COMPLEX PROBLEM-SOLVING CAPABILITIES

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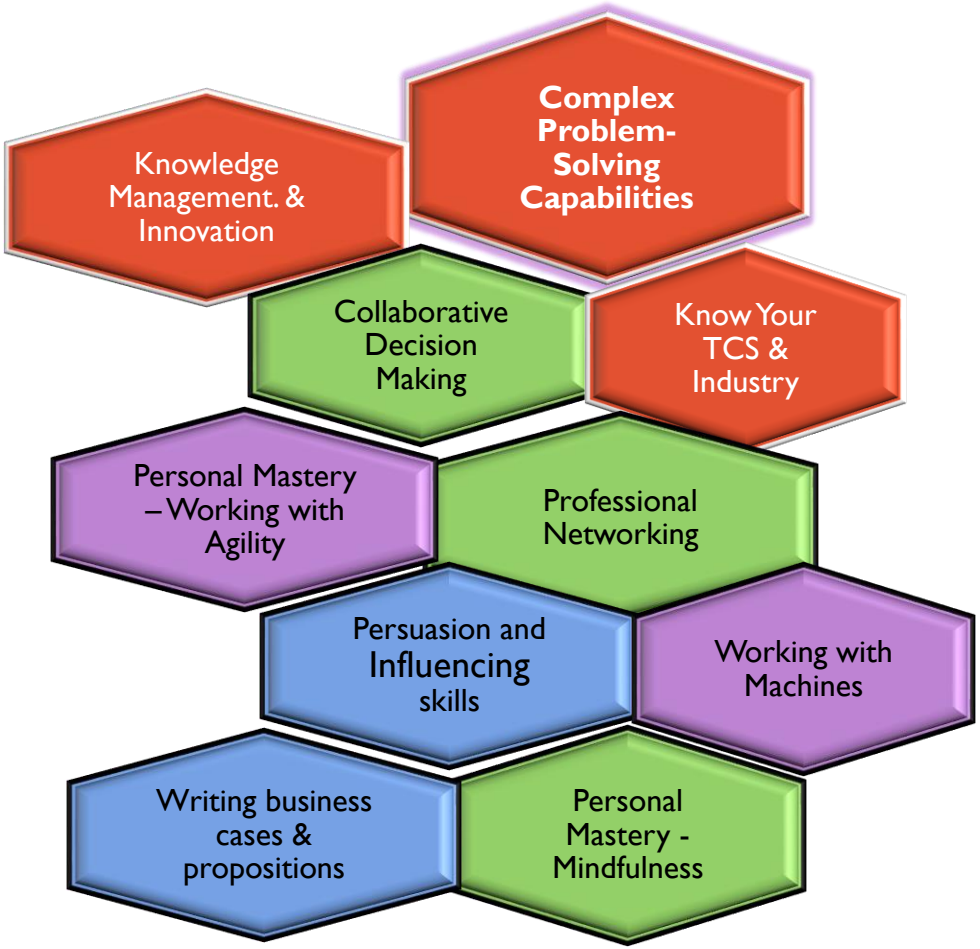

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Introduction to Problem Solving

A problem is a question or situation that presents doubt, perplexity, or difficulty. It's an issue that needs to be corrected or overcome in order to achieve a desired state.

Solving problems involves goal-oriented thinking and action in situations for which no ready-made solutions exist. While you already possess problem solving skills, it is possible to sharpen them further by understanding the problem-solving process and acquire an awareness of the challenges and pitfalls that impair the process.

Do go through the following articles to learn more:

Article:

- Introduction to Problem Solving Skills
- Brief Introduction to Problem Solving

(Right click on the link to open it in a new tab)

Don't wish it were easier

Wish you were better

Don't wish for less problems

Wish for more skills

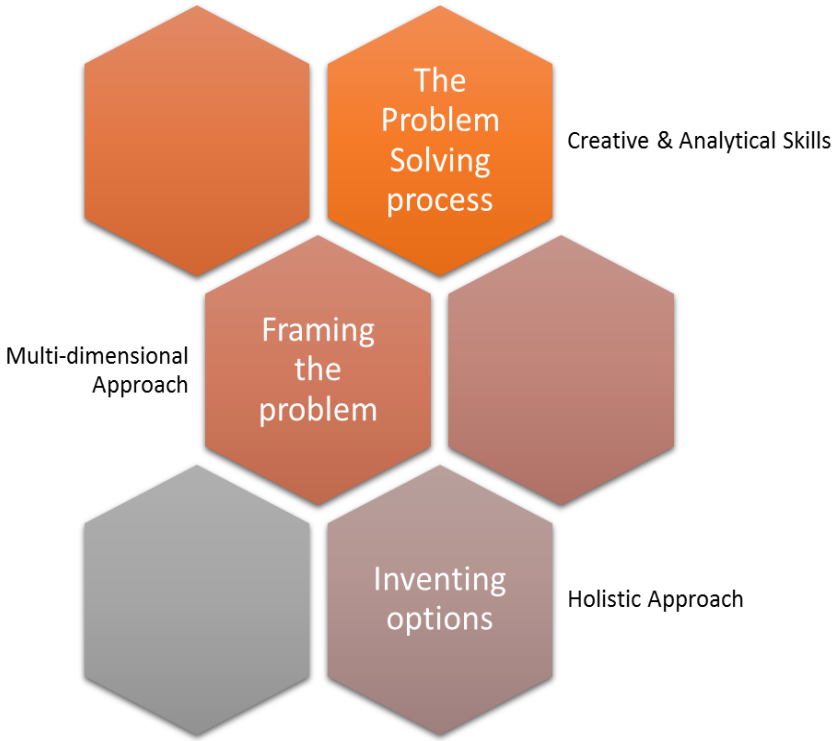
Don't wish for less challenge

Wish for more wisdom

What lies ahead…

In the module for problem solving we will learn about:

- The problem solving process and its application
- How to get to root cause by framing the problem
- Come up with ideas for the most appropriate solution
- Further, We will also learn about the developing creative and analytical skills which are requisites for effective problem solving.
- Finally we will discuss the various approaches to solve complex problems.



