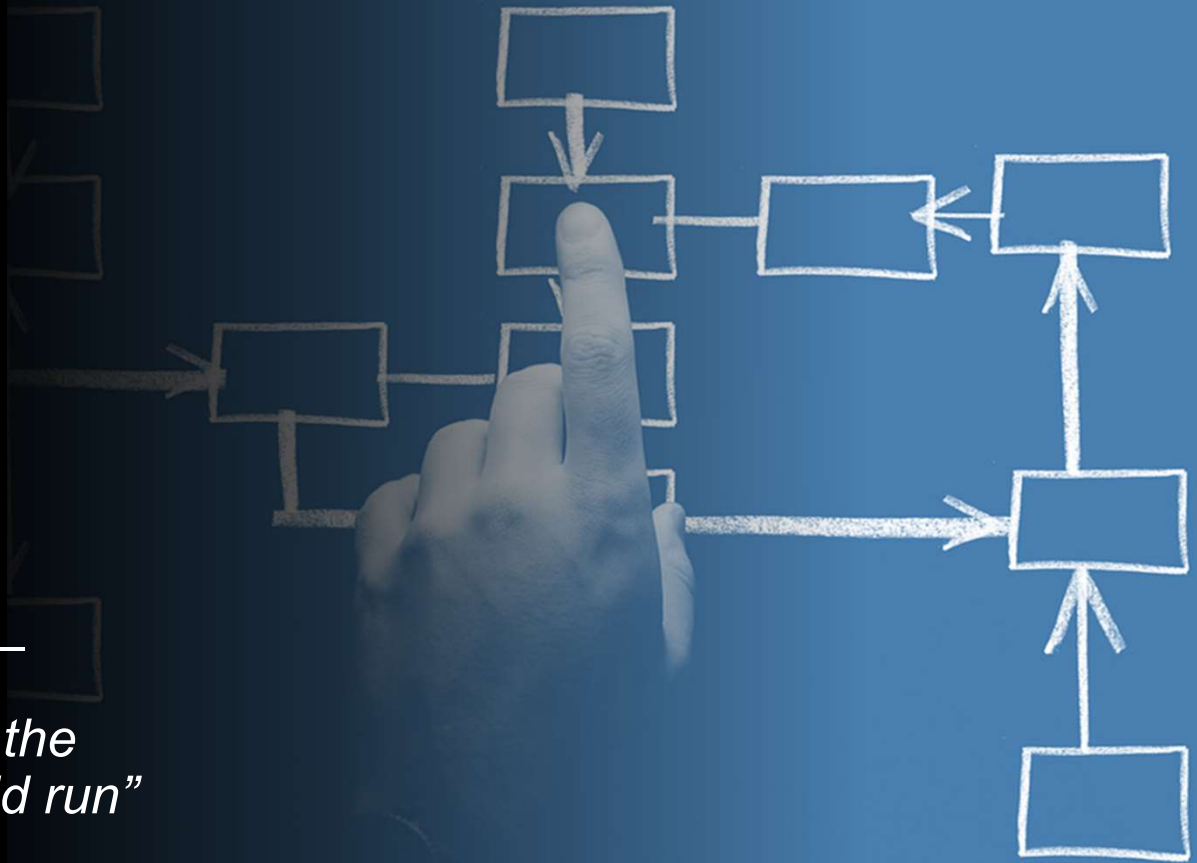




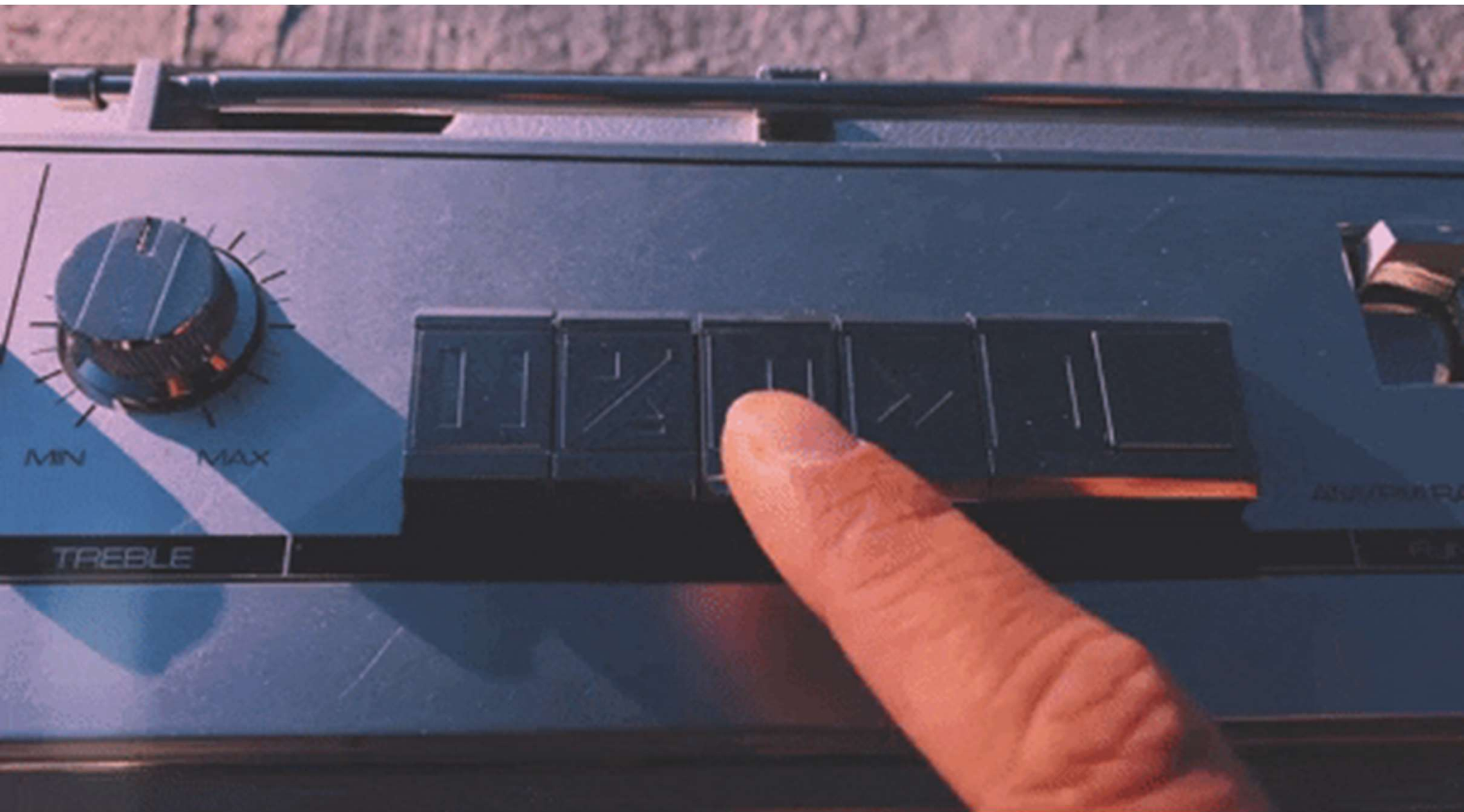
Operations
Management
MLI21C617

“Operations may not run the world, but it makes the world run”

Lecturer: Misa Bakajic



Spring 2024



Recap

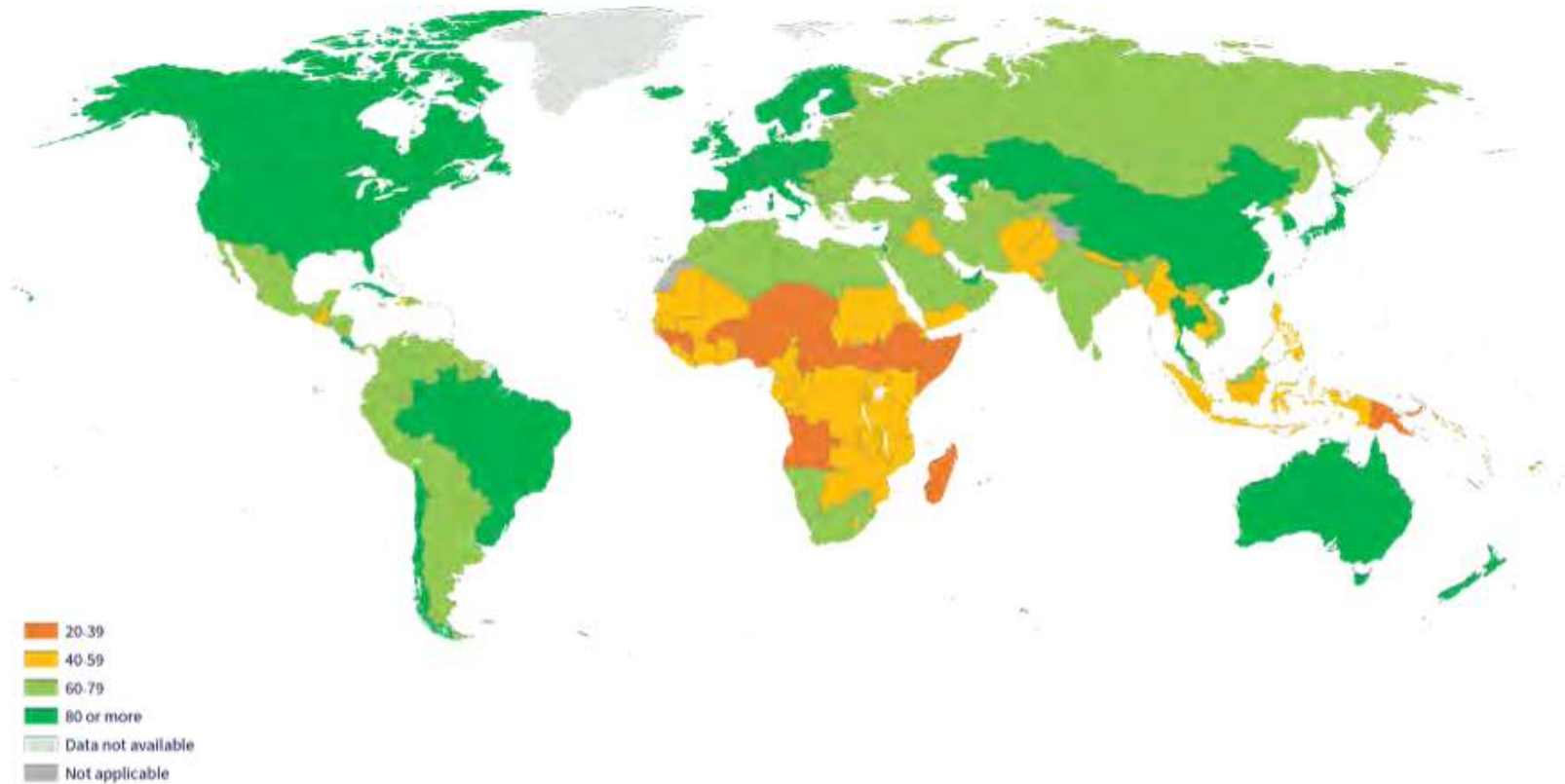
1. Internal and external effects impact performance objectives
2. Healthcare operations (like others) are impacted by volumes and variability
3. Little's Law can be used to understand workflow and staffing needs
4. Service innovation can be used to improve operations
5. Service quality standardization is important service providers

