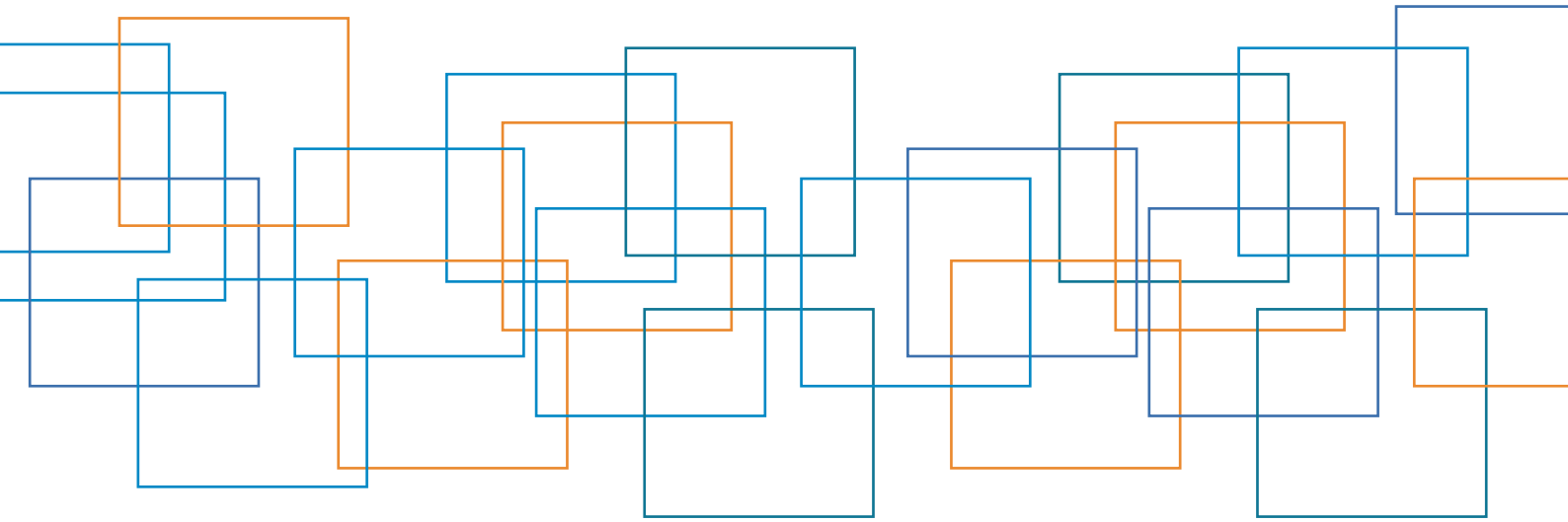
KEPNERandFOURIE®
Foundation



Course Book

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Acknowledgements

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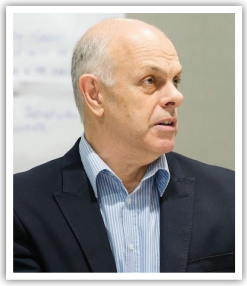
Lead Author



Matthys J Fourie, Founder and Chairman at Thinking Dimensions Global Consulting

Matt Fourie is a Professional Problem Solver specifically in the fields of Root Cause Analysis, Decision Making, and Project Optimization. He co-founded Thinking Dimensions with Chuck Kepner in 1997. Together they developed the KEPNERandFOURIE® thinking methodology. His primary focus is on product design and managing the international network across 20 countries. This is supported by solution design, facilitation and capability development in the areas of Root Cause Analysis, Process Improvement, ITIL Continual Service Improvement, Project Management, Lean-Sigma, and general problem-solving practices.

Matt Fourie holds a B.Mil (B.Sc) from The University of Stellenbosch in Cape Town, a B.Com (Honors) from the University of South Africa, and his Ph.D. from UCL London, UK.

He brings over 30 years of global and Fortune 1000 experience. The main area of his work experience is in addressing client issues with customized programs and transferring this expertise in-house via personal coaching strategies.

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COURSE INTRODUCTION

Let's Get to Know Each Other

Introduce yourself in the following format:

- Name
- Company
- Role and background
- Job responsibilities and biggest challenge
- Experience in problem solving and decision making Familiarity with KEPNERandFOURIE® concepts and their practice
- Expectations from this course

Expectations from this course

Some of the known expectations from this course are:

- Ability to troubleshoot IT technical problems
- Make quick decisions to remove causes
- Finding the root cause of an incident
- Get a common process of Root Cause Analysis (RCA)

Course Overview

Systematic problem solving is one of the essential skills that organizations look for these days. The confident professionals who know how to approach an incident and solve it the "first time every time" are in highest demand. They are the professionals who set new standards in innovation and creativity. The learning path of these people keeps growing and enables them to succeed both personally and professionally.

