

A Process-based Supply Chain Solution for Elderly Care In an Integrated Organization

Jukka Korpela, Merja Tepponen, Kalle Elfvengren,
Tanja Kaarna, Markku Tuominen



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Description and objectives

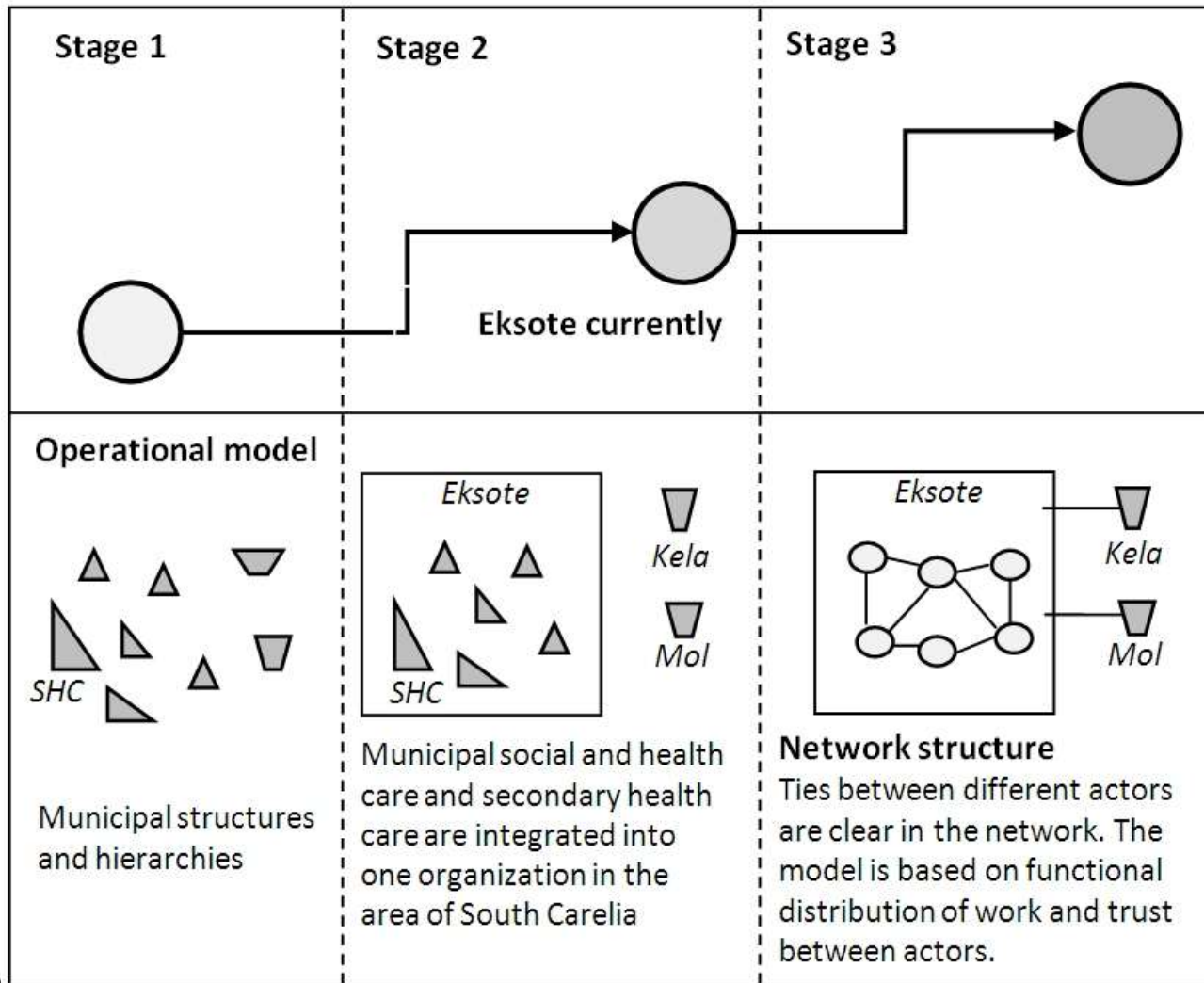
- A case study of implementing a new supply chain process and solution for patient placement
- Case organization: South Karelia District of Social and Health Services (Eksote)
- An agile Business Process Management approach was used
- The focus of the placement process (Assess-Qualify-Place, i.e. AQP) to relocate patients
 - Short term placement
 - Long term placement
- The paper describes the how a new IT solution was created to support the placement process

