WORKBOOK

INNOVATION:

FINDING YOUR WAY

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INNOVATION:

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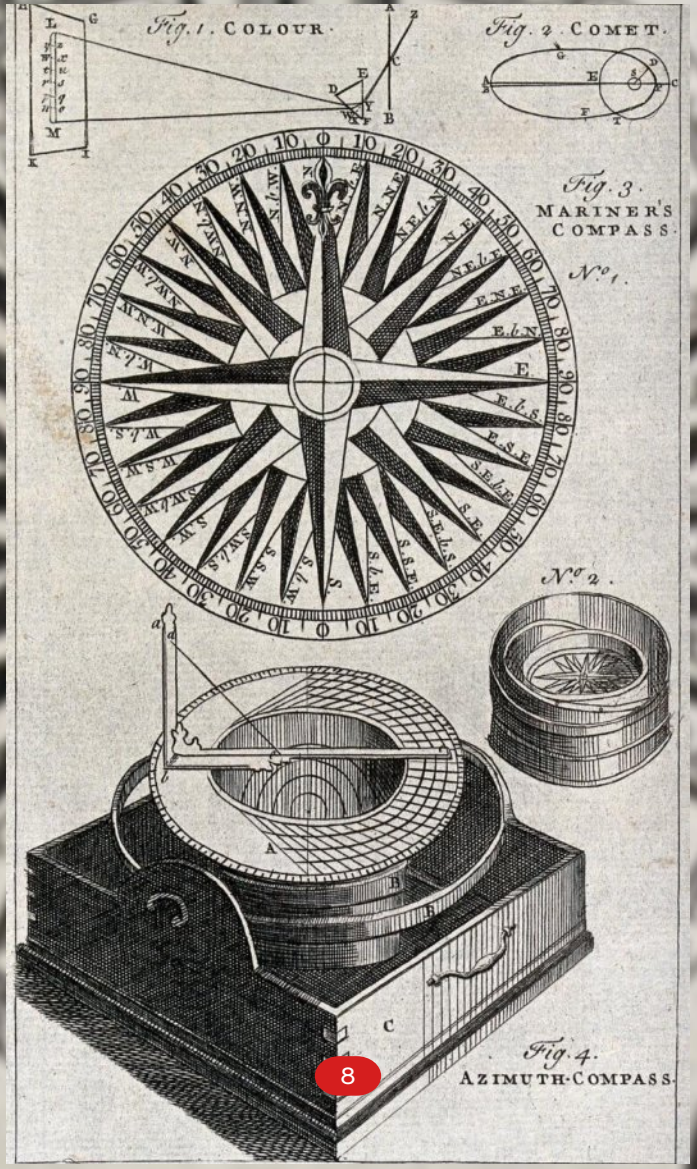

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INTRODUCTION

FINDING YOUR WAY TO INNOVATION

In today's fast-paced world, innovation is a critical element for success, and yet many people struggle with how to begin innovating or how to remain innovative. **"Innovation: Finding Your Way"** is a practical guide designed for those who aspire to innovate and those who seek to enhance their innovative capabilities.

With its unique and comprehensive toolkit, **"The InnoNavigator,"** this workbook provides the essential tools and concepts for innovation that are not covered elsewhere (p.80). The book is supported by exercises and activities that guide readers through the innovation process, making innovation accessible to a broad audience.

This book covers both the technical aspects of innovation and the human side of the innovator. It encourages readers to be bold, experiment, and pursue new and creative ideas. The tone of the book is uplifting and inspirational, meant to motivate and empower innovators at all stages of their journey.

"Innovation: Finding Your Way" presents innovative concepts and ideas intended to give a new perspective to the way innovation is approached. The author utilized cutting-edge technologies, such as Canva and DALL-E, and even used OpenAI's ChatGPT as a proofreader and sounding board for ideas, to bring a fresh and modern perspective to the book.

Whether you are an experienced innovator or just curious about innovation, this workbook will challenge and inspire you to take your innovation skills to the next level. So, welcome to **"Innovation: Finding Your Way,"** a practical guide for those looking to embrace innovation in their work and life.

NAVIGATING YOUR WAY THROUGH THIS WORKBOOK

PART 1

Because You Want to **EMBRACE INNOVATION**, You Are Here

PART 2

Because Someone **TOLD YOU TO FIND** Your Way, You Are Here

PART 3

Because **YOU WANT TO FIND** Your Way, You Are Here

PART 4

Because **YOU ARE FINDING** Your Way, You Are Here

INNOVATION:
FINDING YOUR WAY

SYMBOLS USED IN THIS BOOK

PART 1

Because You Want to

EMBRACE INNOVATION,

You Are Here

15 - PART 1

UNDERSTANDING INNOVATION, INNOVATOR, AND INVENTION

"Innovation" is a popular word nowadays and can mean different things to different people. Defining it can be difficult because its meaning can vary depending on the context and the person interpreting it. Like words such as love, justice, and friendship, innovation represents a more general concept rather than a specific notion.

In general, when we talk about **innovation**, we refer to *something new, that has never been seen before*. However, definitions of innovation are not absolute and often describe how new or original something is in a particular situation or scenario. "Innovation" is also a word that has multiple meanings, called a *homograph*. Innovation can be used as the name of a discipline or the output of innovating.

Innovator is the *creator of an innovation*. It can be *singular* or *plural*, in the case of a team or a group.

There is another practical concept that is important to discuss at this moment. It is the word "invention". An **invention** is *the practical application of an innovation.* For example, the original electric speaker was an innovation because it introduced a new way of producing sound, while the first wireless speaker was an invention because it was a new product built upon the existing electric speaker.

It is worth noting that the distinction between innovation and invention can be somewhat subjective, and there is often overlap between the two concepts. Additionally, the process of creating a new product or technology can involve both innovation and invention, as new ideas and concepts are often combined with existing ones to create something new and useful.

KEY Concepts

Innovation is a human creation with no antecedent.

An **innovator** is a person (*singular*) or group (*plural*) who creates an innovation.

An **invention** is the practical application of an innovation.

in·no·va·tion

/ˌinəˈvāSH(ə)n/

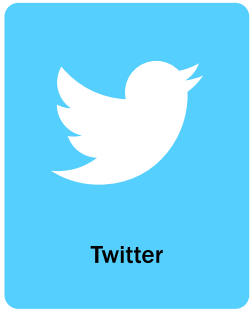
a human creation with no antecedent

17 - Sect. 1.1

An innovation *wows* and *cannot be predicted, quantified*, or *standardized.*

NOT EVERYTHING THAT IS NEW IS AN Innovation

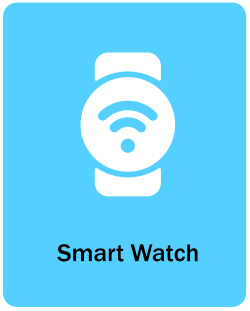
Do you agree that the following products were not innovations when they were initially launched?



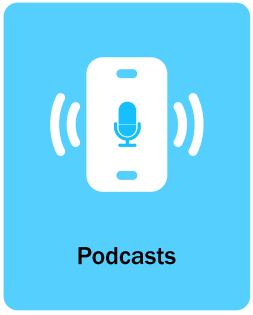
Cell phone text messages

Computer corded mouse

Existing breeds of dogs



Cell phone



Radio programs

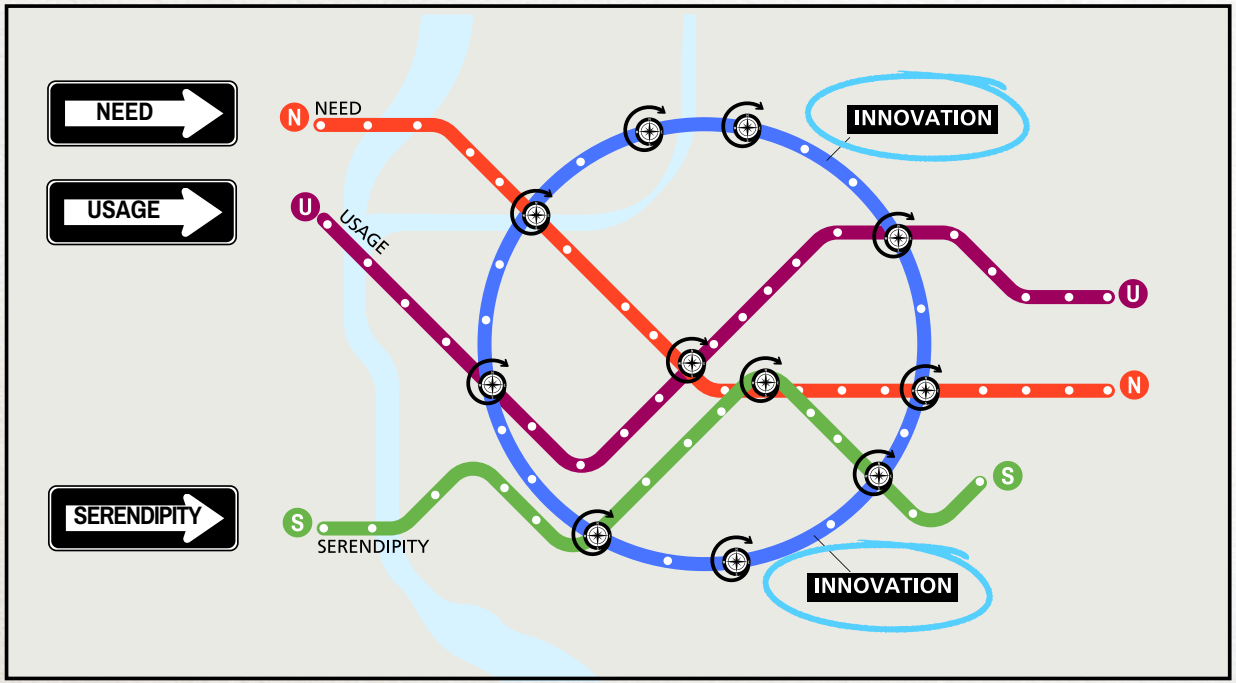
Outdated movement's ideas

Traditional farming

Research Basis: Existing knowledge

EXERCISE: Find Your Way

SOURCES OF Innovation



SOURCES OF Innovation

Need as a source to innovation refers to a problem or requirement that motivates the development of new solutions or outcomes.
The need for more sustainable energy sources has led to innovations in solar and wind power, while the need for more efficient healthcare has led to innovations in telemedicine and digital health tools.

Way of use as a source to innovation refers to identifying new uses or applications for an existing practice, tool, or behavior. It involves analyzing or mimicin how something is currently used and imagining new ways to achieve similar or better outcomes.
Velcro was developed by observing how burrs stuck to the hair of animals and then using that principle to create a type of fastener that imitated the burrs' ability to cling to fur.

Serendipity as a source to innovation involves the discovery of new outcomes or solutions through chance or unexpected circumstances.
The development of post-it notes was the result of a serendipitous discovery by a scientist at 3M who noticed that a weak adhesive he had developed for another purpose could be used to create reusable notes.

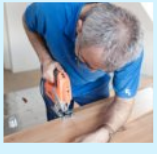
CONTEXT OF THE Innovation

The **context of an innovation** refers to the external factors and environment that affect its development and implementation, including time and place of creation, social and cultural norms, and available technology. Additionally,the usage of an innovation, whether it's tangible or intangible, can define its context by providing information about its intended purpose and scenario.

Example: A metal blade takes different shapes in different contexts.

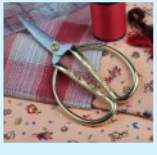
Food preparation: Metal blades are used in kitchen knives and other tools for cutting food in food preparation.

Construction: Many power tools, such as table saws, chop saws, and jigsaws, use metal blades to make precise cuts in wood, metal, or other materials.



Carpentry: Metal blades in saws are used for cutting wood, metal, and other materials in carpentry.

Agricultural equipment: Metal blades are used in agricultural equipment such as combines and plows to cut crops and prepare fields for planting.



Handcrafts: Metal blades are used in scissors for cutting paper, fabric, and other materials.

Industrial equipment: Metal blades are used in industrial equipment such as paper cutters, shears, and slitting machines for cutting and processing materials in manufacturing and production environments.

Landscaping: Metal blades are used in lawn mowers to cut grass.

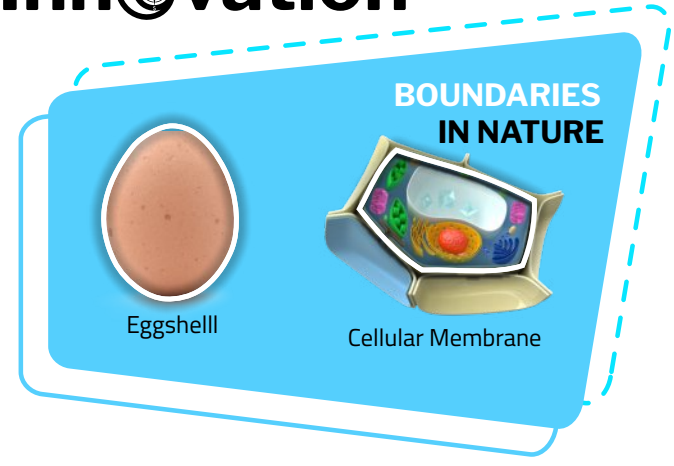
Medical equipment: Metal blades are used in medical equipment such as scalpels, scissors, and bone saws for surgical procedures.

Changing The Context

1. Get ready to unleash your creativity! Take out a **triangle, rectangle, circle,** and **square** and let's get started on a fun drawing challenge. Here's what you'll be drawing by using all those shapes:
   - ***Scene 1:*** A piece of art for your closest Museum of Modern Art.
   - ***Scene 2:*** What you saw in your journey to an agricultural farm.
   - ***Scene 3:*** An image showing the improvements you would do to your closest urban area.
2. **Reflect on your experience:** How did the change in context influence your drawings? Did it bring out a different side of your imagination? Share your thoughts and discover the impact of surroundings on your art!

THE POWER OF BOUNDARIES IN Innovation

The **boundary**, or *membrane*, of a system defines and separates it from others, regulating the exchange of information, energy, and matter between its components. This principle can be applied to innovation, where the boundary limits the creative space defined by the innovation's purpose. The boundary helps determine the *context, scope,* and *objectives* of the innovation process. The boundary is established by the deliberate choice of the innovator, and its main purpose is to contain and sustain the elements of the intended innovation. As a result, the contents within the boundary become functional and contribute to the overall effectiveness of the innovation. **The boundary is not a constraint, but rather a focus of attention.**



Example of Boundary Variations

The statement *'I'm going to innovate something for drying off after a shower'* requires a clear boundary to help define the desired outcome. In this case, the boundary could be established based on the target user group or intended use location,


For Adults


For Children


For Animals


For Beach Use


For Pool Use


For Gym Use

IMPULSE: THE CATALYST OF Innovation

As an innovator, you have begun your journey to bring new solutions to the forefront. The most crucial element in this journey is the **IMPULSE.** Without it, **innovation cannot occur.** Let's now explore the critical role that impulse plays in the innovation process.

