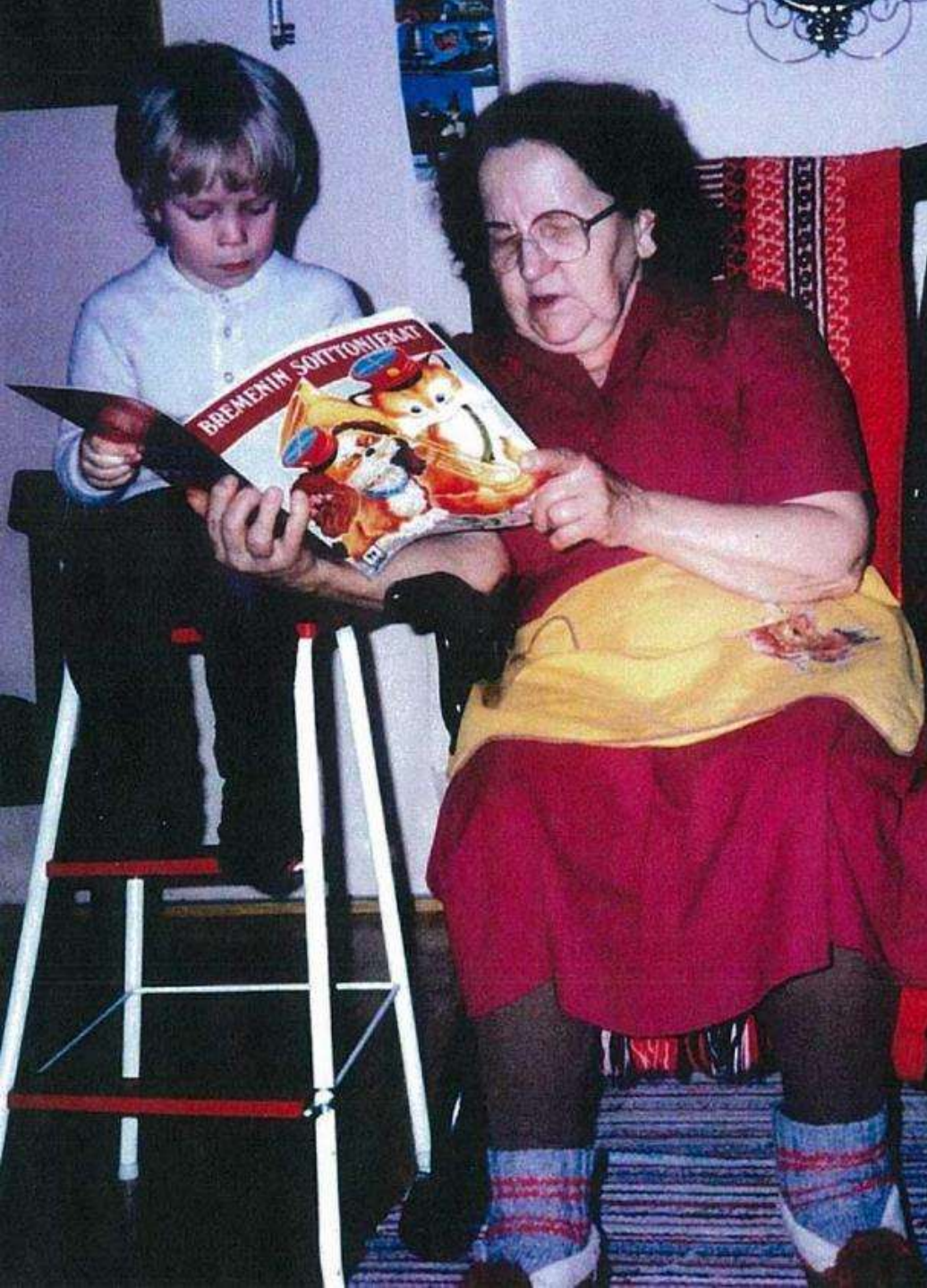




evondos®

*The leading Nordic
Automated medicine
dispenser (AMD)*



Grandma wanted to talk to someone

“During my childhood, I first encountered the problems of home pharmacotherapy. When visiting my granny, I remember the nurse coming over to refill granny’s red pill organizer.

