not slam the screen door. It's how you were graded in school, coached in sports and how your performance is rated on the job. When something is not as you (or your parent, teacher, boss, etc.) think it should be, you correct it—just like the thermostat in your house. This same pattern is found in nature, widely used in technology, and describes virtually all business processes. It's everywhere and it's quite useful. For most of us, it is a firmly ingrained habit.

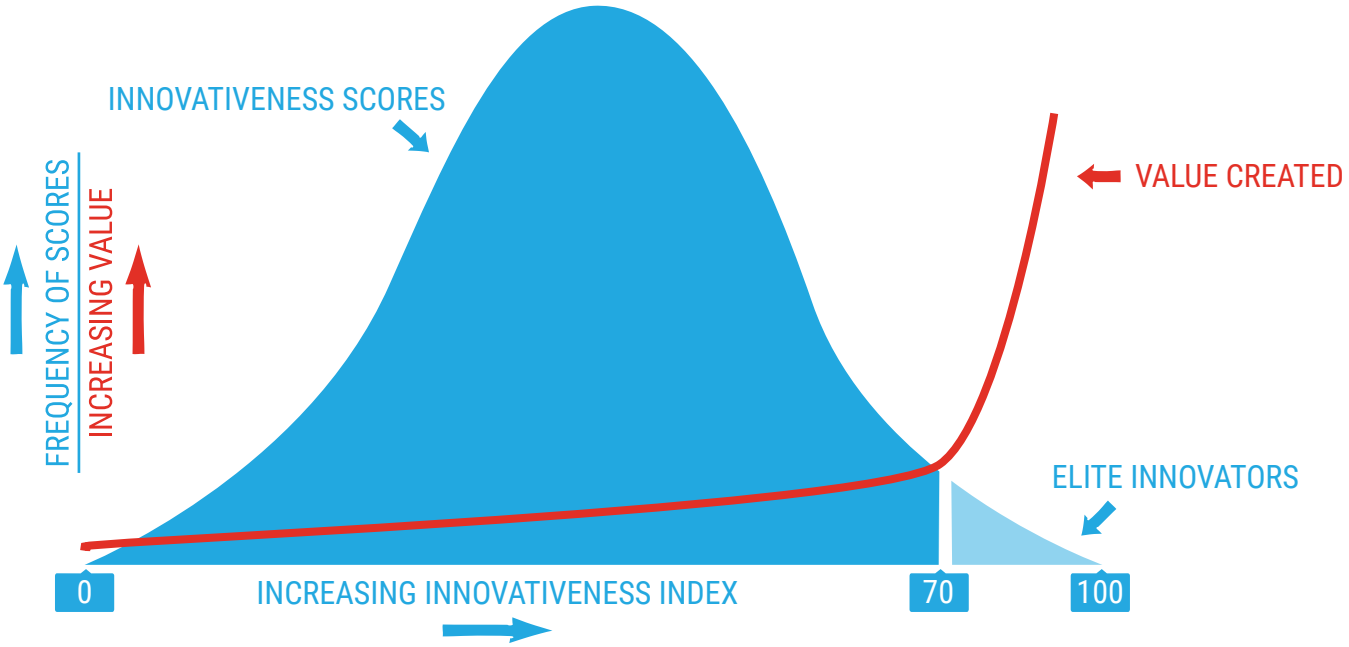
Unfortunately, when your impulse is to correct anything that deviates from what you think is correct, you stop innovation cold. Because changing how you do things is exactly what innovation requires. To innovate, you have to shift to a different pattern—a different mindset. Innovator Mindset helps you understand how to make that shift.

WHAT THE RESEARCH SHOWS

The Innovator Mindset assessment is a high quality psychometric instrument developed through years of rigorous peer-reviewed scientific research. The original study that determined that IM is statistically reliable and valid was conducted with more than 250 individuals inside such companies as Medtronic, Thomson Reuters and Allina Health Systems. IM's ability to predict value creation was evaluated with more than 300 diverse entrepreneurs, with the help of the Ewing Marion Kauffman Foundation. Research has also been done to measure and develop the innovativeness of students, under a grant from the U.S. National Science Foundation.

The research with entrepreneurs revealed the dramatic impact of innovativeness on value creation. When those founders who scored highest on the Innovativeness Index were compared to those who scored lowest, the ventures of the high scorers averaged 34 times as much profit, 70 times as much revenue and employed 10 times as many people. They were also dramatically more likely to be one of the exceptionally high performers that investors call a "home run" (defined in this study as having achieved at least a million dollars in annual profits).

INNOVATION'S VALUE CREATION CURVE



Value creation tended to follow the same trend regardless of the type of value measured. It showed a gradual increase along most of the scale. Then, at about three quarters of the way up the scale (about 70 out of 100) it accelerates sharply upward. Only a small percentage of scores are above this inflection point. Yet they represent a hugely disproportionate share of overall value. Among the tech companies studied, these few high scorers (less than 10%) created 65% of the value created by the tech ventures as a whole.

If your score puts you low on this curve, that doesn't mean you're not creating value; it means you are creating less value than you could be, that you are underperforming your innovation potential (which is true of nearly everyone). If you score near the top of the scale, you can still benefit from greater awareness of the mindset that put you there. That self-awareness helps ensure that you are fully leveraging these tendencies and practicing them consistently.

Take Note...

A Genie With a Puzzle

Imagine that you face a genie who tells you that in order to innovate, you must solve a puzzle. The genie will not give you the solution. However, he agrees to provide hints—in the form of consequences.

So to find the solution, you must invent possibilities, attempt them and observe what happens. If your attempt is successful, you have discovered a solution. If your attempt fails, you use the hints (consequences) to gain insights that enable you to invent new possibilities, and you repeat until you are successful.

That's the Innovation Cycle. It is the only known strategy for playing this genie's game, the not-so-secret formula behind all forms of innovation.

It may seem like simple trial and error, but in reality it is a highly disciplined process that requires a wide range of skills. Skills we were all born with, but that we frequently fail to use.

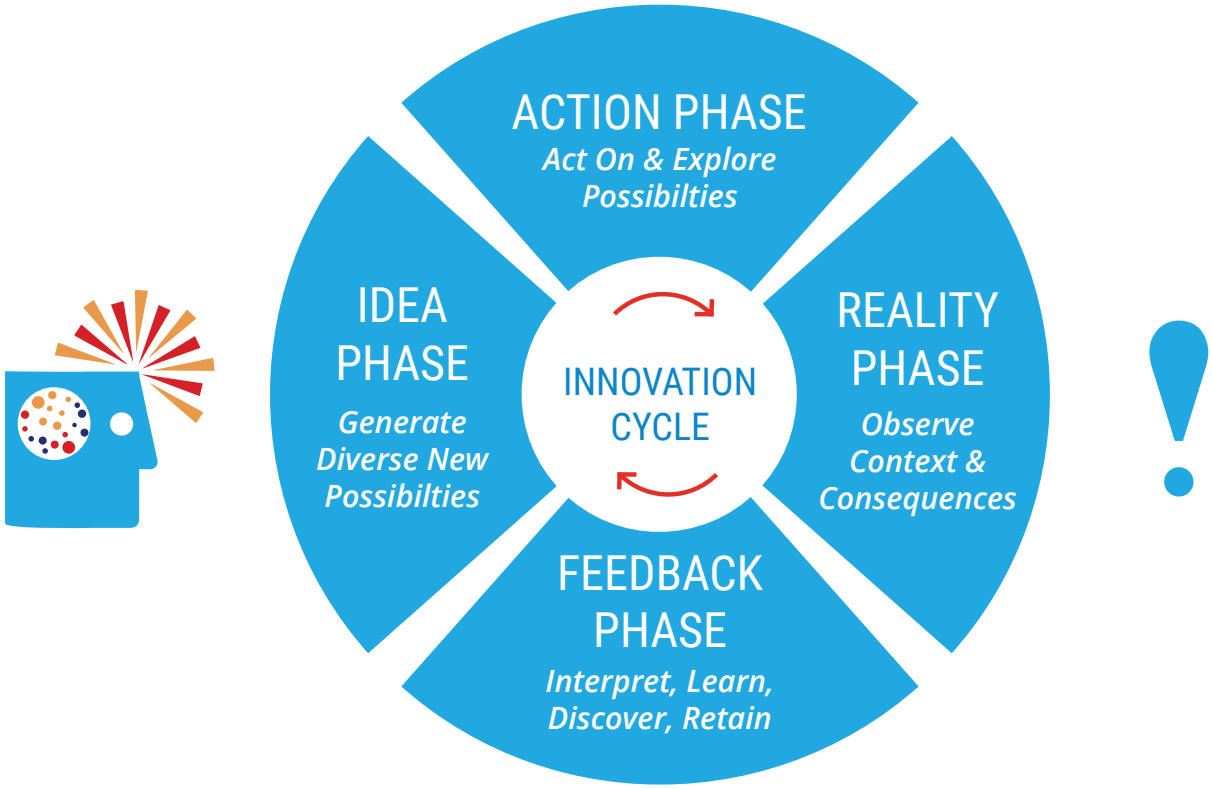
As you develop an Innovator Mindset, you regain your ability to follow this pattern—and win the genie's game.

THE INNOVATOR MINDSET FRAMEWORK

There is an underlying pattern that is fundamental to all types of innovation. Whether it occurs in nature, science, technology, society, business or anywhere. This pattern or Innovation Cycle generates new possibilities, tests them to determine whether they create any value and retains those that do. Natural selection, the scientific method and business innovation are all characterized by this pattern.

INNOVATION CYCLE

The Innovation Cycle describes the interaction between someone trying to innovate (you) and the challenges you face (reality). It can be divided into four Phases. An Idea Phase where you create diverse new possibilities, an Action Phase where you act on those possibilities in order to explore and test them, a Reality Phase where you observe the consequences of your actions and determine whether value is created, and a Feedback Phase where you use those consequences to learn, gain insights and make discoveries. You then use those insights and discoveries to generate new possibilities and the cycle continues.



Take Note...

