Monitoring Elderly People at Home
Results and Lessons Learned

Eloisa Vargiu¹, Stefan Dauwalder¹, Xavier Rafael-Palou¹, Felip Miralles¹, Alejandra Millet Pi-Figueres², Lluïsa Pla i Masip², Cèlia Riera Brutau²
¹EURECAT, Barcelona
²Centre de Vida Independent, Barcelona

MOTIVATION

- The median age of the EU population increased from 35.2 years in 1990, to 40.9 years by 2010
- From 2012, the over-60 population will increase by about 2 million people a year
- By 2020, around 25% of the EU population will be over 65
- People aged from 65-80 will rise by nearly 40% between 2010-2030

AIM

- To monitor elderly people living alone at home
- To study daily life activities
- To provide caregivers/relatives with
  - Dashboard
  - Automated reports
  - Alerts and emergencies

THE SOLUTION

- eKauri has been installed in Barcelona
  - 13 elderly people’s homes (1 man)
  - over 65 years old
  - from May 2015 to January 2016

EXPERIMENTS

- Monitored users daily answered to a questionnaire composed of 20 questions (12 optional)
- They also daily received a phone-call by a caregiver who manually verifies the data

RESULTS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>User at home</td>
<td>0.98</td>
</tr>
<tr>
<td>User alone</td>
<td>0.68</td>
</tr>
<tr>
<td>User sleeping</td>
<td>0.78</td>
</tr>
</tbody>
</table>

LESIONS LEARNED

- Users really appreciated that
  - It is not-intrusive
  - They may follow their normal lives
  - They were called by phone

- Social interactions are a must!

- Caregivers recognized it as a support to detect users’ habits helping in diagnosing user’s conditions and her/his decline, if any

- Tele-assistance systems does not substitute caregivers!