APPENDICES

Fan Yang

CONTENS

APPENDIX A: DATA AND INFORMATION STORAGE

Important data and information acquired in this study classified and stored in the research archive created in OneNote. Below are the screenshots of the archive's three main sections.

Section2 ▾

The interrelationships between the core principles of the project

24 January 2013   12:10

To achieve human-centric innovation, it is important to understand people in the context of everyday life and anticipate this when developing and creating solutions. It is necessary to involve people in the design and creation processes; not solely at the end, as often happens, but already during the 'fuzzy front' of innovation as well as during various steps in the process. This paper discusses the steps that need to be taken to actively involve people in a co-creative way. This includes a different way of researching to collect in-depth insights into people's lives, a different way of applying these insights, and the collaboration of people from different disciplines.

This paper presents a new model/tool/approach that puts people rather than technology in the centre of the design and creation process. Instead of conducting research solely during the later process stages – usually to evaluate prototypes amongst the target groups, this new approach focuses on collecting and integrating people's insights from the very start as well as throughout a company's innovation process. It focuses on a thorough understanding of people and considers people behaviour in its broader social context. It makes distinction between several different phases where research can provide input.

understanding people's everyday life without letting technological roadmaps solely dictate future developments, which is often the case in large corporations.

Starting phase — Inspiration — To understand people's values, needs and experiences in their everyday life context

Middle phase — Ideation and Integration — To translate values, needs and experiences into solutions, keeping context in the forefront

End phase — Conceptualization and validation — To set-up a test approach, evaluating solutions in users' lives

People insights in the design and creation process
"People insights at the fuzzy front of innovation" By Lucile Rameckers and Stefanie

Phase one – inspiration
People insights provide a specific understanding of people's values, needs and experiences in an everyday life context.

Phase two – ideation and integration
People insights are integrated and translated to generate initial ideas. Often underestimated, this phase is the creative heart of the process.

Phase three – conceptualization and validation
Prior to actual validation and idea initiation, solutions are evaluated to see the ext to which they trigger the intended experiences, needs and values, and how they fi everyday life.

conventional prototype or technical demonstrator, both which are more product and technology-focussed rather than user and experience-focussed.
The user experience that the concept is supposed to trigger is tested – not the actual concept or product.

Build a database of company master data with a search engine

The enterprise master data shall be categorized into several groups

Level 1   Rich information
Abstracted information
Level 2
Functions, departments, types...
e.g., Telecare   Telehealth   Marketing   options   End users   Customers   Interaction design   UI design   culture......
Level 3
tactic information   fluid information
tactic information   fluid information

Search: by categories   by key words   by categories + key words

A weighting tool
"A tool can be used to weight information based on people's feedback can be handy." (field trial, considerations to differences on culture and territories)
To select the most viable product solution from trade-offs

Process Mapping (at the outset of the product or service development process)

The purpose of mapping and illustrating the key elements of the NPD process and their frame of relations onto project timelines in the front end is to strengthen the overall plan and manage s... to build a solid base of subsequent research, design and production activities. Process mapping helps players of diverse functions review the key elements of a project, and manage s... expectations and relations as a whole. It aids in structuring NPD activities, managing cooperative work and making participation less elusive (Moogiat & Snook 2007). To be more spe... mapping is a process of : 1)visualizing and customizing the pre-designed NPD process to make it comply with the requirements and features of specific projects; 2) interpreting abstra... more detailed plan of activities; 3) defining why, when and how people participant; 4) outlining the relationships between these participants; and 5) clarifying the responsibilities of p... tasks or phases. The key elements need to be addressed in this process include at least: a project's context; available resources; stakeholders and their individual roles and functions... responsibilities, and level of involvement in each of the project phases; and the estimated output of each phase. Through mapping, the NPD participants are provided with further in... context, the characteristics , the boundary and the process of a project as well as their own roles and responsibilities.

Ideas in creating the brief cr...
Requirements & Estimated f
Process checklist
Explore
Writing
The infrastructure
New key points
New meetings

APPENDIX B: THE PROJECT BRIEF OF THE WORKPLACE STUDY

A project brief which incorporates context, objectives, time frame, responsibility, expected output, quality control approaches, and resources of the workplace research were drafted upfront, and was signed by the company and myself. This document is attached below:

DEVELOPING A NEW APPROACH THAT SUPPORTS SMES IN IMPROVING HHCPS AND ITS APPLICATIONS

PROJECT BRIEF

University College
FALMOUTH
incorporating Dartington College of Arts

Project Name: Developing a New Approach that Supports SMEs in Improving HHCPs and Its Applications
Author: Fan Yang
Version: 4, 26/04/2012

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1. Context

With the aim of exploring opportunities to improve the development processes of home health care products (HHCPs) and its applications, Fan Yang, who is a doctoral research student at University College Falmouth, is proposing this collaborative project with ████ Healthcare Group. This aim of this project brief is to provide a full and firm foundation for the initiation of the project.

2. Objectives

2.1, To support the needs of ████:

- To analysis the process through which ████ develops its products and services and to explore a new approach of increased time and cost efficiency
- To construct a brief creation toolkit for ████ to manage their innovation activities in the front-end process of product/service innovation

2.2, To further Fan Yang's doctoral research:

- To carry out necessary field research to test and to improve its hypothesis, ideas and concepts
- To study the product/services development approaches currently applied by sample companies in the field, such as ████ and its business partners to identify strengths, weaknesses and opportunities
- To analyse the interrelationship between the success of home health care solutions and product/service development techniques applied by the companies in the sector
- To explore how to effectively involve a wide range of stakeholders into HHCPs/HHCSs development
- To review the interactions of the project outcome and to see if it is "fit for purpose"

3. Outputs

1. Documented conclusions from analysis on ████'s product/service development process as an input to point 2.

2. A new innovation management technique focused on the front-end phase of product/service development that Supports SMEs in improving HHCPs and its applications.

4. How the success of the project will be measured?

The outcome of the project is assumed to be a front-end innovation toolkit. With the aim of producing this toolkit, research will be carried out with reference to two of ████████'s products/projects, 1) a Monitoring device and 2) a Telecare IT solution. The Monitoring device will be used as a 'Reference Product'(benchmark). Fan Yang will redesign the concept of this device following the stakeholder-centred design principle. Through this process, ideas of the toolkit components will be generated. Their performance in design development terms will be evaluated by assessing the redesign concepts of the monitoring device against their predecessor.

The ideas of the toolkit components will be developed and assembled into the model of the final project outcome. This model will be applied in the innovation of the Telecare IT project to evaluate strengths and weaknesses against traditional development approaches used by ████████. It leads to the next step in which the model will be revised and further developed into one interactive innovation toolkit.

5. Quality Control

Throughout the development of the project output, Richard Sharp from ████████, Fan Yang and his supervisors Dr Yorick Benjamin and Prof Colin Roberts will organise a meeting to review Fan Yang's work every 2-3 weeks. In the review meetings, the team will discuss research progress, and make recommendations for any revisions to the project plan. If Fan Yang is based at ████████ meetings will be primarily conducted by Skype or similar means. Dr Yorick Benjamin, and possibly Professor Roberts intend to attend one meeting at ████████.

6. Resources

████████ shall provide Fan Yang with access to their project teams and product user groups. It will incorporate approaches such as interviews, observation and workshop. During the project, Fan Yang will work in ████████'s office in Yorkshire for approximately three to four months to conduct research. This duration needs be agreed by Fan and ████████ before the

start of the project. During this period, the tuition fee for Fan's doctoral studentship will be covered by Fan Yang's research funding. ██████will provide financial support to cover Fan Yang's living and transport cost.

7. Reporting Requirements

- To carry out doctoral research, there is an obligation to contribute to human knowledge in the health care area.
- The project must fit the time frame of Fan Yang's doctoral research studentship.
- The conclusions of Fan Yang's research may be used in any conference abstract or publication.

8. Project Planning

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PROJECT PLANNING

(Developing a New Approach that Supports SMEs in Improving HHCPs and its Applications)

Year: 2012

Activities	May	Jun	July	Aug	Sep	Oct	Nov
STAGE 1							
1.1 Defining and planning the project	■						
1.2 Reviewing the context		■					
1.3 Revising the project plan		■					
1.4 Analysing Tunstall products' performance on the market		■					
1.5 Review		∧					
1.6 Analysing Tunstall products with users		■					
1.7 Generating conclusions			■				
1.8 Review (Milestone)			∧				
STAGE 2							
2.1 Project 1 (Research with reference to the Monitoring device)			■				
2.1 Testing and evaluating UCD methods for their application in the FFE			■				
2.2 Review			∧				
2.3 Exploring the best approach to convert FFE information into design specifications			■				
2.4 Review (Milestone)				∧			
STAGE 3							
3.1 Project 2 (Research with reference to the Telecare IT project)				■			
3.1 Developing the outcome model				■			
3.2 Review				∧			
3.3 Testing and improving the outcome model				■			
3.4 Review (Milestone)					∧		
STAGE 4							
4.1 Drawing conclusions					■		
4.2 Review					∧		
STAGE 5							
4.2 Developing the project outcome into an interactive toolkit					∧		

Working in Tunstall's Office

STAGE 1

Stage 1.2 Reviewing the context

Exploring the in-house procedures and development processes used by ████████ for their previous projects through 1) interviews with the main actors including those from ████████ who manage projects and product development process, and ████████'s innovation partners; 2) analysis of ████████ products' technical menus.

Stage 1.3 Revising the project plan

1. Meeting with key people involved in this project to discuss in details about 1) the scope and scale, and the time plan of the projects on which the research will be conducted; 2) the setting up of the milestones; 3) the approach to control the quality and to measure the project success.
2. Revising the project plan considering also the conclusions from stage 1.1

Stage 1.4 Analysing ████████ products' performance on the market

Interviewing the manager of sales and marketing to learn 1) how ████████ sell their products 2) and the general performance of ████████'s products on the market and trends.

Stage 1.6 Analysing ████████ products with users

- Analysing the documents from ████████ on user study and testing
- Undertaking the approaches of observation, face to face interviews and group discussions to research on the performance of ████████'s Telecare Service with users
- Interviewing the product providers

STAGE 2   (Carrying out research with reference to the Monitoring device)

Stage 2.1 Testing and evaluating UCD methods for their application in the FFE

A key aim of this stage will be to narrow down the range of UCD methods that Fan Yang has explored in his previous research to identify those fit for purpose and cost effective; for use in the final toolkit.

- Testing and evaluating UCD approaches such as Inclusion of a Lead User, Participatory Design, and Observation in Project 1 1) to explore their applications in the context of home health care; 2) to explore how to manage front-end activities in HHCPs innovation in a time and cost effective way; 3) to explore how to properly involve stakeholders into the innovation process to improve the outcome; 4) to determine how to identify users' real needs.
- Exploring how and when to involve stakeholders into the innovation process to improve innovation outcomes.

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Stage 2.3 Exploring the best approach to convert FFE information into design specifications

Undertaking approaches such as Affinity Diagram, House of Quality and Contextual Design to explore an effective method 1) to convert user information and opportunities identified in the FFE into design specifications and requirements; 2) and to weight the identified requirements to create a proper design brief.

Stage 2.4 Review

Comparing the outcome of Project 1 with ████████'s existing solution

STAGE 3 (Carrying out research with reference to the Telecare IT project)

Stage 3.1 Developing the outcome model

Developing a model of the design brief creation approach / innovation management process based on conclusions of Stage 2

Stage 3.3 Testing and improving the outcome model

- Applying the model generated in Stage 3.1 in Project 2 to test its effectiveness
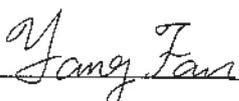- Improving the model in the project

STAGE 4

Stage 4.1 Drawing conclusions

- Analysing results from previous stages to further developing the outcome model.
- Determining how will the outcome model will be packed into an interactive toolkit together with ████████, for example, a platform on web.
- Determining the strategy to develop the final toolkit
- Documenting results conclusions and reporting it to ████████.

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9. Document Distribution

Name	Organization	Role
Richard Sharp	▓▓▓▓▓Health Care Group Ltd	
Dr Yorick Benjamin	University College Falmouth	Director of Studies of Fan's doctoral course
Prof Colin Roberts	Peninsula College of Medicine & Dentistry	Second supervisor of Fan's doctoral course
Fan Yang	University College Falmouth	Doctoral research student

10. Approvals

Prepared By   Fan Yang _Yang Fan_   DATE: 26/04/2012

This document requires the following approvals

Approved By   ▓▓▓▓▓▓▓   DATE: 20.5.2012

APPENDIX C: THE COMPANY'S PRODUCT LINE (IN THE RECENT 20 YEARS)

APPENDIX D: MEETINGS WITH KEY STAKEHOLDERS

MEETING DATES

Participants	Responsibilities	Date
Interviewee 1	Global innovation director (Company supervisor of this workplace study)	31-10-13 10-10-13 11-09-13 12-09-13 23-08-13 09-08-13 27-06-13 09-06-13 03-06-13 22-05-13 17-05-13 10-05-13 10-05-13 06-05-13 03-05-13 17-04-13
Interviewee 2	Product manager of the focused project 1	30-10-13 10-09-13 17-07-13 28-06-13 09-06-13 12-06-13 31-05-13 22-05-13
Interviewee 3	Product manager of the focused project 2	09-10-13 23-08-13 26-07-13 25-07-13

		02-07-13
		28-06-13
		27-06-13
		22-05-13
Interviewee 4	Product manager	31-07-13
		31-05-13
Interviewee 5	Product manager	12-09-13
		09-08-13
		27-06-13
		31-05-13
Interviewee 6	Project manager	18-07-13
Interviewee 7	Project manager	19-07-13
Interviewee 8	Senior engineer	01-08-13
		09-15-13
Interviewee 9	Chief engineer	19-07-13
		27-06-13
Interviewee 10	Territorial manager	26-07-13
Interviewee 11	Sales director	26-07-13
Interviewee 12	Marketer	26-07-13
Interviewee 13	Marketer	26-07-13
Interviewee 14	Service manager	03-06-13
		11-06-13
Interviewee 15	Service engineer	13-06-13

Interviewee 16	Service engineer	15-07-13 05-07-13
Interviewee 17	Innovation consultant	09-09-13 16-07-13 15-07-13 13-07-13
Interviewee 18	Quality manager	18-07-13 10-09-13
Interviewee 19	Representative of one of the company's design partner 1	17-04-13
Interviewee 20	Representative of one of the company's design partner 2	27-06-13
Interviewee 21 & 22	Representatives of one of the company's design partner 2	17-07-13 27-06-13

KEY POINTS FROM THE MEETINGS:

The brief creation tool

Aim:

1. Coaching

2. Inquisitiveness

To ask questions rather than to be a passive platform

To quality decisions

Preferred form of the tool:

A web-based (HTML)

Advantages:

Standard format

Easily hacked/customized

Representation is flexible

The format of the tool for presentation in PhD:

Web page application layout (To mock up in other programs)

Comments

1. Using different platforms

50% of time was consumed by transferring the format of documents across platforms

The current platforms used for documenting and presentation in The company partner are:

Word(print out), Excel(Primary program. It is not a print-out program) and PowerPoint

Recording and presenting data in a format which is distributable across platforms will significantly increase working efficiency

2. The synchronization of documents

The current fashion of data management is storing independent instances in the central drive which is confusing and difficult to exploit in daily works. There is a lack of master data.

These comments are related to the conclusions made in the thesis: increasing the consistency of information

Identified Problems & Wishes

To lengthen products' life span

To speed the NPD cycle

The product development teams from the company partner are under pressure to speed product development cycle. The pressure is coming from 1) the political change and 2) the competition in the market.

To improve product change management

A project manager pointed out it is difficult to add new features to existing products which is, however, often required to meet new requirements from diverse customers and to keep the existing product competitive. Thus, a NPD approach which properly considers the need of revising and improving products after launch is what the company partner requires.

Another project manager pointed out business requirements change often during the NPD. As a result, designs of products have to be revised frequently while The company partner' product development teams are under-resourced to do the design revisions properly in some cases.

The need for constant change and renewal

This must be addressed as part of the organizational decision making approach

The desire to create long term competitive advantage enabling a sustainable business.

Sustainability of Innovation

Marketing

The marketing department does not have a proper understanding of their own products \.

They do not understand :

1) What are the products for?

2) What the customer requirements are?

3) And why will customers buy the company partner's systems instead of those from The company partner's competitors?

The company is weak at capturing micro level market knowledge.

Market size, market share, market trend, the potential of new technologies for NPD

The marketing department does not have a proper understanding the functionality of their own products and systems.

To form an effective group to gain customer insights   (interviews to 5 project managers)

Sales   +   Product Manager

(Facilitating meetings)   (Asking questions, interpreting data, and presenting data back to the team)

Not addressing the competition

As one leading supplier in the area of telecare and telehealth, the company partner shall also lead the development of new generations of products and to make The company partner's competitors respond to what it claims. In contrast, the company partner tends to passively respond to the market competition. One example is the XXX product. In order to maintain its leading position on the market and to further expand its market share, the company partner may need to have an increased awareness of the market changes and to foresee the performance of its competitors in a better way. In NPD, these knowledge has been proved to be critical in supporting product mangers to set tactics and to address clearer project boundaries. It also helps to avoid requirements for design changes in later phases of projects which however happens often in the company partner. The way which the company currently used to gain customer and competitor insight need to be assessed.
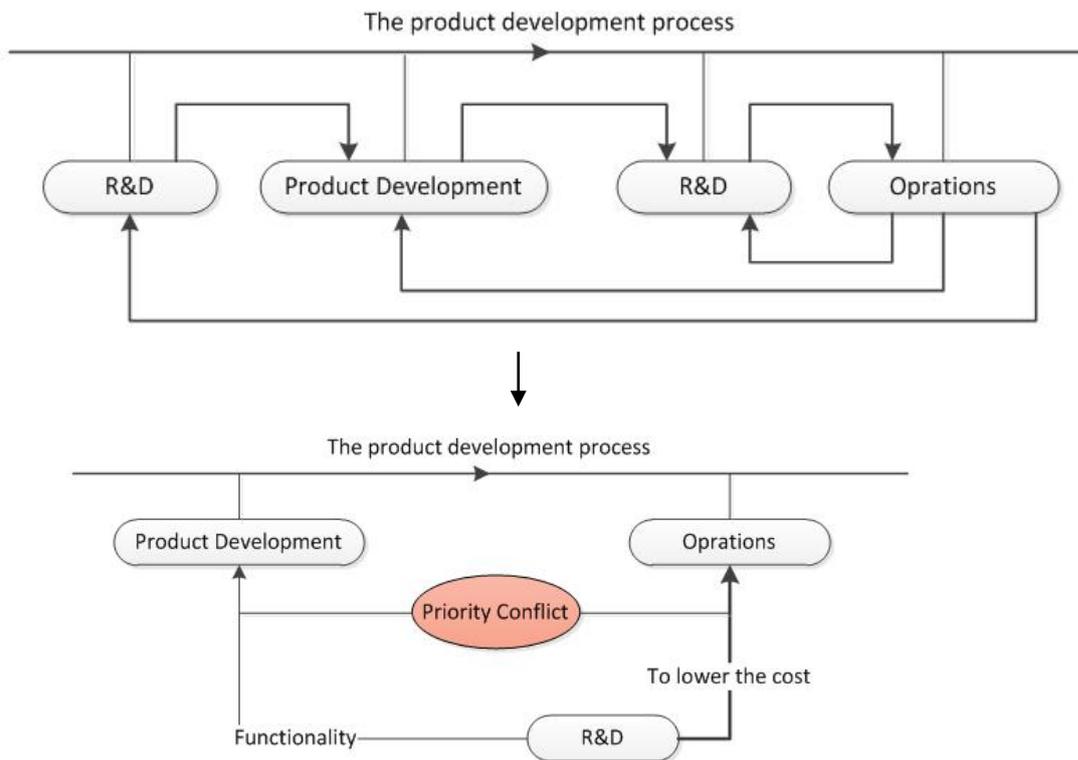
Market research related functions are usually realised by the marketing department. The majority of market and customer information is provided by the Sales department instead. The marketing department here traditionally focused only on promotions. Sales team can indeed provide valuable customer information and some of these information also reflect the changes of the market, however, this channel cannot provide enough information to ensure a full understanding of the market individually. Further, market and customer information through this channel is prone to bias and can hardly be controlled with regard to the main purpose of interactions between the Sales team and customers as well as the expertise of the people from the Sales team.

The company partner shall review and integrate the methods and approaches it employed in collecting and transferring market, competitor and user information.

When carrying out activities with the purpose of gaining insight into customers, market trends and users, people shall think more from the design perspective.

The marketing department shall have the ability to assess the saleability of a new product/service concept.

Ideas on revising the company partner's product delivery process

The product development process

R&D → Product Development → R&D → Oprations

↓

The product development process

Product Development — Oprations

Priority Conflict

To lower the cost

Functionality — R&D

The company partner's product delivery process has not been updated in around five years.

Main criticisms from Mark Jennings:

1) People ignore the in-house process.

2) The current gate process does not suit projects of various type and size.

(A faster process for some less complex projects is required. But key activities shall never be ignored.)

3) Poor information from Service/Field engineers fit into the current process.

4) More time shall be spent on the feasibility and planning stage to avoid major changes happen later.

(A better resource and capacity plan shall be made (Quality plan template)

5) The company partner are trying to do too many projects at the same time.

6) How to store the information? The project data shall be stored in a consistent way that people can easily access.

The company partner needs a full understanding of

1) their own products and their capacities in NPD;

2) the marketplace that they are operating;

3) the drive affecting that marketplace;4) who are the main players in the marketplace and their shares.

These information shall be accessible by whoever need them in the company and be

presented in a common format.
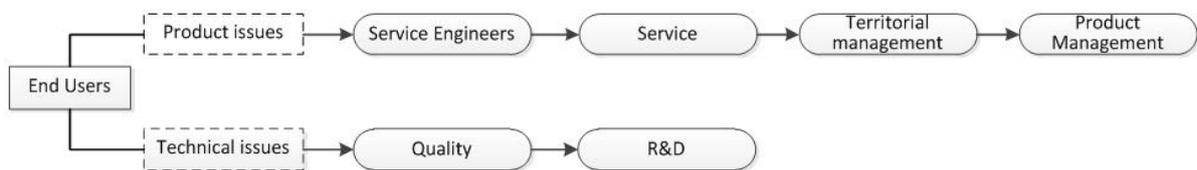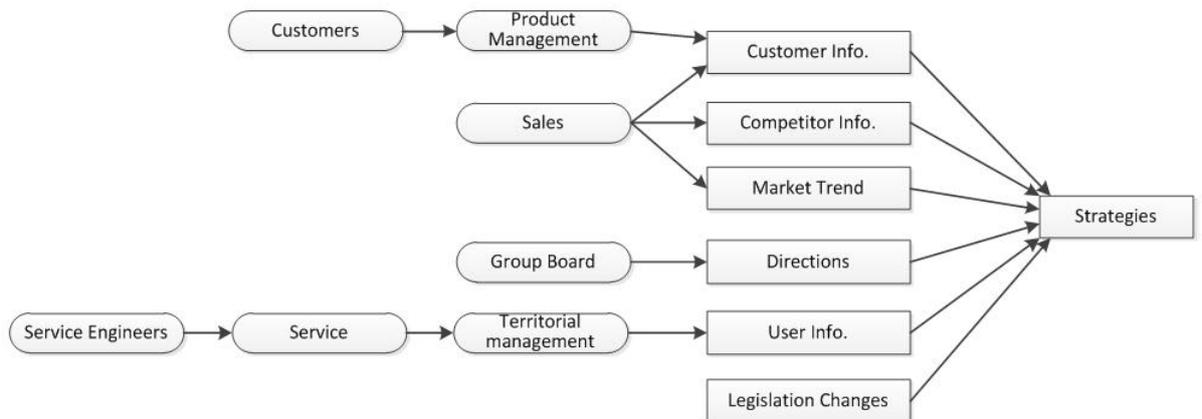
"The market is desperate for new products" –per an interviewed project manager

The Sales of The company partner is made up of two groups in terms of functions, the external sales team and the internal l sales team. The external sales team, as described by The company partner's UK sales manager Toney walker, plays the role of "hunter", they are responsible for searching business opportunities and building up relationships with potential customers. The internal sales team plays the role of "farmer". Its team members continue developing and enhancing the initially established relationships and interacting with identified customers daily.
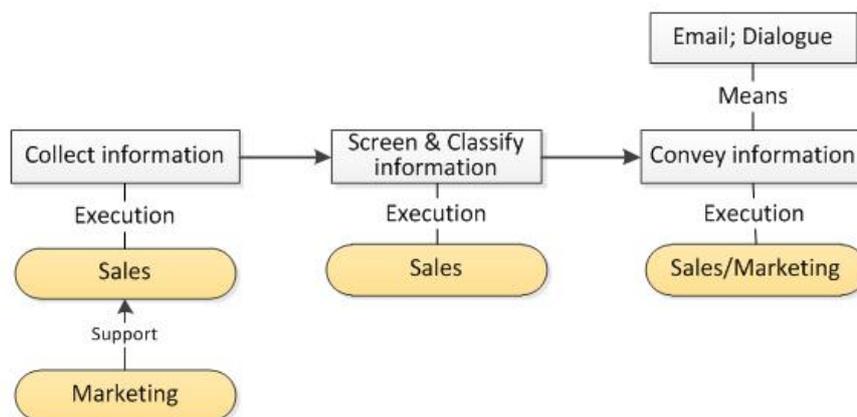
Gathering market and customer information

Approach: only dialogue and not regularly

Hitting the target (primary) and gathering market and customer information (secondary) are the two functions of the Sales department in the company partner. These two functions shall be realised on the premise that people who carry out these functions understand the current situation of their own company and the functions and performances of their own products as well as those from competitors. This is achieved in the company partner by providing the sales teams the document "Sales support". It is a blue print created by the Sales together with the Marketing and the R&D. It has been proved as a very helpful tool in supporting the Sales teams. This document, like all other tools, need to be kept fresh to ensure a satisfied performance. However, it has not been updated in three years as pointed out by Tony Walker.

Collecting market and customers information is carried out via dialogues with customers by the Sales. However, these dialogues are usually carried out with the priority of hitting the target. Few activities are organised exclusively for understanding market, customers and competitors, or considering these as main tasks. Further, there is no identified support or guide on carrying our market and customer research to ensure the dialogues will reveal information of high quality.
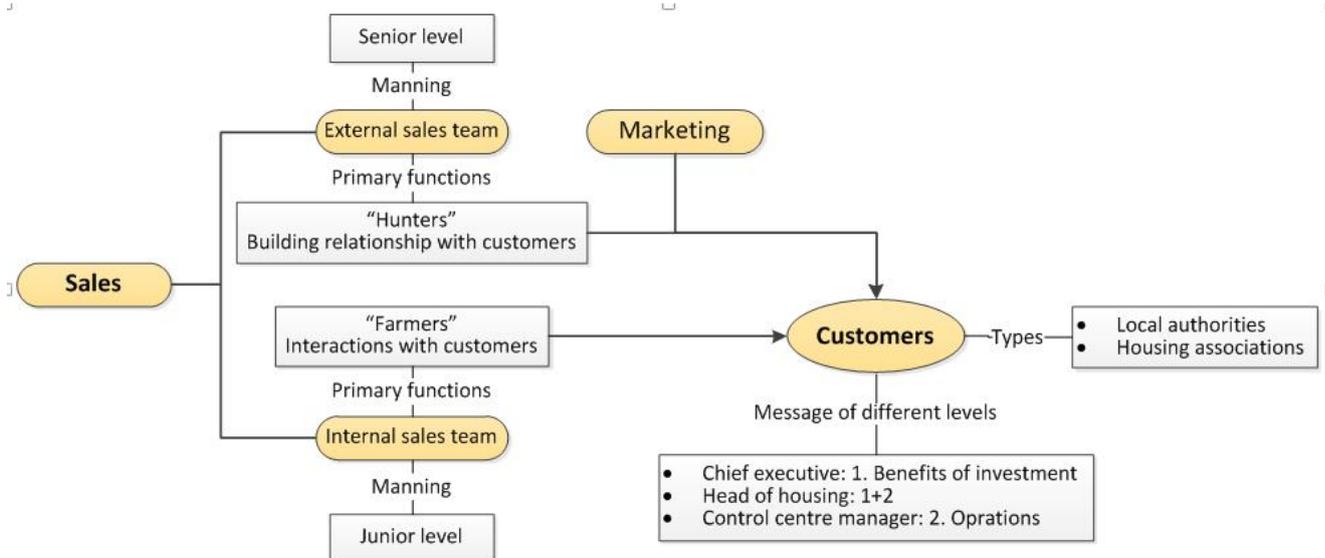
Screening information

Market and customers information collected by the sales are screened and classified initially in the Sales before delivering to other departments. There is no formal approach applied in screening information.