Innovation Domination

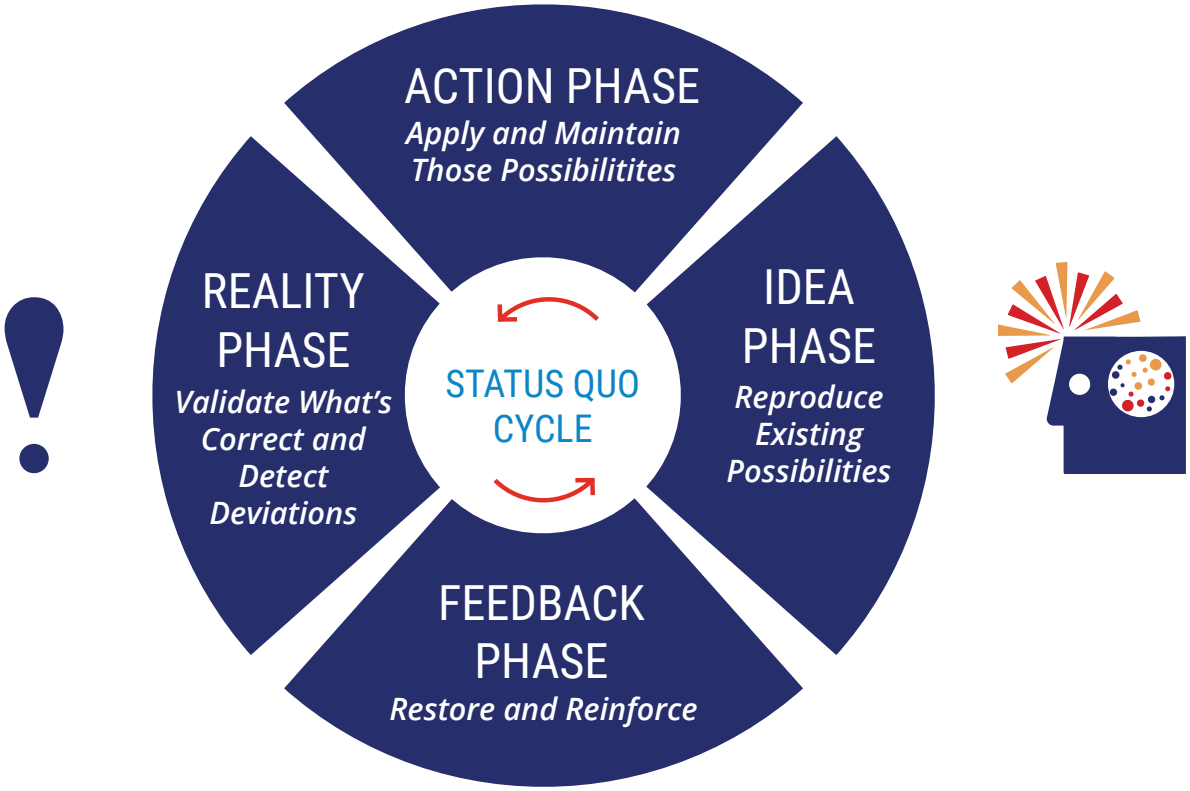
It is important to understand that while both of these patterns are important, the research is clear that those who create the most value have a strong preference for the Innovation Cycle. They are not balancing these two patterns and they are not shifting back and forth. They recognize the importance of the Status Quo Cycle and use it, but they elevate the Innovation Cycle above it. This is because when the Status Quo Cycle dominates, it shuts down the Innovation Cycle. But when the Innovation Cycle dominates, it still uses the Status Quo Cycle to "save" what it discovers.

In nature, science, technology, business and any other form of innovation, the Status Quo Cycle stores what the Innovation Cycle discovers—but always subject to further review and modification by the Innovation Cycle. In other words, the Status Quo Cycle is a useful tool but not the best mindset.

STATUS QUO CYCLE

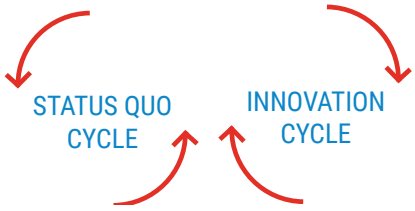
As important as the innovation Cycle is, it's only half the story. Another pattern describes resistance to innovation. This Status Quo Cycle preserves existing processes. (See Detect & Correct) It's also found in nature, as well as technology, society and business. This pattern is designed to dynamically minimize variability and keep things on track. Nature uses this mechanism in numerous ways to regulate such things as body temperature and blood chemistry—keeping us alive. We use this cycle in our technology for everything from trimming the sails that propelled Columbus' ships, to the electronics in your mobile phone. In business, this pattern is found in many business processes, from budgeting and accounting, to sales and marketing, to human resources. It's all the things that need to be sustained in order for the business to survive and grow.

The Status Quo Cycle has the same four phases as the Innovation Cycle, but they function in very different ways. Here the Idea Phase reproduces existing possibilities, the Action Phase applies and maintains existing processes, the Reality Phase detects any deviations, and the Feedback Phase corrects those deviations to restore and reinforce whatever already exists.



You may notice that these diagrams are mapped in opposing directions. The Innovation Cycle flows Clockwise and the Status Quo cycle flows Counter Clockwise. This is because these patterns flow in essentially opposite directions. The Status Quo Cycle is propelled by classic mechanisms of cause and effect. The Innovation Cycle is propelled by the outcomes it produces.

These two cycles mirror each other. For every characteristic of one, there is a corresponding characteristic for the other. This means that together these patterns represent a series of tradeoffs or choices. The Innovator Mindset assessment prompts you to indicate your preference between each of those choices. Your responses are then used to provide a series of scores that indicate which of these patterns you tend to favor, in what ways and by how much.



Take Note...

A Recurring Insight

Many thought leaders have long described a variety of tradeoffs that are like the one between the Innovation Cycle (IC) and the Status Quo Cycle (SQ). These distinctions all appear to be alternative ways of characterizing the kind of thinking that occurs within each of these patterns.

- **Philosopher Alfred North Whitehead distinguished between a static (SQ) and a dynamic (IC) world view.**
- **Gestalt Psychologist Max Wertheimer distinguished between reproductive thinking (SQ), the solving of problems using prior knowledge, and productive thinking (IC), the solving of problems with new insight.**
- **Educational psychologist Jean Piaget distinguished between assimilation (SQ) and accommodation (IC). A student assimilates information by fitting it into an existing mental framework, or accommodates it by revising the framework.**
- **American Psychological Association President, Raymond Cattell distinguished between crystallized intelligence (SQ), the ability to use skills, knowledge and experience and fluid intelligence (IC), the ability to recognize patterns, draw inferences and discover new relationships.**
- **Business and education theorists Chris Argyris and Donald Schon expanded on earlier insights by Bateson and Ashby when they distinguished between single loop (SQ) and double loop learning (IC). Single loop learning is problem solving within existing assumptions and constraints. Double loop learning is problem solving by challenging those assumptions and constraints.**
- **Nobel laureate Daniel Kahneman is one of many psychologists who have described a duality between System/Type 1 (SQ) thinking, which is predominantly subconscious, automatic, heuristic and habitual, and System/Type 2 (IC) thinking which is more effortful, reflective and deliberative.**

COMPARING TWO MINDSETS

The Status Quo and Innovation cycles prompt different beliefs, values and behaviors. Both mindsets are entirely rational but they represent different choices.

At its extreme, the Status Quo Cycle operates like a well-tuned machine that proactively adjusts to keep itself functioning at peak efficiency. This kind of smooth operation is often a virtue in business and other activities, but it breaks down when the environment changes too quickly. When what it is designed to do is no longer the best fit, or when new technologies and competitive threats emerge, it fails...because it cannot adapt. When we emphasize it too much, we often resist making adjustments that are beneficial and necessary.

Developing an Innovator Mindset means following the Innovation Cycle. This does not mean rejecting the Status Quo Cycle; it means constantly questioning and testing it, checking to make sure that it is still a good fit and looking for ways to improve its operation. Like the Status Quo Cycle, the Innovation Cycle self-corrects, but in a way that adapts to changing conditions. There is no upper limit on the value of pursuing the Innovation Cycle. Value creation just keeps increasing as innovativeness increases, provided that you have no significant gaps in any of the Phases.

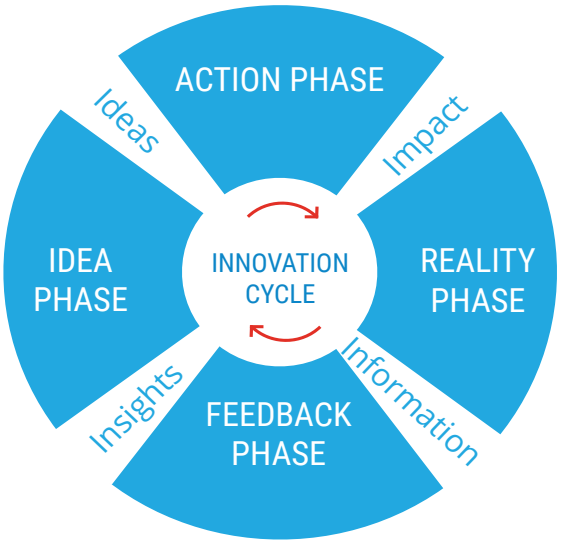
The Innovation Cycle is a great way to explore new possibilities and find solutions, such as with a new venture, when circumstances change. or when trying to function effectively in an unfamiliar environment. It enables you to gather the information and insights you need. The Status Quo Cycle does not have this capability, and it has little value when you have not yet figured out exactly what needs to be maintained.

Most of us operate using a blend of these two patterns, and therefore fail to achieve the full benefits of either one. When you try to balance these two cycles or shift back and forth, you undermine both. Great innovators recognize the importance of efficiency and reliability, but don't allow it to become a trap. They constantly use the Innovation Cycle to find better solutions and create enhancements, not by rejecting the Status Quo Cycle, but by elevating the Innovation Cycle above it.

THE FOUR 'I'S

Each of the four Phases of the Innovation Cycle produces an outcome that is the starting point for the next Phase. These transitions are known as The Four 'I's. The Idea Phase takes Insights and uses them to produce Ideas. The Action Phase takes those Ideas and uses them to produce some tangible Impact. The Reality Phase is where that Impact is observed, producing Information. The Feedback Phase takes that Information and uses it to generate Insights. And so on.

The four 'I's are the things that you become skilled at generating as you develop and practice an Innovator Mindset. You gather better information, generate more powerful insights, invent more promising ideas and as a result, you have greater impact.



Take Note...

What is Possible?

There are two very different ways of thinking about what is possible. Some things are known to be possible here and now, and some things are ultimately possible but not yet achieved and therefore still unknown. For example, powered controlled flight has always been possible in the sense that the rules of the universe permit it. But it took until a little more than a century ago for anyone to figure out how to achieve it. The Wright brothers were the first to turn that ultimate possibility into a known and useful capability.

Your knowledge tells you what is and is not currently possible. You know that it is possible to travel somewhere by flying on a plane. And you know that it is not possible to teleport yourself somewhere, like a character in Star Trek. However, your knowledge does not tell you what may ultimately be possible. For that you have to engage your imagination—like the creators of Star Trek. Teleportation may ultimately be possible, but we won't know until if and when we figure out how to do it. Such a technology would be a major innovation. Yet it would result from discovering a possibility that, in an ultimate sense, already exists.