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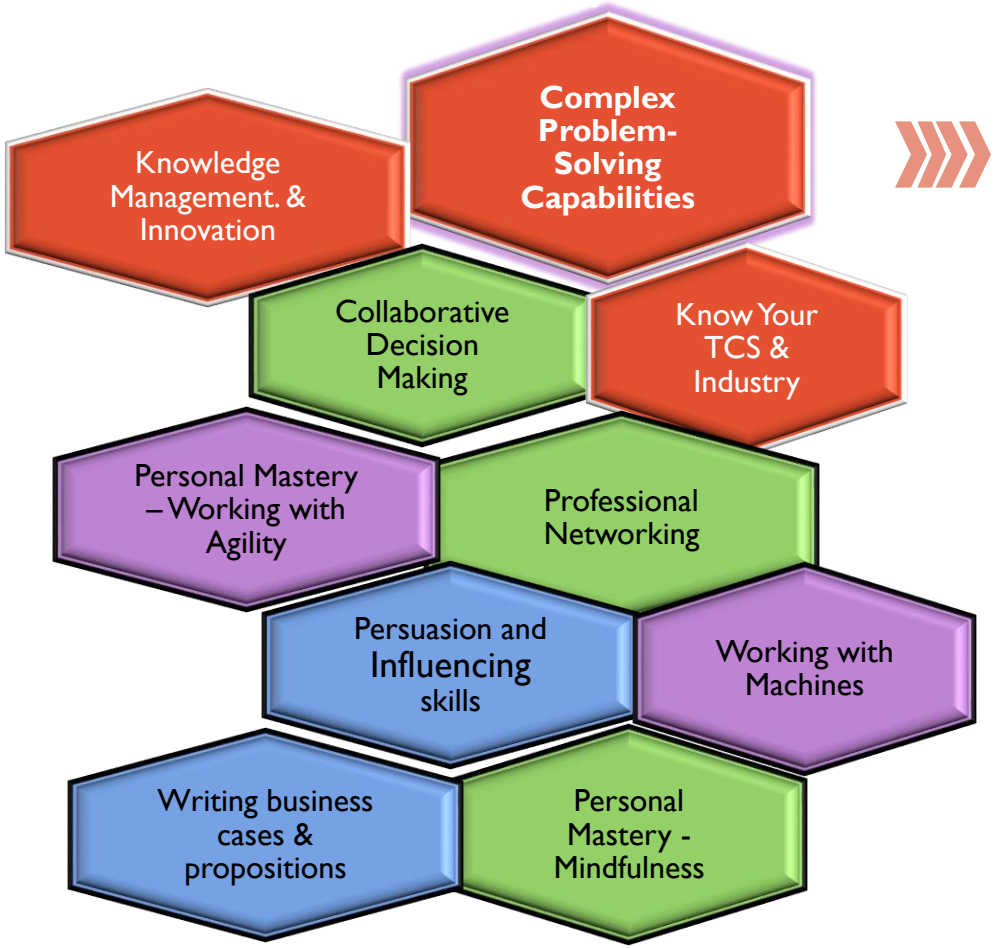

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Problem Solving: The Fundamentals

This article written by Wharton magazine covers the fundamentals of problem solving. Also, we have a Linkedin video which talks about a step by step process that can be used effectively to solve problems of any type.

Article - The Fundamentals of Problem Solving

Linkedin Video - A framework for Problem Solving -2hr 4mins

The learning objectives are:

- sequence key activities performed in the six-step problem-solving model
- recognize activities that demonstrate the type of skills best suited to resolve a given type of problem
- It will help you in any problem solving situation; moving you towards better solutions, less stress and greater confidence.

You can use the following article and video as a ready reckoner.

