

Hanzehogeschool Marian van Os **Centrum voor Ondernemerschap**





Wearables and apps for resilient employees

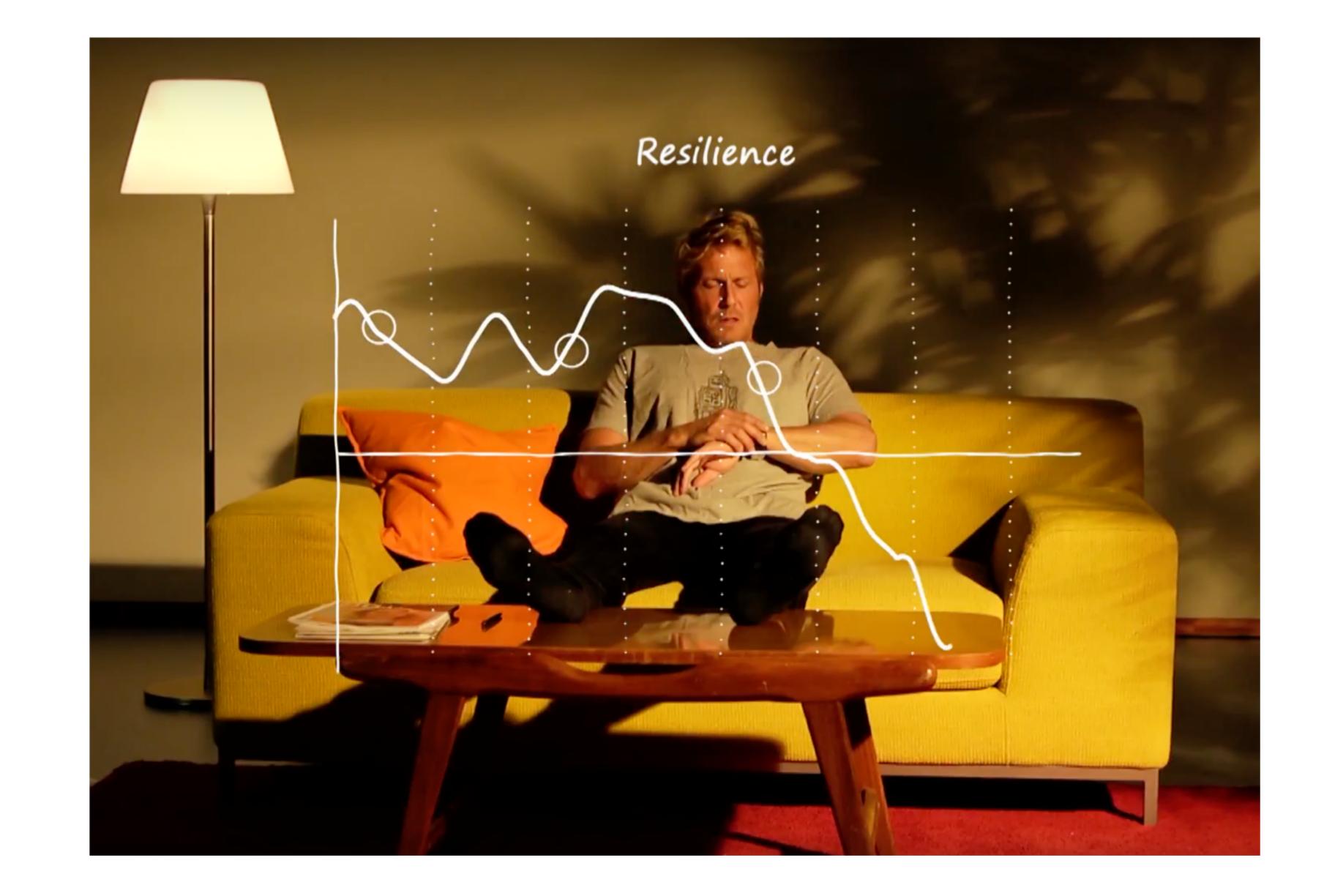
Duration of PhD trajectory: Q4 2017 until Q4 2021. PhD candidate: Herman de Vries

Problem outline

- Stress is a major cause of health problems and absenteeism under employees.
- Interventions to improve employees' resilience to stress exist, but have limited ability for continuous monitoring and to assist the employee real-time.
- Wearables and apps have potential to assist employees in managing their resilience, but automated methods to analyse data and create personalised feedback are lacking.
- Models that predict an employee's resilience based on data from wearables and apps are therefore needed to improve this aspect of employee resilience interventions.

What is resilience?

Resilience can be defined as *"the process of positively* adapting to adverse events."



Several approaches to measure resilience exist. In this project, data from wearables and apps will be used to develop prediction models for multiple resilience-related outcomes.

Aims of the project

This project aims to contribute to:

- the body of knowledge on how automated data-analysis (e.g. machine learning) can be used in order to create personalized feedback based on a single individual's data;
- the body of knowledge on how objective data derived from wearable sensor technology can complement subjective measures in predicting resilience outcomes;
- the development of a personalized resilience intervention using wearables and apps.

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Promotor: Prof. Dr. Robbert Sanderman. Copromotors: Prof. Dr. Cees van der Schans, Dr. Hilbrand Oldenhuis, Dr. Wim Kamphuis