The Importance of Impulse

An *impulse* is the driving force that transforms an idea into a tangible reality. Without it, an idea remains just that, an idea. *Impulse* is like a spark that sets things in motion and transforms nothing into something. It is like the force in physics that makes things move, and similarly, it is essential to bring an innovation to life.

What Can Serve as an Impulse?

A myriad of external events can trigger an innovator's role and provide the impulse for innovation. At other times, the desire to express oneself can drive innovation, with the expression serving as a reflection of the innovator's soul and essence *(inspiration).* Regardless of the source, these driving forces act as catalysts for future innovations.

PART 2

Apollo 13 Space Mission

Deke Slayton (check jacket) shows the adapter devised to make use of square Command Module lithium hydroxide canisters to remove excess carbon dioxide from the Apollo 13 LM cabin.

Because Someone

TOLD YOU TO FIND

You Are Here

27 - PART 2

FORCED INTO THE INNOVATOR'S ROLE

Being asked to come up with new and innovative ideas can be a lot of pressure, especially if it's not part of a person's regular responsibilities. Sometimes, people may feel like they have no choice but to try to come up with something new and exciting, even if they don't have the knowledge or experience to do so. This can be especially challenging when they feel like they've been forced into the **role of innovator.**

Why is a person forced into the role of an innovator? The reasons behind this sense of obligation for the imposed innovator can be many and varied, as we discuss in the following pages.

Innovation Amidst Adversity

The need to rebuild Cathédrale Notre-Dame in Paris has forced many to become innovators due to the loss of historical construction technologies and techniques that were used in the cathedral's original construction. The professionals in charge of the rebuilding project had to create methods and technologies based on field observations and limited documentation to reconstruct the cathedral as closely as possible to its pre-fire state. This required some of them to assume the role of *technical innovators* (p.30) and apply *atavistic innovation* (p.82) to achieve their rebuilding goal.

THEY WERE FORCED INTO THE INNOVATORS ROLE

REASON: When they must solve a problem that requires an immediate solution, and they don't have the resources to do it.

THE **GO-GETTER** INNOVATOR

EXAMPLE: A community affected by a natural disaster that needs to find ways to provide shelter, food, and medical care for its members, but may not have access to the necessary resources due to the destruction caused by the disaster.

THE BEST WAY TO PREDICT THE FUTURE IS TO CREATE IT

REASON: When they must solve a problem that has no known solution, but it needs to be fixed right away.

THE **FIXER** INNOVATOR

ILLUSTRATION: A team of scientists assigned to clean up an oil spill in a short amount of time and lack existing solutions that are effective at addressing the scale and complexity of the spill.

The incident that made Apollo 13 famous is another example of this. NASA had to come up with a plan on the fly to safely bring astronauts back to Earth after the oxygen tank on their spacecraft exploded.

REASON: When there are apprentices that are asked to find a solution as a way of learning.

THE **ROOKIE** INNOVATOR

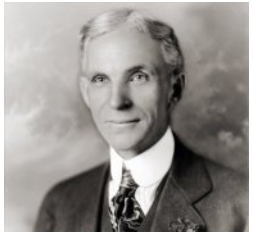
ILLUSTRATION: An apprentice factory supervisor or a medical resident. Although they may receive guidance and support from more experienced individuals, they are expected to take the lead in finding solutions and demonstrating their understanding of the problem and the subject matter.

REASON: When they need to survive, either individually or as a group.

THE **HUMANITARIAN** INNOVATOR

ILLUSTRATION: Nigerian students who developed urine-powered generators that run on urine and can provide electricity to remote communities.

The Barefoot College in India, a community-based organization that trains rural people to become solar engineers, artisans, and healthcare providers, among other things.



REASON: When they disagree with the beliefs or opinions of others and want to show that there is another way of looking at things.

THE **DEFIANT** INNOVATOR

ILLUSTRATION: Henry Ford in the early 1900s was determined to prove that he could build a car that was affordable for the average person. He developed the Model-T, which became the first mass-produced car.

In the early 1980s, Steve Jobs and Steve Wozniak, the co-founders of Apple Inc., were determined to prove that personal computers could be accessible to everyone. They developed the Macintosh, which was the first mass-market personal computer to feature a graphical user interface (GUI).

THEY WERE FORCED INTO THE INNOVATORS ROLE

REASON: When they feel emotionally committed to finding a solution, despite lacking knowledge, expertise, or experience.

THE **DEVOTED** INNOVATOR

ILLUSTRATION: Dr. Albert Sabin, a devoted medical researcher in the mid-1900s, developed a polio vaccine despite having no formal virology training. He followed an unstructured process and challenged accepted medical practices of the time.

REASON: When a person's job description includes words such as "new products," "innovation," "unique designs," "optimization," or just "new" in general.

THE **STAFF** INNOVATOR

ILLUSTRATION: Job titles such as *New Product Development Manager, Innovation Director, Design Thinking Strategist, Optimization Engineer,* and *New Ventures Consultant* indicate a focus on developing new products, innovating solutions, designing unique products, optimizing existing products or processes, or working on new business ventures. *Salespeople* also play a role in this as they have direct customer feedback and can act as innovators.

REASON: When a person is a leader of an organization and needs to find a way to keep the business running now and, in the future.

THE **HONCHO** INNOVATOR

ILLUSTRATION: In 2008, Howard Schultz returned as CEO of Starbucks during a time of several financial crisis. Schultz turned around the company by restructuring it and introducing new products such as the Starbucks card, the introduction of new coffee blends, and free wi-fi in the stores. He also enhanced the customer experience by redesigning the stores and launching the Rewards program.

REASON: When a person is a technical specialist who is expected to create new methods, processes, products, and services.

THE **TECHNICAL** INNOVATOR

ILLUSTRATION: Raul Garcia, a Spanish architect, designed a low-cost, modular housing system that can be easily assembled on-site using locally available materials. This system has been used in countries such as Haiti and El Salvador.

John Williams, the composer of many popular films such as Star Wars and Indiana Jones, innovated movie soundtracks by incorporating classical music techniques into his scores.

NOT A FORCED INNOVATOR

REASON: When they come across an innovation fortuitously.

THE **SERENDIPETAL** INNOVATOR

EXAMPLE: Charles Goodyear discovered the process of vulcanization by accident while trying to make rubber stronger and more resistant to chemicals. One day, he accidentally dropped a mixture of rubber and sulfur on a hot stove and noticed that the rubber had become much more stable and resistant to heat. That was the foundation for the process named after the Roman god Vulcan, the god of fire and metalworking.

THE INNOVATOR'S CHAINS

Which of the following expressions have held you back from moving forward in the past? Words have the power to shape our reality, both for ourselves and for others. Some words or phrases can be **roadblocks to creativity, preventing us from expressing our ideas fully**. To help stay mindful of these roadblocks, a list has been compiled. If you encounter one of these words, avoid them. Remember that we all have the ability to keep our creative process moving forward. Take note of the words that have held you back in the past and work to remove them from your vocabulary as an innovator.

Choose the expressions from the list below that have been roadblocks for you, so you can eliminate them and continue to innovate.

Words that express DOUBT or SKEPTICISM:

- ☐ That's not how it is...
- ☐ That's not how it's done...
- ☐ That doesn't work...
- ☐ There is no way to do it...
- ☐ Perhaps...
- ☐ Maybe...
- ☐ It cannot be done...

Words that express a sense of INDECISION or DELAY:

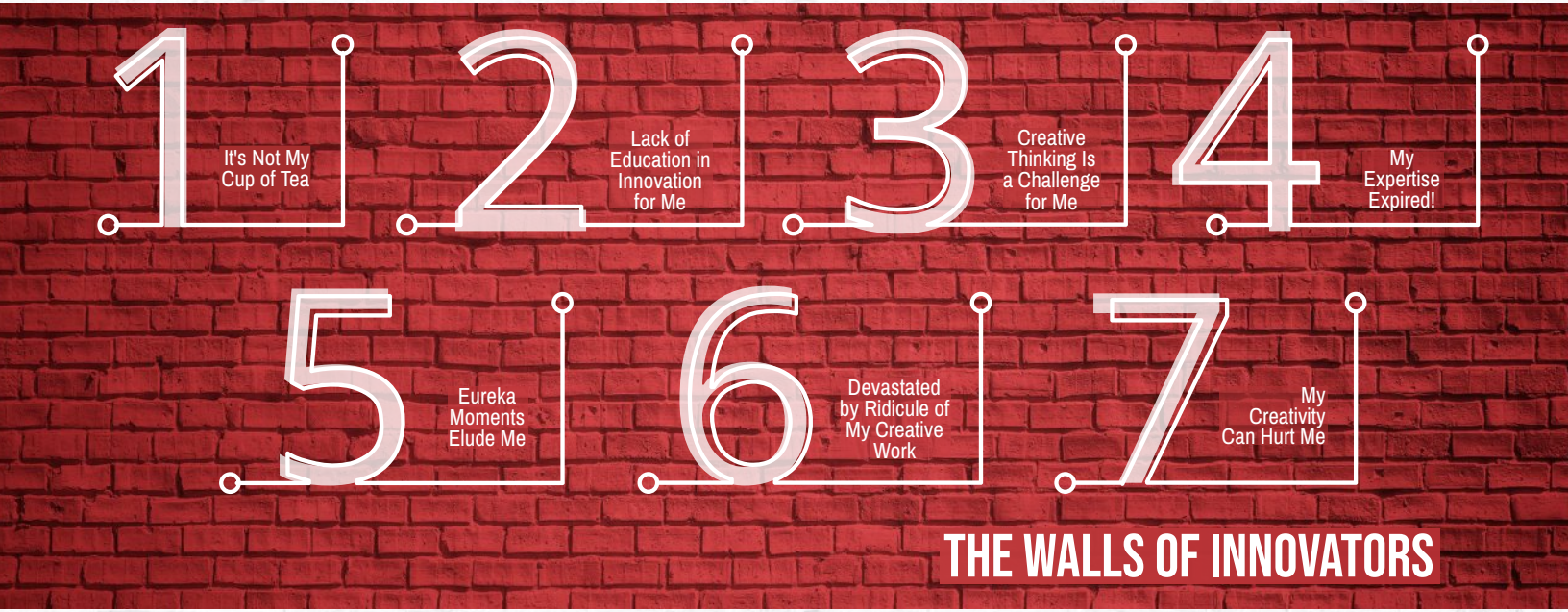
- ☐ Later...
- ☐ Somewhere else...
- ☐ Tomorrow...
- ☐ Yesterday...
- ☐ This again?
- ☐ I forgot...
- ☐ I guess so...

Words that express a sense of MISSED POSSIBILITY:

- ☐ What would it happen?
- ☐ What would it happen if?
- ☐ I tried to...

BREAKING WALLS

Aspiring innovators often have a desire or a circumstance that drives them to express themselves and make an impact. However, this alone is not enough to guarantee success. Innovation is often hindered by obstacles, both figurative and real. This section explores seven barriers for innovators and provides ideas to overcome them.



Sometimes the forced innovator may say things like, *" I do not want to do it. It's not my thing. I am not interested in that. For what?"* This is a common challenge called "**Wall One.**" It can be tough when what a person wants to do and what is expected to do don't match. If this happens, you might feel angry or frustrated. You can either ignore the request to innovate or take a moment to think about it. If you decide to do nothing, that's okay. But if you're the only one who can make a difference, it might be worth reflecting on why you're feeling resistant. You might find that you're willing to take on the challenge after all.

To deal with that, we introduce a tool called the **"Insight Finder"** which can help you understand why you might be feeling resistant. Once you understand the issue, it will be easier to identify what you can do about it and how you want to proceed. Just be honest with yourself and don't worry about good or bad answers. Keep in mind, the tool will only be useful if you're willing to work on addressing "Wall One."

It's Not My Cup of Tea!

Wall One

The Insight Finder

The "Insight Finder" is a set of questions grouped by four larger issues related to "Wall One." To complete this exercise, follow these steps:

- ☐ **Make a copy** of the diagrams on the next three pages or write it out in this workbook.
- ☐ **Answer** the list of questions.
- ☐ **Mark the questions** that you think are relevant to your "Wall One" (the thing that's making you feel resistant).
- ☐ **Connect the issues** that affect you with lines if they're part of a pattern or have a connecting thought. You may want to consider creating a diagram, such as a *mind map*, to visualize those connections in an easier fashion.
- ☐ **Write** in front of each identified topic *(those that you marked in the Yes/No response, that are in red text)* how you would resolve it. This part should be fun because it will activate your innovator side, looking for answers.
- ☐ **Mark with another color** or symbol the issues that you couldn't or didn't want to resolve. Are these truly impossible to overcome?

And the final question: All things considered, ***what are you going to do about being an innovator in this instance?***

We hope the "Insight Finder" helps clarify your situation. **Good luck!**

The Insight Finder

I DON'T WANT TO DO IT + FOR WHAT?

Question	Response	Obstacle / Reason	Solution to Overcome Obstacle
Issue: I DON'T WANT TO DO IT			
Do I have the resources or support needed to do the assignment?	☐ Yes: Not an issue ☐ No: What are those?		
Am I already overwhelmed by other responsibilities or commitments?	☐ Yes: What are those? ☐ No: Not an issue		
Do I have a personal conflict or objection to doing the assignment?	☐ Yes: What are those? ☐ No: Not an issue		
Am I experiencing negative emotions such as fear, anxiety, or stress because of the assignment?	☐ Yes: What are those? ☐ No: Not an issue		
Issue: FOR WHAT?			
Do I see the value or purpose in doing the assignment?	☐ Yes: Not an issue ☐ No: Why?		
Do I feel that the assignment is contributing to a larger cause or purpose that I believe in?	☐ Yes: Not an issue ☐ No: Why?		
Do I feel that the assignment is a waste of time or resources, or that it is not generating meaningful results?	☐ Yes: Why? ☐ No: Not an issue		

The Insight Finder

IT IS NOT MY THING

Question	Response	Obstacle / Reason	Solution to Overcome Obstacle
Issue: IT IS NOT MY THING			
Do I have the necessary skills or knowledge to complete the assignment?	☐ Yes: Not an issue ☐ No: Why?		
Do I lack confidence or competence in doing the assignment?	☐ Yes: Why? ☐ No: Not an issue		
Do I see that the assignment is aligned with my strengths, interests, or values?	☐ Yes: Not an issue ☐ No: Why?		
Do I feel that the assignment is a good fit for my personality or style?	☐ Yes: Not an issue ☐ No: Why?		
Do I feel that the assignment is relevant or important to me personally?	☐ Yes: Not an issue ☐ No: Why?		
Do I feel that the assignment is aligned with the larger goals or objectives of the organization or group I am a part of?	☐ Yes: Not an issue ☐ No: Why?		

