

**Structured Analytic Techniques
for Policy Analysis
and Strategic Threat Assessment**

I. COURSE STRUCTURE AND TEACHING METHODS

1.1. Course goal and objectives

The course “Structured Analytic Techniques for Policy Analysis and Strategic Threat Assessment” aims at providing delegates with basic skills and techniques used in the analysis of strategic intelligence and forecasting of policy processes. The focus is on foreign affairs and global threats.

The overall course goal is to introduce delegates to the concepts of structured analysis, strategic thinking and policy forecasting and help them to gain a degree of confidence in their practical use.

Specific course objectives include:

1. reaching a better understanding by delegates of the concept of structured analysis and its importance in education and professional development;
2. providing delegates with essential knowledge about the process of thought and impact of cognitive biases on the analytic process;
3. giving delegates understanding of and some practice in the use of the core structured analytic techniques including weighted ranking, event/decision tree, multiple perspective utility analysis;
4. practicing the use of structured analytic techniques applied in forecasting including Force Field Analysis, Futures Wheel, What if? Analysis, High Impact-Low Probability Analysis and Analytic Failure Simulation;
5. practicing the use of structured analytic techniques applied in strategic threat assessment and risk analysis with a focus on the expanded T4 matrix;
6. informing delegates about the use of social network analysis and game-theoretic techniques in threat assessment and policy forecasting.

1.2. Learning outcomes

The course provides knowledge and skills through a balanced mix of classroom-based learning and self-study in the format of group home projects. Classes include interactive lectures, structured discussion, and seminars in the use of newly learned techniques to achieve designated learning outcomes.

By the end of this course, delegates should

Know:

- Elements of thought and strategic thinking;
- Main cognitive biases and their impact on the analytic process;
- Benefits and limitations of core structured analytic techniques;

Be able to:

- Apply 14 core structured analytic techniques to the study of policy issues and strategic threats;
- Recognize cognitive biases in others’ and own thinking;

- Consistently and consciously apply the techniques of problem restatement and problem decomposition to expose and reveal core issues in a problem with a view to identifying alternative solutions to it;
- Routinely use weighted ranking to make better decisions when comparing different options.

Have acquired skills in:

- applying divergent thinking to their academic studies;
- drawing event/decision trees, building weighted ranking and probability/utility matrices;
- performing a structured and consistent critical analysis and forecasting of policy issues and strategic threat assessments;
- analytic report writing.

2. COURSE SYLLABUS

2.1 Course outline.

Specific course duration and content will be determined in accordance with customer requirements/preferences. Below follows a standard course syllabus including description of the core modules.

Topics				
	Lectures	Seminars	Home projects	Total
Topic 1. Reasoning 101 - Elements of thought and strategic thinking	1			1
Topic 2. Cognitive biases and mind-sets	1			1
Topic 3. Problem restatement. Divergent thinking	2	2		4
Topic 4. Matrices/Ranking, Decision/Event Trees	2		2	4
Topic 5. Probability, Utility, Multiple-perspective Utility Analysis	2	2	15	19
Topic 6. Futures Wheel. Force Field Analysis	2	2	20	24
Topic 7. What if? Analysis		2	15	17
Topic 8. Strategic Threat Assessment and Risk Analysis issues	2	2	2	6
Topic 9. Analytic Failure Simulation	2	2		4
Topic 10. High Impact-Low Probability Analysis		2		3
Topic 11. Social Network Analysis/Network Capital	2	2		4
Topic 12. Game-theoretic forecasting techniques	2	2		4
Total	18	18	54	90

2.2. Description of core modules

Topic 1. Reasoning 101 - Elements of thought and strategic thinking

Elements of thought including purposefulness, assumptions, point of view, inferences and focus on consequences are described and discussed. Clarity, accuracy, precision, relevance, depth, breadth, logic, significance and fairness are identified as standards of critical thinking.