Transferring information

Approach: Dialogue and it is not in a controlled fashion   Emails

 Overview

The Information Transfer I refer to in this report/thesis is a more complex process than moving message from a source to a receiver via a communicational channel. It is a more collaborative process which involve several sections, and may involve several people or several groups of people. A complete information transfer shall include four stages: translating, recording and storing, conveying, and presenting/receiving.

 The transfer of market and customer information inside the Sales department as well as from the Sales to other departments is not very well structured and managed. As pointed out by Tony Walker, finding a solution for the loss of information during transfer is an urgent need. Dialogue is the main approach applied to transfer the information currently. Email is the other method used for the same purpose. Dialogue is a direct way of communication and it helps to avoid misunderstandings. However, these dialogues are conventionally not regular and are not in a controlled fashion. As a result, there is no guarantee that the information will reaches people who require them in time, and valuable information can be lost or neglected before conveying happens.

 (Face-to-face conversation is the best form of communication)

Recording and Storing

Through the information transfer, there is no structured way of recording and storing the information. This status raises several problems:

First, information can be easily lost in the process of transfer. It will be difficult to recover the lost information when transfer is via dialogues from person to person and from department to department without recording and storing.

 Second, it increases the difficulties of ensuring the richness of the information when they reach people who require these information to forge business strategies or to design new products and services. In the product design area, for example, it is not a common practice that designers have direct contact with users and customers though it benefits understanding them as addressed widely in literature. In practice, designers are little involved in research activities, receive rather abstract outcomes and conclusions from other departments such as the Sales, the Marketing and the Consumer research. These outcomes and conclusions often lack necessary details that can inspire designers with new ideas or to be used to create an analytic benchmark. Misinterpretation and misunderstanding can also happen in the process without being noticed. Thus, people performing market and customers study need to record and convey data following a structured fashion. Easy tools such as a template will support them address all basic but necessary details. Adopting an unified format also simplifies the management of information.

 Third, it makes it difficult to trace back to the information source. Even when research findings are well conveyed to people carrying out work in the following stages, they will not

include all details that may be required for various purposes. Thus, the need of tracing back to the information source often present. Without recording and storing the information in the process, it is often complex and sometime is even impossible achieve this goal.

Fourth, it is difficult to keep the old information alive. A large percentage of information discovered in research for one specific aim will also be valued in other scenarios. The primary research in this project shows that when streamlined communication processes are adopted, it is particularly difficult to keep the information alive. Building a data base which has information stored in an easy to understand manner and can be easily accessed by people of different functions in the company increases research efficiency substantially and may create opportunities in the future.

Conveying and Receiving (lacks of presenting)

The Sales department is the "sender" of information and the direct "recipients" are the Product development department and the Marketing department. The sender first screen and process the information they have identified through dialogues with customers. The valued information will then be classified into two types according to their functions. The type of information which is considered to be useful for NPD is conveyed to the product development department. Those information which is likely to feed the forging of marketing strategies and product promotions is delivered to the Marketing department. Throughout the information delivery, dialogue and email are the main approaches currently employed. Interviews to key people from both of the information sender and the recipients show that the delivery of customer and market information is carried out neither regularly nor in a controlled fashion.

The information recipients in the process of transferring market and customer information can be classified into two levels. The Product management group and the Marketing group are at the primary level. They receive information from the Sales groups directly. The Product management team weight the value of the information received, and then feed those which they think are most appropriate in NPD into the formulation of new products proposals. The proposals are evaluated at the Strategic filter by the Group board afterwards.

The Marketing department further process the information they received and then pass the information up the business hierarchy.
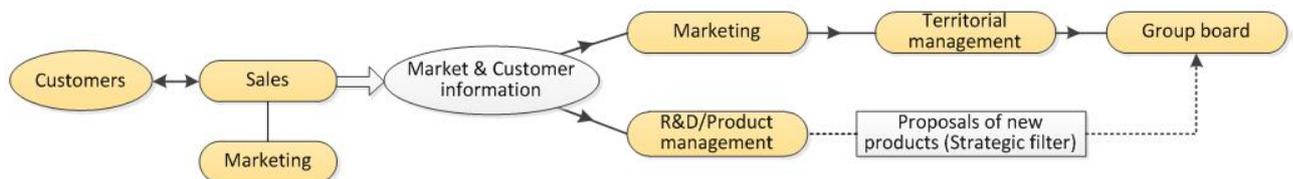
The above situation started to change in a recent project the goal of which is to develop a new generation of telecare system. In this case, project meetings are organised around every two weeks, and to have people from the Product development, the R&D, the Marketing and the Sales present. The project meetings are planned to involve managers of the four groups in the

early stage of the project and to absorb their input in the project progress. The interviews to the meeting participants and the studies to the meetings progress were undertaken in this project and the results prove that this change in the process helps in promoting ideas generation, opportunities identification, and communications and collaborations between departments and groups. As described by Tony Walker, it is a quick and efficient way compared with non-regular and non- controlled dialogues. However, this change happens in this specific project only, and some people inside the company doubt if it can be considered as a revision to the company's NPD process.

Decision making

The company is not good at decision making.

It was traditionally a manufacturing led company

Conflict between Product Management Groups and the Options

```
                              │
                              ▼
                    ┌──────────────────┐
                    │  Decision Making │
                    └──────────────────┘
                              ▲
                              │
                        ╭───────────╮
          ┌────────────▶│ Disagreement│◀────────────┐
          │             ╰───────────╯               │
          │                                          │
          │                          ┌───────────────────────────┐
          │                          │  ┌─────────────────────┐  │
          │                          │  │      Oprations       │  │
          │                          │  └─────────────────────┘  │
          │                          │  ┌─────────────────────┐  │
          │                          │  │      Marketing       │  │
          │                          │  └─────────────────────┘  │
   ┌──────────────────┐   Support    │  ┌─────────────────────┐  │
   │Product development│◀────────────│  │        Sales         │  │
   └──────────────────┘              │  └─────────────────────┘  │
                                     │  ┌─────────────────────┐  │
                                     │  │       Service        │  │
                                     │  └─────────────────────┘  │
                                     │  ┌─────────────────────┐  │
                                     │  │        ......        │  │
                                     │  └─────────────────────┘  │
                                     └───────────────────────────┘
```
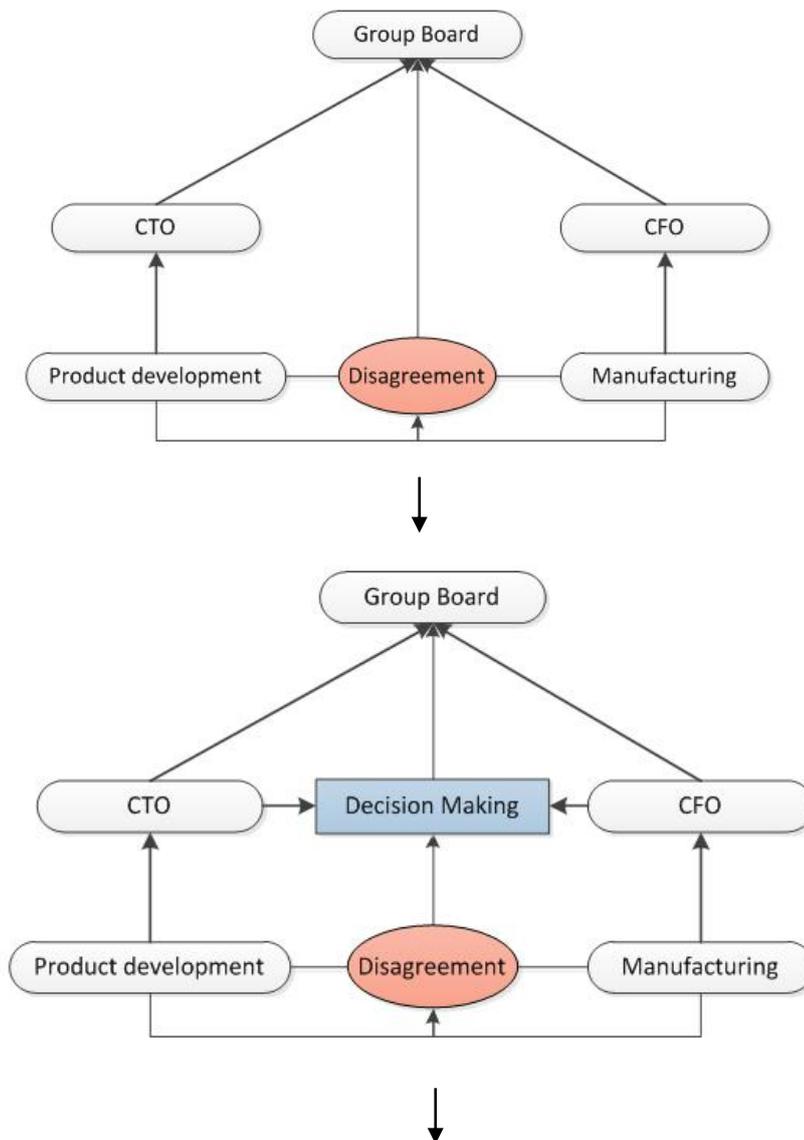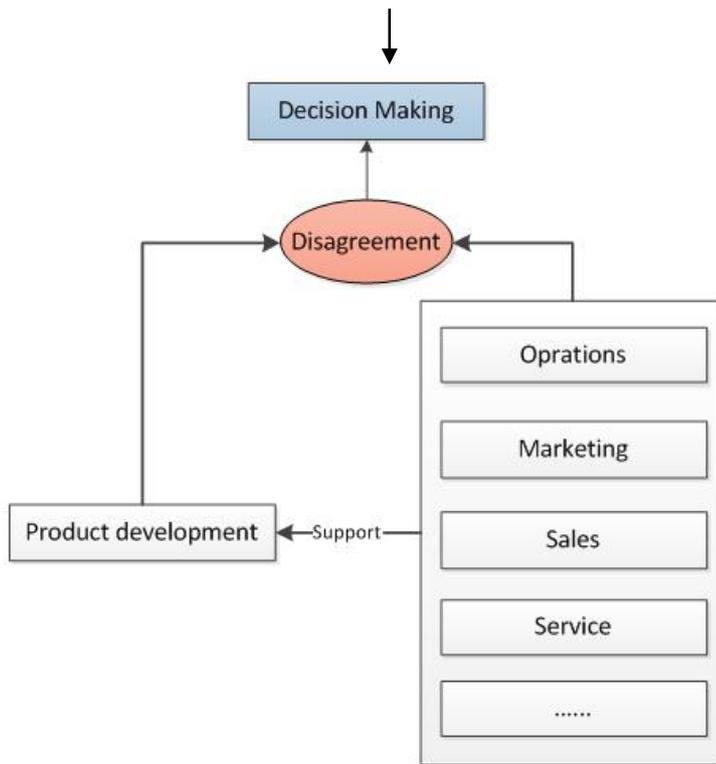
Some important notes taken form meetings with the company partner's team members:

Product Specification

Playing to meet the dead line rather than going to meet what the project should

Product specification | Product Brief _____ Design Authority
                                                    (Technical view)
• more detail   Key features of product
  (R&D)   (Product Development)

Work of Kevin

Estimate: what work is required for R&D ?
what approvals need to be ?
How much cost is going to be involved ?
        (plastic ⟶ Tooling)
The time line.
The complexity of the project

① Product Spec. ② Project Plan ③ Risk Management ④ Quality Plan
⑤ Statement of Work.

⟱

Development Contract

34 / 275

- Product Spec. need to be more detailed.
- Product brief must be 100% percent. / consistent

↘ Lack of details. (Too high level)

Customer Experience Group.   (Hayden Pickup)
[Customer Acceptance Testing   (Royce Wilson.)
↳ Last Phase
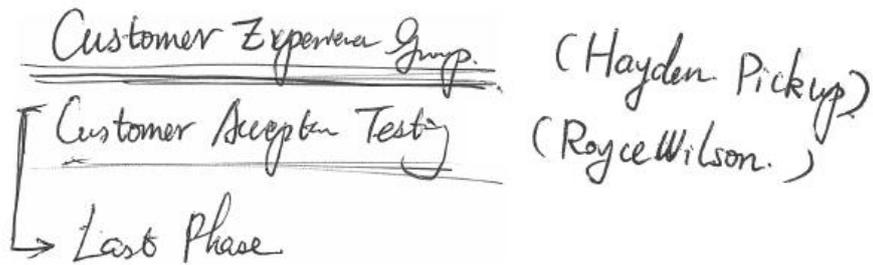
Customer Acceptance Testing (C.A.T.)

~~Can we have~~
Idea: To add User Acceptance Testing (U.A.T.)

users end of views [U.A.T.] ⌐
↓ support   — To bring to the early phase of the project
↓
Dismissal ⟵ [C.A.T.]
idea of view
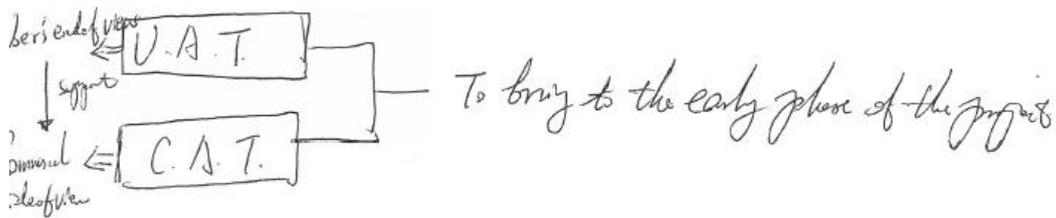
The briefing process in the front end

A product design brief is mostly required when an independent designer or a design agency executes a design on behalf of a client. The decision of creating this document or not shall be made based on the considerations of the size and the type of a project when the product design work is executed is in-house. This decision shall be made as part of the quality plan at the very front end of the product delivery process in order to keep consistency in a project's progress.

Who is a new product designed for?

To know the target:

Who will be the direct users of a new product?

Who will be the customers/buyers of a new product?

To understand the target:

What are the characteristics of these two target groups?

What are the direct and latent requirements and wishes of the two groups?

What are the similarities and differences in the identified wishes and requirements of buyers and users?

To properly set up design boundaries:

Boundaries of design shall be identified and presented in a clear manner at the early stage of a project. (Product functions; user experiences; criteria for and areas of application; etc.) It is essential to ensure that all key stakeholders of NPD understand aware the design scope and the scope evolvement at the same level. Once the design boundaries of a project have been agreed and confirmed by the whole team, major changes regarding to shall be avoided. If such changes must happen, feedbacks must be taken from all key stakeholders, and impact of these changes on the related activities in the process, for example, resource restraint assessment must be carefully considered before progressing. To ensure that the design boundaries are properly set up, a company may consider developing its own benchmark for all projects and building it a section of one gate meetings in the front end.

Quality control in the brief creation:

- Control the quality of the process
- Control the quality of collaborations
  Quality of in-house collaborations
  Quality of collaborations with third parties
- Control the quality of inputs
- Control the quality of outputs
  In order to ensure that the final solution meet the requirements defined at the beginning well, outcomes produced in each stage of the whole project cycle shall be supervised in an ideal scenario. In order to speed up a project cycle, SEMs which usually under pressure of resources often perform poorly in translating and documenting stage outcomes in the

process, even those stages which can bring about vital impact on a project progress. Cases studies on suppliers in the area show that in some projects, product specifications were documented after the working prototype had been built and a product design brief was neglected when a third party was hired to carry out the design work. These activities always produce problems and sometimes even lead to the failure of a project. To control the quality of stage outputs, the NPD process shall clearly indicate what outcomes need to be produced in which stage, and what are those outcomes considered to be necessities of project progress. The process shall also state who is going to be responsible to review individual stage outcomes and by which method. When looking for an approach to manage quality of outputs, considerations must be given to the approach's applicability to project size and types, a company's organization and other related issues.

- Control the quality of communications
- Ensure the consistency of projects (documentation, requirements evolvement , etc.)
  All key stakeholders of a project must be informed of the vital decisions made in the progress.

The quality of business data directly influences the effectiveness of business processes and the quality of the business decisions made. Yet it's typical for data about important customers, suppliers and products to be housed in multiple information silos, with no consistency among them. In fact, according to the Tower Group, 50% of enterprises separately maintain master data in 11 or more systems.

Other influencing factors:

- Identify primary roles and responsibilities of the project staff
- Identify those monitoring and controlling actions that will be conducted to control quality throughout the project's life. Quality policies, procedures, criteria for and areas of application, and roles, responsibilities and authorities.
- Indicate responsibilities for activities such as mentoring or coaching, auditing processes, participating in project reviews, etc.
- A consistent process to manage the creation and development of product, project and design briefs and product specifications;
- An approach to oversee the project progress
- An approach to track the progress in the front end of projects , to ensure that business strategies and high level requirements are properly interrelated and transferred into detailed product or service innovation requirements and finally into solutions which fit for purpose.
- Ensure key players aware of their responsibilities
- Use single trusted views to improve the effectiveness of strategic decisions (Improve Strategic Decision Making & Business Agility)

APPENDIX E: THE COMPANY'S NPD PROCESS

Project Quality Plan will identify all required development
stages and the documents and activities required.
Validation plan will identify the validation required in each
development stage and the specific risks associated with all disciplines
which must be eliminated for progression to the next phase.
Risk Register - Minimum risks must be those identified in the
Validation Plan by phase.

dates based on market requirements

Minimum requirements
Signed Product Specification
Quality Plan
Resourced Dev Plan
Confirmed Business Case

Development plan
pre agreed
by Functional heads.

Product spec and
project planning.

Development
Contract
Product
Specification and
Plan agreed?

Yes

Specs, plans and
development funding
authorised

**Internal
Communication**

No

Formal Dates
update

Commit date -
(Externally communicated)

If 95% commit date, signals authority to
use by S&OP, and Market

Target Date -
Agreed by project team

Target date used by project team

Commit date underwritten by R&D Management

Target date agreed with Project team

Each review
of the prima
Risk Regist

Development Stage Reviews
Typically,
- **Prototype**
- **Alpha**
- **Beta**

```
┌─────────────────┐      ┌─────────────┐          ┌─────────────────┐        ┌──────────────┐
│Design Specifications   │ Documents   │          │   Technical     │        │ Authority to │
│ Validation Specs  │───▶│ Approved    │───▶      │   Concept       │  Yes ──▶│ design.      │
│  Draft User       │    │             │          │   Review.       │        │              │
│  Documentation    │    └─────────────┘          │   Design        │        └──────────────┘
└─────────────────┘                               │ Specifications  │
                                                  │ Approved and    │
                                                  │ distributed?    │
                                                       No
```

Development stage

Risks ren
as defin
Validatio
for Dev S

Verification   Validation

Formal
update

Documents under change control:

1. Product Specification
2. System Design Specification
3. Software Functional Specification
4. Hardware / Software / Mechanical Design Specifications.
5. Hardware / Software interface Specification.

Other documentation if required:

1. Draft User interface documents

Formal Dates
update

Commit date -
(Externally communicated)

Commit (
(Externally con
post each stag

Target Da
Agreed by pro

Signal Code 6

OPMENT

Project Manager accountable for management of all activities and publishing commit dates.

w is targetted in confirming the status
ary risks identified for the stage in the
ter and Validation Plan.

No

No

No

Engineering
Release.
Is all Engineering
data developed
and accepted?

Yes

noved
ed in
n Plan
Stage?

Yes

All Design
Stages
complete?

Yes

CAT Activities

Risks confirmed
removed by
Trials?

Yes

Yes

Yes

Yes

Build Released
Product

Formal Dates
update

l Dates

date -
nmunicated
e review.)

Controlled
Release
Can we release it for
field trials?

Yes

Authority to
Field trial

Commit date -
(Externally communicated)

ate -
ject team

Target Date -
Agreed by project team

Signal Code 6 Or 9

OPMENT

```
        Factory NPI          Production risks    Yes      General Release      Yes      Authority to          Product release.
          build               removed?                   Is it OK for general          release.             product Subject to
                                                              release?                                       Engineering change
                                      No
```

Signal Code 40 OR 41

Market facing representatives accountable for the product life management.

Gate 6 Ongoing Performance Review
Should we still make it?

No

Yes

Periodic review

Remove from sales and create Withdrawal plan

Gate 7 Withdrawal
Can we withdraw it?

Yes

No

Periodic review

7.3 Design and development

7.3.1 Design and development planning

The organization shall plan and control the design and development of product.

During the design and development planning, the organization shall determine

a) the design and development stages,

b) the review, verification and validation that are appropriate to each design and development stage, and

c) the responsibilities and authorities for design and development.

The organization shall manage the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility.

Planning output shall be updated, as appropriate, as the design and development progresses.

7.3.2 Design and development inputs

Inputs relating to product requirements shall be determined and records maintained (see 4.2.4). These inputs shall include

a) functional and performance requirements,

b) applicable statutory and regulatory requirements,

c) where applicable, information derived from previous similar designs, and

d) other requirements essential for design and development.

These inputs shall be reviewed for adequacy. Requirements shall be complete, unambiguous and not in conflict with each other.

7.3.3 Design and development outputs

The outputs of design and development shall be provided in a form that enables verification against the design and development input and shall be approved prior to release.

Design and development outputs shall

a) meet the input requirements for design and development,

b) provide appropriate information for purchasing, production and for service provision,

c) contain or reference product acceptance criteria, and

d) specify the characteristics of the product that are essential for its safe and proper use.

7.3.4 Design and development review

At suitable stages, systematic reviews of design and development shall be performed in accordance with planned arrangements (see 7.3.1)

a) to evaluate the ability of the results of design and development to meet requirements, and

b) to identify any problems and propose necessary actions.

Participants in such reviews shall include representatives of functions concerned with the design and development stage(s) being reviewed. Records of the results of the reviews and any necessary actions shall be maintained (see 4.2.4).

7.3.5 Design and development verification

Verification shall be performed in accordance with planned arrangements (see 7.3.1) to ensure that the design and development outputs have met the design and development input requirements. Records of the results of the verification and any necessary actions shall be maintained (see 4.2.4).

7.3.6 Design and development validation

Design and development validation shall be performed in accordance with planned arrangements (see 7.3.1) to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Wherever practicable, validation shall be completed prior to the delivery or implementation of the product. Records of the results of validation and any necessary actions shall be maintained (see 4.2.4).

7.3.7 Control of design and development changes

Design and development changes shall be identified and records maintained. The changes shall be reviewed, verified and validated, as appropriate, and approved before implementation. The review of design and development changes shall include evaluation of the effect of the changes on constituent parts and product already delivered.

Records of the results of the review of changes and any necessary actions shall be maintained (see 4.2.4).

7.4 Purchasing

7.4.1 Purchasing process

The organization shall ensure that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product on subsequent product realization or the final product.

The organization shall evaluate and select suppliers based on their ability to supply product in accordance with the organization's requirements. Criteria for selection, evaluation and re-evaluation shall be established. Records of the results of evaluations and any necessary actions arising from the evaluation shall be maintained (see 4.2.4).

7.4.2 Purchasing information

Purchasing information shall describe the product to be purchased, including where appropriate

a) requirements for approval of product, procedures, processes and equipment,

b) requirements for qualification of personnel, and

c) quality management system requirements.

The organization shall ensure the adequacy of specified purchase requirements prior to their communication to the supplier.

7.4.3 Verification of purchased product

The organization shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.

Where the organization or its customer intends to perform verification at the supplier's premises, the organization shall state the intended verification arrangements and method of product release in the purchasing information.

Notes taken form meetings with project managers

Sales —— Customer.

~~Competitors~~
(Secondary Research)? —— Competitors
Current Situation

Marketing → does not understand → current products

[• What is the product for?
  • What the customer requirements are for a system?
  • Why they will buy our system compain to a competitor's system

[Back end. current functions. branding.......]   knowledge

Size of market. market share ____   * Micro level of Market requirements

Tunstall is ~~feak~~ weak bit : ←_____   Trends, ____
                                                  Cowl the technology change anythr

"knee jerk" "Tynetec"

"Alarm telephone Market" 2% /   70%.   "Tunstall react things. they do not drive things"
              Lifeline #1.

" The business has needs ① a full understanding the market place we are operating; the drive affect that market place. ② who the main player are on that their market share, ③ and a full understanding of products and capabilities (product, company). "
                          (Understandable)

L need to be accessible by whoever. Who need these in a common format:
          Idea situation. to   Customers
Marketing [Organise a group. to   [Sales] —— [Product Management] ——
get Customer input. (facilitate meeting) (Ask question, interpret data;
                                            Presented back to the business

cost against benefit.

"Nobgal at decision making."

Product management ←——→ Operations

Conflict

"Manufacturing - led Company"

CEO

Product Development   Conflict   Manufacturing

Cost functionly

GPO (Gary lord)

- Decision Making unit)
Position

Manufacturing - led R&D team

Manufacturing — Product development — Marketing/Product deployment led R&D team

OPERATIONS

MFG ENG MGR. — ALEX SINGLETON.

TEST   METHODS
                          STEVE MORRIS
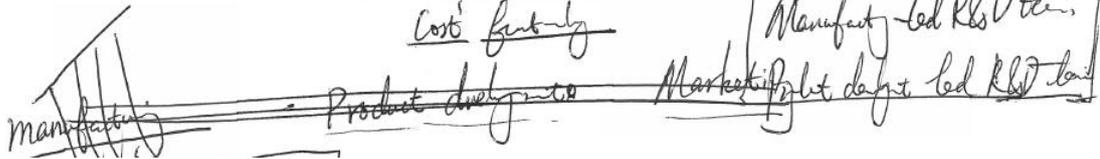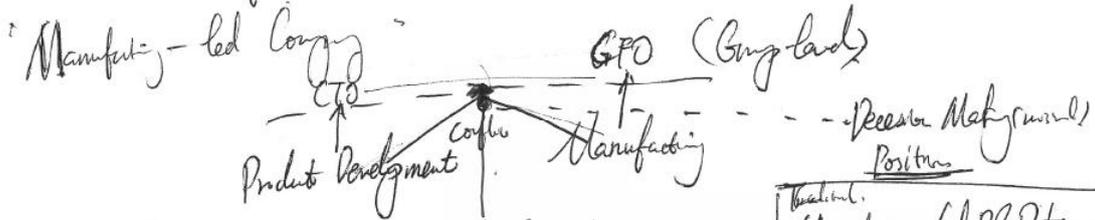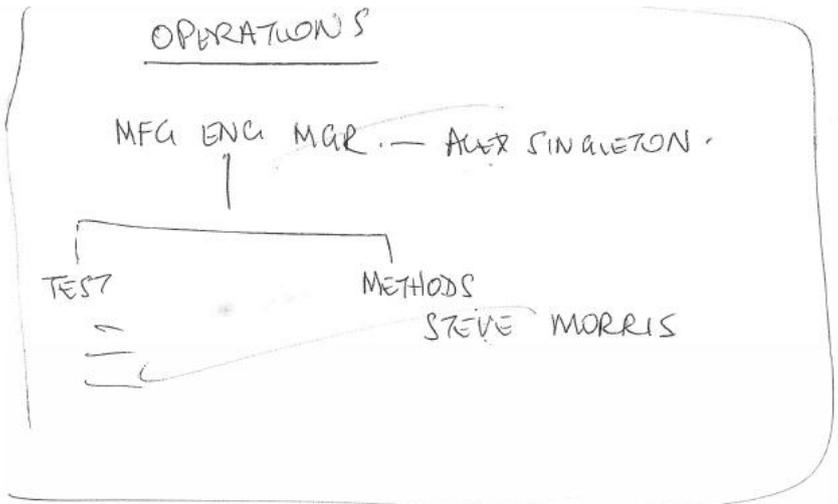
OPERATIONS
PURCHASING.

OPERATIONS,
PLANNING   (Production plan)

all the way through

TECH SUPPORT GROUP. — Service?
                                                (lead)

PRODUCT MGT   Magazine

TERRITORY REPS.   MKTG (end)

(start)   SALES (start) (end)

I/P.

Proto type. Phase I.

System ux Review.

I/P.

Reviewed By : Via :

New design.

WEAKNESS

Revision Design Spec. Features list

Wireframe.

No Functional Spec.