*My granny would always be eager to chat, but **the nurse would only concentrate on arranging the medication – giving only the briefest of responses.***

Granny deserved more attention and human interaction, but instead her nurses had to pay close attention to arranging her medication correctly. Even then, some human errors occurred occasionally.

I knew, then and there, that things needed to change.”

-Mika Apell, Founder of Evondos

evondos®

Established
2008

Turnover 2022
22 M EUR

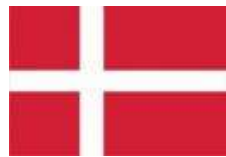
Turnover growth
2018 +101%
2019 +75%
2020 +60%
2021 +52%

Dispensed doses
12/22
20.000.000+

160+
employees

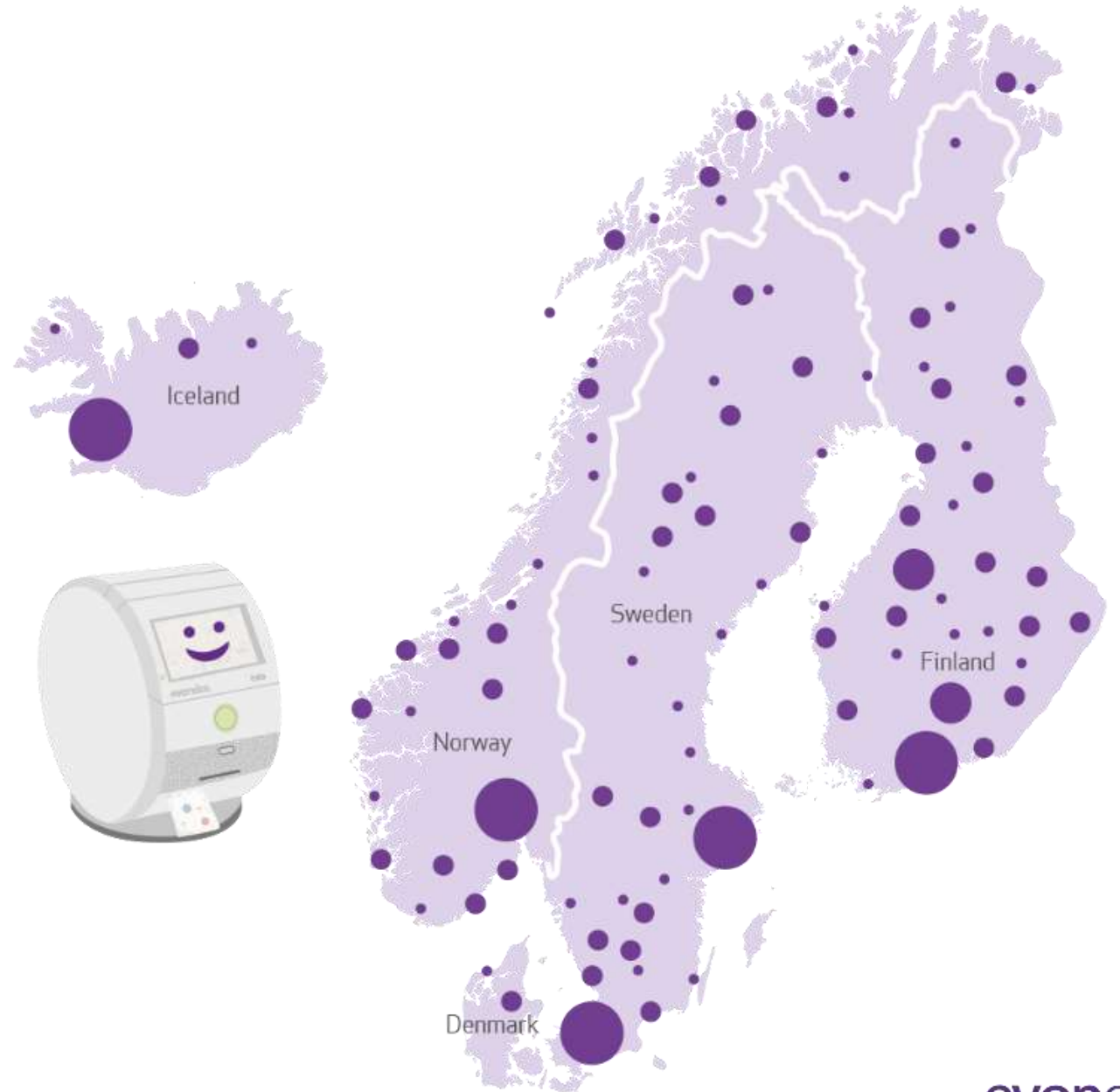
Over 300
municipality
customers

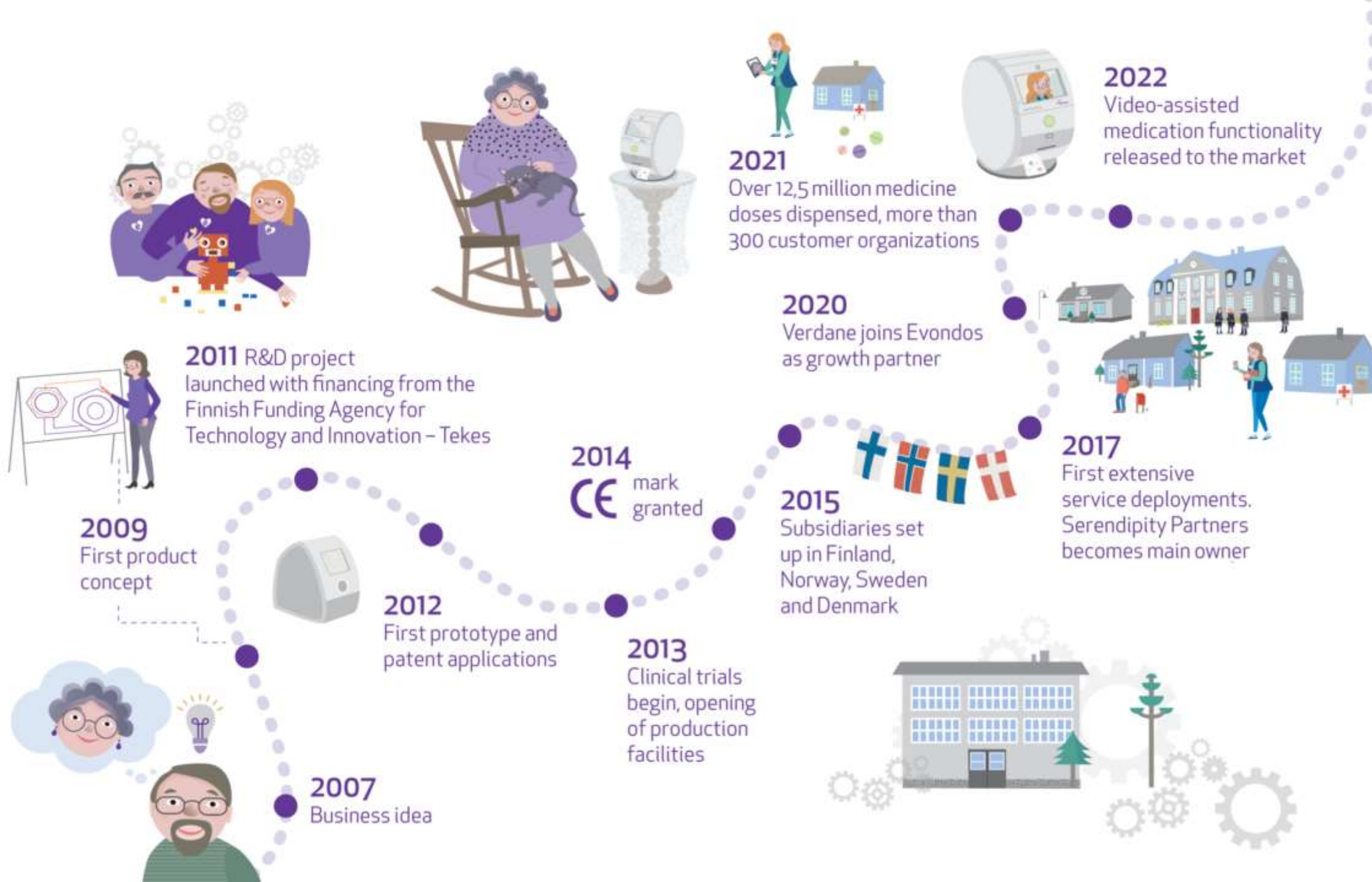
Leading Nordic automated medicine dispensing company



