



## ELITE

### Elicit to Learn Crucial Post-Crisis Lessons

#### DELIVERABLE D5.3

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## EXECUTIVE SUMMARY

The *Elicit to Learn Crucial Post-Crisis Lessons* (ELITE) project has developed a living document containing lessons learned from disasters such as forest fires, earthquakes and floods. In particular the project attempts to identify lessons learned that are common across these disaster types. The ELITE living document will be a publicly available web solution which comprises a “living” repository of best practices and guidelines as well as social media features. A prototype of this “living document” was tested at the last table workshop of the project

This report Deliverable 5.3 describes the evaluation criteria for the transfer of knowledge, experiences within the learning processes of the learning community from a socio-technical modeling perspective where the “living document” is seen as part of the system focus. That is to say, the living document is considered as an artifact, or node in the socio-technical network in focus.

This report contains:

1. Brief description of the learning process model proposed in Deliverable 5.2
2. Description of evaluation criteria for the learning measurement points

Major contributions

- This report is the last report in the construction of the learning process framework that will be presented in Deliverable 5.4

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## VERSION CONTROL

Version	Date	Contributors	Sections Affected
1	2014-05-29	Stewart Kowalski	All
2	2014-05-30>	Jose Maria Sarriegi	Section 1 and Section 2 Reviewed
3	2014-05-31	Stewart Kowalski	Section Three completed
4	2014-06-4	Jose Maria Sarriegi, Josune Hernantes, Leire Labaka	All reviewed

## 1. INTRODUCTION

The Elite project has established contacts with a wide group of end users in crisis management in Europe including crisis managers, first responders, government and non-government officials in a number of European countries. These individuals were considered to be a first core of members to develop a Community of Practice (CoP) for post crisis lessons learned analysis. The project held 4 workshops with these experts: one workshop on fires, one on earthquakes, one on floods and one holistic workshop. In the first three workshops the experts were asked to present, discuss, and analyze lessons identified and lessons learned from different natural disasters. In the last holistic workshop the participants helped validate the classification criteria for lessons learned documents which are described in Deliverable 4.1 (GOUJON 2013) and integrated into the living document Deliverable 3.2 (LAUGE 2014). Figure 1 gives an example of the different classification criteria in the living document

Earthquakes, English, Best practices, Document, Strategic, Recovery, Red, External communication, Resilience, First responders

Click on the labels you want to attribute to this page:

Type of disaster	Earthquakes   Fires   Floods
Language	English   French   German   Spanish
Content file	Best practices   Case study   Emergency plan   Guidelines   Incident report   Press release
Type of file	Article   Audio   Document   Picture   Press release   Video
Level	Operational   Strategic   Tactical
Phase	Analysis   Mitigation & Prevention   Preparation   Recovery   Response
Alert level	Green   Orange   Red
Focus	Coordination   Education   Equipment   External communication   Internal communication   Logistics   Protocols   Resilience   Training
People involved	Amy   Civil protection   First responders   Health service   Volunteers
Assets	Critical infrastructures   Economic assets   Human assets   Natural assets   Other infrastructures
Context specificities	Vulnerable population   Urban area   Rural area   Isolated area   Dryness   Humidity   High wind

Save page | Show preview | Show changes

Figure 1 Classification criteria in the living document prototype upload file page (GOUJON 2013 p. 27)

There have been several attempts to create living documents among community of practices. However, as pointed out in the United Nations Development Program on establishing community of practices UNDP (UDP 2004), as much as 70% of organizational learning is unstructured and informal and stays with the individual. In order to turn informal and unstructured learning into formal and structured learning it has to modeled and then measured. This report will suggest evaluation criteria for the ELITE living document based on the model and measurement points suggested in Deliverable 5.1 and 5.2

### **1.1 Objective of the report**

The objective of this report is to present a structured table of evaluation criteria for knowledge and experience transferred at different established measuring points in the model.

### **1.2 Relevance and importance of the report**

The end-product of the ELITE project will be a “living document“ that becomes especially important when dealing with broader regional crisis. Støldal (2013) argues that securing lessons learned in a broader geographical setting seems to be lacking. Hence, there is a need to systematically evaluate the gathering of lessons learned within an organization and between organizations in the crisis management community in Europe.

