

Secretaria Nacional de Educación Superior, Ciencia, Tecnología e Innovación

**Doctoral Program in Computer Science** 

# A TOTAL QUALITY FRAMEWORK FOR THE ASSESSMENT AND IMPROVEMENT OF EMERGENCY PLANS MANAGEMENT

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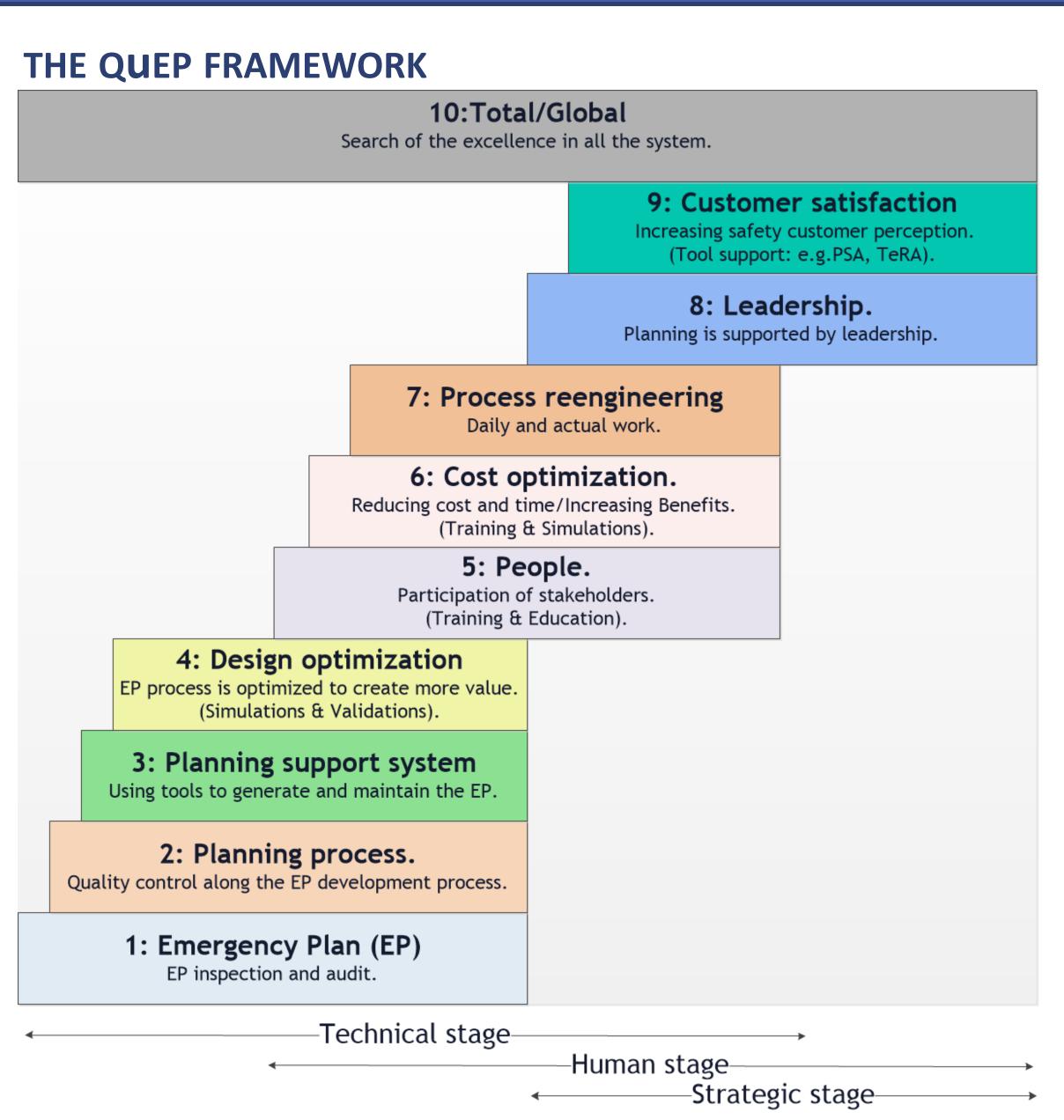
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# **1. MOTIVATION**

The evaluation of the quality of Emergency Plans is an unresolved issue. While most research efforts have focused on the definition and improvement of planning methods and the associated tools, a reference framework allowing the assessment of Emergency Plans and their management is still missing.







# **2.** GOALS

#### GENERAL

Assessment and continuous improvement of the Emergency Plans Management in an organization through the development of a Emergency Plans Quality Model.