The Insight Finder

I AM NOT INTERESTED

Question	Response	Obstacle / Reason	Solution to Overcome Obstacle
Issue: I AM NOT INTERESTED			
Do I feel that the assignment is aligned with my passions or interests?	☐ Yes: Not an issue ☐ No: Why?		
Is the assignment too difficult, complex, or time-consuming for me to handle?	☐ Yes: Why? ☐ No: Not an issue		
Do I think that the assignment is challenging or engaging enough?	☐ Yes: Not an issue ☐ No: Why?		
Do I think that the assignment will be detrimental to my personal or professional growth or development opportunities?	☐ Yes: Why? ☐ No: Not an issue		
Do I find the assignment enjoyable or fulfilling?	☐ Yes: Not an issue ☐ No: Why?		
Do I find that the assignment is a good use of my time or skills?	☐ Yes: Not an issue ☐ No: Why?		
Do I think that the assignment will be detrimental to my status or personal reputation?	☐ Yes: Why? ☐ No: Not an issue		

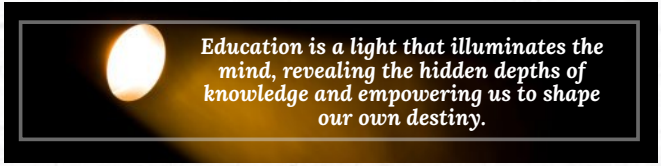
Lack of Education in Innovation for Me

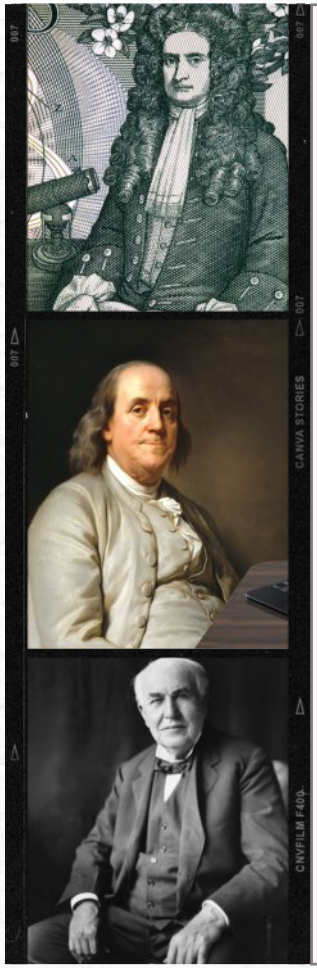
Wall Two

The practice of innovation may raise questions about the education component, such as where to find it, options, if a degree is necessary, and cost. This is "**Wall Two**," *the belief that formal education is necessary for success in innovation.* Talent and practice are just as important.

Finding education in innovation depends on personal interests and goals. Books and social media are widely available, and in the future, innovation will be assisted by AI and language models like ChatGPT. Formal education can be helpful but doesn't guarantee success.

Many options exist for learning about innovation, from free to expensive. No matter your interests, learning style, or budget, something will work for you. Keep exploring and don't be afraid to try new things. You never know what you might discover.





DID YOU KNOW?

Some of the most famous innovators in history didn't have much formal education. That's right!

Isaac Newton developed calculus and made important discoveries in physics, but he was mostly self-taught.

Benjamin Franklin also didn't have much formal education, but he still managed to invent things like bifocal glasses, street lighting, and more in a wide range of fields.

Henry Ford and **Thomas Edison** were both self-taught inventors who went on to achieve great success. Henry Ford founded the Ford Motor Company, and Thomas Edison holds more than 1,000 patents for his inventions!

Creative Thinking Is a Challenge for Me

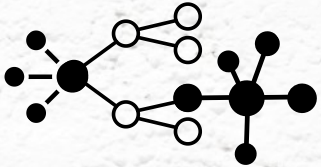
Wall Three

"Wall Three" *is the belief that creative thinking is out of reach.* However, everyone has thought creatively at least once in their life, whether it was through storytelling or presenting an alternative reality. Tearing down this wall involves learning and practicing different thinking approaches, such as divergent, lateral, and systems thinking. Mastering the latter is crucial for success in innovation, as it allows for attention to detail and the ability to see the big picture.

A short description of these main thinking approaches is provided below, and I encourage you to conduct further research on each topic. The table "Thinking Approaches" provides a succinct overview of these methods for enhanced thinking (p.40).

Convergent thinking involves searching for a single, correct answer or solution to a problem, by following sequential steps. It's best suited when the problem and solution are clear, and it's used by scientists, researchers, and experts in fields like athletics, music, and writing. However, it's not typically conducive to innovation as the correct answer is predictable and singular.

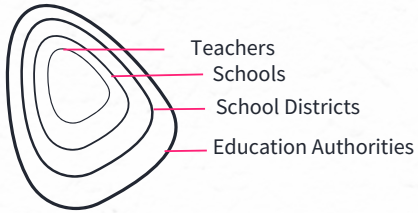
Divergent thinking involves finding multiple solutions to a problem, unlike convergent thinking which focuses on one correct answer. It is unstructured and allows for creativity and originality. It's useful for problems with open-ended solutions and is often used by generalists. It can lead to innovation by generating new ideas.



Lateral thinking is a way of solving problems by looking at them from a different perspective. It's also called "thinking outside the box" and "vertical thinking." It allows one to explore a situation or problem in a new way. The process of lateral thinking is unstructured, and it can use both convergent and divergent thinking as needed.

Systems thinking is an approach focused on understanding the complexity of a whole system, including its components, subsystems, and interrelations with other systems. It recognizes the dynamic nature of a system and requires the development of both a keen eye for detail and the ability to see the system as a whole. It is usually applied in the study of various systems, such as the solar system, the systems within our bodies, economic systems, natural ecosystems, and any other unit that has the word "system" in it.

Components in the Education System
EXAMPLE



Systems thinking provides a framework for understanding who, what, for what, when, where, why, and how innovations will be developed and deployed, making it critical for innovation. It allows innovators to consider a larger range of resources and see themselves as part of more complex systems. It opens up opportunities and possibilities for innovative thinking.

Exploring a System: Key Considerations and Questions

To explore and comprehend a system, it is crucial to exercise discipline, curiosity, and recognize that the system is greater than the sum of its parts. When examining a system, it's essential to consider the following aspects:

- **PURPOSE:** Why does the system exist? What is the ultimate goal of the system?
- **CONTEXT:** Under what conditions does the system exist? In what environment does it operate?
- **BOUNDARY:** How big is the system? Where are its limits?
- **SUBSYSTEMS:** What are the subunits or components within the system? How do they relate to each other? Are the components also systems themselves?
- **INTERCONNECTEDNESS:** What are the links between the components of the system? How do they affect each other?
- **RELATIONSHIPS:** How do the components interact with each other? What feedback loops exist?
- **INTERDEPENDENCE:** How do components depend on or influence each other? What is the nature of those relationships (e.g. positive/negative, cooperative/competitive, etc.)?
- **PATTERNS:** What are the regular and repeated behaviors/activities that occur within the system? What factors cause these patterns to change? Are these patterns found elsewhere?

Approaches for Enhanced Thinking

Thinking Approach	Cornerstone	Other Names	Purpose	Application	Traditional Users
CONVERGENT Thinking	• New knowledge is built upon directly related existing knowledge. • Use of logic and rational thought processes (analysis) to solve problems. • Duality of alternatives.	• Critical Thinking: *Evaluating evidence and arguments to make sound judgments or decisions.* • Vertical Thinking: *Building knowledge on top of earlier knowledge and developments.* • Linear Thinking: *Following a logical, step-by-step thought process.*	Identification of a single, correct answer or solution to a problem.	• Structured processes. • Solving of well-defined problems. • Generation of cumulative and formal knowledge.	Experts.
DIVERGENT Thinking	• Use of creativity and originality to generate ideas or solutions to problems. • Multiplicity of alternatives.	Creative Thinking: *Generation of new and original ideas, or solutions to problems.*	Generation of multiple ideas or solutions for a problem.	• Unstructured processes. • Solving of ill-defined problems.	• Generalists. • Innovators.
LATERAL Thinking	• Change of context (new point of view) for generating effective solutions. • Use of both convergent and divergent thinking.	• Thinking outside of the box. • Horizontal thinking.	• Generation of new and original ideas. • Identification of effective solutions to problems.	Solving of ill-defined problems.	• Generalists. • Visionaries. • Innovators.
SYSTEMS Thinking	Thinking in terms of: • Complete unit or system. • System's purpose. • System's context. • System's boundary. • Components of the system / Subsystems. • Interconnectedness. • Interdependence. • Patterns.	N/A.	Complex problem solving.	• Understanding the interaction among complex systems. • FRAMEWORK for INNOVATION.	• Generalists. • Visionaries. • Innovators.

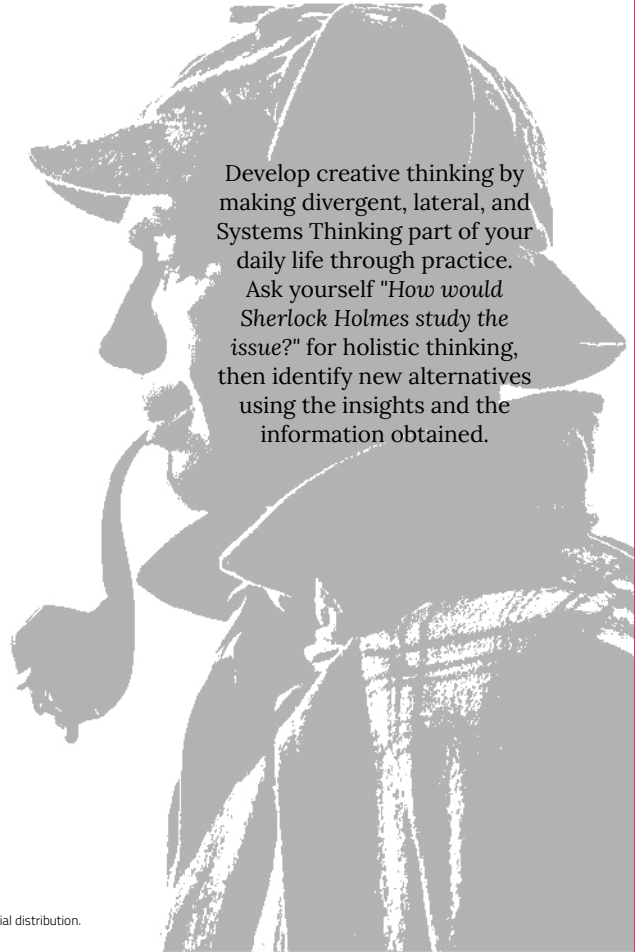
Practicing Creative and Systems Thinking

Ideas that can be used for fostering CREATIVE THINKING:

- Focus attention by identifying the purpose and boundary of what you're exploring. Challenge assumptions.
- Look at things from different perspectives.
- Ask "what if" questions.
- Embrace uncertainty and ambiguity.
- Consider the opposite.
- Connect unrelated ideas.
- Keep learning and exploring new things.
- Practice brainstorming and idea generation techniques.
- Collaborate with others.
- Take breaks and give your brain time to recharge.

Ideas for developing SYSTEMS THINKING:

- Focus attention by identifying the context, purpose and boundary of what you're exploring.
- Understand interconnections and interdependence of components. View problems and challenges holistically. Look for the *"big picture."* Consider multiple levels of interest (e.g., individual, organizational, societal)
- Analyze feedback loops.
- Map and visualize systems, including the interactions and interdependencies among the components of the system. Identify leverage points for resilience.
- Evaluate systems over time.
- Collaborate with diverse perspectives.
- Continuously reflect and learn how to sustain and improve the system.



Develop creative thinking by making divergent, lateral, and Systems Thinking part of your daily life through practice. Ask yourself "*How would Sherlock Holmes study the issue?*" for holistic thinking, then identify new alternatives using the insights and the information obtained.

Surviving a Winter Storm Without Electricity or Water

It's a dire emergency! A severe winter storm has knocked out the power in your house for several days. But that's not all - you're new in town and totally unprepared for any kind of emergency. The roads are closed, your car's gas tank is almost empty, and you don't even know your neighbors. To make matters worse, you just got a message from the water company that they can't pump water to your house due to the power outage, leaving you without any water at all. Your neighbors are in the same boat, so you can't count on them for much help.

This is a life-threatening situation and you need to take immediate action to protect yourself and your loved ones.

How can you tackle the following pressing issues in an innovative and unconventional way?

1. Prevent the milk in the refrigerator from going bad.
2. Ensure that the bathrooms are usable.
3. Provide heat for yourself and your family.
4. Prepare food.
5. Keep your body clean.
6. Have a hot drink.
7. Keep everyone calm and comfortable.
8. Know what is happening in the city.
9. Keep your cell phone charged.
10. Keep the children entertained.

HINT: Concentrate on what you have at hand. Establish the context and boundary of the problem. Look for the systems involved in the situation. Identify subsystems, interconnections, relationships, interdependencies, and patterns among them. Draw an image that illustrates the situation. Create a diagram of the components of the system.

My Expertise Expired!

Wall Four

Expired Expertise refers to when *individual knowledge and skills are no longer useful or relevant.* It can occur to anyone and does not reflect one's intelligence or capability. It simply means that the world and what is important to know evolves over time. This can result in frustration, unhappiness, or stress for aspiring innovators who experience "**Wall Four**" or *'My Expertise Expired!'* It's important to remember that this is normal and there are ways to update one's knowledge and skills.

Some possible reasons for expired expertise may include,

- **Skills no longer being relevant to the current situation or goals**, such as a lawyer practicing in a country with a different legal system.
- **Outdated or replaced skills**, such as a tailor finding store-bought clothes cheaper than making them.
  Loss of interest or motivation in previously obtained skills, such as discovering a passion beyond formal education or experiencing a vocational crisis.
- **Forgetting skills due to lack of use or practice.**

Experiencing "Wall Four" can be frustrating, but it also offers an opportunity for personal growth and innovation. Overcoming it begins by acknowledging the difficulty of knowing what you don't know and being open to starting anew by removing attachments to prior knowledge that force you to stay in the past. Utilizing new sources, consultants, contractors, AI, and other relevant tools can also help. The simplest solution is often working in interdisciplinary teams.