EksoTe - Background

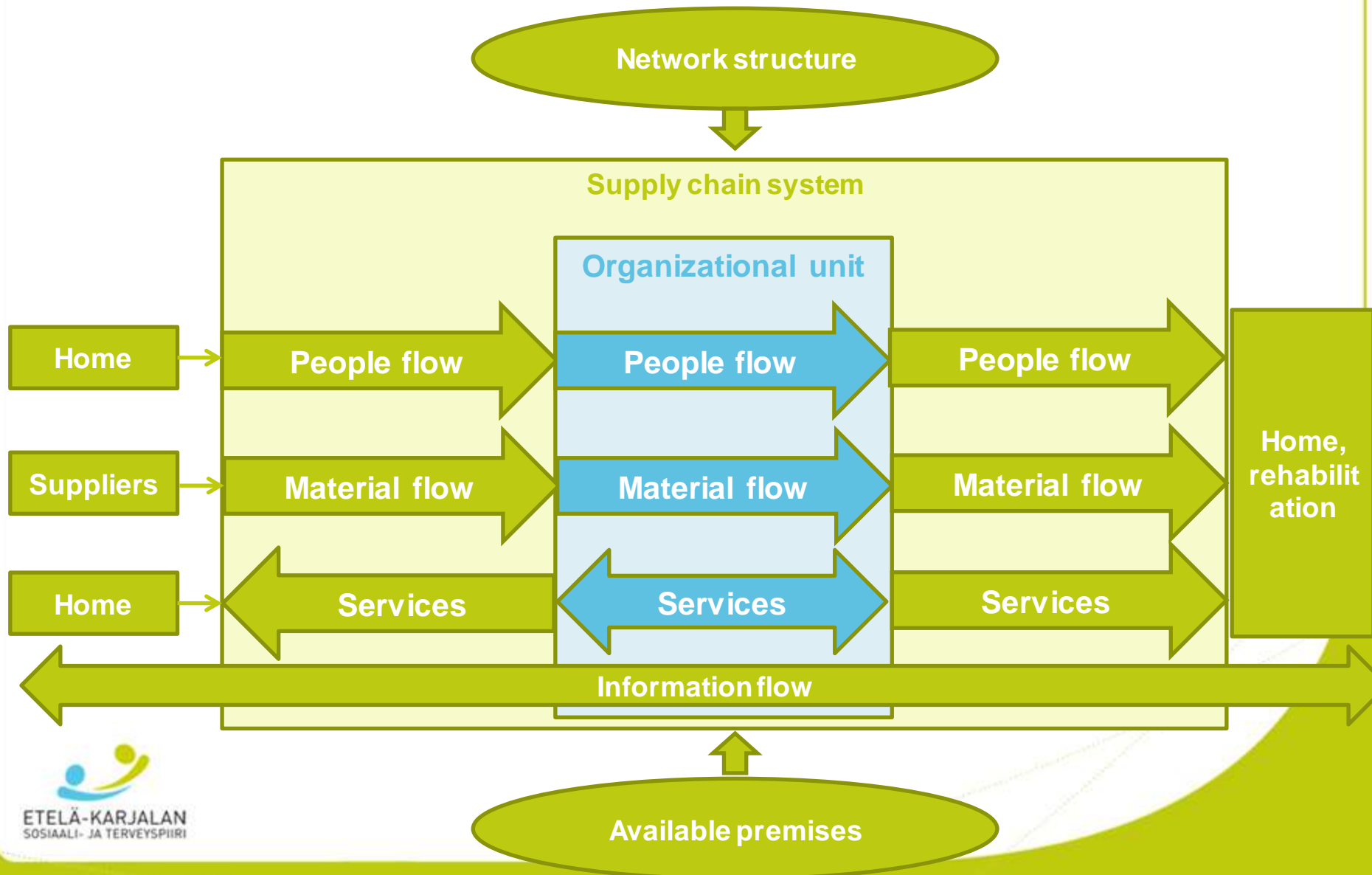
- EksoTe = South Karelia District of Social & Health Services, a legal entity owned by 9 municipalities in South-Eastern Finland
- Provides public social and health care services in the area
- One central hospital in Lappeenranta and various regional GPs (with bed wards) in other municipalities
- Kicked off January 2009 and basic health services were added to scope in January 2010
- EksoTe's goal is to provide better use of services and resources beyond municipal borders and to reduce costs through centralized organization and processes