Systematic problem solving applies to all IT disciplines and brings all the skills of different disciples together with a standard process and language to resolve incidents and avoid "trial and error" attempts. The KEPNERandFOURIE® methodology shared during this course goes hand in hand with Incident and Problem Management. This foundation course will enable you to utilize the KEPNERandFOURIE® methodology effectively. The methodology will enable you to find the correct starting point for investigation, identify the core issues in problem situations, determine the actual cause of an incident, and deliver the right

solutions. The course will introduce you to a series of situation-specific 'can' critical questions that will help you generate mutually agreed solutions for everyday and unique IT problem situations.

In addition to the knowledge of the concepts, combining factual data, intuition, and experience is critical for successful problem-solving practices. It helps you to manage a powerful realization of what is 'missing.'

COURSE OBJECTIVES

At the end of this course, you will be able to:

- Generate and identify the core issues represented in any Incident Situation.
- Generate an accurate Problem Statement, which would enable the investigator to address the correct incident situation.
- Use a set of questions to gather the relevant incident information to serve as the basis for a systematic analysis and verification of a cause.
- Identify and verify the correct technical cause with its root cause.
- Develop solutions for cause removal and solve seemingly unsolvable issues in an incident/problem situation.
- Identify risks represented in an action or decision/plan to be implemented.
- Utilize tools to improve collaboration across silos and virtual collaboration across time zones.

COURSE AGENDA

	Module	Subject	Start	End	Total Time (In hours)
DAY 1	01	Course Introduction	09:00	09:30	00:30
	02	KEPNERandFOURIE® Fundamentals	09:30	10:15	00:45
	03	PriorityWise	*10:15*	*10:45*	*00:30*
		Break	10:45	11:00	00:15
	03	PriorityWise (Contd.)	*11:00*	*12:30*	*01:30*
		Lunch	12:30	13:30	01:00
	04	CauseWise	13:30	*15:30*	*02:00*
		Break	15:30	*15:45*	*00:15*
	04	CauseWise (Contd.)	*15:45*	*17:45*	*02:00*
		End of Day Debrief	17:45	18:00	00:15
		Total (Less Breaks and Lunch)			**07:30**
		Total			**09:00**

	Module	Subject	Start	End	Total Time (In hours)
DAY 2		Review of Day 1	09:00	09:15	00:15
	04	CauseWise (Contd.)	09:15	10:15	01:00
	05	SolutionWise Max4™	10:15	*11:00*	*00:45*
		Break	*11:00*	*11:15*	*00:15*
	05	SolutionWise Max4™ (Contd.)	11:15	12:30	01:15
		Lunch	*12:30*	*13:30*	*01:00*
	05	SolutionWise Max4™ (Contd.)	13:30	15:00	01:30
		Break	*15:00*	*15:15*	*00:15*
	06	RiskWise	15:15	17:15	02:00
		End of Day Debrief	17:15	17:45	00:30
		Exam Preparation Guide	17:45	18:00	00:15
		Total (Less Breaks and Lunch)			**07:30**
		Total			**09:00**

TYPE OF ACTIVITIES

Group Discussions and Exercises

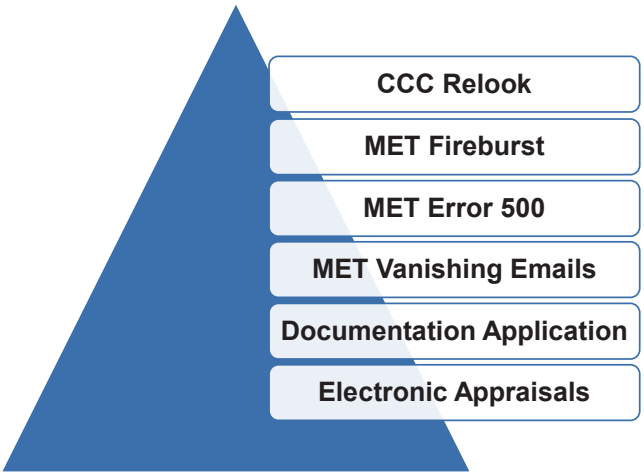
The course contains small and whole group discussions, spread over all modules, with the intent of enhancing participants' understanding, adding context to the content, broadening participants perspective, reinforcing knowledge, and building confidence.

