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Case Study

User Centred System and Icons for Mission Trainer

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Problem:

The system had an old approach towards the user centric design model and wasn't updated as per modern needs, which can increase the efficiency to use the system on task completion and avoiding mis-clicks.
The instructor would interact with the simulator in a map-centric way. Many tools/functions were made available directly in the map. Most of the functions were represented by icons that should be recognizable and distinguishable. A large part of the interaction was done using context menus in the form of radial menus using only a mouse and adaptable for a joystick.

Roles:

User Experience Designer, User Interface Researcher.

Time:

15 weeks

Solution:

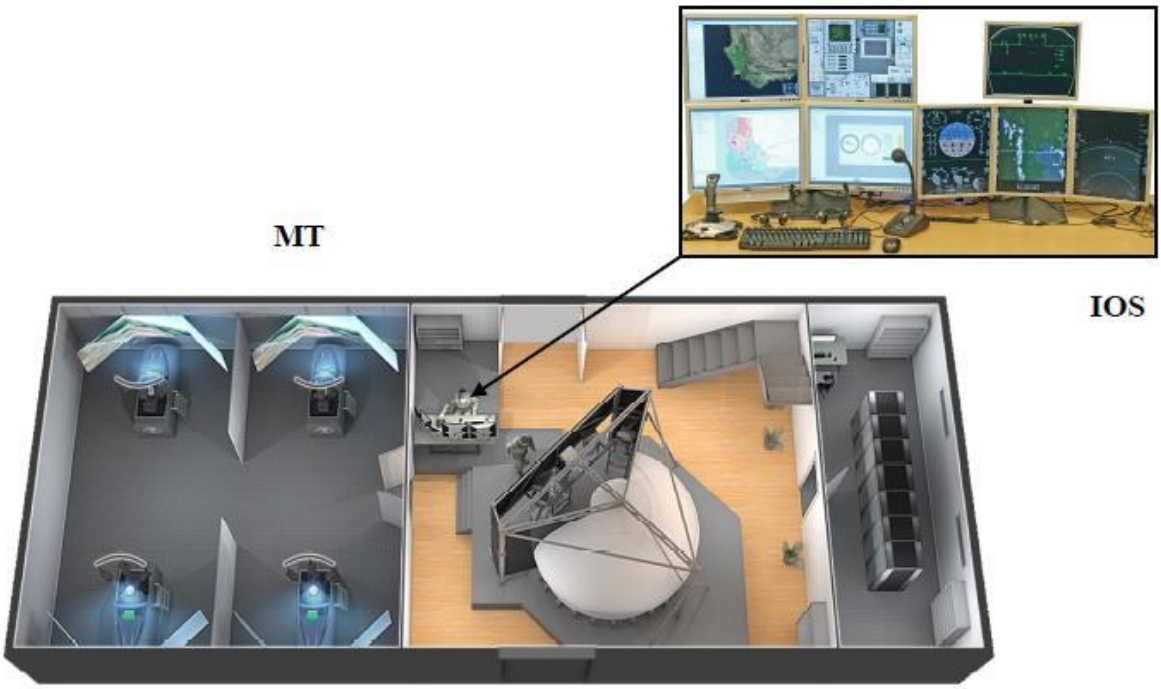
A new UCS was created according to the new standards, also enhancing UX by intuitive flow, ease of information access and appropriate system feedback.
Most of the Prime features were kept consistent and easy to relate to the actions performed.

Activities:

Interview, Paper Prototyping, and Lo-Fi Prototyping.

Process:

The current system.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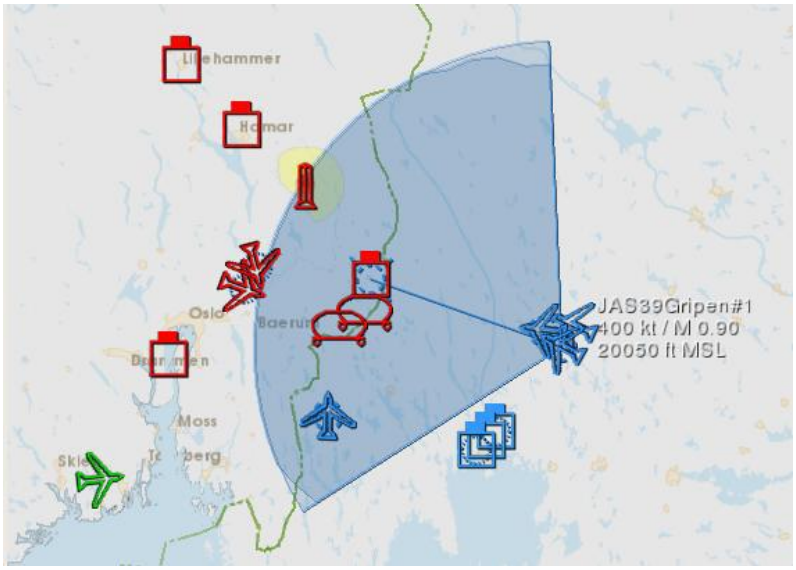
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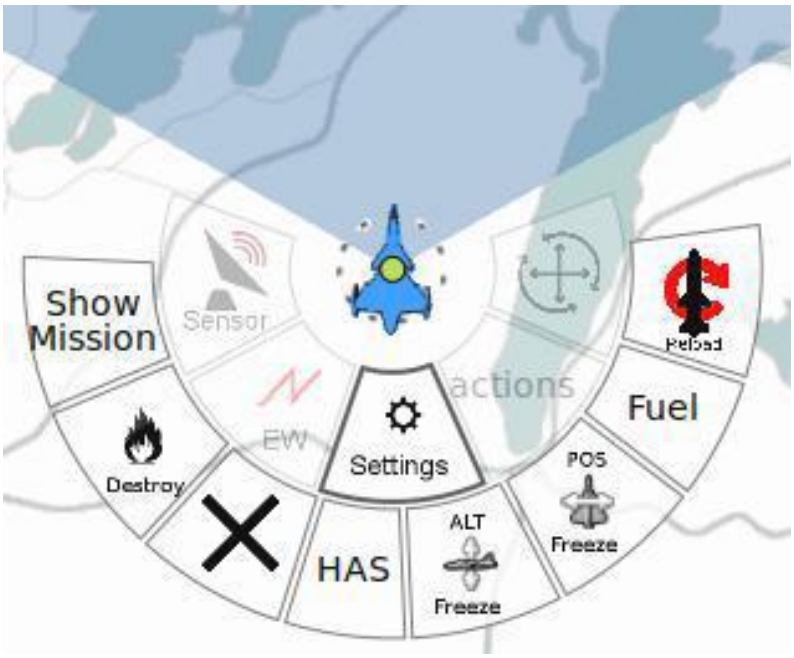


Ideation

Designing for the elite pilots of försvarsmakten sounded like a challenge.
We wanted to keep the design as close to their everyday action-packed life with controls embedded in their muscle memory and mental models.
Our initial research showed that the pilots struggled with lot of mis-clicks and found the screen very clustered while engaged in action.
So, considering all the factors, the overall objective of our design is to help instructors pilots perform their training exercises efficiently and effectively.

Tools Used:

- Interview
- Comparative Analysis

Requirements gathering and Research

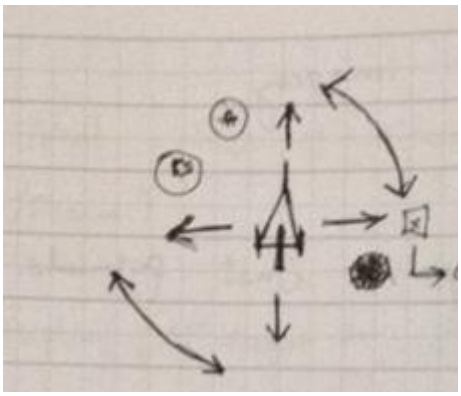
- Stakeholder interviews,
- Requirement's elicitation,
- Research the old system.

