Introduction

# Abstract

# Project Overview

A great deal of current and recently completely projects in the field of Computer Science focus on combining separate areas of real-world problems through using abstract techniques to represent, merge and ultimate gain new information from these problems. Generally speaking, this project takes the fields of smoking cessation and social networking and, by mapping them to an agent-based model, tries to provide information about how social situations and conditions affect the effort of someone in giving up smoking. On top of this, it aims to assess whether this would be useful as a commercial level approach to investigating smoking cessation. [**REF SELF?**]

Given that combining these fields has the potential to be a very large project, the scope of this work was limited to an attempt to create a basic model of smoking related behaviours and social interactions. From this, extensions could be made to further represent human behaviour or social networking, should the model indicate that it would be useful. At this point, it should be noted that social network is referred to in the context of all social interaction as opposed to just that of online networking. **More intro**

# Project Rationale

As described above, the project is focused on smoking cessation and in particular, what factors contribute to individuals to giving up. Smoking is a big problem for healthcare in many countries partly due to the expense managing it – in 2005/06, the National Health Service (NHS) spent around £5.2 billion on costs directly related to smoking [**REF PG 78 NHS paper**].

Furthermore, due to the advent of services such as Facebook, Twitter and other online social networks, the concept of networking has become significantly more popular in recent years, although it is an ever-present factor in life [**Ref USN pg 4]. FILL IN**

Agent based modelling is a commonly used but relatively new tool for approximating situations of high levels of complexity [**ref Sandtable paper]**. Through allowing a number of autonomous entities, called agents, to behave in defined ways, the system can provide predictions through simulation. A number of companies specialise in this approach to solving real-world problems. Sandtable, for example,

Together, these three sections represent an opportunity to investigate relevant and meaningful problems

# Project Management Overview

Since the project is largely research driven, an approach akin to the Waterfall model was used [**Ref waterfall**]. As displayed in **FIGURE** Due to the research aspect, requirements and maintenance could be removed

**DIAGRAM OF WATERFALL vs METHODOLOGY USED**