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LECTURE 5 Improving Healthcare Operations

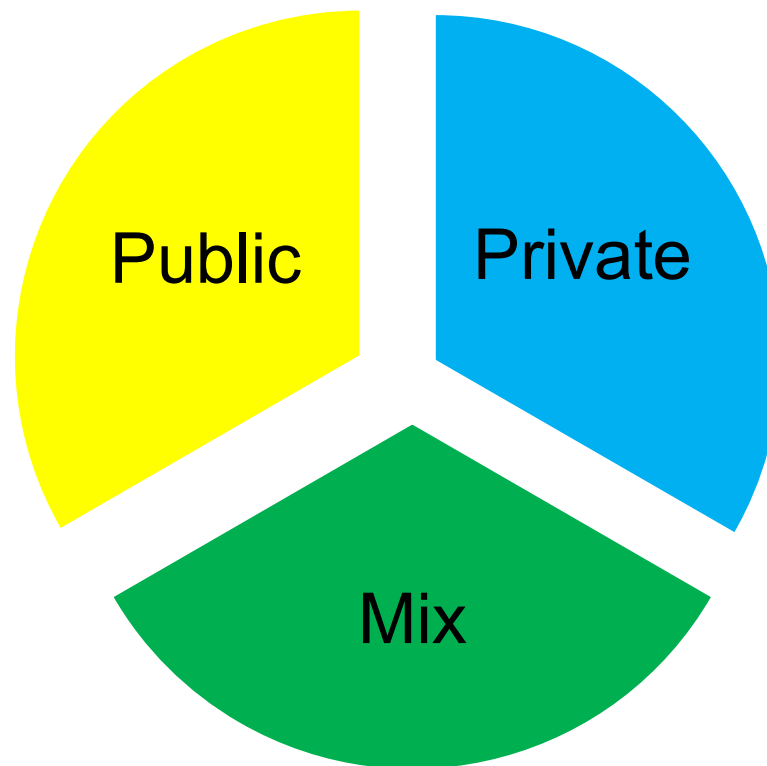
A!

Universal Healthcare Coverage



WTO (2023) Tracking universal health coverage2023 global monitoring report. WTO and World Bank Group. Found at: <https://iris.who.int/bitstream/handle/10665/374059/9789240080379-eng.pdf?sequence=1>

Finnish healthcare services



Health care funding in Finland

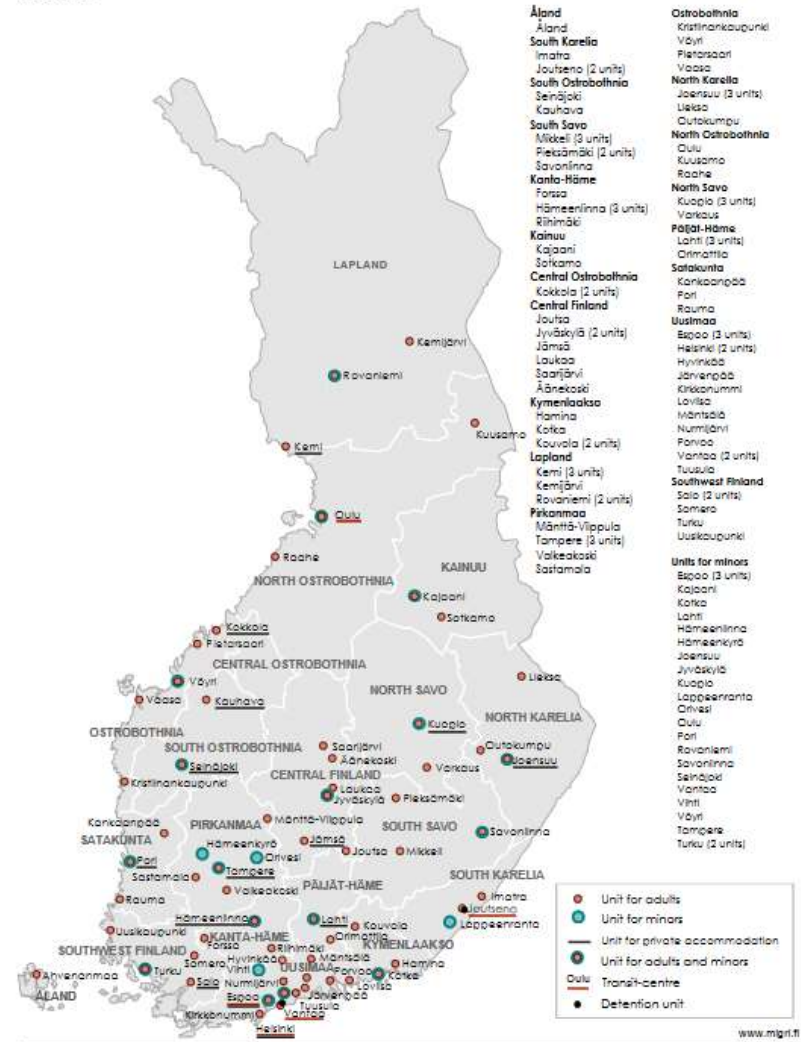


Reception center function

- Reception centers provide basic living services to displaced persons coming from abroad (housing, food, healthcare, etc.)
- Clients may spend months at the center waiting to be processed:
 - Clients who get right to stay are given additional integration services
 - Clients that do not stay in Finland are relocated according to their situation