Build Phase II.
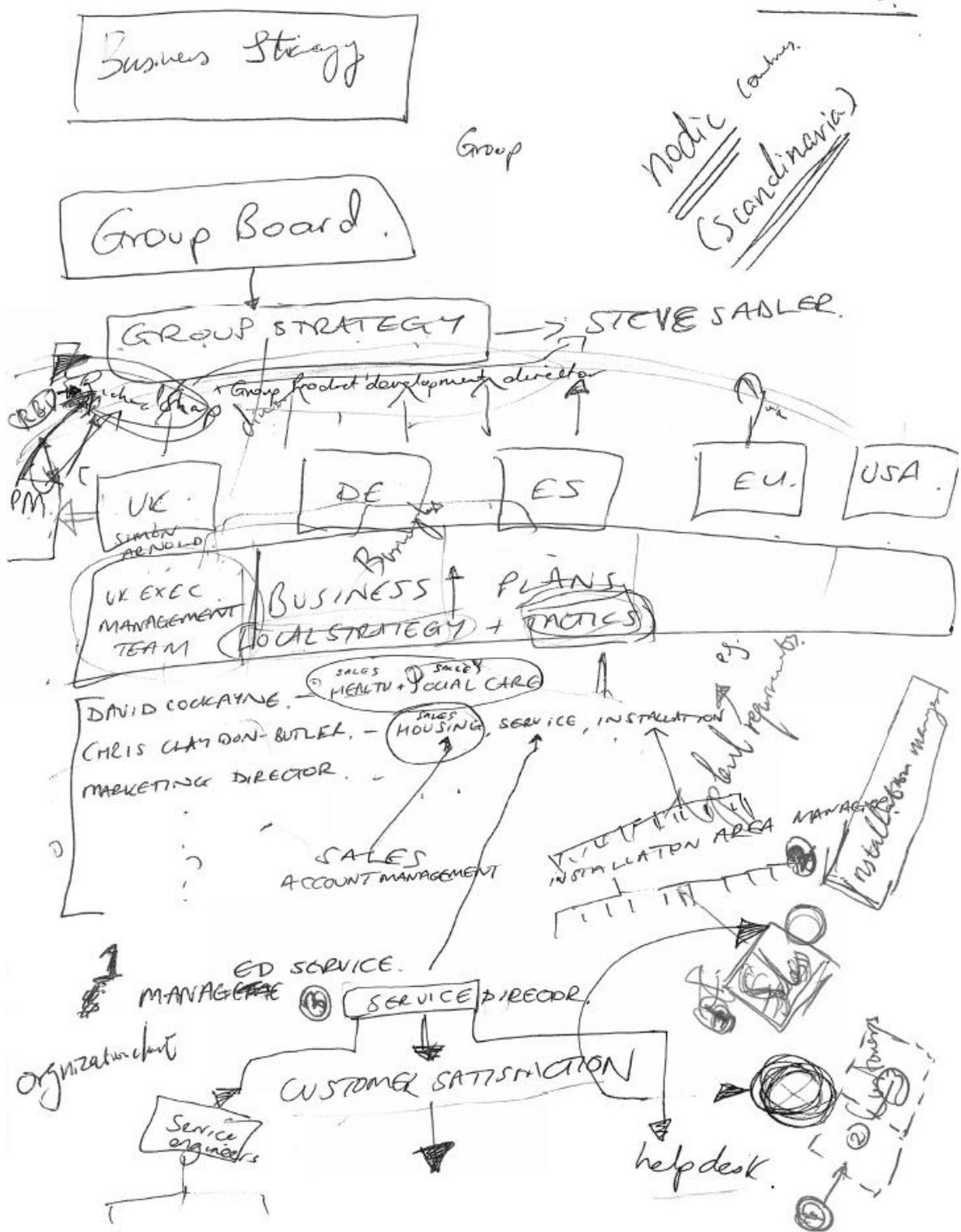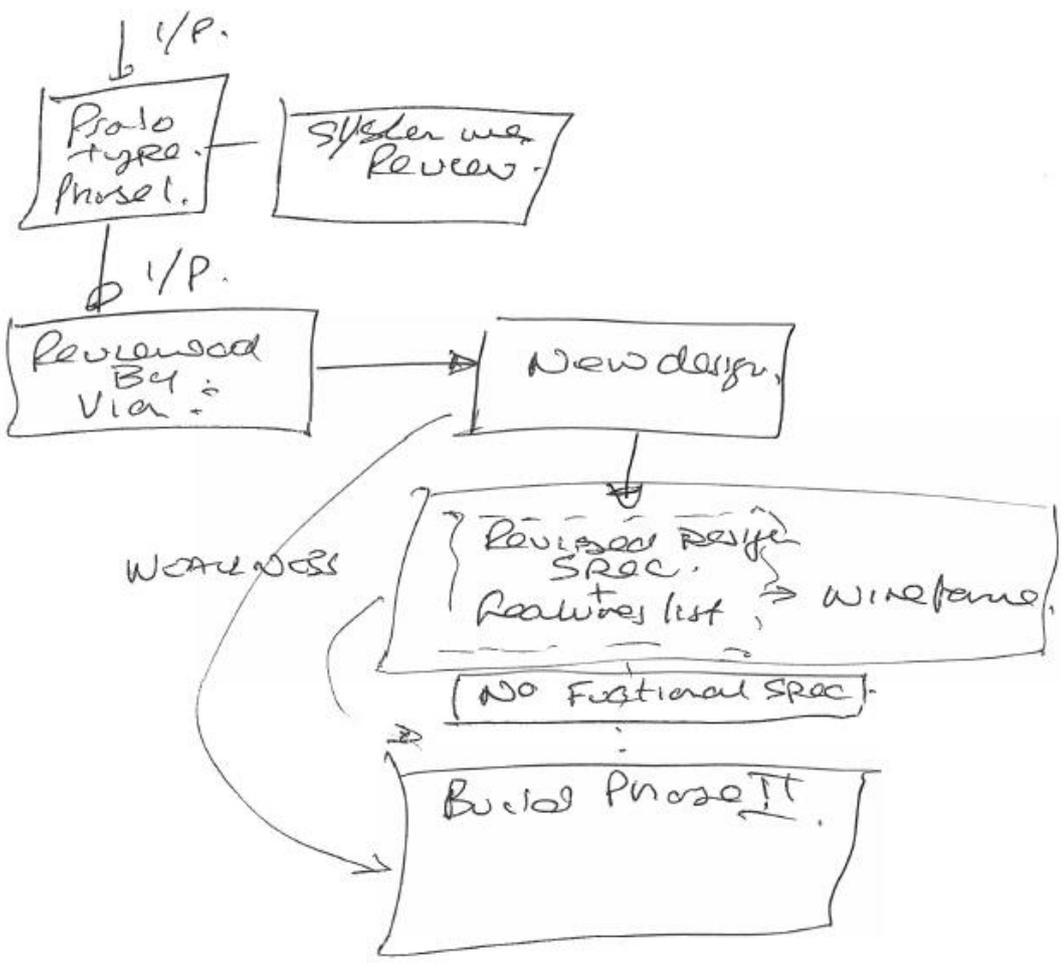
ISSUES POINTED OUT BY TEAM MEMBERS

Main criticisations.

① People ignore the in-house process.

② A faster process for some less complex projects. (but ensure key actions *not missed?*) The current gate process does not suit all types of Tunnell projects.

Poor information from server / folders you fit into this process.

③ More time on the _Feasibility and Planning_ Stage. Avoid to avoid major changes later. (Quality plan template;)

✱ Process in-house has not been updated in around 5 years.

④ Trying to do too many projects at the same time ‼

Better resource / capacity plan.

Competitor Info for ......
Customers → Product Management
Sales / Competitors
Customers
ⓘ Market trend
Legislation changes

in a easy consistent way people can access.

⑤ How this information is stored.

(Responsible. to do it, effort to do so, ____

Product Development.   Operations.

R & D

Product.   Price.

Priority Conflicts.
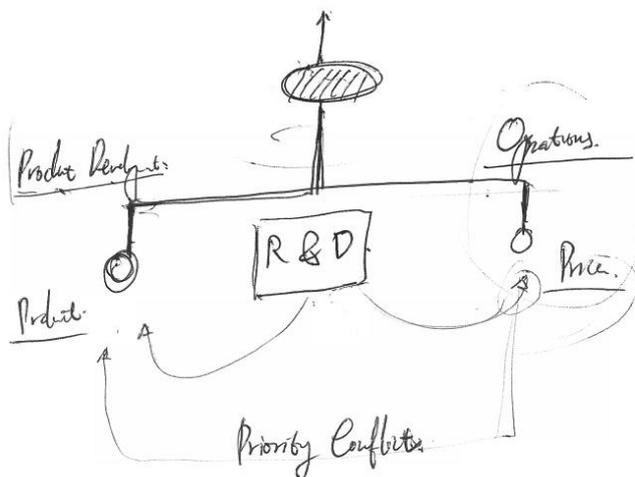
Centralized marketing group
To bring a product to ~~Total~~ Market Turnbull.
3 month ———— 1.5 year.

1. Need someone who takes market opportunity to help translate it into product brief.
   • takes product spec after development and translate that into market ~~myth~~
   ~~at side with~~

2. Underestimate marketing leadership

Market proposal ————×————→ Product Spec.
                    feature missed
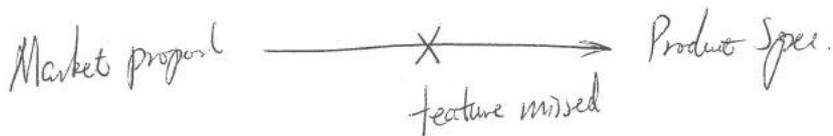
~~Database~~
○ Feature request data base (idea)

M.P. →→ ◇   ◇   ○→ ◇   ◇   ◇ ◇
   S.F.   E.F.   Development Control
                                        spec change.

market input | development input
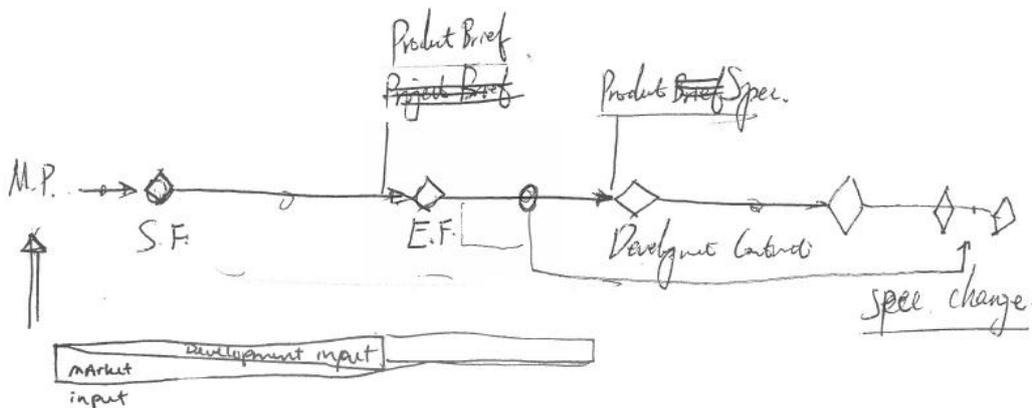
Marketing : ¹Market Communications (~~Total~~ marketing activities)
² Product Marketing ~~product~~ (1 Identify market requirements
            2 Translate those into product requirements
            3 Be the voice of the market in the development phase
            4 To communicate back when the product is available to facilitate good market activities)

Sales —— Customer.

~~Comeptitors~~
(Secondary Resource)? —— Comeptitors

Current Situation

Marketing → [does not understand] current products
    ⌐ • What is the product for?
    └ • What the customer requirements are for a system?
      • Why they will buy our system compain to a competitor's system.

[Back end. current functions. branding ___]

Size of market . market share ___ ⁕ Micro level of Market ~~information~~ requirements.
                                          knowledge
                                    Trends, ___
Tunstall is ~~feeb~~ weak bit : ←___   Coul the technology change any thn

---

"knee jerk" "Tynetec"

"Solarm telephone Market" 2% / 70%.   "Tunstall react things. they do nt drive things"
            Lifeline V1.

: The busn ~~has~~ needs ① a full understing the market place we are operating, the drive affect that market place. ② who the main player are on ~~that~~ their market share, ③ and a full understbly of products and capabilities (product, copy). "
                                          (understbale)

L: need to be accessible buy whoever who need these in a common format.
            Idea situation. to   Customers
    ~~Mark~~ | Orgnise a group to   [Sales] ——— [Product Manynt.] ~~├├├├~~
             Get customer input.   (facilitaty meety)   (ask question, interpret data,
                                                            Present back to the busnes

S. F.

Sensor management
Commercial. management

Richard
Zoom out.

Mark

← Government policy ← Electricity (situation)

← Customers ←

opportunistic projects ← (customer driven)

Short term Tactical ← (business driven by budget target)

Environmental impacts
(short term perspective)

yes to your achievement
Short term views
to meet short term targets

Ownership

Culture
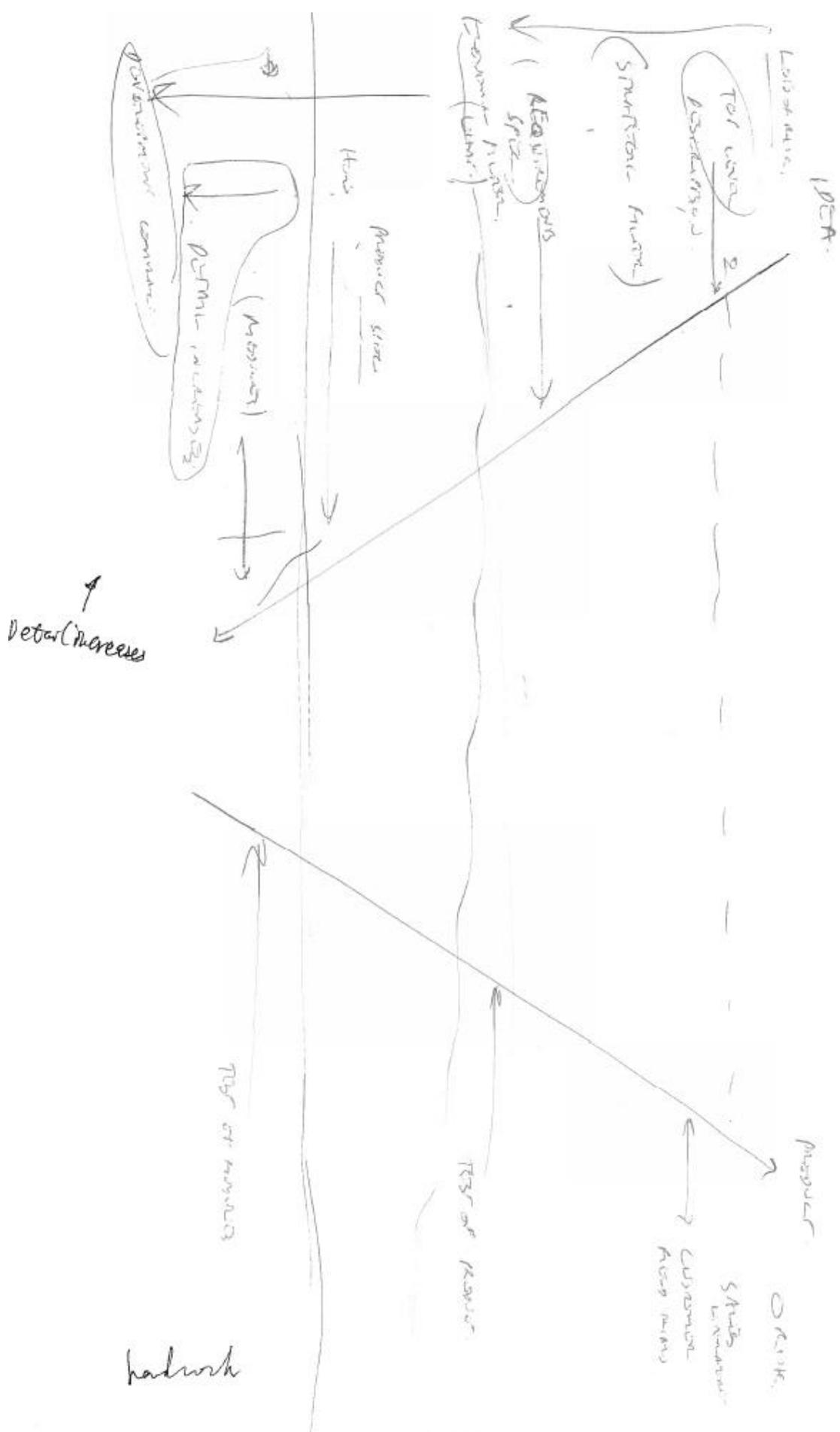
APPENDIX F: TESTING PRODUCTS WITH USERS

SAMPLE PHOTOS TAKEN DURING THE USER VISITS
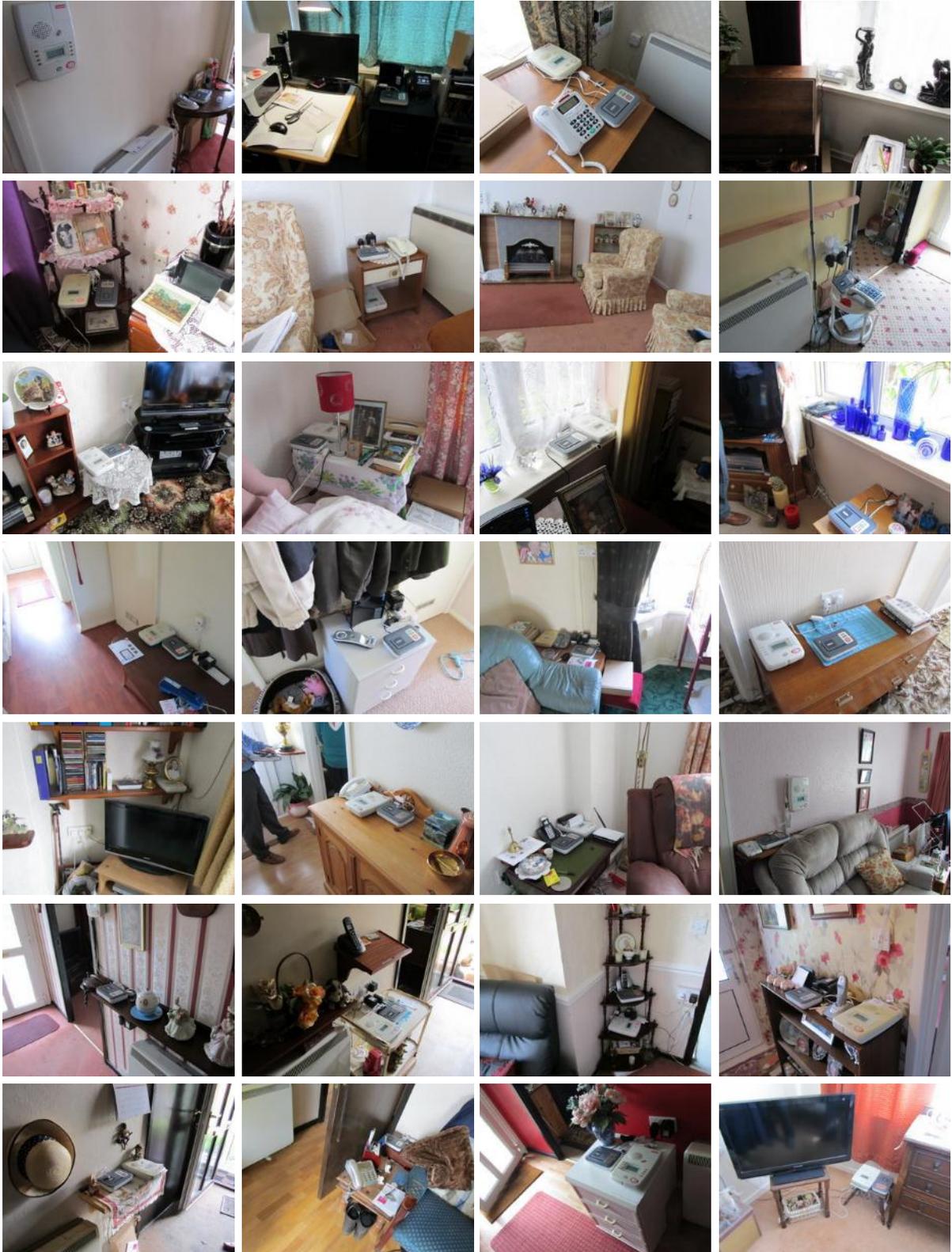
COMPLETED QUESTION SHEETS (1ST ROUND USER VISITS)

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID _90/_   Photo number _01_ _____   14/06/2012 - 15/06/2012

User Context

Age Band | | 40-   ☐ 40-49 | | 50-59   ☑ 60-69   ☐ 70-79   ☐ 80-85   ☐ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____ _____

Household Number _____ _1_ _____

Accommodation Types
☑ Bungalow | |Terrace   ☐ Detached house   ☐ Semi-detached house | _ Flat   ☐ Flat (Sheltered Scheme)

Installation Position ~~Mains~~ EX tention fitted

How many times and how often did the users
activate the ~~XXXX~~? _4 years._

_____ _never_ _____ (easier with pendant)

How many times and how often did the users
use the pendant?

_____ _3 ∽ 4 times in the last year_ _____

Whether the installation position of the unit is the
representative of the house temperature?

☑ Yes | |No

▮ Lower than the house's average temperature

▯ Higher than the house's average temperature

Is there any other digital equipment
within 3 meters?

☑ Yes |No

_1. TV._
2. Digital photo~~frame~~
3. Phone.

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Bedroom
Living Room
Hallway

3m

Digital equipment within 3m

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID __902__   Photo number __02, 03__   14/06/2012 - 15/06/2012

User Context

Age Band   [ ] 40-   [ ] 40-49   [ ] 50-59   [ ] 60-69   [ ] 70-79   [ ] 80-85   [✓] 85+ **92**

Gender   [ ] Male   [✓] Female

Occupation   [ ] Full-time work   [ ] Part-time work   [✓] Retired   Other _____

Household Number   __1__   ____

Accommodation Types
[✓] Bungalow   [ ] Terrace   [ ] Detached house   [ ] Semi-detached house   [ ] Flat   [ ] Flat (Sheltered Scheme)

Installation Position

1999 — 2012.   *(pendant in the bedroom)*

How many times and how often did the users activate the ~~XXXX~~

Support worker used it only (2-3 times a year).
The user ~~didas~~ has never used it

How many times and how often did the users use the pendant?

_____   _____

Whether the installation position of the unit is the representative of the house temperature?
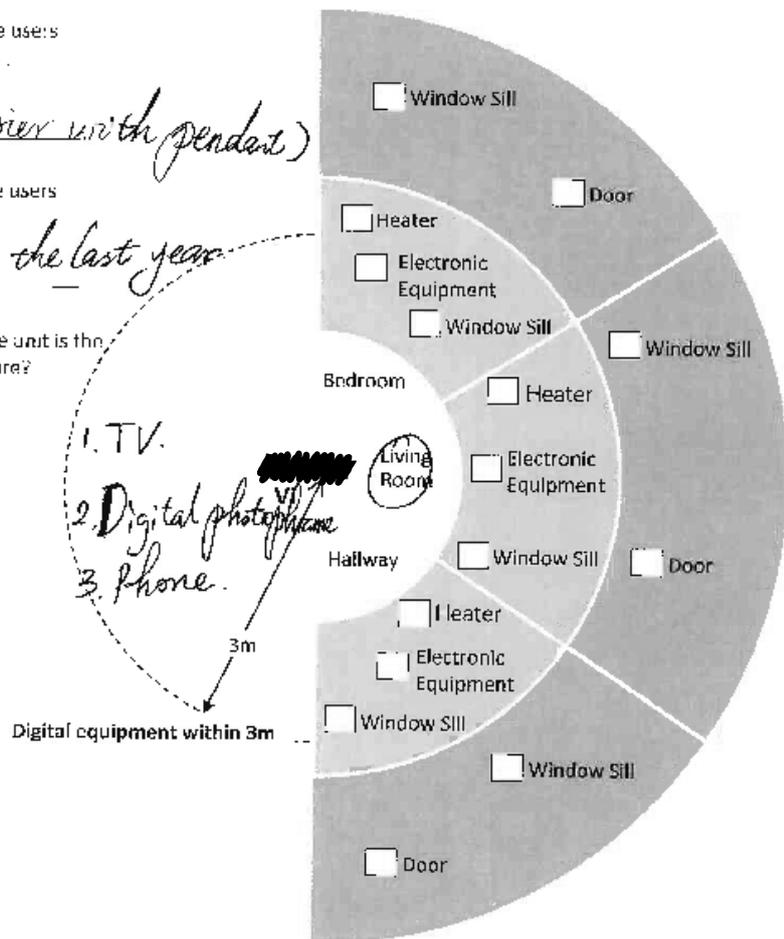
[✓] Yes   [✓] No

[gray] Lower than the house's average temperature

[light gray] Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

[✓] Yes   [ ] No

Bedroom / Living Room / Hallway diagram with:
- Window Sill
- Door
- [✓] Heater
- Electronic Equipment
- [ ] Window Sill
- Window Sill
- [✓] Heater
- Electronic Equipment
- Window Sill
- Door
- Heater
- Electronic Equipment
- Window Sill
- Window Sill
- Door

T.V.

Vi ~~XXXX~~

3m

Digital equipment within 3m

Installation of the ~~█████~~ unit for the field trial

Unit ID _9o3_   Photo number _o4_

14/06/2012 - 15/06/2012

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☑ 70-79   ☐ 80-85   ☐ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part time work   ☑ Retired   Other _____

Household Number _1_

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

about eight years.

How many times and how often did the users activate the ~~█████~~

~~At~~ 1-2 times a week.

How many times and how often did the users use the pendant?   _on the wrist_

about 3 times

Whether the installation position of the unit is the representative of the house temperature?
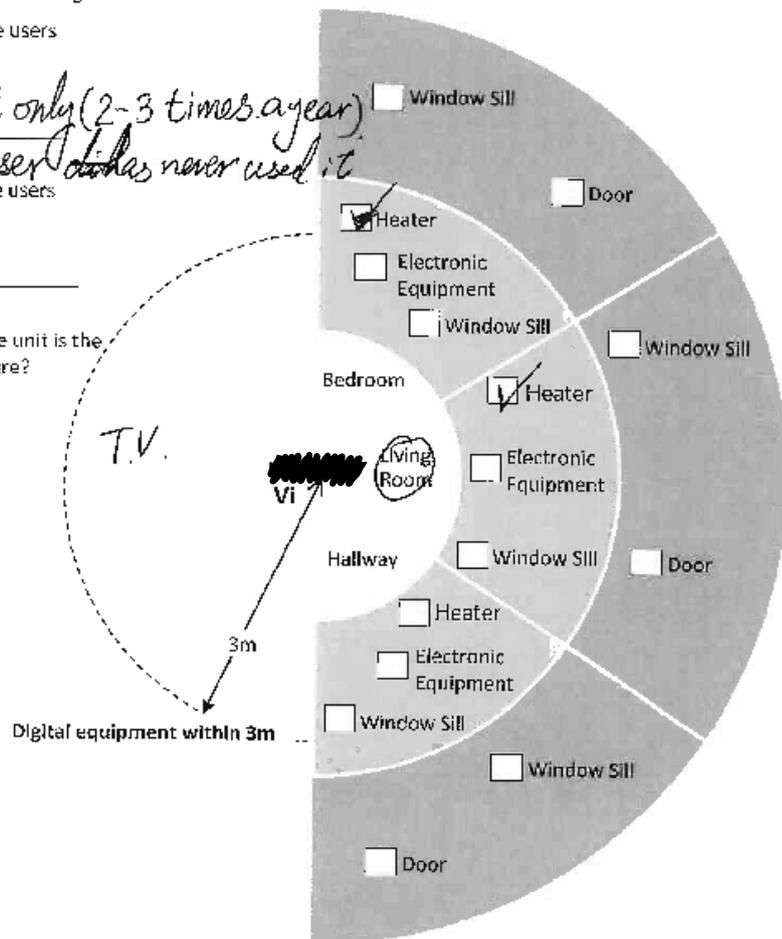
☐ Yes   ☑ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

_T.V._
_D.V.D._
Telephone VI

Digital equipment within 3m

3m

Bedroom   Living Room   Hallway

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☑ Heater
☑ Electronic Equipment
☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Window Sill
☐ Door
☐ Door

Installation of the ~~████████~~ unit for the field trial

Unit ID *904*   Photo number *o5*

14/06/2012 - 15/06/2012

User Context

Age Band ☐ 40- ☐ 40-49 | ⌐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80-85 ☑ 85+

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work ☐ Part-time work ☑ Retired Other _____

Household Number *1*

Accommodation Types

☑ Bungalow ☐ Terrace ☐ Detached house ☐ Semi-detached house ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position ~~Main extension fitted~~

3 years.

How many times and how often did the users activate the ~~████~~?

Never

How many times and how often did the users use the pendant?

Never.

