

Telecare Technology ...

Functionality and User Experience

- Telecare Specification Process
- Needs, Wants and Requirements Process
- Task: Check the appropriateness of your telecare solution

Telecare Selection

Process: Scenario

- Bert is a single man aged 75, he lives alone on the outskirts of a large city near to a local cluster of shops.
- He has a daughter Alice who visits once a month as she lives about an hour and a half drive away. Alice is aged 37 and lives with her husband Dave and her two children Jennifer (2) and Josh(6). Bert's next-door neighbour Jim is a close friend aged 57 living with his wife.
- Bert has become apprehensive about negotiating the underpass on his normal route when taking his dog for a walk, as he doesn't see well in dim lighting and tends to become disorientated. Bert has also been a smoker for 60 years and as a result suffers from COPD (<http://www.priory.com/cmol/copd.htm>) .This is exacerbated on exertion, and as a result Bert is concerned that he would not be able to handle a “run in” with an unscrupulous character in the dim light of the underpass. As a result his walks are taking longer.

General Process Sequence

- Stakeholder (What is the name and role of the stakeholder?)
- Service User (Name and ID of the Service User)
- Care Need (What care needs does the service user have that are relevant for this stakeholder?)
- Interest (What is the care interest of the stakeholder?: In what way do they care?)
- Care Question (What specific question is this stakeholder needing to have answered?)
- Measure (What aspect of the state or behaviour of the service user will be measured to answer the care question?)
- Sensor (What sensor would be used to measure this state or behaviour?)
- Data (What data will be generated by the sensor, and what processing will need to be done to extract phenomena of interest from the data?)
- Data Representation (How would the stakeholder prefer to be informed of the answer to their question, in terms of information representation, and the device used to convey the information?)
- Connections (What relationship does this stakeholder have with other stakeholders?)
- Further Comments:

User Requirements: Informal Carer: Alice

- Stakeholder Alice, Daughter
- Service User Bert
- Care Need Well-Being: Health
- Interest Is Bert OK Socially: Is he healthy: how is his COPD?
- Care Question Does Bert get out for a walk as expected?: Is he having an acute episode?: how well are his lungs working?
- Measure Location & Movement: Breathing Difficulty: Breathing Effectiveness
- Sensor GPS & Mobile phone location: Panic Alarm & Vital Signs monitoring: Peak Flow Meter
- Data Endpoint Log with Timestamp (not waypoints): Alert flag and Vital Signs levels: Peak Flow level
- Data Representation Trend representation on a picture frame: SMS messages on mobile phone: Trend representation on a picture frame
- Connections Discuss with Bert: Discuss with Social Worker: Call Doctor:
- Further Comments:

User Requirements: Informal Carer: Jim

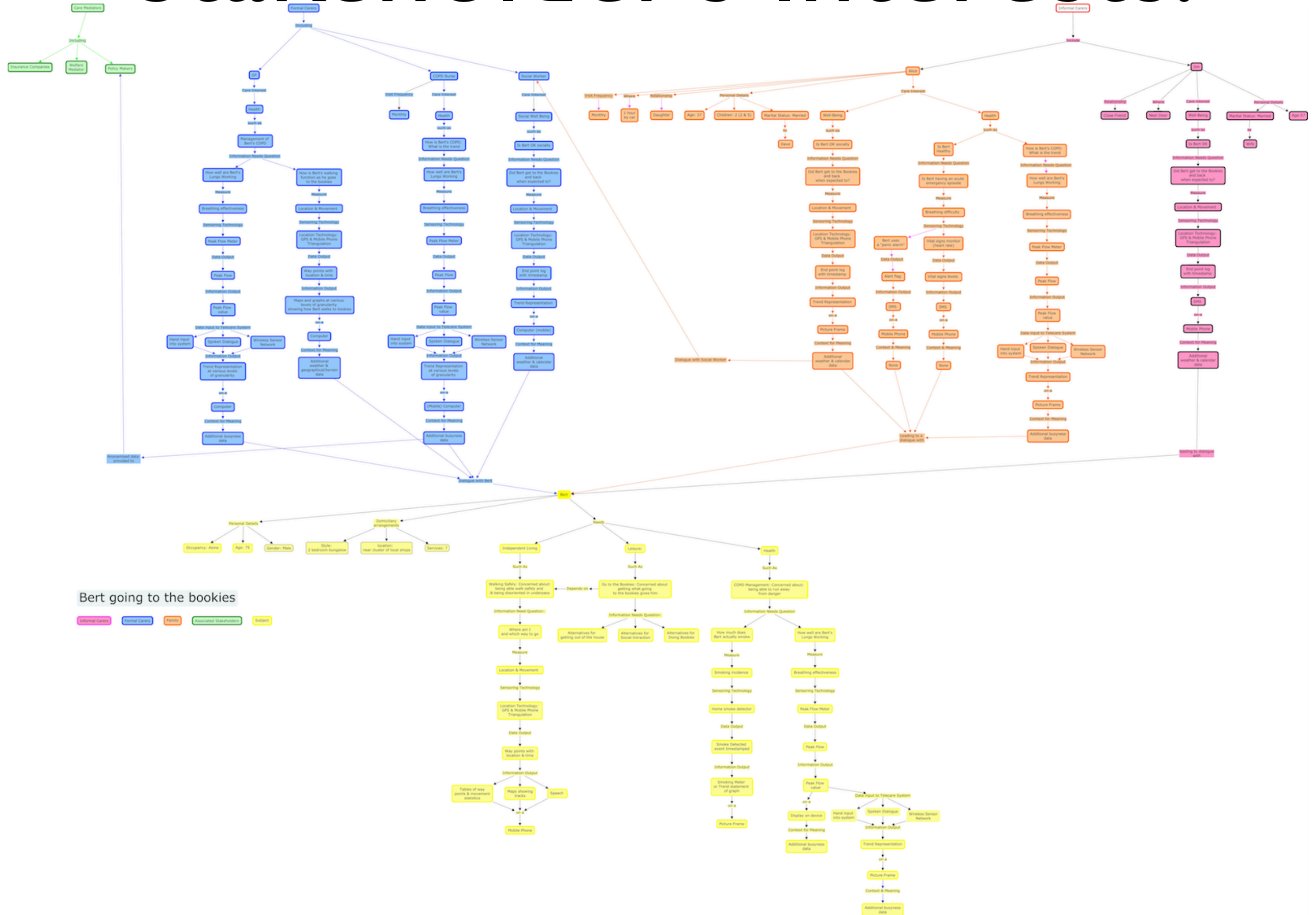
- Stakeholder Jim, Friend
- Service User Bert
- Care Need Well-Being: Health
- Interest Is Bert OK Socially?
- Care Question Does Bert get out for a walk as expected?
- Measure Location & Movement
- Sensor GPS & Mobile phone location
- Data Endpoint Log with Timestamp (not waypoints)
- Data Representation SMS messages on mobile phone
- Connections Discuss with Bert
- Further Comments:

User Requirements: Formal

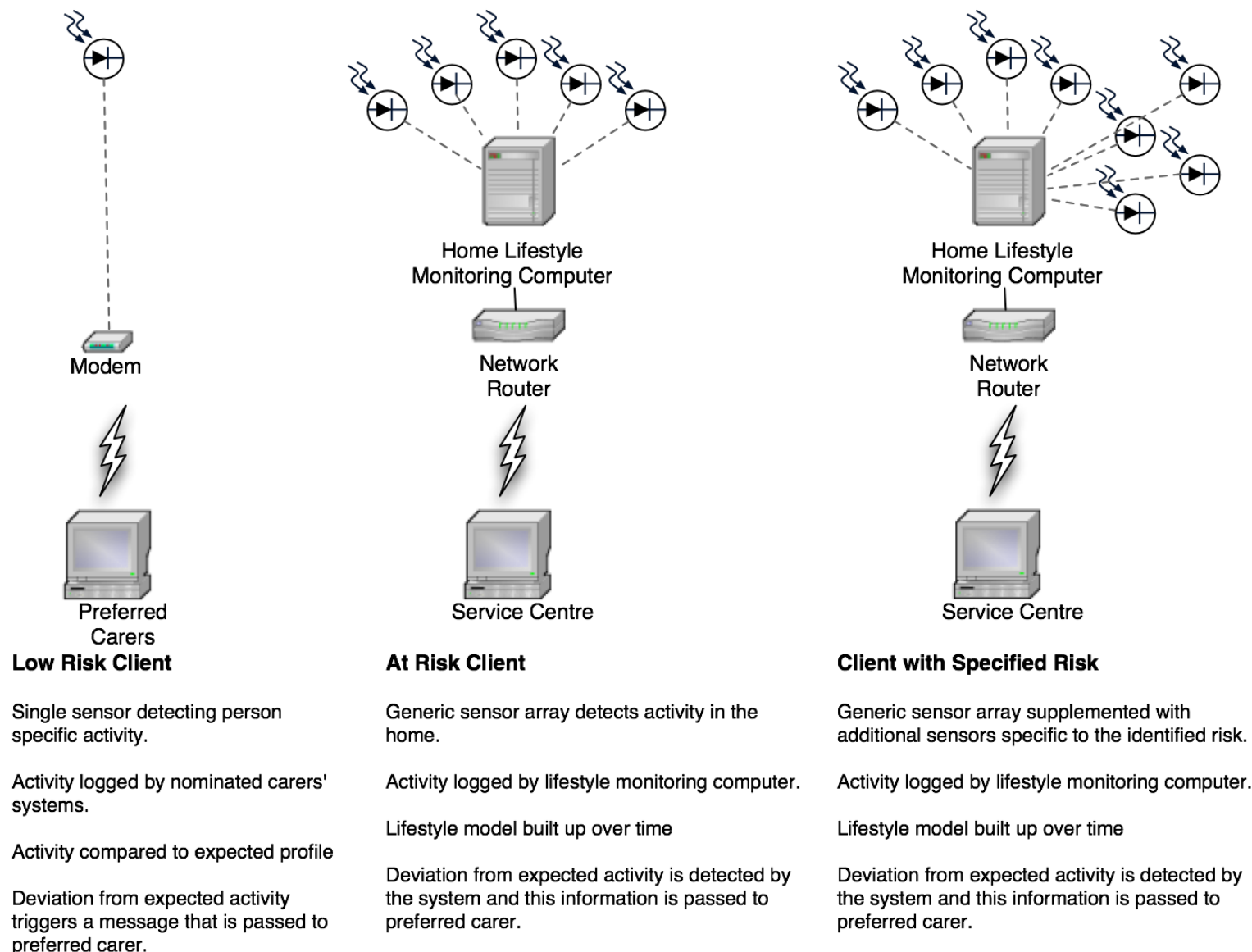
Carer: Family Doctor

- Stakeholder Family Doctor
- Service User Bert
- Care Need Well-Being: Health
- Interest Is he healthy: how is his COPD?
- Care Question Is he having an acute episode?: how well are his lungs working?
- Measure Location & Movement: Breathing Difficulty: Breathing Effectiveness
- Sensor GPS & Mobile phone location: Panic Alarm & Vital Signs monitoring: Peak Flow Meter
- Data Waypoint Log with Timestamp: Alert flag and Vital Signs levels: Peak Flow level
- Data Representation Trend representation within an application interface
- Connections Discuss with Bert: Discuss with Social Worker: Discuss with Specialist Doctor:
- Further Comments:

Stakeholder's Interests:



What should we sensor, what should the telecare Monitor?