Article - The Six Step Problem Solving Model

YouTube Video - Six Steps to Problem Solving – 4mins 30secs

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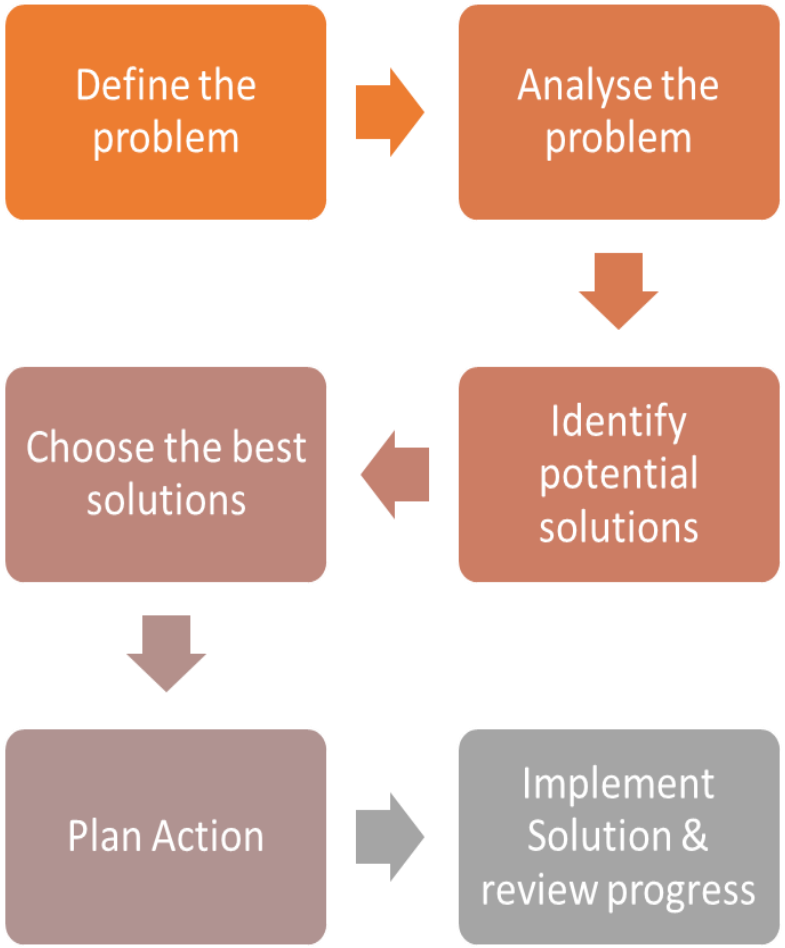

Problem Solving Skills: Building Your Strengths

- We've learnt about the fundamentals of problem solving. Now it is time check our strengths and build upon them.
- Can you handle difficult or unexpected situations, business challenges in the workplace. Have you ever thought of yourself as a problem solver?
- Problem Solving is so important in life like relationship building and day-to-day decision making. Please go through the following articles to learn how to develop and enhance problem solving skills and styles:

Article - Problem-Solving Skills: Definitions and Examples

Article - 6 Ways to Enhance Your Problem Solving Skills Effectively

Article - Problem solving styles

These articles will help you in:

- Determining Problem-solving Skills with examples
- Developing and enhancing Problem-solving skills effectively
- Assessing Your Problem-solving Styles

(Right click on the link to open it in a new tab)

Barriers to Problem Solving

- There are several common barriers and obstacles to successful complex problem solving. The articles and videos below will walk you through the barriers we have to solving problems and start to touch on how you can create a problem-solving strategies.
- Read about them using the links below:

Article - Barriers to Problem Solving

Article - Problem-Solving Strategies and Obstacles

YouTube Video - Obstacles to Problem Solving – 9mins –

- While it is useful to know what are the barriers it is more important to learn how to avoid and counter them.

YouTube Video - Problem-Solving Mind Traps – 12 mins

(Right click on the link to open it in a new tab)

Bias in Problem Solving

- Action
- Confirmation
- Association
- Sunk-Cost

Cognitive biases

- Framing
- Anchoring
- Availability
- Overconfidence

Motivational biases

- Self-enhancement
- Cooperation
- Need for closure
- Accountability

Use this article to remind you of the types of bias you may encounter during the problem-solving process.

Article - 3 Common Biases That Impede Problem Solving

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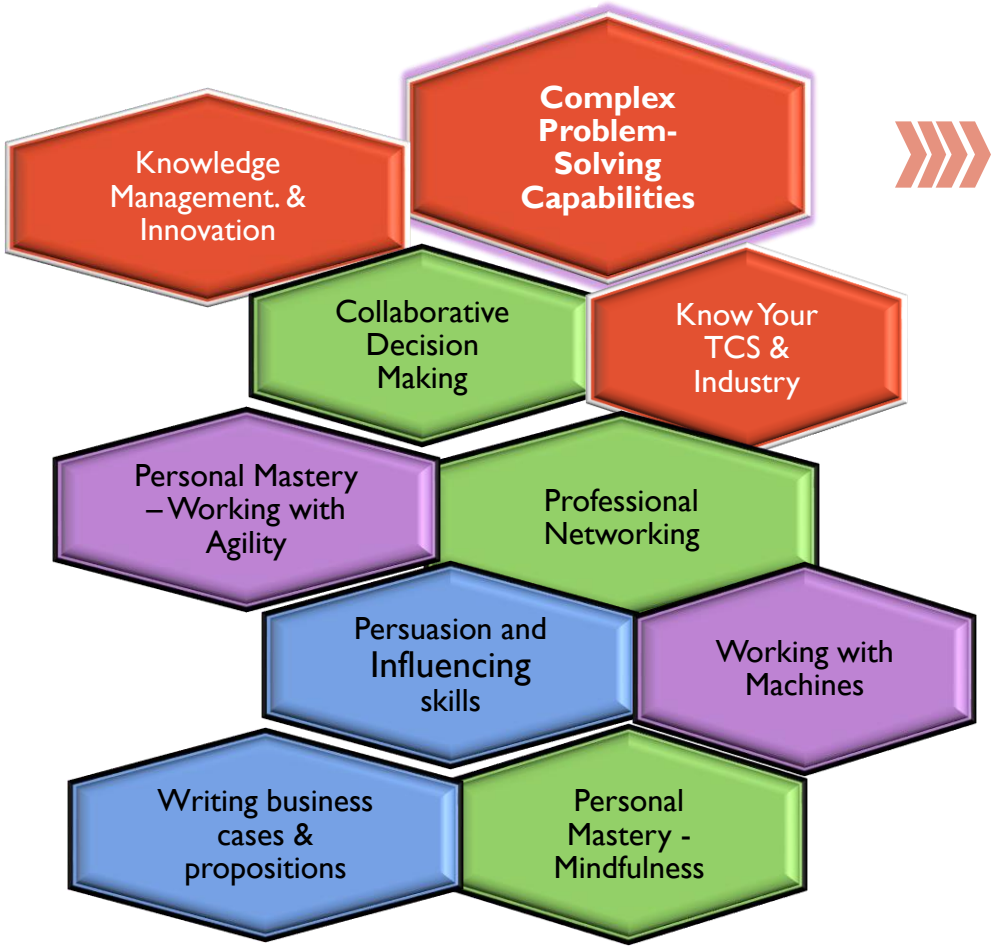