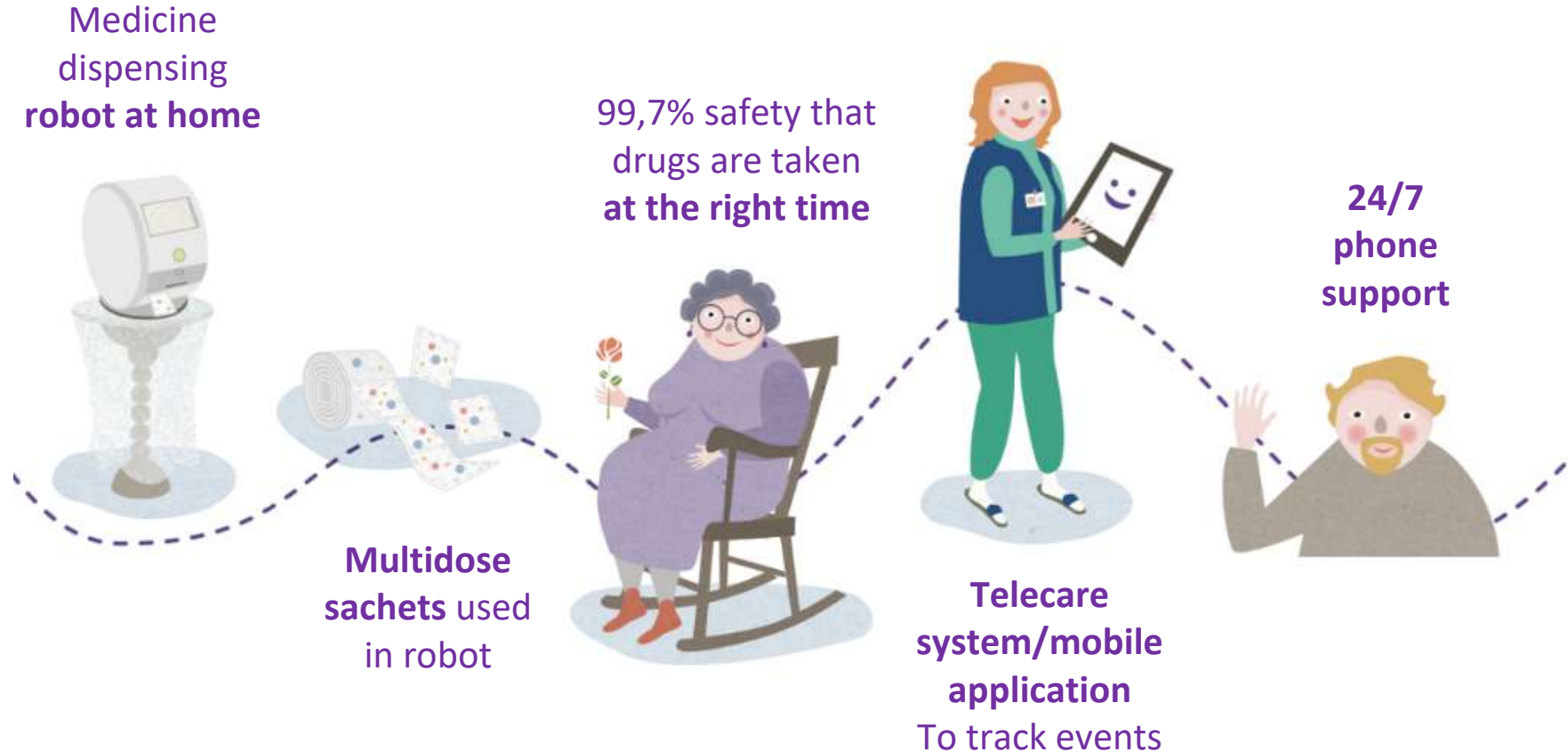
Evondos in the Nordics

- Over **300 municipalities**
- **20 million** correctly distributed medicine sachets (over 99% adherence)
- Equaling over **600.000 saved working** days in the Nordics





Evondos service improves medication adherence





evondos®

Supporting your Independence

Better quality of life. Fewer societal costs

The cost for society decreases when the need for home care can be reduced or postponed.

** Source: KOLADA statistics, SWE*



How Evondos benefits