The concept of strategic thinking is introduced and discussed. Different lists of attributes used to define it are reviewed and critiqued.

Topic 2. Cognitive biases and mind-sets

The human mind cannot cope directly with the complexity of the world. Rather, we construct a simplified mental model of reality and then work with this model. These mental models or mind-sets are inescapable. The principal disadvantage of a mind-set is that it is always, inevitably biased. Mind sets are immensely powerful mechanisms with an extraordinary capability to distort our perception of reality.

Cognitive biases are built into human thinking process and are highly resistant to conscious efforts to overcome or compensate for them. Cognitive biases that can affect evaluation of evidence; perception of cause and effect; estimation of probabilities; and retrospective evaluation of analytic reports are explained.

Topic 3. Problem restatement/decomposition. Divergent thinking

Problem restatement permits to expose and reveal the core issues in a problem. The aim of problem restatement is to broaden our perspective of a problem. It can help to identify the central issues and alternative solutions. This in its turn raises the probability that the outcome of our analysis will resolve the problem to a greater extent.

This topic also addresses the prevalence of compulsively negative thinking and discusses techniques for making positive thinking a natural habit instead.

The overall purpose of divergent thinking is to generate creative ideas about a topic in order to enrich the inventiveness of solutions.

Mental tools for opening the mind are presented, including techniques for questioning assumptions (sensitivity analysis, preventing mirror imaging), seeing different perspectives (thinking backwards, role-playing, learning from surprise), stimulating creative thinking (deferred judgment, avoiding self-imposed constraints). The four postulates of divergent thinking are discussed.

Topic 4. Matrices/Ranking, Decision/Event Trees

Ranking involves assigning a position to something relative to other things. Our default approach to ranking is intuitive - I like it, I like it not, I like one more/less than the other. A major defect of the intuitive approach is that it is simplistic and subject to all kinds of reasoning whims. To overcome

the weaknesses inherent in intuitive ranking, delegates are taught how to conduct pair ranking and apply a weighted pair ranking matrix.

The decision/event tree dissects a scenario into its sequential events. It shows clearly the cause-and-effect linkages, indicating which decisions and events precede and follow others. It also shows which decisions or events are dependent on others. Use of trees aids to visualize differences in alternative scenarios enables us to analyse them separately and systematically.

Topic 5. Probability, Utility, Multiple-perspective Utility Analysis

Probability is the language of estimating. It deals with the issue of the materialization of outcomes. Probability is a non-intuitive concept meaning it cannot be easily derived from everyday experience. Problems of policy analysis are of random and indeterminate type making analytical estimates heavily depend on subjective judgments. There can be no certainty in the proposed solution, only probability.

Utility means a prize. It deals with the consequences of the materialization of an outcome. Utility defines a benefit or a disbenefit that arises from it. Students are presented with the explanation of the concepts of Options, Outcomes and Perspectives. Single-perspective vs. Multiple-perspective utility analysis is discussed and subsequently practiced.

The techniques of weighted pair ranking, pro-cons-fixes, decision/event tree, multiple-perspective utility matrix are practiced during Home Project 1.

Topic 6. Futures Wheel. Force Field Analysis

Answers sought through futures analysis typically include the combination of the following: What potential events could occur? What future patterns could emerge? What will be the effect of future fundamental drivers?

The overall purpose of futures work in strategic analysis is to:

- Provide a strategic context within which to understand emerging threats;
- Provide a foresight capacity to allow the development of proactively targeted strategies;
- Narrow the range of uncertainty;
- Ensure that this understanding is provided in an appropriate form to the appropriate decision makers at the appropriate time.

The *Futures Wheel* is a consequence analysis tool mainly used to consider effects of an event or an action. It is also useful for analysing a particular trend. The Futures Wheel provides rapid visualization of a cause and effect relationships of consequences and their implications through a chosen number of tiers.