RECEPTION UNITS

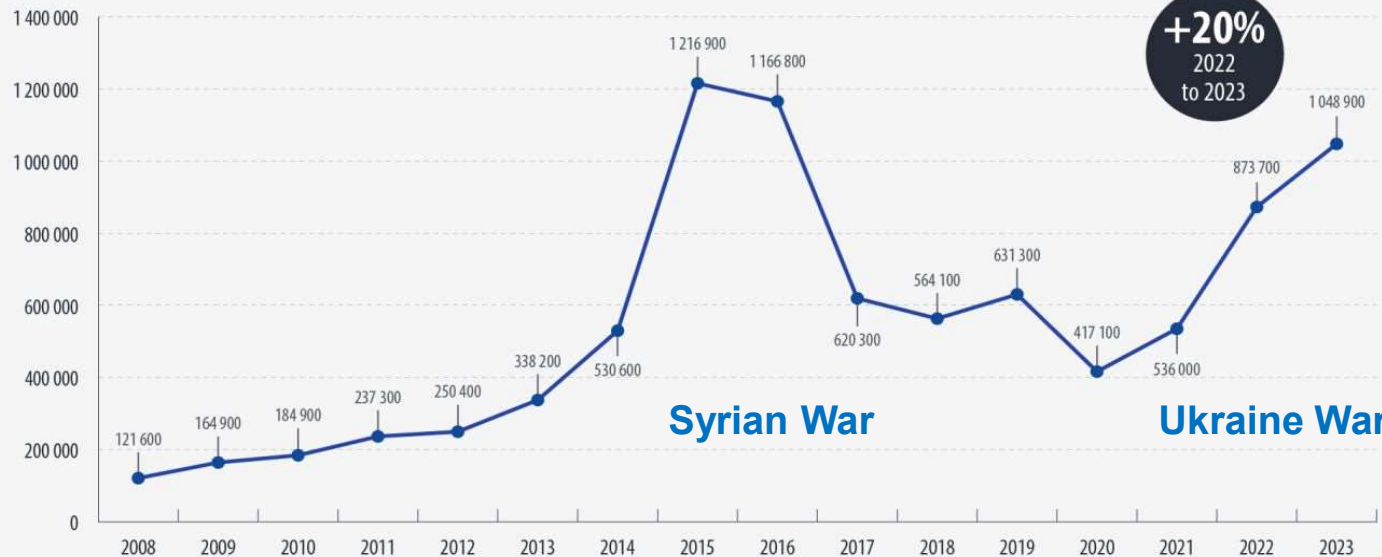
86 units for adults, 24 units for minors and 2 detention units
22.3.2024



Asylum seekers – volumes and variability

First-time asylum applicants in EU countries

(2008-2023)



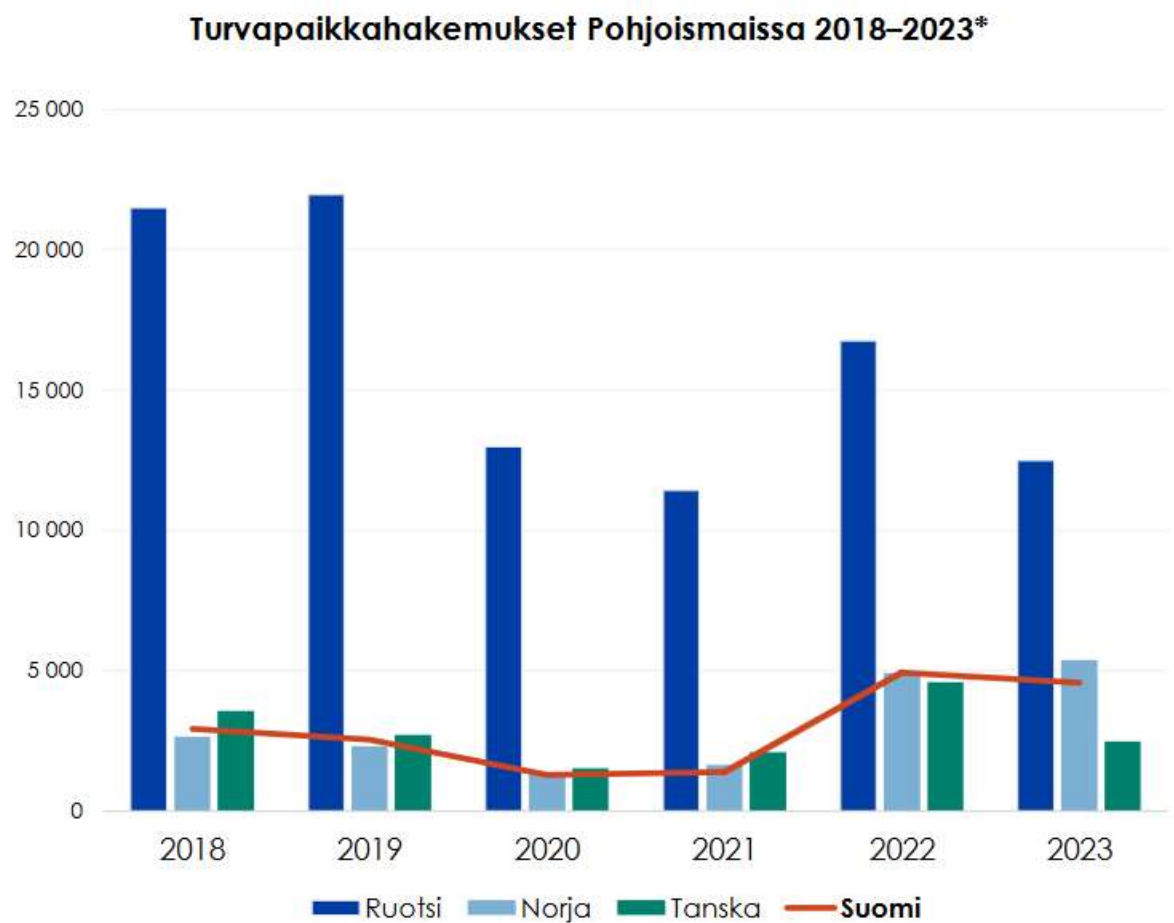
Notes: 2008-2013 sum of available data. Numbers are rounded to the nearest 100.