evondos



Guides homecare clients in taking the correct dose at the right time

Ensures high medication adherence and a better outcome

Allows safer medication management

Improved patient safety

Frees up nurse time to treat more patients with the same workforce

High efficiency that allows nurses to focus on their primary tasks

Reduce number of physical medication dispensing visits

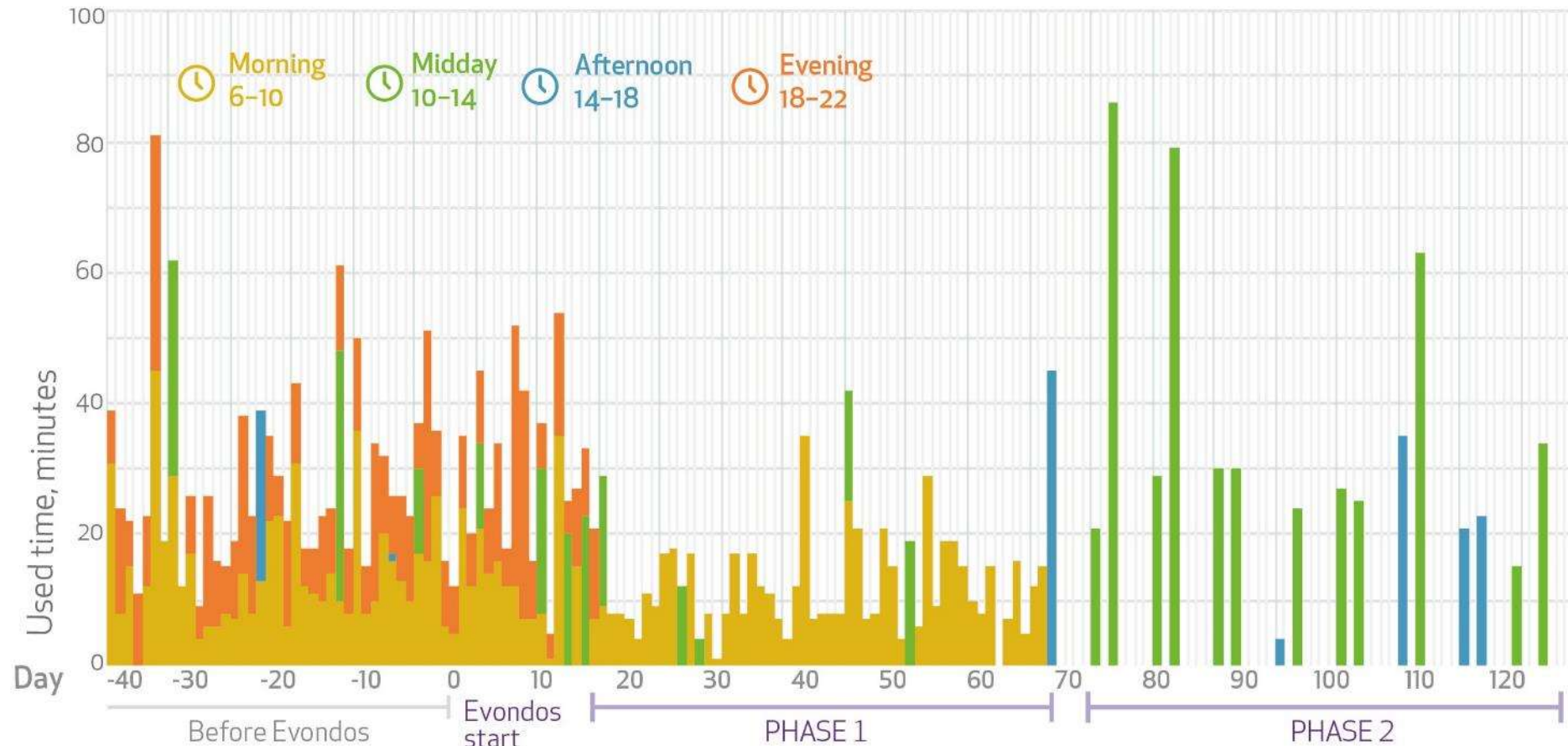
Costs savings in travel and medication dispensing costs