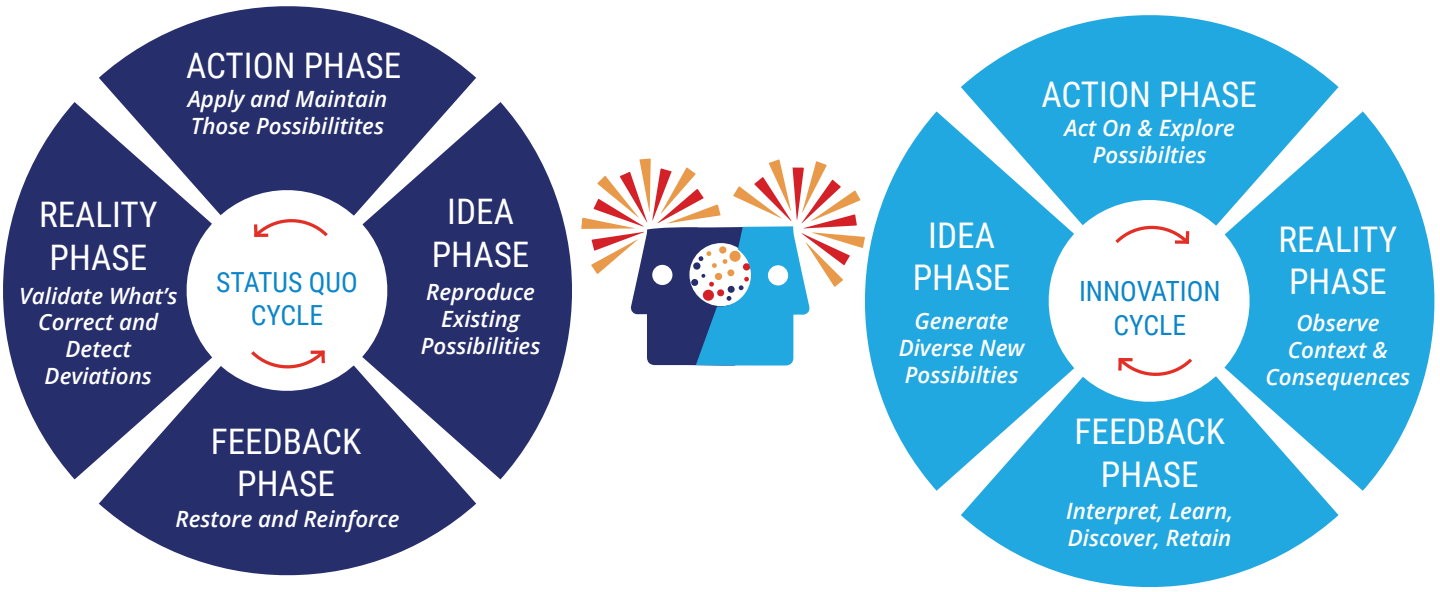
Innovators live in that space between what is known to be possible and what they think may be ultimately possible, if they can figure out how to do it. They are willing to venture beyond what they already know is possible, to try to do something that they hope is possible. That space is risky and sometimes dangerous but innovation is impossible without venturing into it. The Innovation Cycle is the strategy we use to get through that space. There may be other ways to innovate, but that is a possibility that is as yet unconfirmed.

CHECK YOUR UNDERSTANDING

Status Quo vs. Innovator Mindset

Are you favoring the Status Quo Cycle or the Innovation Cycle when you...?	Status Quo Mindset	Innovator Mindset
Answer a tough question by searching for it online.		
Dream up a new way to flavor coffee.		
Try a new route to commute to work.		
Use a map to find your way around an unfamiliar city.		
Look for personal validation from co-workers, friends and family.		
Seek negative feedback following a presentation.		
Use data and information to confirm what you expected to find.		
Change your thinking about some long held belief.		
Carefully follow instructions.		
Encourage someone to disagree with you.		

Check your answers in the Appendix



TWO PATTERNS

NOTES:

REFLECTION & INSIGHTS

Where have I seen these two patterns in myself and others?

When have these patterns been used appropriately or inappropriately?

Where or when do I need to monitor my mindset and perhaps make a shift?

What new insights do I want to be sure to remember—including my own?

HABITS OF AN INNOVATOR

The four Phases of the Innovation Cycle correspond to four innovator habits. These are things that the most successful innovators do automatically. These habits have become their default way of thinking and behaving.

AWARE

In the Reality Phase, you need to be Aware of what is occuring around you. How skillfully do you observe what is happening and especially the impact of your own actions? This is where you size up the challenges you face. It is also how you determine whether you have created any value—a crucial test of innovation. It takes considerable discipline to make good observations, and gather reliable data.

OPEN

In the Feedback Phase, you need to be Open to understanding things in new ways. How do you make sense of your observations and the information you gather? How open are you to gaining new insights and making discoveries? To innovate, you must be willing to revise your own thinking.

CREATIVE

In the Idea Phase, you need to be Creative in how you develop your ideas. How willing are you to generate new possibilities, rather than rely on what you already know? This is about being creative in your thinking and willing to use your insights to invent new possibilities.

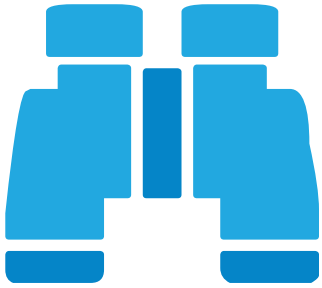
BRAVE

In the Action Phase, you need to be Brave in how your act on your ideas. How willing are you to take risks and face uncertainty? This is about having the courage to explore and experiment with your ideas.

Your innovativeness is determined not only by whether you practice these habits, but by ***how*** you practice them. For each habit, there are tradeoffs between the Innovation and Status Quo Cycles—between Status Quo and Innovative Thinking. Understanding those choices enables you to make adjustments that will enhance your innovativeness. You can then prioritize your thinking and behaviors in ways that will stop interfering with your natural genius and more fully tap into it.

What follows is a description of the key choices for each habit, what shifts you need to make, and some suggested strategies for getting in the habit of successfully navigating the Innovation Cycle.

UPGRADING YOUR AWARENESS



When you observe, the key choice is between Validate and Challenge. You can look for validation that you are successful and that things are what you expect, or you can challenge yourself to get the most accurate data.

Seeking to validate that you are correct follows the Status Quo Cycle. It may seem to make sense but it often leads to Confirmation Bias—the tendency to see only those things that confirm what you want to find or already believe to be true. It tempts you to rationalize your success to justify your actions and the choices you have made.

WHEN YOU ARE NOT AWARE: INNOVATION FAILS

What goes wrong...

- Bad information
- Corrupted data
- Untested assumptions
- Blind spots
- False confidence
- Undetected failure, challenges and opportunities

What happens as a result...

- Misunderstood customer problems, needs and expectations
- Missed opportunities
- Illusory success
- Low self-awareness
- Delayed response

When you challenge yourself to get the most accurate data—even when it tells you that you have failed—you are following the Innovation Cycle. Without careful observation and the awareness that creates, innovation breaks down because your actions don't fit the realities around you. You risk misunderstanding your customers or your technology or things like the nature of the marketplace and the challenges you face.

It's not that you don't want to be successful; it's that you want to be sure that your success is real, and that you notice anything unexpected. The things that surprise you are often the best opportunities to gain new insights and make discoveries. You should strive to get the most reliable information possible and humbly accept it, so you can make appropriate adjustments.

GOALS

The Reality Phase can be both a starting point and a destination. You should have two goals:

1. Accurately determine the current situation.
2. Gauge your impact.

OBSERVATION STRATEGIES

- Focus on specific high value outcomes to guide where you direct your attention.
- Recognize how easy it is to miss things, even when you are paying close attention.
- Engage your imagination to try to anticipate what you may not expect.
- Seek negative feedback, anything that indicates you are wrong or don't fully understand something.
- Seek the perspectives of people who see things differently and may notice things you don't.
- Gather measurable data when you can.
- Separate the facts of the situation from your interpretation of those facts.
- Highly value integrity, so you don't corrupt the data.

ASK YOURSELF

- Am I genuinely curious about this?
- Am I observing with integrity?
- How am I looking at this from more than one perspective?
- How willing am I to humbly admit that I'm wrong or that I have failed?
- How am I actively seeking negative feedback?
- How am I assuring that I have objective data?
- How am I challenging my own observations?

CHECK YOUR UNDERSTANDING

Validate vs. Challenge

When you observe, which pattern are you following when you...?	Status Quo Mindset	Innovator Mindset
Make sure you don't miss anything.		
Make sure that you have gotten things done right.		
Try to imagine what you should look for.		
Pay close attention to the evidence.		
Avoid being distracted by things that are not relevant.		
Avoid making assumptions.		
Strive to identify your biases.		
Expect to have blind spots.		
Do your best to prove that you have been successful.		
Are willing to be surprised.		

Check your answers in the Appendix

GATHERING INFORMATION

NOTES:

REFLECTION & INSIGHTS

How skillfull and objective am I as an observer?

How and when can I practice becoming more observant?

UPGRADING YOUR OPENNESS

When you reflect on what you have observed, the key choice is between Reinforce and Discover. You can seek to reinforce your opinions and beliefs, or you can seek to discover new ways of understanding the world around you. This is about how you interpret the information you gather.

Seeking to reinforce your views follows the Status Quo Cycle. It is often driven by Ego Bias, the desire to be "right," which can create a powerful emotional pull toward reinforcing what we already believe. Seeking reinforcement tends to lock you into interpreting the world based on your own conventional wisdom, maintaining the status quo.

Another risk is Assumption Bias—a tendency to form opinions and make decisions based on hidden assumptions. This is something everyone does. We couldn't function without making assumptions, but it's important to always monitor yourself for this tendency and strive to identify and check those assumptions.

WHEN YOU ARE NOT OPEN: INNOVATION FAILS

What goes wrong...

- Failing to listen
- Lack of empathy
- Lack of insight
- Rigid thinking
- Defensiveness
- Arrogance

What happens as a result...

- Misunderstood issues
- Misdiagnosed problems
- Unnecessary conflict
- Ineffective communication
- Missed discoveries
- Irrelevant and low quality ideas

Striving to discover follows the Innovation Cycle. It opens you up to changing your understanding, which is the path to innovation. Your goal should be to come up with new interpretations that prompt you to refine and revise your thinking, and gain new insights. When innovation is successful, we tend to credit great ideas. But the real work of innovation comes from being open and reflective. Because that generates the insights that lead to those ideas.

GOALS

In the Feedback Phase, you are trying to understand and discover. Your two goals should be:

1. Make sense of what is happening.
2. Discover new ways to understand what you observe and experience.

REFLECTION STRATEGIES 

- Set aside time to reflect on what you observe.
- Be sure to separate your observations—the facts—from how you interpret those facts.
- Actively use your imagination to invent alternative interpretations to consider.
- Seek and consider others' interpretations and opinions—especially when they disagree.
- Identify and question your assumptions and beliefs.
- Base your decisions on which interpretations are most useful, rather than always worrying about what may be "true." (You frequently don't know.)
- Sometimes you should repeat the Innovation Cycle to explore and test your insights.