eurostat

AI School of Business

- Number of asylum seekers increases during periods of war
- Other socioeconomic trends also play a role
- In 2023 top citizenships of asylum seekers in the EU were: Syrian, Afghan, Turk, Venezuelan and Colombian

Asylum applications in Nordics



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Customer or Client?

Services



Online service Enter Finland

Book an appointment at a service point

Customer guidance services

Chatbot Kamu

Frequently Asked Questions

Immigration advice

Instructions

Brochures and publications

Customer guidance services of the Finnish Immigration Service

You can contact us to ask about residence permits, citizenship matters or other permit matters handled by the Finnish Immigration Service, about booking an appointment or about our online services.

Before you contact us

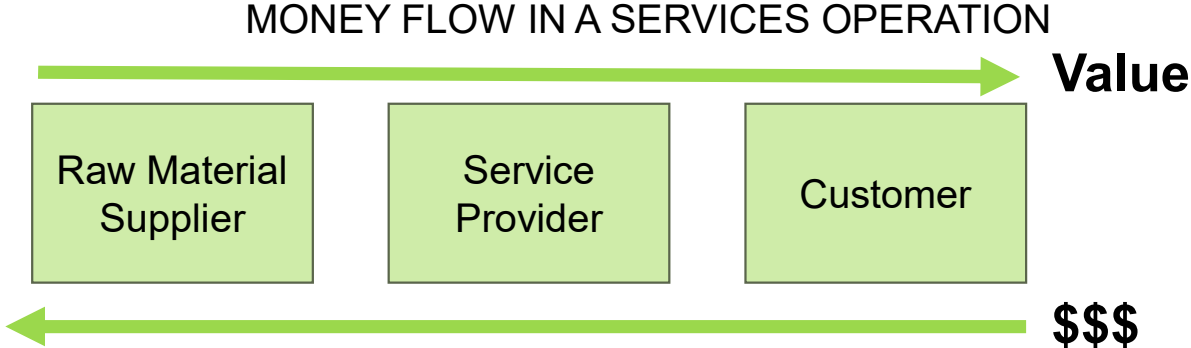
1. Frequently Asked Questions
 - Before you contact us, please read the Migri.fi website carefully. See the [Frequently Asked Questions](#) page.
 - You can follow the processing of your application in Enter Finland if you have applied for a permit or citizenship online. In most cases, you can follow the processing of your application also with the help of [chatbot Kamu](#) and [automated messages](#).



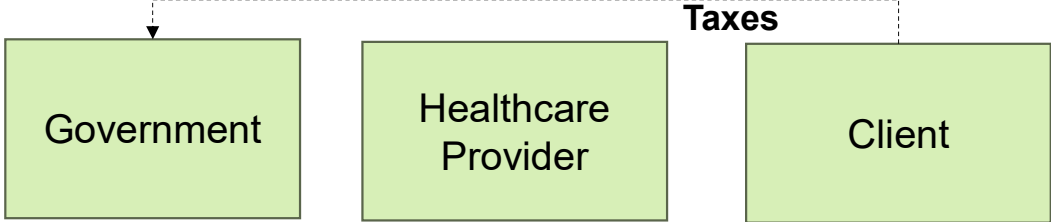
Hi! How can I help you?

