

# WASP - Windows and Shutters Project

Group 7: Sebastian Künzel, Lukas Nabakowski, and Jannis Rapp

<sup>1</sup> Service Computing Department, IAAS, University of Stuttgart

`st150016@stud.uni-stuttgart.de`

<sup>2</sup> `st148841@stud.uni-stuttgart.de`

<sup>3</sup> `st150565@stud.uni-stuttgart.de`

**Abstract.** The abstract should briefly summarize the contents of the report in 150–250 words.

**Keywords:** First keyword · Second keyword · Another keyword.

## 1 System Introduction

Quality of Life and well-being is an essential factor for work performance and the health of employees in modern office environments. One prominent problem of indoor office buildings is a high CO<sub>2</sub> concentration which lead to impaired work performance and negative health symptoms [?]. Further possible disturbances in office environments include ambient noise and sunlight [?]. Both elements distract the concentration of office workers.

We use an intelligent window and shutter management system to address the problems outlined above. This system uses sensors to monitor the CO<sub>2</sub> concentration, ambient noise level, and sunlight intensity. Based on the observed information, the system can then react by adjusting the windows, shutters, and heating accordingly.

The goal is to control the office's windows and shutters to maintain high air quality with a low CO<sub>2</sub> concentration and a comfortable temperature while avoiding distractions caused by ambient noise and blinding sunlight. The system is also equipped to adapt to environmental influences (e.g. rain and wind) that can adversely affect the indoor office space when windows are open.

Other weather aspects such, as wind and rain also need to be considered when controlling office windows. Additional, the influence of ambient noise has to be minimized.

The performance and health of office employees can be increased by monitoring the CO<sub>2</sub> concentration, as well

To increase the performance and health of employees an automated

Modern companies are focus

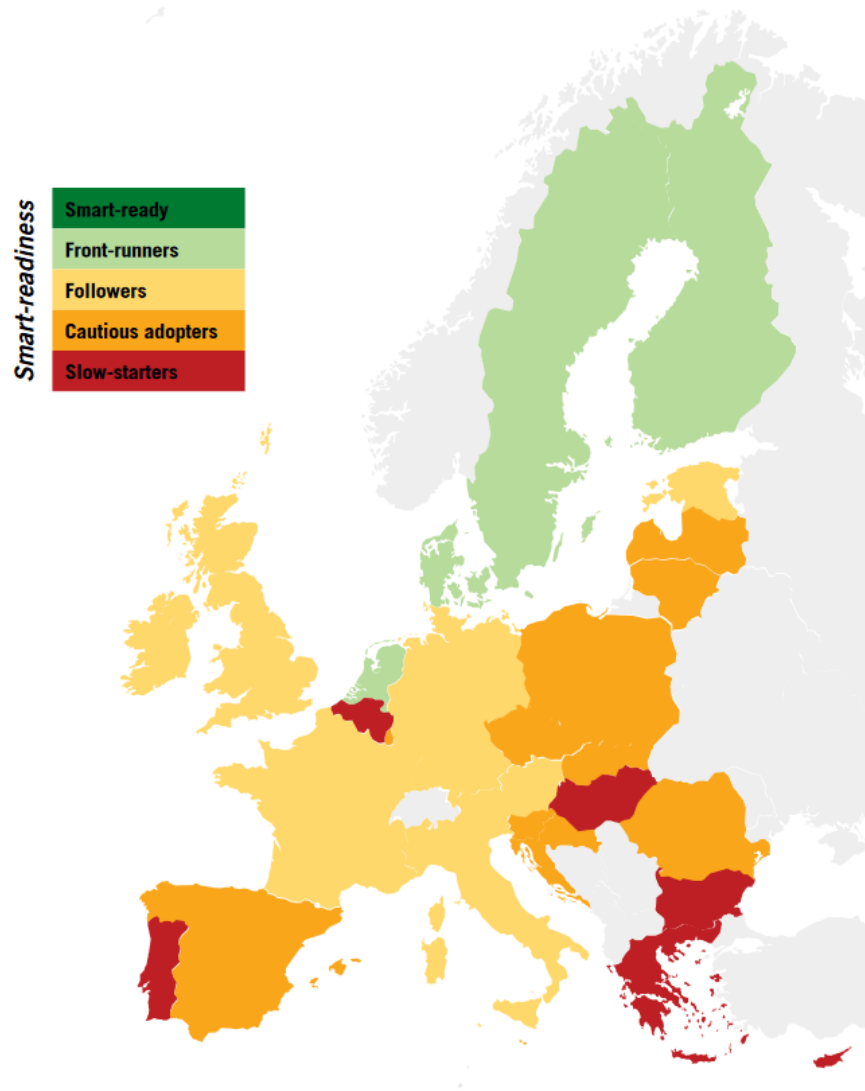
Describe the scope (ghdfghfdhgbgbackground information and problem statement) and the goals of your project.

Table 1 an example of a table.

Fig. 1 gives an example of a figure.

**Table 1.** Table captions should be placed above the tables.

Item	Deadline
I111	D1
I2	D2
I3	D3
I4	D4
I5	D5



**Fig. 1.** A figure caption is always placed below the illustration. Please note that short captions are centered, while long ones are justified by the macro package automatically.

For citations of references, we prefer the use of square brackets and consecutive numbers. The following bibliography provides a sample reference list with entries for journal articles [?], a book [?], proceedings without editors [?], and a homepage [?]. Multiple citations are grouped [?,?], [?,?,?,?].

## **2 System Analysis**

Describe the user requirements of your system.

## **3 System Architecture Design**

Describe and provide a design of the architecture of your system.

## **4 System Implementation**

Describe the implementation of your system. This section is only relevant for the report and should be omitted for the project description.

## **5 Discussion and Conclusions**

Here you can discuss some interesting points or limitations of your system and conclude the report.

All links were last followed on April 17, 2020.