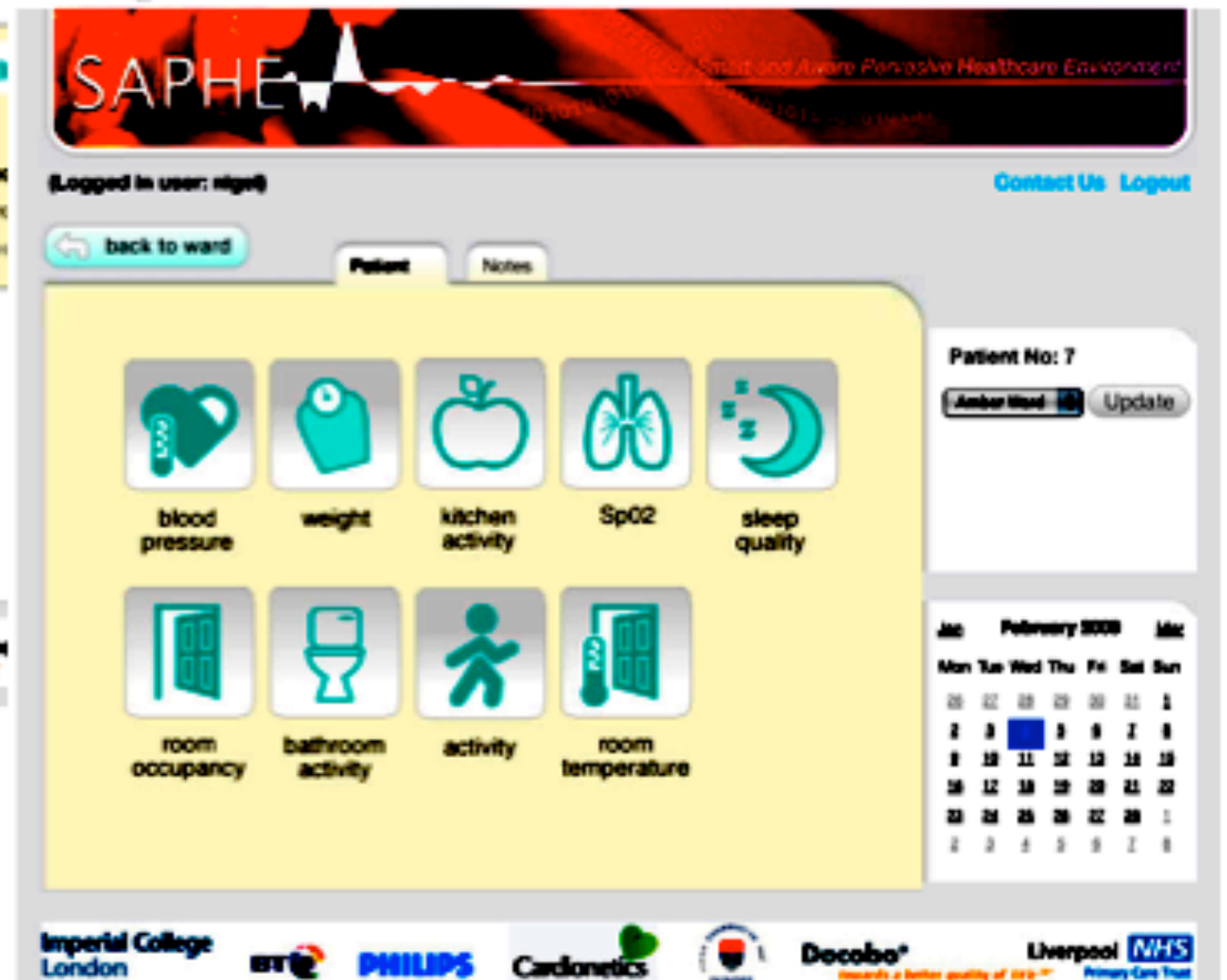
Monitoring Principle

- Monitor only where there is risk or where a specific condition demands it
- Preserve Privacy
- Loss of well-being is revealed by change in behaviour
 - Busyness
 - How much is happening in the home ?
 - Activity
 - What is happening in the home ?
- Is it necessary to detect specific activities?
 - Kitchen, Bedroom
- Respect the Client's Home

How do we know what stakeholders need/

- Ask Them!
 - Focus Groups
 - Individual Interviews
 - Seminars & Workshops
- Model what they know?
- Show them the future?
 - Forum Theatre