By interacting among themselves and responding to the varying viewpoints, participants tend to learn continually. These discussions allow the participants to learn about their peers, which help them know about each other's past experience, perspectives, and opinions in the context of the topic in discussion.

CASE STUDIES

Case studies help facilitate learning through real-life situations that enable participants to come up with a set of questions that result in an open-ended discussion. These discussions help simplify the complicated problem, improve analytical thinking, and make effective decisions. Case studies also help learners to transfer/apply what they have learned into practice.

This course uses the following case studies to enable the learners to gain a thorough analysis and understanding of the concepts:

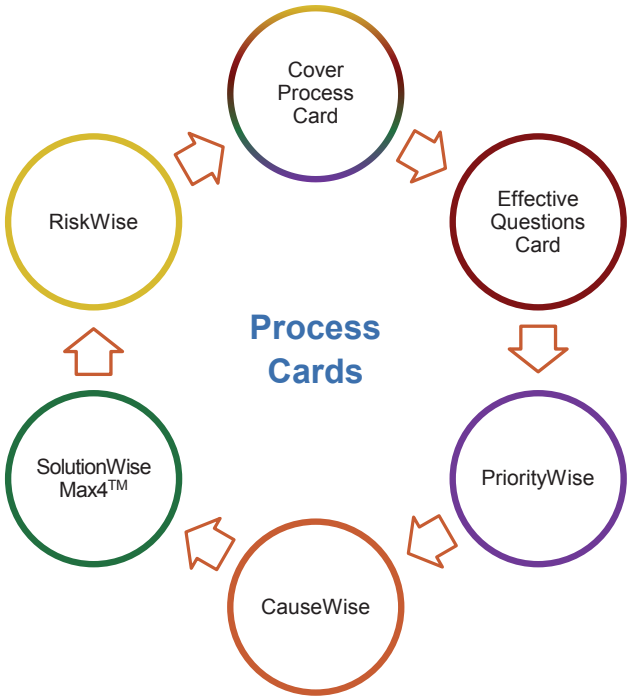


- **CCC Relook:** It will enable learners to identify core issues using the PriorityWise process.
- **MET Fireburst:** It will help the learners to understand the Root Cause Analysis process.
- **MET Error 500:** It will be used for Application type learners to practice the CauseWise process.
- **MET Vanishing Emails:** It will be used for Infrastructure type students to practice the CauseWise process.
- **Documentation Application:** It will be used as a background to allow learners to follow a SolutionWise Max4 facilitation exercise.
- **Electronic Appraisals:** It will be used as a background to enable learners to apply the RiskWise process.

Note: Please refer **Appendix A: Case Studies** to know more about the case studies.

PROCESS CARDS

The course contains Process Question Cards to facilitate learning. These cards are like job aids that will enable you to apply the KEPNERandFOURIE® processes in your work environment. These cards contain worked questions and are specifically designed to help you to ask these to an information source without any other help.



- **Cover Process Card (Multi-colored):** The front side of this card lists all the KEPNERandFOURIE® processes. On the other hand, the flip side displays the process that you should follow to decide the thinking approach for a particular problem.
- **Effective Questions Card (Brown-colored):** The front side of this card lists questions that you will practice during the course. The flip side contains the Check your Thinking approach that you will use at the end of every process.
- **PriorityWise (Purple-colored), SolutionWise Max4™ (Green-colored), RiskWise (Yellow-colored):** The front side of these cards contain questions that you will practice during the course for the corresponding KEPNERandFOURIE® process. On the other hand, the flip side displays the templates.
- **CauseWise (Orange-colored):** This process has two cards that cover all the four highly disciplined steps of the Root Cause Analysis thinking approach.

Note: The Instructor will provide you with the required process cards. These are also provided in a separate book, **Process Cards.**

EXAM

At the end of the course, an exam will be conducted. The exam details are:

- **Bloom Level:** 1 and 2
- **Question Type:** Multiple Choice Questions (MCQs)
- **Question Number and Passing Mark:** 40 questions with a minimum passing rate of 65% (26 points out of 40 to be earned)
- **Time:** 60 minutes (15 minutes extra for non-native examinees)
- **Exam Type:** Closed-book format (participants may bring process cards either physical or eBook)
- **Suggestion:** Recommend that the participants take the exam after completion of the course

MODULE SUMMARY

In this module, you learned that:

- KEPNERandFOURIE® Foundation is a 2-day course that is designed to provide the core education essential for all IT disciples to perform systematic problem-solving and bring the different skills together with a common process and language to resolve incidents and avoid “trial and error” attempts.
- What are the various objectives that this course will help you accomplish?
- What is the 2-day schedule of the training?
- The course contains group discussions and case studies for better understanding of the concepts.
- The exam of this course will have 40 MCQs, and its duration will be 60 minutes.
- The course book is a comprehensive source of information and contains whatever is taught in each module.