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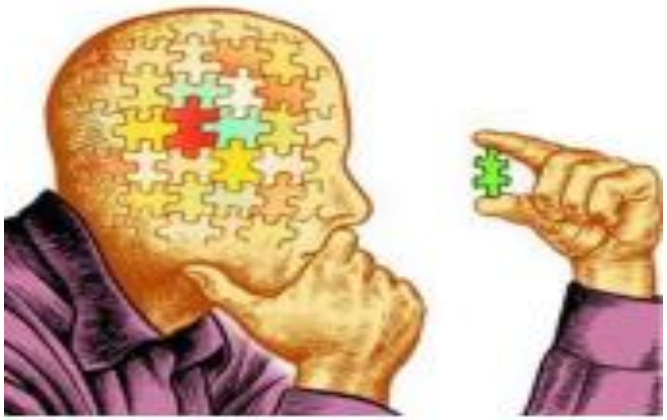
Analytical Skills

Analytical skills or analytical thinking is an ability to collect, visualize, and analyze information to see the bigger picture or trend behind facts and help in finding solutions to common problems and make decisions in helping what to perform next.

- Analytical skills are essential for gathering data, solving complex problems, making rational decisions at workplace. These skills allows in evaluating simple and complex problems.
- In order to analyze a question or problem and reach a solution, need the below key aspects of analytical skills.
  - Attention to Detail
  - Critical Thinking
  - Decision – Making
  - Researching Skills



Critical Thinking Skills

Critical thinking is the ability to think clearly and rationally, understanding the logical connection between ideas. It includes the ability to engage in reflective and independent thinking.

1. This short video gives an idea about critical thinking.

What is Critical Thinking?

2. To know in detail what is Critical Thinking, what are the constituent elements and how to improve the quality of your thinking, please complete the Web based training from Linkedin using the link below:

Linkedin Course - Critical Thinking– 59 mins

3. Brian Oshiro, a teacher evaluator, shares what he has observed in the classrooms and offers three simple questions we can ask to encourage critical thinking of the children and ourselves in this TED talk.

Video: Encourage critical thinking with 3 questions | Brian Oshiro | TEDxXiguan

Investigating Arguments

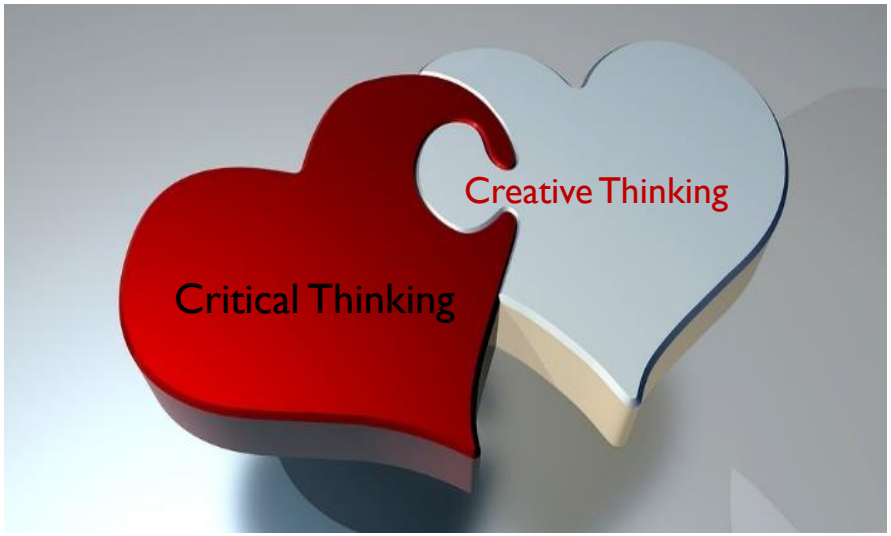
Debating an argument is part of reaching a logical conclusion and solving problems. One needs to use strategic thinking to identify and judge arguments, recognize logical fallacies and persuasion techniques, and make effective arguments of your own.

Do watch the insightful videos to critically think about critical thinking and learn how to apply and improve it in your life.

Video - Critical Thinking - Use Independent Thinking To Build A Powerful Life – 18mins

Video - 5 tips to improve your critical thinking - Samantha Agoos – 4mins 30 secs

Creative Thinking



Critical thinking and creative thinking go hand-in-hand

Your thinking can have a significant effect on the quality of your life – it determines how well you work through complex problems, make decisions, and accomplish your goals. That's why developing creative thinking skills is so important. To think creatively is a practical goal – you can apply to every question, issue, or problem you face.

This course explains describes the skills required for creative thinking and how to apply creativity thinking to decisions, problems, or issues in the workplace.