## 2. LEARNING PROCESS MODEL FROM DELIVERABLE 5.1 AND 5.2

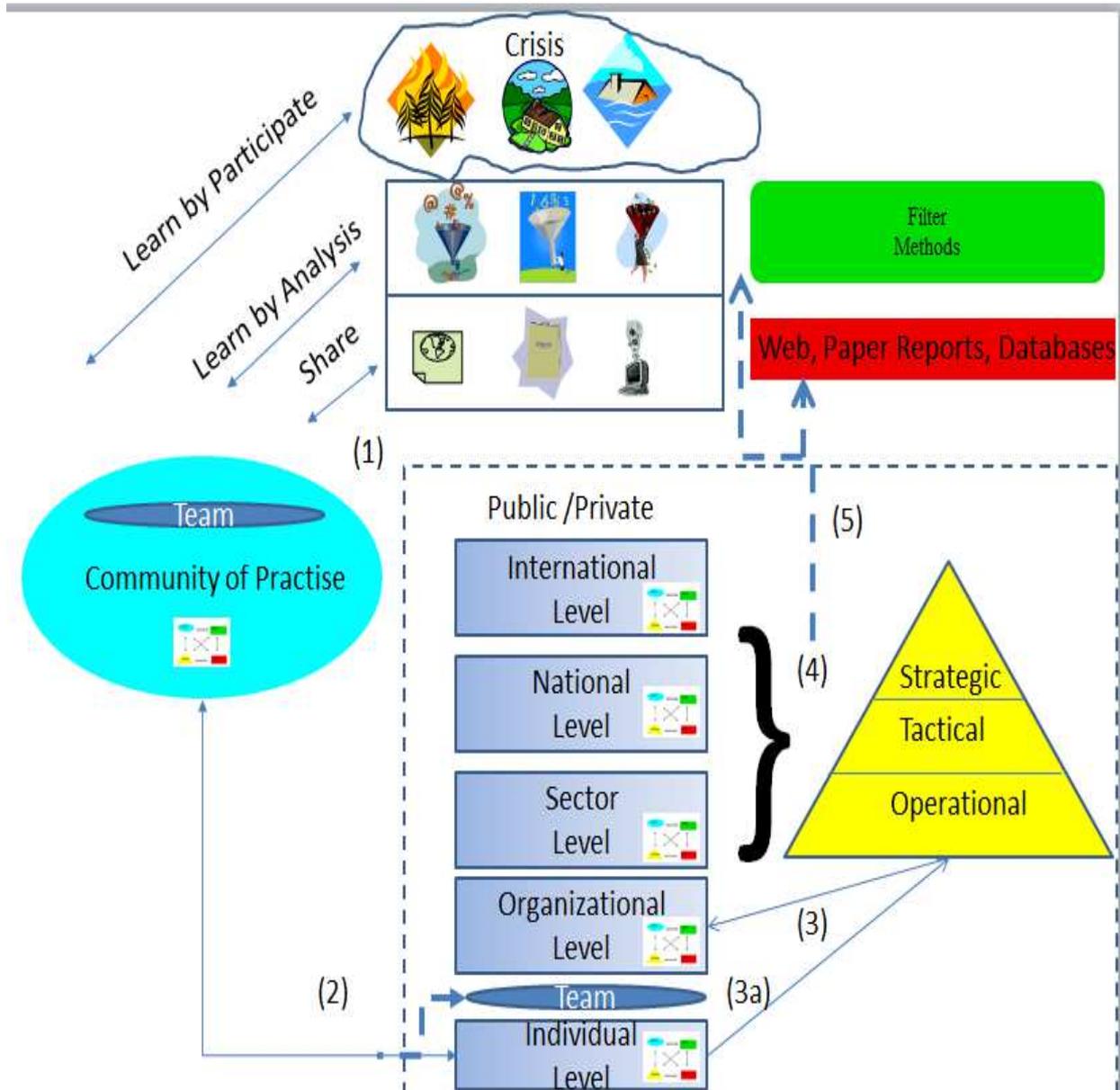
Figure 2 is a socio-technical model of the ELITE learning system. The layered approach has been used in this figure to refer to different levels from individual to international organizations. This figure has been created adapted to a large extent from Rasmussen earlier model of risk management in a dynamic society (Rasmussen 1997). The development and analysis of the model is presented in Deliverable 5.1 and 5.2 (Kowalski 2013, Kowalski 2014). The model originally identified four learning measurements but, after discussion with experts in the field, two new measurement points were added.