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Source of value and power

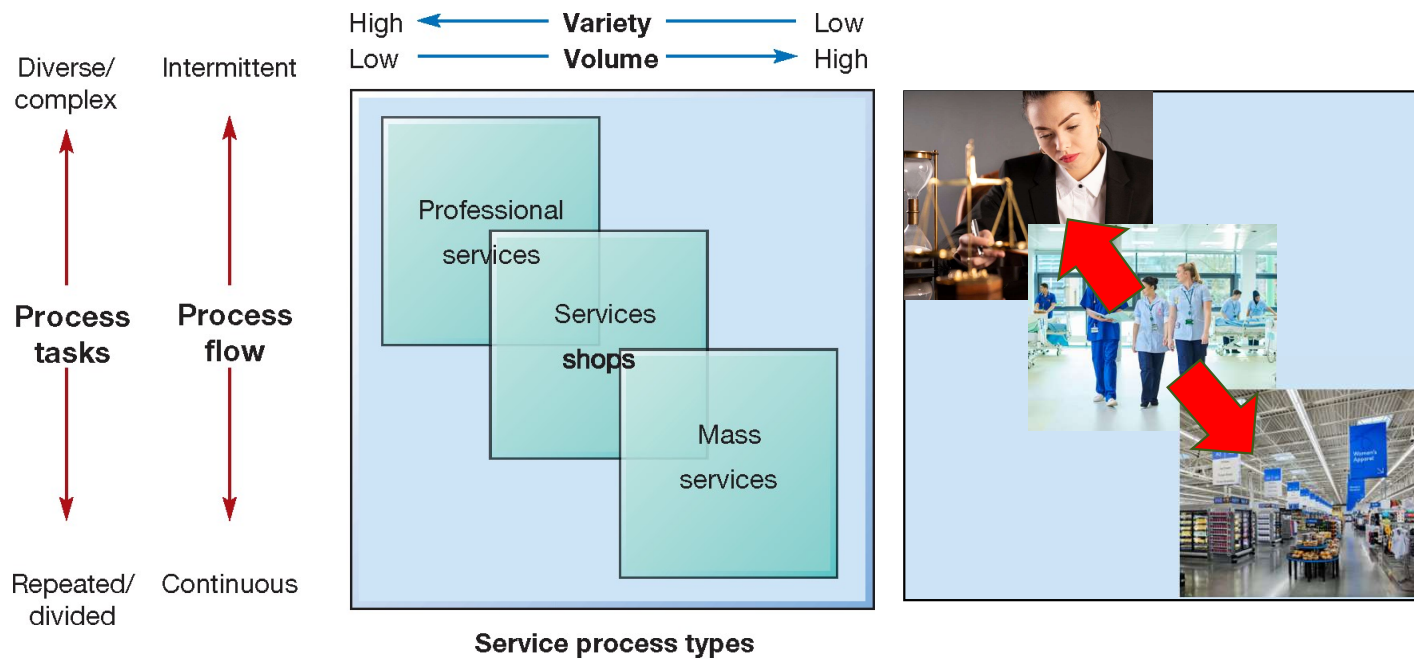


MONEY FLOW IN A GOVERNMENT FUNDED HEALTHCARE



A!

Product-process matrix



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Figure 6.4

KOTOKUNTA

Mari Vänttinen

Healthcare Manager, MSc, RN

12.4.2024

History

- Roots in refugee crisis in 2015 (Kotouma)
 - Underage unit of Kivistö
 - 2 reception centers (Vääksy & Pyhtää)
- In 2016 started integration services for municipalities (Kotokunta)
- Kotouma and Kotokunta integrated in 2021

Kotokunta today

- provides reception services for almost 9000 customers (refugees, asylum seekers and people who are granted temporary protection)
- 27 different locality by June 2024
- 5 underage units for unaccompanied minors
- employs 500 reception service professionals



Juhani Pälve, CEO (MSc Econ.)



Janne Autio, Chief Operating Officer



Jari Lampinen, Chief of Finance and Administration



Matias Pälve, law, HR (Master of Laws, BSc Econ.)



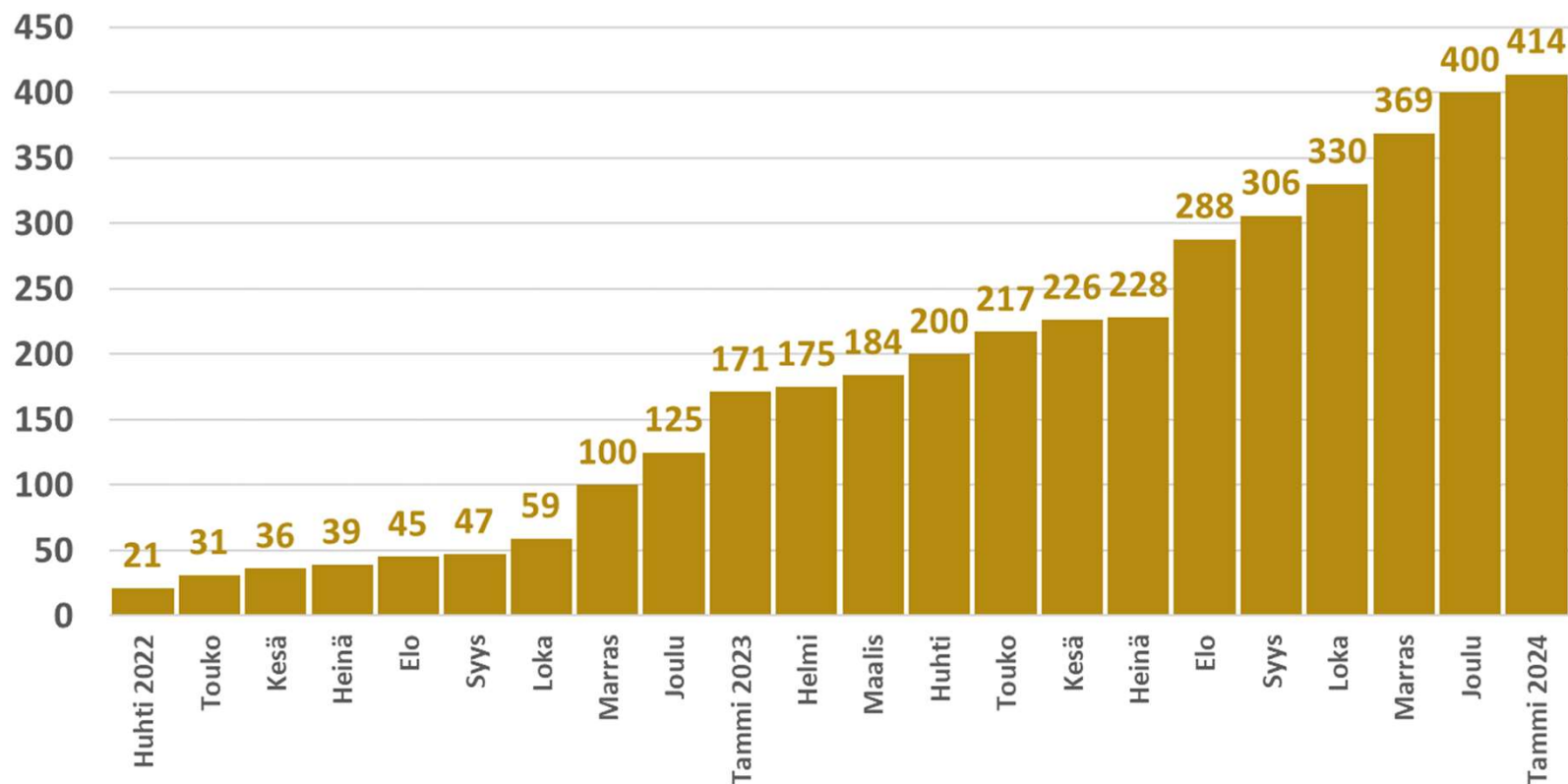
Lari Christensen, Member of the board (MSc Econ.)