The *Force Field Analysis* often used in conjunction with the FW is a comparative tool that assists examination of the relative weight of drivers that act for (facilitators) or against (inhibitors) change. It can be conducted for the current situation and for a moment in the future.

The key to force field analysis is to assess when inhibitors and facilitators are most vulnerable to external pressure, and consequently where and when effort is likely to be best expended.

Delegates are taken on a guided tour of a real-life forecast. FW/FFA techniques together with pair ranking and pro-cons-fixes subsequently form the core of the assignment for Home Project 2.

Topic 7. What if? Analysis

What if? Analysis uses the reframing technique of assuming that a future event has happened and then thinking backwards in time to reconstruct how it could have happened. This technique can be used in combination with the Futures Wheel and Force Field Analysis techniques.

During the lecture delegates will be taken step-by-step through the method of applying this technique. This technique in combination with the Futures Wheel and Force Field Analysis is tested in Home Project 3 in courses of longer duration and as a self-standing technique in Home Project 2 in shorter courses.

Topic 8. Strategic Threat Assessment and Risk Analysis issues

Threat, Harm and Risk analysis techniques have the key objective of prioritizing strategic challenges with a view to setting priorities for allocation of scarce resources. They provide an understanding of a threat posed by a problematic phenomenon, harm that could be caused by it, risk that this harm would materialize, and vulnerability of the environment. They aim to produce actionable knowledge.

Expanded T4 Matrix, Long Matrix and RAM technique are explained in detail and practiced with delegates. Hands-on practice in the use of these techniques is accomplished through completing Home Project 3 (in courses of a shorter duration).

Topic 9. Analytic Failure Simulation

Failure to question a consensus judgment, or a long-established mental model, has been a consistent feature of most significant analytic failures.

The structured technique of Analytic Failure Simulation aims to challenge the accuracy of a conclusion regarding futures analysis. It is a specific application of the problem restatement method. The assumption is that one's solution has failed, it's an accomplished fact – and now one must explain why.

Analysts are typically over-confident in the accuracy of own judgements. This technique gives an opportunity to flip the toggle and distance oneself from a failed estimate. This remote view allows to come up with multiple explanations for failure.

During the lecture, delegates will be taken on a guided tour of this technique using a real-life scenario.

Topic 10. Social Network Analysis/Network Capital

Objectives of *Social Network Analysis* can include:

- Study of network objectives, threat and harm analysis;
- Collection of intelligence on network actors;
- Development of covert human intelligence sources among network actors;
- Network monitoring or undercover infiltration;
- Network disruption, weakening or destruction;
- Futures work – forecasts of network evolution.

The notion of *Network Capital* can be used for a large variety of purposes, including:

- Determining how isolate/webbed a network is;
- Measuring the response of a network to disruptive measures;
- Obtaining a valuation of comparative Actor centrality.

A practical exercise using the Six Steps to Calculate Network Capital is conducted in class.

Topic 11. High Impact-Low Probability Analysis

This technique aims to provide decision makers with early warning that a seemingly unlikely event with potentially major resource repercussions (harm) might actually occur.

It should be activated whenever the level of event probability starts displaying any kind of upward dynamic from its “low” rating, insignificant as it may appear. This technique uses new or anomalous information as a trigger and then projects forward to what might occur and the consequences if it does occur.

Students will be given a walk-through of the seven steps involved in the High Impact-Low Probability analysis using a real-life scenario.

Topic 12. Use of game-theoretic forecasting techniques

Strategic analysis is underpinned by the game theory. Delegates will be walked through two real-life scenarios of a simultaneous and a sequential game related to policy analysis and strategic threat assessment. These aim to demonstrate the uses of such game-theoretic concepts as Nash’s bargaining solution/axioms, reaching the Nash equilibrium through the shift from Pareto Optimal to Pareto Improvement payoffs in an extensive form game, deterrent/compellent threats/promises for the purposes of forecasting outcomes.