Eksote service structure development



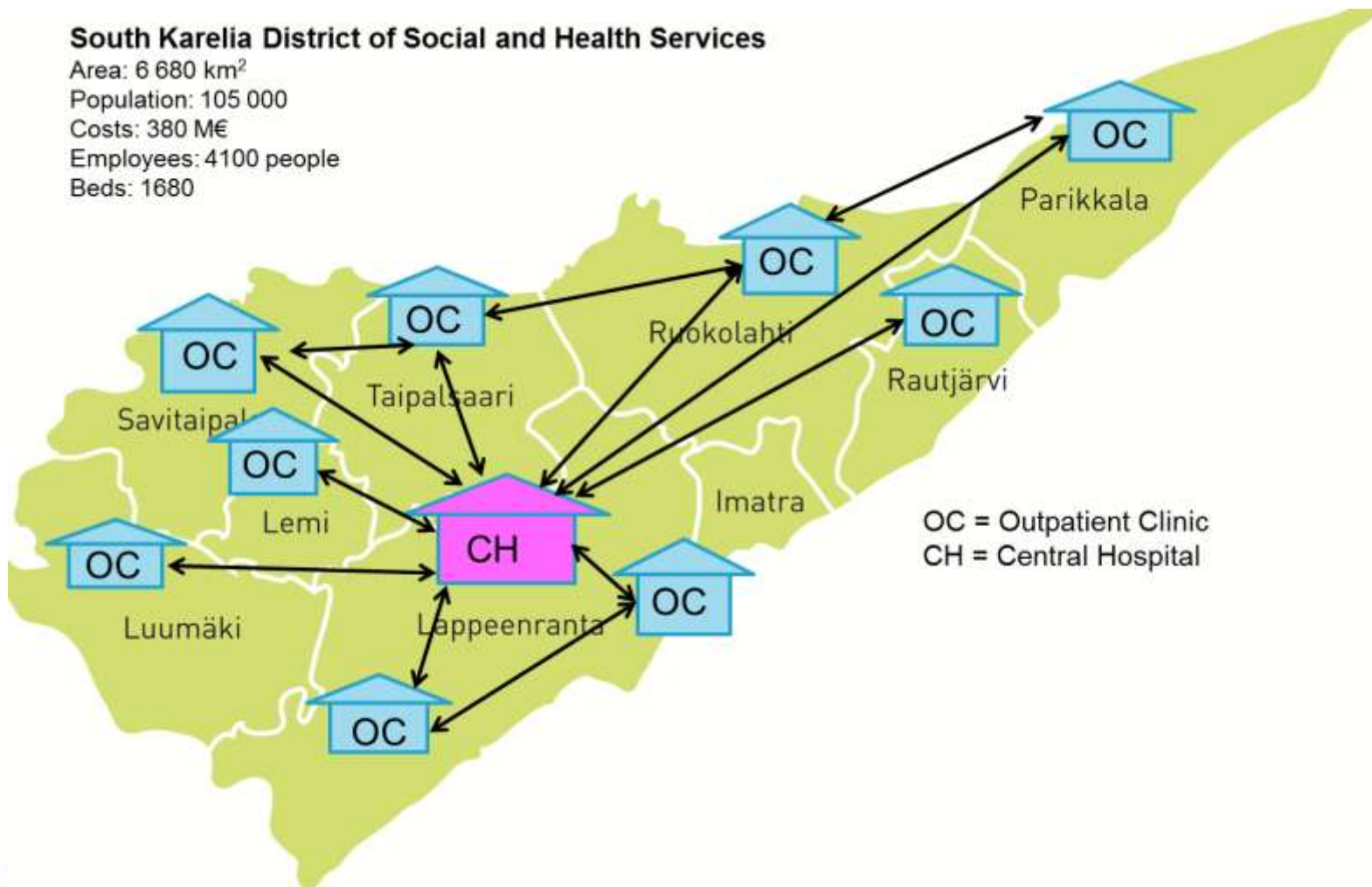
The main elements of the Eksote supply chain



Eksoite supply chain network

South Karelia District of Social and Health Services

Area: 6 680 km²
Population: 105 000
Costs: 380 M€
Employees: 4100 people
Beds: 1680



Challenges and the need for an efficient placement process in Eksote

- Drive for efficiency and integration of services within the district – limited amount of resources available
- Amount of beds limited especially in the special health care wards – therefore a growing need to pay attention to discharging patients home or to send them to receive further treatment to GP bed wards as early as possible



Challenges with placement decisions

- Doctors and nurses lack the understanding of bed resource availability in the area
- Too much inefficient point-to-point communication for finding a suitable further treatment ward for the patients – too much time spent on non-care related activities

Solution – Centralized Placement Office and Centralized Placement Process

- Instead of making the placement decisions locally, Eksote turned the problem into an area-wide logistical question – how to fill available places with patients that have the most urgent needs

Eksote formed a centralized Placement (Assess-Qualify-Place =AQP) office that handles all the placement decisions in the area

- AQP office consists of multiple specialized discharge & placement nurses who purely focus on patient placement – they are making the placement decisions instead of doctors and nurses in the wards
- AQP office is responsible both for short-term and long-term placements
- The model has been possible largely because Eksote provides basic and special health care as well as social services in the area – no need for financial transactions between municipalities for placement decisions

Short Term Placement

Central hospital special health care wards



AQP office



GPs (with bed wards)



- Short-term further care for patients who can't be discharged but don't require special health care anymore
- Nurses in the central hospital place patients into assessment for further treatment or discharge and send patients when agreed
- AQP nurses assess patients, make placement decisions and put patients into queue to wait for a vacant further treatment place
- GP nurses provide up-to date information on the bed availability to AQP and receive patients from hospitals

Long Term Placement



- Long term care for elderly people either in public or privately owned facilities
- More thorough assessment and approval phases than in the short-term placement process
- Otherwise the process flow and the roles of AQP nurses, sending parties and receiving parties and similar to the ones in short term process



Main Benefits of the Centralization

- Customer needs can be taken into account in much broader way – patients receive the treatment they need and they get it as quickly as possible (these benefits exceed the downside of having to possibly be placed far away from home)
- Nurses and doctors in the wards don't need to spend their time in trying to find a suitable further treatment
- Clear responsibilities for different parties - unnecessary communication is not needed



Eksoite executed AQP processes but faced issues because of insufficient system support

- Organization was in place, but process was poorly executed
- Too heavy process - no clear rules or screening on who could be submitted to assessment; **lack of process control and discipline**
- Information exchange happened through phone calls and e-mails; **time-consuming and stressful for each party**
- Cases were handled in Excel and it lacked e.g.:
 - Up-to date availability picture of beds in GPs
 - Role-based visibility
 - Control of the process and clear ownerships
 - Auditability
 - Process metrics
 - Structured data