Whether the installation position of the unit is the representative of the house temperature?
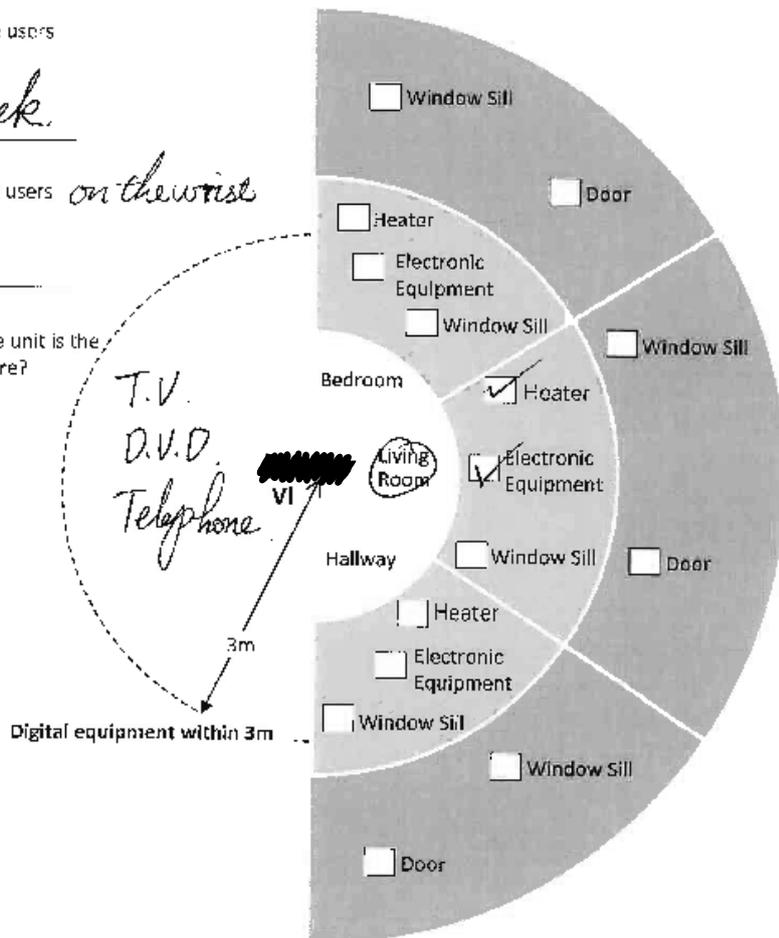
☑ Yes ☐ No

▨ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes ☑ No

Window Sill · Door · Heater · Electronic Equipment · Window Sill · Heater · Electronic Equipment · Window Sill · Heater · Electronic Equipment · Window Sill · Window Sill · Door · Door · Window Sill · Door

Bedroom · Living Room · Hallway

Vi

3m

Digital equipment within 3m

61 / 275

Installation of the ~~█████~~ unit for the field trial

Unit ID __9₂5__   Photo number __06__

User Context

Age Band   ☐ 40-   ☐ 40-49 | ☐ 50-59   ☐ 60-69   ☐ 70-79   ☐ 80-85   ☑ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number __1__ __

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house | ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position *4½ years.   Main extension fitted*

How many times and how often did the users activate the ~~█████~~? *only for the test*

Never _____

How many times and how often did the users use the pendant? *on the wrist*
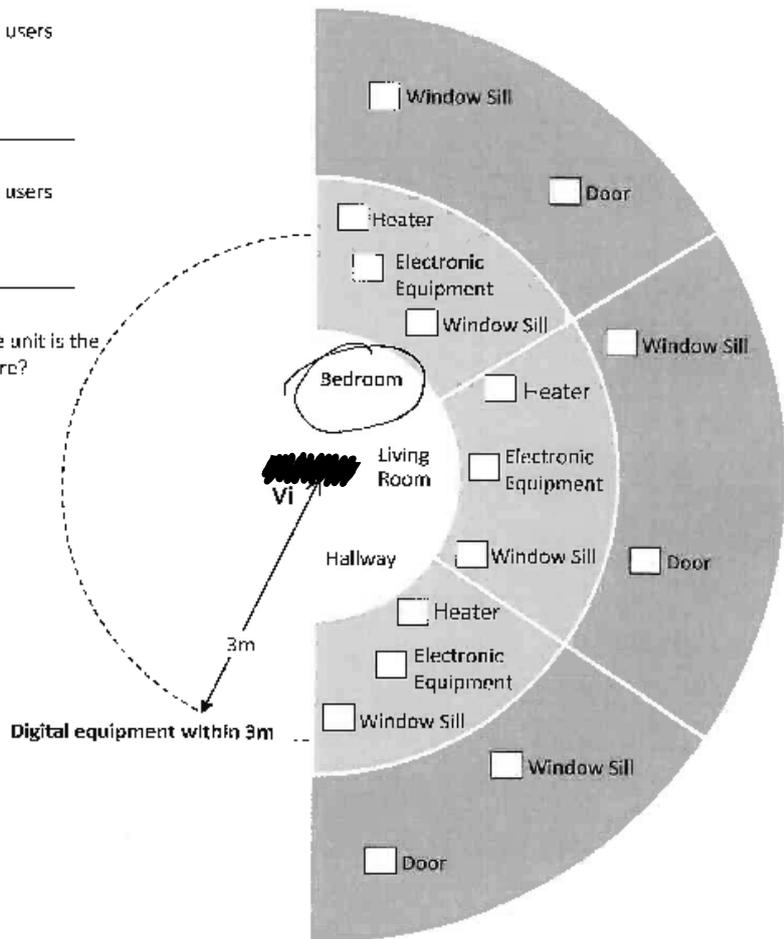
Never. _____

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes   ☑ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V.
D.V.D.
B.T. Broadband hub

3m

Digital equipment within 3m

Bedroom

☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill

Living Room

☐ Window Sill
☑ Window Sill
☑ Heater
☐ Electronic Equipment
☑ Window Sill

Hallway

☐ Heater
☐ Electronic Equipment
☐ Window Sill

☐ Door
☐ Door
☐ Window Sill
☐ Door

Installation of the ~~XXXXXXX~~ unit for the field trial

Unit ID _9a5_ Photo number _06_

User Context

Age Band ☐ 40- ☐ 40-49 | ☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80-85 ☑ 85+

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work ☐ Part-time work ☑ Retired Other _____

Household Number _1_ __

Accommodation Types

☑ Bungalow ☐ Terrace ☐ Detached house ☐ Semi-detached house | ☐ Flat ☐ Flat (Sheltered Scheme)

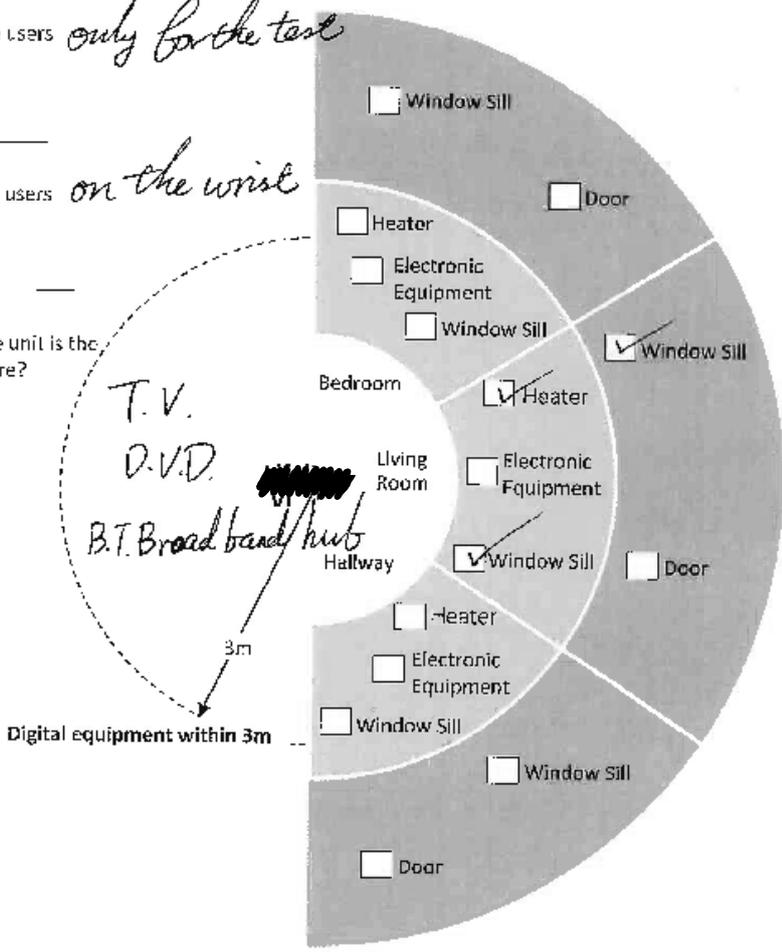## Installation Position _4½ years. Main extension fitted_

How many times and how often did the users activate the ~~XXXX~~? _only for the test_

Never _____

How many times and how often did the users use the pendant? _on the wrist_

Never. _____

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes ☑ No

▧ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes ☐ No

_T.V._
_D.V.D._
~~XXXX~~
B.T. Broad band hub

Digital equipment within 3m

3m

Bedroom
Living Room
Hallway

☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Heater
☐ Electronic Equipment
☑ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill

☐ Window Sill
☐ Door
☑ Window Sill
☐ Door
☐ Window Sill
☐ Door

Installation of the ~~XXXXX~~ unit for the field trial

Unit ID __906__   Photo number __07__

User Context

Age Band ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☐ 70-79   ☐ 80-85   ☑ 85+   *92*

Gender ☑ Male   ☐ Female

Occupation ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number __1__

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)
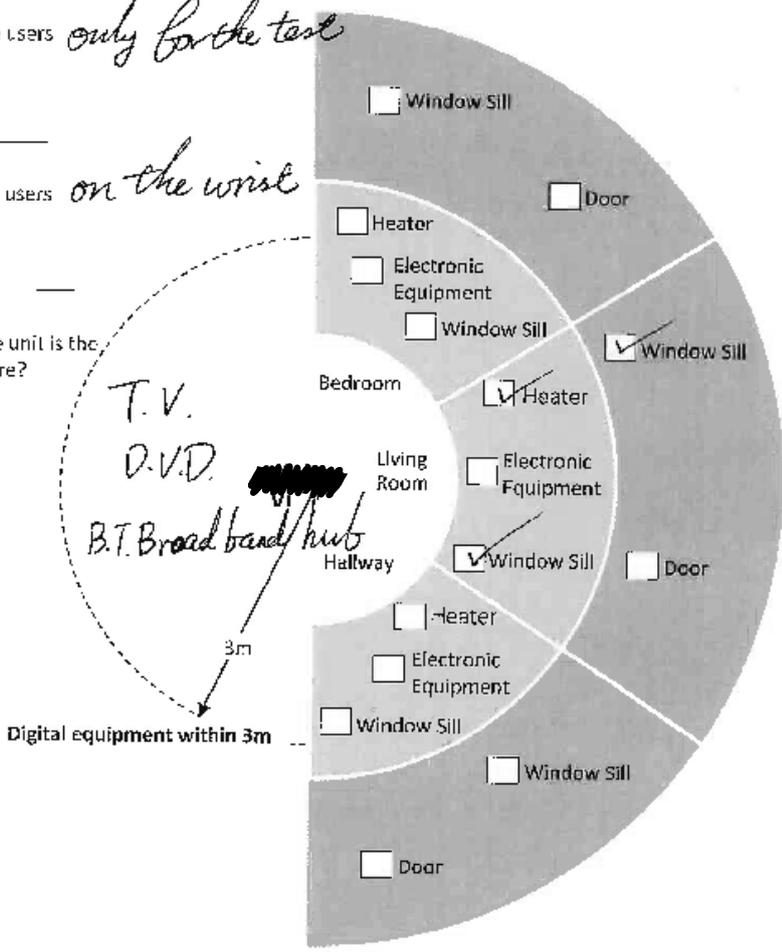
Installation Position

about 5 years

How many times and how often did the users activate the ~~XXXXX~~   *fire alarm only*

Never _____

How many times and how often did the users use the pendant?   *keep in the cabinet in the living room*

Never. _____

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

■ Lower than the house's average temperature

■ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V Telephone ~~XXXX~~ Vi

Bedroom   Living Room   Hallway

Window Sill · Door · Heater · Electronic Equipment · Window Sill · Heater · Electronic Equipment · Window Sill · Window Sill · Door · Heater · Electronic Equipment · Window Sill · Window Sill · Door

3m

Digital equipment within 3m

Installation of the ~~██████~~ unit for the field trial

Unit ID __907__   Photo number __08__ __

User Context

Age Band | 40·   ☐ 40-49   ☐ 50-59   ☐ 60-69   _ | 70-79   ☐ 80-85   ☑ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____ _____

Household Number ____1____

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house | Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

8-10 years

How many times and how often did the users activate the ~~████~~?   _for test only_

____never____   ___

How many times and how often did the users use the pendant?   _aside of bed._
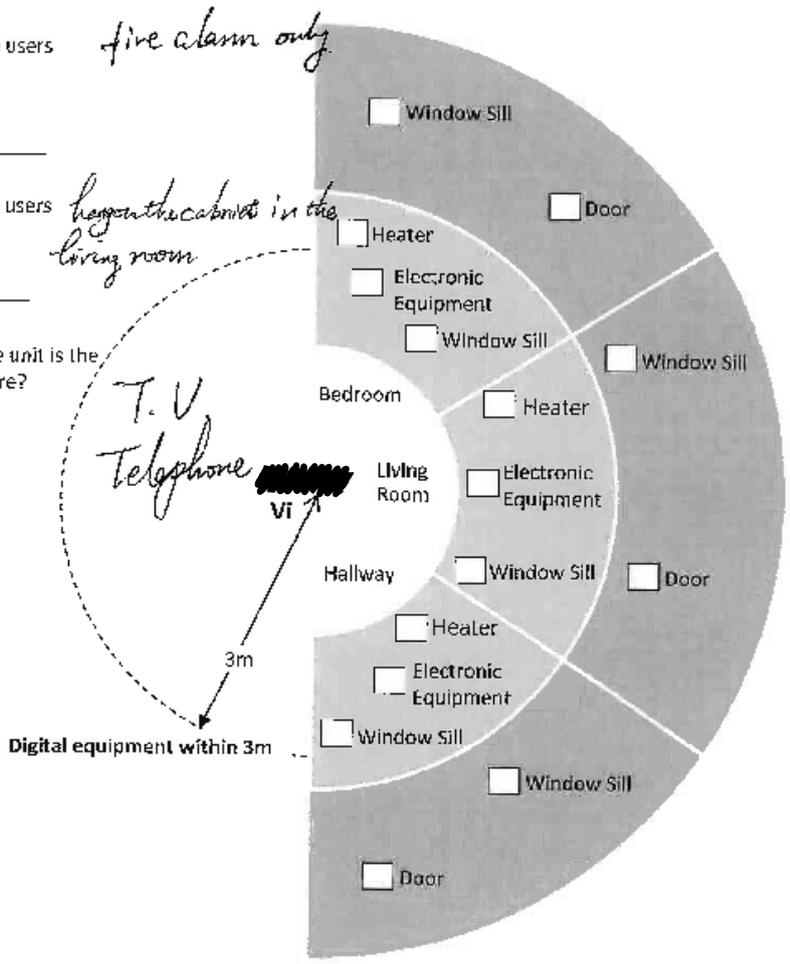
____never.____   ___

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes | ☑ No

■ Lower than the house's average temperature

▢ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes | No

_T.V._
Telephone ~~████~~ Vi

Bedroom

Living Room

Hallway

3m

Digital equipment within 3m ___

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☑ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Door

Installation of the ~~████████~~ unit for the field trial

Unit ID ...... *908* Photo number *09*

User Context

Age Band ☐ 40- ☐ 40-49 ☐ 50-59 | ☐ 60 69 ☐ 70-79 ☐ 80-85 ☑ 85+ *92*

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work | ☐ Part-time work ☑ Retired Other _____

Household Number _____ *1* _____

Accommodation Types

☑ Bungalow ☐ Terrace ☐ Detached house ☐ Semi-detached house ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position

How many times and how often did the users activate the ~~████~~?

around 8 years *3-4 times in 8 years*

How many times and how often did the users use the pendant? *around neck*
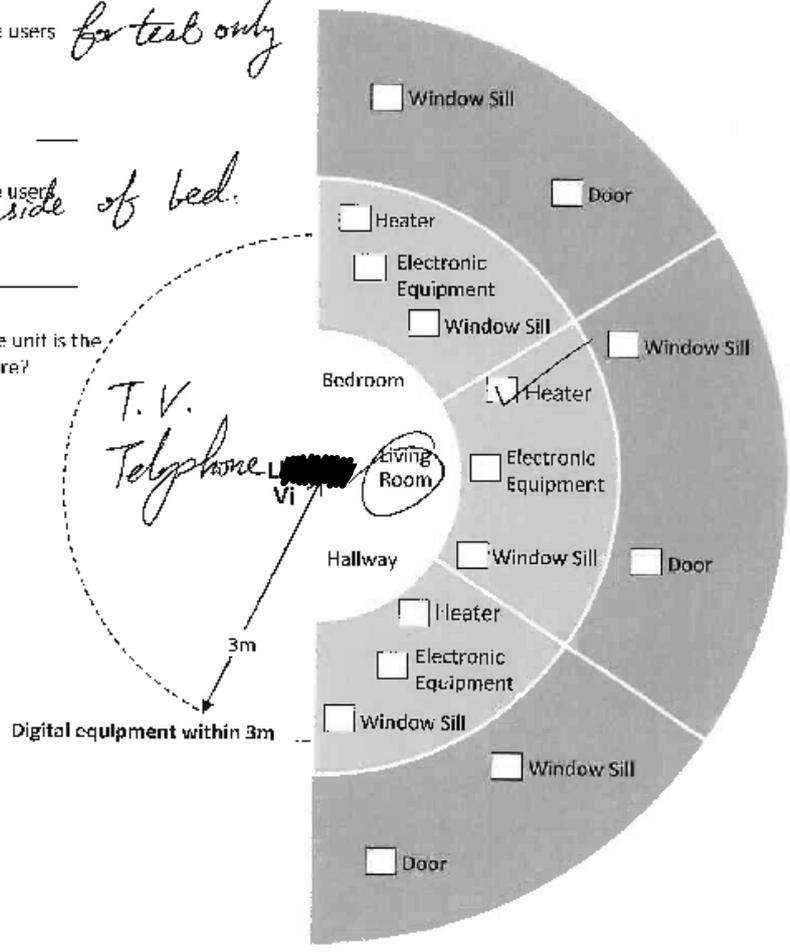
1-2 times

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes ☑ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes ☐ No

Desktop computer
BT. Broadband hub ~~████~~
Printer

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☑ Heater
☑ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Door

Bedroom
Living Room
Hallway

3m

Digital equipment within 3m

Installation of the ~~██████~~ unit for the field trial

Unit ID __909__   Photo number __10__   14/06/2012 - 15/06/2012

User Context   *(very happy with life line old unit)*

Age Band ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ✓ 70-79   ☐ 80-85   ☐ 85+

Gender   ☐ Male   ✓ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ✓ Retired   Other _____

Household Number   __1__

Accommodation Types

✓ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)
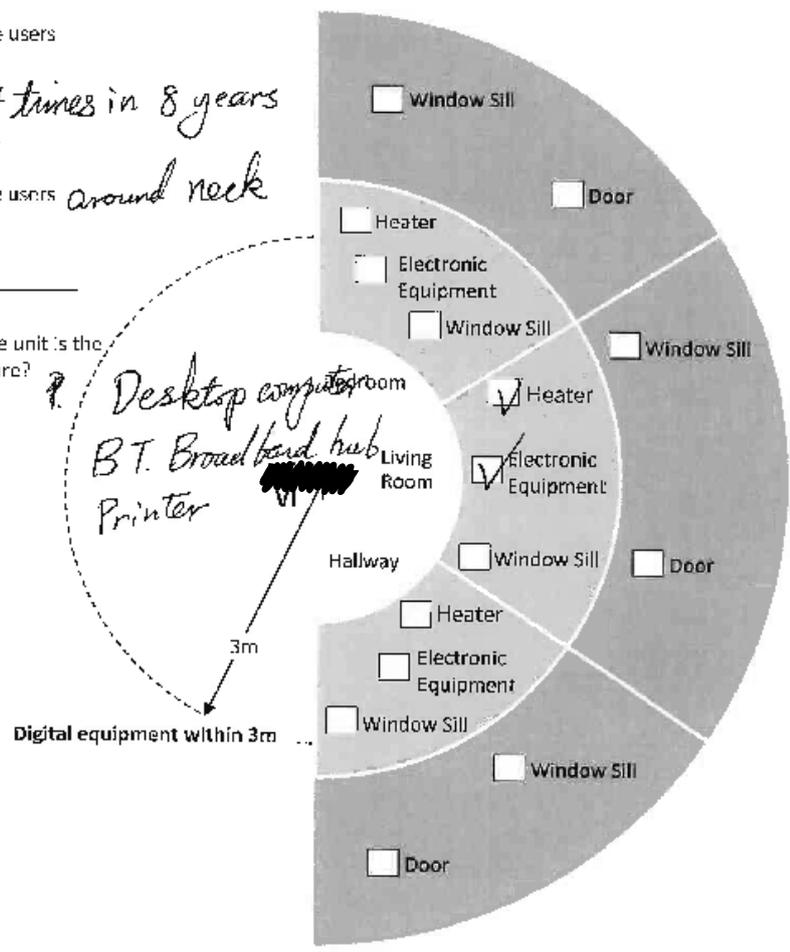
Installation Position   *Main extension added*

How many times and how often did the users activate the ~~████~~?

around 6 years   *2-3 times per month → 0 → starts use again*

How many times and how often did the users use the pendant?   *handle of cabinet in the bedroom*

Twice in 6 years   *(think it's handy)*

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes   ✓ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

✓ Yes   ☐ No

T.V.

Digital equipment within 3m

3m

Bedroom   Living Room   Hallway

Window Sill   Door   Heater   Electronic Equipment   Window Sill
✓ Window Sill   ✓ Heater   Electronic Equipment
✓ Window Sill   Door   Heater   Electronic Equipment   Window Sill   Window Sill   Door
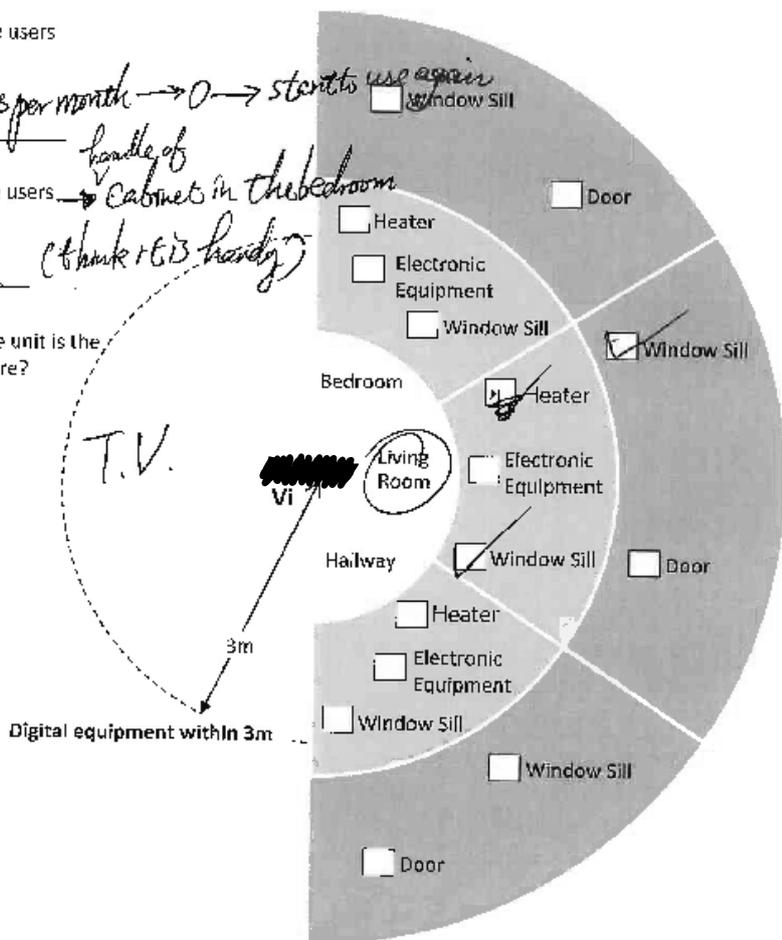
Installation of the ~~XXXXXXX~~ unit for the field trial

Unit ID _9/o_   Photo number _11_

User Context _happy with the old cunt with no identified wishes_

Age Band ☐ 40- ☐ 40-49 ☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80-85 ☑ 85+

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work ☐ Part-time work ☑ Retired Other _____

Household Number _1_

Accommodation Types

☑ Bungalow | ☐ Terrace ☐ Detached house ☐ Semi-detached house | ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position

2~3 years.

How many times and how often did the users activate the ~~XXXX~~

2~3 times

How many times and how often did the users use the pendant?   — _on the wrist_

Never.

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes ☑ No

▨ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes ☑ No
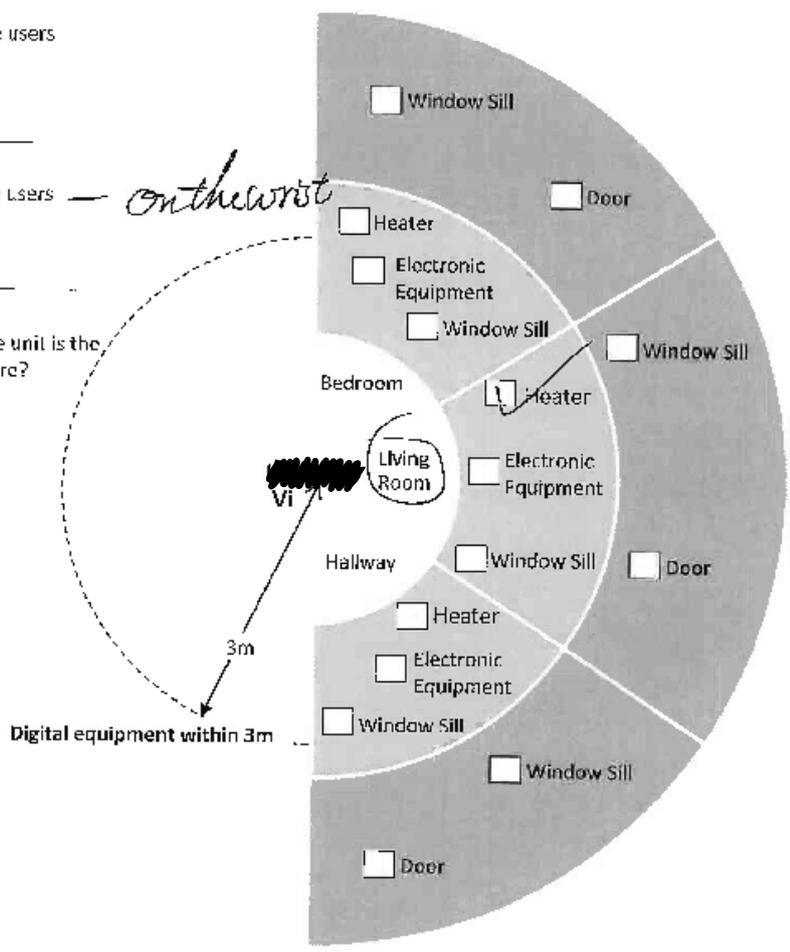
Installation of the ~~█████~~ unit for the field trial

Unit ID __911__   Photo number __12__   14/06/2012 - 15/06/2012

User Context

Age Band   ☐ 40-   ☐ 40 49   ☐ 50-59   ☑ 60-69   ☐ 70-79   ☐ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number __1__   _____

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house | Flat   ☐ Flat (Sheltered Scheme)

Installation Position

8 years

How many times and how often did the users activate the ~~████~~?

2-3 times per month (only to tell that the user himself was OK when he left home for days)

How many times and how often did the users use the pendant? _in the bedroom._

Never.

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes   ☑ No

▨ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

Computer desktop
B.T. Broadband hub
Printer
_T.V._
Telephone.

