

TDT4140

EXERCISE CLASS – EXPLORATION PHASE

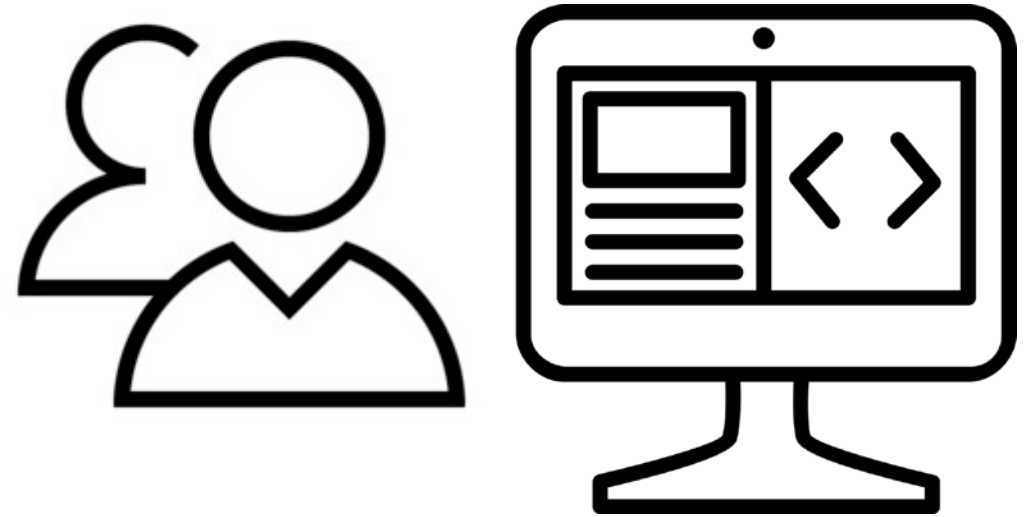
KARI ELINE STRANDJORD



THE COMMON PROJECT



DELIVERABLES



GOAL OF THE COMMON PROJECT

*REVOLUTIONIZE THE LEARNING-
EXPERIENCE IN UNIVERSITY EDUCATION*

