**Interim Report**

**EE5500**

Name: Wojciech Lesnianski

Student number: 1644612

Electronic and Computer Engineering

School of Engineering and Design



Dr. Ali Mousavi

Monday, September 18, 2017

Table of content

[Introduction 3](#_Toc493528172)

[Background to the project 3](#_Toc493528173)

[Initial survey 3](#_Toc493528174)

[Aims and Objectives 3](#_Toc493528175)

[Experimental/investigative methods to be adopted 4](#_Toc493528176)

[Time-plan 4](#_Toc493528177)

[Deliverables or specific outcomes 4](#_Toc493528178)

# Introduction

This section should briefly overview the project topic.

Acquisition, analysis and modelling of historical and realtime water-plant data.

Overcoming some of the existing barriers of interoperability and harmonisation of data and information.

**[Quelle: 1]**

Access to clean water is the most basic and fundamental type of the human infrastructure. The quality of life highly depends on the accessibility to clean water. We require water not only for drinking, but also for cooking, and washing. Additionally, various professions and commercial establishments, like farmers or restaurants, could not exist without certain quality and quantity of water. The quantity of clean water in most cases, depends on collecting water and sewage from rivers and lakes, cleaning it in dedicated water-plants and thus bringing it to a specific quality standard, and then distributing it back into the waters.

Acquisition, analysis and modelling of historical and real-time water-plant data will be the main topic of this master thesis. The Project will be done in partner work, although the tasks will be strictly separated and the outcome of one part of the project won’t affect the outcome of the other part. This dissertation is dealing with the problem of acquiring, harmonizing and providing water-related data and leaves the analysis and presentation to the partner project.

**[Quelle: 2]** The specific cleaning process in the United Kingdom consists of 7 steps, which will be described in a later chapter:



***(Source:*** [***http://www.water.org.uk/about-water-uk/wastewater 18.09.2017***](http://www.water.org.uk/about-water-uk/wastewater%2018.09.2017)***)***

The most individuals will be interested in the outcome of step 7, which also indicates the quality of water available for public usage, nonetheless the incoming and outgoing water of the other steps provides different kind of data which might be interesting for different kind of reports, especially due to the fact, that each step deals with a specific problem.

# Background to the project

This section should provide a more detailed review of the technical field, largely based upon survey material.

Despite billions of Pounds invested in securing the nation’s precious water resources, mains water cannot be guaranteed even today, and this problem will become more severe

# Initial survey

This survey is a quick preliminary survey, to discover something of the 'shape' of the relevant field of information; in doing this you will identify key abstracts, journals, books, series of reports, and so on. Key technical issues will be summarised.

Take inspiration and technology currently in use by communication service providers in mobile industries – who obviously managed to find a common way to communicate

# Aims and Objectives

A clear statement of the Aims and Objectives. Remember, aims and objectives are generally a statement of what is to be achieved, not how it is to be achieved.

The purpose of this project is to investigate and design knowledge and data engineering (KDE) infrastructure for strategic and large scale water and waste water treatment processes (WWTP). By KDE of water treatment operations we mean the building of the essential capabilities for acquisition, analysis and modelling of the data to create the knowledge for large scale (regional, national and international) strategic planning of water supply and consumption.

# Experimental/investigative methods to be adopted

An outline of the key activities necessary to complete the project, itemising the experimental methods to be used (in, for example, a design-based project), or the investigative techniques to be adopted (in the case of, say, a critical survey).

# Time-plan

Strongly related to the key activities identified above.

# Deliverables or specific outcomes

A clear statement of the expected outcome(s).