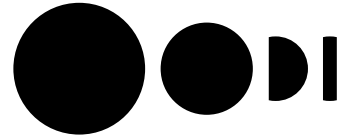


# Robots at Oodi

Innovative projects at Central Library Oodi

**Riia Ollanketo**  
Special Librarian  
[riia.ollanketo@hel.fi](mailto:riia.ollanketo@hel.fi)





**Not just a library.  
Your interface to everything.**

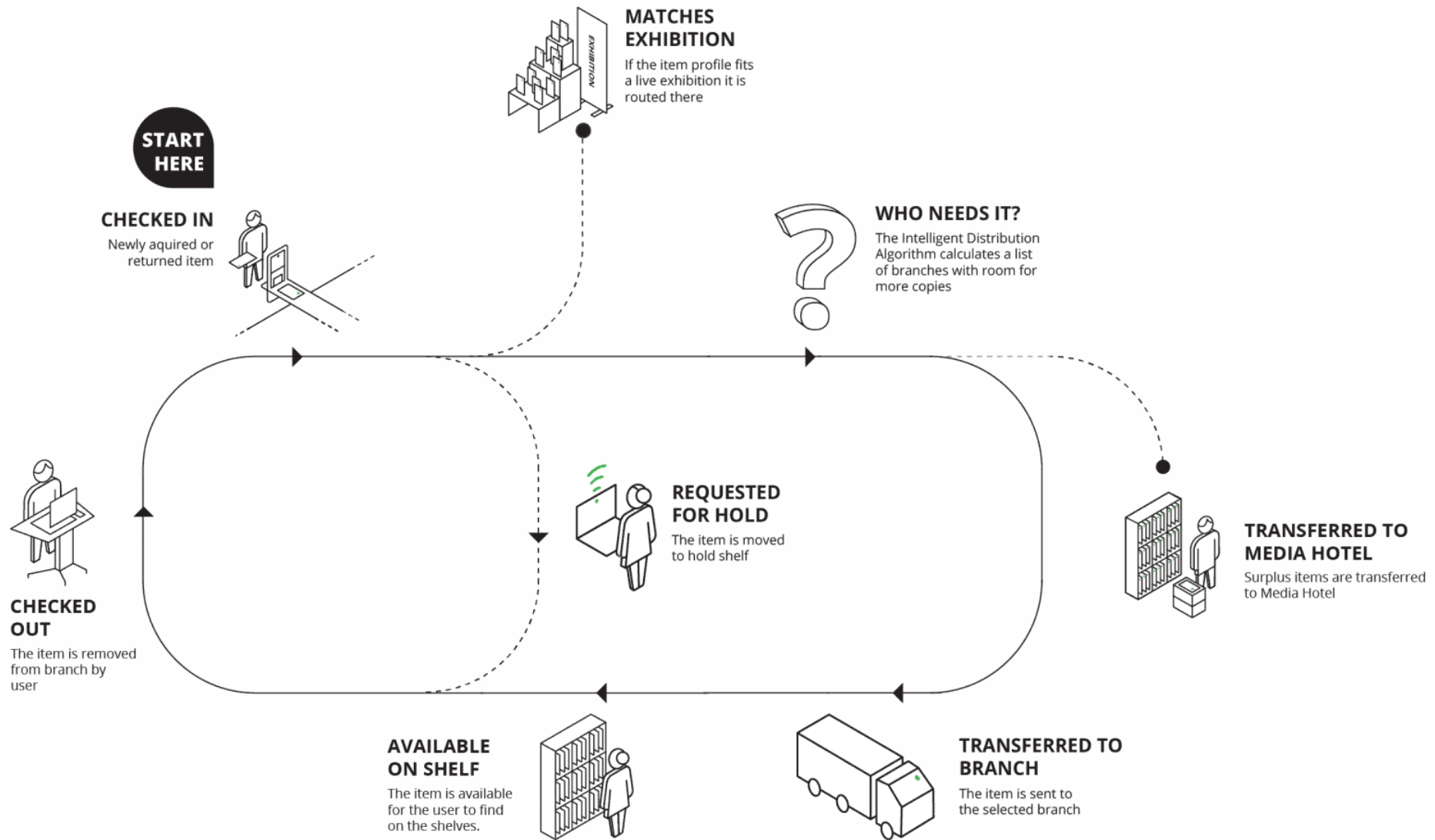
# Helsinki Central Library Oodi

- Opened December 2018
- Design: ALA Architects Ltd.
- Size: 10 000 m<sup>2</sup>
- 7000 - 8000 visitors per day, over 2 mil. visitors every year
- Oodi is a branch library of Helsinki City Library and part of Helsinki Metropolitan Area library coalition HELMET