Agile BPM

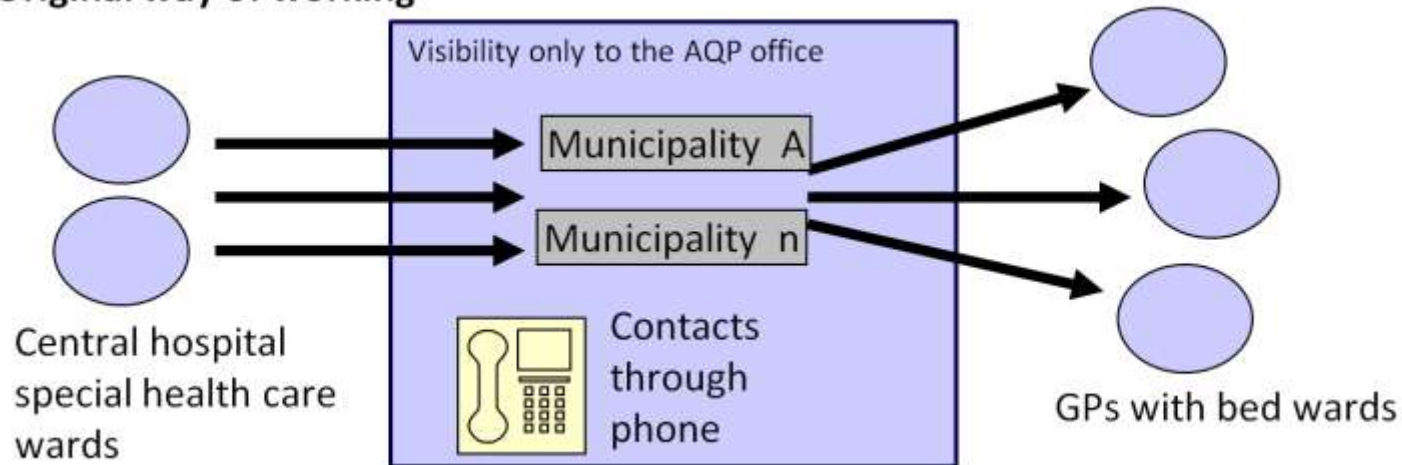
- Empowering individuals by emphasizing flexibility and responsiveness over efficiency and predictability
- Responding quickly and intelligently to events in the business environment
- Give highest priority to sense and respond to customer needs and preferences in order to continuously deliver value to the customer

Development approach

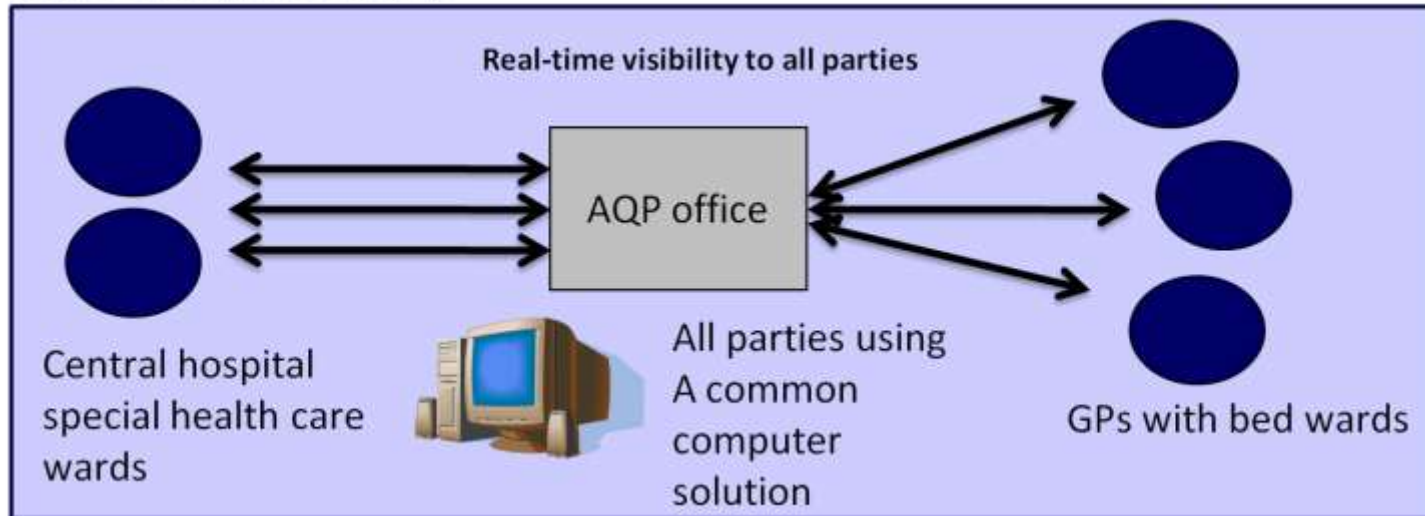
- Process definition
- Solution development
- User acceptance testing
- User training and implementation
- Continuous development