Learning measurement point 1 in Figure 2, outlines the community of practice relationship to the living crisis experience and the living document. Here members of the community learned by either participating in a crisis or in crisis exercises and shared their lessons learned as individuals or teams using the filtering and categorization systems agreed upon in the living document. They were also asked to upload and rank these documents.

Learning measurement point 2 in Figure 2, shows the individual or the team connecting back to the official hierarchical structure of their organization with the different echelons or layers of power structures.

Learning measurement point 3 and 3a in Figure 2 show the interaction between the individual, team and organization on operational, tactical and strategic lessons learned.

Learning measurement point 4 and 5 attempt to describe how lessons learned at the organizational level are moved up through the socio-technical stack from the sector level, national level and international level. At point 5 (at levels above the team level in the socio-technical stack) the lessons learned should have been officially endorsed by a respected organization or body. This endorsement should be done through some function in the living document.



**Figure 2 Model of Learning Measurement Points.**

## 2.1 Introduction of a Meta Measuring Point and Hinders.

In deliverable 5.1 (Kowalski 2014 A) the basic premise of the socio-technical model is that for an organization to adopt or learn requires that its socio-technical dynamics are not working against each other. If they do, there can be dysfunctional connections or hinders for adopting lessons learned from a community of practice.

In Figure 3 we see at the organizational level a dysfunctional socio-technical system in crisis management. This system is blocking change within the total system because there is poor communication between the structure and the culture in this organization. Consequently, new machines cannot be introduced because the structure at the organization level does not allow them to be introduced.