Trial and error is a way people have used for centuries to overcome the lack of knowledge. When using trial-and-error to solve problems and gain new knowledge, it's important to keep in mind that it involves exploring new options and learning from them. This practice can be done virtually or physically. It may be costly in terms of time, resources, and effort.

Regardless of the method chosen to overcome expired expertise, it is crucial to keep track of what is tried, including what doesn't work, so that progress can be made and mistakes can be avoided. This can be done by using a log, images, videos, or any other preferred method for recollection of events.

Eureka Moments Elude Me

Wall Five

Wall Five, also known as the ***'Eureka Moments Elude Me'*** obstacle, *is a roadblock that occurs when a person is unable to reach a breakthrough despite their best efforts.* This can lead to feeling stuck and unable to find new ideas.

EUREKA Moment

A **Eureka moment** is when a person has a sudden understanding or idea that helps them solve a problem or make a discovery. It's a moment of revelation, excitement and satisfaction. The expression *'Eureka'* comes from Archimedes who had this moment while figuring out how to calculate the density of gold while in a bath.

Here some tools for dealing with Wall Five, Eureka Moments Elude Me:

Tools for handling the feelings of not having a breakthrough idea:

Accept failure as part of the innovation process and the range of emotions that come with it. Risk and emotions can be stressful, but they are a part of the process.

Don't fall in love with what you do. Keep an open mind and don't get too attached to your own creations. Remember, the innovation's journey is just as important as the end goal. Be willing to *adapt*, *change course*, and *improve* when things aren't working.

Tools for facilitating your Eureka moment:

Use the resources used by writers to overcome their creative stagnation. The creative source that nourishes literary creators is the same that nourishes innovators.

Practice flexible thinking. Be open to multiple perspectives and making connections between seemingly unrelated concepts.

Reinterpret your frustration. Try looking at it from a different perspective or writing about it. Be kind to yourself and don't beat yourself up over setbacks found during your innovation journey.

Re-connect with nature, especially in green spaces. Studies have shown that the color green can foster innovation, and being in nature can help clear the mind and emotions. This could be as simple as taking a walk in a park or sitting under a tree. Even if you live in a highly urban environment, contemplating at an animal or a plant may have a similar effect.

Try relaxation. It's a great way to clear the mind and soul, and can lead to insights and understanding that can't be accessed otherwise. Relaxation techniques such as meditation, yoga, or deep breathing can have the added benefit of lowering stress.

Take a nap. Famous inventors like Thomas Edison and Salvador Dali believed that napping could lead to breakthroughs. Try holding a heavy object in your hand and releasing it when you fall asleep to wake yourself up, then quickly write down any thoughts that come to mind.

Look for the silver lining. Focusing on the positive aspects of a difficult situation, and finding opportunities where others see only obstacles.

Flexible Thinking and The Eureka Moment

Let's put your flexible thinking skills to the test with a thoughtful exercise! We'll be using the ideas we talked about how to find your Eureka moment, so get ready to stretch your brain a bit.

1. Write down the toughest challenge or problem that you are facing or have faced in the past. The nature of the problem is irrelevant.
2. Write down three potential solutions to solve the problem after using some of the ideas described on the previous page. If the challenge is in the past, write down **UNUSED** approaches for solving that challenge.
3. For each solution, write down three potential consequences that could result from implementing that solution.
4. Evaluate each solution based on the potential consequences, and choose the one that appears to have the most positive outcomes. ***Sleep on it.***
5. ***The day after or later***, reevaluate your solution. If it is still good, draw or write the effects of your solution based on your evaluation. If not, go back to task # 2 We encourage you to make an effort to draw, as it will activate other thinking processes in addition to the analytical one.

CHALLENGE:			
POTENTIAL SOLUTIONS	Solution	Solution 2	Solution 3
CONSEQUENCES	Consequence 1 from solution 1	Consequence 1 from solution 2	Consequence 1 from solution 3
	Consequence 2 from solution 1	Consequence 2 from solution 2	Consequence 2 from solution 3
	Consequence 3 from solution 1	Consequence 3 from solution 2	Consequence 3 from solution 3
EFFECT OF THE SOLUTION			

Devastated by Ridicule of My Creative Work

Wall Six

"**Wall Six**" is *when people make fun of an innovator's ideas and it makes them feel bad.* Even famous inventors like Tesla (AC motor), the Wright brothers (airplane), Hoffman (aspirin), and Frederick W. Smith (Fedex) have faced this. Being laughed at can make a person feel embarrassed, ashamed, angry, powerless, or insecure. This can make an innovator not want to keep working on their idea. It's important for innovators to be strong, develop resilience and not let other people's opinions discourage them.

Innovations can get ridiculed for a variety of reasons, some of them are discussed on the next page.

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Reasons for Ridicule in Creative Work

LACK OF UNDERSTANDING

Sometimes, new or different ideas get laughed at if people don't understand how they work or what they're used for. This can happen when an innovation challenges what people already believe or know.

When the telephone was first invented, some people didn't understand how it worked and thought it was a silly and unnecessary idea.

THREAT TO STATUS

Sometimes, innovations that are ahead of their time can make the innovator appear more important, which can threaten the status of others. Humiliating the innovator can discourage them from pursuing the innovation.

A boss might feel threatened by an innovative idea from an employee and humiliate the employee in front of others to discourage them from pursuing it further.

FEAR OF CHANGE

Sometimes people make fun of innovations that they think will change their way of life or make them feel unsafe. This can happen when an innovation challenges existing power structures or traditional ways of doing things.

When car seat belts were introduced, people made fun of them because they found them uncomfortable or restrictive, didn't believe in the safety benefits, thought it was a government infringement on their freedom. They thought their cars were already safe.

FEAR OF FAILURE

Sometimes people make fun of innovations that they think are risky or uncertain, especially if they think the innovation won't be successful or will lead to failure.

The idea of commercial air travel first came out, some people thought it would be too expensive and dangerous.

SOCIAL INFLUENCE

Sometimes people make fun of innovations because they see others doing it or they think it's the socially acceptable thing to do.

Innovations in healthcare may be perceived as dangerous to personal health and ridiculed by online communities

CONSERVATISM

Sometimes people make fun of innovations that they think are unnecessary or go against established norms or traditions.

Some people made fun of the idea of renewable energy because they were used to traditional fossil fuels and didn't see the need to change.

LIMITED IMAGINATION

Some people may laugh at new ideas or inventions because they can't imagine all the ways it could be useful.

When smartphones first came out, some people thought they were just for phone calls and didn't see the potential for things like internet access, GPS navigation, and cameras.

Wall Six starts outside of the innovator, but the solution is personal. There is no one fix-all solution. Sometimes, an innovator may need to talk to a therapist for help. Here are some ideas for overcoming this problem:

- **Be kind to yourself.** Don't blame yourself for how others reacted to your idea. It's not healthy to keep thinking about what you could have done differently.
- **Look for the positive.** Try to find something good about the situation.
- **Get support.** Talk to someone you trust, like a friend or therapist.
- **Work on your self-esteem.** Do things that make you feel good about yourself, like volunteering or helping others.
- **Move forward.** Try not to dwell on the past and focus on what's next.

Please share the exercise with others and start a conversation about the topic.

Breaking Down Innovator's Walls

Welcome to this enlightening exercise where we reflect on how walls can impact us in the present or have affected us in the past.

1. Which of the seven walls of innovation have you faced? How did they affect you?

2. How would you overcome them now?

3. How would you prevent them in the future?

My Creativity Can Hurt Me

Wall Seven

"**Wall Seven,** *My Creativity Can Hurt Me,*" is a phenomenon in which a *person becomes hesitant to showcase their creative abilities due to negative past experiences.* This can lead to physical and mental health issues. While fear is the underlying cause of this block, there may be other factors that contribute to it. The causes of **"Wall Seven"** can include:

- **The environment is not conducive to creative thinking,** and anything that challenges the status quo is rejected.
- **Fear of judgement and rejection** leads to self-censorship and the suppression of creativity.
- **The desire to be part of a larger group** can lead to silencing oneself to avoid rejection.
- **Perfectionism** can lead to emotional burden due to personal and external expectations.
- **Self-doubt** can lead one to assume that others are better and that their own work is worthless.
- **Negative past experiences** related to showcasing personal creative talent can also contribute to the fear of displaying one's creativity.

Overcoming **Wall Seven** is a personal journey that requires adopting a positive mindset that acknowledges the abundance of opportunities available to explore and exercise your creative power. The following solutions can help:

- Persevere in your path and avoid living with regrets. Explore new opportunities and environments where your creativity will be valued. The popular wisdom says, *'No person is a prophet in their own land'.*
- Recognize that hurtful experiences were due to others' need for control, not your lack of ability.
- Create new spaces for your creativity, such as side projects, volunteering, or joining like-minded communities.
- Create or find a support network that can offer compassionate guidance.
- Speak out and be clear about what you want and need, but **be cautious.**

Remember that success may require knocking on many doors before finding the right opportunity. Have faith in yourself and your creative potential to overcome *'My Creativity Can Hurt Me'.*

> YOUR PAST HURTS DO NOT DETERMINE YOUR FUTURE SUCCESS. YOU HAVE THE POWER TO HEAL AND GROW.

People around the world use costumes as a way to transform into someone or something else. By wearing a costume, they can show an assumed identity that might be different from who they are in their everyday life. Costumes allow people to temporarily step into someone else's shoes and experience the world in a different way.

Step into the shoes of an innovator! Don't be fooled into thinking that you're not one. You'll be amazed at the path of discovery and unique creations waiting for you to uncover. Embrace your inner innovator and **find your way'** to bring forth the **'unprecedented'**!

FAKE IT UNTIL YOU MAKE IT!

Exercises for Finding Your Way

In this section, you will be *'finding your way'* by exploring and creating your own solutions. Remember, the goal is for you to have a unique and personal experience. Don't worry about trying to imitate or copy others. There are no wrong answers in this exercise, so let your creativity run wild and have fun!"

Popsicle Palooza: A Stick-tastic Challenge!

Get ready to grab your sticks and let your creativity soar! In this fun-filled exercise, you'll be using popsicle sticks and other materials like matches, straws, pencils, and more to build unique structures. Here's the catch: **each creation must be different from the previous one**, so you'll need to get imaginative!

Start with just one stick and work your way up to building something amazing with 2 sticks, then 3, and so on. The sky's the limit, so let your creativity run wild! Whether it's a towering skyscraper, a whimsical castle, or a quirky robot, it's up to you to bring your vision to life. Take a picture of each creation. This will remind you how far you have come.

So gather your materials and get ready to build, because it's time to turn those sticks into something spectacular in *'Popsicle Palooza: A Stick-tastic Challenge!*

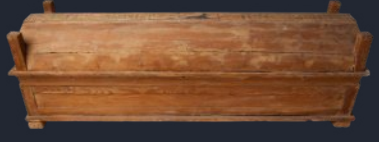
Touch and Inspire: A Creative Connection Game

Find an object with velvety texture and another with rough texture.
PART A: While looking at both of them, think of a new application for a wooden stick. Describe your experience. **PART B:** For 2 minutes, think of something new that you could build, even as just as a thought, while constantly touching the velvet texture. *What is your new thing?*
PART C: Repeat the same while touching the rough texture.

Splash into Style:
A Wavy Shoe Design Adventure

PART A: Submerge your feet in water, without touching the bottom of the container or place where you are. While doing that, imagine a new pair of shoes. What shoes did you imagine? Describe your experience.
PART B: Who designs better shoes for dancing, the person whose shoes are tight or the one who doesn't have shoes?

Escape from the Coffin:
A Naked Innovation Challenge



If you were trapped inside a coffin, completely naked, what tools would you want to have at that moment to open it from the inside?

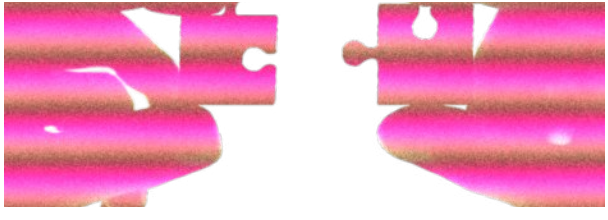
Note: This idea can be used to design a tool to open an industrial freezer from the inside and other similar applications

Bringing Joy to the Memories:
An Entertaining Adventure for Seniors

Imagine that you have been asked to provide companionship to a senior with memory issues. They have given you the task of letting them play with a 1,000 piece puzzle. As you observe them working on the puzzle, you notice the following:

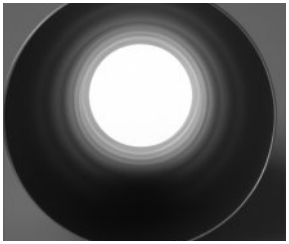
- The senior looks intimidated by the number of pieces and constantly asks for direction.
- You show them how to put pieces together and give them one to practice with, but they seem confused and struggle to differentiate the subtle color changes in the puzzle pieces.
- The senior has difficulty grasping the pieces of the puzzle.
- Eventually, they express frustration, saying "I don't know how to do this" and push the puzzle away, requesting to sleep.

Given this information, describe a creative solution to entertain this senior, taking into account their limitations with memory and physical abilities. Finally, create a prototype of your solution.



Beyond the Obvious: A Sequence Study

Study the sequence of images below. What is the common theme? What message does the composition convey? Finish the sequence by adding your own images. Is there a deeper message beyond the intellectual aspect? How is this related to innovation?






Challenge the Usual: Innovating Around the House

Unleash your inner innovator! Identify everyday household or workplace challenges like a dripping detergent bottle, a salt spill, or a trashcan allways full. Get creative and come up with unique solutions for these problems. Remember, as an innovator, you have the power to make life easier and more enjoyable, starting right in your own home!

AN INNOVATOR IS BORN

I Am an Innovator

I am an innovator, with a vision so bright,
I see the world from new and fresh perspectives, that take others' sight.
Unprecedented solutions, a constant flow,
My mind is a wellspring, where creativity does grow.

The creative process, it brings out the best,
An inner spark ignites, leaving worries and stress.
With each new creation, I bring joy to their life,
Easing burdens and troubles, banishing strife.

I am finding my way, as each innovator must,
Navigating uncharted territory, with determination and trust.
Discovering unique paths, where no one else has tread,
Uncovering new possibilities, where others only see dead.

