Supporting the workflow of nurses at the ICU

Designing the interface of an ICU dashboard

A dashboard that improves work satisfaction and patient safety by showing timely and relevant information.
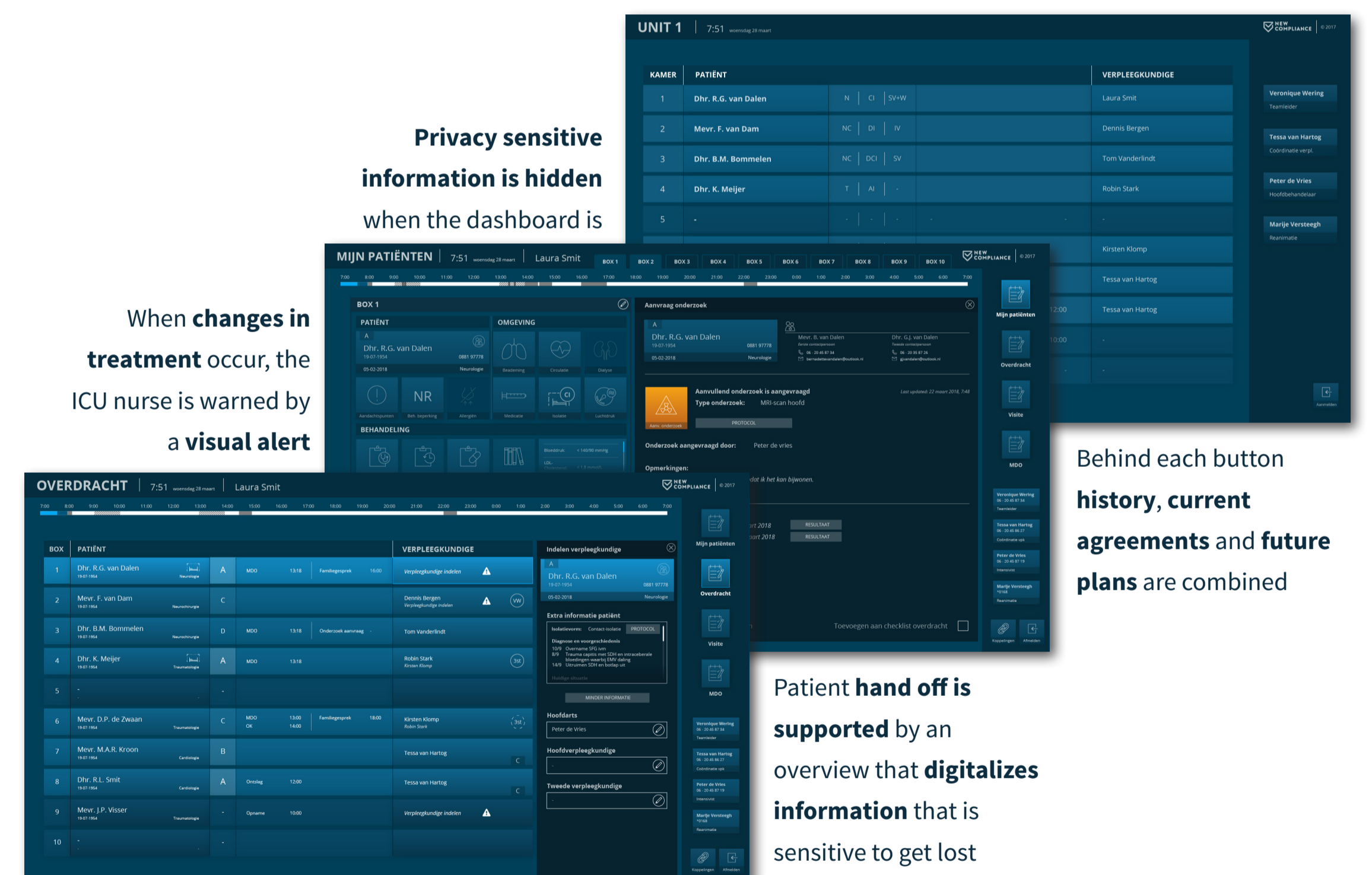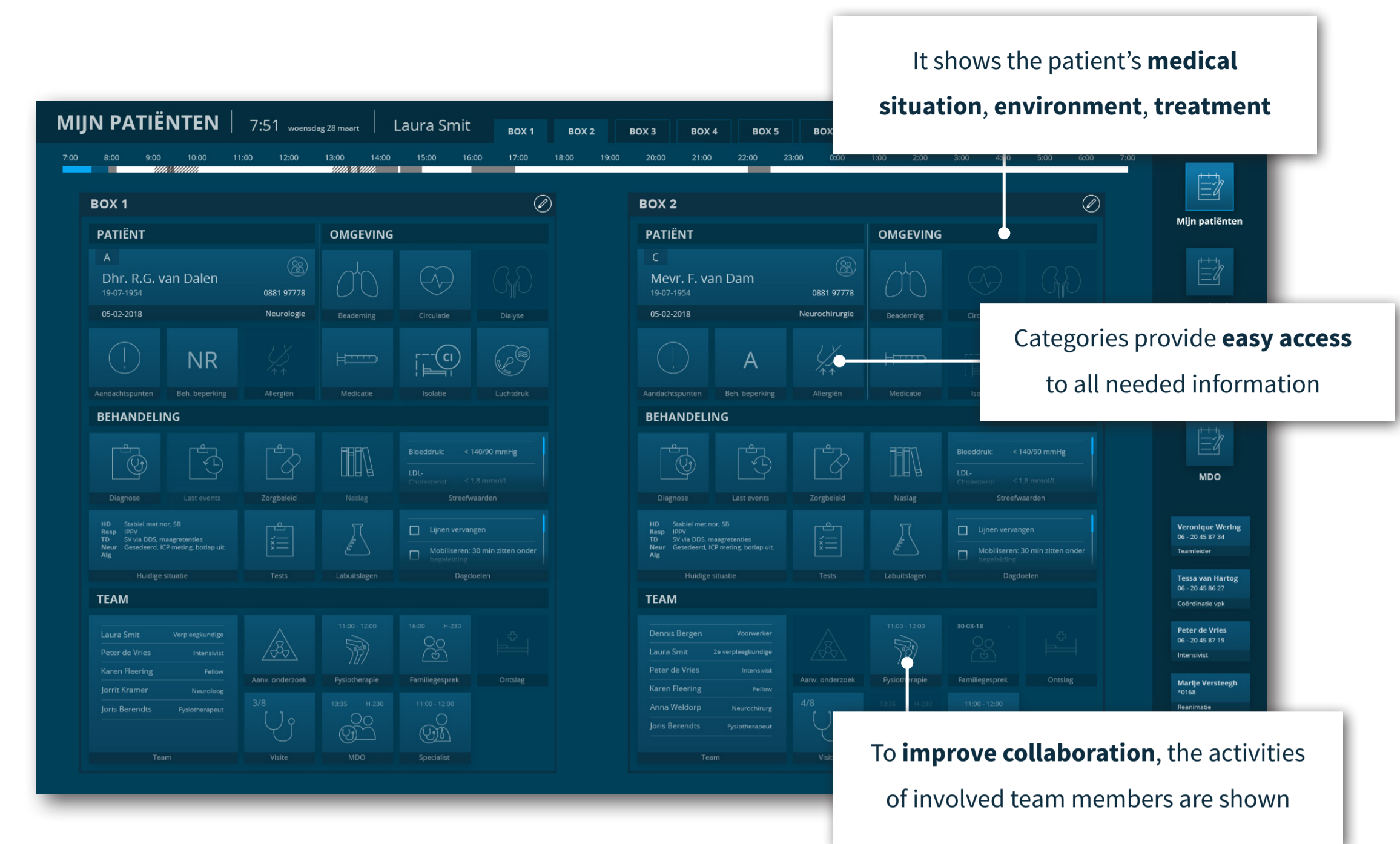
The intensive care is a complex environment where nurses have to deal with more than 500 tasks a day, an administrative burden and an information overspill coming from a multitude of IT systems and colleagues. On top of that, a high rate of alarms is false and messages are not always relevant. These stressors have a large impact on patient safety and work satisfaction. In literature, multiple solutions are proposed to improve this situation. However, these research outcomes are not consistently implemented in the field, the solutions found are not generally accepted due to current hospital cultures and the usability of implemented solutions is often insufficient.

DISCOVERING THE NEEDS

The software development company New Compliance aims to improve the working circumstances by producing medical dashboards that show timely and relevant information. Through contextual research based on contextmapping, it came forward that improving effectiveness and efficiency, improves work satisfaction and patient safety. To achieve this, the feeling of collaboration and of having control of the situation has to be increased. This is done by providing ICU nurses with a complete overview of patient and treatment related information. Through this overview more insight is provided in the activities of related ICU team members and changes in treatment plans. This assures ICU nurses to be in control of their planning and conduct most up to date treatment.

ALERT PHILOSOPHY

The well-known phenomenon of alert fatigue was considered by formulating an alert philosophy. This alert philosophy determines when and how an alert will show. It establishes the visualisation, prioritization and categorization of the alerts and provides guidance in diminishing the number of irrelevant alerts.

It shows the patient's **medical situation**, **environment**, **treatment**

Categories provide **easy access** to all needed information

To **improve collaboration**, the activities of involved team members are shown

Privacy sensitive information is hidden when the dashboard is

When **changes in treatment** occur, the ICU nurse is warned by a **visual alert**

Behind each button **history**, **current agreements** and **future plans** are combined

Patient **hand off is supported** by an overview that **digitalizes information** that is sensitive to get lost

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