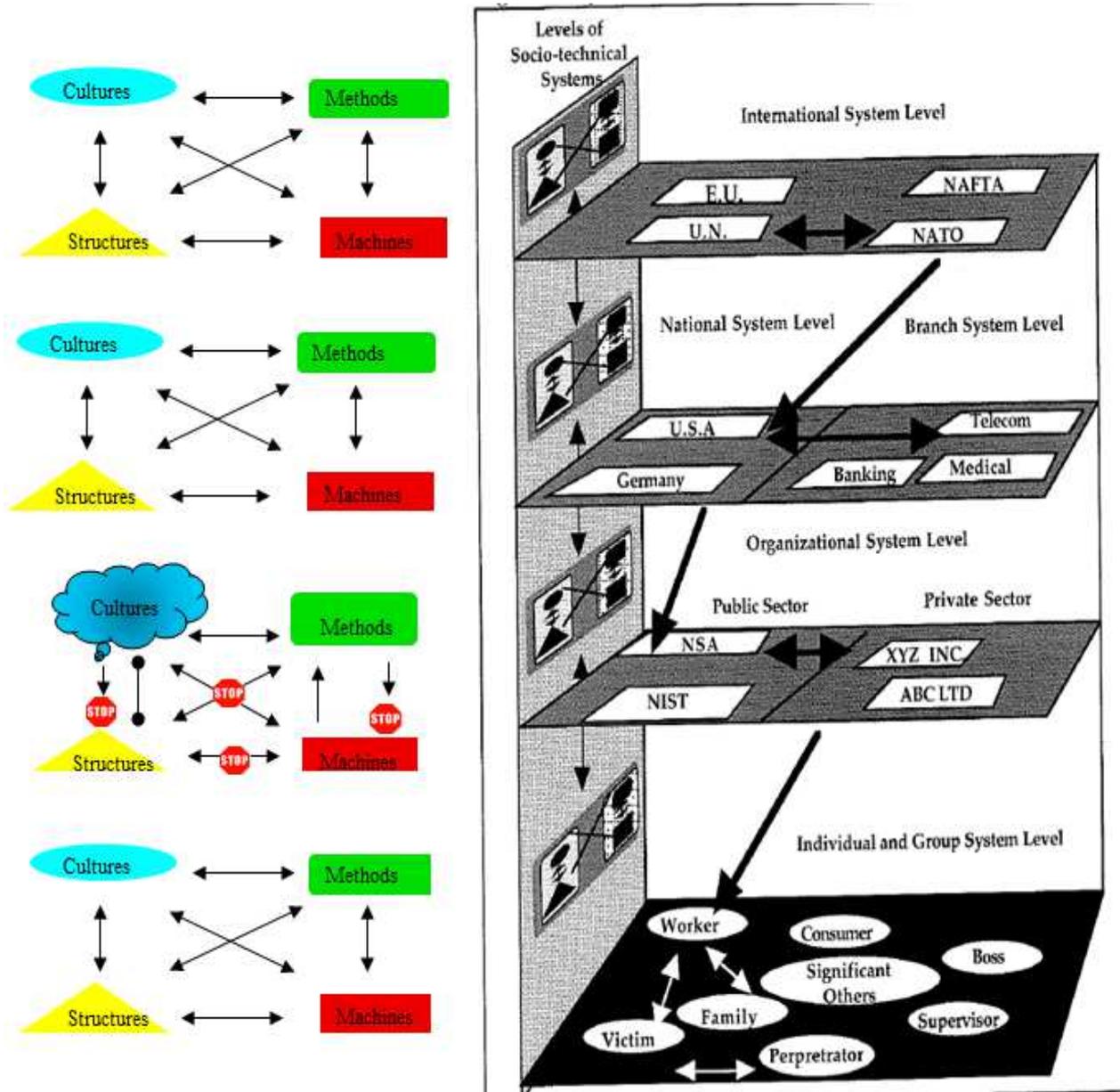
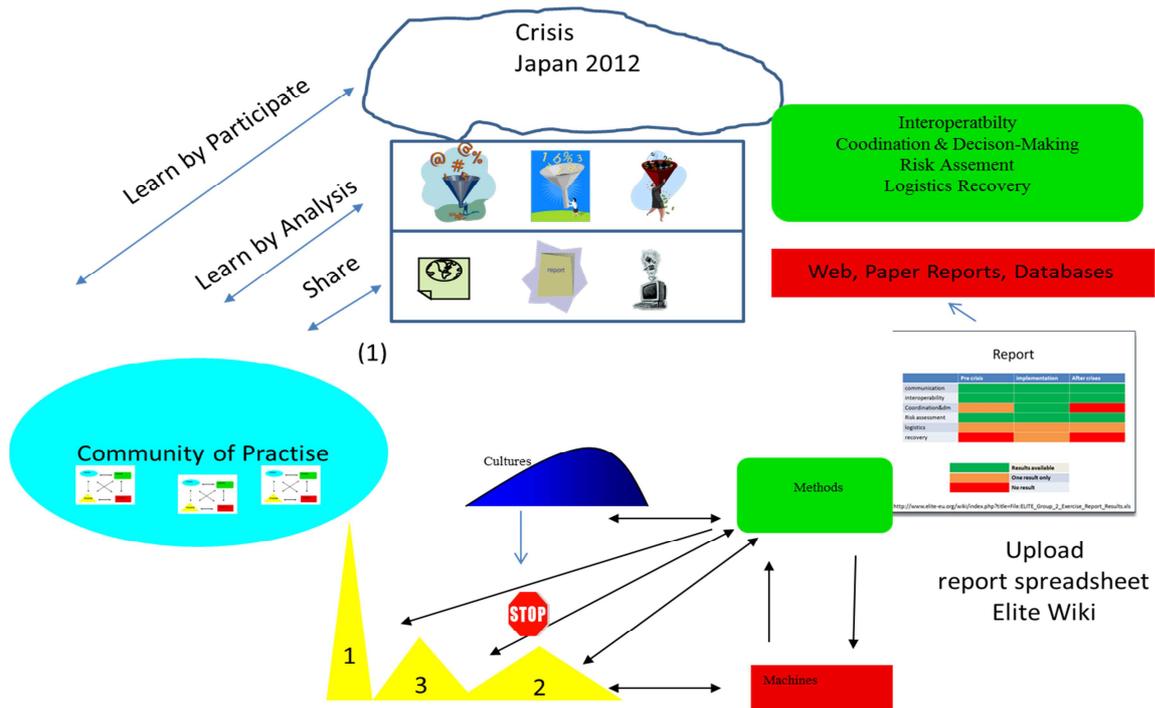