Old and new way of working

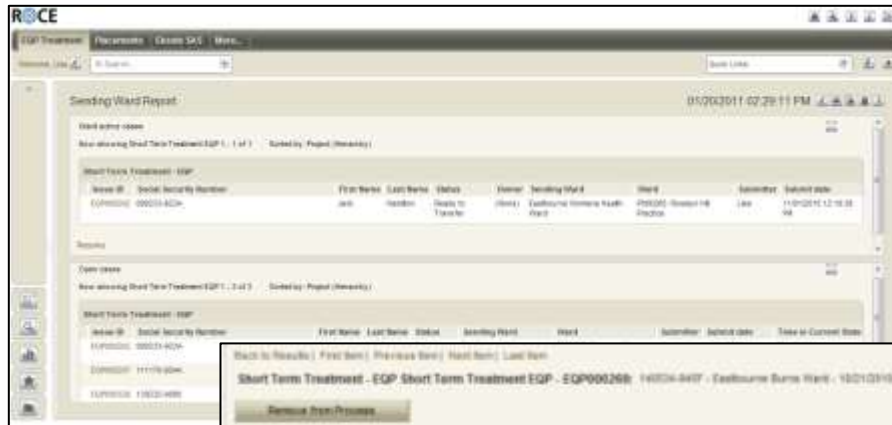
Original way of working



Targeted way of working



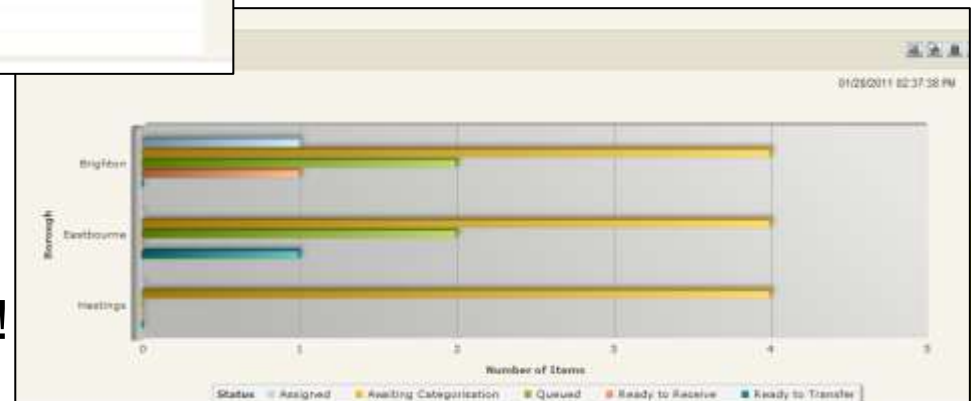
AQP Process Solution



Solutions were built with Business Process Management (BPM) technology

- Process modelling and execution tightly coupled
- Web-based, very simple to use UIs
- Rich views and reporting capabilities

Each solution was built together with nurses to have functionality and look exactly the way they wanted – in less than two months!



An example of the user interface

The screenshot shows a web application interface for 'EQP Treatment'. The top navigation bar includes 'EQP Treatment', 'Placements', 'Eksote SAS', and 'More...'. A user greeting 'Welcome, Lisa' and a search bar are visible. The main content area is titled 'Sending Ward Report' and shows a table of 'Short Term Treatment - EQP' cases. Below this, there is a 'Requery' button and an 'Open cases' section with another table of 'Short Term Treatment - EQP' cases. The interface includes a sidebar with navigation icons and a top right corner with a date and time '01/20/2011 02:29:11 PM' and several utility icons.

EQP Treatment | Placements | Eksote SAS | More...
Welcome, Lisa | Search... | Quick Links: [Icons]

Sending Ward Report

01/20/2011 02:29:11 PM [Icons]

Ward active cases
Now showing Short Term Treatment EQP 1 - 1 of 1 | Sorted by: Project (Hierarchy)

Short Term Treatment - EQP

Issue ID	Social Security Number	First Name	Last Name	Status	Owner	Sending Ward	Ward	Submitter	Submit date
EQP000282	090233-923A	Jack	Hamilton	Ready to Transfer	(None)	Eastbourne Womens Health Ward	P000265: Rosslyn Hill Practice	Lisa	11/01/2010 12:18:38 PM

Requery

Open cases
Now showing Short Term Treatment EQP 1 - 3 of 3 | Sorted by: Project (Hierarchy)

Short Term Treatment - EQP

Issue ID	Social Security Number	First Name	Last Name	Status	Sending Ward	Ward	Submitter	Submit date	Time in Current State
EQP000282	090233-923A	Jack	Hamilton	Ready to Transfer	Eastbourne Womens Health Ward	P000265: Rosslyn Hill Practice	Lisa	11/01/2010 12:18:38 PM	78 4:51:04
EQP000287	111170-924A	Stacy	Atkins	Ready to Receive	Eastbourne Womens Health Ward	P000265: Rosslyn Hill Practice	Lisa	11/02/2010 09:31:23 AM	76 4:38:55
EQP000328	130232-9000	Rick	Rogers	Assigned	Eastbourne Womens Health Ward	P000263: Daleham Garden Practice	Lisa	11/30/2010 09:31:23 AM	50 21:36:57