ASK YOURSELF

- How willing am I to question my own beliefs?
- What unexamined assumptions am I making?
- What are some alternative explanations that I can consider?
- Am I genuinely open to being persuaded of another point of view?
- How am I welcoming dissent and guidance?
- How can I update my thinking and gain new insights?
- What can I discover?

CHECK YOUR UNDERSTANDING

Reinforce vs. Discover

When you are interpreting information and feedback, which pattern are you following when you...?	Status Quo Mindset	Innovator Mindset
Seek unexpected insights.		
Look for new things to discover.		
Reach more than one interpretation.		
Expect one definitive answer.		
Find what you expected to find.		
Learn something unanticipated.		
Seek input from others.		
Reject alternative opinions.		
Make quick decisions and move on.		
Leave some questions unanswered.		

Check your answers in the Appendix

GAINING INSIGHTS

NOTES:

REFLECTION & INSIGHTS

How genuinely open am I to different ways of thinking and understanding?

Where do I most need to work on my openness and mental flexibility?

UPGRADING YOUR CREATIVITY

When you need an idea or a solution to a problem, the key choice is between Know and Imagine. You can draw on what you already know and what has worked for you before, or you can imagine new possibilities. The first option is obviously not going to be very innovative, while the second option is a critical component of your innovativeness.

This is easier said than done. It is one of the key challenges you face whenever you want to be creative. It is easy to fall into Knowledge Bias—the tendency to let prior knowledge and expertise create a subtle but powerful momentum that restricts the type of options you consider. In order to embrace new ideas, you have to be willing to let go of the old ones. Relying too much on what you know blocks your creativity and keeps things from changing. But you can never entirely escape your current grasp of things. In most situations, some initial understanding of the problem and the context is essential to inventing viable solutions. So the challenge is to leverage your knowledge without becoming trapped by it.

WHEN YOU ARE NOT CREATIVE: INNOVATION FAILS

What goes wrong...	What happens as a result...
• Fewer ideas	• Lack of originality
• Lower quality ideas	• Limited options
• Resistance to new ideas	• Poor choices
• Overreliance on knowledge	• Unsolved problems

What we already know is often a rich source of options and a foundation we can build on, but we have to be willing to question that foundation even as we use it. We need to become skilled at drawing on our knowledge while being careful not to use it to screen out possibilities. One reason the Innovation Cycle is so powerful is that it doesn't assume that great ideas fall out of the sky. Taking time to reflect and gain new insights provides a more flexible starting point than drawing on your expertise. It starts you down a path of exploration and frees you to consider new options.

GOALS

In the Idea Phase, you are trying to generate new possibilities and select those that are most promising. Your two goals are:

1. Come up with new ideas.
2. Identify which ideas you want to pursue.

Literally thousands of techniques have been invented to foster ideation, far more than can be covered here. So here are some guiding principles and a few of the most widely used and proven strategies.

CREATIVITY STRATEGIES

- Clearly define your desired outcome—the problem to be solved or objective to be reached.
- Treat your knowledge and expertise as a source of possibilities, rather than a filter.
- Look first for potential, rather than flaws, in new ideas and approaches.
- Relax and be playful and spontaneous when you're looking for ideas.
- Look for metaphors, similarities and creative connections between diverse subjects and disciplines.
- Treat apparent contradictions as challenges to be resolved rather than barriers to be avoided.
- Get in the habit of writing down or otherwise noting your ideas when they occur to you.
- Incubate. Give your brain time to process a problem and it will often give you a solution spontaneously.

ASK YOURSELF

- Exactly what do I hope to accomplish?
- What insights can I build on?
- What new possibilities can I imagine?
- How am I embracing newness and change?
- How am I seeking improvement?
- What possibilities does my knowledge and experience give me?
- How can I move beyond what I already know, or revise it?

CHECK YOUR UNDERSTANDING

Know vs. Imagine

When you are trying to solve a problem or come up with ideas, which cycle are you following when you...?	Status Quo Mindset	Innovator Mindset
Search for solutions to a similar problem in other fields.		
Remember what worked for you last time.		
Conclude that an idea will not work, because it has not worked before.		
Take a walk while you muse about some unsolved problem.		
Check to see how someone with prior experience solved the problem.		
Try to find potential in an obviously weak idea.		
Build on someone else's idea.		
Ask someone with relevant expertise what action they recommend.		
Look for the most reliable approach.		
Try to improve on something that is already working.		

Check your answers in the Appendix

GENERATING IDEAS

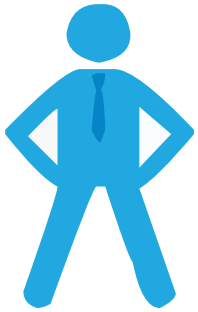
NOTES:

REFLECTION & INSIGHTS

How creative am I and where do I struggle?

What opportunities can I find to strengthen my creative “muscles”?

UPGRADING YOUR COURAGE



When you act, the key choice is between Apply and Explore. You can apply existing processes that you believe will work, which is following the Status Quo Cycle. Or, you can explore new ways of doing things in order to find out what will work, driving innovation.

When you apply your knowledge, it's usually because you have already concluded that your approach will work. You may delay taking action until you have a sense of certainty about the outcome. So you risk being overly cautious, or falling into Optimism Bias, the belief that your preferred option is more likely to succeed than it really is. When you are trying something new, you may fall in love with your idea and behave as though you already know it will work, instead of testing it to find out. So you underestimate the real risk.

WHEN YOU ARE NOT BRAVE: INNOVATION FAILS

What goes wrong...

- Overly cautious/risk averse
- Paralyzed by uncertainty
- Organizational inertia
- Untested ideas implemented too quickly

What happens as a result...

- Delayed action
- Missed opportunities
- Unexplored options
- Wasted resources
- Failure to adapt

In the real world, it is very difficult to accurately calibrate the risks you face. So it's wise to treat almost any action as a type of experiment. Your mindset needs to be one of curiosity and exploration. Yet you also need the faith and confidence to face uncertainty and risk failure. This is one of the paradoxes of an Innovator Mindset. It requires supreme confidence and profound humility at the same time. The recognition that you may fail, yet the courage to act anyway.

GOALS

In the Action Phase, you are trying to evaluate your ideas and alter events in some way. So your goals are to:

1. Test your ideas.
2. Impact the world around you.

ACTION STRATEGIES

- Treat your ideas as hypotheses to be tested, rather than as plans to be executed.
- Define your objectives, so you know when they have or have not been achieved.
- Know how you will distinguish success from failure, to learn what works and what doesn't.
- Strive to manage risk, so that failure is an acceptable (if unpleasant) outcome.
- Strive to anticipate where failure may occur.
- Expect surprises and be prepared to make course corrections as you learn from experience.

ASK YOURSELF 

- How can I make my ideas real?
- How can I find out whether my ideas will work?
- Do I have faith in myself and in these ideas?
- What resources are available to me?
- How might I fail and what would that look like?
- What are the risks of taking action and are they acceptable?
- How can I reduce the risks?
- Am I acting with confidence and humility?

CHECK YOUR UNDERSTANDING

Apply vs. Explore

When you take action, which pattern are you following when you...?	Status Quo Mindset	Innovator Mindset
Learn and follow the best approach.		
Move forward only when you are confident that you will succeed.		
Make failure impossible.		
Experiment with more than one possibility.		
Pick an idea that you know will work.		
Keep going even when you don't know what will happen.		
Anticipate where you may fail.		
Avoid taking any risks.		
Make sure you follow the rules.		
Improvise your way around problems.		

Check your answers in the Appendix

HAVING IMPACT

NOTES:

REFLECTION & INSIGHTS

How willing am I to take risks and face uncertainty?

Where can I be more proactive about trying new things and experimenting?

Take Note...

Don't Be That Guy

Nearly everyone is more comfortable operating in some Phases of the Innovation Cycle than in others. Certain people are good at coming up with ideas, but not good at implementing those ideas. Others are good at taking action, but not good at objectively evaluating their efforts. These personal gaps are so common they create familiar stereotypes.

The Starving Artist

This is someone who excels at being creative but not at accepting feedback. They think, "See how creative I am!" (But nobody cares.) They are weak in the Reality Phase. So they are not Aware of how their work is perceived. As a result, they create little or no real value. They are also failing to learn in ways that would help them improve.

The Know-it-all

This is someone who does okay in the Reality Phase but is weak in the Feedback Phase. They have reasonably good Awareness, but they are quick to assume that they already know what things mean. They are not Open to finding new interpretations. They tend to manipulate the data to fit whatever they already believe. So they fail to gain useful insights or discover anything new.

The Curmudgeon

A curmudgeon is someone who is weak in the Idea Phase. They lack imagination and often empathy. So they are not very Creative, and they don't see any need to change things. They think, "Just leave it alone. I like it that way." Even when there may be great room for improvement. So they stay stuck in the status quo (and apparently like being there).

The Dreamer

This is someone who is weak in the Action Phase. They have plenty of ideas, but they are not acting on them. They think, "Wouldn't it be awesome if..." but don't find out. Because they are not Brave enough and committed enough to pursue their ideas. So they don't accomplish much. They never have any real impact.

Each of these personality flaws is enough to stop innovation cold. The pattern is broken. No further progress can be made. Most of us have little trouble spotting these failings in others. Strive to recognize them in yourself, and actively guard against them.

THE WHOLE PACKAGE

Too often, we resist fully embracing these habits because we assess their value in isolation. We think things like, "I don't want to be ***too*** creative," or, "Why would I do something when I don't know how it will turn out?" These are perfectly rational concerns. It is not a good idea to become highly creative just because you like how it makes you feel. It is not wise to pour time and resources into wild speculations because you like the adventure of it. It is important to determine whether what you are doing creates any real value.

Adopting any of these habits can be potentially harmful, if you are not also developing the other habits too. It is no accident that value creation really kicks in and accelerates at about three quarters of the way up the Innovativeness Index. Because to score at that level, you are probably favoring the Innovation Cycle across all four Phases. It is by applying these habits in combination that they become truly powerful.

Thankfully, this tends to happen on its own. There is an internal logic to both the Innovation and Status Quo cycles that tends to shift your mindset in the same direction across all four Phases. This becomes apparent when you think of the Innovation Cycle in reverse. Creating new value requires that you do something different. So you need some creative ideas. To come up with great ideas, it makes sense that you would need some great insights. Those insights need to be based on sound observations, and so on. Research data confirms a significant correlation between how people score on any of these habits and how they score on the others.