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KEPNERandFOURIE® FUNDAMENTALS

Module Objectives

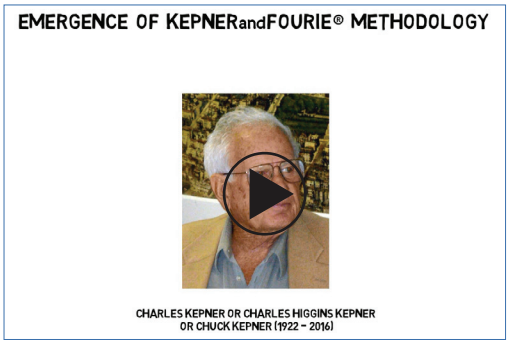
At the end of this module, you will be able to:

- Explain how to apply the Divergent and Convergent Thinking model.
- Explain how the KEPNERandFOURIE® methodology emerged.
- Describe in brief the five process and the three investigation skills of the KEPNERandFOURIE® methodology.
- Discuss the different skills in IT root cause analysis resolution processes.
- Explain what a problem-solving process is and how the KEPNERandFOURIE® thinking technology is associated with it.
- Describe the KEPNERandFOURIE® ITIL centric processes.

EMERGENCE OF KEPNERandFOURIE® METHODOLOGY

Video Script:

Chuck Kepner, the guru in problem solving and decision making, co-developed the initial techniques of the problem solving and decision making far back in 1960. Kepner kept on refining the techniques of problem solving and decision making over the years with the clients, such as NASA, Walt Disney, and Hewlett Packard.



In 1997, Chuck Kepner teamed up with Mat-thys Fourie or Matt who had 20 years of vast experience in problem solving. Matt was also the founder of Thinking Dimensions Global. The aim of their partnership was to write and launch a new 21st century program in problem solving and decision making. As a result, Kepner and Matt developed a program that has a unique blend of **intuitive**, **logical**, and **creative thinking** approaches and founded the KEPNERandFOURIE® methodology.

In 2005, Matt with a few consultants of Thinking Dimensions Global started to adopt and adapt the traditional manufacturing Root Cause Analysis Approach for IT applications. Considering the specific and different nature of IT problem-solving practices, Thinking Dimensions Global made appropriate changes to certain questions of the existing problem-solving and decision-making processes. The changes resulted in a powerful yet simple way to address IT incidents and problems.

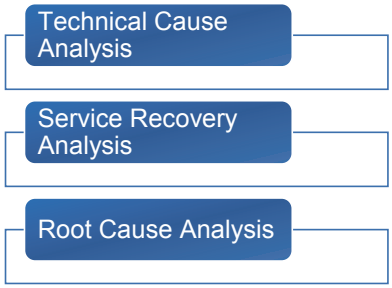
In 2009, Matt managed to get the Kepner and Fourie methodologies accepted by ITIL and *it*SMF organizations across the world. In 2011, Thinking Dimensions Global received the "Innovation Award" from ITSMF Australia for their Incident Investigation and Restoration problem-solving approach.

In 2018, Thinking Dimensions Global partnered with ITpreneurs to further expand the KEPNERandFOURIE® training portfolio to the IT market.

KEPNERandFOURIE® METHODOLOGY

The Five Processes

The Three Investigating Skills



The KEPNERandFOURIE® methodology provides a fast and structured approach to problem solving and decision making. It comprises of five processes/dimensions and three investigation skill sets.

The course concentrates on the four processes: PriorityWise, CauseWise, SolutionWise Max4TM and RiskWise. These are the thinking approaches most applicable to Root Cause Analysis (RCA).