Vi

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
☑ Heater
☑ Electronic Equipment
Window Sill
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Bedroom
Living Room
Hallway

Installation of the ~~XXXXX~~ unit for the field trial

Unit ID _914_   Photo number _15_

User Context

Age Band   ☐ 40   ☐ 40-49   ☑ 50-59 | 60-69   ☐ 70-79 | 80 85   ☐ 85+

Gender | | Male   ☑ Female

Occupation   ☐ Full time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number _1_

Accommodation Types
| ☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat | Flat (Sheltered Scheme)

Installation Position

3 years

How many times and how often did the users activate the ~~XXXXX~~

never

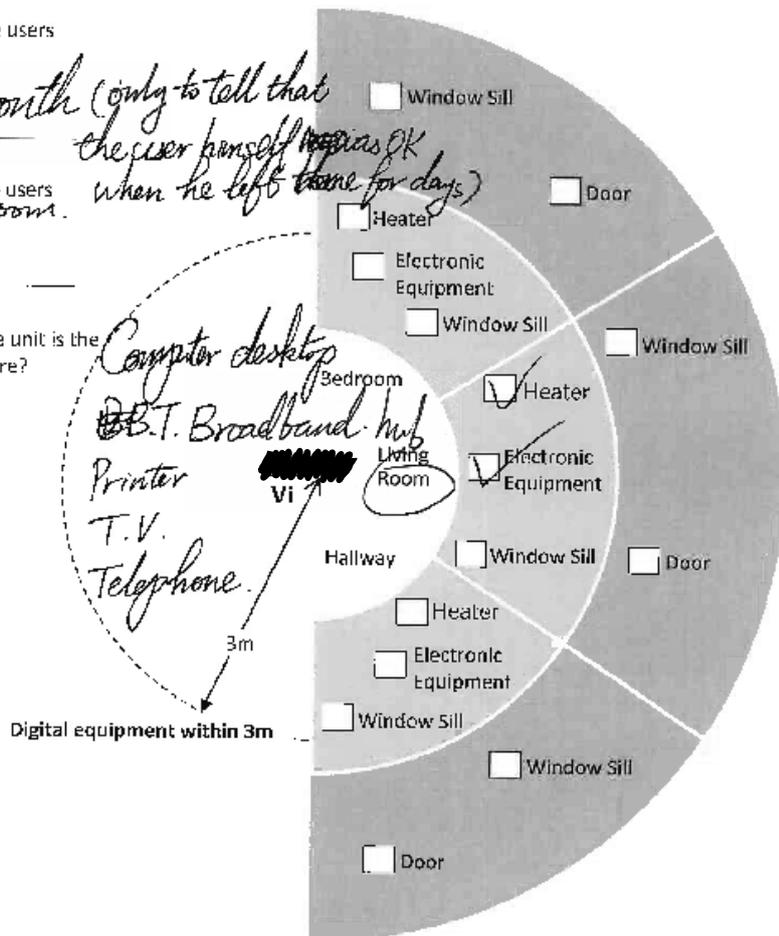How many times and how often did the users use the pendant?

never

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

bedroom

_T.V._
Telephone   Vi

Bedroom

Living Room

Hallway

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID *9/5*   Photo number *16* ___

14/06/2012 – 15/06/2012

User Context

Age Band | 40- | | 40-49 | | 50-59 | ☐ 60-69 | ☐ 70-79 | ☐ 80-85 | ☑ 85+

Gender ☑ Male   ☐ Female

Occupation ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number */*

Accommodation Types
☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position *Main extension added*

6-8 years.
How many times and how often did the users activate the ~~XXXX~~?

never

How many times and how often did the users use the pendant? *around neck.*

never

Whether the installation position of the unit is the representative of the house temperature?
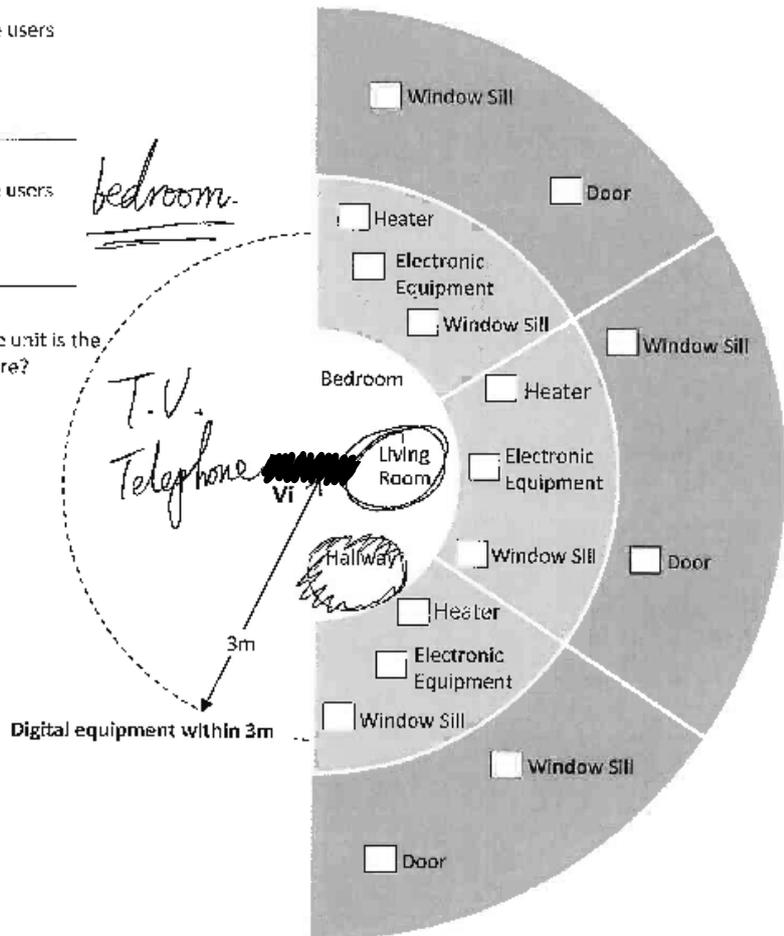
☑ Yes   ☐ No

▦ Lower than the house's average temperature

▦ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V.
D.V.D ~~XXXX~~
Telephone

3m

Digital equipment within 3m

Bedroom

Living Room

Hallway

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Door

71 / 275

Installation of the ~~████████~~ unit for the field trial

Unit ID _96_   Photo number _17_

User Context

| Age Band | ☐ 40- | ☐ 40-49 | ☐ 50-59 | ☐ 60-69 | ☐ 70 79 | ☐ 80-85 | ☑ 85+ _92_ |

Gender ☑ Male   ☐ Female

Occupation ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number ____/____

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

How many times and how often did the users activate the ~~██████~~?

Never

How many times and how often did the users use the pendant? _around neck_

1 time

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

■ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes   ☑ No

Window Sill, Door, Heater, Electronic Equipment, Window Sill, Bedroom, Living Room, Hallway, Heater, Electronic Equipment, Window Sill, Door, Heater, Electronic Equipment, Window Sill, Window Sill, Door, 3m, Digital equipment within 3m

Installation of the ~~████████~~ unit for the field trial

Unit ID __ 917 ___   Photo number ___ 18 ___

User Context

Age Band ☐ 4C- ☐ 40-49 ☐ 50-59 ☐ 60-69 ☑ 70-79 ☐ 80-85 ☐ 85+

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work ☐ Part-time work ☑ Retired Other _____

Household Number __1__

Accommodation Types

☑ Bungalow ☐ Terrace ☐ Detached house ☐ Semi-detached house ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position *Main extension added around 13 years, (6 month for the unit in the new home)*

How many times and how often did the users activate the ~~██████~~

~~Once~~ Never for health reasons

How many times and how often did the users use the pendant? *call once to report that she was away in the kitchen*
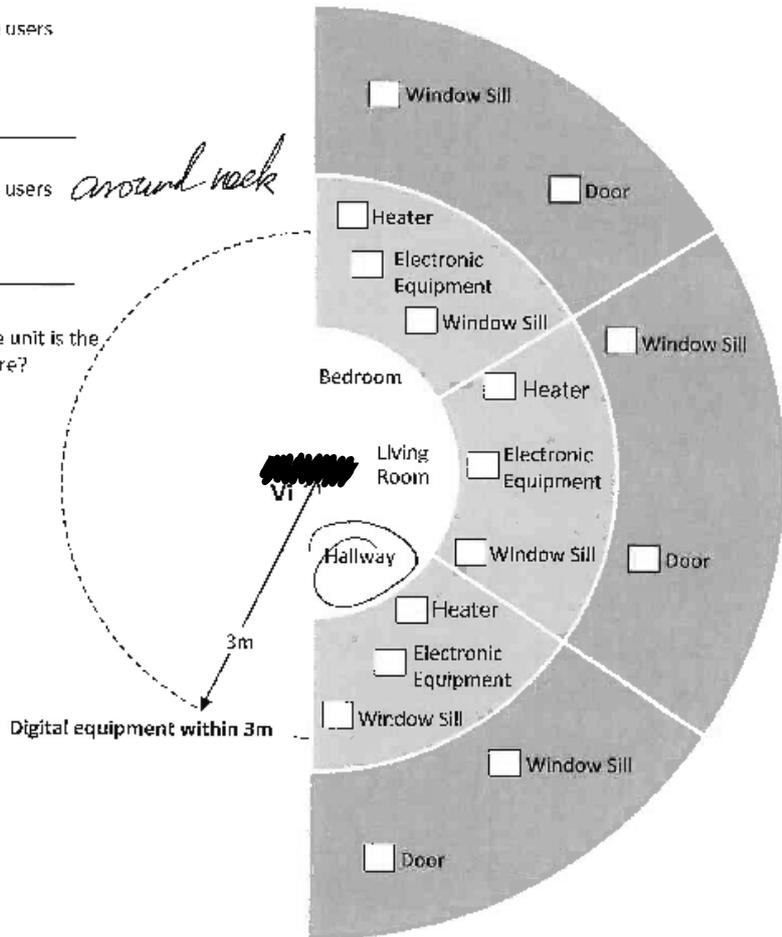
Whether the installation position of the unit is the representative of the house temperature?

☐ Yes ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes ☐ No

Telephone.
TV.
D.V.D.

Digital equipment within 3m

Bedroom · Living Room · Hallway · 3m

Window Sill · Door · Heater · Electronic Equipment · Window Sill · Heater · Electronic Equipment · Window Sill · Door · Heater · Electronic Equipment · Window Sill · Window Sill · Door

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID _942 ~~9/8~~_   Photo number _~~#9~~ 23_   ~~14/06/2012~~ 15/06/2012

Connect +

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☑ 60-69   ☐ 70-79   ☐ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____ _____

Household Number ___/___

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

1 year.

How many times and how often did the users activate the ~~XXXXX~~

⊨ 2-3 times in 1year

How many times and how often did the users use the pendant?   _at the side of bed_
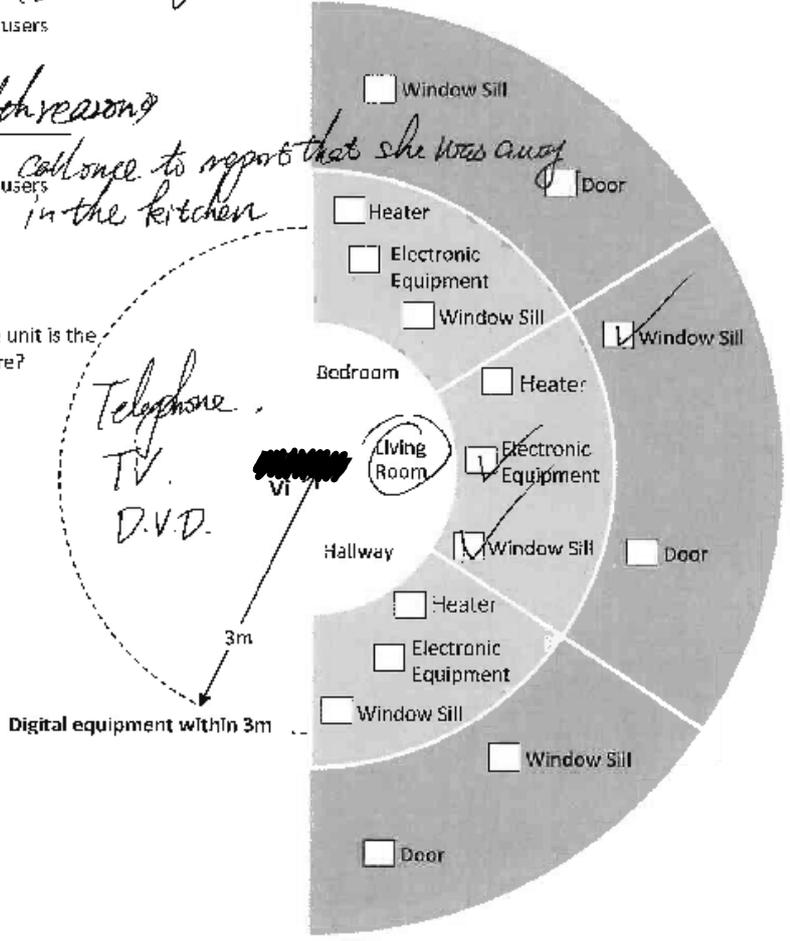
~~XXXXXX~~ _1_

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes   ☑ No

■ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

Identified problems:
take longer to ring through
wishes: phone on top of the unit.
bigger button

Broad band hub
Lamp.   Vi

Digital equipment within 3m

3m

Bedroom
Living Room
Hallway

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door
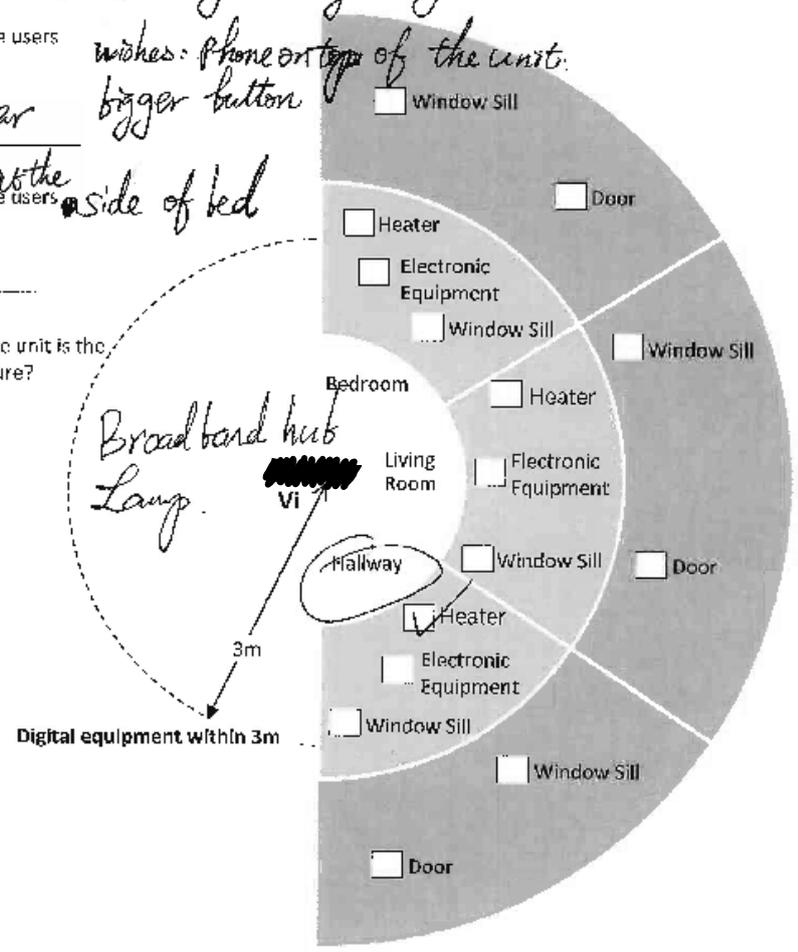
Installation of the ~~XXXXXXX~~ unit for the field trial

Unit ID __945__   Photo number __2f__

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☐ 70-79   ☑ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number __2__

Accommodation Types

☑ Bungalow | | Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

4 years (current one) 6 years (previous)

P. ~~cartridge~~ fouse alarm when in bed.

W.

How many times and how often did the users activate the ~~XXXX~~?

4 → 1-2 times a month

How many times and how often did the users use the pendant?   *around neck*

1-2 times in the last year.

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▓ Lower than the house's average temperature

▒ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V. D.V.D.
Telephone
VI

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Bedroom   Living Room   Hallway

Installation of the ~~████████~~ unit for the field trial

Unit ID _941_   Photo number _25_

User Context

Age Band | | 40-   ___ 40-49   ☐ 50-59   ☑ 60-69 | 70-79   ☐ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number _2_

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat | Flat (Sheltered Scheme)

Installation Position

7 years

go off for cooking.
Main extension added

W: ✓
P: ✓

How many times and how often did the users activate the ~~████~~

Eg. 1 times in 7 years.

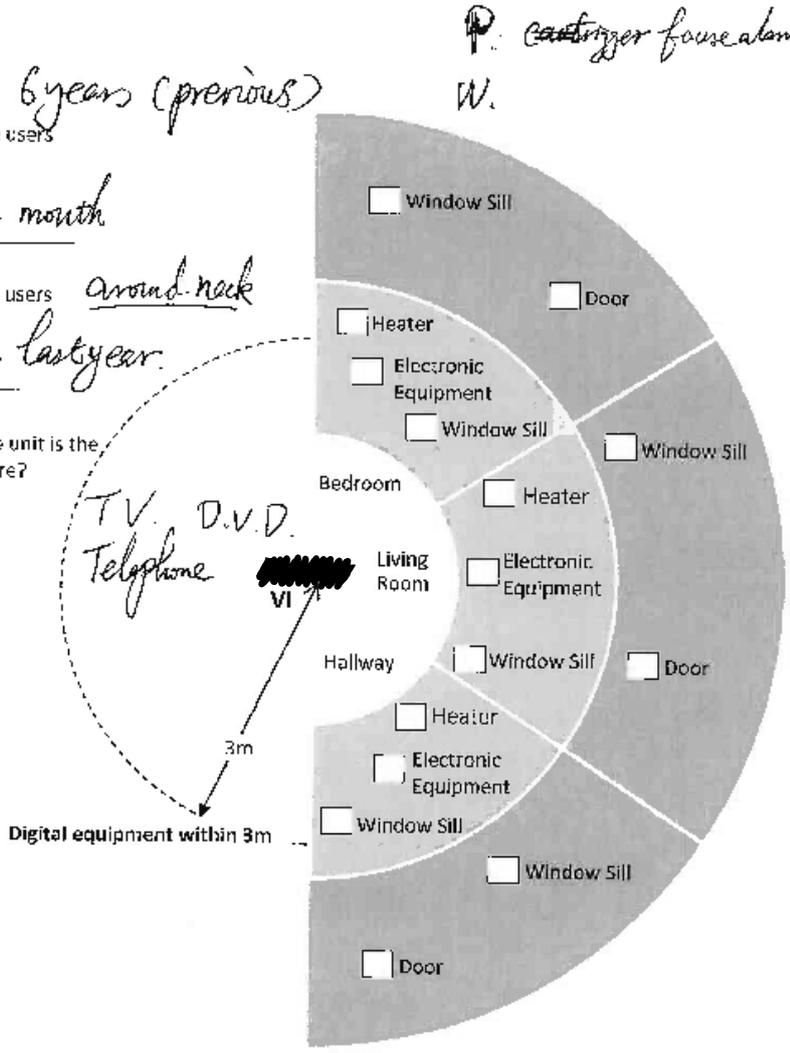How many times and how often did the users use the pendant?   *in the hallway*

Never.

Whether the installation position of the unit is the representative of the house temperature?

☐ Yes   ☑ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

Telephone

Digital equipment within 3m

3m

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Door
☑ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☑ Door

Bedroom
Living Room
Hallway
VI

Installation of the ~~████████~~ unit for the field trial

Unit ID . *923*   Photo number *26*

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69 | 70 79   ☑ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number *2*

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position   *fire alarm*   *P. ✓*

2-3 years   *W. ✓*

How many times and how often did the users activate the ~~████~~?

Never _____

How many times and how often did the users *in the bedroom* use the pendant?

Never _____

Whether the installation position of the unit is the representative of the house temperature?
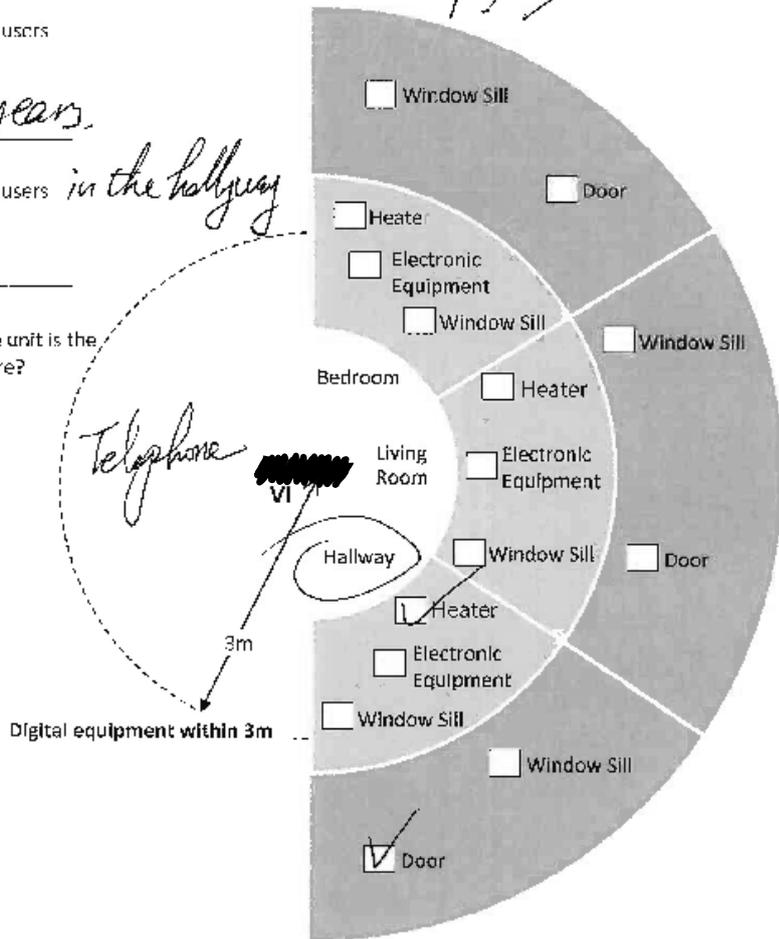
☐ Yes   ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

Telephone

Digital equipment within 3m

Bedroom — Window Sill, Door, Heater, Electronic Equipment, Window Sill

Living Room — Window Sill, Heater, Electronic Equipment, Window Sill ☑, Door, Heater ☑, Electronic Equipment, Window Sill, Window Sill, Door

3m

Installation of the ~~████████~~ unit for the field trial

Unit ID __9/5__   Photo number __27__

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☑ 60-69   ☐ 70-79   ☐ 80-85   ☐ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part time work   ☑ Retired   Other _____

Household Number __2__

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

12 years

How many times and how often did the users activate the ~~████~~?

__B Never__

How many times and how often did the users use the pendant?

__Never__

Whether the installation position of the unit is the representative of the house temperature?
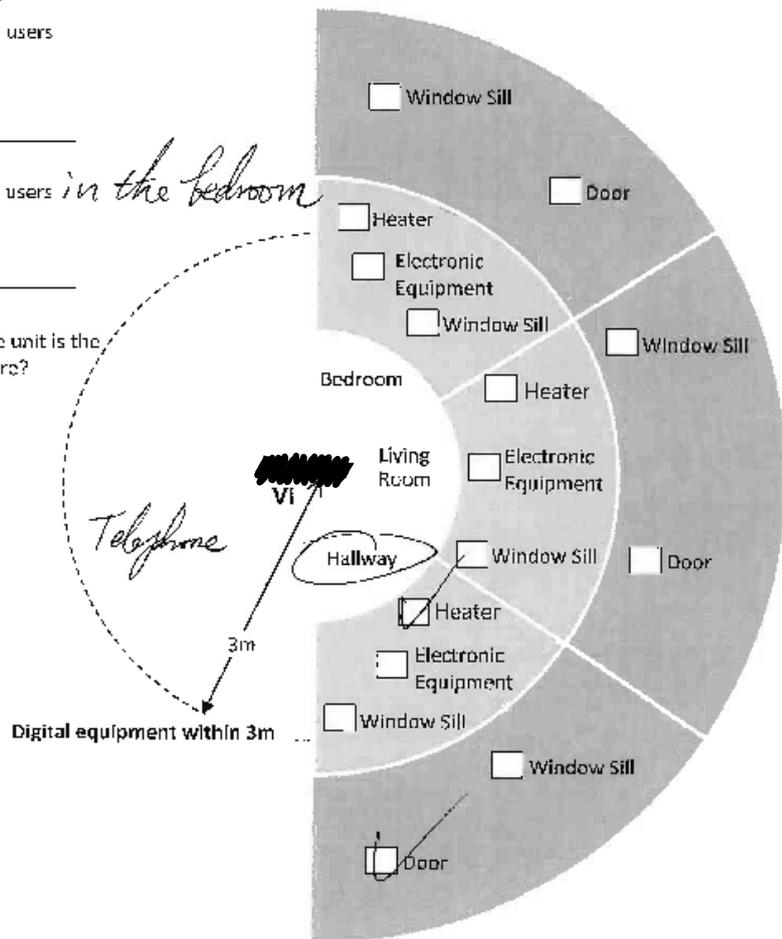
☐ Yes   ☑ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes   ☑ No

P. worry that it takes too long time to ge through
W.

Digital equipment within 3m
3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door
Bedroom
Living Room
Hallway

Installation of the ~~XXXXXXX~~ unit for the field trial

Unit ID 939   Photo number 28

User Context

Age Band ☐ 40-   ☐ 40-49 | 50-59 | ✓ 60-69   ☐ 70-79   ☐ 80-85   ☐ 85+

Gender   ✓ Male   ☐ Female

Occupation   ☐ Full time work   ☐ Part time work   ✓ Retired   Other _____

Household Number / _____

Accommodation Types
✓ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

4 years.

How many times and how often did the users activate the ~~XXXX~~ 2-3 times in 4 years first call for repair the property

How many times and how often did the users use the pendant?   bedroom.

Never.

Whether the installation position of the unit is the representative of the house temperature?
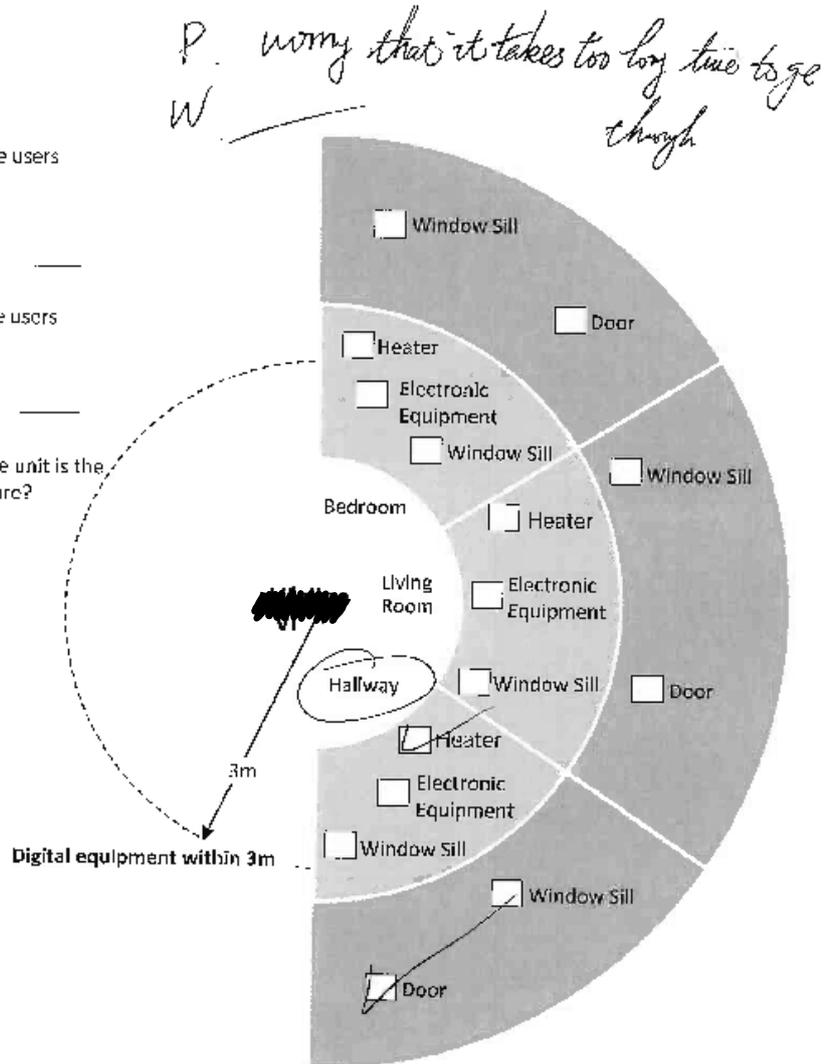
✓ Yes | ☐ No

▨ Lower than the house's average temperature

▨ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

✓ Yes   ☐ No

P.
W.

Phone.   ~~Lifeline~~

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Bedroom
Living Room
Hallway

Installation of the ~~███████~~ unit for the field trial

Unit ID _934_ Photo number _29_ _

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☑ 70-79   ☐ 80-85   ☐ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other ___ ___ ___

Household Number _2_ ___

Accommodation Types
☑ Bungalow | Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

cooking → smoke/fire. alarm.   _W. wish it on the wrist_

Installation Position

around 8 years _include_   P.