Increases employee satisfaction

Nurses have more control over their primary work

evondos

Routine medication visits reduced by 2/3



Alleviate the morning peak hours

- More time for client
- More flexible timing for visits – avoid morning/evening rush hours

Reference: Vesa Tiitola, Master's thesis
2018

Velfærds Teknologi Vurdering

Socialforvaltningen, Enheden for Velfærdsteknologi



Evondos

Pilotafprøvning i Den Sociale
Hjemmepleje, med borgere
bor i egen bolig og modtager
til medicin dagligt

Well-documented
evidence
of benefits
in homecare

Siun
SOTE



MINISTRY OF
SOCIAL AFFAIRS AND HEALTH
Finland

Is vaikuttavuusanalyysi – SiunSote 01/2021
6.2.2021
Ilkka, Varkaus
vaikuttavuus@siun.fi



Evondos helps to achieve operational benefits in homecare

Elisa Salonen M.D. (GP), MA, MBA

Doctoral researcher Vesa Tiittola has conducted an extensive impact analysis of the results achieved with the Evondos service for the clients of Siun Sote homecare services. The study included 14,328 homecare clients, 424 of whom were Evondos clients. The clients were monitored for a period of 26 months between January 2018 and March 2020. The total number of visits to Evondos clients could be reduced by 19.2%. Additionally, the morning rush peaks of the visits could be reduced substantially. The development of the intensity of Evondos clients was more favourable than that of other homecare clients during the 26-month monitoring period.

Introduction

The need for homecare services for the elderly is growing strongly. At the same time, the shortage of personnel makes providing and developing services difficult. The total cost of homecare has increased quickly, being EUR 1.3 billion in 2019 – 6.2% of the total cost of public social and health services.

Over 2,000 homecare clients in Finland are using the Evondos service. It is very well documented that the Evondos service ensures a high standard of pharmaceutical care, as it guides the homecare client in always taking the correct medicine in the prescribed dose at the right time.

There is also strong indicators that the Evondos service improves the operative efficiency of homecare. By using the Evondos service, the Siun Sote Joint Municipal Authority for Primary Health Care and Social Welfare has managed to reduce travel times and costs.

reduce the number of homecare visits. The Karvonen Joint Municipal Authority for Primary Health Care and Social Welfare has managed to reduce travel times and costs.

