
No Tap Water?

A study of Business Continuity Management for drinking water suppliers with focus on BS 25999 and emergency situations

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Abstract

The access to safe drinking water is a basic and critical component of our society. If the drinking water supply system is exposed to disturbances, it is of great importance that water suppliers are able to maintain continuity within the water distribution system. In emergency situations this has to be done using alternative methods, e.g. distribution by tanks.

This report analyses if the emergency planning of Swedish drinking water suppliers can be improved by the use of Business Continuity Management (BCM), and if the British standard for BCM BS 25999 is appropriate for the given purpose.

The conclusion is that BS 25999 is suitable, although it has to be translated before implementation according to the special prerequisites of the drinking water industry.

Introduction

A functioning drinking water supply system is fundamental to society since lots of organizations and businesses are directly or indirectly dependent on the access to clean water. This makes the society vulnerable for disturbances within the water supply system. Improving the resilience of the water distribution system is thereby an option to develop the resilience of the society as a whole (Krisberedskapsmyndigheten, 2009).

To maintain continuity of the water supply and to resist hazards that can threaten the business, Swedish drinking water distributors undertake different methods of risk management. This is supported and controlled by *Livsmedelsverket*; the Swedish National Food Administration.

A method for risk reduction that focuses on the ability to resist disturbances is Business Continuity Management (BCM). The BCM work follows systematically build-up routines and is based on nationally or internationally accepted standards, e.g. the British standard BS 25999. It is still unusual that drinking water suppliers are working with BCM, and no Swedish water distributors have specifically implemented BS 25999.

The aim of this study was to analyse if BS 25999 is of appropriate use for Swedish drinking water distributors. Focus was set upon emergency situations, when the ordinary water supply system is unusable and water has to be distributed by alternative methods; usually by tanks or bottles.

Methods

The survey was divided into three parts:

- A literature study of BCM for drinking water supply systems and of drinking water emergency situations.
- A study of drinking water incidents in Europe.
- Interviews with drinking water experts at VA SYD (water distributor of Malmö and Lund), NSVA (water distributor of six municipalities in northwest of Scania) and VAKA – the national drinking water catastrophe group of Sweden.

The results from the different parts of the survey were compared whereupon

requirements of BCM for drinking water emergency planning were identified. The next step was to examine whether or not these requirements could be fulfilled by BS 25999, and finally conclusions could be made about the suitability of the standard.

Result

The identified requirements of BCM for drinking water emergency situations were summarised in a list consisting of ten demands that the standard for BCM should fulfil:











- A) Give possibilities to maintain internal communication.
- B) Contribute with a plan for external information and for the contact with media.
- C) Encourage cooperation with external organisations.
- D) Contribute with a clear responsibility distribution for emergency situations; both within the organisation and between the organisation and other concerned companies or authorities.
- E) Encourage the drinking water distributor to observe dependences between the different parts of the business, thereby identifying vulnerabilities.
- F) Contribute with a method to find the balance between written routines and flexible ad hoc solutions, in order to rationalise crisis management.
- G) Contribute with a plan for how the organisation should practise the crisis management plan.
- H) Contribute with a plan for how the organisation should be able to maintain sustainable manning in a long-running crisis situation.
- I) Encourage the organisation to prevent sabotage of the alternative drinking water supply system.

- J) Encourage the establishment of an up-to-date contact list to customers that are especially sensitive to disturbances or consume large volumes of water.

These demands were then graded depending on how well they were fulfilled by BS 25999. The result is shown in table 1. The three colours should be interpreted as follows:

- Green = The requirement was included in BS 25999 and the specific demand was fulfilled.
- Yellow = The requirement was included in BS 25999 but the specific demand was *not* fulfilled.
- Red = The requirement was *not* included in BS 25999.

Table 1. The ten demands are shown together with a green, yellow or red spot symbolizing how well the demand was fulfilled by BS 25999.

A: Internal communication	
B: External communication	
C: Cooperation with external organisations	
D: Responsibility distribution	
E: Observe dependences	
F: Written routines or ad hoc solutions	
G: Practising the plans	
H: Sustainable manning	
I: Sabotage prevention	
J: Contact with customers	

Analysis

Five of ten demands were perfectly fulfilled by BS 25999. The reason to why the remaining five requisites could not be seen as fulfilled was mainly because the specifications of BS 25999 are formulated too generally. This means that some demands are only mentioned indirectly, creating a risk that they would be neglected by mistake within the BCM work of the water distributor.

Conclusion and recommendations

Based on the comparison between the demands and BS 25999 the following conclusion was made:

BS 25999 is suitable for BCM planning of drinking water emergency situations, although it has to be translated before implementation according to the special prerequisites of the drinking water industry.

It is also recommended that Livsmedelsverket (the Swedish National Food Administration) or *Svenskt Vatten* (drinking water interest organisation) produce BCM guidelines that are translated according to the special requisites of the business.

Final comments

BCM for drinking water industry is a new field of research. This means that the results of this study should be regarded with humility and that further investigations are needed. For example, studies have to be made about how BS 25999 should be translated due to the given prerequisites and how BCM could be used for the drinking water supply system as a whole and not only for emergency situations.

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References

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