Please go through the courses below to learn more:

Linkedin Course - Creative Thinking – 41mins

Linkedin Course - Creativity for All – 3hr 4mins

Creativity and Ideas

Creative thinking is the ability to look at things with a fresh perspective to be able to generate new, unorthodox ideas which can help in solving problems. Creativity and the need for it is not limited only to artists, designers or those in a creative profession. Each of us can develop and benefit from it.

Do go through this course to learn more:

Linkedin Course - Creativity: Generate Ideas in Greater Quantity and Quality – 58 mins

Linkedin Course - Take a More Creative Approach to Problem-Solving - 27 mins

Additionally, check out these videos to enhance your learning:

- 7 steps of creative thinking: Raphael DiLuzio at TEDxDirigo
- Creative thinking - how to get out of the box and generate ideas: Giovanni Corazza at TEDxRoma

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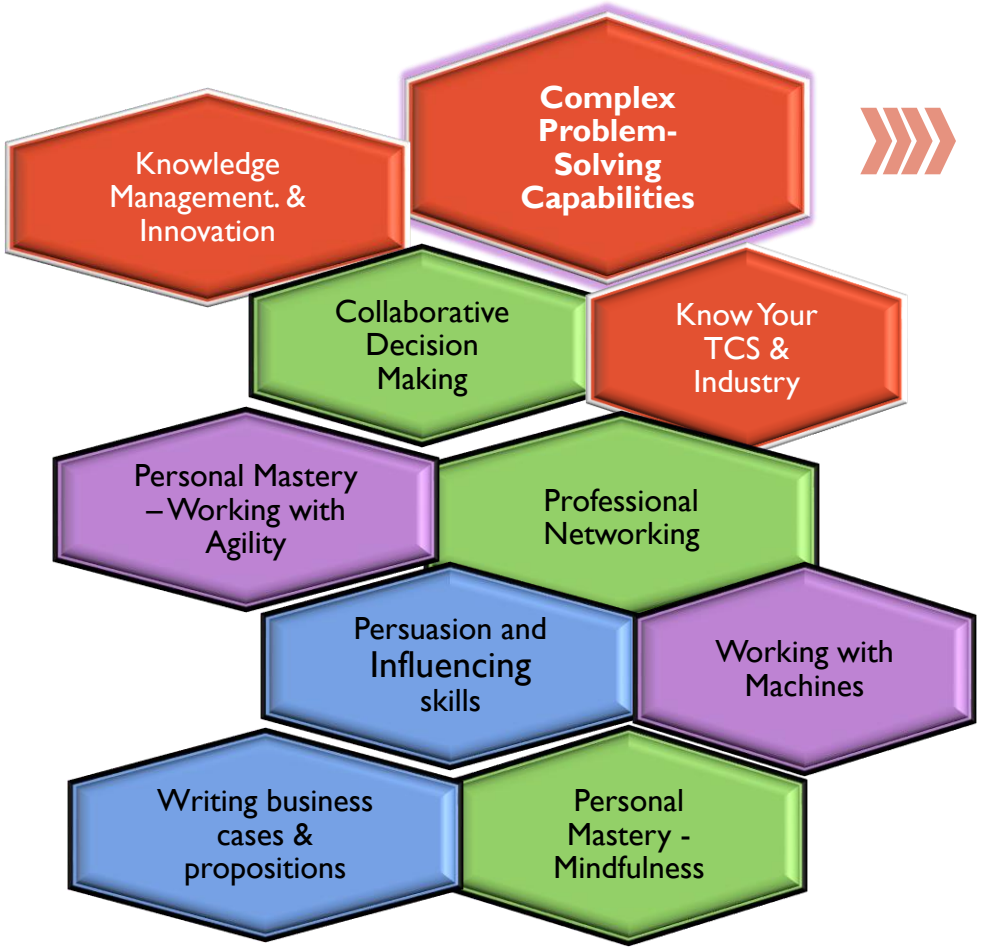

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Getting to the Root of a Problem

Articulating a problem requires asking the right people the right questions. In this article , you'll learn about how to use analysis techniques to get to the root cause of a problem and also you have a course which explains on how to solve business problems.

Article - Getting to the root of the problem

Framing the Problem You Need to Solve

- Match root causes of problems with the organizational level at which they typically occur
- Recognize how to investigate root causes of problems using 5 Whys analysis
- Recall the steps in using a fishbone diagram to investigate the root causes of a problem
- Use appropriate methods to get to the root cause of a problem