Doctoral researcher Vesa Tiittola's study focuses on the operative impacts achieved with Evondos in the implementation of homecare and, thereby, in care strain as well. The study utilised pseudonymised homecare visit entry data collected from 1 January 2018 to 31 March 2020, and the implementation and decommissioning dates of the Evondos robots. The analysis was conducted through before/after monitoring, which aimed to identify whether the clients' care changed after the implementation in other words, no control groups were used in the analysis but the aim was to identify the impacts in other care processes and the significant impacts on homecare on

An In-Home Advanced Robotic System to Elderly Home-Care Patients' Medications: A Safety and Usability Study

Pekka Karvonen, MD, PhD¹, Timo Parkkinen, RN², Sanna Leikola, PhD³,
Marja Arvola-Simola, PhD⁴, and Alan Lyles, ScD, MPH⁵

¹Valdella Rehabilitation, Helsinki, Finland; ²Clinus Ltd., Helsinki, Finland; ³Pharmat Finland Oy, Vantaa, Finland; ⁴Clinical Pharmacy Group, Division of Pharmacology and Pharmatherapy, Faculty of Pharmacy, University of Helsinki, Helsinki, Finland; and ⁵School of Health and Human Services, College of Public Health, University of Baltimore, Baltimore, Maryland, USA

IHE
IHE Rapport
2021:6



Proven medicine safety by clinical studies

- Rantanen et al., Clinical Therapeutics, 2017: *An In-home Advanced Robotic System to Manage Elderly Home-care Patients' Medications: A Pilot Safety and Usability Study*
- Home-care residents (approx. 17) used the Evondos Medicine Dispensing Service for 457 days. The device delivered and patients retrieved medicine sachets for 99% of the alerts
- In rare cases where the medication was not taken independently, the alerted nurse ensured that the proper medicine was given. Not a single dose of prescribed medication was left untaken.

https://helda.helsinki.fi/bitstream/handle/10138/222904/1_s2.0_S0149291817302023_main.pdf?sequence=1&isAllowed=y



IHE - released study in Sweden on dispensing robots *by* **The Swedish Institute for health economics**

- Research group managed by Professor Peter Lindgren
- Challenge – growing number of elderly – lack of competent personnel
- Study included 4 municipalities with 229 AMD's
- Results
 - savings 22 h work/month/robot
 - 14 h if taking into account visits done for other reasons during medicine giving by the robot

*dispenses occurring when nurse present



Capio connect Ab

private homecare provider

Results reported in Stockholm

- Study with 25 robots / 6 months
- Medication adherence 99,4 %
- 0 reported medication errors
- Enabled 11 % increase in number of patients treated
- Record high Customer satisfaction 9,3 (patients) & 9,4 (personnel)
- Saved 6500 hours of driving & 3000 hours of care work
- More time for patient-centric care



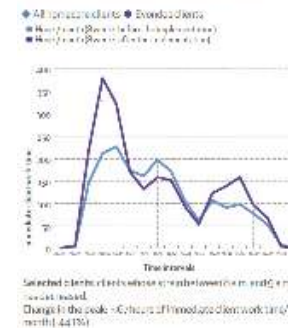
Finnish Municipality Federation

- The work input of 7 to 9 care persons was released for other homecare tasks
- Visits decreased by 2246 visits/month
 - estimated time saved 898 hours/month
- Morning rush peaks were reduced, and duration of visits was lengthened

Image 4. Development in care intensity of homecare clients



Image 3. Morning rush peak among those Evondos clients whose visits could be reduced the most



A safe and reliable medicine depository

Locked medicine container

- Identifies any attempt of forced entry

Only signed-in users can access the medicine

- Sign-in alternatives: Certification card, RFID, username + password
- All operations executed by the robot are stored on a log, which can be used to trace back who/what has been done



During the refill process, it is ensured that the **robot is filled with the correct medicine for the right patient:**

- The robot's visual application identifies the client's name and social ID via the correct medicine sachet
- Timing for medication is read via imprinted data on the sachets – medication times are never entered manually to avoid human error
- During refilling it is ensured that no dose of medicine is missing from the sachet rolls

Container for missed medication

- Locked container, accessible only by nurse.