Experiences from the agile BPM approach

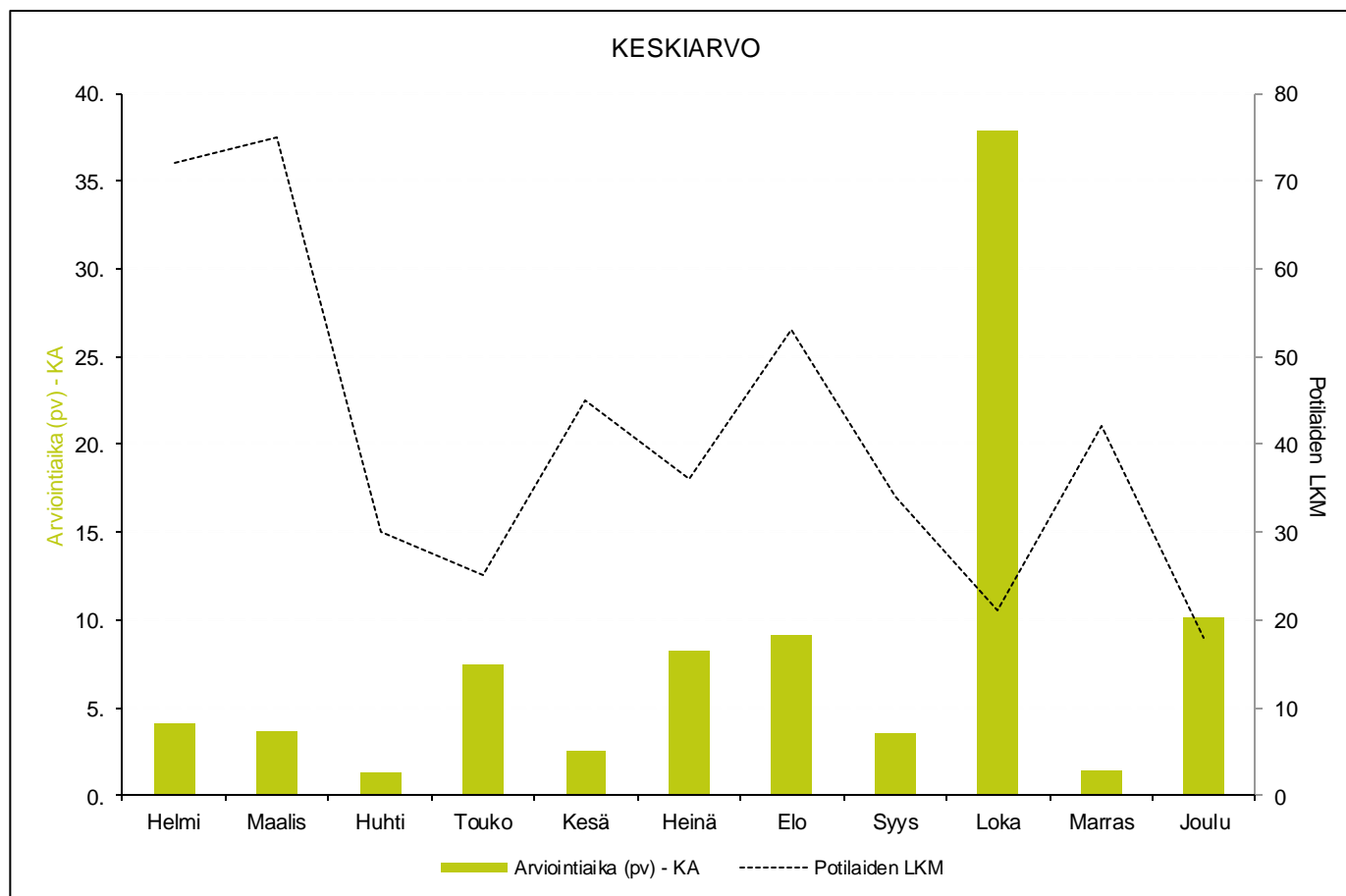
- Development was quick and cost-effective
- Iterative development approach the main success factor
- Flexibility in making changes to the system essential
- Evolution of the process and the system taken into account
- User satisfaction at a high level
- Quick implementation and go-live phase