How many times and how often did the users activate the ~~████~~   _(usys when the users are away)_

5-6 times a year.

in the hallway

How many times and how often did the users use the pendant?   _~~████~~ in last year._

use the unit more often

Whether the installation position of the unit is the representative of the house temperature?
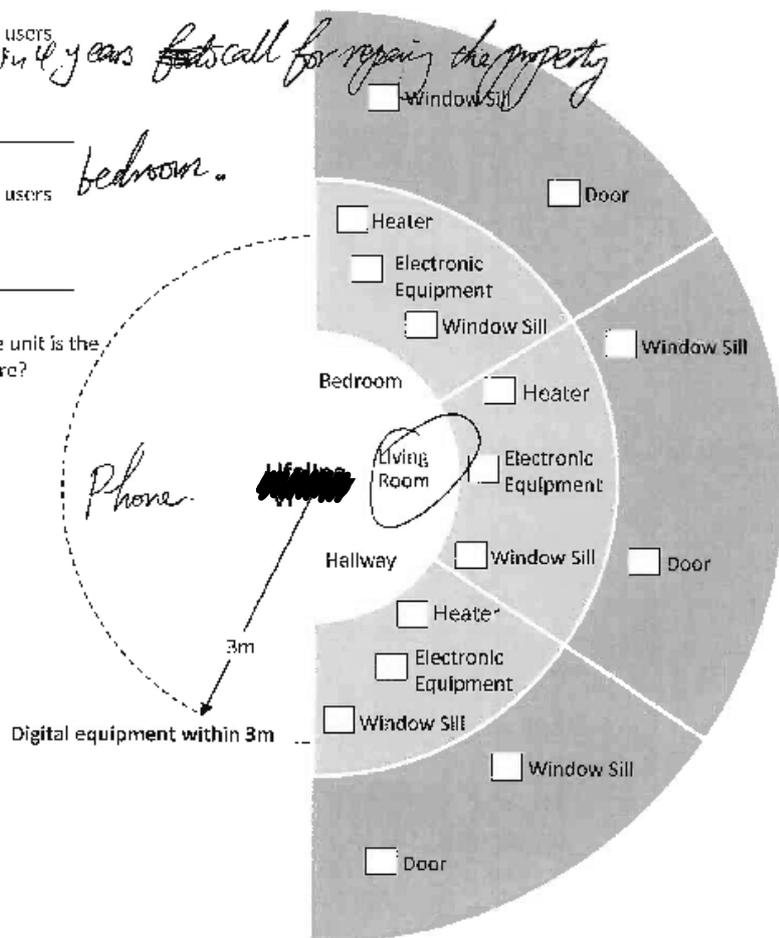
| ☑ Yes   ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

| ☐ Yes   ☑ No

Window Sill · Door · Heater · Electronic Equipment · Window Sill · Window Sill · Bedroom · Heater · Living Room · Electronic Equipment · Window Sill · Door · Hallway · ☑ Heater · Electronic Equipment · Window Sill · Window Sill · Door

3m

Digital equipment within 3m

Installation of the ~~████████~~ unit for the field trial

Unit ID ___933___   Photo number ___36___

User Context

Age Band | 40   ☐ 40-49   ☐ 50-59   ☑ 60-69   ☐ 70-79 | 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number ___2___

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

1 year.

How many times and how often did the users activate the ~~████~~   *or calling for help (the base)*

~~F☐~~ *Never (except test purpose)*

How many times and how often did the users use the pendant?   *I'm in living room.*
Never.

Whether the installation position of the unit is the representative of the house temperature?
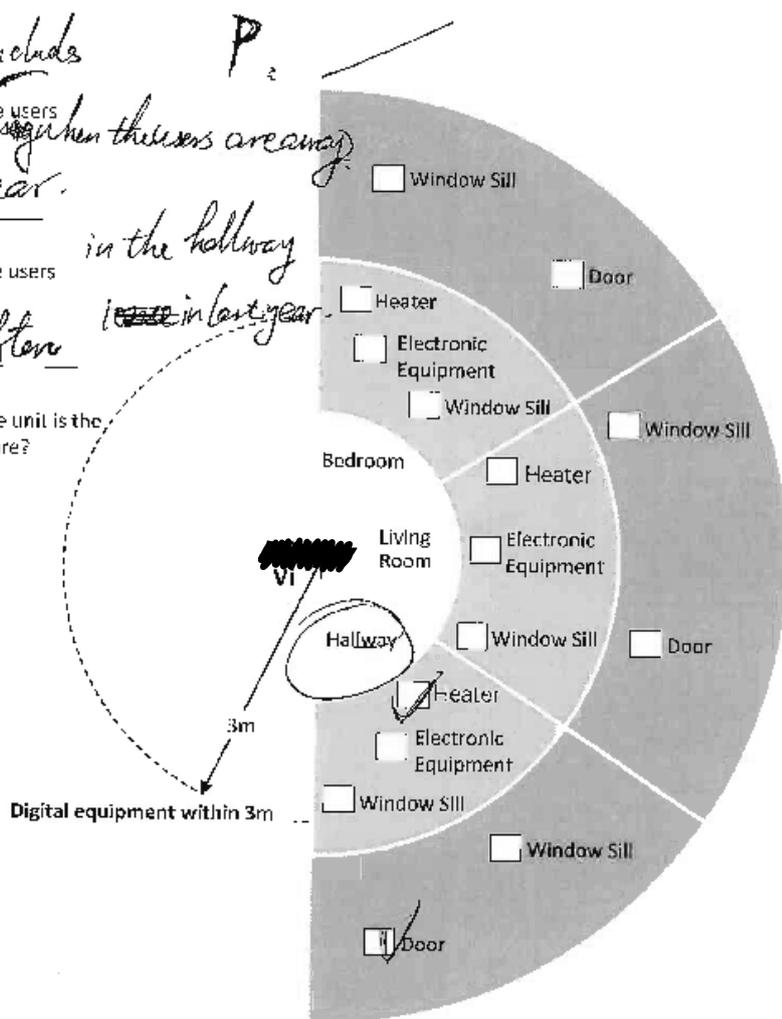
☑ Yes   ☐ No

■ Lower than the house's average temperature

□ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

W.
P.

Laptop
Lamp
Telephone ~~████~~

Bedroom

Living Room

Hallway

3m

Digital equipment within 3m

☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Door
☐ Heater
☐ Electronic Equipment
☐ Window Sill
☐ Window Sill
☐ Door

Installation of the ~~████████~~ unit for the field trial

Unit ID _9406_ Photo number _31_

User Context

Age Band ☐ 40- | 40-49 ☐ 50-59 ⌐ 60-69 ☑ 70-79 ☐ 80-85 ⌐ 85+

Gender ☐ Male ☑ Female

Occupation | Full-time work ☐ Part-time work ☑ Retired Other _____

Household Number -- _2_

Accommodation Types

☑ Bungalow ☐ Terrace | Detached house ☐ Semi-detached house ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position

W.

Q.

How many times and how often did the users activate the ~~████~~?

Never

How many times and how often did the users use the pendant?

Never

Whether the installation position of the unit is the representative of the house temperature?
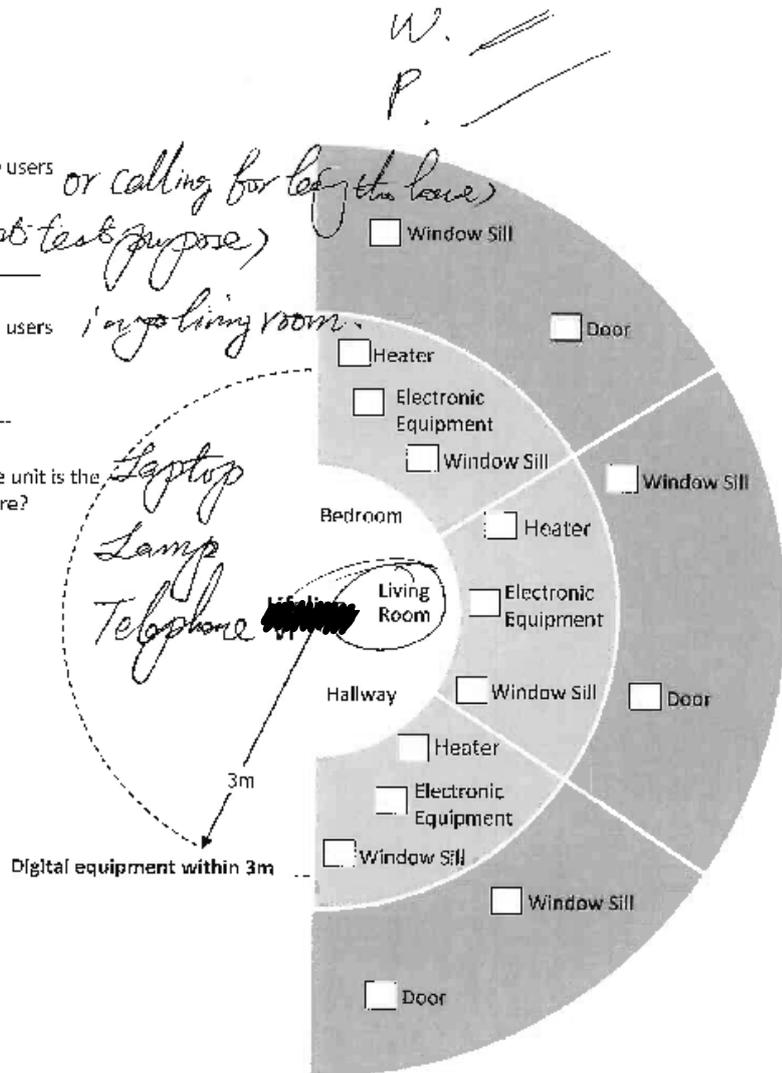
☑ Yes ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes ☐ No

Telephone ~~████~~

3m

Digital equipment within 3m

Bedroom
Living Room
Hallway

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID __440__   Photo number __32__

User Context

Age Band ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☑ 70-79   ☐ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number __2__

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

7 – 8 years   P.

Installation Position

fire alarm. & test   W.

How many times and how often did the users activate the ~~XXX~~

~~Always~~ / *Never*   *8 times in total.*

How many times and how often did the users use the pendant?

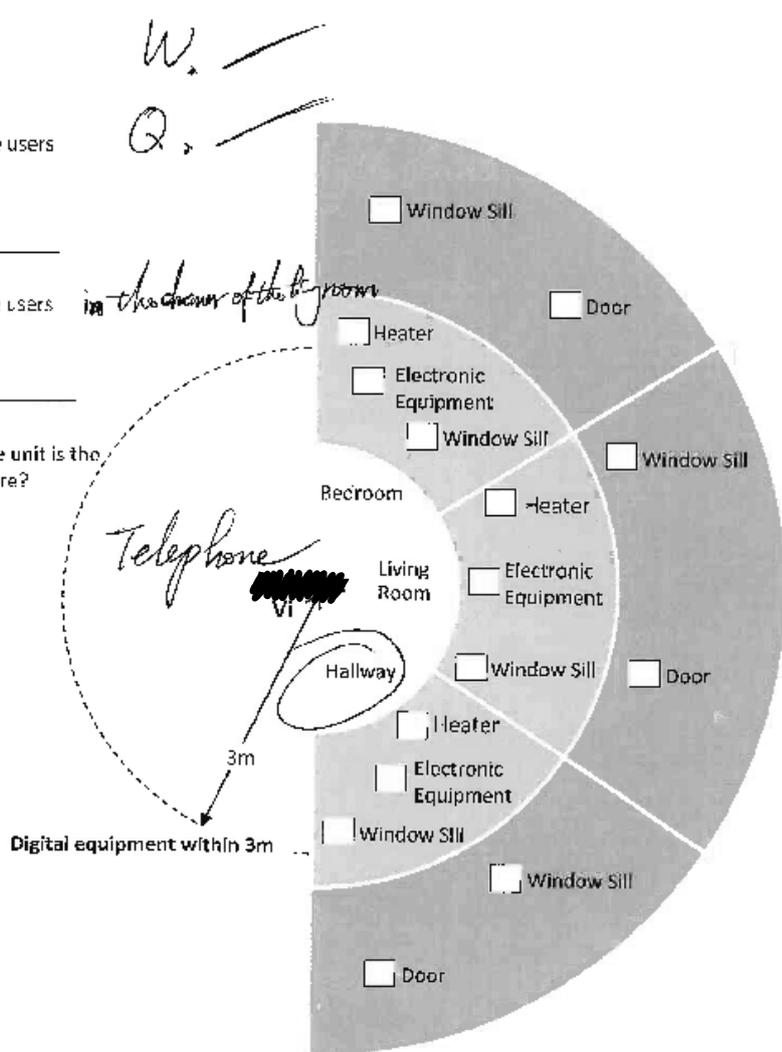*Never.*   *1,2 times (fire alarm)*   *In the leaving room*

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V. DVD

Bedroom

Living Room

Hallway

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Installation of the ~~██████~~ unit for the field trial

~~14/06/2012~~ 15/06/2012

Unit ID _914_   Photo number _33_

User Context

Age Band   ☐ 40‑   ☐ 40‑49   ☐ 50‑59   ☑ 60‑69   ☐ 70‑79   ☐ 80‑85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full‑time work   ☐ Part‑time work   ☑ Retired   Other _____

Household Number _2_

Accommodation Types
☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi‑detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

φ

Installation Position

7‑8 years

W. ✓
P. ✓

How many times and how often did the users activate the ~~████~~?

Never

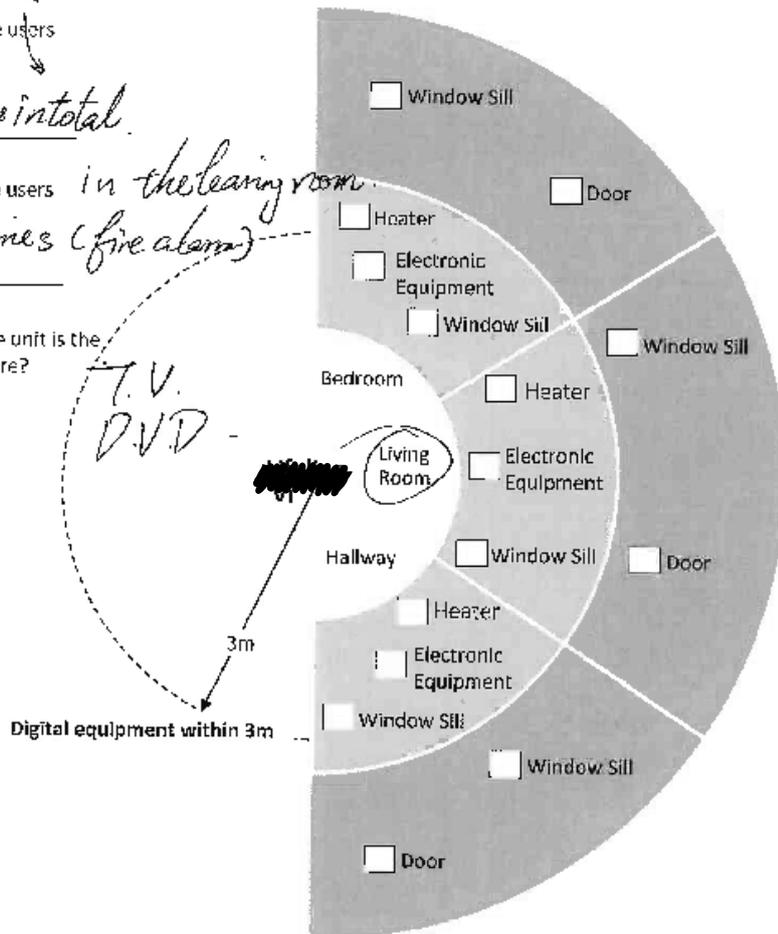How many times and how often did the users use the pendant?   *in the bedroom*

Never

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▮ Lower than the house's average temperature

▯ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes   ☐ No

T.V.
Phone ~~████~~
Vi

Bedroom

Living Room

Hallway

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Heater
Electronic Equipment
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Installation of the ~~██████~~ unit for the field trial

Unit ID 937 Photo number 34

User Context

Age Band ☐ 40- ☐ 40-49 | 50-59 ☐ 60-69 ☑ 70-79 | ☐ 80-85 ☐ 85÷

Gender ☐ Male ☑ Female

Occupation ☐ Full-time work ☐ Part time work ☑ Retired Other _____

Household Number 2

Accommodation Types
☑ Bungalow ☐ Terrace ☐ Detached house ☐ Semi-detached house ☐ Flat ☐ Flat (Sheltered Scheme)

Installation Position

around 8 years.

How many times and how often did the users activate the ~~████~~

I time a year.

How many times and how often did the users use the pendant?

[handwritten, illegible]

Whether the installation position of the unit is the representative of the house temperature?
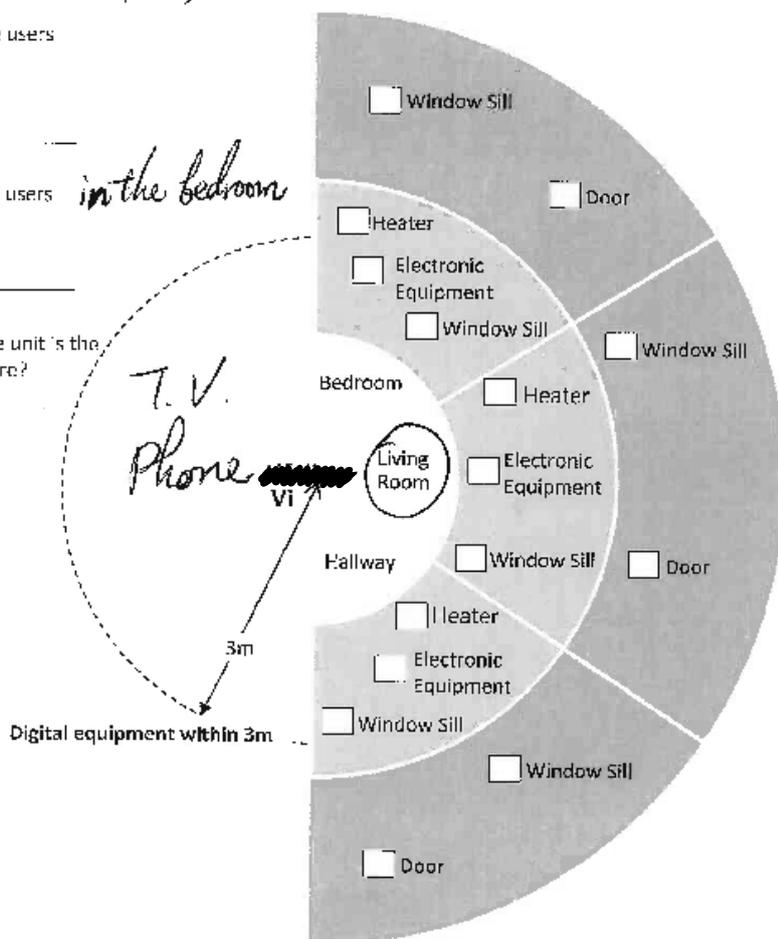
☑ Yes ☐ No

■ Lower than the house's average temperature

□ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☑ Yes ☐ No

Handwritten annotations:
childproof

Prefer in the bedroom

Limitation of the location

P. takes long time to go through (process)

W. size of pendant

on the side of bed can you wear outside around neck

BT Router

Telephone Vi

3m

Digital equipment within 3m

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Bedroom
Window Sill
Heater
Living Room
Electronic Equipment
Hallway
Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Door

Installation of the ~~chemicals~~ unit for the field trial

Unit ID _____ 938 _____   Photo number _____ 35 _____   ~~14/06/2012~~ – ~~18~~/06/2012

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☐ 70-79   ☑ 80-85   ☐ 85+

Gender   ☐ Male   ☑ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number   _____ 1 _____

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

P : string irritate the skin,
W.

Installation Position

10 years

How many times and how often did the users activate the ~~pendant~~   (I time being trigged by cooking)

1 – 2 times a year   no more than 6 times

How many times and how often did the user bedroom use the pendant?
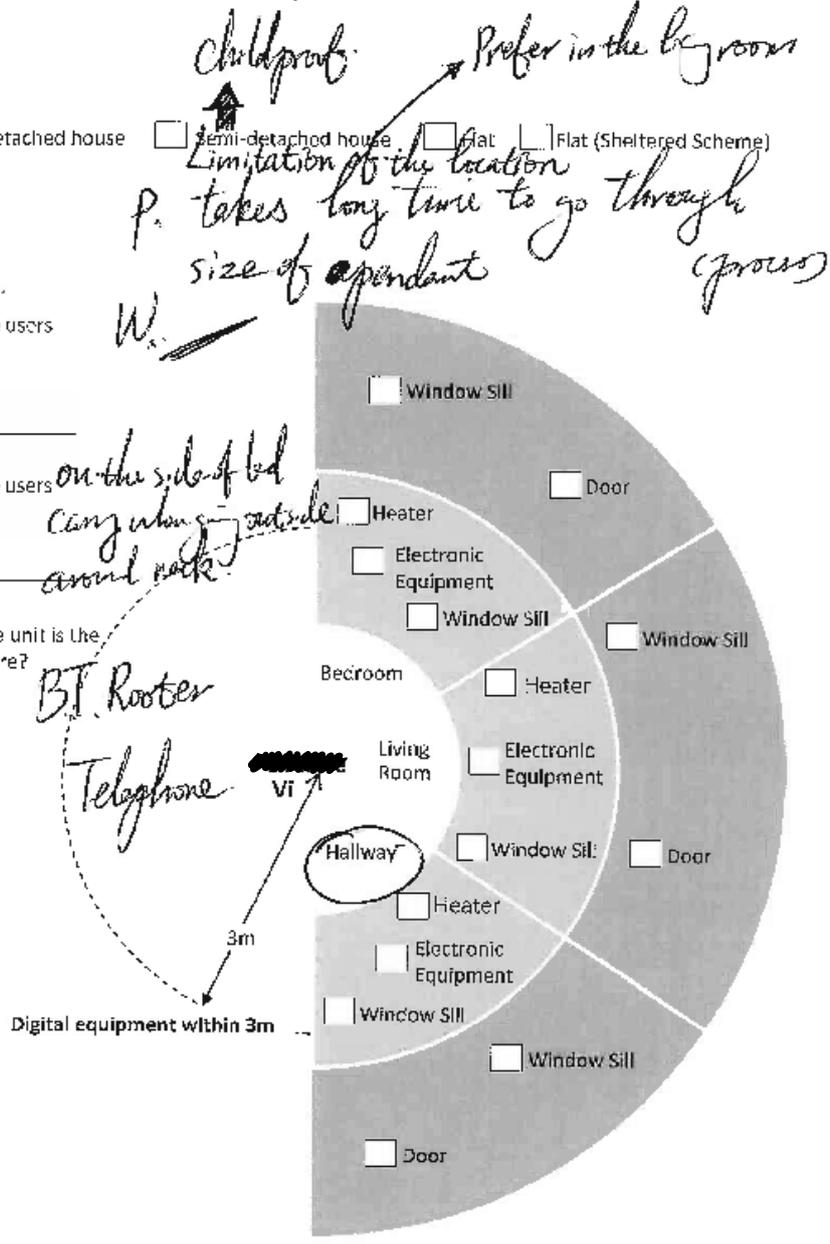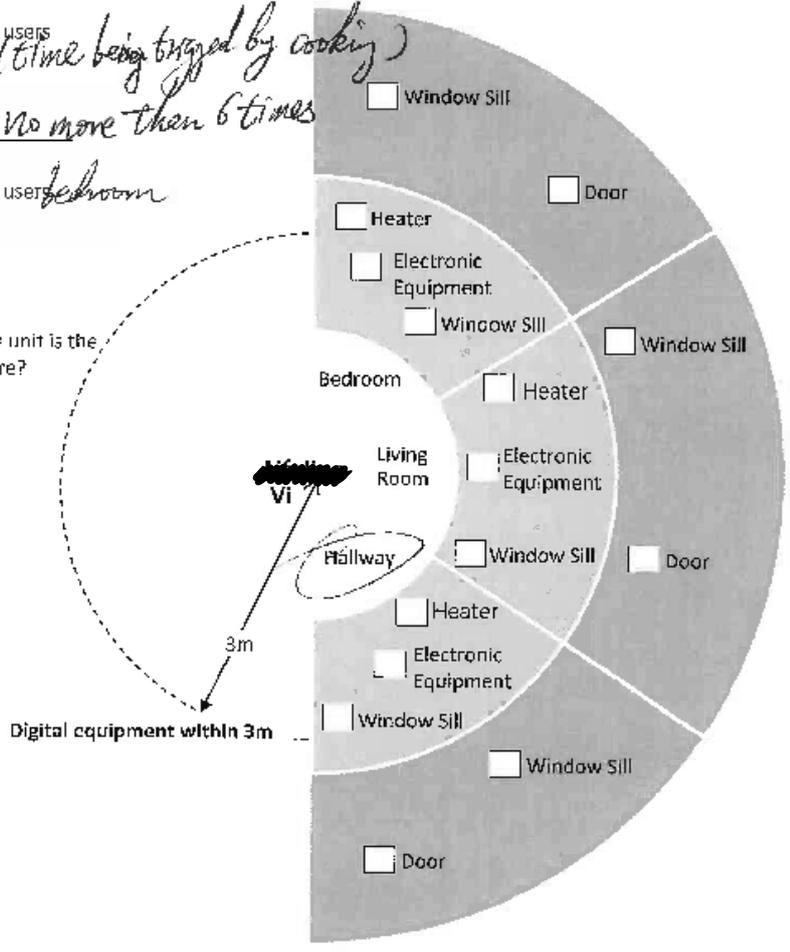
~~no more than 6~~

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▨ Lower than the house's average temperature

▧ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes   ☑ No

Window Sill
Door
Heater
Electronic Equipment
Window Sill
Window Sill
Bedroom
Heater
Living Room
Electronic Equipment
Vi
Hallway
Window Sill
Door
Heater
Electronic Equipment
3m
Window Sill
Digital equipment within 3m
Window Sill
Door

Installation of the ~~XXXXXX~~ unit for the field trial

Unit ID _935_   Photo number _36_

User Context

Age Band   ☐ 40-   ☐ 40-49   ☐ 50-59   ☐ 60-69   ☐ 70-79   ☑ 80-85   ☐ 85+

Gender   ☑ Male   ☐ Female

Occupation   ☐ Full-time work   ☐ Part-time work   ☑ Retired   Other _____

Household Number   _2_

Accommodation Types

☑ Bungalow   ☐ Terrace   ☐ Detached house   ☐ Semi-detached house   ☐ Flat   ☐ Flat (Sheltered Scheme)

Installation Position

fo - 15 years

How many times and how often did the users activate the ~~XXXXXX~~?

Never for health reason

How many times and how often did the users use the pendant?
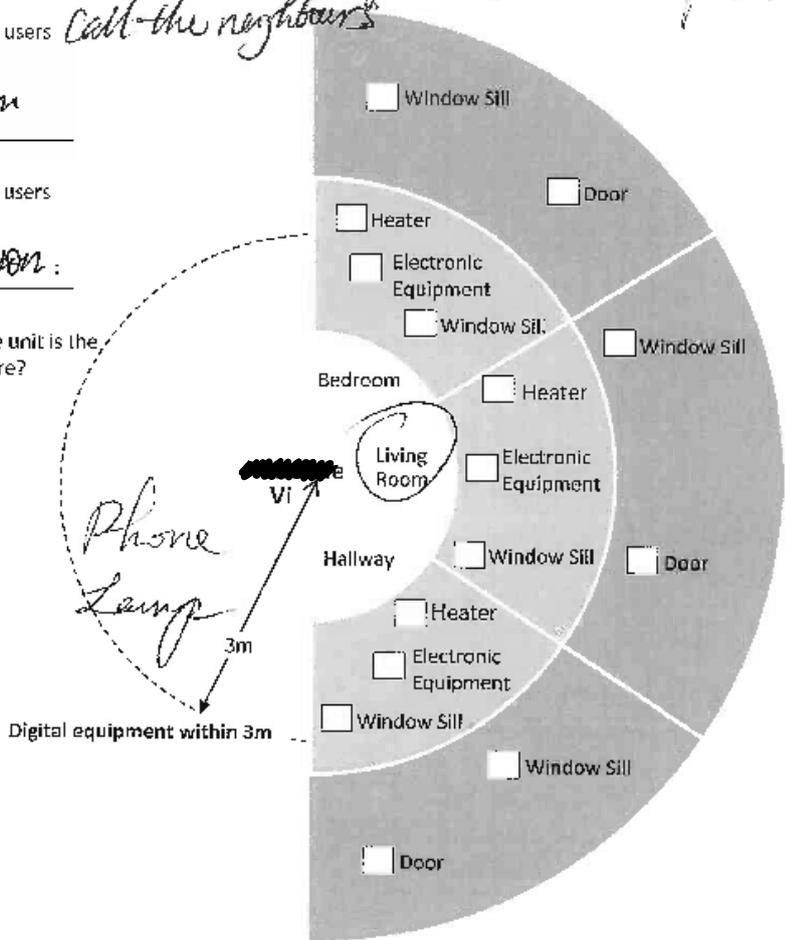
Never for health reason.