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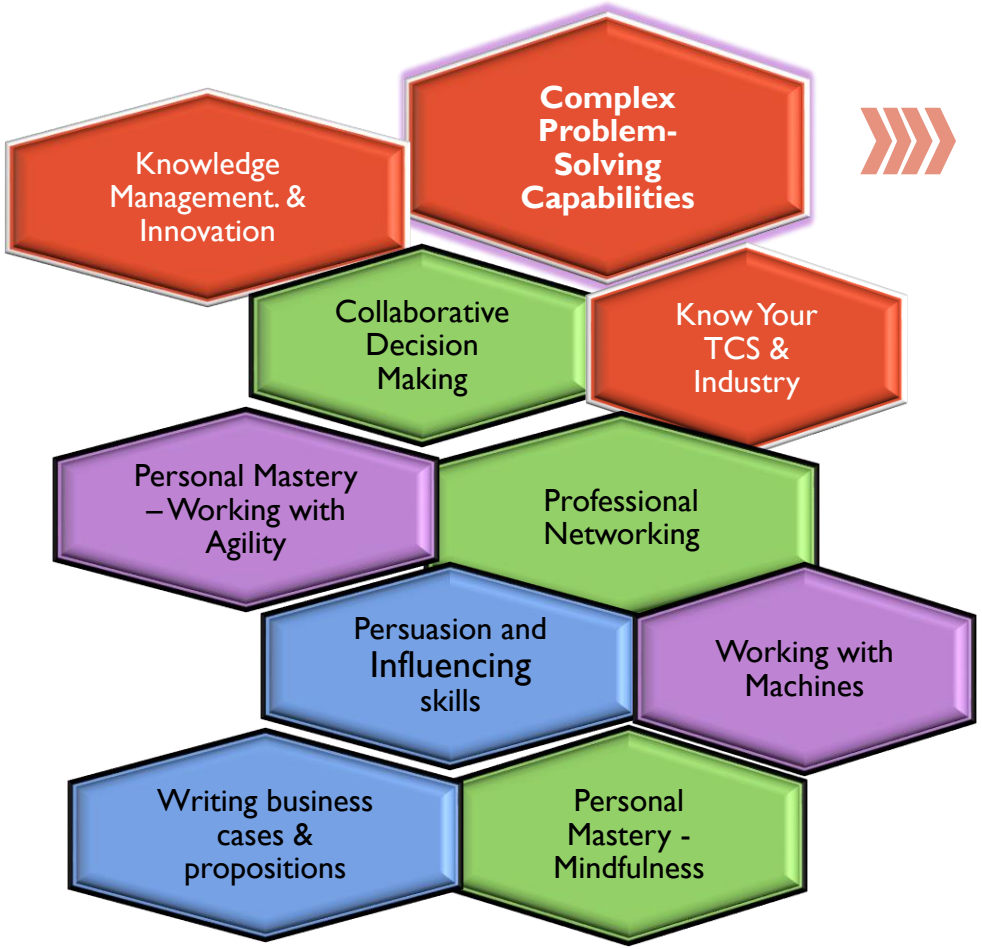

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Problem solving Techniques

Norman Vincent Peale, who stressed the need for analysing a problem in detail, once said, 'When a problem appears, study it until you are completely knowledgeable. Then, find the spot, break the problem apart and the rest will be easy.' A fact-based, honest analysis happens at two main steps in the problem-solving process: first, when you analyse problems to identify the root causes and then, when you evaluate and analyse potential solutions to determine the one that has the maximum chance of success.

The first course helps you to boost your creativity and select the best solution that demonstrates how the application of a few tools greatly assists you when determining the root cause of a problem and the best solution. The second course explains how to solve business problems using logic maps and 2x2 matrix techniques.

Linkedin Course: Problem Solving Techniques – 1hr 32mins

Linkedin Course – Solving Business Problems – 36mins

Objectives

- Identifying the real problem
- Generating possible solutions
- Selecting the best solution
- Recall how to keep a problem well defined using logic maps.
- Recognize how to use a 2x2 matrix to prioritize solutions.

Tools to Use

Article - Problem solving and Problem analysis tools

The following links leads you to another comprehensive course which provides an array of tools to use to solve problems.
Take your time to go through it and ensure to note what you find most helpful for your current work. The best way to learn is to apply , so find avenues where these tools can be used and begin right away.

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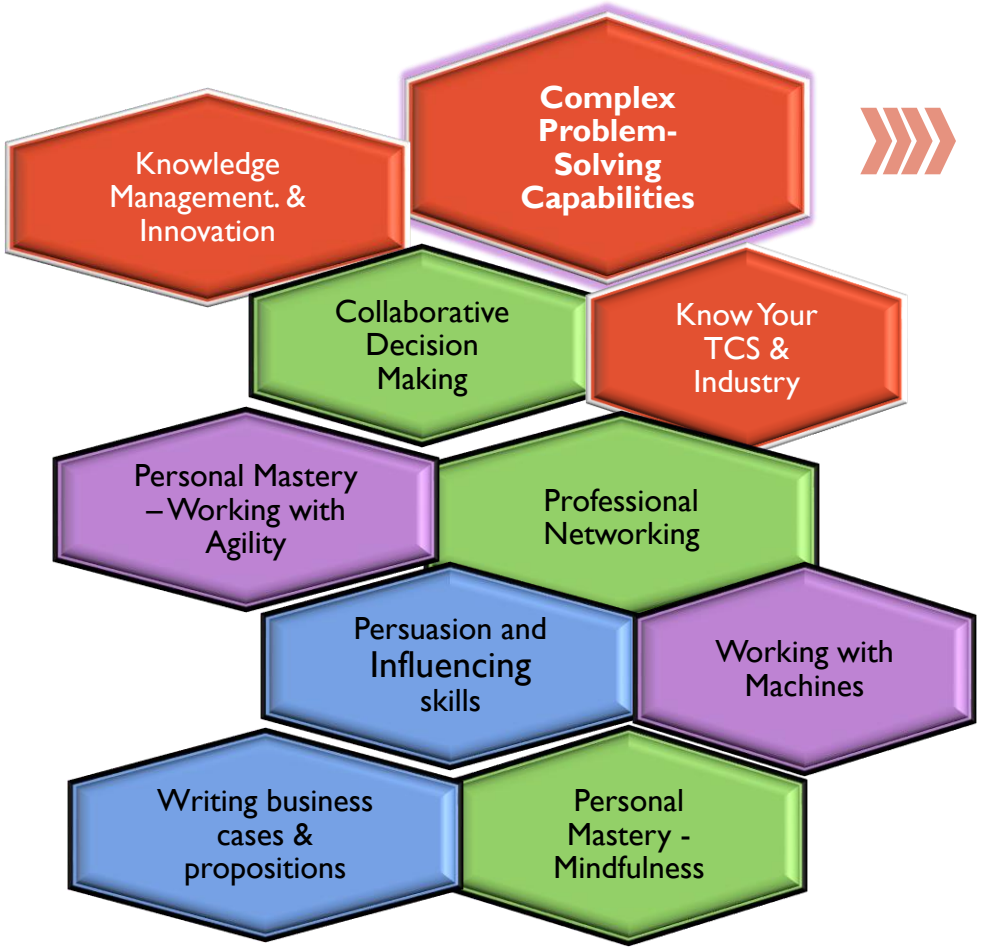