Innovation brings satisfaction, like nothing else can,
A feeling of accomplishment, that elevates the soul of a man.
Creating something from nothing, giving birth to a new,
A feeling so enriching, that words cannot do justice to.

So let us continue to innovate, to create and to grow,
To explore the vast unknown, and to let our imaginations flow.
For we are the dreamers, the makers, the visionaries,
Bringing change to the world, with each of our unique stories.

Find Your Way →

The Innovator's Question

When an innovator sees someone else's innovation for the first time, their response is often, *'Why didn't I think of that?* This question is not surprising because the innovation often appears logical and as though it should have been considered previously. However, the true question for the innovator is not "Why didn't I think of that?" but instead, ***"What did they see that I didn't?***

The invisible becomes innovation when it is seen. To see the invisible, we must look for untracked changes, the direction of those potential effects, and unexplored intangibles.

From Aspiring to Emerging Innovator

We've come to the end of our discussion on *'Because Someone Told You: Find Your Way, You Are Here.'* Finally, an innovator has emerged, understanding the challenges of being forced into the role and how to overcome the roadblocks that hold them back. This person knows how to motivate others as supporters of innovation and has honed the skills needed to be a successful innovator, including the ability to identify opportunities for innovation on a personal or professional level. The emerged innovator knows that it's not about being an expert, it's about "**seeing the unseen.**"

Let's explore the desirable attributes and competencies of innovators. If you don't have some of these traits, don't worry. You can look for complementary traits in others, who may bring more to the table than just those specific traits.

Desirable Innovator Attributes

Whether working alone or in teams, innovators play a critical role in driving innovation by bringing new ideas and solutions. While some traits and skills are innate, many can be developed with effort and determination. If you possess all the listed attributes below, congratulations! you have what it takes to be a successful innovator on your own. But even if you don't have all of them, don't worry. A team of innovators can complement each other and bring diverse skills and abilities to the table. Embrace your strengths, work on your weaknesses, and let's bring innovation to life!. This material is covered again on page 85, as part of the InnoNavigator toolkit.

The **Foundational Personal Qualities for Innovation** are the fundamental qualities that are recommended for success in the innovation process. They encompass a set of key skills, qualities, and attributes that are critical for success in the field of innovation. These qualities include *common sense, confidence in decision making, emotional intelligence, flexibility, good time management skills, independent thinking, taking ownership of one's actions, perseverance, resilience, openness to criticism, self-motivation, stress management, strong critical thinking skills, a strong work ethic, tenacity, and being a trailblazer.*

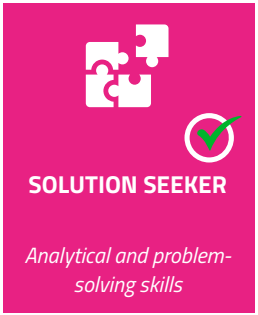
The **Attitudes and Behaviors for Successful Innovation** refers to a set of attitudes and behaviors that contribute to successful innovation. These include *being adaptable, determined, ethical, networked, and willing to take risks.*

The **Innovation Skills and Abilities** refer to a set of abilities that facilitate successful development and implementation of new and creative ideas. These abilities include *strategic thinking, effective communication, collaboration, problem-solving, risk-taking, and resourcefulness,* which are vital for driving change and progress. Individuals who seek to make an impact in innovation should possess these skills. Additionally, *curiosity, coordination (leadership), teamwork, inspiration, passion, persistence, self-confidence, and understanding of the subject of innovation* are included in the desirable skills for innovation.

The **Innate Innovation Traits** are innate talents or capacities for generating and implementing new and creative ideas or solutions. These traits include *intuition, creativity, and visionary thinking.* With some work, these traits can be enhanced or developed.

Innovator's Competencies

Innovators have a distinctive set of abilities that allow them to bring unique ideas to life as tangible or intangible unprecedented outcomes. The five critical competencies for successful innovation are:



SOLUTION SEEKER

Analytical and problem-solving skills

This competence refers to the individuals who use enhanced thinking, problem solving (p. 40), and strategic thinking to tackle complex challenges and bring innovative ideas to life.

UNCONVENTIONAL THINKER

Creativity and innovation skills

This competence refers to the individual's ability to think originally and generate new and original ideas. An unconventional thinker uses creativity, enhanced thinking, and an entrepreneurial mindset or an *'it can be done'* attitude to drive innovation and create impactful solutions

DIPLOMATIC INFLUENCER

Communication and collaboration skills

This competence refers to the individual's ability to effectively communicate and collaborate with others. Diplomatic influencers are skilled communicators who are able to build relationships and influence others in a positive and constructive manner.

TRADE / DISCIPLINE LITERACY

Technical skills

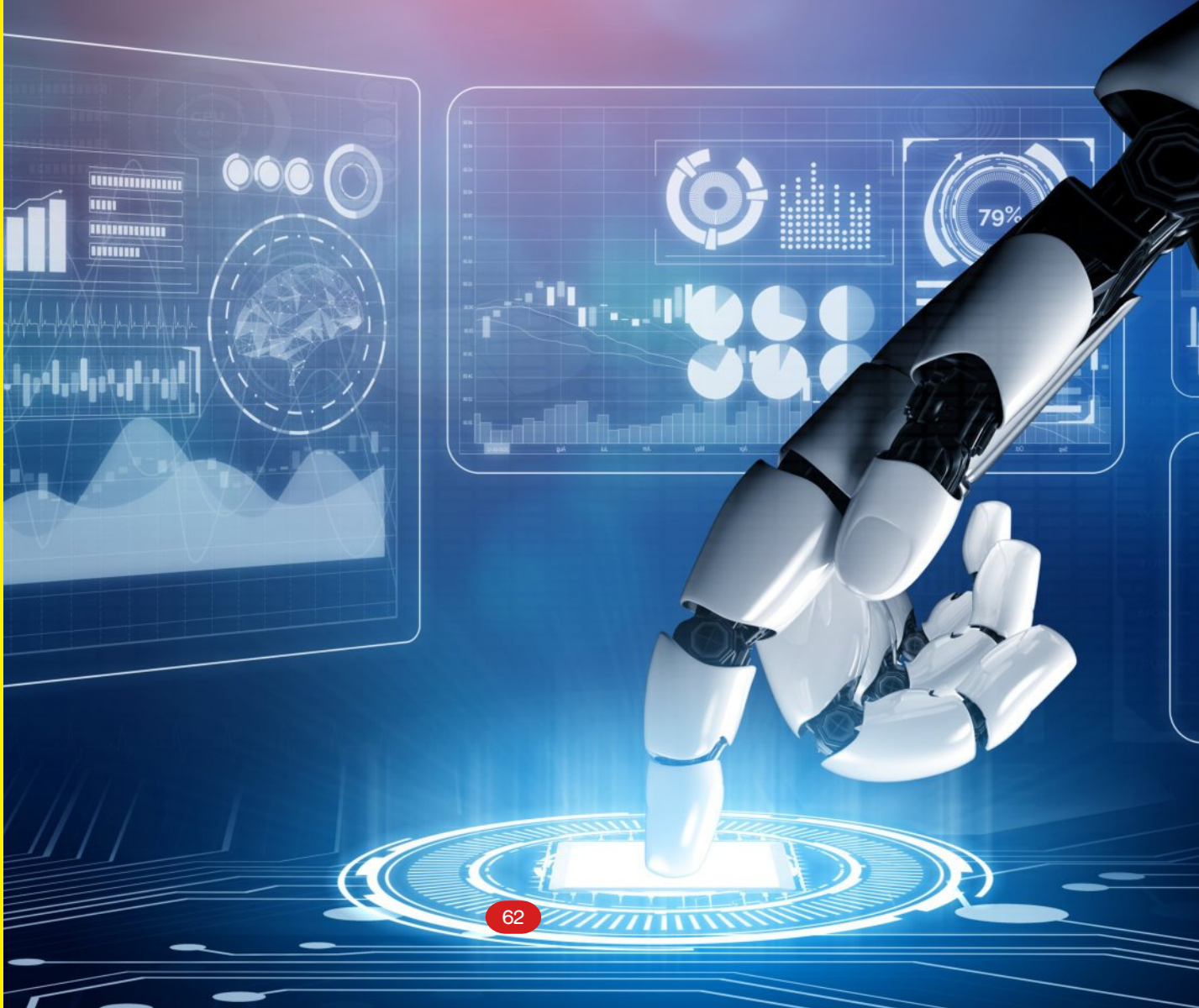
This competence refers to the individual's mastery of technical skills and knowledge within a particular discipline or trade. Trade / Discipline literate individuals are technically adept and have a deep understanding of the theories and practices within their field.

OPEN MINDEDNESS

Flexibility of thought

This competence refers to the ability to consider various perspectives. It also means challenging the status quo and avoiding biases. More-over, it involves being open to alternative viewpoints. As a result, this competence leads to a tendency to take risks and break free from conventional thinking.

PART 3



Because

YOU WANT TO FIND

You Are Here

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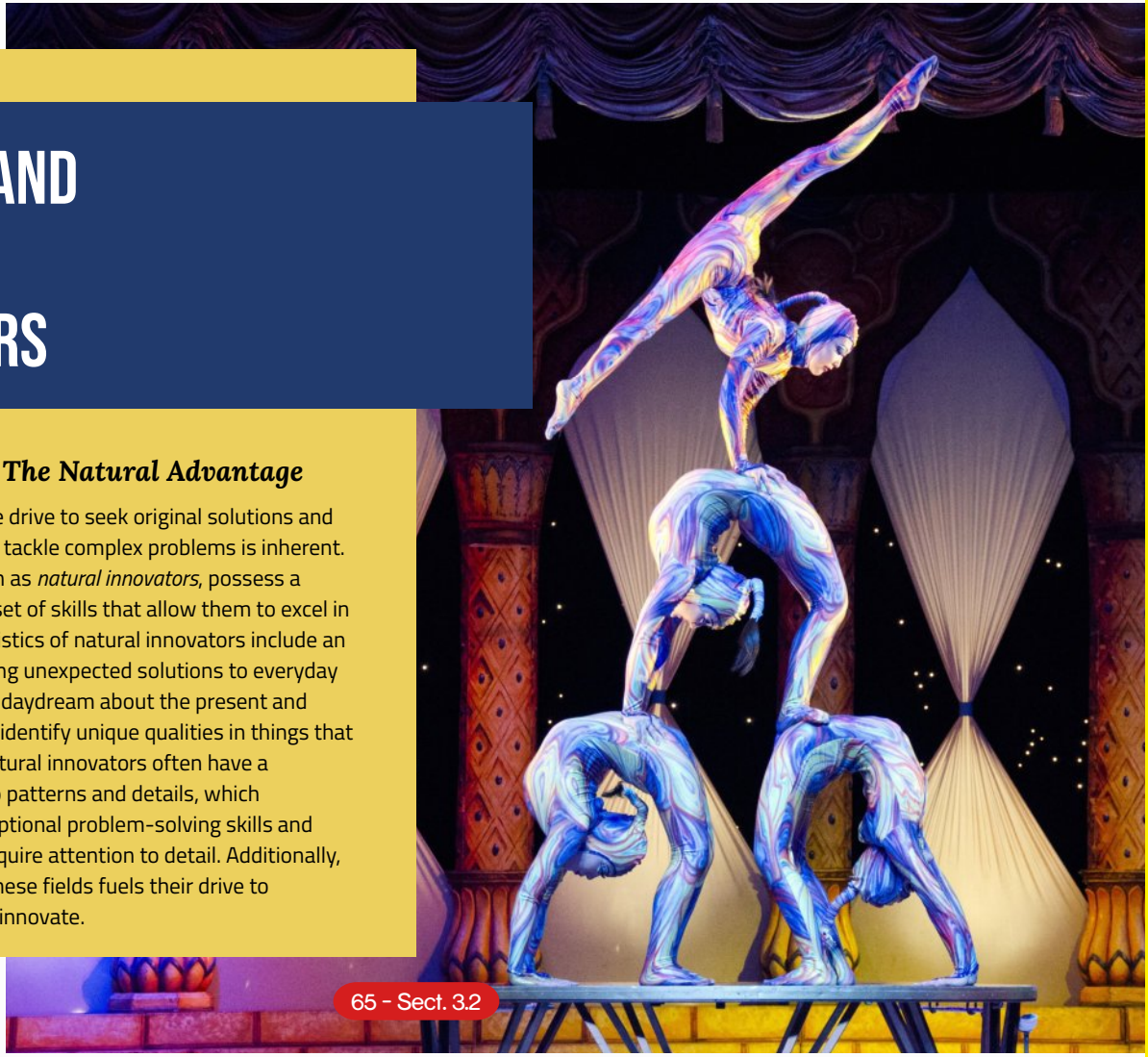
EVERYONE SAYS YOU ARE DIFFERENT

Being different has value. Embrace your unique qualities, bring fresh perspective, lead to innovation, build confidence, and find fulfillment. Don't be afraid to stand out.

NATURAL AND LEARNED INNOVATORS



Born to Innovate: The Natural Advantage

For some individuals, the drive to seek original solutions and the ability to effortlessly tackle complex problems is inherent. These individuals, known as *natural innovators*, possess a unique perspective and set of skills that allow them to excel in their pursuits. Characteristics of natural innovators include an inclination towards finding unexpected solutions to everyday problems, a tendency to daydream about the present and future, and the ability to identify unique qualities in things that others may overlook. Natural innovators often have a heightened sensitivity to patterns and details, which contributes to their exceptional problem-solving skills and mastery of fields that require attention to detail. Additionally, their strong interest in these fields fuels their drive to continually improve and innovate.

NATURAL INNOVATORS:

- Find unexpected solutions
- Daydream about the future
- Imagine future possibilities
- Refine the past for present and future
- Identify unique qualities in things
- Generate new ideas and applications

LEARNED INNOVATORS:

- Apply personal talents
- Overcome weaknesses with strengths
- Collaborate with others who fill the gaps

Learned Innovators: Harnessing Their Potential Through Learning

Individuals who are not naturally inclined towards innovation, including those who identify as *learned innovator*s, can still tap into their own potential through learning and development. By immersing oneself in the innovation field and honing creativity and enhanced thinking skills, anyone with a creative and practical mindset can develop the ability to drive change and make meaningful contributions. With the right tools and strategies, the potential for innovation is within reach for all.

BRAINSTORM STATE OF MIND

"Brainstorm State of Mind" refers to a creative and imaginative state where one's thoughts are focused on generating new ideas and solutions. It's characterized by openness, curiosity, and a willingness to think in an original way. Similar to how "New York State of Mind" embodies the fast-paced, eclectic, and innovative spirit of New York City, "Brainstorm State of Mind" embodies the energy, drive, and resourcefulness of someone in a joyful and satisfied state of idea generation.