Figure 3 Model of Learning Measurement Points. (Adapted from Kowalski 1994)

Consequently, a new type of measurement point was discovered in deliverable 5.2 (Kowalski 2014 B). It was a learning barrier that occurred because the individuals leading the subgroup in the community of practice workshop created different structures within their groups. As Figure 4 indicates some leaders had strong hierarchal structures while other has less strong or flat structures as represent by the different shaped triangles.



**Figure 4 Model of the Learning Process Workshop 4**

Hofstede(2001) has defined and operationalized these structural and cultural relationships as “power distance”. Consequently, at measurement point 3 and 3A in Figure 2 which refer to the relationship between the individuals and the teams to the organization power distance should be measured. Also at measurement point 4 in Figure 2 we need to considers the degree of power distance within the different countries and in the community. If the power distance is high then suggestions from individuals and organizations are not permit to change practices unless the upper levels accept it. For example a new method for organizing volunteers might be become a lesson learned for an organization that has structure like type 2 since has a lower power distance represented by the broad base of the triangle. However if there exist structure like the type 1 triangle in Figure 4 which shows high power distance, no changes in the organization will be permitted unless they are discovered by the upper management themselves.

Below are examples of some of the questions used to determine the power distance of a culture or organization (James 2010).

1. Managers should make most decisions without consulting subordinates.
2. It is frequently necessary for a manager to use authority and power when dealing with subordinates.
3. Managers should seldom ask for the opinions of employees.
4. Employees should not disagree with management decisions.
5. Managers should not delegate important decisions.

Luthans and Doh (Luthans , Doh, 2009).have found that countries and organizations with high power distance require strict obediance to norms both at the individual and organization levels. In contrast, organizations and countries with low power distance

tend to be decentralized with flatter structures as represented in the flater structure of triangle 2 in Figure 4. ,

In Table 1 we see some example of power distance of some of the countires which are currently participating as part of the Elite project community of practice.

**Table 1 Example of Power Distance**

Country	Hofstedes Power Distance
Sweden	31
Norway	31
Spain	57
Poland	68
Austria	11
Netherlands	38

Given that there is such a large difference between some of the members who are participating in the Elite community of practice the measure criteria of power distance will be consider included in the measuring evaluation criteria which is outline in the next section.

### 3. DESCRIPTION OF EVALUATION CRITERIA

Below, we will outline tables that describe the evaluation criteria at different measurement points in the model. Some measurements can be quantitative in nature while others can be qualitative in nature. The qualitative nature is required given the complex nature of measuring learning and change. For example it can be that you have used a lesson learned from the living document to only partially change a practise or procedure after a crisis. Consequently, the evaluations will need to use scale questions and analysis for example using a Thurstone or Likert scales in the responses.

#### 3.1 Learning Measurement Point 1

Here, the individual or team is interacting with the Elite living document and or participating in a workshop. At this measurement point the criteria can be both quantitative and qualitative in nature. A qualitative measurement criteria can be extracted from the evaluations and surveys done by the experts who attend the lesson learned exercise concerning a crisis. During the project a number of surveys at the workshop were performed asking the experts if they believed that they had taken back any relevant lessons learned from the workshop.

Table 2 Evaluation Criteria Measurement Point 1

1A	Survey and questionnaire results asking the community of practice members to rate their experiences at the crisis exercise or workshop.(Qualitative)
1B	The number of participants at the workshop who brought back or uploaded a lesson learned.(Quantitative)
1C	The number of Community of practice members who downloaded a lesson learned document. (Quantitative)
1D	The number of Community of practice members who read the lesson learned document.(Quantitative)
1E	The number of Community of practice members who ranked the lesson earned document.(Quantitative)
1F	The number of suggestions for new or revised categories or filters for lesson learned documents.(Quantitative)

#### 3.2 Learning Measurement Point 2

At this measurement point the members of the community of practice have acquired either through verbal or written communication an abstract or a concrete lesson learned as individuals or team members. In Workshop 1 and 2 it was observed and reported that individuals in crisis management share anecdotal information in three basic categories; new and better equipment, procedures and people.