Whether the installation position of the unit is the representative of the house temperature?

☑ Yes   ☐ No

▓ Lower than the house's average temperature

░ Higher than the house's average temperature

Is there any other digital equipment within 3 meters?

☐ Yes   ☑ No

P. W.. Range of the fabric; (out of road. childgarb)

call the neighbours

Phone Lamp

Digital equipment within 3m

Window Sill ☐
Door ☐
Heater ☐
Electronic Equipment ☐
Window Sill ☐
Window Sill ☐
Heater ☐
Electronic Equipment ☐
Window Sill ☐
Door ☐
Heater ☐
Electronic Equipment ☐
Window Sill ☐
Window Sill ☐
Door ☐

Bedroom
Living Room
Hallway
3m

COMPLETED QUESTION SHEETS (2ND ROUND USERS VISITS)

Information Collection from the Field Trial of ~~█████~~ Unit

Unit ID ~~256~~ 90   The current Lifeline unit 4000 — [✓] 4/07/2012   [ ] 4/07/2012   [ ] 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

   23

2. What is the temperature of the ~~█████~~ plastics?

   22

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

   25

~~█████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☑	☐	☐	☐	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

		1	2	3	4	5	
2.1	Home/Away (Yellow) Very difficult	☐	☐	☐	☑	☐	Very easy
2.2	Cancel button (Green) Very difficult	☐	☐	☐	☑	☐	Very easy
2.3	Help Button (Red) Very difficult	☐	☐	☐	☑	☐	Very easy

   Other ____ _____ _____ _____ _____ _____ _____ _____

3. Can you read the words underneath the button on the unit?

Yes	No
☐	☑

4. Do you think having words underneath the buttons is a good idea?

Yes	No	Other
☐	☑	_____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☐   No ☑   Other ___Depends. ~~Day~~ Night.___ not at

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very good

8. How is the speech quality compared to your current ▓▓▓▓?

Worse 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ Better

9. How useful was the pendant test reminder feature?

Not useful 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ Very easy

11. Did you have any problems with the pendant reminder feature?

___Never pressed the pendant___

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☐   No ☑

2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very easy

Unit ID **905**   The current Lifeline unit ~~4000~~ _ [✓] 4/07/2012 | 4/07/2012 [ ] 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

___ **23** ___ ___

2. What is the temperature of the ██████i plastics?

___ **24** ___ ___

3. What is the temperature reading on the ██████i using the installer keypad?

___ **26** ___ ___

~~████████~~

1. Do you like the look of the new ██████?

	1	2	3	4	5	
Do not like it	[ ]	[ ]	[ ]	[ ]	[✓]	Like it very much

2. How easy is it to press the buttons on the ██████?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult		[ ]	[ ]	[ ]	[✓]	Very easy
2.2 Cancel button(Green)	Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy
2.3 Help Button (Red)	Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

Other ___ ___ ___ ___ ___ ___ ___

3. Can you read the words underneath the button on the unit?

Yes [✓]   No [ ]

4. Do you think having words underneath the buttons is a good idea?

Yes [✓]   No [ ]   Other ___ ___ ___ ___ ___

5. Can you see the LEDs ok?

Yes ✓ No ☐

6. Is the help button LED bright enough?

Yes ✓ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☐ 1 ☐ 2 ☐ 3 ☐ 4 ✓ 5 Very good

8. How is the speech quality compared to your current ~~_____~~

Worse ☐ 1 ☐ 2 ✓ 3 ☐ 4 ☐ 5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1 ☐ 2 ☐ 3 ✓ 4 ☐ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1 ☐ 2 ☐ 3 ✓ 4 ☐ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____

_____

12. Are the voice announcements clear to understand?

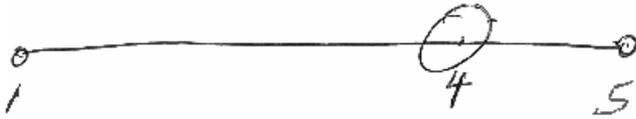Not clear at all ☐ 1 ☐ 2 ☐ 3 ☐ 4 ✓ 5 Very clear

User guide

1. Have you read the user guide?

Yes ✓ No ☐

2. Was the user guide easy to understand?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ✓ 5 Very easy

pendant → wrist (nots in the way)

Information Collection from the Field Trial of ~~▓▓▓▓▓▓~~ Unit

④

Unit ID _704_   The current Lifeline unit _4000_ ☑ 4/07/2012 ☐ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

   _26.3_ ____ ____

2. What is the temperature of the ~~▓▓▓▓▓▓~~vi plastics?

   _25_ ____ ____ ____

3. What is the temperature reading on the ~~▓▓▓▓▓▓~~vi using the installer keypad?

   _27_ ____ ____

~~▓▓▓▓▓▓▓▓~~

1. Do you like the look of the new ~~▓▓▓▓~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ~~▓▓▓▓~~?

2.1 Home/Away (Yellow)	Very difficult	1 ☐	2 [	3 ☐	4 ||	5 ☑	Very easy
2.2 Cancel button(Green)	Very difficult	1 ☐	2 ☐	3 ☐	4 ☐	5 ☑	Very easy
2.3 Help Button (Red)	Very difficult	1 ☐	2 |	3 ☐	4 ☐	5 ☑	Very easy

   Other _____ _____ _____ _____ _____

3. Can you read the words underneath the button on the unit?

   Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

   Yes ☑   No ☐   Other _____ _____ _____ _____

5. Can you see the LEDs ok?

Yes [✓] No [ ]

6. Is the help button LED bright enough?

Yes [✓] No [ ] Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	[ ]	[ ]	[ ]	[✓]	[ ]	Very good

8. How is the speech quality compared to your current ▓▓▓▓?

	1	2	3	4	5	
Worse	[ ]	[ ]	[✓]	[ ]	[ ]	Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	[ ]	[ ]	[✓]	[ ]	[ ]	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[✓]	[ ]	Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	[ ]	[ ]	[ ]	[✓]	[ ]	Very clear

User guide

1. Have you read the user guide?

Yes [✓] No [ ]

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[✓]	[ ]	Very easy

S: take less room

→ wrist

⑤

Unit ID _937_ - The current Lifeline unit _4000_ ✓ ☐ 4/07/2012   ☐ 4/07/2012 | 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_22.4_

2. What is the temperature of the ~~█████~~ plastics?

_23._

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

_24_

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons or the ~~████~~?

2.1 Home/Away (Yellow)

Very difficult	1	2	3	4	5	
	☐	☐	☐	☐	☑	Very easy

2.2 Cancel button(Green)

Very difficult	1	2	3	4	5	
	☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red)

Very difficult	1	2	3	4	5	
	☐	☐	☐	☐	☑	Very easy

Other _Information get through quicker._

3. Can you read the words underneath the button on the unit?

Yes ☐   No ✓

4. Do you think having words underneath the buttons is a good idea?

Yes ☐   No ☐   Other _Only if it can be seen_

96 / 275

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very good

8. How is the speech quality compared to your current ~~█████~~

Worse 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Better   *more clearer*

9. How useful was the pendant test reminder feature?

Not useful 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very useful *?*

10. How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

11. Did you have any problems with the pendant reminder feature?

Too many times ~~remi~~ reminding

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☑ No ☐
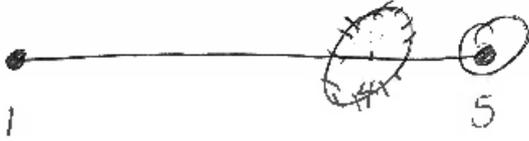
2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

In general.

S:
① get thigh ~~more~~ quicker.
② Voice is clearer.
③ looks better, neater.

W:

Pendant: ① the button is easier to press.
         ② lighter is clearer,

1   5

Information Collection from the Field Trial of ~~█████~~ Unit ③

Unit ID ~~937~~ 969   The current Lifeline unit ~~4000~~ ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

____ _22.7°C_ ____ ____

2. What is the temperature of the ~~█████~~ plastics?

_ ____ _22.0°C_ ____ ____

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

_ ~~24.0°C~~ ____ ____

~~█████████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

		1	2	3	4	5	
2.1	Home/Away (Yellow)	Very difficult ☐	☐	☐	☐	☑	Very easy
2.2	Cancel button(Green)	Very difficult ☐	☐	☐	☐	☑	Very easy
2.3	Help Button (Red)	Very difficult ☐	☐	☐	☐	☑	Very easy

Other ____ ____ ____ ____ ____ ____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ~~☐~~

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other ____ ____ ____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other

_____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor | 1 ☐ | 2 ☐ | 3 ☑ | 4 ☐ | 5 ☐ | Very good

8. How is the speech quality compared to your current ~~_____~~

Worse | 1 ☐ | 2 ☐ | 3 ☑ | 4 ☐ | 5 ☐ | Better

9. How useful was the pendant test reminder feature?

Not useful | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☑ | 5 ☐ | Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☑ | Very easy

11. Did you have any problems with the pendant reminder feature?

When remind function trigger, the telephone runs ~~about~~ all the times and causes problems

12. Are the voice announcements clear to understand?

Not clear at all | 1 ☐ | 2 ☐ | 3 ☑ | 4 ☐ | 5 ☐ | Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

Very difficult | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☑ | Very easy

Unt.
S: /   Think the same.

W: /

Pendant.
_____

S :   Same.

W :

Unit ID _ ~~905~~9/0   The current Lifeline unit   4000   ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

21.8

2. What is the temperature of the ~~■■■■■~~ plastics?

21

3. What is the temperature reading on the ~~■■■■■~~ using the installer keypad?

22

~~■■■■■■■~~

1. Do you like the look of the new ~~■■■■■~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~■■■■~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.2 Cancel button (Green)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐	☐	☑	Very easy

Other   _ving too many times_

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very good

8. How is the speech quality compared to your current ▓▓▓▓▓?

Worse 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Better

9. How useful was the pendant test reminder feature?

Not useful 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

11. Did you have any problems with the pendant reminder feature?

too many times

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☑ No ☐

2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

can
S₂ hear it better
② looks better

W: —.

Unit ID __915__   The current Lifeline unit __4000__   ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__27.0°C__

2. What is the temperature of the ▓▓▓▓ plastics?

__28.0°C__

3. What is the temperature reading on the ▓▓▓▓ using the installer keypad?

__30.0°C__

▓▓▓▓▓▓

1. Do you like the look of the new ▓▓▓▓?

Do not like it   ☐1   ☐2   ☑3   ☐4   ☐5   Like it very much

2. How easy is it to press the buttons on the ▓▓▓▓?

2.1 Home/Away (Yellow)   Very difficult   ☐1   ☐2   ☐3   ☐4   ☑5   Very easy

2.2 Cancel button(Green)   Very difficult   ☐1   ☐2   ☐3   ☐4   ☑5   Very easy

2.3 Help Button (Red)   Very difficult   ☐1   ☐2   ☐3   ☐4   ☑5   Very easy

Other _false alarm._ _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____ _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐	☑	☐	Very good

8. How is the speech quality compared to your current ~~XXXX~~?

	1	2	3	4	5	
Worse	☐	☐	☑	☐	☐	Better

~~9. How useful was the pendant test reminder feature?~~

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☐	Very useful

~~10. How easy was the pendant test reminder feature to use?~~

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

~~11. Did you have any problems with the pendant reminder feature?~~

_____ _____ _____ _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☐	☑	Very clear

User guide

1. Have you read the user guide?

Yes ☑ No ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

S : ① looks better
② cleaver.

W : ② —

Pendant : did not try.   (Shower)
→ wrist
fell irritated with the string.

this Resident has had a phone Bill
for these calls alone of £14·80 the Book's
Voucher worth £15 will not Be any good due to
he does not use Books other than visit for
his pills, that cost nothing is there anything
more we can do for this Resident. to say
thank You.

Information Collection from the Field Trial of ▓▓▓▓ Unit

Unit ID - *908* -   The current Lifeline unit *4000*   ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

22

2. What is the temperature of the ▓▓▓▓ plastics?

23

3. What is the temperature reading on the ▓▓▓▓ using the installer keypad?

24

▓▓▓▓▓▓

1. Do you like the look of the new ▓▓▓▓?

	1	2	3	4	5	
Do not like it	☐	☐	☑	☐	☐	Like it very much

2. How easy is it to press the buttons on the ▓▓▓▓?

2.1 Home/Away (Yellow) Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

2.2 Cancel button(Green) Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red) Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

Other   *the old unit has buttons easier to ...... distance between the buttons of the new unit is too*

3. Can you read the words underneath the button on the unit? *small*

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☐   No ☑   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____ _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor | 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ | Very good

8. How is the speech quality compared to your current ~~_____~~

Worse | 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ | Better

9. How useful was the pendant test reminder feature?

Not useful 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ Very useful

10. ✗ How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very easy

11. ✗ Did you have any problems with the pendant reminder feature?

_____ _____ _____ _____

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ Very clear

User guide

1. Have you read the user guide?

Yes ☑ No |

2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Very easy

~~Did not ch~~

Did not see obvious improvements

＊ Prefer the old unit ~~better~~ as she is more used to it

S: neat

W: @ layout of buttons

Pendant.   Did not try

→ around the neck
(no body can see).

Information Collection from the Field Trial of ~~████████~~ Unit

④

Unit ID __934__   The current Lifeline unit __4000__ ☑ 4/07/2012 ☐ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__25.2°C__

2. What is the temperature of the ~~████~~ plastics?

__26°C__

3. What is the temperature reading on the ~~████~~ using the installer keypad?

__28.°C__

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐		☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

		1	2	3	4	5	
2.1	Home/Away (Yellow) Very difficult	☐	☐		☐	☑	Very easy
2.2	Cancel button(Green) Very difficult	☐	☐	☐	☐	☑	Very easy
2.3	Help Button (Red) Very difficult	☐	☐	☐	☐	☑	Very easy

Other ~~delete~~ ff the information can get through faster
↳ has been improved, but ~~that~~ could
it can be further improved

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____ _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐	☐	☑	Very good

8. How is the speech quality compared to your current ~~system~~?

	1	2	3	4	5	
Worse	☐	☐	☐	☑	☐	Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☑	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

11. Did you have any problems with the pendant reminder feature?

_____ _____ _____ _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☑	☑	Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. ~~Was the user guide easy to understand?~~

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

S ① smaller, takes less room.

W. :

W₂ ①

P₂ do not want to be seen near the pendat.

Information Collection from the Field Trial of ~~█████~~ Unit

Unit ID __94__   The current Lifeline unit _4000_   ☐ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

___21°C___

2. What is the temperature of the ~~█████~~ plastics?

___18.°C___

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

___21°C___

~~█████~~

1. Do you like the look of the new ~~█████~~?

Do not like it   1 [✓]   2 ☐   3 ☐   4 ☐   5 [✓]   Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)   Very difficult   1 ☐   2 ☐   3 ☐   4 ☐   5 [✓]   Very easy

2.2 Cancel button (Green)   Very difficult   1 ☐   2 ☐   3 ☐   4 ☐   5 [✓]   Very easy

2.3 Help Button (Red)   Very difficult   1 ☐   2 ☐   3 ☐   4 ☐   5 [✓]   Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes [✓]   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes [✓]   No ☐   Other _____

5. Can you see the LEDs ok?

Yes   No

[✓]   [ ]

6. Is the help button LED bright enough?

Yes   No   Other

[✓]   [ ]   _____ _____ _____ _____ _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

       1   2   3   4   5

Poor   [ ]   [ ]   [ ]   [ ]   [✓] Very good

8. How is the speech quality compared to your current ▓▓▓▓?

       1   2   3   4   5

Worse   [ ]   [ ]   [ ]   [ ]   [✓] Better

9. How useful was the pendant test reminder feature?

       1   2   3   4   5

Not useful   [ ]   [ ]   [ ] | | [✓] Very useful

10. How easy was the pendant test reminder feature to use?

       1   2   3   4   5

Very difficult   [ ]   [ ]   [ ]   [ ]   [✓] Very easy

11. Did you have any problems with the pendant reminder feature?

_____ _____ _____ _____ _____ _____ _____ _____

12. Are the voice announcements clear to understand?

       1   2   3   4   5

Not clear at all   [ ]   [ ]   [ ]   [ ]   [✓] Very clear

User guide

1. Have you read the user guide?

Yes   No

[✓]   [ ]

2. Was the user guide easy to understand?

       1   2   3   4   5

Very difficult | | [ ]   [ ]   [ ]   [✓] Very easy

115 / 275

S: ~~log~~ taks less room
② looks better

W: ⟋

Information Collection from the Field Trial of ~~█████~~ Unit

Unit ID __9 23__   The current Lifeline unit ~~4/2012~~ [✓] 4/07/2012   [ ] 4/07/2012   [ ] 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__25.5°C__ ____ _

2. What is the temperature of the ~~█████~~ plastics?

__27.0°C__ ____ ____ ____

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

__28.0°C__ ____ ____

~~█████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	[ ]	[ ]	[ ]	[ ]	[✓]	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

2.2 Cancel button (Green)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

Other _ ____ ____ ____ ____ ____ ____

3. Can you read the words underneath the button on the unit?

Yes [✓]   No [ ]

4. Do you think having words underneath the buttons is a good idea?

Yes [✓]   No [ ]   Other ____ ____ ____ ____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very good

8. How is the speech quality compared to your current ~~######~~

Worse ☐ 1   ☐ 2   ☑ 3   ☐ 4   ☐ 5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1   ☐ 2   ☑ 3   ☐ 4   ☐ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1   ☐ 2   ☐ 3   ☑ 4   ☐ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

Very difficult ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very easy

S: looks better

~~Did not had never used it before~~ S
had not used the old unit. so could not make
a comparison.

The "Away" button is helpful.

.

Information Collection from the Field Trial of ~~██████~~ Unit

Unit ID __139__ . The current Lifeline unit __400__ — [✓] 4/07/2012   [ ] 4/07/2012   [ ] 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__21.5°C__

2. What is the temperature of the ~~█████~~ plastics?

__23.0°C__

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

__25°C__

~~██████~~

1. Do you like the look of the new ~~█████~~?

1	2	3	4	5	
Do not like it [ ]	[ ]	[ ]	[✓]	[ ]	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)   Very difficult | 1 [ ]   2 [ ]   3 [ ]   4 [ ]   5 [✓]   Very easy

2.2 Cancel button(Green)   Very difficult   1 [ ]   2 [ ]   3 [ ]   4 | | 5 [✓]   Very easy

2.3 Help Button (Red)   Very difficult   1 [ ]   2 | | 3 [ ]   4 [ ]   5 [✓]   Very easy

Other _____ _____ _____

3. Can you read the words underneath the button on the unit?

Yes [✓]   No [ ]

4. Do you think having words underneath the buttons is a good idea?

Yes [✓]   No [ ]   Other _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very good

*took longer time to get through compared with the old one

8. How is the speech quality compared to your current ▬▬▬▬?

Worse   1 ☐   2 ☐   3 ☑   4 ☐   5 ☐   Better

9. How useful was the pendant test reminder feature?

Not useful   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very clear

User guide

1. Have you read the user guide?

Yes ☐   No ☑

2. Was the user guide easy to understand?

Very difficult   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very easy

S: letter style

W: Test remind function.

Resident mentioned Reminder function Repeated Several time Every Day! Did sound Like Resident was Doing it correctly.

Information Collection from the Field Trial of ~~█████~~ Unit

Unit ID __945__ __ The current Lifeline unit __4000__ __ ☑ 4/07/2012 ☐ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__25.9°C__

2. What is the temperature of the ~~█████~~ plastics?

__24.0°C__

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

__27.0°C__

~~█████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)	Very difficult	1 ☐	2 ☐	3 ☐	4 ☐	5 ☑	Very easy
2.2 Cancel button (Green)	Very difficult	1 ☐	2 ☐	3 ☐	4 ☐	5 ☑	Very easy
2.3 Help Button (Red)	Very difficult	1 ☐	2 ☐	3 ☐	4 ☐	5 ☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ✓   No ☐

6. Is the help button LED bright enough?

Yes ✓   No ☐   Other _____ _____ _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very good

8. How is the speech quality compared to your current ~~~~~~?

Worse ☐ 1   ☐ 2   ☐ 3   ☑ 4   ☐ 5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____ _____ _____ _____ _____

12. Are the voice announcements clear to understand?

Not clear at all ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very clear

User guide

1. Have you read the user guide?

Yes ✓   No ☐

2. Was the user guide easy to understand?

Very difficult ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☑ 5 Very easy

S: ① OLED lights are brighter
② looks better

W: —

Unit ID __917__   The current Lifeline unit __4000__ ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__25.5°C__

2. What is the temperature of the ~~████~~ plastics?

__24.0°C__

3. What is the temperature reading on the ~~████~~ using the installer keypad?

__28.0°C__

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.2 Cancel button(Green)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____   _____   _____   _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____   _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____ _____ _____ _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☑		☐	☐	Very good

8. How is the speech quality compared to your current ~~████~~?

	1	2	3	4	5	
Worse	☑	☐	☐		☐	Better

~~9. How useful was the pendant test reminder feature?~~

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☐	Very useful

~~10. How easy was the pendant test reminder feature to use?~~

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

~~11. Did you have any problems with the pendant reminder feature?~~

_____ _____ _____ _____ _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☑	☐	☐	☐	Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐		☐	☑	Very easy

Prefer the older one

S : x : The away buttons.

W : less clear then the old one.

P : did not test it

* A Button to contact with the warden. (Preset number)
(speak)

Information Collection from the Field Trial of ~~████████~~ Unit

Unit ID . _911_   The current Lifeline unit _4000_ ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_22.9°C_

2. What is the temperature of the ~~█████~~ plastics?

_21.0°C_

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

_24.0°C_

~~████████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)   Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

2.2 Cancel button(Green)   Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red)   Very difficult

1	2	3	4	5	
☐	☐	☐	☐	☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

       1   2   3   4   5

Poor ☐ ☐ ☐ ☑ ☐ Very good

8. How is the speech quality compared to your current ▓▓▓▓?

       1   2   3   4   5

Worse ☐ ☐ ☑ ☐ ☐ Better

9. How useful was the pendant test reminder feature?

       1   2   3   4   5

Not useful ☐ ☐ ☐ ☑ ☐ Very useful

10. How easy was the pendant test reminder feature to use?

       1   2   3   4   5

Very difficult ☐ ☐ ☐ ☑ ☐ Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

       1   2   3   4   5

Not clear at all ☐ ☐ ☐ ☐ ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

       1   2   3   4   5

Very difficult ☐ ☐ ☐ ☐ ☐ Very easy

S : looks better, more neat.

W : faster to get thngh . _ _

Information Collection from the Field Trial of ~~████████~~ Unit

Unit ID —94̶0̶—   The current Lifeline unit ~~4600~~   ☑ 4/07/2012   ☐ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

    23.6°C

2. What is the temperature of the ~~████~~ plastics?

    23.0°C

3. What is the temperature reading on the ~~████~~ using the installer keypad?

    27.0°C

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.2 Cancel button (Green)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____ _____ _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very good

8. How is the speech quality compared to your current ████████?

Worse 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Better

9. How useful was the pendant test reminder feature?

Not useful 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☑ No ☐

2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very easy

S : size., easy to keep it & cleaner.
colour → (darker)

W :

P : → ~~accidental gets~~
around wrists. (chain)

~~one~~

W. One button to put appointment ~~reminder~~ information
(reminder)

Information Collection from the Field Trial of ~~████████~~ Unit

Unit ID __902__   The current Lifeline unit __4000__ ☑ ██/07/2012 ☑ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__23.8°C.__

2. What is the temperature of the ~~████~~ plastics?

__22.0°C.__

3. What is the temperature reading on the ~~████~~ using the installer keypad?

__23.0°C__

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.2 Cancel button (Green)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes / No
☑ ☐

6. Is the help button LED bright enough?

Yes / No   Other
☑ ☐   _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☑	☐	☐	☐		Very good

8. How is the speech quality compared to your current ~~████~~

	1	2	3	4	5	
Worse	☑	☐	☐	☐	☐	Better

never ~~can not~~ heared that

~~9. How useful was the pendant test reminder feature?~~

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☐	Very useful

~~10. How easy was the pendant test reminder feature to use?~~

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

~~11. Did you have any problems with the pendant reminder feature?~~

_____   _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☑	☐	☐	☐	☐	Very clear

User guide

1. Have you read the user guide?

Yes / No
☑ ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☑		Very easy

Prefer the old unit better

S > ① looks better

W: ① less loud and clear, compared with the one ..
    not strong voice.

Information Collection from the Field Trial of ~~████████~~ Unit

Unit ID __912__   The current Lifeline unit   ~~4000~~+ ☐ 4/07/2012 ☑ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

__235°C__

2. What is the temperature of the ~~█████~~ plastics?

__~~24°C~~ 22.0°C__

3. What is the temperature reading on the ~~█████~~ using the installer keypad?

__~~22.0°C~~ 240°C__

~~████████~~

1. Do you like the look of the new ~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult		☐	☐	☐	☑	Very easy

2.2 Cancel button (Green)

	1	2	3	4	5	
Very difficult		☐	☐	☐	☑	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

Other __~~too~~ slightly too close to each other (the top two buttons)__

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 Very good

8. How is the speech quality compared to your current ~~■■■■■■■~~?

Worse ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

too low volume _____

12. Are the voice announcements clear to understand?

Not clear at all ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Very easy

S: ßsmaller. looks better

W: too low volume.

Wishes = way to adjust the volume
            fit on the wall
   → carry and the neck.

(3)

Unit ID __913__   The current Lifeline unit 4000+ ☐ 4/07/2012 ☑ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

____ __24.9°C__ ____

2. What is the temperature of the ▨▨▨▨ plastics?

____ __24.0°C__ ____

3. What is the temperature reading on the ▨▨▨▨ using the installer keypad?

____ __29°C__ ____ ____

▨▨▨▨▨▨

1. Do you like the look of the new ▨▨▨▨?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ▨▨▨▨?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.2 Cancel button (Green)	Very difficult	☐	☐	☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐	☐	☑	Very easy

Other ____ ____ ____ ____ ____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other ____ ____ ____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor   1 ☐   2 ☑   3 ☐   4 ☐   5 ☐   Very good

8. How is the speech quality compared to your current ~~device~~

Worse   1 ☐   2 ☑   3 ☐   4 ☐   5 ☐   Better

9. How useful was the pendant test reminder feature?

Not useful   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult   1 ☐   2 ☐   3 ☐   4 ☑   5 ☐   Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all   1 ☐   2 ☐   3 ☐   4 ☐   5 ☑   Very clear

User guide

1. Have you read the user guide?

Yes ☐   No ☑

Was the user guide easy to understand?

Very difficult   1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   Very easy

S: small, compact looks better.

W: too low volume.
to make the pendant easier to find.
.

Wishes: to adjust the volume.
* to measure (pulse?). when she stopping breathing
pendant: like it.   to trigger alarm.

~~wish~~ wish it small to carry about
bigger when putting aside the bed.

.

Unit ID _ **9.33**   The current Lifeline unit   **4300f**   ☐ 4/07/2012   ☑ 4/07/2012   ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_____ **24.3°C** _____

2. What is the temperature of the ~~█████~~i plastics?

_____ **25°C** _____

3. What is the temperature reading on the ~~█████~~i using the Installer keypad?

_____ **28°C** _____

~~█████████~~

1. Do you like the look of the new~~█████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~█████~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐			☑	Very easy
2.2 Cancel button(Green)	Very difficult		☐	☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult			☐	☐	☑	Very easy

Other _____   _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes   No

[✓]   [ ]

6. Is the help button LED bright enough?

Yes   No   Other

[✓]   [ ]   _____   _____

7. How would you rate the speech quality when speaking to the monitoring centre?

     1   2   3   4   5

Poor   [ ] | ⌐   [ ]   [✓]   Very good

8. How is the speech quality compared to your current ████████?

     1   2   3   4   5

Worse   ⌐   [ ]   [✓]   ⌐   [ ]   Better

9. How useful was the pendant test reminder feature?

     1   2   3   4   5

Not useful   [ ]   [ ]   [ ]   [ ]   [✓]   Very useful

10. How easy was the pendant test reminder feature to use?

     1   2   3   4   5

Very difficult   [ ]   [ ]   [ ]   [ ]   [✓]   Very easy

11. Did you have any problems with the pendant reminder feature?

_____   _____   _____

12. Are the voice announcements clear to understand?

     1   2   3   4   5

Not clear at all   [ ]   [ ]   [ ]   [ ]   [✓]   Very clear

User guide

1. Have you read the user guide?

Yes   No

[✓]   [ ]

2. Was the user guide easy to understand?

     1   2   3   4   5

Very difficult   [ ]   [ ]   [ ]   [ ]   [✓]   Very easy

S: ①more compact
② the temperature measuring function & feature

W: ① ~~waiting twice~~ response time is longer.
② .