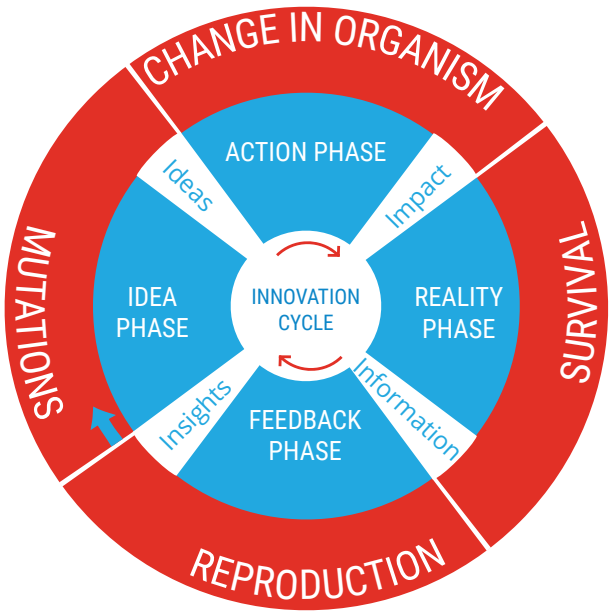
Unfortunately, the Status Quo cycle creates the same kind of momentum. Drawing on our knowledge to solve problems and meet our challenges is appealing, partly because we think we know what will happen. So we look for evidence that confirms our success and use that to reinforce the knowledge we already have. There is no off ramp. To break out of this pattern, you have to make deliberate choices. But those choices will not be effective if they are made in isolation. You need to follow a different path, by shifting to the Innovation Cycle.

You can wait to make that shift until it becomes painfully obvious that your current knowledge and practices are no longer working. Or, you can develop habits that enable you to anticipate and prevent those lapses.

THE INNOVATION CYCLE AND OTHER MODELS

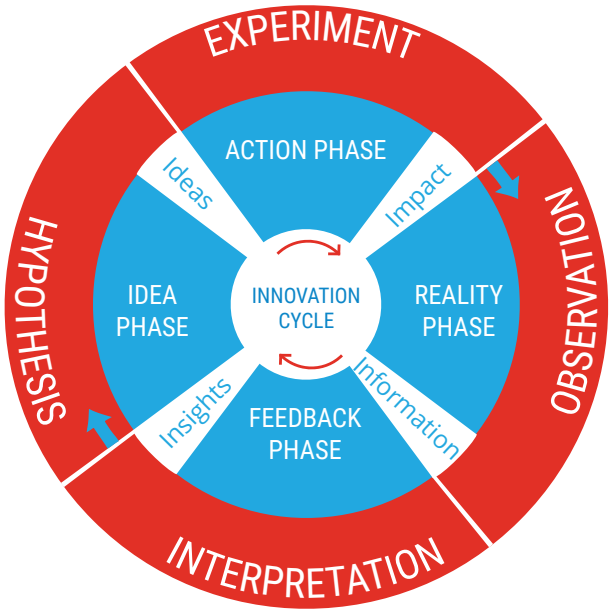
The Innovation Cycle provides a template for evaluating and optimizing any innovation model or strategy. So increasing your proficiency in using the Innovation Cycle makes you more proficient at using many innovation processes.

The following maps compare various innovation processes to the Innovation Cycle, revealing similarities, and gaps. These maps also show where tools and strategies can be appropriately transferred from one model to another. It's possible to "begin" the Innovation Cycle anywhere, so different innovation approaches may have different starting points, which are shown with a



NATURAL SELECTION

Nature has been innovating for billions of years. Natural Selection illustrates how well the Innovation Cycle works even without any creativity or intent. Random mutations ("Idea" Phase) create changes in an organism (Action Phase). The environment (Reality Phase) then determines whether the change is advantageous or harmful. The organism then survives to reproduce or fails to (Feedback Phase). When reproduction does occur, the change is passed along to subsequent generations (saved) and becomes a potential source of further innovation. In nature, things like insights and ideas do not exist as they do in human-fostered innovation, but the pattern is the same.

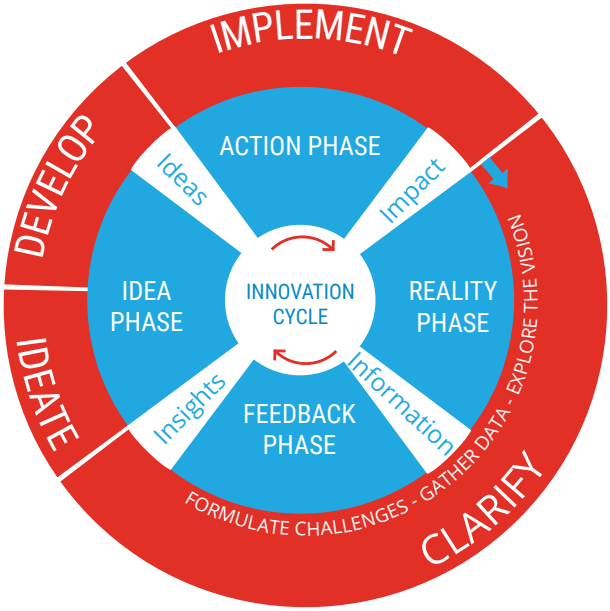


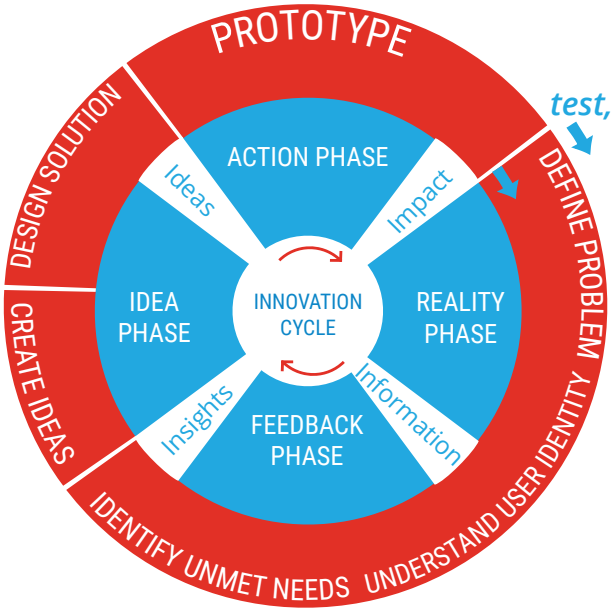
THE SCIENTIFIC METHOD

The Scientific Method has now been with us for hundreds of years, and it continues to be our most powerful tool for gaining new knowledge and insights. It was one of the inspirations for the Innovation Cycle, so it's not surprising that they match up. The Scientific Method typically starts with either an observation (Reality Phase) or a hypothesis (Idea Phase). However, an individual scientist may pick up the cycle anywhere. For example, someone might start in the Action Phase by designing an experiment to test a pre-existing hypothesis, or start in the Feedback Phase by reinterpreting existing data to develop a new theory.

CREATIVE PROBLEM SOLVING

Creative Problem Solving is the oldest widely used systematic model of creativity, dating from the 1950s. Commonly called brainstorming, it has been updated many times based on research and borrowing from other models and disciplines. CPS is generally treated as a linear model that does not explicitly iterate. Still, it maps onto the Innovation Cycle. It includes tools for implementation but strictly speaking not experimentation.





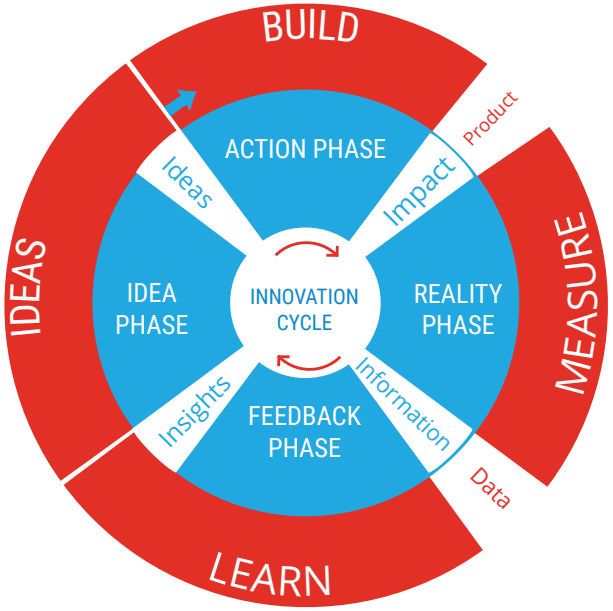
test, learn, refine

DESIGN THINKING

Design Thinking, like Creative Problem Solving, tends to blend together data gathering (Realty Phase) and analysis (Feedback Phase), which is partly a reflection of the ethnographic qualitative research that is at its core. Also, like Creative Problem Solving, Design Thinking divides ideation (Idea Phase) into two steps: idea generation and idea refinement. Design Thinking is explicit about testing and iterating the solutions it develops. The final step in the Design Thinking process, Test-Learn-Refine, is in a sense taking another lap around the Innovation Cycle.

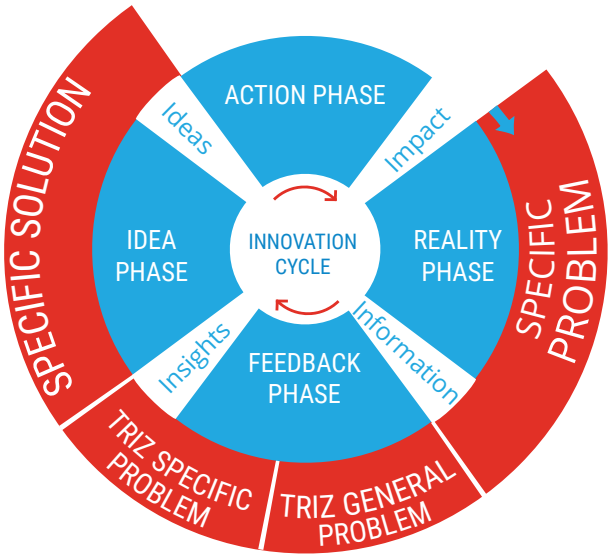
LEAN STARTUP

LEAN Startup is called a three step process, but it easily maps to the four phases of the Innovation Cycle. LEAN Startup has a Build step (Action Phase) that creates a Product, a Measure step (Realty Phase) that creates Data and a Learn step (Feedback Phase) that leads to new ideas (Idea Phase). Like the Innovation Cycle, LEAN Startup is an iterative process.