**Table 3 Evaluation Criteria Measurement Point 2**

2A	The number of abstract and concrete lessons learned about new and good and bad equipment. (Quantitative)
2B	The number of abstract and concrete lessons learned about new procedures. (Quantitative)
2C	The number of new contacts made with new experts in a particular field. (Quantitative)
2D	The number of lessons learned about new documents.(Quantitative)
2E	The number of lesson learned about new laws or policies.(Quantitative)
2F	The number of courses or exercises recommended in the living document.(Quantitative)

### 3.3 Learning Measurement Point 3 and 3 A

At this measurement point the individuals or teams are operating within and through the formal stack of control i.e the organizational sector, national, and international levels). That is to say, the individuals in the community of practice can come from different levels in the stack.

**Table 3 Evaluation Criteria Measurement Point 3A and 3B**

3A	The number of individuals at all levels that uses a lesson learned, process or equipment to change their day-to-day operations.(Quantitative)
3B	The number of individuals at all levels that uses a lesson learned, process or equipment to change their tactical approach.(Quantitative/Qualitative)
3C	The number of individuals at all levels that uses a lesson learned, process or equipment to change their strategy. (Quantitative/Qualitative)
3D	The number of teams at all levels using a lesson learned, process or equipment to change their day-to-day operations.
3E	The number of teams at all levels that using a lesson learned, process or equipment to change their tactical approach. (Quantitative/Qualitative)
3F	The number of teams at all levels using a lesson learned, process or equipment to change their strategy. (Quantitative/Qualitative)

### 3.4 Learning Measurement Point 4

At this measurement point regulations, laws, and policies are used to transfer the lessons identified into lessons learned at the meta-system levels. Some very interesting work has been done using a socio-technical modeling approach to model the 1986 outbreak of the Bovine Spongiform Encephalopathy BSE epidemic in the United Kingdom by Cassano-Piché and Vicente Jamieson, (Piché 2006). In the Appendix we see two figures: the first one is an accident analysis map referred to an AcciMap and the second one is a conflict modeling map which attempts to visualize the cause and effect of policies and practices between the different echelons or layers at the measurement point 4. In these figures we see a clear example of the rigor vs relevance problem with modeling. It is recommended that given the complex nature of crisis management at measurement point 4, that no quantitative or qualitative measurement should be used at this time in the crisis management area. However, the fact that this measurement point is included in the model is for completeness.

### 3.5 Learning Measurement Point 5

The difficulty with creating measurements for point 4 does not however impede the possibilities to have concrete suggestions for measurement point 5. Here a measurement can be the number of lessons learned documents that are officially approved to be placed into the living document.

5A	The number of lessons learned documents accredited and placed in the living document from the sector level. (Quantitative/Qualitative)
5B	The number of lessons learned documents accredited and placed in the living document from the national level. (Quantitative/Qualitative)
5C	The number of lessons learned documents accredited and placed in the living document from the international level. (Quantitative/Qualitative)

## 4. SUMMARY

This report has outlined the evaluation criteria to be used in measuring both qualitative and quantitative learning processes in a post crisis community of practice living document. In the next deliverable all three reports will be compiled to produce a framework for a learning process for post crisis learning and make suggestions for future research on how to validate and improve the framework in practice.