Example of rapport from Evondos Telecare system

90551

Total amount of sachets taken

2,9

Average medication / client / day

0,3%

Total number of untaken medicines %

Evondos® Service Usage Statistics

Total number of clients who have used the robots	173
Total number of sachets taken in travel state	236
Total number of untaken medicines	281

99,7%

Medication compliance achieved

267,9

Average number of sachets per day

0,3%

Sachets taken in travel state %

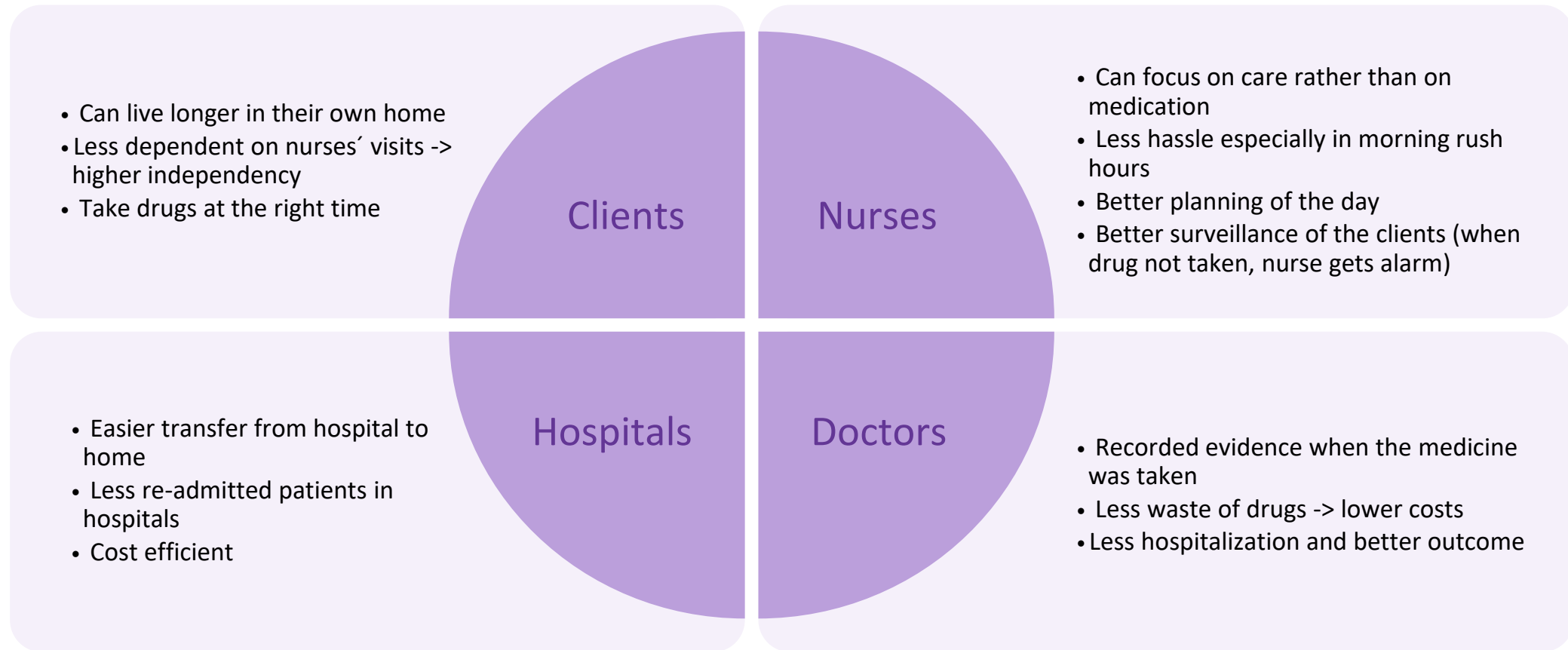
Evondos® Service Reliability Statistics

Sachet given manually	172
Sachet given manually %	0,19%

Development of the Evondos Service Use



With Evondos, every stakeholder wins



More satisfied clients, coping with lack of nurses, less costs for the healthcare system



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