EVALUATION DIMENSIONS

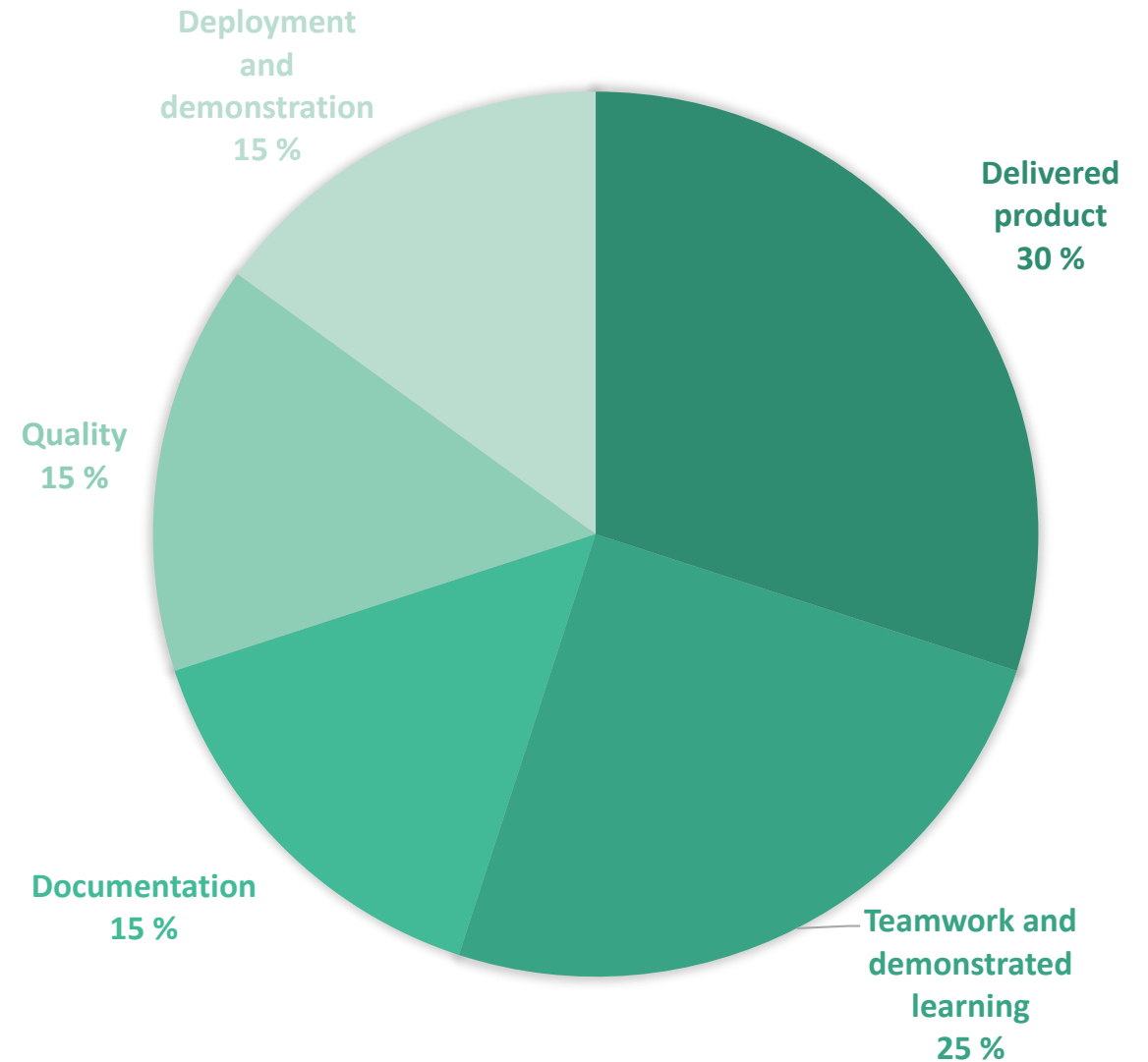
Project is due 27th of April.

Deliverables are mandatory, but only pass/no pass.

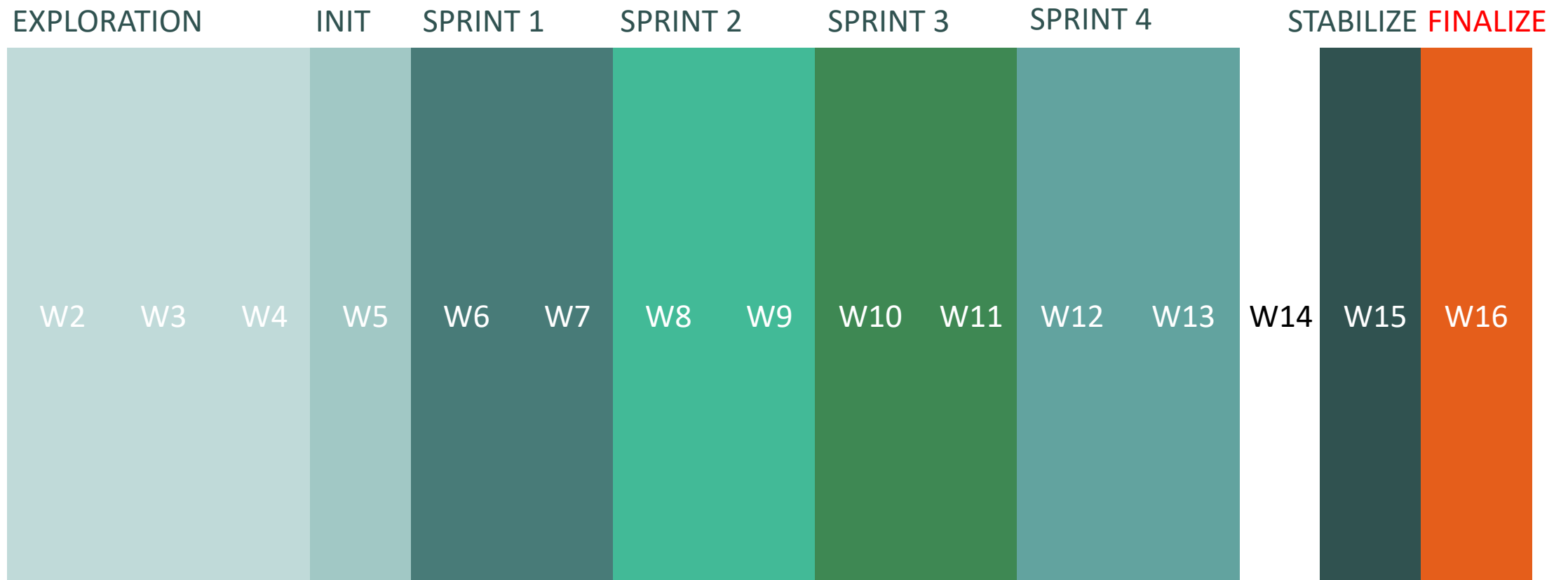
100% of the grade is based on project work.

