1.1 Introduction

In order to make processes more effective and efficient it is necessary first to identify, analyze and redesign (unfreeze—redesign—freeze) the already existing processes. This approach was probably first brought to general attention of scholars and practitioners by the work of Deming and his colleagues (Deming 1982; Juran 1988; Sanders et al. 1999; Hall and Johnson 2009; Jacka and Keller 2011). However, the father of process modeling and designing processes for effective and efficient management dates back to Taylor (Gilbreth and Gilbreth 1924; Taylor 1911).

Business process mapping then refers to activities involved in defining exactly what a business entity does, who is responsible, to what standard a process should be completed and how the success of a business process can be determined (Wikipedia 2012). The main purpose behind business process mapping is to assist organizations in becoming more efficient. Thus, a clear and detailed business process map or illustration allows outside firms to come in and look at whether or not improvements can be made to the current process. While to date process mapping of healthcare processes is not as prevalent as other areas of business process mapping the following four chapters illustrate its use and benefits in case studies that focus on process mapping of emergency departments of four respective hospitals in the Stuttgart area in Germany. The four chapters are summaries from respective student projects supervised by Professors Kirn and Wickramasinghe. They are intended to illustrate the benefits of using process mapping techniques and tools in real life scenarios but are not intended to suggest effective or ineffective management in terms of healthcare practice.

All four case studies have a common approach. At first students collected data in the particular emergency departments in order to build a very detailed business process model using event driven process chains. Afterwards they analysed the processes and identify inefficiencies (especially unnecessary waiting times). Subsequently students made recommendations for possible improvements and critically assessed them by indicating the barriers and facilitators.
Besides, two of the groups integrated their idea for improvement into the process model and tried to show a reduction of throughput times by using the simulation tool MedModel®.

The four groups focused on different problems in the emergency department:

1. The group considering Marienhospital Stuttgart focused on the implementation of a Triage system
2. The group considering Klinikum Esslingen focused on the implementation of Kiosk Check-In
3. The group considering Katharinenhospital Stuttgart focused on the improvement of the bed management process
4. The group considering Robert-Bosch-Krankenhaus Stuttgart focused on the improvement of different parts of the process, e.g. transportation process

We believe the following four case studies which by no means cover all the possibilities of using simulation to facilitate business process mapping and redesign help to demonstrate the benefits of such exercises and their applicability to healthcare contexts.

References

Gilbreth, F., & Gilbreth, L. (1924). *The quest of the one best way*. West Lafayette, IN: Purdue University, Frank and Lillian Gilbreth Papers, Society of Industrial Engineers, The University of California.