

## Workshop in: Systems Thinking For Growth and Sustainable Business

By Khaled Wahba, PhD



### Program Overview

Business is a System, and it is a dynamic one that needs different techniques, methodologies and even philosophies to understand and to deal with. Decision making and policy design processes in the context of such complexity, range from subjective to objective practice. One of the crucial aspects in the policy design and decision making process is obviously the policy and decision makers and their understanding about reality. Whether he/she is risk-taker or conservative, there should be a route to follow to reach less risky sound intervention. Many respectable methodologies are out there to help policy and decision makers in their intervention journey. However, most of them include linear-based thinking process to define problem and hence to choose the least risky intervention within the given circumstances and conditions. Unfortunately this kind of linear based thinking process ignores a lot of important and yet not easy to recognize aspects, such as side effects of our intervention and the unintended consequences due to the presence of delay and feedbacks within our context.

Modeling technique such as Systems Thinking is considered as a methodology that takes into consideration, the delay and the feedback nature that exist in our context. Accordingly any policy design and decision making methodology that neglect such features and nature will probably lead to high risk intervention.

Systems Thinking will help in answering many critical questions such as: Why solutions are delayed, diluted or defeated and others fail to produce lasting results? Why many times our best efforts to solve problems by making new decision actually make it worse? Why do some firms grow while others stagnate? How do once-dominant countries or even firms lose their competitive edge? And how can a country or firm identify and design or redesign high-leverage actions and solutions that are not thwarted by unanticipated side effects?

### Objective and Scope

The principal purpose of modeling is to improve our understanding of the ways in which an organization's performance is related to its internal structure and operating policies as well as those of customers, competitors, and suppliers.

During this workshop participants will use several systems archetypes to explore such strategic issues. Participants will learn to recognize and deal with situations where policy interventions are likely to be delayed, diluted, or defeated by unanticipated reactions and side effects. They will have a chance to use state of the art software for modeling purpose.

This workshop introduces to the participants the systems thinking tools for the analysis of policy and strategy. They will learn to visualize an organization in terms of the structures and policies that create dynamics and regulate performance.

Systems Thinking is a paradigm and methodology for dealing with complex situations underlying business, economics, scientific, and social systems. Systems Thinking views the organization as a whole and focuses on interdependencies and links between various departments, functions and divisions and how they impact each other and the entire organization.

## Key Issues to Be Covered:

### What is Systems Thinking?

- Why do we think the way we do? The origins of modern thinking
- What is a system and what is not? Systems and non-systems
- Why do leaders need Systems Thinking?
- How do we make sense of the world? Four Levels of Thinking
- Why do organizations fail?
- How to design effective policies and strategy?
- How to avoid between policies (strategies) conflict?

### System Structure and Behavior over Time

- Dynamics: Feedback Loops, Delay
- System Archetypes

### System Dynamics Process

- Problem Articulation
- Causal Loop Diagram CLD (Dynamic Hypothesis)
  - Naming Variables
  - Naming Feedback Loops
- Defining Dominant Feedback Loops
- Determining the Leverage point(s) for Long Lasting Solutions
- Plotting Roadmap for Sustainable Performance

## Key Benefits and Skills to be Acquired

At the conclusion of the workshop, participants will be able to use Systems Thinking concepts and tools to model and explain complexity and hence to make better decision and intervention. They will be able to draft a design of new policies/strategies/decisions and or the already-existing policies/strategy in effective way. They will be able to recognize the dynamic and interdependent nature of recurring problems and to identify key leverage points for lasting decisions and solutions.

## Participants' Profile

- Executives, Senior Managers reporting to CEOs (CFO, CIO, CMO, Head of Strategy)
- Divisional Managers of large organizations
- Middle managers who are planned to be Executives
- Researchers and Modelers

## Practical Information

**Location:** Regional IT Institute Premises.

**Duration:** 16 Hours

**Schedule:** 2 full days from 9:00 to 17:00.

**Registration Requirements:** Registration form and 2 photos.

**Important Note:** Participants need to bring their laptop during the sessions. Special software will be used such as Vensim for model building and simulation.

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### For Information and Registration

#### Regional IT Institute

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## Biography | Khaled Wahba

Khaled Wahba is an adjunct Associate Professor at a number of universities, business and technical schools located in various countries such as Canada, the Netherlands, Romania, Peru, Colombia, Suriname and Egypt. With more than 20 years of teaching experience in the academic field, Khaled has dedicated his career as a freelance trainer and instructor with a focus on Data Analysis, Decision Making, Quantitative Research Methods, Systems Thinking and System Dynamics. His goal is to share extensive knowledge and experience outside the academic field, targeting corporate and business clients. Individuals trained represent different sectors such as Petroleum, Cement, Banking and ICT.

Khaled completed his BSc and MSc at Cairo University, Systems and Biomedical Engineering Department, Egypt in 1985 and 1989 respectively. He received his PhD from Aachen University of Technology in Germany, Faculty of Mechanical Engineering. Since returning from Germany, he is an Associate Professor in Systems and Biomedical Engineering, Cairo University, Egypt.

In addition to over 95 academic and business publications, Khaled co-authored a book in 2007 with Professors S. Jones and B. van der Heijden titled "How to Write Your MBA Thesis". This publication became the standard textbook adopted by the Maastricht School of Management, the Netherlands for MBA students across 22 outreach programs. Khaled also co-authored various chapters in books in the field of knowledge management. Furthermore, he supervised over 400 theses and dissertations in biomedical engineering, and management.

Khaled has developed his own portfolio of training courses that he believes are essential for any organization to understand the complexity of business and the decision making process. His courses such as: KWANTi®, Data Analytics for Impact, Life Design©, Pizzatistics®, Research Skills for Business always provide a framework for participants to help change their mindset and the way they think both professionally and personally.

Beside his interest in training, teaching, supervision and research, for over 6 years Khaled served as the Director and Academic Advisor of a regional education and training institution (RITI), located in Egypt. During his time as Director, RITI was considered the leading provider of postgraduate studies and professional training in the Egyptian market.

Afterwards, Khaled served as the CEO of an IT startup company operating in Egypt and the UAE for 4 years. After which, he shifted his career path to extend his experience and knowledge in academia, to corporate and private sector clients.

On a consultancy basis, Khaled has participated with the Maastricht School of Management to design and develop a management program for the staff of the Ministry of Irrigation and Water Resources, in Egypt. Moreover, he is currently involved in building a System Dynamic Model for the adoption of electronic healthcare records in Egypt on behalf of the Ministry of Communication and Information Technology and for the Ministry of Health and Population.

Khaled is frequently invited to give talks and presentations in his field both inside and outside Egypt. He was also an active member and board member of various international societies, conferences and academic journals. Khaled currently resides in both Egypt and Canada at various times of the year, and can be contacted at [kwahba@kwahba.com](mailto:kwahba@kwahba.com)