

# From vessel to office

## Designing work transformation

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# Designing work transformation

## Understand current work

- Reality is rich
- Pragmatic & psychological aspects

## Understand future opportunities

- Stakeholders' assumptions

Method: Service experience design



# Remote pilotage system as a service for pilots

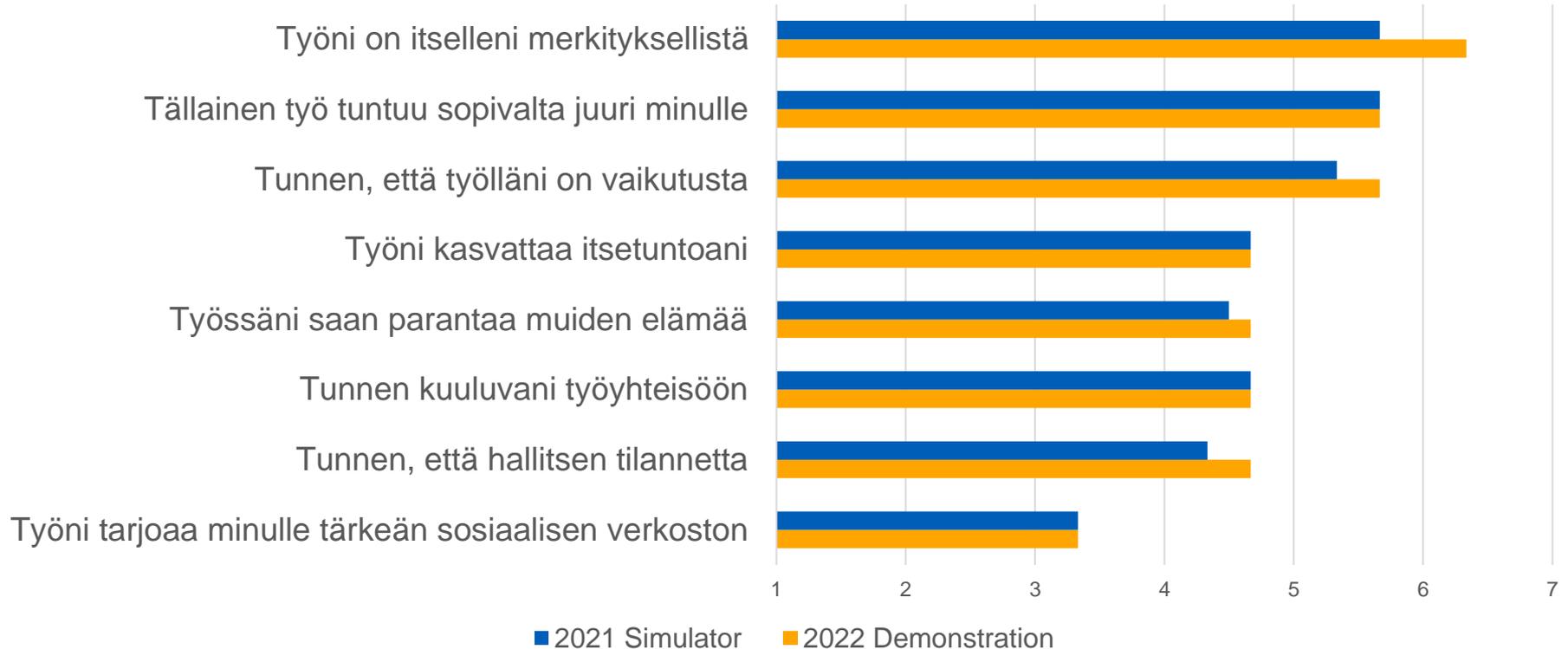
**At this point of development, technology testing gets the priority**

**One day, new tools should**

- serve the employee to excel at work, optimize workflow
- cover all services needed from the first contact to reporting
- support meaningful remote work

# Meaning of work

Indicative feedback from 3 pilots only



# From vessel to office – Positive

## **Saving time**

No boat transportation

## **Improving pilot safety**

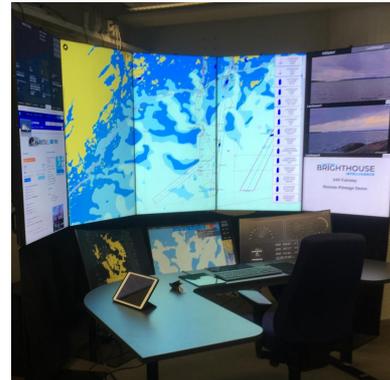
No dangerous climbing to ship

## **Fitness not a requirement**

Remote work with a broken leg ok

## **Upskilling**

Pioneer work can be exciting



# From vessel to office – Negative

## Decrease of social contacts

Thin contact to crew

## Safety of vessels

Pilot is safe, how about the others

## New tools, new challenges

The best solutions are not here yet

Increased cognitive load



# From vessel to office – Mix new with old

## Working hours

Pilots prefer the current rhythm:  
full 1 week on duty, 1 week off

## Remote control centre location

If old rhythm, no matter where:  
Sleeping 1 week in the centre



*The Harmaja lighthouse is an active pilot station with 10 pilots, 10 boat men and a cook.*

<https://johnnurmisenisaatio.fi/en/pilots-save-the-baltic-sea-every-day-clean-baltic-sea-cruise-to-harmaja-and-suomenlinna/>

# The Ship Sense

- **The current trend is that pilots physically navigate the vessel (approx. 50 – 90% procent of times depending on the fairway, vessel type and captain)**
  - From pilot station to harbour limit after which the captain takes over
  - From pilot station all the way to mooring
- **It has become a habit, reasoning in general**
  - Company policies
  - The lack of experience amongs captains to maneuver their vessel in Finnish waters
  - Challenging conditions e.g. Ice navigation, hard wind, new mooring position etc.
  - To avoid tug costs

**Due to this, the pilots have gained a wide experience base of different type of vessel behavior, navigation and maneuvering in various conditions which supports decision making also in situations when they are not onboard.**

- Future considerations: How to maintain this expertise also in the era of remote piloting?

# Some Key Points

- **Work ergonomics**
  - It is more tiring to monitor and operate from a remote operation center than being on the vessel
    - Smart presentation of information to support SA and decision making (right information available at the right time, easily and clearly)
    - Work schedules, breaks – general coordination of work
    - Work station ergonomics, location of critical information sources etc.
- **It seems that during remote operations, the remote pilot tends to be more careful to ensure safety than onboard (e.g. bigger CPA)**
  - Technological development and experience creates trust in the system
  - Experience in the remote piloting operations and successful operations increase efficiency still maintaining safety
  - Or maybe this is just a good thing?