Tendering process by Finnish Immigration Service in 2023-2024

- Each operator makes a bid for providing the service
 - Finnish Immigration Service makes new contracts with the winners
 - The transfer of a business: business with all its functions transfers from the old operator to the new one
- The transfer of a business means the transfer of a company, shop, association or foundation or their functional part to another employer, if the business to be transferred, carried out as a main or secondary activity, or its part remains the same or similar after the transfer

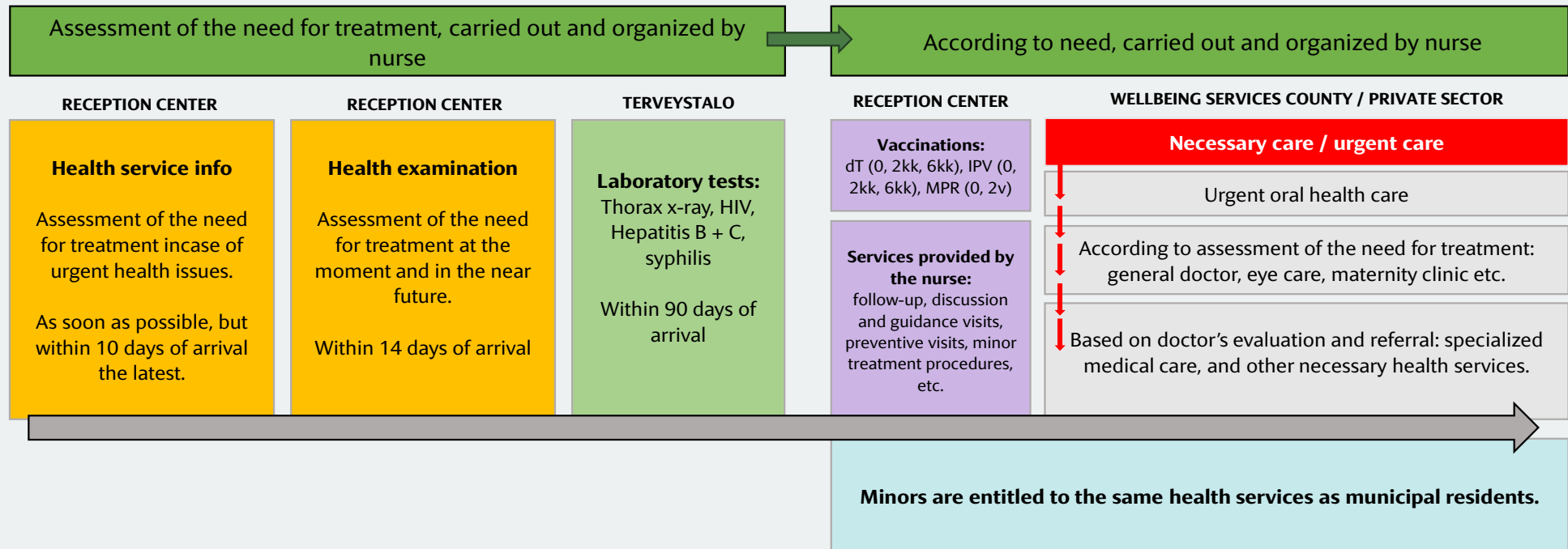
Development of the number of employees

Henkilöstömäärän kehitys



Health services in reception center

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New and unique role in the field of the reception services in Finland.

- the link between directors and nurses of the reception centers
- consultant of the reception center's health care
- trains and instructs, helps with the induction process of the new nurses and directors
- coordinates health care resources
- develops and unifies operating models
- the support in anything related to health care

Case: Health examinations for 1000 new clients

The reception center offers must offer a health examinations to all its clients, though participation is voluntary. The immigration services office protocol is that new clients have to be checked within two weeks of arrival if the opt in. When the war started in Ukraine, reception centers suddenly got lot of new clients about 1000 in total which created operational challenges. These clients come in addition to other those arriving from countries other than Ukraine which has thankfully decreased in recent months.