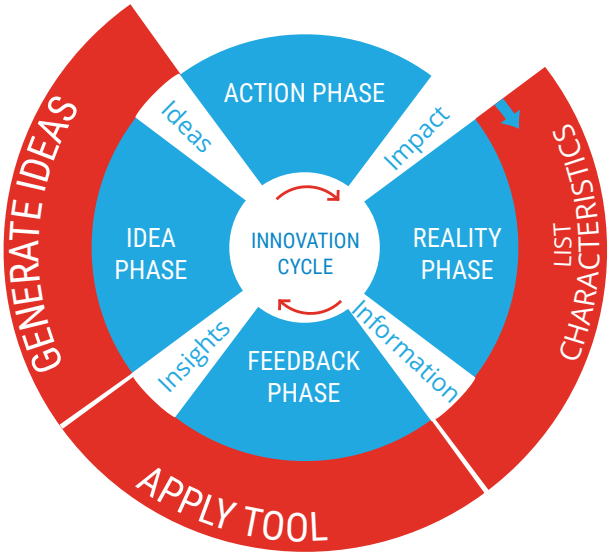
TRIZ

TRIZ is based on the belief that all technology innovations have already been figured out and fall into identifiable patterns. So solutions are best found by looking at comparable solutions used elsewhere, or by identifying certain patterns. TRIZ maps to just part of the Innovation Cycle, substituting analysis, pattern recognition and retrieval for other approaches to ideation. With TRIZ, the Reality Phase (observation and data gathering) is less robust than some other models, while the Feedback and the Idea Phases are extensive. A considerable number of innovation tools have been developed by TRIZ practitioners that build on and expand the TRIZ approach.



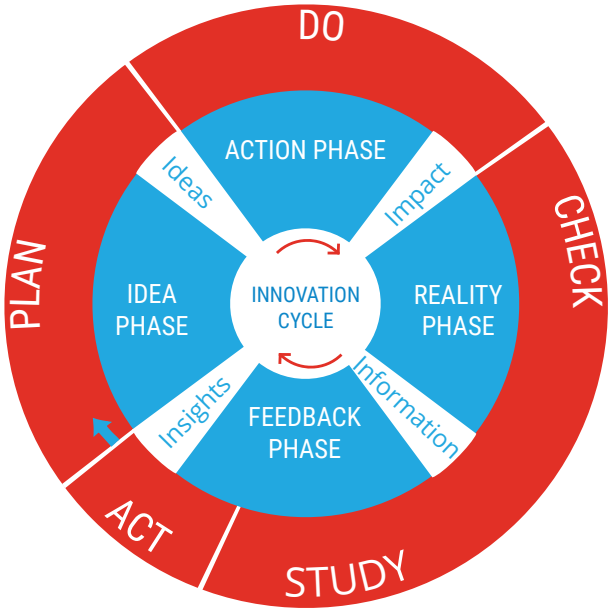
SYSTEMIC INVENTIVE THINKING

Systematic Inventive Thinking (SIT), also known as Thinking Inside the Box, was inspired by the TRIZ methodology. It is a clever set of tools for generating creative ideas and solutions. SIT resembles older Creative Problem Solving models, in that it does not provide for experimentation and iteration (although it does not preclude doing those things). Instead, it focuses on generating good usable ideas. So, like TRIZ, it maps to part of the Innovation Cycle.



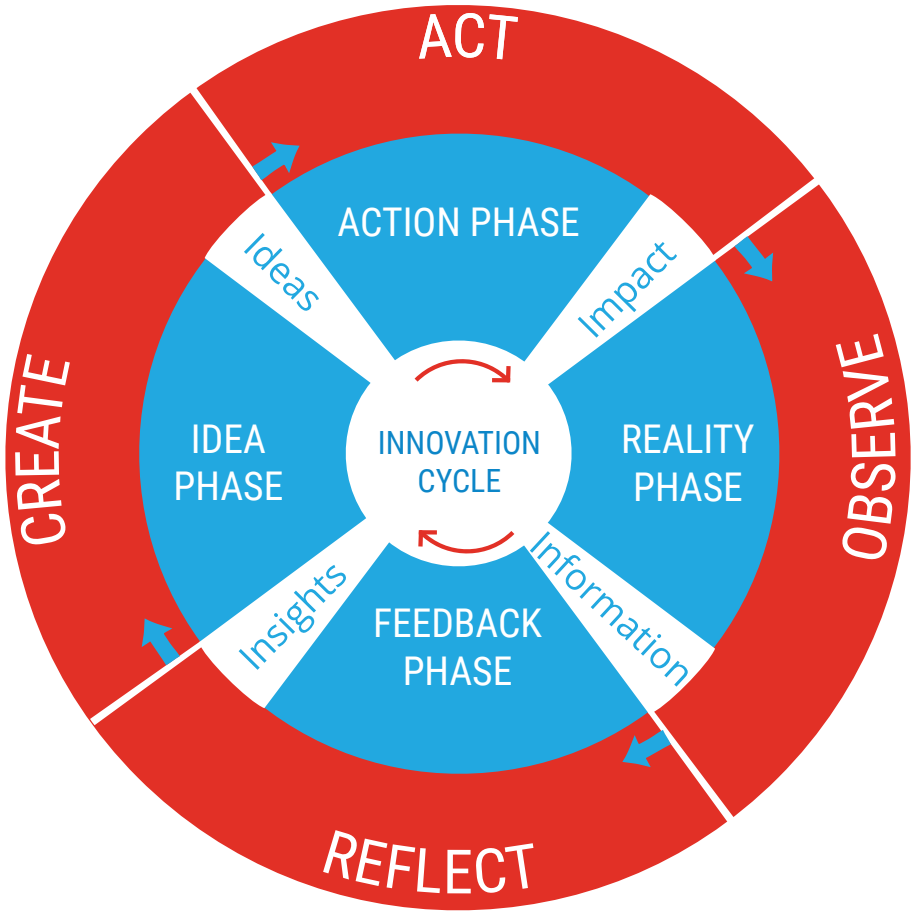
PLAN DO CHECK ACT

The Plan Do Check Act (PDCA) cycle, popularized by W. Edwards Deming, is widely used in project management and for continuous improvement. It is applied primarily to optimize and enhance existing processes (Status Quo Cycle) but can also be used to develop new ones. PDCA begins with planning (Idea Phase). The Do step (Action Phase) tests that chosen approach. The Check or Study step (Reality Phase) measures changes in performance, to determine whether a new or enhanced process should be adopted (value creation). In PDCA, the Act step refers to when a process change is actually adopted into practice.



ORCA

ORCA Observe/Reflect/Create/Act is a process and a set of tools specifically designed to implement the Innovation Cycle. These tools can be used beginning with any Phase and the process usually involves iterating through the cycle multiple times. The next section explains the ORCA process and tools more fully.



TOOLS OF AN INNOVATOR: ORCA

ORCA is an innovation process based on the Innovation Cycle. It can be used as a stand-alone set of innovation tools. Or, it can be used to enhance other innovation processes by assuring that they are applied in ways that follow the Innovation Cycle. Distinguishing between Innovative and Status Quo Thinking is a good strategy whenever you seek to innovate.

ORCA is a simple mnemonic for remembering to follow the Innovation Cycle. It stands for Observe, Reflect, Create and Act. Each of these tools is designed to implement a Phase of the Innovation Cycle, and to reinforce the Habits associated with that Phase. (See the following chart.) But the terms are less important than the concepts and strategies they describe.

The ORCA process can begin with Observe, as shown here, or with any of the four ORCA tools.

HABITS	AWARE	OPEN	CREATIVE	BRAVE
IM PHASES	Reality	Feedback	Idea	Action
STATUS QUO VS. INNOVATION	Validate vs. Challenge	Reinforce vs. Discover	Know vs. Imagine	Apply vs. Explore
POTENTIAL BIASSES	Confirmation Bias	Ego Bias Assumption Bias	Knowledge Bias	Optimism Bias
ORCA TOOLS	Observe	Reflect	Create	Act

QUESTIONS AS TOOLS

A simple and effective way to maintain Innovative Thinking and avoid falling into Status Quo Thinking is to ask a series of questions, and resist the temptation to make firm assertions. Asserting what you believe to be true tends to pull you into relying on what you know and looking for reinforcement. Asking questions opens you to new insights and discoveries.

For each tool, there are two sets of suggested questions or prompts.

1. Initial questions

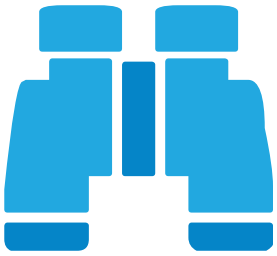
These are intended to be used when you first encounter a situation before you have taken any specific action.

2. After action questions

These are more specific questions to be used once you have acted on an idea, as you continue around the Innovation Cycle. The initial questions may still be relevant, but these additional questions are designed to gauge what impact you have had. Your focus should tend to narrow as you close in on the best solution or approach.

What at first may seem like a lengthy process will get quicker over time. As you become proficient at each of these habits they will gradually become second nature, helping to develop your Innovator Mindset while addressing real innovation challenges.

OBSERVE: GATHERING FACTS AND DATA



With Innovative Thinking, the objective when you observe is to gather accurate information, with minimal interpretation. For example, when a product isn't selling,

Think: Sales are low. Or: Sales are less than what was projected.

Don't think: Customers don't like the product.

Those first observations briefly state known facts, leaving the interpretation of those facts as a separate step. The second observation makes a specific interpretation that may or may not be appropriate. (Customers may like the product but think the price is too high.) This prematurely directs your interpretation in ways that limit your possible responses. So you may end up solving the wrong problem or developing a less than ideal solution.

Think skeptically, as a potential investor might look at things. What issues/challenges/concerns/unknowns/uncertainties are there? Ideally, you should observe and talk to customers and potential customers to identify problems, issues and potential opportunities. Investigate the current state of the art around a new technology. Look at what other service providers, competitors and potential competitors may be doing, and so forth.

PROCESS: FACT CHALLENGING

1. INITIAL OBSERVATIONS List your observations as statements of fact.
2. FACTS Review your list and revise your observations to minimize or eliminate any interpretation.
3. REFINEMENT Ask yourself, How might this not be true? Add possible alternatives to your list. These may be questions that reflect your uncertainties.

This prevents you from taking your observations at face value. It opens you up to creatively thinking about what's really happening. If you can imagine how something may not be true, it may not be a reliable observation. It may need to be refined and further clarified. By doing this, you begin to generate important questions and insights. When possible, investigate the situation further to generate the best possible information.

QUESTION PROMPTS

INITIAL TAKE: OBSERVING THE SITUATION

- What do I need to be sure to notice?
- What is happening?
- What is the situation/context?
- What is working or not working?
- What is unexpected?
- Who is being impacted and how?
- What are their concerns and expectations?
- What might I be missing?

AFTER ACTION: OBSERVING YOUR IMPACT

- What impact did I have?
- How does this compare to what I expected?
- How did I succeed or fail in my objectives?
- What worked and what did not work?
- What changed?
- How did I solve or fail to solve the problem?