#### **SPECIFIC**

- Define a maturity-driven layered framework (QuEP Framework) for the evaluation of **Emergency Plans Management in organizations.**
- Identify principles, practices and stakeholders for Emergency Plans Management.
- Design a Total Quality Model to evaluate Emergency Plans with regard to the planning principles and practices.
- Implement our Model and integrate it into the plan analysis module of the SAGA framework

#### **EMERGENCY PLANS MANAGEMENT PRINCIPLES AND PRACTICES**

Maturity Level	EP. Practice	EP. Principle	
10: Total	Search of the excellence in all system practices		
9: Service	Tools support	IT	
	Customer perception	People	
	Diffusion by authorities	Policies	
	Customer satisfaction	Results	
	Goals and Vision (Objectives)		
8: Leadership	Teamwork and Roles	Participation	
	Leadership style	Policies	
	Inter-organizational coordination	Cooperation	
7: Reengineering	Process improvement	Monitoring	
	Analyzing daily activities	Monitoring	
6: Cost Optimization	Cost of training and Timeline.	Implementation	
	Emergency drills	Monitoring	
	Hazard analysis	Risk driven	
5: People	Personal Training	Darticipation	
	Public engagement.	Participation	
	System responsibilities	Policies	
4: Design optimization	Optimizing requirements of risks.	Risk driven	
	Simulation software		
	Resource improvement and	Monitoring	
	maintenance		
3: Planning support	Analyze organizational resources	Implementation	
system	Analyze customer requirements	People	
2: Planning process	Control in the development	Implementation	
	Stakeholders involved	Participation	
1: Emergency plan (EP)	Deliverable plan	Policies	
	Standards and formats		
	Consider aspects of risk	Risk driven	

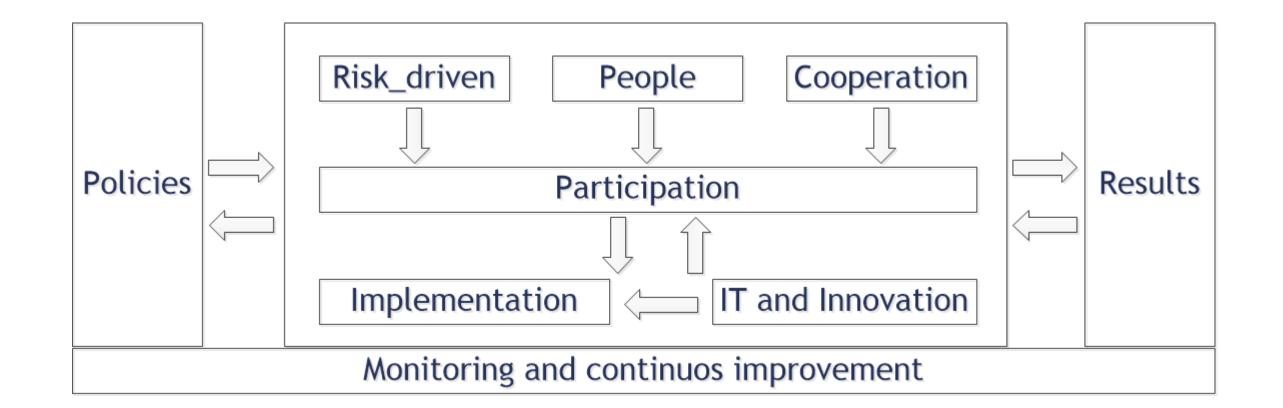
- to support the Emergency Plans life cycle.
- Assess the Model with experts and organizations.

# **3.** RESEARCH PLAN

Stage 1 (in progress):	Stage 2 (in progress):	
<ul> <li>Study of the state of the art in the area of Quality Management and Emergency Plans.</li> </ul>	<ul> <li>Make a detailed study of governmental guidelines and laws.</li> </ul>	
<ul> <li>Define the Total Quality Framework for Emergency Plans Management.</li> <li>Design Total Quality Model initial proposal.</li> </ul>	<ul> <li>Identify principles, practices, and stakeholders to Emergency Plans Management to each one in the maturity levels of the framework.</li> </ul>	
Stage 4:	Stage 3:	
• Evaluate and validate our proposal with experts and organizations	<ul> <li>Implement the Total Quality Model and integrate it with the framework to</li> </ul>	

#### **THE QUEP MODEL**

The Total quality model covers 9 Principles and their respective Practices.



experts and organizations with involved (feedback and results).



support the emergency plans life cycle (SAGA) developed by ISSI-DSIC-UPV.



### **4. EXPECTED RESULTS**

- A hierarchy of maturity levels that will allow the assessment of the capabilities of organizations with respect to the Management of Plans along their whole lifecycle, as well as the definition of improvement paths via a number of actions that can lead organizations up in the hierarchy (best practices).
- The Model is intended to be the evaluation tool of a method in which not only the plan, but also the Emergency Plans Management can be improved in order to increase the planning process and the satisfaction of all the stakeholders in an organization.

