Facility Management and Health Care at Home

Internet days 2009, November 5
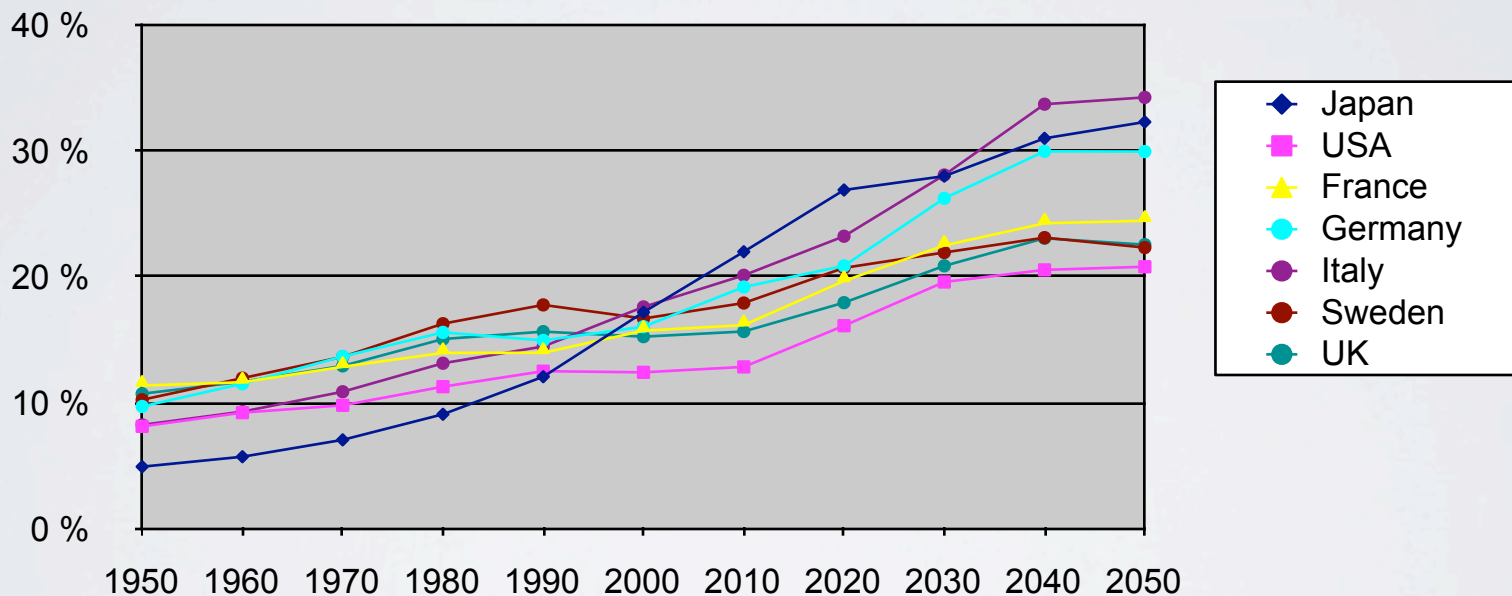
Stefan Lundberg, PhD

