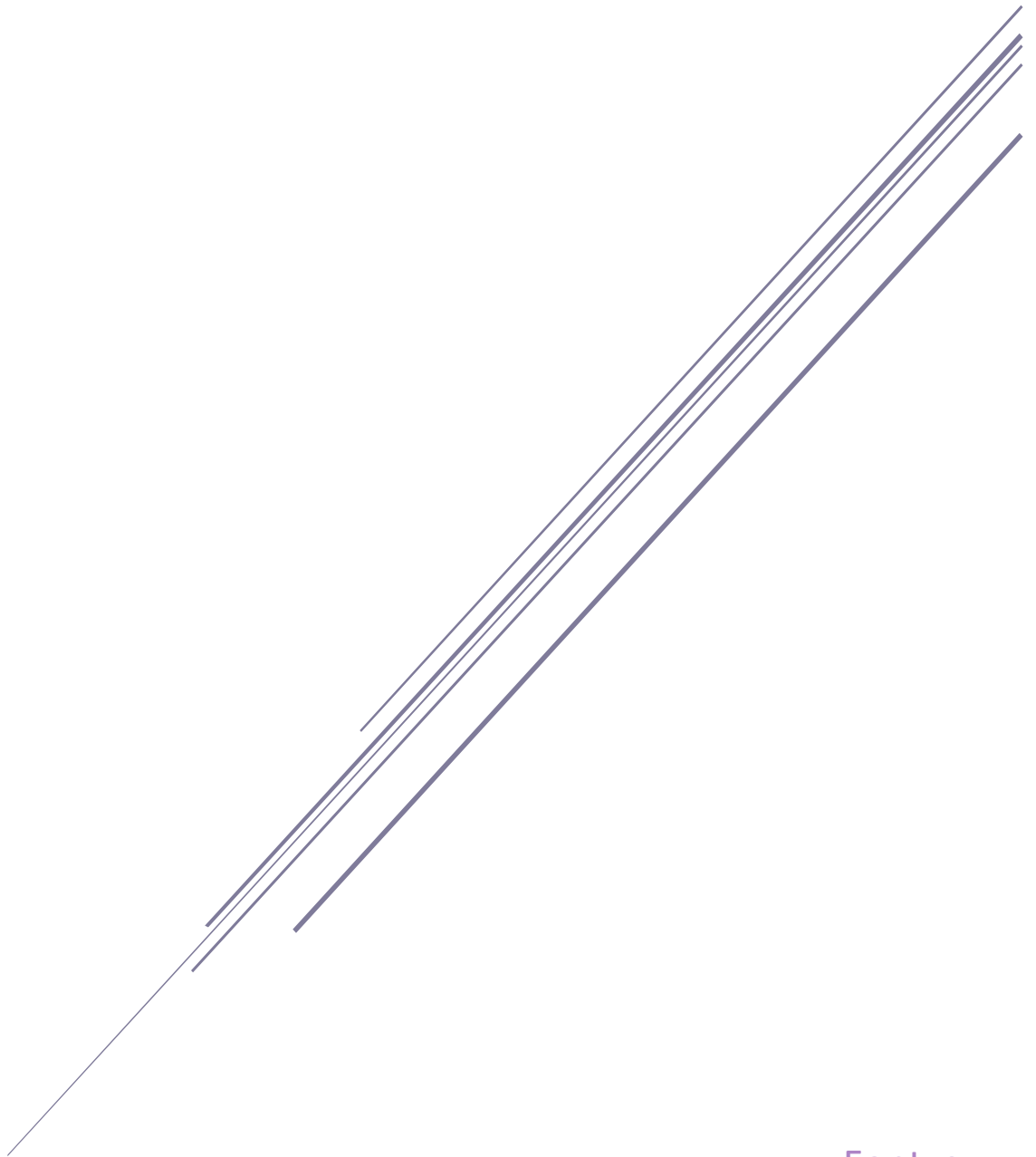# SECURITY BY DESIGN

Reasoning, Conclusions & Recommendations

Fontys

HBO ICT

OPENING

In this document I will explain why I made certain decisions in my implementations and why I did not go for a different approach. The topics that we will be going over are Security & Security by Design

CHALLENGE

Water polo is a niche sport in the Netherlands. Unlike football, hockey, or tennis where each town might have one club of the three sports and big cities might have multiple within the same sport. This results in clubs easily finding opponents to play practice matches outside the main competition. Water polo on the other hand besides having a smaller group of athletes also has the problem that it is restricted to towns and cities with a swimming pool which is also competition approved. This combination leads to difficulty finding practice matches, the idea for this project is an integrated system where teams can find each other to play practice matches, contact each other, find relevant personnel like referees, keep track of matches themselves and create an environment which promotes competitive play among the regions.

REASONING

Security by design in my opinion is divided into three steps. Research, Analysis and Implementing. The research part I refer to risk analysis but also research during and after deployment regarding package updates, discovered vulnerabilities and new regulations. To find these discoveries in you research you can let lose an analysis on your application, these can be automated through a pipeline using tests and quality analysis but can also be done using a pen test. Lastly implementing this regards the way new user stories are created in your application, are you using an object-oriented language like Java you are less likely to create code bugs which will go unnoticed. But also do you develop tests with a coverage you assigned in the research stage.

CONCLUSION & RECOMMENDATIONS

During my project I had little choices as soon as I selected my language of choice. But before that I did way the effects using Java Spring might have on security. Discovering how many different packages are slowly being built into the default packages of Spring gave it an edge over alternatives during my pre hand research. Other security implementations such as the usage of OAuth2 are more a by product of using Google Cloud.