

Map	Inve	ntive Problem
Applications	Describe the system Sy Sy	stem name stem structure
Dns Delem Solving (IPS) Failure Determination Plution D Deblem Solving	Describe the problem Pro	stem functioning stem environment blem name chanism causing the problem - Use abbreviated IFA
d organizational development Engineering TRIZ cost reduction) roperty validation and enhancement cess improvement cation	Unc Pro Oth Ideal vision Available resources	desired consequences of the problem blem history: previous attempts to solve er systems with similar problems ernatives
Problem Solving With IWB	Allowable changes (limitations) Criteria for solution acceptance Project data and business enviro	1. Invert the problem
document the problem (Complete ISQ) mulation Building the graphical description Formulate Directions	iption (diagram)	<ul> <li>2. Amplify inverted problem</li> <li>3. Search for solutions</li> <li>4. Formulate hypotheses and tasks for their verification</li> <li>5. Correct the failure</li> </ul>
Generate ideas with System Combine Ideas into concep		Abbreviated IFP 1. Invert the problem 2. Create Ideal Scenarios
Ults Identify and solve secondar Predict and eliminate poten	ry problems	3. Generate Failure Scenarios 4. Prevent the failures
Process	es	_ Directed
		Evolution
n Failure Analysis with IFA software	<mark>e</mark>	Analyze the system environment
	escribe the system escribe the problem	Identify super-systems for the system Identify the system market Identify impeding forces and limitations
nalysis modeling Building the diagram Formulate hypotheses	Identify history Localize the problem Amplify the problem	Identify driving forces of evolution Identify contradictory requirements
Categorize Verify Ar	nticipatory	Analyze the system functioning
results Apply Operators Develop Concepts	Failure	Identify useful functions Identify harmful factors Identify functional contradictions
n Failure Prediction P software	<b>Example 2 Describe the system</b>	Problem Formulation Build the diagram Directions from functional analysis
Failure Prediction Questionnaire Building the diagra	Document known drawbacks Identify history of the system	Selected Directions Assess system resources
rediction modeling Formulate hypothe Generate failure so Apply check lists a	<u>cenarios</u>	Analyze analogous systems Analyze history of the system evolution
otheses Categorize Verify		System prototypes Conditions of the system creation History of problems
ailures Apply Operators           Apply Operators           Develop Concepts		Develop Concepts List and categorize preliminary ideas Combine ideas into Concepts
Iopment ry of ongoing development innovation solution system for R&D with other business, quality and knowledge ma ems like Six Sigma, Stage Gate, etc.	nagement	Evaluate results         Meet criteria for evaluating Concepts         Develop workable system         Reveal potential problems         Work with secondary problems         Consider further system development         Plan the implementation
RIZ to organizational development scientific problem solving (SPS) pecialized knowledge bases (chemical, health ca PS software development powerful and user friendly software shell integrator module -TRIZ in schools and universities	are, business / management, etc.)	Monitor the system evolution         Monitor changes to the environment         Continuous system improvement         Accumulate new ideas         Prepare to the next step

E-learning (Basic TRIZ, IWB master, AFD master)