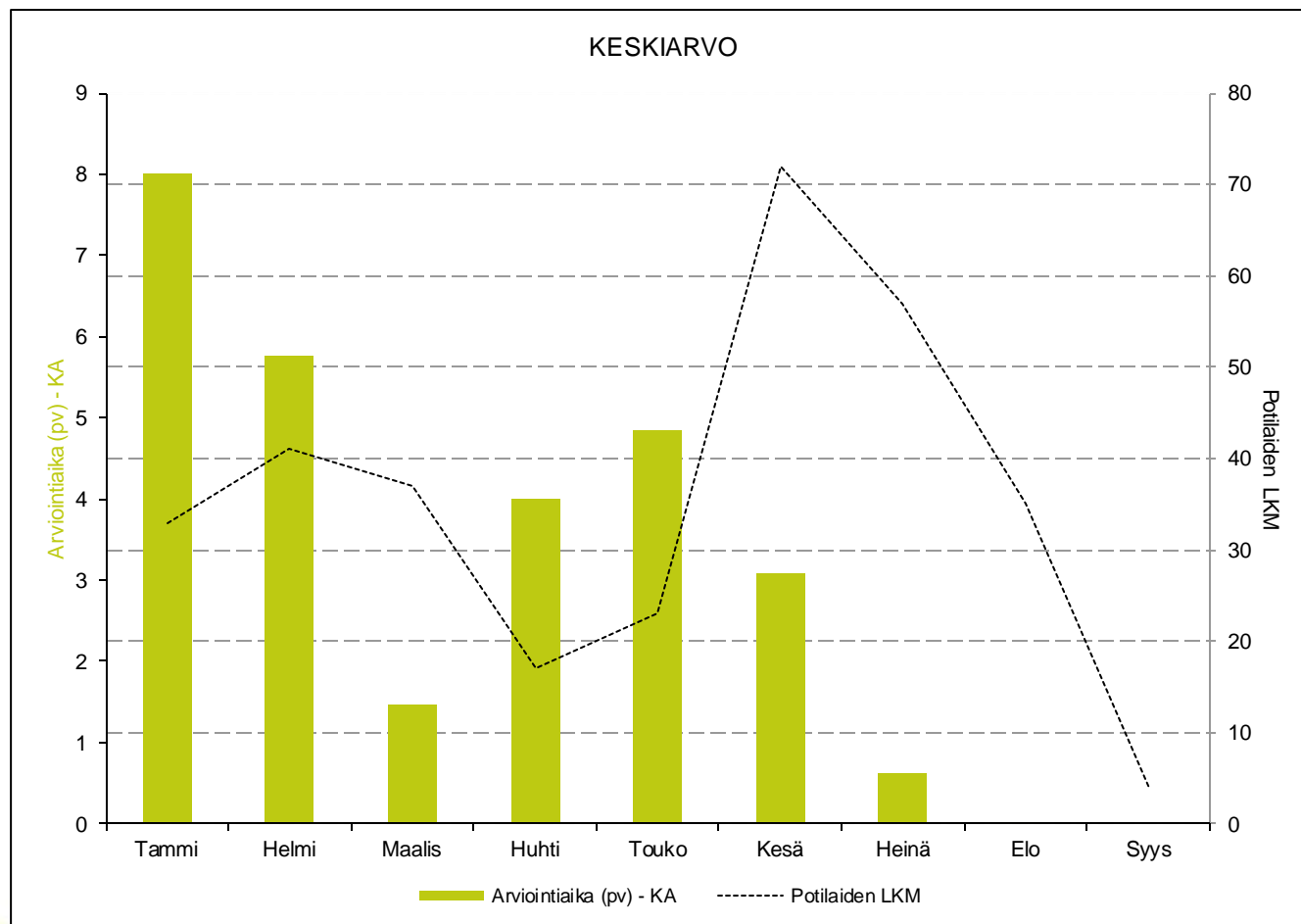
Benefits of the solution

- Number of phone calls decreased dramatically
- Effectiveness and efficiency of the process improved
- Patient queues disappeared
- Roles within the process were clarified
- Process became measurable and transparent
- Solution can be easily changed according to the process changes