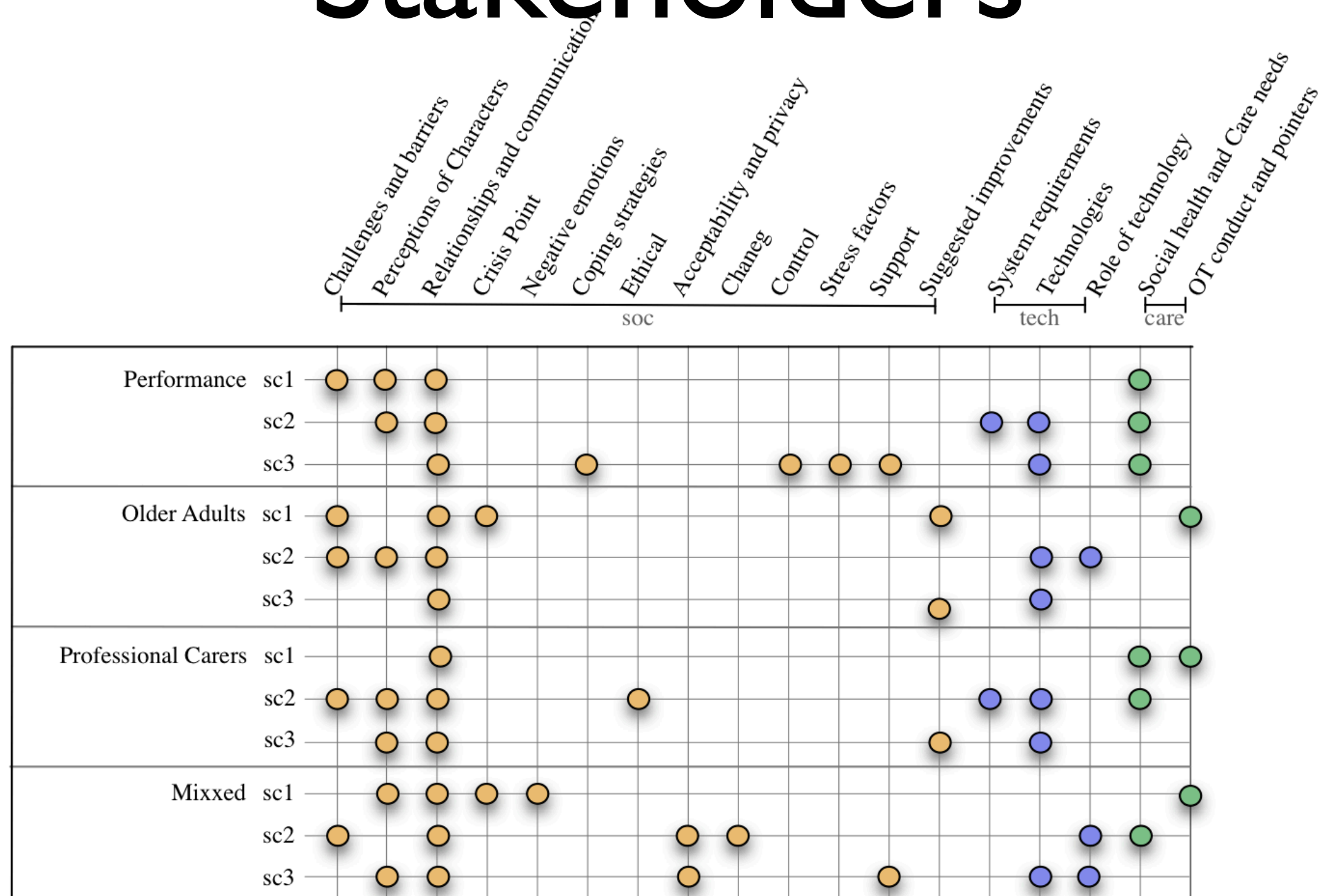
Model what users know ... Community Nurse Interface



Show them the Future ...



Listen to All Stakeholders



Document the Conversations

Stakeholder Care Interest Form

Service User (Name and ID of the Service User)	
Care Need (What care needs does the service user understand that they have?)	
Interest (What is the care interest of the Service User?: In what way do they care?)	
Care Question (What specific question is this service user needing to have answered?)	
Measure (What aspect of the state or behaviour of the service user will be measured to answer the care question?)	
Sensor (What sensor would be used to measure this state or behaviour?)	

Data (What data will be generated by the sensor, and what processing will need to be done to extract phenomena of interest from the data?)	
Data Representation (How would the stakeholder prefer to be informed of the answer to their question, in terms of information representation, and the device used to convey the information?)	
Connections (What relationship does this stakeholder have with other stakeholders?)	
Further Comments:	

Form Completed by:	
Date	

So

- “Telecare is the remote or enhanced delivery of care services to people in their own home or in a community setting by means of telecommunications and computerised services. Telecare usually refers to sensors and alerts which provide continuous, automatic and remote monitoring of care needs, emergencies and lifestyle changes, using information and communication technology (ICT) to trigger human responses, or shut down equipment to prevent hazards.”
- Fit Telecare to all the stakeholders ...

Practical Exercise:

Document the Whole

- Stakeholder (What is the name and role of the stakeholder?)
- Service User (Name and ID of the Service User)
- Care Need (What care needs does the service user have that are relevant for this stakeholder?)
- Interest (What is the care interest of the stakeholder?: In what way do they care?)
- Care Question (What specific question is this stakeholder needing to have answered?)
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