For those in this state, anything can inspire new ideas and they approach life with a mindset of constant creativity and imagination. They are fully immersed in the process of generating and evaluating ideas, embracing distractions and limitations as opportunities to enhance their thoughts. This state of mind allows individuals to tap into their full creative potential, leading to innovative solutions and breakthroughs.

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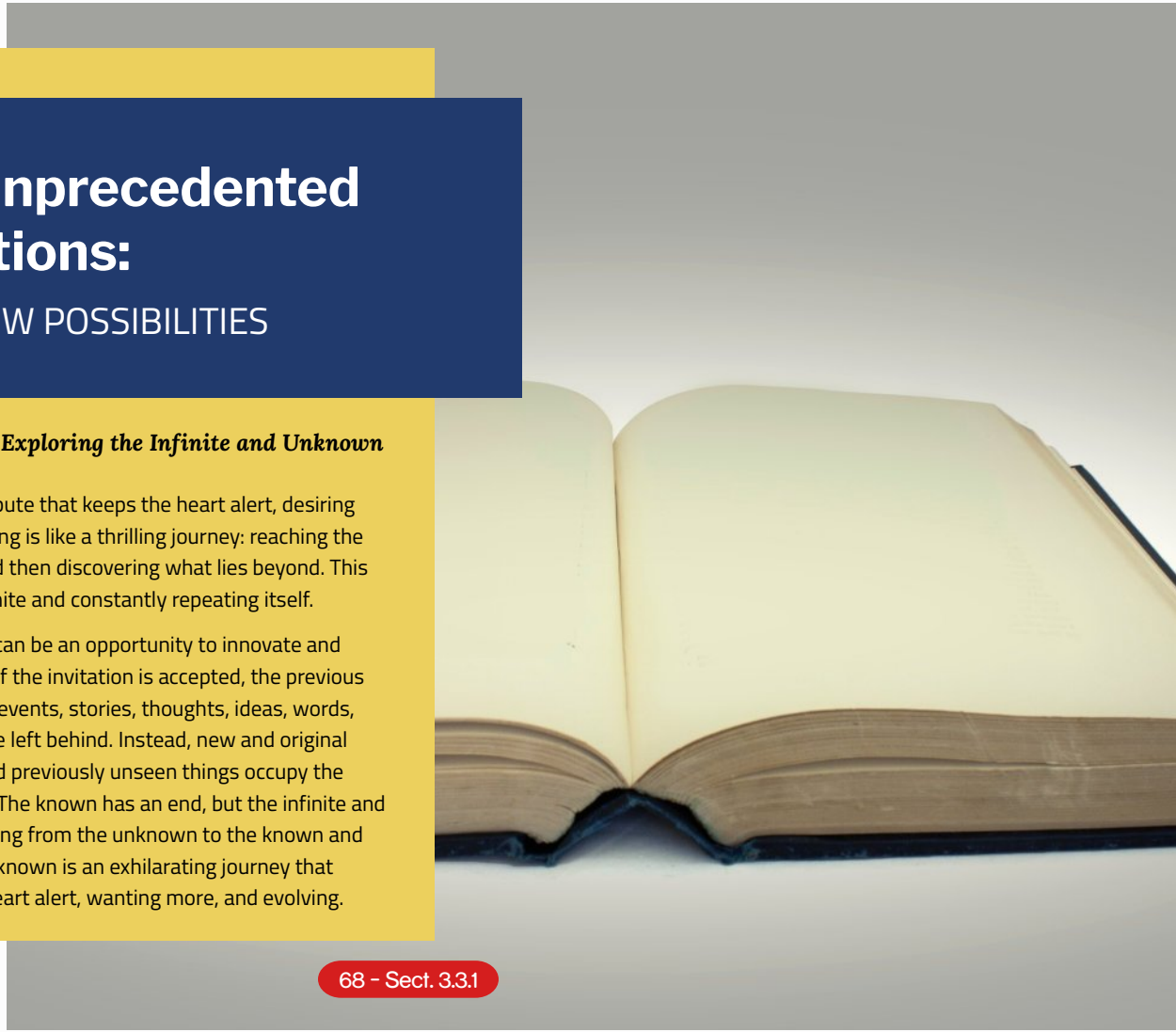
Finding Unprecedented Combinations:

EXPLORING NEW POSSIBILITIES

The Joy of Innovation: Exploring the Infinite and Unknown

Innovation is a joyful attribute that keeps the heart alert, desiring more, and evolving. Evolving is like a thrilling journey: reaching the top, touching the goal, and then discovering what lies beyond. This cycle of exploration is infinite and constantly repeating itself.

The blank page of a book can be an opportunity to innovate and explore new possibilities. If the invitation is accepted, the previous pages containing actions, events, stories, thoughts, ideas, words, and other things should be left behind. Instead, new and original ideas are put together, and previously unseen things occupy the previously empty spaces. The known has an end, but the infinite and the unknown do not. Moving from the unknown to the known and from the known to the unknown is an exhilarating journey that keeps the mind and the heart alert, wanting more, and evolving.



The first sugar cube combined existing concepts of geometry, sugar, and unit of measure that resulted into something both practical and innovative.

The Birth of the Sugar Cube: A Convenient Solution

Innovation brings "the invisible" to light. It is also finds creative solutions to problems. The sugar cube is a perfect example of this. For centuries, sugar had been used as a commodity, sold in irregular blocks. This characteristic made it difficult to measure the exact amount needed. Tools for breaking those blocks into smaller pieces were of common use.

One day in the middle of the 19th century in Europe, a husband wanted to make his wife's life easier and had the idea to create a sugar cube that was equivalent to a tablespoon. He devised a simple yet ingenious solution that combined the tangible and widely known concepts of sugar, spoon, and geometry that had been around for centuries. The sugar cube quickly became popular because it made it so much easier to measure the exact amount of sugar needed. A need became the impulse for the innovation that created a turning point in the way sugar was sold for domestic consumption around the world.

What made the sugar cube possible was the intangible need that it fulfilled. The need for a simple and easy way to measure sugar was always there, and someone had the vision to provide a convenient solution. The sugar cube combined existing concepts to create something both practical and innovative. It's a reminder that innovation is all around us, waiting to be seen. The key is to be open to new ideas and possibilities and to look for what is unseen.

Bifurcation, The Secret of Innovation

Innovation occurs when an impulse has a significant effect on a prior system, resulting in new directions and possibilities for a distinct system. The *direction of change, critical juncture, turning point,* or just *'bifurcation'* is determined by the antecedents preceding the impulse. This change may result in the coexistence of two distinct systems, or in the case of *'Disruptive Innovation,'* it can cause the previous system to shrink or disappear.

Examples of innovative systems that coexist with the parent system, as well as innovative systems that are impacted by disruptive innovation, are listed below.

Coexisting Innovations in Parent and Innovative Systems

Coexisting Innovative System	Parent System with Coexisting Innovation
Social media	Mass media (printed press, radio, and television)
Cryptocurrencies	Centralized controlled currencies
3D printing	2D printing
Electronic books	Print media
Driverless vehicles	Manually operated vehicles
Mobile phone	Landline phones

Disruptive Innovation's Impact on Systems

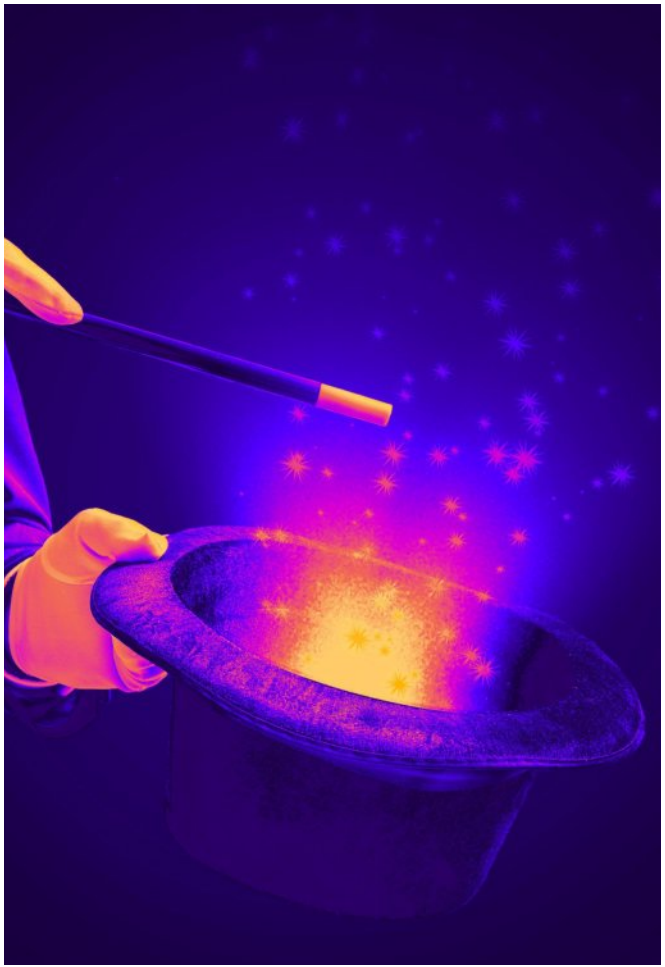
Disrupted Innovative System	Parent System with Disruptive Innovation
Netflix *(Online streaming)*	Video CD rental
Uber	Taxi companies
Amazon	Retail commerce
Facebook	Traditional social networking sites

THE SYMBOL OF INNOVATION:

From Nothing to Something

The symbol for innovation starts with a circle or zero, which means nothing. And the circle also represents the impulse, the mysterious force that turns nothing into something. Next, a spiral is added to show that innovation is a never-ending process. Finally, an arrow is put in to show that the innovation leaves the original system/environment.

When a compass is added to the center of the circle, it signals the individual journey for finding the way to innovation. *That is the symbol that represents our* ***InnoNavigator Toolkit*** *and you, finding your way.*



Recognizing the Absence of Process:

PUFF! AND IT'S DONE

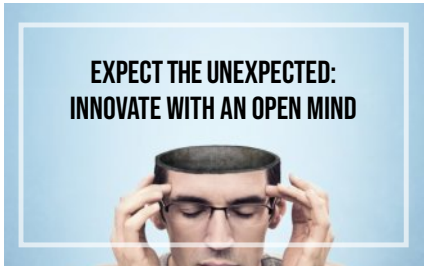
The question of whether a process is necessary for creating something from nothing is still debated. This applies to both planets and innovation. While some creations may require a specific process, others can happen suddenly, as if by magic, with just a **"puff!"** This concept represents *the sudden emergence of something new and unexpected.* However, some processes may still be necessary, like teaching a child to walk. The process of walking is mysterious, much like the impulse that drives innovation. With a **"puff!"** a toddler can walk, and with another "puff!" innovation can emerge. **"Puff!"** is innate in human nature.

Expectation and Anticipation in Innovation

Innovation involves creating something with no antecedent. **Anticipation** refers to preparing or looking forward to a future event with a known outcome, while **expectation** involves being open to the emergence of something new and unexpected. The notion that ***"expectation matches innovation"*** is correct, while *'anticipating innovation'* is not, as innovation is about creating something new and unknown. Therefore, when discussing innovation, the focus should be on the concept of **expectation**, which encompasses the possibility of something new and unexpected emerging. **Expectation** is a mental state, while **anticipation** is a state of action.

Design and Innovation: Distinct Processes

The process of **design** involves following structured steps to bring transformation to the environment. However, design should not be confused with innovation. Unlike design, innovation lacks an antecedent and is characterized by sudden emergence from nothingness. While the designer's role is to bring form to the known and anticipate a result with limited unknown possibilities, innovation focuses on the unexpected and the emergence of new ideas that were previously non-existent. As such, innovation and design represent two distinct goals that require different approaches and mindsets.



Tips for Entering a Brainstorm State of Mind

- Immerse yourself in a wide range of influences, both related and unrelated to your personal interests.
- Keep a journal to capture your ideas and revisit them later to uncover new connections.
- Define a clear boundary when contemplating innovation.
- Identify relevant antecedents to your area of interest.
- Consider whether a structured approach to innovation is necessary.
- Clearly define the driving impulse behind your desired innovation. Explore potential points of deviation from the parent system.
- Keep in mind that "expectation fuels innovation."

Innovate with Everyday Objects

To cultivate a *'Brainstorm State of Mind,'* follow these instructions for a thought-provoking exercise. The goal of this exercise is to practice innovation by creating new products with no existing antecedent. By completing this exercise, you can develop a mindset that encourages creative thinking and generates new ideas.

Part 1: Object Genealogy

1 Choose six everyday objects from your surroundings.
2 For each object, identify the parent system(s) it originated from and the innovation source that led to its creation. The parent system is the original system or product that the object was developed from, while the innovation source refers to the need, way of use, or serendipitous event that sparked the creation of the object.
3 Record your findings on the next page.

Part 2: Unexpected Outcomes .

1 For each of the six objects, select one component and duplicate it.
2 Change the duplicated component in an unconventional way.
3 Apply the changed component to the original object and observe the result.
4 Write a brief description of each new product and its potential use.

Innovate with Everyday Objects

OBJECT	OBJECT GENEALOGY			UNEXPECTED OUTCOMES		
	Parent System (Original product)	System Impact*	Innovation Source **	Duplicated Component	Modified Component	Resulting Product
Ballpoint pen	Fountain pen	Decreased size	NEED: Reliability, convenience, and consistency of a writing tool	Nib	The 2nd nib is digital screen-compatible	One pen for paper and digital writing

*: System Impact refers to the effect on the original or parent system. It can be: *No effect, Increased Size, Decreased Size, Disappeared completely, Other. Specify.*

**: Innovation Source refers to the *need, way of use,* or *serendipitous event* that led to the creation of the innovation.