Take Note...

Innovation is "Effectal"

Innovation requires what has been called a "strange inversion of reasoning."

When you want to influence events, you probably think in terms of linear cause and effect. "If I do this, then this will happen." That logic works fine when you are working within the status quo following well-understood processes. Established businesses do it every day. But new products and ventures require a different approach. Rather than being causal, innovation is effectal. Its success depends not on prior causes, but on what the effects are. What matters is the outcome—an outcome you do not control.

When you are trying something new (and if it is not new, it is not innovation), you cannot be certain how it will turn out. Your success will be determined by the realities that you confront. If what you are trying to do does not fit those realities, it will not work, and no amount of resources or hard work or force of will can change that. You have to find a way to align with those realities in order to achieve your objectives.

Elite innovators, like shrewd entrepreneurs, are skilled investigators. What most distinguishes them is not their ability to execute a plan they know will work, but to test their ideas in order to find out what will work. They are excellent "figure-outers." You don't get to tell your customers what they will buy. They tell you. They determine whether you create any value. Your success as an innovator is determined not by prior events, but by the effect of your actions. Effect becomes cause, creating a circle of mutual influence and interaction between you and the realities you face—the Innovation Cycle.

This is not to say that you are powerless. Far from it. But to innovate you must be an inventive and resourceful detective. With an objective in mind and the courage to pursue it, yet humbly accepting that you cannot fully control the result. In a sense, you need to think backwards, starting with your desired outcome, such as a successful new venture or product or service. Then working out how to get there by learning what your customer needs and expects.

To quote Steve Jobs, that's how you, "Put a dent in the universe."

REFLECT: INTERPRETING INFORMATION

With Innovative Thinking, the objective when you reflect is to interpret the information you have gathered in order to gain insights and make discoveries. You are striving to identify problems and opportunities and learn from your experience. The insights you gain will then become the basis for developing ideas and solutions. This part of the Innovation Cycle is frequently where the real "heavy lifting" of innovation occurs.

PROCESS: INSIGHTS & OPPORTUNITY PATHS

1. ALTERNATIVE INTERPRETATIONS Look at your initial observations and ask yourself how they might be wrong, or what other explanations might there be. Do your best to develop multiple ways to interpret the facts you have listed.
2. INSIGHTS & OPPORTUNITY PATHS Look at your interpretations and explore their implications. What possibilities or opportunities do they present? What have you discovered? List these.
3. SELECTION Choose the most promising Opportunity Paths and bold or highlight these in some way. These may be specific problems to be solved, opportunities you have identified or some new understanding of your customer or marketplace.

You want to discipline yourself to think flexibly about what you observe and not assume you already know what it means. Strive to identify and challenge any assumptions you may be making. Look for things you can influence or control. Your goal is to gain insight, not necessarily decide what is true.The more unique insights and discoveries you make, the more options you have when generating ideas. Ideas based on good insights are much more likely to be relevant and promising than those you generate by randomly brainstorming.

QUESTION PROMPTS

INITIAL TAKE: MAKING SENSE OF THE DATA

- Why did this happen?
- What does this mean?
- Why are things the way they are?
- What's good or bad about this?
- What's new or unexpected about this?
- What can I learn from this?
- Who might interpret things differently and in what ways?
- What hidden assumptions am I making and how might they be incorrect?
- How would someone challenge my thinking?
- What are the urgent issues?
- What unsolved problems are there?
- Where is there a potential opportunity?

AFTER ACTION: EVALUATING YOUR IMPACT

- Why did I succeed or fail?
- What have I learned and how can I apply it?
- What could I have done differently?
- What are the strengths of this approach? (What should I preserve?)
- What are the weaknesses of this approach? (What should I improve?)
- What have I discovered?
- What insights have I gained?
- How does this change my thinking?
- What do I still need to learn?
- Who can help me understand this?

CREATE: GENERATING IDEAS

This is the most purely creative and therefore least predictable part of the process. But if you have been thorough in reflecting on things and genuinely open to new understanding, that gives you a huge running start. Your best ideas are likely to flow from those musings. Many times, you will have already formed some ideas and solutions as you reflected on the situation.

PROCESS: IDEATION & INCUBATION

1. IDEATION Reflect on your Opportunity Paths to see what sort of ideas they prompt. These are frequently fairly obvious at this stage. A problem well-understood is often half solved. If some solution pathways are clearly different approaches, or when there are too many to pursue at once, select one or a few to focus on and develop. You can then perhaps go back and consider others

2. SELECTION Review the ideas generated and choose the ones you think are most promising, the ones you intend to pursue. Perhaps hold others in reserve for future exploration.

There are many ideation strategies you can try, including brainstorming, drawing analogies to other situations, forcing yourself to find connections between seemingly unrelated topics or just going for a walk. You can also go back to Reflect and try a different solution pathway.

Whenever time permits, give yourself time to incubate new ideas. Scan for possibilities and connections in your environment, conversations, experiences, and in what you read. Just giving your subconscious time to process and build on your insights can sometimes be remarkably effective. Keep a notepad or mobile phone with you at all times (24/7), so when ideas occur to you, you can record them.

You will get better at ideation as you practice it and develop your other innovator habits.

QUESTION PROMPTS

INITIAL TAKE: LEVERAGING INSIGHTS

- What can I do now?
- What can I create?
- How can I help?
- How could things be done differently?
- What are some possible solutions?
- What would make this easier? More effective? More fun? More valuable?
- What elements can I add, remove, duplicate, modify or repurpose?
- What solutions used elsewhere might work here?
- What difficult contradictions are there that if resolved might produce a breakthrough?
- What would make the situation better or worse?
- What would be really awesome?

AFTER ACTION: REFINING POSSIBILITES

- What other approaches or opportunity paths can I try?
- How can I improve on my ideas?
- What insights have I gained that will help me do this better or differently?
- How can I improve the chances for success?

ACT: HAVING IMPACT

Every idea is really a hypothesis to be tested. If you are already sure it will work, it's probably not very innovative. So your challenge is to find out. Sometimes that means "just go try it," but you should do that in ways that enable you to learn and gain insights. So you can refine your ideas, or find better ones.

PROCESS: EXPERIMENTATION & IMPACT

1. EXPERIMENTATION Plan how you will implement your ideas. What needs to happen to make them a reality? What options do you have? What resources do you need? How can you design experiments to answer key questions?
2. IMPACT What are your intended outcomes? How will you know what is working and whether you are creating value? What do you hope to learn? List these as hypotheses to be tested and explored.
3. ACT Execute your experiments and observe the consequences.

This will only rarely be the end of your innovation efforts—when your first attempt works. Most innovations require multiple laps around the Innovation Cycle. As you iterate your way to success, note the After Action question prompts.

Whenever possible, set outcomes that can be measured and use meaningful metrics. Don't just count visits to your website; count how many of them actually buy what you are selling. Isolate the variables, by focusing on one hypothesis at a time. So when it does or doesn't work, you know why. It sounds counterintuitive but make sure failure is possible. It's what a scientist calls falsifiability. If you can't tell when you have failed, you are not really testing your idea. You're just trying to prove you are right. You won't learn much.

Exploring your ideas can be a real test of character. To do it well, you will need faith, determination, courage and humility. When your experiments succeed, you are poised to discover something. When they fail, you can still gain valuable insights.

QUESTION PROMPTS

INITIAL TAKE: EXPLORING IDEAS

- Exactly what impact do I want to have?
- How can I make this happen?
- How can this idea be tested?
- How can I confirm my hunches?
- What is the best way to go about doing this?
- Is this likely to create value?
- Is this feasible?
- What resources are available to make this work?
- How can I do this with the least time and expense?
- How risky is this and is that risk acceptable?
- What if I fail?
- How will I know if I have failed and what will that teach me?

AFTER ACTION: SUBSEQUENT ATTEMPTS

- What else can I try?
- What else do I need to know and how can I find out?
- What should I do differently?
- What questions are still unanswered?
- How can this be done more effectively?
- How can I get better answers?
- What can I do that will teach me the most?

Take Note...

Imagine that you want to spell the word "innovation" by just guessing. That's 10 letters with 26 possibilities for each letter. Trying all possible combinations would require more than 141 trillion guesses. At one guess per second that will take you almost 4.5 million years.

Now suppose that you guess each of those letters on a computer that is programmed to tell you when you guess a letter correctly. Like the genie with a puzzle (p.10), it does not give you the answer, but simply tells you when your attempts "work." Finding a solution now will take at most 260 attempts, a task you could complete in less than 4.5 minutes. You are still guessing but your efforts become hundreds of billions of times more efficient!

If you add just one more letter to make the word plural, pure guessing will take 26 times longer still. That is more than 100 million years! But with a way to check what works, it will only add another 26 seconds.

That is the astounding efficiency of the Innovation Cycle. Even without great ideas, astute insights or profound courage. Just by systematizing your guessing, it enables you to find solutions and create value, faster than any other approach we know.

This pattern has proven itself in countless ways. It is the pattern of natural selection that has created life. It is the pattern of the scientific method that has dramatically accelerated our ability to gain new knowledge and develop technologies. It is the pattern of business research and development that has accelerated commercial value creation. And it is the iterative processes in innovation and with new startups that are having the same effect. The research data on entrepreneurs shows that those who favor the Innovation Cycle are dramatically more likely to achieve success and create exceptional value.

That is what an Innovator Mindset enables you to do. Rapidly create tremendous value. And the more adept you are at applying that mindset, the more powerful it becomes. You should now know how the Innovation Cycle works and what habits it requires. Now you need to put that mindset into practice.

It is, in a very real sense, the universe's killer app.

OTHER INNOVATION TOOLS

There are many innovation tools that correspond to ORCA. Some of the most widely used ones are listed here. All of these can easily be found online, along with where they originated and how to apply them. Use them to supplement ORCA and use ORCA to enhance how you use these tools.

OBSERVE: REALITY PHASE

- Appreciative Inquiry
- Behavioral Mapping
- Customer Demos
- Customer Interviews
- Customer Surveys
- Diary Study
- Ethnography
- Eye Tracking
- Genchi Gembutsu - Go and see for yourself.
- Innovation Accounting
- Positive Deviance
- Voice of the Customer
- Web Analytics

REFLECT: FEEDBACK PHASE

- Affinity Diagram
- Analogs & Antilogs
- Assumption Surfacing
- Cohort Analysis
- Customer Interviews
- Customer Profiling/Archetypes
- Emotional Journey Map
- Empathy Map
- Experience Mapping
- Five Whys
- Focus Groups
- Process Flow Diagram
- Shoshin – The Beginner's Mind
- Startup Learning Milestones
- Statistical Analysis
- Storyboarding
- SWOT Analysis

CREATE: IDEA PHASE

- Brainstorming
- Brain Writing
- Creative Process Incubation
- Creativity Simile & Metaphor
- Diverge Converge
- Idea Management
- SCAMPER
- Scenario Planning

ACT: ACTION PHASE

- Experimental Design
- Growth Hypothesis
- Value Hypothesis
- Kanban
- Leap of Faith
- Minimum Viable Product
- Opportunity Analysis
- Prototyping
- Small Batches
- Split A/B Testing

MY NARRATIVE

What is my personal innovator narrative, based on the Phases and Profiles of my Innovation Cycle?

