

Wildfire Prevention and Fighting Dashboard Design

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Chapter 1

Introduction

As time goes by, we come to the conclusion that wildfires are some of the most fierce and dangerous threats to human and wildlife safety. One of the ways to prevent them is by using technological tools that can detect and combat them more effectively.

For this report, we divided all of the stages of our project into four sections:

- Section 1: from the problem description to the definition of stakeholders;
- Section 2: from the designed sketches to the iteration process.

Chapter 2

Section 1

For this work, we were given the task to create a dashboard that could simulate a real-time, real-world system for wildfire prevention. To achieve that goal, Silvanet Wildfire Sensors and Mesh Gateways are necessary to survey and detect wildfires effectively.

One of the biggest challenges we faced was keeping a complex system, with multiple functionalities, simple and intuitive to use without the need for prior knowledge on this specialized tech, such as the sensors and gateways.

In order to come up with some of the sketches shown in Chapter 3,

- Dryad (Sensor Manufacturer)
- Firefighters
- SNS (Portuguese National Healthcare Service)
- Civil Protection
- City Council

In order to come up with some of the sketches shown in Chapter 3,

Persona 1:

- Joaquim Soares (35 years old):
 - Civil Protection agent;
 - Lives with his wife and kids in Aveiro;
 - Joined GNR and received police training at the age of 20;
 - Worked as GNR in Aveiro’s district during the wildfires of Summer of 2024. After this catastrophic experience, he volunteered to become a Civil Protection Agent in this new program to prevent and fight forest wildfires.

Persona 2:

- João Rodrigues (24 years old):
 - Has a degree in Management of Safety, Emergency, and Civil Protection
 - Lives with his parents and sister in Aveiro
 - Currently undertaking a post-graduation degree in Civil Protection, through online classes
 - Works as an operations assistant for Civil Protection.
 - Has ambitions to climb the ranks in ANEPC by gathering experience in various fields

Chapter 3

Section 2