Chapter XLI
ICT to Facilitate Emergency Response in The Netherlands

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ABSTRACT

The implementation of GMS (Integrated Emergency room System) in the Netherlands has had a tumultuous record. A direct consequence of the governmental decision to hand over the empty basic system to the emergency rooms is that a large deviation in local systems emerged. A case study in one of these emergency rooms explains the consequences of this action and theorises the local construction of these ICT environments. The theoretical perspective that is found most relevant is the emergent perspective. Next to information system development the process of interdisciplinary collaboration started in the emergency room. For the first time all three emergency services (the police, medical services, and the fire department) took place together in de emergency room. In this article the influence of the ICT system on the interdisciplinary collaboration is explicated.

INTRODUCTION

In 1995, the Dutch cabinet decided to implement a single national communications network for the police, the fire brigades, and the first aid teams. This decision was part of a policy that aimed at simplifying the emergency response operations internally as well as its presentation to the general public. As part of the public emergency response interface emergency number 1-1-2 was

introduced around the same time as the number to use in emergencies. The changes internal to the safety response consisted of an organizational regrouping of the dispatch functions of the three main disciplines involved—fire brigade, medical emergency services, and police—into a co-located emergency room. The information and communications network to support it consists of two parts: a software environment and mobile communications system. One decision was to build an emergency response software system GMS (Integrated Emergency room System) to integrate emergency response and support it with crucial information. The other decision was to construct a safe mobile system to be called C2000 (communication 2000). Its aim was to make digital voice and data communications between all emergency services possible—not only in the emergency room but also on the street—and to replace the existing 100 analogous networks, which had obstructed such communication.

GMS and C2000 are prime examples of information and communication systems designed to facilitate cooperation between organizations. Indeed, they are intended to make the integration of different organizations in the field of security possible. Yet, when such systems are implemented, it often turns out that the differences between the "information domains" (Bellamy & Taylor, 1997) the partaking organizations constitute provide almost insurmountable barriers to actually realizing such systems. Organizations literally speak different languages and have different operating procedures. Moreover actions are taken at different levels and at different moments in time thus preventing operational practice to be determined completely in the design stage. Trying to overcome operational difficulties beforehand also often leads to heavy political infighting between the responsible organizations. In the C2000 and GMS case actors at the national level realized early on that a necessary strategy was to leave the integration of the organizations to the local level. Relevant considerations and processes therefore need to be charted by following how groups manage and work with these systems on the shop floor. For this contribution we studied the implementation of C2000 and GMS in one dispatch room, the dispatch room of the security region "Gooi- en Vechtstreek," which has its centre in the town of Naarden, but encompasses several municipalities. The implementation took place in the broader perspective of nation wide roll out of the systems over a period of about 6 years with a preparation period taking nearly as long. (The decision to develop GMS and C2000 was taken in 1995.) The development and implementation of GMS in the dispatch rooms thus was a relatively long trajectory.

BACKGROUND

The developments in the starting phase of the GMS system can be depicted according to two different perspectives. The *initial infighting perspective* regards technology as an instrument for the restructuring of social relations. It is based on the emphasis of actor contribution in the design and implementation process. Actor interests are represented in the policy development phase when the important choices for implementation are made. When sensitivity to external stakeholders is paramount, as is the case in many policy domains including policing in the Netherlands, concessions to stakeholders in the initial phase are an important part of decision making. In this view that is comparable to a systems implementation when design is stabilized it should be implemented according to plan. The responsibility of policy makers and senior management at the lower levels is to consider the best appropriate techniques for implementation.

The second, *emergent* perspective is derived from insights of different studies on the developmental course of information technology systems. It is empirically defined, based on observations in different contexts of the implementation of ICT