# IMMS (Lyngsoe Systems)

## Intelligent Material Management System

- Helsinki City Library has a shared collection
  - Intelligent floating collection
  - Intelligent inventory
- Logistic instrument - where items are
- Libraries can themselves choose, what kind of items they want
- With easy access reports, we get statistics on a daily basis



# Intelligent Material Management System aka IMMS

<https://lyngsoesystems.com/intelligent-material-management-system/>

# IMMS at Oodi

- At Oodi every shelf is one metre long
  - Easy to count
- Oodi has 50000-90000 items on shelves
- min 45 cm items on shelves / max 75-95 cm
- Oodi is the most popular place to pick up reservations
  - 15-20 boxes every weekday
- Exhibition order
  - Easy way to order items for the exhibitions

# What we have in Oodi?

- IMMS – Intelligent Material Management System
  - How our shelves get books
- MIR – Robots
  - Tireless logistic robots
- UR10 – robot hands
  - Arnold Schwarzeneggers of Oodi

# Oodi's logistics solutions

- [Innovation partnership](#) was used to find best solutions for Oodi's needs
- Finnish company called Mikro-Väylä Oy was selected as a partner in fall 2017
- The solutions covered the entire logistical process from returning items to staff shelving the items
- Reduces staff's physical strain, more ergonomic work environment



# Statistics

- Average of
  - 7 000 visitors per day
  - 1300 -1500 items returns per day
  - 1500 loans per day
- Reservations about 10 000 per month
- On top of this, about 20-50 box of items come from other branch libraries and sorted at Oodi everyday



# Oodi's logistics consist of:

- Sorting machine with three customer returning points ( [Mikro-Väylä](#) )
- IMMS ([Lyngsoe](#))
- Three MIR 200 mobile robots ([Mobile Industrial Robots](#) / Mikro-Väylä)
- Two UR10 robot hands ( [Universal Robots](#) / Mikro-Väylä)
- Six loaning machines (Mikro-Väylä)

IMMS system is used throughout Helsinki City Library network, which has a total of 38 libraries. It creates a foundation for a floating collection.



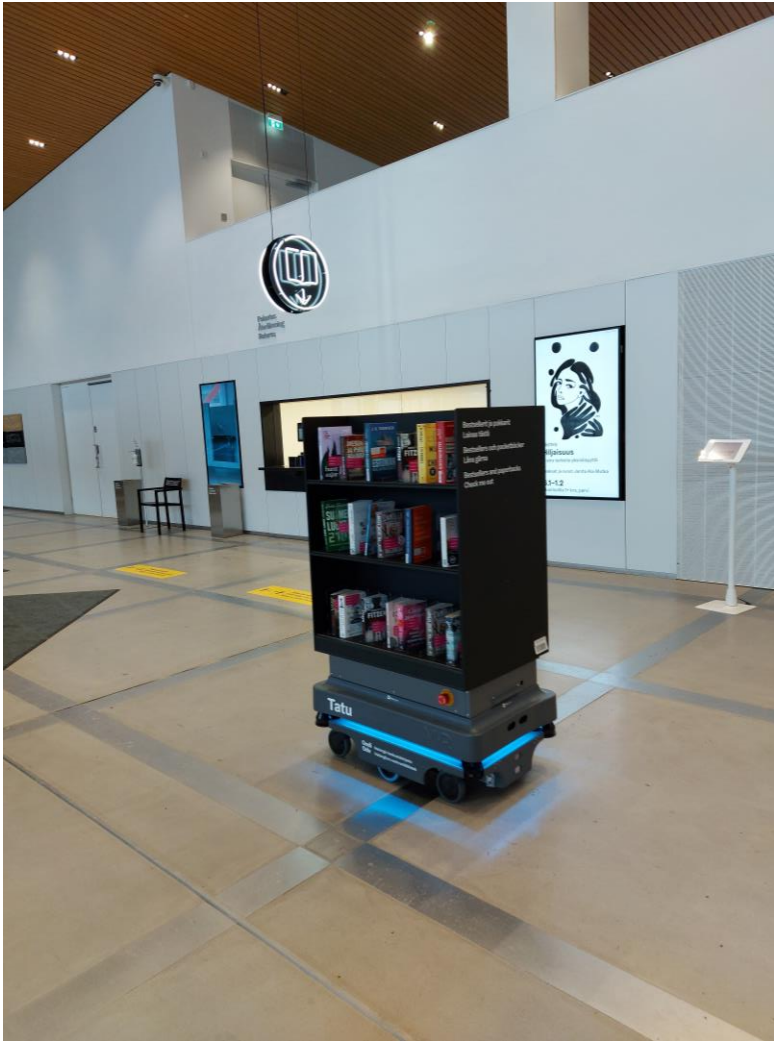
# Mobile robots Patu, Tatu ja Veera

The names came from a competition open to the public. They are characters of famous children's picture book written by Aino Havukainen and Sami Toivonen.