Evaluation dimensions:

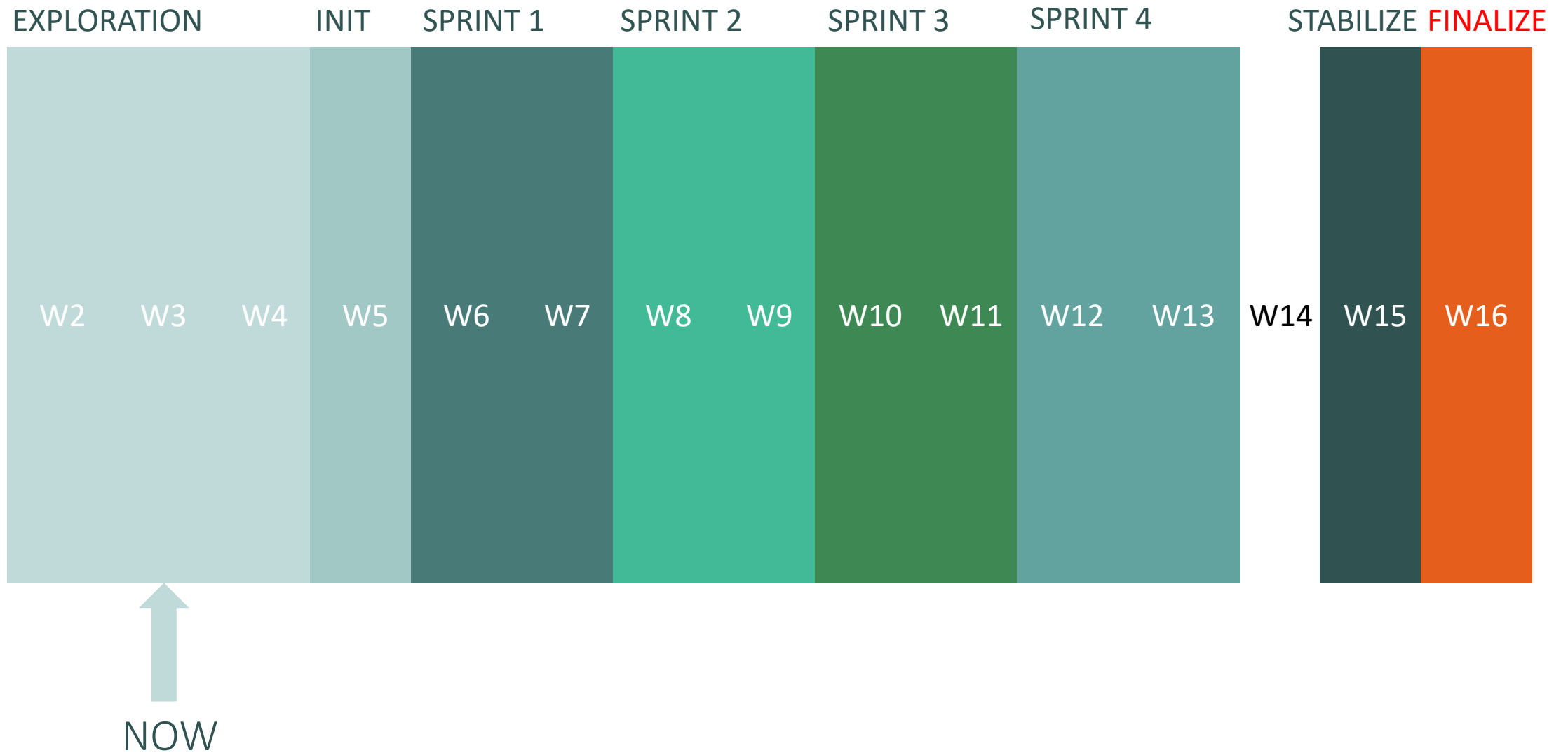
- Delivered product 30%
- Teamwork and demonstrated learning 25%
- Documentation 15%
- Quality 15%
- Deployment and demonstration 15%