KEPNERandFOURIE® PROCESSES

KEPNERandFOURIE® RCA Model

The RCA model of KEPNERandFOURIE® consists of the following processes/dimensions:

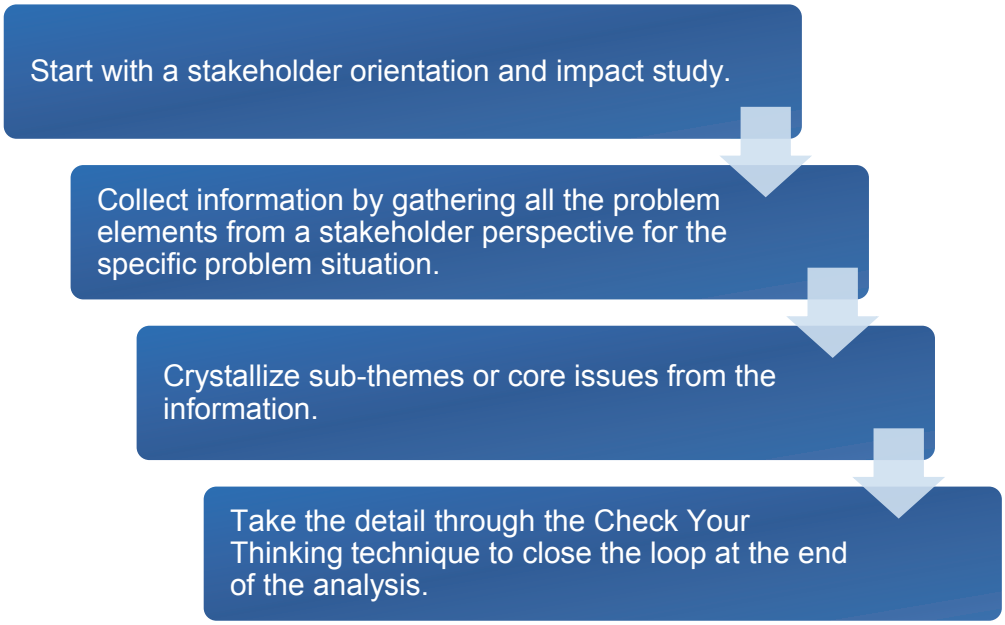
- **PriorityWise:** It is an approach to identify the starting point. Apply this process when a team has many issues on a specific subject, and they do not know where to start. This process helps identify the priority core issues, which when resolved would resolve 80% of the problem situation.
- **ThinkingWise:** It is a structured approach to identify the core issues represented in a vague/complex or performance problem situation.
- **CauseWise:** It is an investigative process to identify the Technical Cause and the Root Cause. It first identifies the Technical Cause or the event that caused the incident, and then it identifies the Root Cause or the underlying reasons why the event took place that caused the incident.
- **SolutionWise:** It is a structured approach to collectively arrive at the most effective actions to remove Technical and Root Causes of an Incident.
- **RiskWise:** It is a systematic way to identify critical risks, quantify these, and design actions to mitigate these.

Each dimension and thinking approach involves the 2-step procedure of Divergent and Convergent Thinking. It involves two steps to identify the actual factual data about the issue being experienced and the two steps to utilize the intuition and expert inputs of Subject Matter Experts (SMEs).

Note: The ThinkingWise process is about performance issues at a high level and is not applicable to RCA. Therefore, the course does not focus on the Thinkingwise process of the KEPNERandFOURIE® RCA model.

THINKING TECHNOLOGY BACKGROUND

Each thinking dimension developed by Chuck Kepner and Mat-thys Fourie utilizes elements of systemic thinking in the following way:



THE THREE INVESTIGATION SKILLS

Three Investigation Skills:

This unique way of doing RCA using the three investigation skills is one of the reasons for the success of KEPNERandFOURIE® methodology, compared to other RCA techniques in the marketplace.

The following points briefly explains the three skills:

- **IT Technical Cause Analysis (*it*TCA℠)**: This approach is all about finding the "event that triggered" the incident. When something happens, people usually look for a change that took place. Therefore, it focuses on learning the tools and techniques of how to find the technical reason for an incident.
- **IT Service Recovery Analysis (*it*SRA℠)**: This approach is about restoring the service to an acceptable level agreed to by all stakeholders, not about finding any causes. Therefore, it focuses on learning and using efficient recovery tools to restore a disruptive service. However, if you stumble upon the Technical Cause by chance, it will be a bonus as it will enable you to perform a fix immediately rather than the traditional 'workaround.'
- **IT Root Cause Analysis (*it*RCA℠)**: This approach is about diving deep to find the 'condition' that gave rise to the Technical Cause. It focuses on further analyzing the Technical Cause to arrive at the correct Root Cause with the appropriate corrective actions.