The Royal Institute of Technology

Prognosis - Population +65 Year

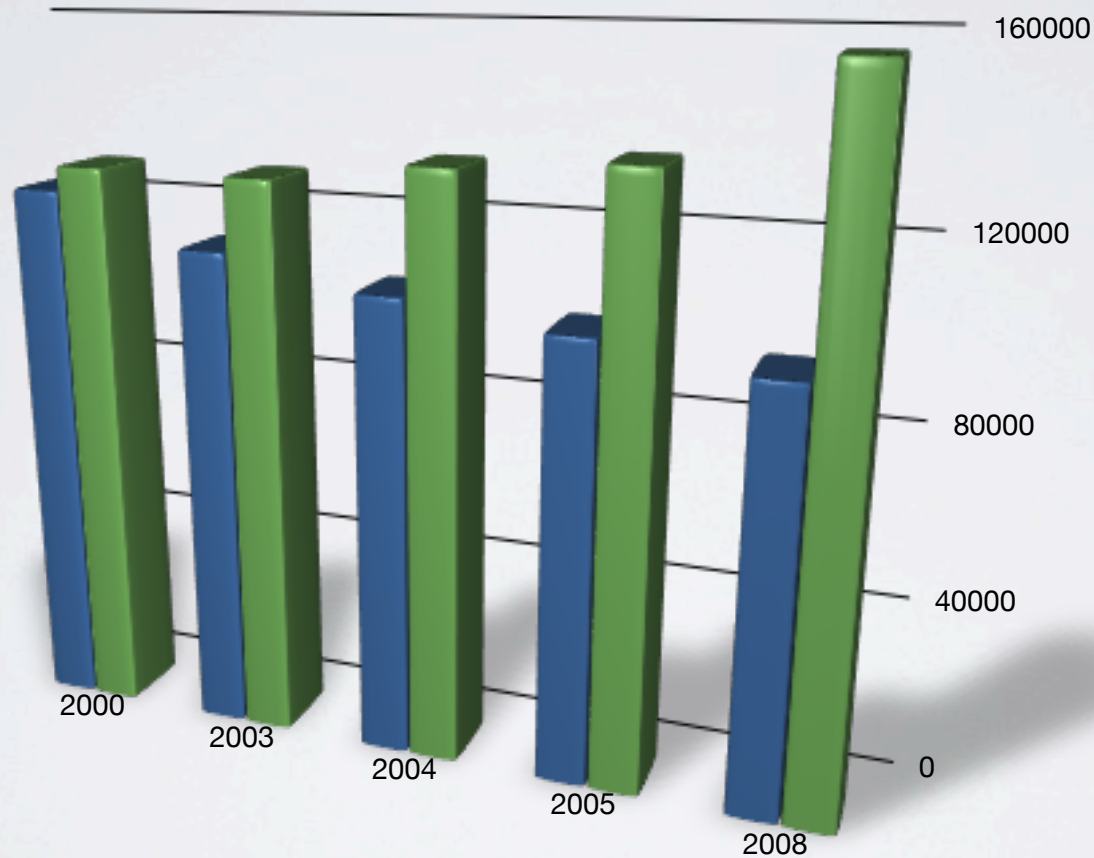The population in the industrialized world is getting older

Source: Prof. Kose, Japan

The Number of Apartments in Nursing Homes are Reduced in Sweden

Year	Nursing Homes	Home Care Service	Total
2000	122 700	128 300	251 000
2003	111 700	128 100	239 800
2004	105 200	132 500	237 700
2005	100 400	135 000	235 400
2008	95 600	156 200	251 800

Source: The National Board of Health and Welfare
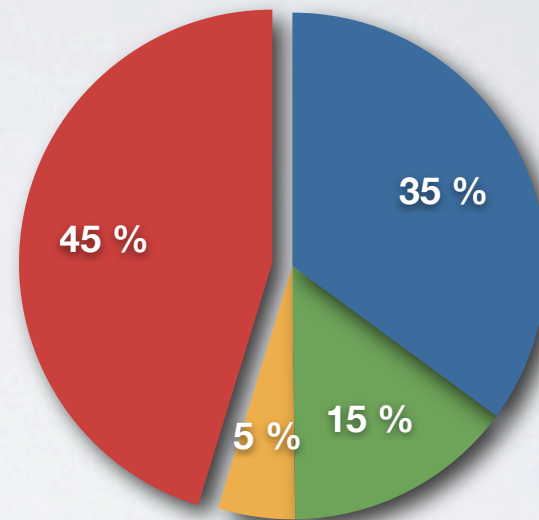
Nursing Home vs Home Care Service

People with Dementia Live in Their Own Home

Nursing Home   In Situ

Type of Home	Dementia	Total
In Situ	Mild	50 000
	Moderate	21 000
	Severe	7 000
		78 000
Nursing Home		**64 500**

- 🔵 Mild
- 🟢 Moderate
- 🟡 Severe
- 🔴 Nursing Home

Source: The National Board of Health and Welfare

5

The Home Becomes a Place for Care

The Prerequisites for a Health Care Building

- A Reliable Communication System

- An Uninterruptible Power Supply (UPS)