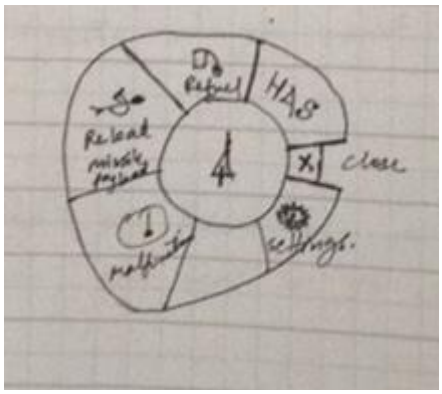
Define & Execute

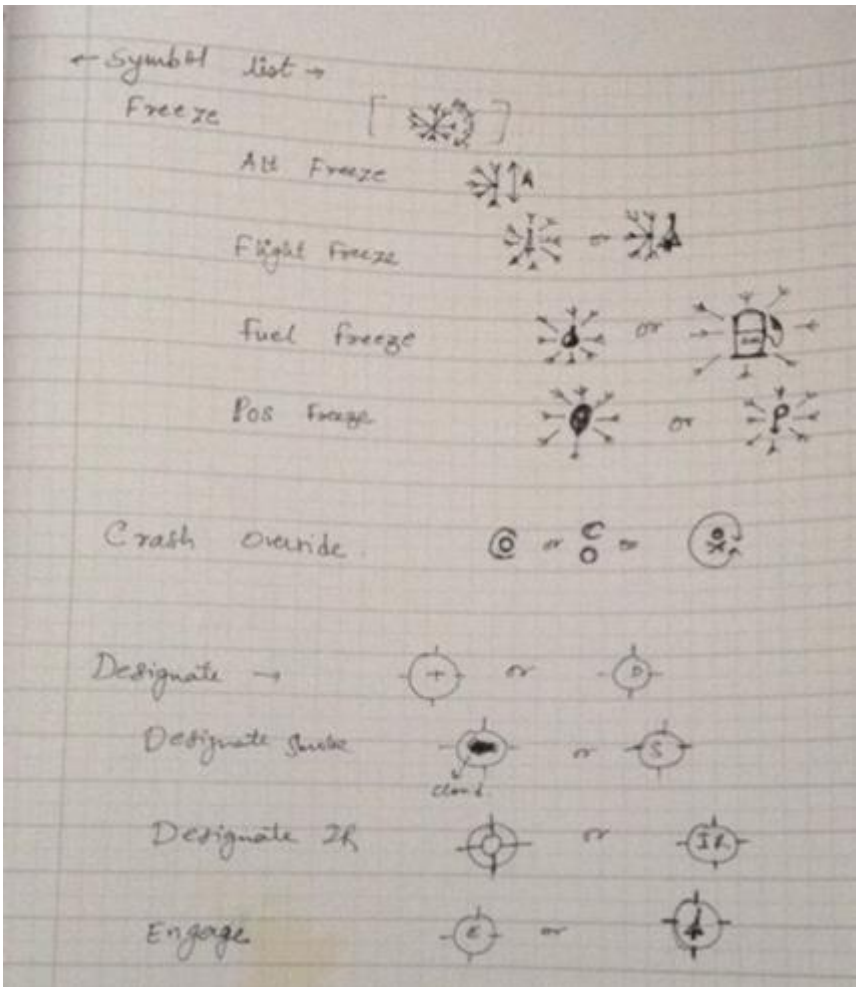
- Information Structure.
- Pen-Paper and Lo-Fi Prototype.
- Review and comment UCS
- Design actions and corresponding feedback: Select, Navigate, Success, Failure, Undo, and Revert 0.

Prototypes:

Tools Used: Pen-Paper, Draw



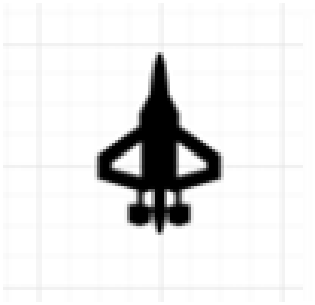


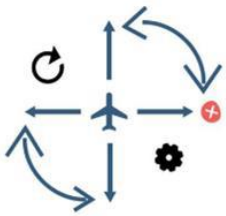


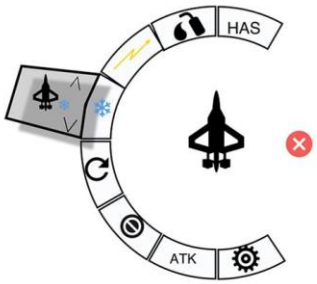
Creating Ideas in reality. Pen-Paper Prototype for new icons and navigation system for mission trainer.

Lo-Fi Prototypes:

Tools Used: MS-Paint







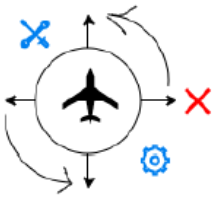
Design highlights

The UI design was made neutral. With the primary focus being on functionality and efficiency of the system co-dependant of instructor pilot.

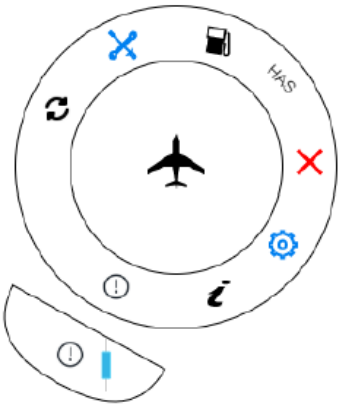
UI customization in the future was also made possible. The system will support user mental models and follow an easy learning curve.

The designed icons are consistent and among same meaning as their actions depict.

zero state



Active HAS function
(single left click on Jet vector will open the sides)



radial pie menu with scroll for later shells