THINKER OR DOER? BETTER BE BOTH

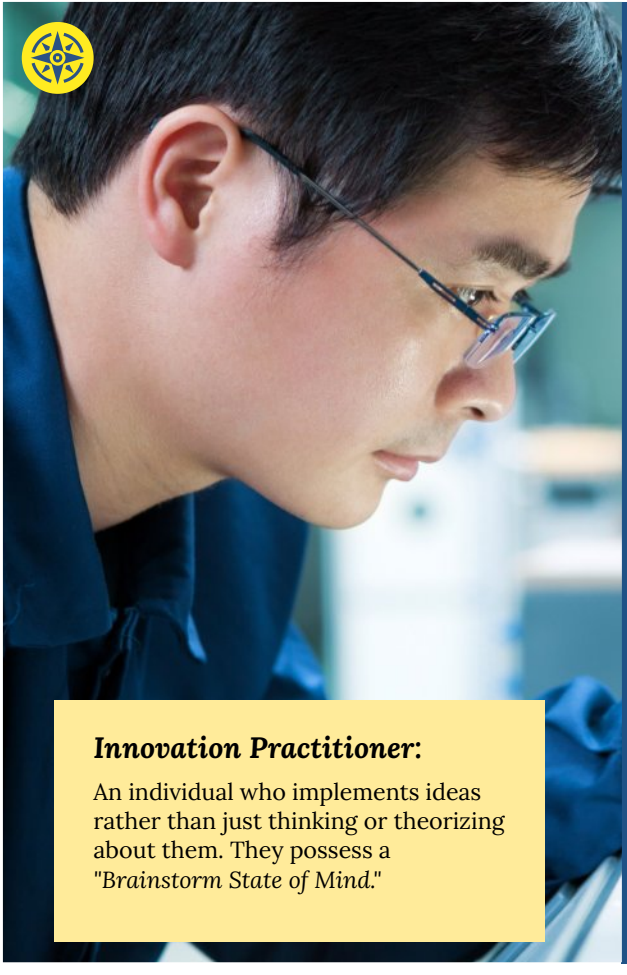
In this chapter, we will delve into the characteristics of a successful innovator and examine the importance of both thinking and doing in innovation. We will begin by providing exercises to help you form your own perspectives on this topic.

Exploring the Impact of Mental Approaches on Innovation

In this exercise, you will analyze how different mental approaches or cognition modes can impact an aspiring innovator who is limited to perceiving the world in a single way. Provide an example of a person who embodies each approach and evaluate its effect on their ability to innovate. You can use personas to illustrate each approach. Fill in the *'Example'* and *'Impact on ability to innovate'* columns in the accompanying table.

Complete These Fields

Cognition Modes	Approach Focus	Example *(100% Single Trait)*	Impact on the ability to innovate
DOING	Involves executing actions without much contemplation on their meaning or consequences.		
WANTING	Refers to a person's aspirations and objectives, rather than the external world.		
KNOWING	Concerned with acquiring knowledge and comprehending the external world, rather than creating something new.		
ANALYZING	Involves critically analyzing the world and the ability to reflect on one's own actions		
CREATING	Involves the act of creation and is characterized by openness, exploration, and the generation of new ideas and possibilities.		



Innovation Practitioner:

An individual who implements ideas rather than just thinking or theorizing about them. They possess a "*Brainstorm State of Mind.*"

Becoming an Innovation Practitioner

1 To be a successful innovator, it is crucial to not only think about ideas, but also to put them into practice. Which of the discussed cognition modes is necessary for achieving the "innovation practitioner" mindset? *Write your answer.*

2 If an aspiring innovator is limited to only one type of thinking, what steps would you recommend for them to embrace the practitioner mindset and achieve success in innovation? *Write your answer.*

The Innovation Equation: Balancing Thinking and Doing

Innovation requires an enhanced thinking, as well as the ability to both ideate and execute. A lack of certain thinking styles or cognition modes can be compensated by working in a team. The practitioner of innovation should be familiar with tools like prototypes and testing, and consider factors beyond economics when developing new products. Additional tools for facilitating the innovation journey are compiled on the **InnoNavigator Toolkit** (p. 80). Clarity on social, environmental, ethical, cultural, and global considerations is also important for the success of the innovation.

The pure thinker never brings ideas to fruition, while the sole doer is prone to making mistakes. However, the innovator can anticipate and avoid unintended consequences through calculated trial and error. To achieve this, tools such as simulations, prototypes, and minimum viable product tests are used to determine the acceptance of a product resulting from innovation. The financial considerations of the innovation must be clearly understood, including the amount of money required, its intended use, source, and expected returns.

Financial planning tools such as a budget, cash flow statement, and other financial reports are crucial in evaluating the financial viability of the innovation.

$$\text{INNOVATION} = \frac{(\text{THINKING} + \text{DOING})}{2}$$

Minimum Viable Product (MVP) is the simplest form of a product with enough features to satisfy early users and gather feedback for improvement. It's the minimum effort to test a product with actual customers.

Innovation Feasibility Assessment

The Innovation Feasibility Assessment is a simple tool that combines the Innovation Cost-Benefit Calculator with an evaluation of the innovation context. It assesses the potential success of an innovation idea, including costs, challenges, and conditions that may affect its success, regardless of commercialization intent.

PART A: The Innovation Cost-Benefit Calculator

1. Determine the cost of materials and labor needed to create a minimum viable product based on your innovation.
2. Consider any additional costs, such as research and development, marketing, and distribution.
3. Add all the costs together to determine the total cost of developing the innovation.
4. Research the market to determine the price range for similar products or services.
5. Based on market research and the total cost, set a minimum sale price that will cover expenses and provide a profit.

Note that this is a rough estimate and further research and market analysis may be needed for a more accurate cost or sale price.

PART B: Context and Market Analysis. Answer these questions

Consideration	Question
Cultural	How does the culture of the target market affect the acceptance of the innovation?
Technological	What are the technological limitations and opportunities for the innovation?
Ethical	Are there any ethical considerations in the development or use of the innovation?
Local	How does the local market and regulations affect the innovation?
Global	How does the global market and regulations affect the innovation?

PART C: Deciding How to Proceed

Evaluate the results of Parts A and B together to determine the best course of action for your innovation. You have three big options:

1. Scrap the project
2. Go ahead with the project as planned
3. Go ahead with the project, but make some changes

Regardless of the decision you make, be sure to write down the lessons learned. By doing so, you will not only enhance your innovation acumen, but also gain valuable wisdom to guide your future endeavors. Best of luck with your project!

You are a natural, make the most of it! by supplementing your natural talents; for that, we compiled a set of tools for innovation that we called **InnoNavigator**. Understanding the tools that compose this toolkit will make your path easier, whether you're a natural or learned innovator. We encourage you to try each tool and build your personal kit, but keep in mind that not all tools may be necessary for every situation. The information presented here is not exhaustive, and new tools may emerge as the field of innovation continues to evolve and grow.

If you plan on bringing your innovations to the market or Improving the lives of others, intellectual property protection may be necessary. In that case, you may want to consult with a legal team that specializes in patents and intellectual property protection. This part is outside the scope of this workbook, but it is critical for achieving a good outcome.

Just like video gamers, *collect all the tools in your innovation toolkit, keep them organized, and manage them effectively to achieve your goals.* Good inventory management will help you be more efficient and effective in your innovation practice.

YOU'RE A NATURAL, MAKE THE MOST OF IT!

The InnoNavigator

THE TOOLKIT FOR INNOVATORS

Innovation is a truly magical force. It can arise suddenly, without warning or effort, and change the world in an instant: Puff! But even those who prefer a more structured approach to innovation can find inspiration and support in our **"InnoNavigator" toolbox.**

This toolkit will help you take your talent for innovation to new heights and provide you with the tools you need to find creative solutions to technical challenges and explore new applications. Please be aware that only a small reference to each tool is included in the list, so look for relevant information to learn about each one. With our toolkit, you can find innovative solutions "inside the box", explore novel applications through extreme user experiences, and unleash your full potential as an innovator. So don't be afraid to dream big and take risks. With our toolkit on your side, you can achieve anything you set your mind and heart to.

U

UNCOVERING TOOLS

Sources that inspire and inform about novel ideas. They help explore unknowns and understand aspects of a problem for innovation.

U-01
Creative Inspiration

These tools provide imaginative pespectives that can help generate new and creative ideas.

Children's stories provide imaginative perspectives that help generate creative ideas for innovation.

Psychic insights offer unique perspectives through intuition and extrasensory perception, potentially leading to innovative solutions.

U-02
Futurism and Foresight

This group of tools provides a long-term outlook on potential future developments and trends, which can inform and inspire innovation.

Futurism emphasizes innovation and the future, and incorporates elements of art and design.

Futurology provides a scientific understanding of future trends and predictions.

Sci-Fi explores the future consequences of scientific and technological innovations and can provide imaginative perspectives for generating new and creative ideas.

U-03
Market Understanding

This group encompasses tools for understanding customer needs, behaviors, and preferences and for building relationships and working with others to drive innovation.

Collaboration and networking involve building relationships and working with others to share ideas, knowledge, and resources, in order to drive innovation.

Marketing provides insights into customer needs, behaviors, and preferences, allowing innovators to identify unmet demands and create solutions that meet those needs, leading to new and innovative products or services.

U-04
Science and Technology

This group of tools provides a technological and scientific perspective on innovation.

Artificial intelligence (AI) enables the creation of innovative systems that can learn and make decisions on their own.

Complexity Science helps understand complex systems, facilitating the development of innovative solutions.

Computer science and informatics provide the foundation for developing innovative technology-based solutions that process information.

Data science enables the collection, analysis, and interpretation of large amounts of data, leading to new insights and innovative decisions.

Economics provides a framework for understanding market dynamics, consumer behavior, and the cost-benefit analysis of innovations.

Machine learning (ML) enables the development of innovative systems that can learn from and make predictions based on data.

Mathematics provides a systematic way of modeling and analyzing complex problems, leading to innovative solutions.

Social sciences provides insights into human behavior and societal trends, important for anticipating market needs and developing socially responsible innovations.

Trend analysis and forecasting study trends and patterns to anticipate future trends and identify opportunities for innovation.

THIS IS A SELF-STUDY SPACE

U-05

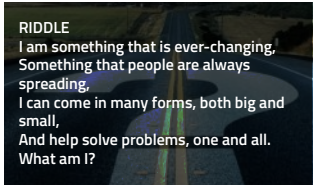
Societal and Environmental Considerations

These tools provide a perspective on the impact of innovation on society, including ethical and environmental considerations.

Ethnography and cultural studies study cultures, communities, and human behavior to gain insight into the social, cultural, and economic factors that influence innovation.

Social responsibility highlights the importance of considering ethical and moral obligations in the innovation process, leading to new ideas that address social issues and create positive impact for communities.

Sustainability emphasizes the need for considering long-term environmental and economic impacts of innovations, leading to ideas that are not only profitable but also responsible for the Planet and future generations.



FACILITATORS FOR INNOVATION

Tools and methodologies that help develop innovative products or services. They provide structure to the innovation process, promote creativity and discipline, and encourage exploring new ideas and approaches.

FI-01

Contextual Innovation

An approach to innovation that draws inspiration from ancestral methods and practices, as well as forward-thinking strategies, to create innovative products and services that are well-suited to the present and future contexts. This approach involves leveraging insights from the past and anticipating future needs to guide innovative solutions.

Atavistic Innovation is the approach to innovation that draws inspiration from ancestral methods to develop new and improved products and services.

Forward-Thinking Innovation involves anticipating future needs by examining trends and market conditions to create innovative products and services that balance present business needs. By experimenting with new ideas, this approach aims to shape the future of the market by being proactive in meeting the needs of customers and adapting to changing conditions.

FI-02

Flexible Customer-Centered Innovation

These tools focus on creating and delivering value to customers in an efficient and flexible way.

Agile Innovation is a flexible and adaptive approach inspired by the Agile methodology used in software development. It emphasizes collaboration, iterative design, and rapid experimentation. Its goal is to quickly create and test prototypes and iterate based on feedback from customers and stakeholders.

Lean Innovation is a methodology that emphasizes speed, efficiency, and customer-centered design in the innovation process. It seeks to minimize waste and maximize value by testing and iterating ideas quickly and with minimal resources. Its goal is to bring products to market faster and with a lower risk of failure.

Open Innovation is a strategy that encourages collaboration and knowledge sharing to drive innovation. It involves actively seeking ideas and technologies from outside the organization, including customers, partners, and even competitors. Its goal is to tap into the collective intelligence of a wider network to generate new and innovative ideas and bring them to market faster.

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FI-03

Flexible Innovation Methodologies

These tools are structured approaches and tools used to organize and guide the innovation process, with a focus on generating high-quality and actionable ideas for innovation, while allowing for flexibility and adaptability to changing needs or conditions.

Design Thinking is a user-centered methodology that emphasizes ideation, inspiration, and implementation to drive innovation. Solutions are considered successful when they are desired by the intended market, technically feasible, and economically viable.

Systematic Innovation Thinking (SIT) provides a structured approach to innovation that incorporates tools and techniques for problem-solving and ideation *"inside of the box".* It is considered a simplification of TRIZ, using only five systematic inventive thinking methods or templates: Substraction, Multiplication, Division, Task Unification, and Attribute Dependency.

TRIZ is a systematic problem-solving methodology based on 40 inventive principles that are used to resolve technical contradictions often perceived as impossible that lead to innovative solutions. The name TRIZ comes from the Russian term *'Theory Of Inventive Problem Solving.'*

FI-04

Nature-Inspired Innovation

These tools use nature and its processes as inspiration to develop sustainable and environmentally friendly innovative solutions.

Biomimetics is a scientific and engineering field that studies natural systems and uses those findings to create new technologies and solutions.

Biomimicry is an approach that involves using nature's solutions as inspiration to create advances in design and technology that reflect the principles and processes observed in the natural world.

Eco-Innovation is focused on creating products and services that are environmentally friendly and reduce environmental impact.

FI-05

Organic Innovation

These tools recognize solutions that emerge naturally and organically, either through sudden bursts of inspiration or through iterative experimentation and refinement.

Innovation Finding Your Way (IFYW) is an approach that involves an individual's discovery of their own path or direction in innovation, without the use of a prescribed method. It centers on encouraging independence and self-reliance, while also acknowledging the unique talents, interests, context, and perspectives of each person. The ultimate goal is to create solutions with no antecedent *(innovations)* that arise from the creative and resourceful nature of the innovator.

Puff! is an innovation concept that emphasizes the sudden, seemingly spontaneous emergence of ideas without the need for a specific method. It is often referred to as *'sudden inspiration'* and characterized by the phrase *'it just came to me from nowhere.'* Puff! highlights the importance of letting ideas come naturally, without forcing them, as a way to achieve breakthrough innovation.

Trial And Error is a method of problem-solving that involves attempting different solutions until the right one is found.

FI-06

Storytelling in Innovation

Storytelling is a tool to effectively communicate and convey the value and impact of an innovation to stakeholders, creating a compelling narrative and emotional connection that can drive adoption and support for the product or service.

THE POWER OF STORYTELLING

PART 1

Once upon a time, in a far-off land, there lived a great storyteller. She had traveled the world and learned stories from people of many different cultures. She knew how to use vivid language, voice inflection, and body language to make her stories come to life.

People came from far and wide to hear her tell stories of adventure, love, and mystery. They were entranced by her storytelling ability, and she became famous throughout the land.