- An Alarm System

- An Electronic Access System

- A Medical Waste System

- An Ergonomic Safe Place for Work
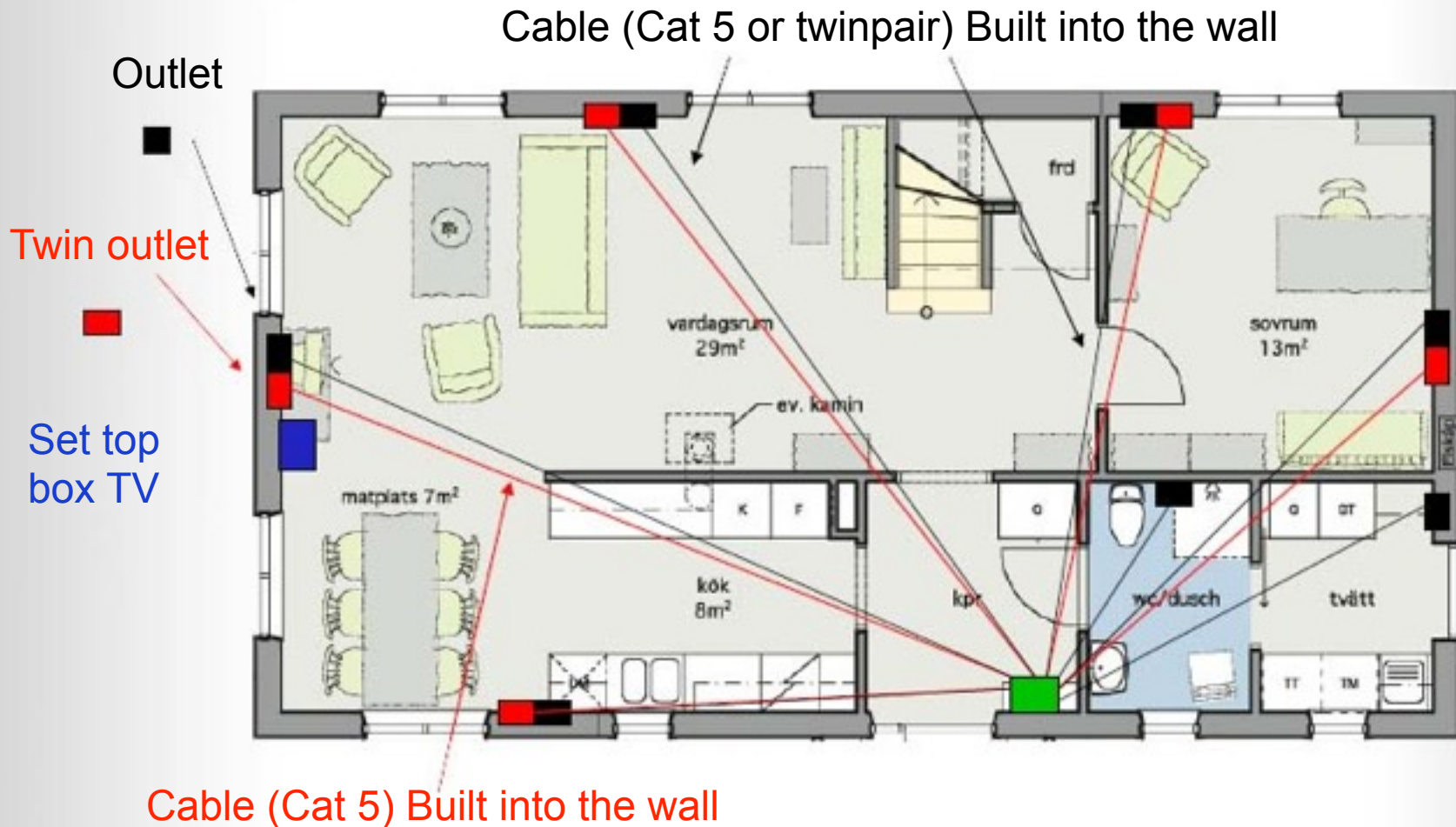
The Prerequisites for Facility Management

- A Support Organisation aware of Health Care issues

- A Medical Waste Management Program

- An Organisation for Remote Surveillance of the Building and Homes - 24/7

Advanced Care at Home requires Easy-to-install Systems

- You never know who will need it (i.e. which apartment)

- You never know for how long time

One (easy) way:
Use a Built-in Infrastructure

A Home Network

Cable (Cat 5 or twinpair) Built into the wall

Outlet

Twin outlet

Set top box TV

Cable (Cat 5) Built into the wall

Example from KTH´s Full Scale Laboratory

Control System and Sensors

What Type of Infrastructure can We Use?

- Telemetric, Industrial Standard
  - Used for the control of the house
  - Not for the Tenant

- IP-based
  - Used for Data, Telephone, TV
  - Also for the Tenant

Telemetry

For Fixed Systems

- Sensors

- Reminders

- Alarm

- Access

IP-Network

- Vital data collected through a computer system

  – Blood Pressure

  – ECG

  – Percutaneous Oxygen

Conclusion

The Home is the Health Care Building for the Future

We must Avoid Proprietary Solutions

And Eventually there Will Be a Transition from Telemetry to IP

The End
Thank You!