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Generating Options

Before generating alternative potential solutions to a problem, it's helpful to have a sense of the 'ideal state' – what the situation would look like if people had a magic wand. This provides some direction to those coming up with new ideas.

Once ideas and alternatives are on the table, evaluating which ones are the best to implement can be a daunting task.

In this video and article, you'll first learn how to elicit descriptions of ideal states. Next, you'll find out how to use basic techniques for generating and evaluating alternative solutions to a problem. Finally, you'll learn to recognize and avoid common pitfalls that can occur while generating and evaluating alternatives.

Resources

Video: Jordan Peterson

Solutions for Very Complex Problems –

Article: 18 Best Idea Generation Techniques

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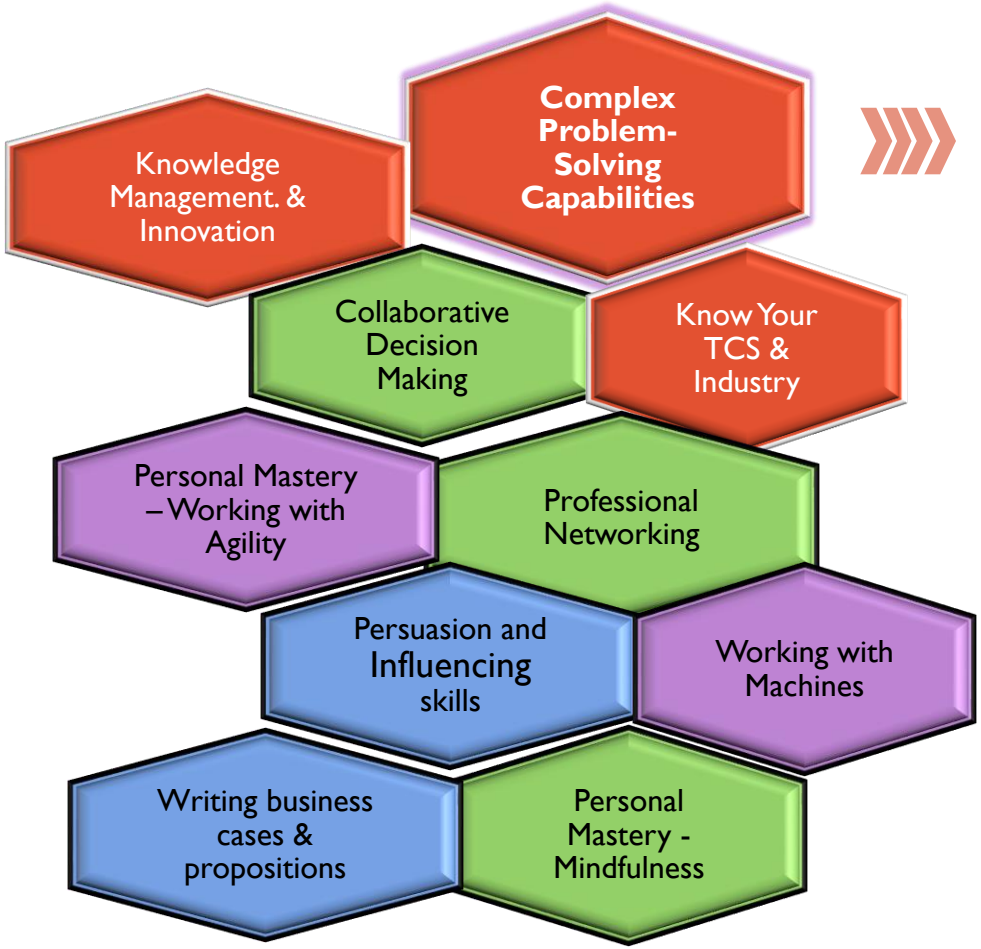

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Design Thinking

Design thinking is a creative approach to problem solving with a human centered core. The focus of this approach is on the user and it starts with asking the right questions. The five stages are to empathise, define the problem, ideate, prototype and test. Check out the course and videos below to learn and understand more about Design Thinking:

Linkedin Video – Design Thinking – 1 hr 31mins

Linkedin Video – What is Design Thinking – 2 hr 8mins

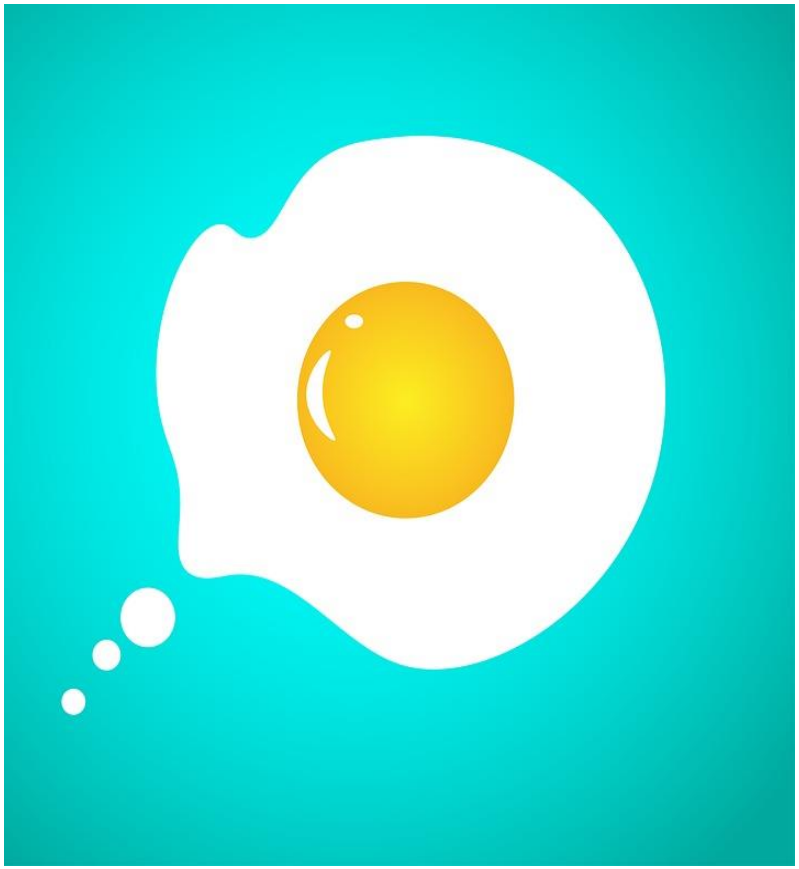
Video – The Design Thinking process – 4mins

https://www.youtube.com/watch?v=_r0VX-aU_T8

Article - An Introduction to Design Thinking process guide

Linkedin Course -

Design Thinking Understanding the Process – 41 mins



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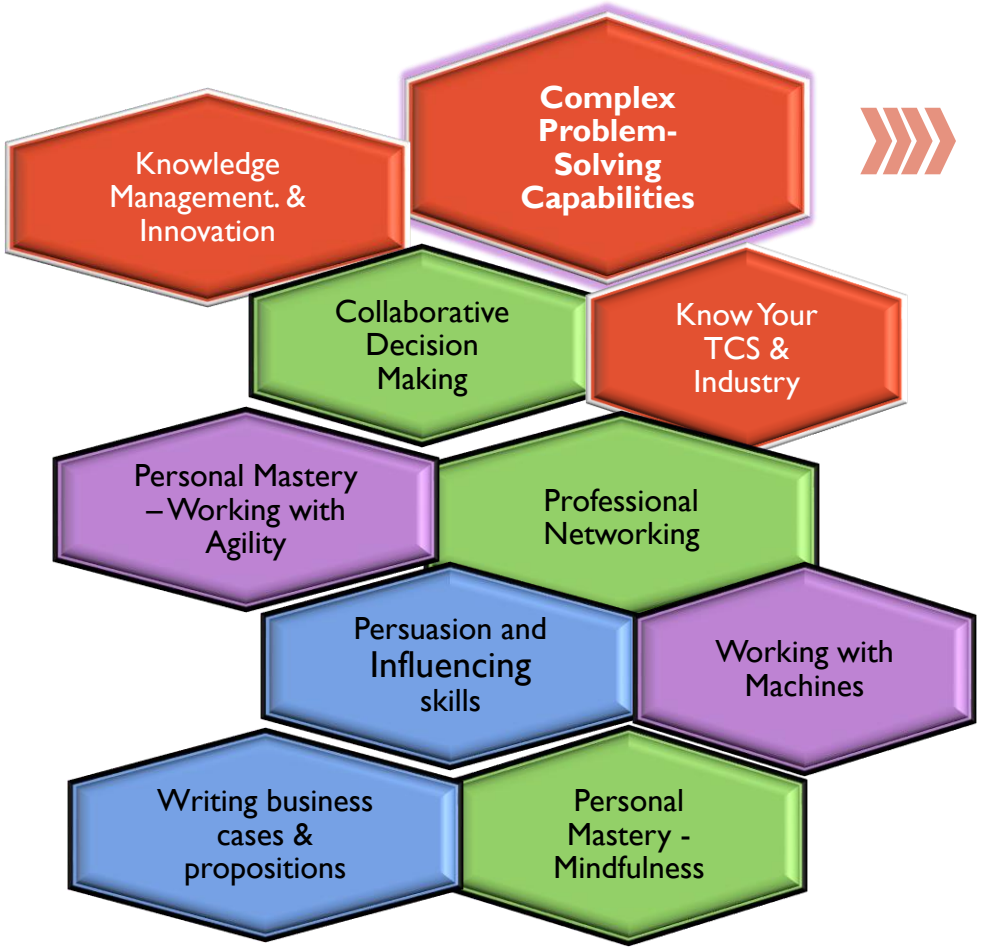

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The Big Picture

Holistic means taking a comprehensive approach. It encompasses the whole of a thing, not just the part. An example of holistic is health care that focusses on the health of the entire body and mind and not just the parts of the body.

One way to consider a problem is to look at its constituent parts and get to the root of the issue. Once the root cause is identified, one can search and develop solutions. The holistic approach involves looking at the problem as a whole and viewing the big picture.

HBR Article - A More Holistic Approach to Problem Solving

Blog - 6 ways to approach problems holistically

THANK YOU