As she told her stories, she often mentioned other great storytellers who had come before her, like Scheherazade, who had used her storytelling skills to avoid being executed, and Aesop, who had told classical fables that taught valuable lessons.

But the storyteller also knew that storytelling was more than just entertainment. It had real-world applications, especially in the field of innovation. By creating a compelling narrative for products or services, innovators could better connect with their audience. Through collaboration and storytelling, they could generate new ideas and insights. And by telling stories that illustrated the potential of new ideas, innovators could inspire and motivate others to support their vision.

Will continue on page 85...

PS

PROBLEM SOLVING

Techniques and approaches for identifying and solving problems related to developing and delivering innovative products or services.

PS-01

Creative Thinking Techniques

Methods used to generate and explore new ideas andperspectives for innovation problem-solving.

Artistic representation is using art or visual representation to communicate and analyze information and ideas.

Brainstorming refers to a group problem-solving technique that involves generating a large number of ideas in a short amount of time.

Convergent thinking narrows down and synthesizes information to find the best solution, but it doesn't lead to innovation by itself. This approach is often associated with linear thinking, where the focus is on finding a single, optimal solution.

Creative thinking is the process of using imagination and original ideas to create something new and innovative. It involves the ability to make connections between seemingly unrelated concepts, and approach problems in unconventional ways.

Divergent thinking is a problem-solving technique that involves generating multiple ideas and possibilities to broaden the scope of the problem-solving process.

Lateral thinking is a problem-solving technique that encourages looking at things in a different way by broadening the scope of observation and considering alternatives that may not be immediately obvious by generating unconventional ideas and solutions.

Mindmapping is a visual tool used to organize and structure information and ideas by connecting those that are related.

Reverse thinking is a problem-solving technique that involves looking at a problem from a different perspective that may be contradictory to the expected train of thought, resulting in new courses of action or possibilities.

Six Thinking Hats is a problem-solving technique that encourages participants to consider a problem from multiple perspectives by wearing "thinking hats" representing different modes of thought.

PS-02

Mindfulness Techniques

Practices that reduce stress, improve focus, and foster creativity and problem-solving. They help to promote an open and flexible mindset that is essential for generating new ideas and approaches in innovation. By improving decision-making and allowing for different perspectives, these techniques enhance an individual's ability to innovate.

Adaptability is the ability to adjust to new situations and change quickly in response to changing circumstances.

Meditation is the practice of focusing one's mind on the present moment, often through the use of breathing exercises, visualization, and other techniques, to increase awareness and reduce stress.

Motivation is the driving force that prompts a person to act, whether it be intrinsic or extrinsic in nature, and influences the direction and persistence of behavior when pursuing a goal.

PS-03

Problem Solving Techniques

Techniques that help identify and analyze problems and generate potential solutions, focusing on the user and the problem's root causes.

Affinity Diagramming is a problem-solving technique that involves organizing and grouping ideas and information into categories based on their natural relationships.

DeBono's Six Action Shoes is a creative thinking technique that encourages lateral thinking and helps to find solutions by exploring

different perspectives and options generated from six action styles or "shoes."

Empathy Mapping is a tool used to understand the needs, wants, and pain points of a target audience to inform innovation efforts and product design.

Fishbone (Ishikawa) Diagram is a problem-solving tool used to identify root causes of a problem by visually organizing and categorizing potential causes.

Force Field Analysis is a tool used to analyze and evaluate the driving and restraining forces affecting a situation, in order to determine the best course of action.

Function Analysis System Technique (FAST) is a tool used to simplify complex systems and identify areas for improvement by breaking down the system into its component parts and analyzing the functions they perform.

Ideation is the process of generating ideas and solutions for a problem, and there are various methods to conduct this process.

Incubation of Ideas refers to the process of allowing ideas to mature and develop over time through reflection and incubation. One common way to incubate an idea is to "sleep on it."

Pareto Analysis is a tool used to prioritize problems and focus on the most significant contributors to a particular issue, based on the Pareto Principle that states 80% of effects come from 20% of causes.

Root Cause Analysis is a method to identify the underlying cause of a problem. The simplest method for root cause determination is by asking why, answering the question, and repeating the why four more times on each new answer.

SCAMPER (Technique) is a problem-solving technique that involves using a list of prompts to encourage creative thinking and idea generation.

THE POWER OF STORYTELLING

PART 2

The storyteller saw the power of storytelling in action when a group of entrepreneurs approached her for advice on how to launch a new product. The entrepreneurs had developed a revolutionary new technology, but they were struggling to get investors on board. They had tried pitching the technology with statistics and technical jargon, but it wasn't resonating with their audience.

The storyteller listened to their pitch and suggested they try telling a story instead. She helped them craft a narrative that highlighted the potential of their technology to change the world. They told the story to investors, and the response was deeply moving. The investors were inspired by the vision presented in the story and saw the potential of the technology in a new light, feeling a sense of hope and excitement.

Will continue on page 86....

INNOVATOR ATTRIBUTES

Desirable personal traits that support the innovation mindset and the materialization of an innovative idea. These traits can be found in a single person or may be provided by different members of a team.

IA-01

Attitudes and Behaviors for Successful Innovation

Set of attitudes and behaviors that contribute to successful innovation.

These include *being adaptable, determined, ethical, networked, and willing to take risks.*

IA-02

Foundational Personal Qualities for Innovation

Fundamental qualities that are recommended for success in the innovation process.

They encompass a set of key skills, qualities, and attributes that are critical for success in the field of innovation. These qualities include *common sense, confidence in decision making, emotional intelligence, flexibility, good time management skills, independent thinking, taking ownership of one's actions, perseverance, resilience, openness to criticism, self-motivation, stress management, strong critical thinking skills, a strong work ethic, tenacity, and being a trailblazer.*

IA-03

Innate Innovation Traits

Innate talents or capacities for generating and implementing new and creative ideas or solutions.

These traits include *intuition, creativity, and visionary thinking.* With some work, these traits can be enhanced or developed.

IA-04

Innovation Skills and Abilities

Set of abilities that facilitate successful development and implementation of new and creative ideas.

These abilities include *strategic thinking, effective communication, collaboration, problem-solving, risk-taking, and resourcefulness,* which are vital for driving change and progress. Individuals who seek to make an impact in innovation should possess these skills. Additionally, *curiosity, coordination (leadership), teamwork, inspiration, passion, persistence, self-confidence, and understanding of the subject of innovation* are included in the desirable skills for innovation.

INNOVATION LANDSCAPE ANALYSIS

A toolset for considering external factors impacting innovation. This contextual understanding is critical for achieving innovation excellence and creating impactful innovations.

LA-01

Circularity

Applying the concept of circularity to reduce waste and pollution through the use of reusable or repairable materials, in response to the increasing relevance of new legislation and interest groups prioritizing circular products.

LA-02

Financing and Funding

Identifying and securing financial resources necessary for bringing innovations to market and scaling their impact.

LA-03

Market Analysis

Understanding market trends, competition, and regulations to create relevant and impactful innovations.

LA-04

Organizational Culture

Creating a supportive organizational culture that values and encourages innovation can have a significant impact on the success of innovation initiatives.

LA-05

Partnerships and Collaborations

Collaborating with other organizations, institutions, or individuals to bring complementary expertise and resources to the innovation process.

THE POWER OF
STORY TELLING
PART 3

From then on, the entrepreneurs became great believers in the power of storytelling, and they continued to use it to inspire and motivate others. And so the storyteller continued to weave her tales, inspiring and enlightening those who listened, and spreading the power of storytelling throughout the land.

And as the power of storytelling spread, its ripple effects reached far and wide. Communities came together, united by the shared experiences and lessons embedded within the narratives. It fostered empathy, understanding, and a deep appreciation for the richness of human diversity, reminding everyone that within every story lies a treasure waiting to be crowned in glory.

The End.

InnoNavigator 1.0

UNCOVERING TOOLS (U-)

U-01 Creative Inspiration

1. Children's stories
2. Psychic insights

U-02 Futurism and Foresight

3. Futurism
4. Futurology
5. Sci-Fi

U-03 Market Understanding

6. Collaboration and networking
7. Marketing

U-04 Science and Technology

8. Artificial intelligence (AI)
9. Complexity Science
10. Computer science and informatics
11. Data science
12. Economics
13. Machine learning (ML)
14. Mathematics
15. Social sciences
16. Trend analysis and forecasting

U-05 Societal and Environmental Considerations

17. Ethnography and cultural studies
18. Social responsibility
19. Sustainability

FACILITATORS FOR INNOVATION (FI-)

FI-01 Contextual Innovation

20. Atavistic Innovation
21. Forward-Thinking Innovation

FI-02 Flexible Customer-Centered Innovation

22. Agile Innovation
23. Lean Innovation
24. Open Innovation

FI-03 Flexible Innovation Methodologies

25. Design Thinking
26. Systematic Innovation Thinking (SIT)
27. TRIZ

FI-04 Nature-Inspired Innovation

28. Biomimetics
29. Biomimicry
30. Eco-Innovation

FI-05 Organic Innovation

31. Innovation Finding Your Way (IFYW)
32. Puff!
33. Trial And Error

FI-06 Storytelling in Innovation

34. Storytelling

PROBLEM SOLVING (PS -)

PS-01 Creative Thinking Techniques

35. Artistic representation
36. Brainstorming
37. Convergent thinking
38. Creative thinking
39. Divergent thinking
40. Lateral thinking
41. Mind mapping
42. Reverse thinking
43. Six Thinking Hats

PS-02 Mindfulness Techniques

44. Adaptability
45. Meditation
46. Motivation

PS-03 Problem Solving Techniques

47. Affinity Diagramming
48. DeBono's Six Action Shoes
49. Empathy Mapping
50. Fishbone (Ishikawa) Diagram
51. Force Field Analysis
52. Function Analysis System Technique (FAST)
53. Ideation
54. Incubation of Ideas
55. Pareto Analysis
56. Root Cause Analysis
57. SCAMPER (Technique)

INNOVATOR ATTRIBUTES (IA-)

IA-01 Attitudes and Behaviors for Successful Innovation

58. Adaptable
59. Determined
60. Ethical
61. Networked
62. Willing to take risks

IA-02 Foundational Personal Qualities for Innovation

63. Common sense
64. Confidence in decision making
65. Emotional intelligence
66. Flexibility
67. Good time management skills
68. Independent thinking
69. Ownership of actions
70. Perseverance
71. Resilience
72. Openness to criticism
73. Self-motivation
74. Stress management
75. Strong critical thinking skills
76. Strong work ethic
77. Tenacity
78. Trailblazing

IA-03 Innate Innovation Traits

79. Creativity
80. Intuition
81. Visionary thinking

IA-04: Innovation Skills and Abilities

82. Collaboration
83. Coordination (leadership)
84. Curiosity
85. Effective communication
86. Inspiration
87. Passion
88. Persistence
89. Problem-solving
90. Resourcefulness
91. Risk-taking
92. Self-confidence
93. Strategic thinking
94. Teamwork
95. Understanding of the subject of innovation

INNOVATION LANDSCAPE ANALYSIS (LA-)

96. **LA-01** Circularity
97. **LA-02** Financing and Funding
98. **LA-03** Market Analysis
99. **LA-04** Organizational Culture
100. **LA-05** Partnerships and Collaborations

87 - Sect. 3.5.7

PART 4

Because

YOU ARE FINDING

You Are Here

89 - PART 4

FEET-PAINTING: INNOVATING BEYOND LIMITATIONS

As you approach the final exercise, you're faced with a unique challenge that requires innovation and resourcefulness. Painting with your feet may seem unconventional or even unattainable, but what if you could make it a reality? This is your chance to overcome a natural obstacle and prove that you can come up with groundbreaking solutions.

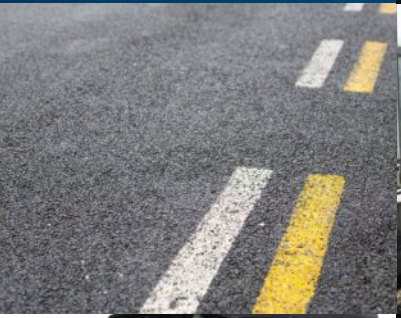
Despite the initial hurdles, you have an array of valuable resources at your disposal. Your feet will serve as your new painting tools, while paper and writing supplies will be your canvas. You also have the InnoNavigator, a toolbox brimming with untapped potential. With these tools, it's time to unleash your creativity and push the boundaries of what's possible.

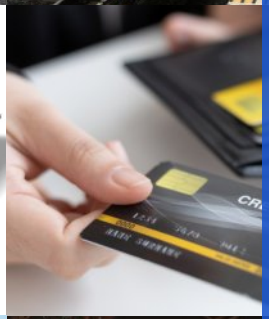
To complete this challenge, you must paint a creation with your feet that rivals what you could produce with your dominant hand. Your success in this endeavor will demonstrate your innovative spirit and problem-solving skills. Once you've completed your masterpiece, share it with the world and inspire others with your ingenuity. You've come a long way, and this final exercise is your chance to shine and show what you're capable of.

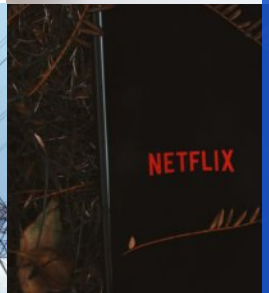
WHAT ABOUT INNOVATING YOURSELF?

By now, you have a very resourceful toolkit that will allow you to bring your innovations to the world. But have you considered using that toolkit on yourself? As individuals in constant evolution and transformation, we can identify aspects of our lives that can be improved or changed by using creative and unprecedented solutions. You may acquire new skills, seek out new opportunities or experiences, and experiment with different ways of doing things for yourself. Innovation also involves being open to new ideas and experiences, taking calculated risks, and being willing to fail in pursuit of a goal. It often requires persistence and the ability to learn from setbacks and adapt one's approach accordingly, just like becoming a better person. Remain focused on your goals, stay flexible, and be willing to put in the effort and hard work necessary to bring about meaningful advancement.










As we reach the end of this workbook **"INNOVATION: FINDING YOUR WAY,"** we hope that you have found the inspiration and guidance needed to embark on your innovation journey. Your ideas, creativity, and determination have the power to change the world and make it a better place for yourself and those around you. So, don't be afraid to dream big and think in unique and creative ways. Embrace your natural abilities, acquire new ones and utilize the tools and resources at your disposal. The world is waiting for you to bring your unique vision to life. The time for innovation is now. Let's see what you can create!

WISHING YOU ALL THE BEST ON YOUR NEXT BREAKTHROUGH INNOVATION