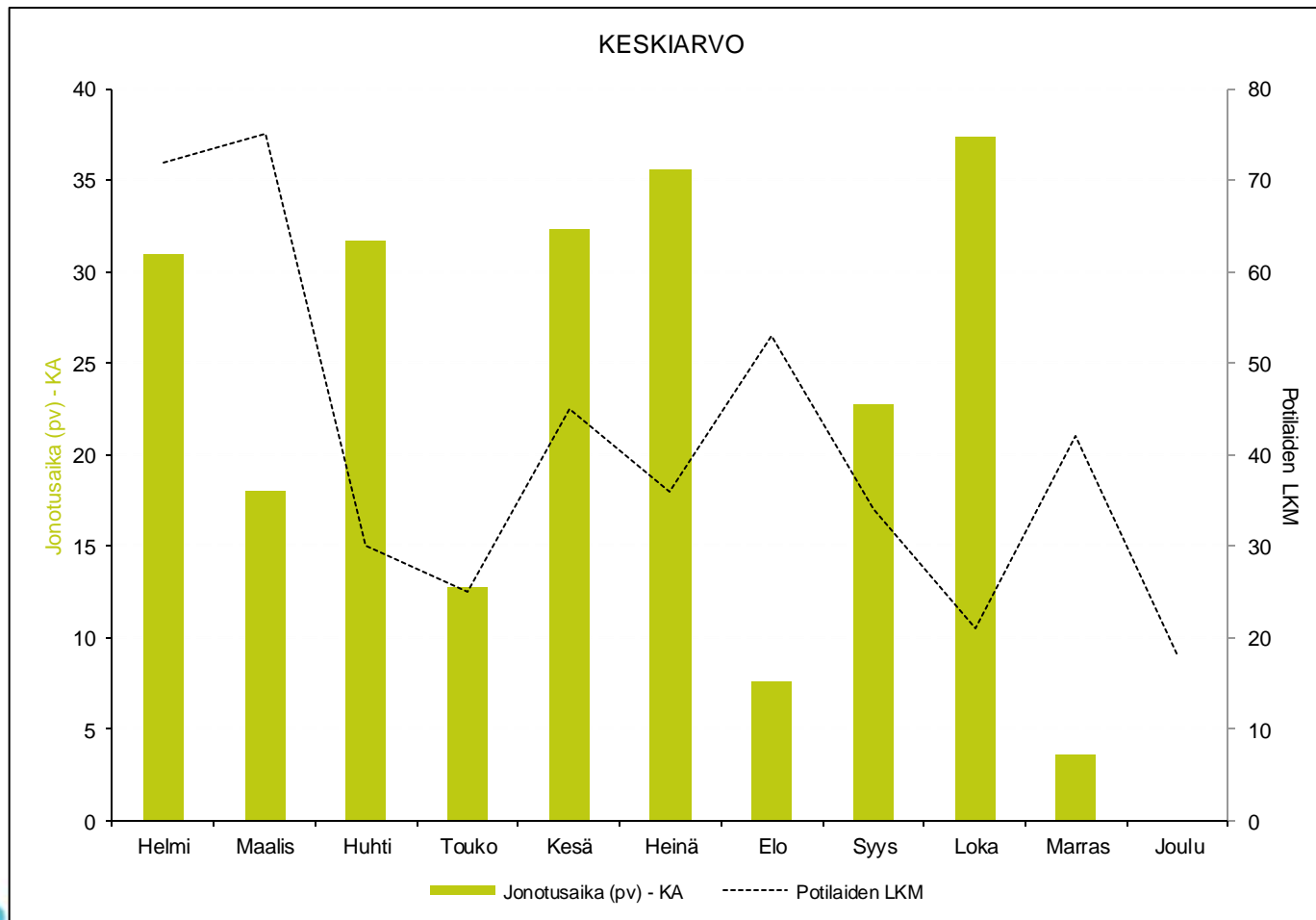
Duration of assessment 2011



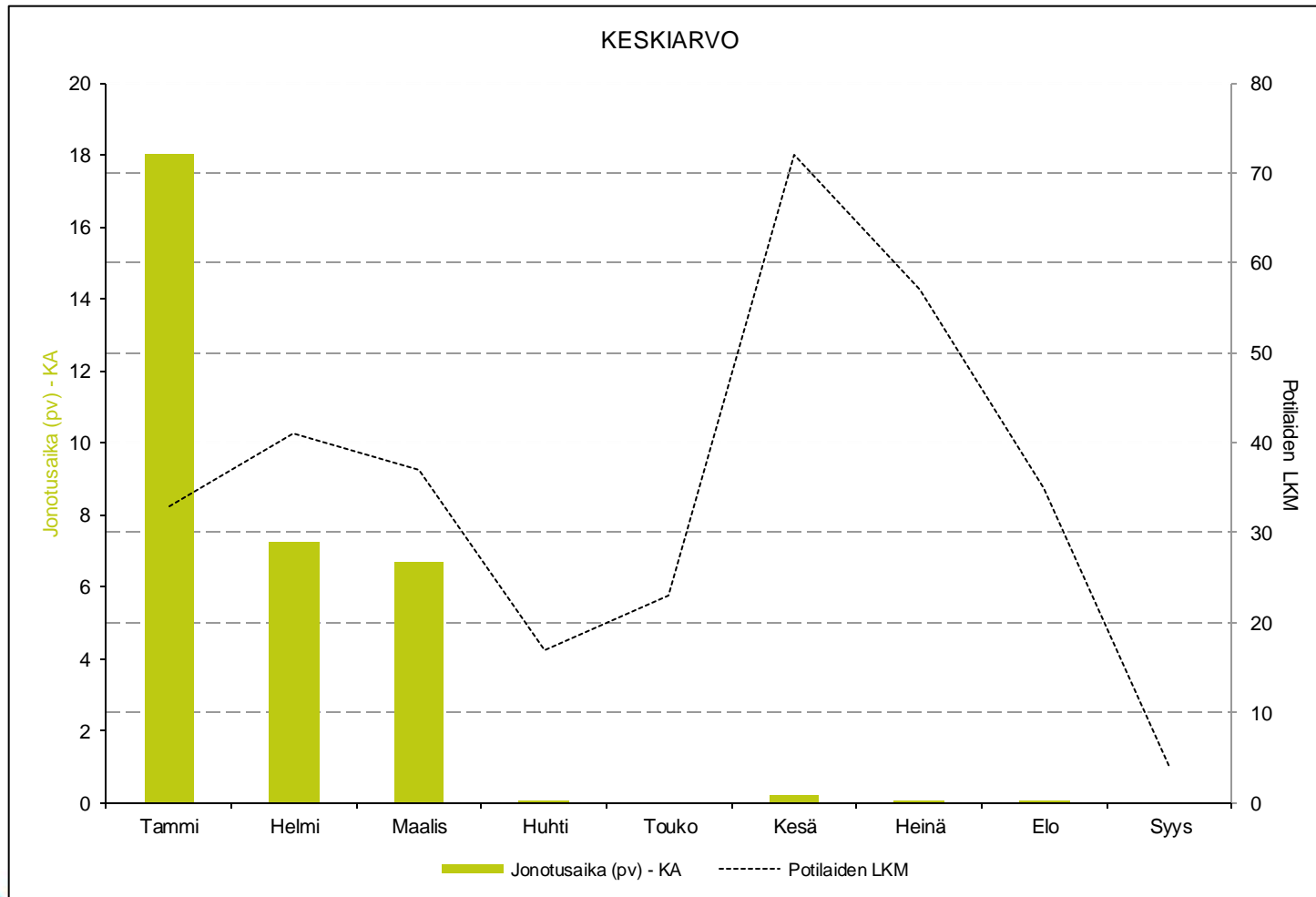
Duration of assessment 2012



Patient queueing time 2011



Patient queueing time 2012



Eksothe process roadmap

Existing solution

In progress

Customers' service needs

External patient logistics

Rental apartment management

Mental health care placement

Patient flow lead-time management

Children welfare placement

ER lead time management

Patient logistics in the hospital

Short term placement

Rehabilitation management

Long-term placement

Disabled patient placement

Home renovation mgment

Interval care for elderly

Service voucher management

Conclusions

- In Finland, health and social care services sector is facing increasing cost pressure
- Organizations are being combined into bigger units to increase cost efficiency
- Supply chain management is one of the main development areas
- In the case company,
 - Patient placement process was centralized
 - An agile BPM development approach was used to create a supporting tool
- The main benefits included:
 - The efficiency of the process increased
 - The process became measurable and transparent
 - The process and solution have flexibility to evolve over time