TIMELINE



TIMELINE



Exploration phase: deliverables

1) Problems and concept

→ deadline 23.01

2) Product backlog,
Project plan and poster

→ deadline 3.02



1

*Problems and
concept*

Discover the top-5 problems of university education from the viewpoint of professors or teachers and propose a concept.



WHY?



*When you have
understood the problem,
you can be more creative
when producing a solution
and deliver real value to
your customers.*

2

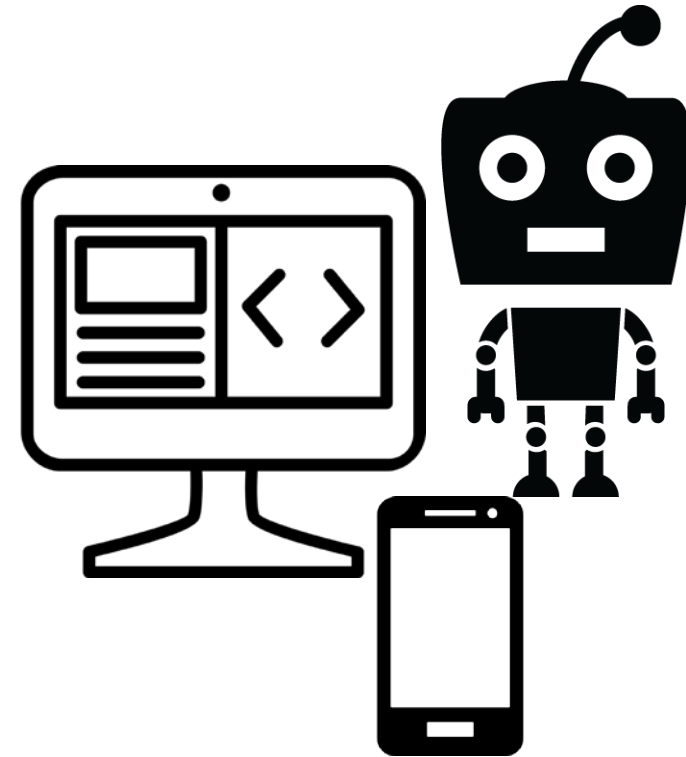
*Product backlog,
project plan and
poster*

- Product backlog
 - Prioritized user stories
- Project plan
 - Opportunity
 - Stakeholders
 - Requirements
 - Software system
 - Work
 - Team
 - Way of working
- Poster
 - Illustration of your concept



PRODUCT BACKLOG

prioritized user stories



FROM CUSTOMERS

TO PRODUCT

USER STORIES

As a <type of users>,
I <want/can/need>
<goal or objective>,
so that <reason>

USER STORIES EXAMPLE

As an admin user, I want to create user accounts, so that I can grant users access to the system

USER STORIES

- Describes wanted features
- Theme
 - A collection of user stories
- Epic
 - A large user story
 - Start with epics and iterate, user stories can be divided into sub-stories
- Prioritize user stories
- Confirmation – condition of satisfaction
 - Acceptance criterias → confirm when a story is done
 - Essentially tests
 - Verify that...