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Appendix 1 (AcciMAP and CONFLICT MAP BSE)

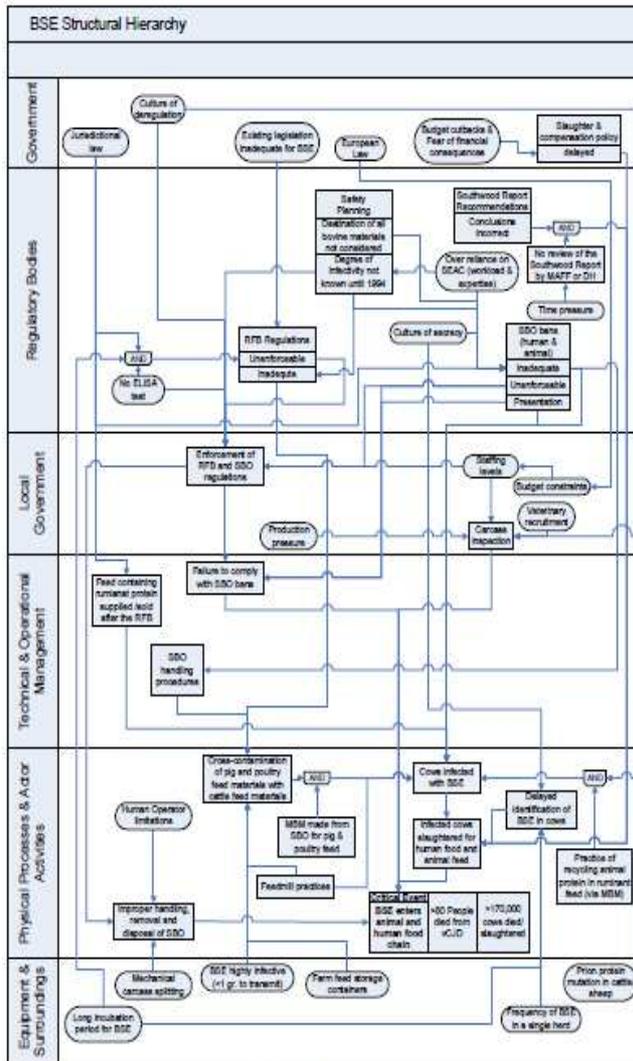


Figure 3: AcciMap of contributing factors

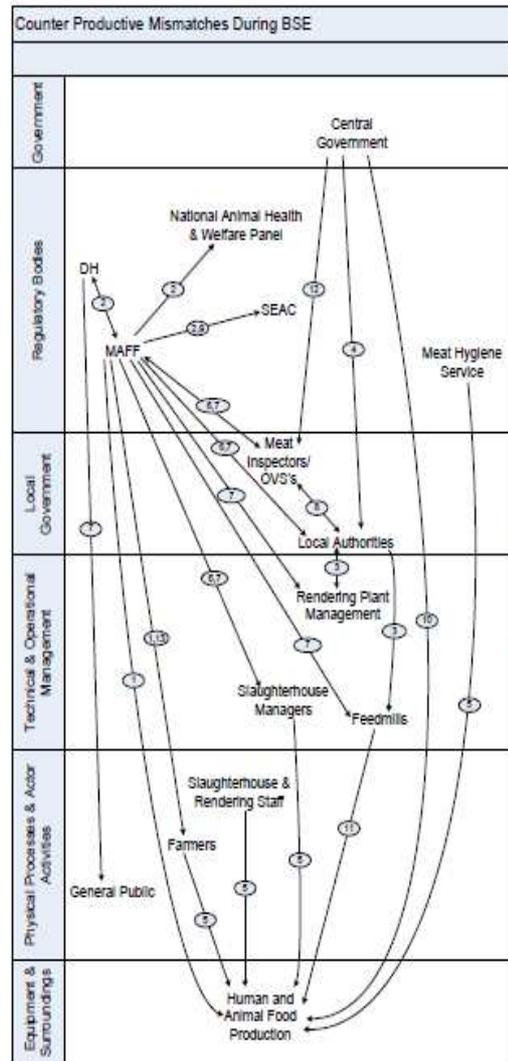


Figure 4: Conflict Map of counter productive mismatches

**Legend for Figures 3 and 4**

DH = Department of Health  
 MBM = meat and bone meal (animal protein)  
 OVS = official veterinary surgeon  
 RFB = Ruminant Feed Ban  
 SEAC = Spongiform Encephalopathy Advisory Committee  
 SBO = Specified Bovine Offal

Adapted from (Piché 2006)