## Work tasks spring 2025

- Veera transports boxes of books from the basement to the 3rd floor.
- Patu is replacing full boxes in the basement sorting machine.
- Tatu transports the book shelf from the basement to the first floor.





Tatu



Patu



Veera

# UR10 Robot hands

- Sorting the special collections of quick loans on its own shelf.
- The system consists of two robot hands, a camera system, and a turntable which recognizes and turns the items the right way for the hands.
- Originally the hands were meant to sort the customer reservations.
  - Due to IMMS system this was no longer possible.





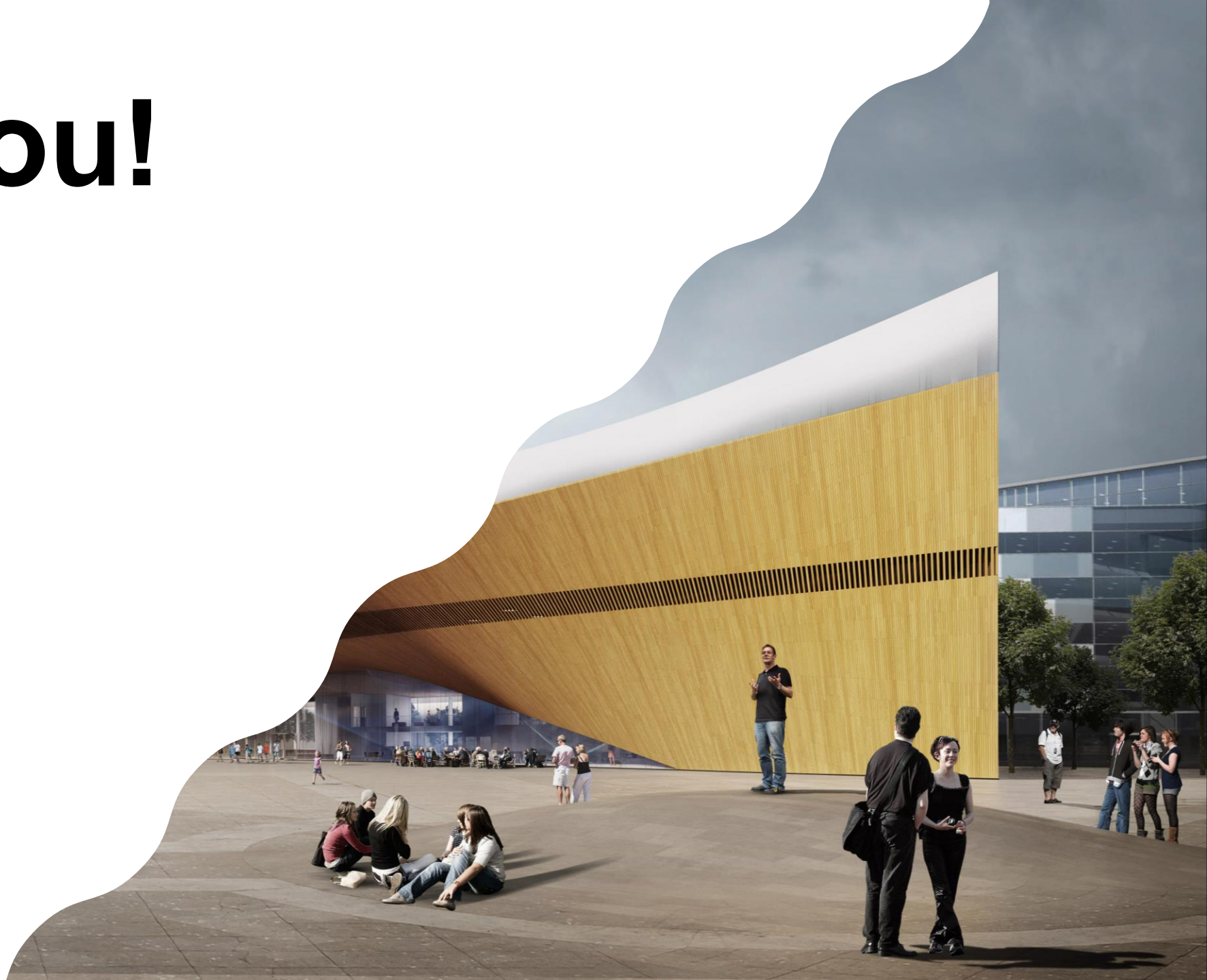
Co-operation projects in our own events and also with [Aalto University](#) and [Futurice](#).



It's not always a smooth ride :)

# Thank You!

Riia Ollanketo  
Special Librarian  
[riia.ollanketo@hel.fi](mailto:riia.ollanketo@hel.fi)



# Nähdään Oodissa!

See you at Oodi!