COMPLEXITY & SIGNIFICANCE	Tame			Complex		Wicked	
HCA METHODOLOGY COVERAGE			Hyper-Integrated Causal Analysis (HCA)				
EVALUATION MODE	None	Basic Analysis	Rapid Investigations	Apparent Cause Evaluations (ACE)	Root Cause Analyses (RCA), Vulnerability & Threat Assessments	Broad Intra-Disciplinary Assessments	Commissions & Blue Ribbon Panels
CRITICAL THINKING LEVELS	0	1	2	3	4	5	6
Critical Thinking: the intellectually disciplined process of gathering, organizing and analyzing information so we can reach sound conclucions and take the best course of action.	Uninformed opinions, usually developed from a single source of information and without question. There is no gathering, analyzing and organizing of information, or consideration of the sources.	The basics of gathering and evaluating information from more than one source and with a limited number of parameters.	The gathering of information from multiple sources and multiple parameters, and organizing it in a way that it can be more readily analyzed.	The gathering of information from multiple sources and organizing it in a way that the information can be rigorously analyzed, and the results independently verified.	The gathering, organizing and analyzing of a comprehensive set of information such that we can arrive at verifyable conclusions, from which we can take appropriate actions that have the opportunity to stave off serious consequences.	The gathering, organizing and analyzing of a comprehensive set of information that often involves unifying multiple stakeholders with different agendas, such that we can achieve a common understanding of the problems, and offer solutions that have the opportunity to improve on previous outcomes.	The product of the meeting of the best minds that can be brought to bear on a problem.
ENGAGEMENT/RIGOR	None	Low	Low	Medium	High	Very High	Extremely High
RESEARCH / PROBLEM SOLVING METHODS AND TOOLS	None: accepting other's input without question. [Note: uninformed actors may wield influence and control resources, and must be considered - not disregarded as unimportant]	In Level 1 we begin organizing information from multiple sources in our heads or perhaps as basic notes on paper.	In Level 2 we start to use basic tools to capture information, such as simple histograms, tables and charts and the KT Decision Making Matrix. Advanced problem solvers also start to consider human behaviors and organizational and programatic interfaces.	Level 3 takes into account applicable systems and subsystems, evaluates behavioral factors, and engages the orgnization's subject matter experts. Level 3 requires formal problem solving methods such as HCA, and data analysis tools such as Pareto charts, control charts, process maps, barrier analysis, task/change analysis, comparative timeline analysis and defect concentration diagrams.	Level 4 takes into account the complexities of socio-technical systems and human behaviors. Level 4 requires the use of the most sophisticated problem solving methodologies (HCA) and data analysis tools. In addition, quantitatitve and qualitative methods to further explore human behaviors such as culture surveys and semi-structured interviews (phenomenology).	Level 5 requires the use of sophisticated problem solving methodologies (HCA) combined with advanced, mixed methods and systems modeling such as soft-systems methodologies, agent based and discrete event modeling, and Design Thinking.	Level 6 requires the use of diplomacy, system "holism" and other philosophical approaches, mediation, and cross and trans-disciplinary engagement.
EXAMPLES	Unimportant Problems and non-consequential decisions.	Problems of relative low consequence such as limited component failure in an industrial setting, making a large purchase in a personal setting, deciding on a preferred candidate in a civic setting.	Problems of medium consequences that can be readily corrected or returned to normal. EX: single facility production failures, minor employee injuries, activities performed out of sequence, errors and ommissions that did not reduce the marging of safety.	Important problems of medium consequences where repeat events ARE acceptable and recovery and return to normal operations is possible. EX: near-misses, minor oil spills, local nuclear contamination, consequential human errors, damage to important equipment, moderate organizational and programmatic issues, negative performance trends.	Important problems of high consequence where repeat events CANNOT be tolerated or recovered from. EX: Challenger and Columbia space shuttles, Exon Valdez oil spill, hurricane Katrina aftermath, 9/11 response, security breakdowns affecting national security, errors and ommissions that significantly reduced the margin of safety.	Long-term, complex and recurring problems that have not been solved with traditional approaches. EX: pandemic response, health care costs, sexual assaults, mass shootings.	Problems not solvable in one generation with extremely high consequences. EX: Racism, homelessness, global warming, poverty, war/inter-state conflict.