What shifts could I make to more fully access my own brilliance?

MEET DENNIS STAUFFER

Dennis is founder, CEO, lead researcher and chief innovator at Innovator Mindset.

He first published the key concepts behind Innovator Mindset in his book Thinking Clockwise, A Field Guide for the Innovative Leader in 2005, winning the Fresh Voices book award. Dennis co-developed what is now called the Innovator Mindset assessment in 2008. The initial validation research was conducted inside several organizations, including Medtronic, Thomson Reuters and Allina Health Systems. This technology has been used extensively with research and development teams, executive teams, project managers, students, entrepreneurs and thousands of individuals.

In 2010, a paper describing the theory behind Innovator Mindset and the research done to validate it, was presented at the annual symposium of the International Society for Professional Innovation Management.

In 2012, the Worcester Polytechnic Institute and the Donahue Institute at the University of Massachusetts invited Innovator Mindset to participate in a National Science Foundation grant to develop the innovativeness of graduate students. This was part of the NSF's Integrative Graduate Education and Research Traineeship (IGERT) program.

In 2013, research was conducted with more than 300 entrepreneurs with the help of the Kauffman Foundation for entrepreneurship. That peer-reviewed research found a predictive link between a founder's innovativeness and the success of their venture, as measured in profits, revenues and jobs created. That work led to the publication of three articles that appeared in series in the International Journal of Innovation Science.

Research is ongoing into the applications and benefits of the Innovator Mindset approach in a wide range of settings. The Innovator Mindset instrument is also available for use by other researchers. Research proposals and potential collaborations are welcome.

APPENDIX

Status Quo vs. Innovator Mindset

Are you favoring the Status Quo Cycle or the Innovation Cycle when you...?	Status Quo Mindset	Innovator Mindset
Answer a tough question by searching for it online. *Anytime you search existing knowledge, you are favoring the status quo.*	✓	
Dream up a new way to flavor coffee. *This one should be obvious. Imagining new possibilities is a key step toward innovation.*		✓
Try a new route to commute to work. *This exercises your innovation muscles by experimenting with a new option.*		✓
Use a map to find your way around an unfamiliar city. *Think of the map as existing knowledge that you are relying on to get to the correct location.*	✓	
Look for personal validation from co-workers, friends and family. *Validation usually means getting reinforcement for doing what you do and being the way you are. We all like to be valued, but we also need to know where we may need to make changes.*	✓	
Seek negative feedback following a presentation. *Genuinely seeking to know where you can improve, helps you to get better.*		✓
Use data and information to confirm what you expected to find. *Seeking confirmation is a natural tendency, but it is unlikely to lead to learning anything new (unless you are confirming the expected results of a new experiment).*	✓	
Change your thinking about some long held belief. *This a great test for how open minded you really are. When was the last time you did it?*		✓
Carefully follow instructions. *This is being guided by existing knowledge and expertise.*	✓	
Encourage someone to disagree with you. *This is a great strategy for getting other people's take on things and challenging your own thinking.*		✓

Aware: Validate vs. Challenge

When you observe, which pattern are you following when you…?	Status Quo Mindset	Innovator Mindset
Make sure you don't miss anything. *This is impossible. Our senses pick up only a tiny fraction all the things happening around us at any point in time. Believing that you are seeing everything only lulls you into the false belief that you could not have overlooked something. Just because you did not notice something, that doesn't mean it was not there.*	✓	
Make sure that you have gotten things done right. *This is classic "detect and correct." We all like being right—sometimes a little too much. Making that your primary goal tends to create confirmation bias.*	✓	
Try to imagine what you should look for. *What you do not anticipate, you frequently do not see. So effective observation is an imaginative process.*		✓
Pay close attention to the evidence. *This is always a good idea—and especially when you want to innovate, because it helps to reduce your biases.*		✓
Avoid being distracted by things that are not relevant. *Determining what is relevant and what is not is usually based on what you already know about a situation. What may seem irrelevant could be the path to a breakthrough idea.*	✓	
Avoid making assumptions. *We all make many assumptions, or we couldn't function. Rather than deny that you make them, strive to identify and examine your assumptions.*	✓	
Strive to identify your biases. *This is important for a list of reasons. It's important for innovation because without it, you are likely to corrupt the data and misunderstand the realities you face.*		✓
Expect to have blind spots. *We all have them. So instead of pretending they are not there, try to identify and correct them whenever possible.*		✓
Do your best to prove that you have been successful. *This is what we do when we want to be right. It is understandable but it can blind us to important cues about where we need to make adjustments.*	✓	
Are willing to be surprised. *The things you do not expect are often the things that teach you the most and give you opportunities to make discoveries.*		✓

Open: Reinforce vs. Discover

When you are interpreting information and feedback, which pattern are you following when you...?	Status Quo Mindset	Innovator Mindset
Seek unexpected insights. *This is one of the most powerful ways to achieve innovation.*		✓
Look for new things to discover. *That is what innovators do.*		✓
Reach more than one interpretation. *There are always multiple ways to understand what you observe and experience. Each one is an opportunity to gain new insights.*		✓
Expect one definitive answer. *This is what we do when we think we already have something figured out, and insist on being right. Recognizing that things may be ambiguous leads to a more nuanced understanding.*	✓	
Find what you expected to find. *Your expectations are usually based on the status quo (unless you are testing a new idea).*	✓	
Learn something unanticipated. *This is just the sort of path an innovator wants to be on.*		✓
Seek input from others. *Other perspectives broaden your options and open you to new ideas and understanding.*		✓
Reject alternative opinions. *When you conclude that someone is wrong, you are probably doing that based on what you think you know, not on what you may be able to imagine. Opinions may be debatable but they are rarely true or false in the same way that facts are.*	✓	
Make quick decisions and move on *This is common in business but it can prematurely cut off opportunities to innovate.*	✓	
Leave some questions unanswered. *Not everything has to be settled immediately. Sometimes staying with the questions keeps you open to new creative options.*		✓

Creative: Know vs. Imagine

When you are trying to solve a problem or come up with ideas, which cycle are you following when you…?	Status Quo Mindset	Innovator Mindset
Search for solutions to a similar problem in other fields. *This is a widely used strategy for finding innovative solutions and prompting creative ideas.*		✓
Remember what worked for you last time. *When you do what you have always done, you will get what you have always gotten.*	✓	
Conclude that an idea will not work, because it has not worked before. *Using knowledge as a filter for evaluating new ideas tends to limit your options to those things you already know how to do.*	✓	
Take a walk while you muse about some unsolved problem. *This is a popular and effective way to tap into your creativity.*		✓
Check to see how someone with prior experience solved the problem. *This is sometimes a helpful place to start, but someone's past experience is part of the status quo. To innovate, you need to move beyond that.*	✓	
Try to find potential in an obviously weak idea. *Many ideas have potential that can be developed when you take time to explore them.*		✓
Build on someone else's idea. *This is a common brainstorming strategy and often the source of great new ideas.*		✓
Ask someone with relevant expertise what action they recommend. *Going to an expert can be helpful in developing options, but expertise is based on the status quo and can become a powerful obstacle to coming up with new approaches.*	✓	
Look for the most reliable approach. *To be reliable, you need to be doing something you know will work and if you already know it will work, it is probably not very innovative.*	✓	
Try to improve on something that is already working. *This is what innovators do every day.*		✓

Brave: Apply vs. Explore

When you take action, which pattern are you following when you…?	Status Quo Mindset	Innovator Mindset
Learn and follow the best approach. *The best (known) approach is probably something that is already being done, and therefore not particularly innovative.*	✓	
Move forward only when you are confident that you will succeed. *Innovation requires that you risk failure and act in the face of uncertainty.*	✓	
Make failure impossible. *When you are innovating, failure is always a possibility, or you are just doing what you already know how to do.*	✓	
Experiment with more than one possibility. *This is usually necessary to innovate and tends to reduce the temptation to try to force your favorite idea to work.*		✓
Pick an idea that you know will work. *If you know in advance that it will work, it is probably not very innovative. Great new ideas come with some uncertainty.*	✓	
Keep going even when you don't know what will happen. *Acting despite your uncertainties is exactly what innovation requires.*		✓
Anticipate where you may fail. *This helps you to manage risk and identify what to watch for. If you cannot fail, you are not experimenting.*		✓
Avoid taking any risks. *No risk = No innovation*	✓	
Make sure you follow the rules. *Rules are usually designed to protect the status quo and make sure things are done in some established way.*	✓	
Improvise your way around problems. *Knowing how to improvise frequently leads you to find new and unforeseen solutions.*		✓

INNOVATOR MINDSET TERMINOLOGY

CYCLE PHASES Where you are	INNOVATOR HABITS How you are	ORCA TOOLS What you do	THE CHOICES you make	THE CYCLES those choices reflect
Reality	Aware	Observe	Validate or Challenge	Status Quo Innovation
Feedback	Open	Reflect	Reinforce or Discover	Status Quo Innovation
Idea	Creative	Create	Know or Imagine	Status Quo Innovation
Action	Brave	Act	Apply or Explore	Status Quo Innovation

This worksheet is designed so that it can be photocopied and enlarged 127% to fit a legal size sheet of paper

PROJECT _____

ORCA Canvas

innovator mindset

OBSERVE – Reality Phase		REFLECT – Feedback Phase		CREATE – Idea Phase		ACT – Action Phase	
Observations	Facts	Alternative Interpretations	Insights & Opportunity Paths	Ideation	Selection	Experimentation	Impact

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Innovator Mindset is a philosophy, methodology and technology for driving innovation.

An approach centered on the human factors that enable and enhance the capacity to innovate. If you, your venture or your organization would like some help advancing your innovation agenda, contact us.

IM can help you

- Identify and create high potential innovators among students, employees, leadership and
- candidates.
- Dramatically improve the odds of innovation and new venture success.
- Optimize your approach to launching a new venture, product or service.
- Boost personal innovativeness and the ability to create value, in any context.
- Identify and create high potential innovators among employees, leadership and candidates.
- Develop innovative leadership skills.
- Foster a culture of innovation.

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Applications

- Undergraduate and graduate instruction in innovation and entrepreneurship
- Startup incubators and accelerators
- Business & executive coaching and team building
- Developing Innovative leaders
- Fostering a culture of innovation

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