USER STORIES EXAMPLE

As an admin user, I want to create user accounts, so that I can grant users access to the system

Acceptance criteria's:

- verify that an admin user can create a user account by adding following information: name, email...
- verify that the new user retrieves an email with login instructions

...



PROJECT PLAN

Project plan

- Include details of all essence kernel alpha states
- Include a risk assessment
- Include the product backlog
- Should give all stakeholders a clear understanding of the project and how it is run
- Should be updated throughout the project

Software project problem:
lack of a documented project plan

SEMAT

There are *Customer* needs to be met

- Someone has a problem or *Opportunity* to address
- There are *Stakeholders* who use and/or benefit from the solution produced and some will fund the endeavor.

There is a *Solution* to be delivered

- There are certain *Requirements* to be met
- A *Software System* of one form or another will be developed

There is an *Endeavor* to be undertaken

- The *Work* must be initiated
- Form an empowered *Team* of competent people
- With an appropriate *Way of Working*



Opportunity

The set of circumstances that makes it appropriate to develop or change a software system.

Identified

Solution Needed

Value Established

Viable

Addressed

Benefit Accrued



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1.1.1



Stakeholders

The people, groups, or organizations who affect or are affected by a software system.

Recognized

Represented

Involved

In Agreement

Satisfied for Deployment

Satisfied in Use



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1.1.1



Requirements

What the software system must do to address the opportunity and satisfy the stakeholders.

Conceived

Bounded

Coherent

Acceptable

Addressed

Fulfilled



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1.1.1



Software System

A system made up of software, hardware, and data that provides its primary value by the execution of the software.

Architecture Selected

Demonstrable

Usable

Ready

Operational

Retired



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1.1.1



Work

Activity involving mental or physical effort done in order to achieve a result.

Initiated

Prepared

Started

Under Control

Concluded

Closed



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1.1.1



Team

A group of people actively engaged in the development, maintenance, delivery or support of a specific software system.

Seeded

Formed

Collaborating

Performing

Adjourned



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1.1.1



Way of Working

The tailored set of practices and tools used by a team to guide and support their work.

Principles Established

Foundation Established

In Use

In Place

Working Well

Retired



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1.1.1

Essence kernel
alpha states



POSTER



HOT DOG

Productowner: Lars Furu Kjelsaas, Scrum Masters: Cornelius Grieg Dahling & Stian Jørgensrud
Developers: Kristoffer Finckenhagen, Martin Gundersen, Egil Uggerud, Sigurd Berglann & Robert Einarsen



SAVE THE DOG

Hot Dog is a tool that measures the temperature inside the users car, and lets the user know through an app when the temperature exceeds a fatal level. Make sure your dog is nice and comfy with Hot Dog!



LETHAL HEAT

Over the course of the last five years, there have been reported a total of 45 cases in the US where dogs have died while being left in a vehicle on warm summer days. Even if the owner decides to leave just for a few minutes it can still have severe consequences for the dog. On sunny days even if the temperature in the air is only 25 degrees celsius, a parked car can reach a temperature double that in just a few minutes.