In this case we will try and do the following:

- calculate how many nurses are needed to handle the new volumes
- understand how the workflow can be improved using conventional operations management principles
- think of innovative solutions for solving the problem
- explore how service quality can be standardized across reception centers

Health examinations for 1000 new clients

The existing health examination process

$$\text{Throughput (Th)} = \text{Work In Process (WIP)} \times \text{Cycle Time (CT)}$$

Each health examination requires 1 hour of a nurse's time. Before an examination, a client booking needs to be done via telephone, a process that takes around 0.5 hours with the help of an interpreter. This scheduling process is integral to the health check process. The centers usually maintain a nurse-client ratio of 1:150 we need to know if the current numbers are sufficient and how many more nurses we need. Assume, in a workday, a nurse has 7.5 hours of duty, and must see each client within ten working days of first contact. Based on Little's Law, calculate:

1. Total average time a client spends in the process, from making the scheduling call to end of the health examination.

Total average time a client spends in the entire process is 1.5 hours (0.5 for the booking + 1 hour for examination)

2. The average number of health examinations a nurse can complete in a day.

One nurse has 7.5 hours of duty time per day, a nurse can complete an average of $7.5 / 1.5 = 5$ client interactions (including scheduling and examination) per day.

3. Given the capacity of the nurses as calculated in (2), determine how many nurses the health center needs to serve 1000 clients in a ten-day period (two weeks time as suggested by the immigration services).

A. To do 1000 clients within 10 days we first determine how many total client interactions need to be done in a day:
total clients / total days = $1000 / 10 = 100$ client interactions per day

B. As each nurse can do 5 client interactions per day, divide the total per day by individual nurse capacity:
 $100 \text{ interactions per day} / 5 \text{ interactions per nurse per day} = 20$ nurses.

Health examinations for 1000 new clients

How can we provide health examination for 1000 new clients as fast as possible? Aside from hiring more nurses which will take time.

Should clients be picked to the health examination in a certain order to speed up the health checks? In what order and how? **Prioritize people based on common attributes to reduce variability (e.g. country of origin, age, gender, etc.)**

What are some innovative and out of the box solutions solutions?

Questionnaire, dedicate a nurse to handle calls, combine booking and health evaluation, use chat, offer instructional videos in different languages, etc.

New units, more staff and more clients

In Kotokunta, our services, operating models and the quality of services should be the same in every reception center. Kotokunta operates about 30 reception centers across Finland how can they ensure the quality of services is the same across their operations.

How can we ensure that Kotokunta's health care services are based on the same assessment of the need for treatment?

The concept of quality here can be viewed from perspective of clients or the service provider (Kotokunta). From client perspective we can develop a customer questionnaire to assess quality over time. From service provider perspective we could use a modified version of the score card approach (p.60), we establish which processes are needed and evaluate how well they are executed. This can be done across different units.

What kind of challenges there may appear, and what can be done to overcome them?

We need to define what we mean by quality (e.g. speed of service, friendliness, accuracy etc.) By standardizing what we mean by quality we can develop metrics to follow quality over time. In an operational sense quality of service could mean a standardized approach across Kotokunta services which is linked to ability of firm to assess the profitability of its operations.

Self-monitoring at Kotokunta

- Tool for
- 1) self-monitoring our work
 - 2) monitoring the quality of the provided services

PFS-info annettu	PFS-kortti annettu	Ohjaajan/asumisen alkuinfo kutsu	Ohjaajan/asumisen alkuinfo	Kierrätysohje annettu	Henkilötietojen käsittely vokissa - Informointiasiakirja annettu	Työ- ja opintotoiminta-sopimus kutsu
Voknet - Vastaanottopalvelut - Maksukortti		Asiakas kutsuttu infoon	Voknet - Vastaanottopalvelut - Asiakkaiden ohjaus ja neuvonta - Asiakasinfot	Teams - Materiaalipankki sisäinen - Tietopankki - Asiakkaille tulostettava materiaali - Ohjeita asumiseen	Teams Tietopankki tai voknet	Asiakas kutsuttu infoon
7 vrk	7 vrk	3 vrk	5 vrk	7 vrk	7 vrk	10 vrk
Ohjaaja	Ohjaaja	Ohjaaja	Ohjaaja	Ohjaaja	Ohjaaja	Ohjaaja
Vain täysi-ikäisille	Vain täysi-ikäisille	Vain täysi-ikäisille	Vain täysi-ikäisille	Vain täysi-ikäisille	Vain täysi-ikäisille	Yli 15-vuotiaille, ei työssäkäyville
3.1.2023	3.1.2023	21.11.2022	23.11.2022	23.11.2022	16.1.2023	3.1.2023
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022		16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022
22.11.2022	22.11.2022	21.11.2022	24.11.2022	24.11.2022	16.1.2023	28.11.2022

References

- Krajewski, L. J., Malhotra, M. K. & Ritzman, L. P. 2019. Operations management: Processes and supply chains. Twelfth edition. Global edition. Harlow, England: Pearson.
- Slack, N., Brandon-Jones, A. & Burgess, N. 2022. *Operations management*. Tenth edition. Harlow, England ; New York: Pearson.
- Vänttinen, M. 2024. Lecture 5 Improving Healthcare Operations. Aalto University. Operations Management [bachelor course guest lecturer].

A!

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**Kiitos
aalto.fi**