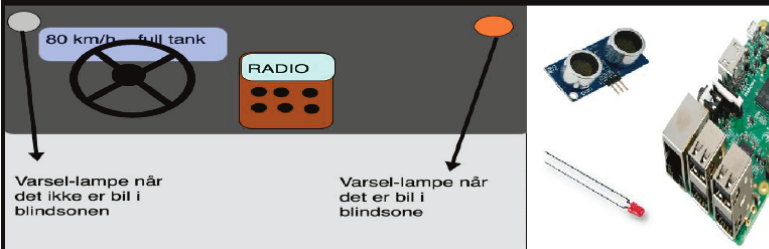
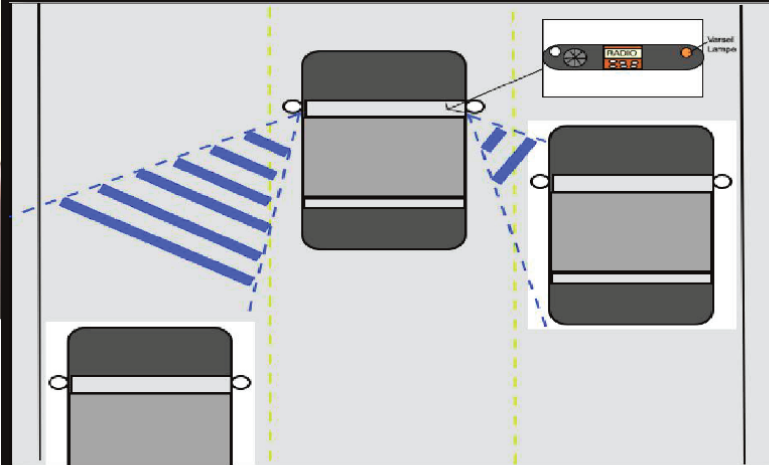


THE PRODUCT

Our solution is developed on a raspberry pi v2, and use module to send the user push notifications received direct their cell phone. The device is easily turned on and off with a switch on the device.

Blind Spot Sensor

Jonas Dammen, Sigrid Bratsberg, Anniken Holst, Marius Lie Winger, Robin Andersen, Petter Aas, Håkon Fredrik Ruud 5th February, 2016



The problem

The car driver needs to check his blind spot when executing a change of lane, to make sure there are no vehicles in the other lane. The driver has to turn around to look for cars. This means the drivers eyes are not on the road for a moment, which may have impact on the traffic security. It is a problem for every driver, but it may be an even bigger problem for inexperienced and older drivers.

Solution

To solve the problem, our idea is to place a distance measuring device on each side of the car, as shown in the illustration. These are supposed to detect if there are an object in the cars blind spot, and send a signal to the driver if this is the case. The devices measures the distance to the cars around, and check if the value of the distance is under a critical value.

How

A good way to notify the driver is to have a light that turns red when the sensor detects something. This has to be placed easily visible to the driver. The system will need a Raspberry pi, two LED-diodes and distance measuring devices. With advanced algorithms, this will be a system that helps drivers take the right decisions on the road.

SwiitHiit

Warm car from afar

With SwiitHiit you will be able to warm up your car with your cell phone. Through the SwiitHiit app you can see the temperature inside your car and it will tell you when to turn the parking heater on to achieve your wanted temperature. If you are a creature of habit you could love the opportunity to schedule the SwiitHiit parking heater to turn on at the desired time your selected days of the week. It is easy, it is fast, and you will never drive cold again.

SwiitHiit – warm car from afar.



valdsen (Chief Executive Officer), Lars Lervik (Enterprise Architect), Harald Blehr (Scrum Master), Mikael Kvalvåg (Scrum Master), n Goudoever (Senior Test Engineer), Andrea Engøy (Graphic Design Leader), Erlend Rydbukt (Developer), Jørgen Sund (Developer)

FDT4140 Software Engineering course, spring 2016

Concept poster

Teaching team: Pekka Abrahamsson, Anh Nguyen Duc, Juhani Henrik Risku
Coaches: Emilie Krutnes Engen, Anniken Øst Dahl, Sarah Utvedt, Tibor Vukovic,
Hans-Olav Hessen, Hans Kristian Henriksen, Daniel Solle Hansen



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Book from 2016

<http://bit.ly/2j8FuxZ>



QUESTIONS?