Information Collection from the Field Trial of ~~████████~~ Unit

Unit ID ~~933~~ 943 The current Lifeline unit ~~4fear~~ . ☐ 4/07/2012 ☑ 4/07/2012 ☐ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

    24.3°C.

2. What is the temperature of the ~~████~~ plastics?

    ~~25°C~~ 26°C

3. What is the temperature reading on the ~~████~~ using the installer keypad?

    ~~28°C~~ 29°C

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐				☑	Very easy
2.2 Cancel button(Green)	Very difficult			☐	☐	☑	Very easy
2.3 Help Button (Red)	Very difficult	☐			☐	☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes   No   Other _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☑1 ☐2 ☐3 ☐4 ☐5 Very good   *too loud (be shocked)*

8. How is the speech quality compared to your current ▓▓▓▓▓

Worse ☐1 ☑2 ☐3 ☐4 ☐5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐1 ☐2 ☐3 ☑4 ☐5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐1 ☐2 ☐3 ☑4 ☐5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all ☐1 ☐2 ☐3 ☑4 ☐5 Very clear

User guide

1. Have you read the user guide?

Yes ☐   No ☑

2. Was the user guide easy to understand?

Very difficult ☐1 ☐2 ☐3 ☐4 ☐5 Very easy

S: ① size.
② .

W: ① volume (too high)
② time to get through is too long. (trust 911)
in emergency.

wishes: ① to adjust the volume.

② .

Unit ID ... 938   The current Lifeline unit 4000+ ____ ☐ 4/07/2012 ☐ 4/07/2012 ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

   21.1°C

2. What is the temperature of the L~~████~~ plastics?

   21.0°C

3. What is the temperature reading on the L~~████~~ using the installer keypad?

   22.0°C

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐		☑	Very easy
2.2 Cancel button(Green)	Very difficult	☐	☐	☐		☑	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐		☑	Very easy

   Other _____

3. Can you read the words underneath the button on the unit?

   Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

   Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

         1   2   3   4   5

Poor ☐   ☐   ☐   ☐   ☑ Very good

8. How is the speech quality compared to your current ~~~~~~~?

         1   2   3   4   5

Worse ☐   ☐   ☐   ☑   ☐ Better

9. How useful was the pendant test reminder feature?

         1   2   3   4   5

Not useful ☐   ☐   ☐   ☐   ☑ Very useful

10. How easy was the pendant test reminder feature to use?

         1   2   3   4   5

Very difficult ☐   ☐   ☐   ☐   ☑ Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

         1   2   3   4   5

Not clear at all ☐   ☐   ☐   ☐   ☑ Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

         1   2   3   4   5

Very difficult ☐   ☐   ☐   ☑   ☐ Very easy

More or less the same

S₁ ①. smaller size ; compact ; neat

W: . . .

Wishes:

Information Collection from the Field Trial of Lifeline Vi Unit

④

Unit ID 918   The current Lifeline unit 4out   ; 4/07/2012   ☐ 4/07/2012   ✓ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

 21℃.

2. What is the temperature of the ~~Lifeline Vi~~ plastics?

 21.0°C

3. What is the temperature reading on the ~~Lifeline Vi~~ using the installer keypad?

 22.0°C

~~████████~~

1. Do you like the look of the new ~~██████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ~~██████~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.2 Cancel button(Green)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the (help button) LED bright enough?

Yes ☑ No ☐ Other _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor				☑		Very good

8. How is the speech quality compared to your current ~~_____~~

	1	2	3	4	5	
Worse			☑			Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful				☑		Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult				☑		Very easy

11. Did you have any problems with the pendant reminder feature?

ring of the user after he has tested on the same day

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all				☑		Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult						Very easy

$:① looks slightly better, takes less room

②

W:①

Wishes ① to contact friends/relatives by pressing buttons

Pendant :

Information Collection from the Field Trial of ~~████████~~ Unit ③

Unit ID _916_   The current Lifeline unit _4000_ [ ] 4/07/2012 [ ] 4/07/2012 [✓] 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

   _2-6°C_

2. What is the temperature of the ~~████~~i plastics?

   _22°C_

3. What is the temperature reading on the ~~████~~ using the installer keypad?

   _23°C_

~~████████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	[ ]	[ ]	[ ]	[ ]	[✓]	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

2.2 Cancel button(Green)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	[ ]	[ ]	[ ]	[ ]	[✓]	Very easy

Other _____   _____

3. Can you read the words underneath the button on the unit?

   Yes [ ]   No [✓]

4. Do you think having words underneath the buttons is a good idea?

   Yes [ ]   No [✓] ——— Other _____   _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very good

8. How is the speech quality compared to your current ~~██████~~?

Worse 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ Better

9. How useful was the pendant test reminder feature?

Not useful 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very useful

~~10.~~ How easy was the pendant test reminder feature to use?

Very difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very easy

11. Did you have any problems with the pendant reminder feature?

different voices of different people

12. Are the voice announcements clear to understand?

Not clear at all 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ Very clear

→ not sure if this is because of the voice of a particular or the equipment has been improved really

User guide

1. Have you read the user guide?

Yes ☑ No ☐

2. Was the user guide easy to understand?

Very difficult 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ Very easy

S_2

W = ① different voice of different people
② takes long time to go through

Wishes = ① adjustable voice
② adjustable ~~function~~ volume

③

Unit ID ___914___   The current Lifeline unit   4000+   ☐ 4/07/2012   ☐ 4/07/2012   ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_____ 23.2°C. _____

2. What is the temperature of the ▓▓▓▓▓ i plastics?

_____ 240°C _____

3. What Is the temperature reading on the ▓▓▓▓▓ using the installer keypad?

_____ 250°C _____

~~▓▓▓▓▓~~

1. Do you like the look of the new ▓▓▓▓▓?

	1	2	3	4	5	
Do not like it:	☐	☐	☐	☑	☐	Like it very much

2. How easy is it to press the buttons on the ▓▓▓▓▓?

		1	2	3	4	5	
2.1 Home/Away (Yellow)	Very difficult	☐	☐	☐	☐	☐	Very easy
2.2 Cancel button(Green)	Very difficult	☐	☐	☐	☐	☐	Very easy
2.3 Help Button (Red)	Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No

4. Do you think having words underneath the buttons is a good idea?

Yes ☐   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the (Help button) LED (bright enough)?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐		☑	Very good

8. How is the speech quality compared to your current ~~_____~~

	1	2	3	4	5	
Worse	☐	☐	☑	☐	☐	Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☑	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

11. Did you have any problems with the pendant reminder feature?

_____ too many times _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☐	☑	Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐			☑	Very easy

Very much the same.
think the phone is quicker and better

S:

W:

P:

Information Collection from the Field Trial of ~~▮▮▮▮▮▮~~ Unit

Unit ID __942__   The current Lifeline unit _Connect 4_   ☐ 4/07/2012   ☐ 4/07/2012   ✓ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

    __22.1°C.__

2. What is the temperature of the ~~▮▮▮▮▮~~ plastics?

    __20.0°C.__

3. What is the temperature reading on the ~~▮▮▮▮▮~~ using the installer keypad?

    __24.0°C__

~~▮▮▮▮▮▮▮~~

1. Do you like the look of the new ~~▮▮▮▮▮~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	✓	Like it very much

2. How easy is it to press the buttons on the ~~▮▮▮▮▮~~?

		1	2	3	4	5	
2.1	Home/Away (Yellow) Very difficult	☐	☐	☐	☐	✓	Very easy
2.2	Cancel button (Green) Very difficult	☐	☐	☐	☐	✓	Very easy
2.3	Help Button (Red) Very difficult	☐	☐	☐	☐	✓	Very easy

    Other _____

3. Can you read the words underneath the button on the unit?

    Yes ☐   No ✓

4. Do you think having words underneath the buttons is a good idea?

    Yes ✓   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very good

8. How is the speech quality compared to your current ~~██████~~?

Worse ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____

12. Are the voice announcements clear to understand?

Not clear at all ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very easy

④. slightly clearer.

S: ① quicker to get through most times (quicker reply better
    ② button of the pendant is less likely to be accidentally pressed
    ③ nice and small, neat.
W: ①.

P, ⟶ around the neck.

Wishes: ①. wants be used as a reminder.

         ② adjustable volume.

Information Collection from the Field Trial of ~~████~~ Unit

④

Unit ID _903._   The current Lifeline unit _4000_ ☐ 4/07/2012   ☐ 4/07/2012 ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

   _23.1°C_

2. What is the temperature of the ~~████~~ plastics?

   _23.0°C_

3. What is the temperature reading on the ~~████~~ using the installer keypad?

   _240°C_

~~████~~

1. Do you like the look of the new ~~████~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~████~~?

   2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

   2.2 Cancel button(Green)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

   2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

   Other _____   _____

3. Can you read the words underneath the button on the unit?

   Yes ☐   No ☑

4. Do you think having words underneath the buttons is a good idea?

   Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ✓   No ☐

6. Is the help button LED bright enough?

Yes ✓   No ☐   Other

_____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐	☐	✓	Very good

8. How is the speech quality compared to your current ~~████~~?

	1	2	3	4	5	
Worse	☐	☐	✓	☐	☐	Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	✓	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	✓	Very easy

11. Did you have any problems with the pendant reminder feature?

_____ _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☐	✓	Very clear

User guide

1. Have you read the user guide?

Yes ✓   No ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐	☐	✓	☐	Very easy

S: ① slightly more clearer.
② looks better

W:

P:

Wishes: ╱.

Unit ID _____ 96 _____   The current Lifeline unit   ~~4000+~~   ☐ 4/07/2012   ☐ 4/07/2012   ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_____ 21.2°C _____

2. What is the temperature of the ~~▮▮▮▮~~i plastics?

_____ 22.0°C _____

3. What is the temperature reading on the ~~▮▮▮▮~~i using the installer keypad?

_____ 23.0°C _____

~~▮▮▮▮▮▮▮▮~~

1. Do you like the look of the new ~~▮▮▮▮~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~▮▮▮▮~~?

		1	2	3	4	5	
2.1	Home/Away (Yellow)	Very difficult ☐	☐	☐	☑	☐	Very easy
2.2	Cancel button(Green)	Very difficult ☐	☐	☐	☑	☐	Very easy
2.3	Help Button (Red)	Very difficult ☐	☐	☐	☑	☐	Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☐   No ☑

4. Do you think having words underneath the buttons is a good idea?

Yes ☐   No ☑   Other _____

168 / 275

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐	☑	☐	Very good

8. How is the speech quality compared to your curren~~t~~?

		2	3	4	5	
Worse	☐		☑			Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	☐	☐	☐	☑	☐	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

11. Did you have any problems with the pendant reminder feature?

_____   _____

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☑	☐	Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☐	Very easy

169 / 275

not bothered

equal,

$S_1 \oplus$ Smaller.

@ Slightly louder and clearer.

$P_?$ do not carry the pendant because he has the cellphone who do a better job.

(a button on the cellphone which the user can press to reach the medical center).

⑤

Unit ID __946__   The current Lifeline unit __4~~000~~ +__   ☐ 4/07/2012   ☐ 4/07/2012   ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

___ 26.0°C _____

2. What is the temperature of the ~~XXXXX~~i plastics?

_____ 20.0°C _____ __

3. What is the temperature reading on the ~~XXXXX~~i using the installer keypad?

___ 26.0°C _____ __

~~XXXXXXXX~~

1. Do you like the look of the new ~~XXXXX~~?

	1	2	3	4	5	
Do not like it	☐	☐	☐	☐	☑	Like it very much

2. How easy is it to press the buttons on the ~~XXXXX~~?

2.1 Home/Away (Yellow)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.2 Cancel button (Green)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

2.3 Help Button (Red)

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

Other _____.   _____

3. Can you read the words underneath the button on the unit?

Yes ☑   No ☐

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____   _____

5. Can you see the LEDs ok?

Yes ☑   No ☐

6. Is the help button LED bright enough?

Yes ☑   No ☐   Other _____ _____

7. How would you rate the speech quality when speaking to the monitoring centre?

	1	2	3	4	5	
Poor	☐	☐	☐	☐	☑	Very good

8. How is the speech quality compared to your current ▓▓▓▓▓?

	1	2	3	4	5	
Worse	☐	☐	☐	☐	☑	Better

9. How useful was the pendant test reminder feature?

	1	2	3	4	5	
Not useful	☐	☐	☐	☐	☑	Very useful

10. How easy was the pendant test reminder feature to use?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

11. Did you have any problems with the pendant reminder feature?

NONE.

12. Are the voice announcements clear to understand?

	1	2	3	4	5	
Not clear at all	☐	☐	☐	☐	☑	Very clear

User guide

1. Have you read the user guide?

Yes ☑   No ☐

2. Was the user guide easy to understand?

	1	2	3	4	5	
Very difficult	☐	☐	☐	☐	☑	Very easy

S: ① Sounds are clearer.
   ② Smaller.

W: ①
P:

Wishes :.

②－③

Unit ID _ 935   The current Lifeline unit *Hoost* _____ ☐ 4/07/2012   ☐ 4/07/2012   ☑ 6/07/2012

Household temperature

1. What is the temperature in the home (thermometer)?

_____ 21.7°C _____

2. What is the temperature of the ~~XXXX~~ plastics?

_____ 24.0°C _____

3. What is the temperature reading on the ~~XXXX~~ using the installer keypad?

_____ 26.0°C _____

~~XXXXXXX~~

1. Do you like the look of the new ~~XXXX~~?

Do not like it ☐1 ☐2 ☐3 ☑4 ☐5 Like it very much

2. How easy is it to press the buttons on the ~~XXXX~~?

2.1 Home/Away (Yellow)   Very difficult ☐1 ☐2 ☐3 ☐4 ☑5 Very easy

2.2 Cancel button (Green)   Very difficult ☐1 ☐2 ☐3 ☐4 ☑5 Very easy

2.3 Help Button (Red)   Very difficult ☐1 ☐2 ☐3 ☐4 ☑5 Very easy

Other _____

3. Can you read the words underneath the button on the unit?

Yes ☐   No ☑

4. Do you think having words underneath the buttons is a good idea?

Yes ☑   No ☐   Other _____

5. Can you see the LEDs ok?

Yes ☑ No ☐

6. Is the help button LED bright enough?

Yes ☑ No ☐ Other _____

7. How would you rate the speech quality when speaking to the monitoring centre?

Poor | 1 ☐ | 2 ☐ | 3 ☑ | 4 ☐ | 5 ☐ | Very good

8. How is the speech quality compared to your current ~~_____~~?

Worse | 1 ☐ | 2 ☐ | 3 ☑ | 4 ☐ | 5 ☐ | Better

9. How useful was the pendant test reminder feature?

Not useful ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very useful

10. How easy was the pendant test reminder feature to use?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 Very easy

11. Did you have any problems with the pendant reminder feature?

_____ _____ _____

12. Are the voice announcements clear to understand?

Not clear at all ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 Very clear

User guide

1. Have you read the user guide?

Yes ☐ No ☑

2. Was the user guide easy to understand?

Very difficult ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Very easy

like the old one better

S: ~~the voice of th~~

W: ① The voice of the old one is clearer.

②

Wishes: reminder feature

SUMMARY OF RESULTS

Features users like

1. The "Away" button (923, 917

2. The smaller size; the compact style

3. The information gets through quicker (937, 942

4. The pendant is easier to press (937

5. The temperature measuring function (933)

6. The button of the new pendant is less likely to be pressed accidently (942

Issues indicated by participants

1. The material of the string irritates the skin

2. The distance between the buttons is too small, especially the top two buttons (908, 912)

3. Took longer time to get through than the old one (939, 943, 916,914

4. Less loud and clear (902)

5. Too low volume (913

6. Too high volume (943

6. To improve the user tutorial/installation service (many users are not aware of the wrist strap, no users fully understand the range of the pendant)

7. Difficult to find the pendant at night (913

6. Voice quality varies / different voice of different people (916

Wishes for improvement

1. When calling the monitoring centre, the information can get through faster. (around 5 minutes in the current situation)

2. The xxx product can help residents deal with medical appointments. S.1 making and appointment S.2a Medical institutes tell the residents appointment details through xxx product. S.2b Xxx product records the appointment details. S.3 Xxx product units remind users of their appointments before the visits.

After booking an appointment with the hospital,

3. Easier to clean

4. To blend in the environment; Not intrusive

5. Smaller size

6. Adjustable volume

7. The call can get through quicker (934)

8. clearer voice (935

9. better material of the string and the wrist strap

10. Prefer what they are familiar with (908, 914

11. No one can see she/he wears a pendant (908)

12. take less room

 13 The reminder function (939, 940, 942, 935

14. adjustable volume (912, 916

15. extra functions of the pedant

16. To make the pendant easier to find at night

APPENDIX G: METHODS APPLIED IN CASE STUDIES

The features of these techniques and their applications in the workplace study are set out in the table below:

1. Methods for exploration:

EXPERIMENTAL INTERVIEW
Experimental Interview is for creating evolutionary designs targeted at an existing or familiar customer base. This method requires exploring target audiences' needs and desires through one-on-one interviews in which the interviewee describes his/her experience with the product class. This method highlights probing deeply into the underlying long-term problems that target audiences are having with a product or service. It was employed in user interviews to explore the opportunities for improving the current NPD approaches.
CONTEXTUAL INQUIRY
Contextual Inquiry is both a field data collection technique and an ethnographic research method, part of the Contextual Design methodology (Refer to Section 5.3). Compared with traditional inquiry techniques, it highlights capturing the detailed information of how users interact with a product in its application environment. Partnering with the target audience and the method's open-ended nature assisted in revealing tacit knowledge of which interviewees may not be consciously aware: By staying in the context, the course of a meeting is controllable - I could adjust the time and approaches during the process, add/delete questions, or open a new topic as required. It also enabled me to gather on-going experience and reliable data. It was used in combination with Observation to probe hidden information and unarticulated needs from interviewees' emotional reactions.
EXPERT INTERVIEW
Expert Interview is an efficient tool for acquiring and validating a large amount of information, for example, when I confronted issues beyond my own knowledge, such as those in business administration; wanted to learn the general status of the company's own NPD process which had been well observed by the Quality Control department; and to confirm the changes in group strategy which many employees were not aware of.
FOCUS GROUP

Focus Group is a qualitative research approach in which research participants are asked in group about their perceptions, opinions, beliefs and attitudes towards a product, service, concept, advertisement, idea, or packaging (Henderson 2009). It is a staged face-to-face discussion typically involving 6-12 people and chaired by an impartial moderator. It was used to explore the general user performance of the company's existing products, giving me first-hand experience of user reaction. It was also adopted to solicit focused feedback from employees of the company partner on specific design issues/ideas from various divisions of the company during the design of a new fuzzy front end tool to support product innovations.

INCLUSION OF LEAD USERS

A leader user is someone who has articulated her needs ahead of the general user community (Von Hippel 1989). He/she may even have cobbled together solutions from existing equipment and thereby gives a much bigger contribution to the average users. Therefore, it is helpful to engage bright and cooperative lead users in product/service innovation (Moore 2000). This method was deployed in this research to assess product performance and to explore the potential of the target users to influence innovation outcomes.

CONJOINT ANALYSIS

Conjoint Analysis is a statistical marketing research technique for analysing the factors that influence customers' purchasing decisions. The output can be used to improve designs, optimize them for value, and predict market share and product success (Dahan & Hauser 2001).

This method was applied in the user study, to determine the strengths of users' preferences on product design attributes. Specifically, I presented a controlled set of product attributes to research participants, then ask them to make a series of trade-offs from least to most appealing. By analysing the results, the implicit value of individual attributes could be revealed, which could further determine what combination of features would make up the most successful product concept.

STORYTELLING

Storytelling is an interview technique which let interviewees decide what is relevant, not the interviewer. The interviewer does not try to control the story. Instead, he/she focuses on exploring the 'what', the 'why', the 'when', the 'how', the 'when' and the 'who' (Kipling 1999), and on steering the interview mode. Storytelling aids in capturing the richness and broadness of how people experience their world, and integrating on-going experiences with memories from the past and aspirations for the future (Atkinson 1998).

An interview using Storytelling is more like a normal conversation - I formulated a range of potential topics without traditional questionnaires, while questions were asked in more detail.

OBSERVATION

Usually, the data/information delivered by verbally have already been processed, and as result, the accuracy, completeness, authenticity and validity can be corrupted by, such as inadvertent input, an individual's knowledge background, and a company's departmental barriers. This explained why information acquired from different interviewees sometimes conflicted, especially when the interviewees were from various divisions. In the workplace study, Interview/discussion had been proven to be effective in collecting large quantity of data/information about a complicated topic in a relatively short time. However, conducting only interviews could not provide all of the raw material needed for designing an effective and feasible NPD approach.

Addressing the above concern, I adopted the observation method to supplement interview techniques in exploring the project management issues. For example, I took part in a project meeting between the company and the external design consultancy, during which I observed the two parities' communication and argument on the design output, took notes of the points that they were in disagreement as well as any other inspiring details they spoke of, and thought about the potential causes and solutions of the observed issues (Refer to Appendix G). Observation let me remain relatively unobtrusive, to capture the information that cannot be elicited by a set of predetermined lines of questioning or other techniques.

2. Methods for knowledge generation

Persona, Affinity Diagram and Process Mapping were the three research techniques I adopted in data processing for generating problem resolutions:

PERSONA

A persona is a behaviour-based user archetype developed to understand user lifestyles, behaviour patterns, aspirations and needs. It is presented as an imaginary person with an assigned name, face, goals, attributes and some other basic information about life, who represents a group of people sharing similar attributes. It is often used in creating a scenario as a fictional player (designingwithpeople.org 2011). It can be expressed in various media and forms: textual, narratives, storyboards, video mock-ups, or scripted prototypes (Go and Carroll 2004).

Creating a persona has been proven in this study to be an effective tool in sorting out complex user information; transforming the information into design attributes and requirements; and presenting the information in a simple and graphic format which can be well understood by innovation stakeholders from diverse background. Besides, it is an efficient tool for screening out highest priority needs/requirements, thus can facilitate decision making in the fuzzy front end (FFE) of an NPD project. Persona was prompted as part of my research output, to improve NPD in the target companies.

AFFINITY DIAGRAM

An Affinity Diagram requires structuring ideas or data gradually from the bottom up into meaningful groups which demonstrate valuable information for decision making or subsequent research, as illustrated in Figure 5.12.

An Affinity Diagram was used to organize large range of ideas or data by defining their interrelations.
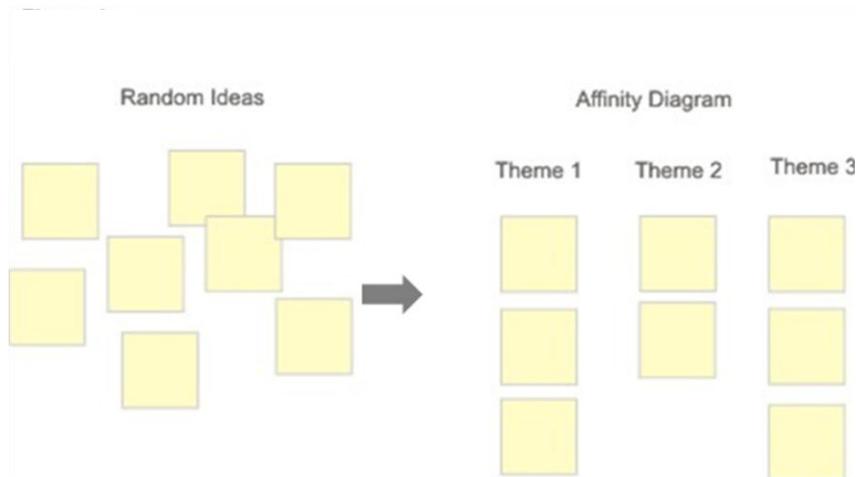
Figure 5.12 An illustration of how to use affinity Diagram to organize data

PROCESS MAPPING

The key elements to be addressed in an NPD project comprise: project context, aim, resources, stakeholder information including their roles, functions, aspirations, responsibilities, level of involvement in a project cycle; and the estimated output of individual tasks/project stages. Illustrating and mapping the various elements onto a project timeline aided me in understanding both their relational frame and respective influence on project success or failure, which was a critical step in discovering the best opportunity for improving NPD outcomes.

For managing an NPD project, the technique is a process of: 1) visualizing and customizing a pre-designed new NPD process, to comply with specific projects; 2) transferring abstract requirements into a plan of detailed NPD activities; 3) outlining why, when and how the stakeholders participant in specific stages/activities of a project cycle; 4) and defining stakeholders' responsibilities. It aids in structuring NPD activities, managing cooperative work and making participation less elusive (Mongiat & Snook 2007).

Like Persona and Contextual Design, Process Mapping is also part of the solution produced in this research.

APPENDIX H: THE TWO FOCUSED PROJECTS

PROJECT 1

Project plan

Responsibility Project manager

Product/Project Name "P~~aaaaaaaaa~~et" (In-house); "~~aaa~~" (on market)

Context of the ~~aaa~~project

Project manager I~~aaaaaaa~~n

Visual communication R~~aaaaaaaaaaaa~~

Partners

~~aaaaaaaaaa~~tions Ltd. (Programing, Coding)

~~aaaaaaa~~s Ltd. (User experience; Icon)

~~aaaaaaa~~d. (Video and Real Time Text Calling over the Internet)

Project Aims

To remove isolation;

To increase social digital inclusion

Problems & wishes in NPD

1. To lengthen products' life span

2. To speed the NPD cycle

The product development teams from the company partner are under pressure to speed product development cycle. The pressure is coming from 1) the political change and 2) the competition in the market.

3. To improve product change management

Ian pointed out it is difficult to add new features to existing products which is, however, often required to meet new requirements from diverse customers and to keep the existing product competitive. Thus, a NPD approach which properly considers the need of revising and improving products after launch is what the company partner requires.

(The old unit of the social alarm equipment)

Sales Channel → Strategy Team → Product Development Team

Age: 35-60 --- Public Sector (Buyers)

Fundamental considerations
- Appearance
- Stigma

Age: 70-80 --- Users

Connect
(The new unit of the social alarm equipment)
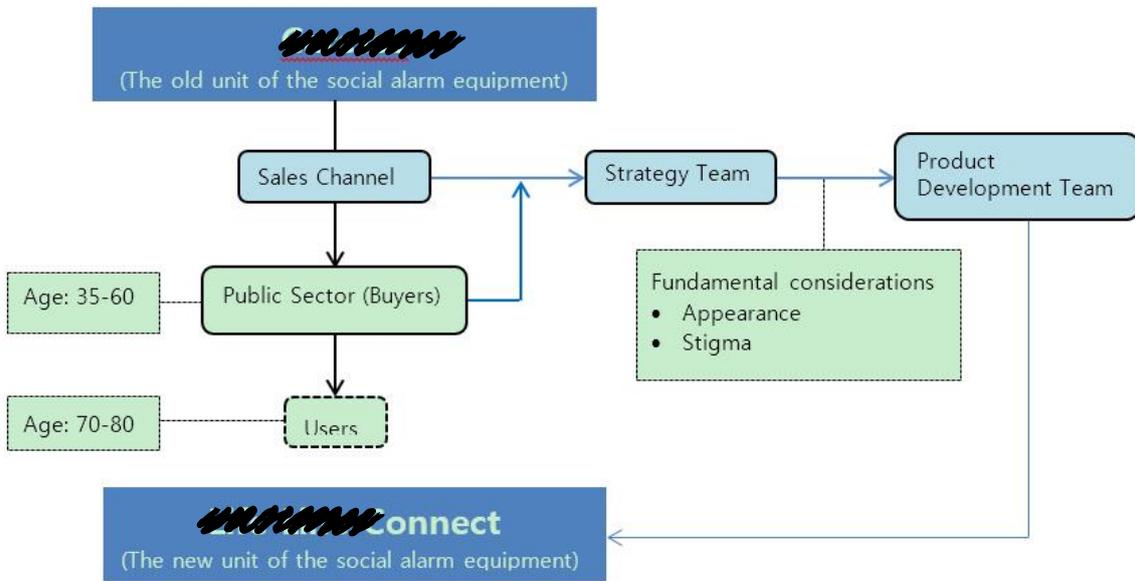
Low/MEDIUM/HIGH

R L
T L ① PARAMETERS → LOCAL SETTINGS
→ TELEPHONE NUMBERS/DIAL SEQUENCES
→ DEFAULT SET UP.

R L ② NEW MARKET → NEW POWER SUPPLIES/CHANGE CIRCUITRY
T m → LOCAL LEGISLATION/STANDARDS.

R Lm ③ PHYSICAL → BUTTON LABELLING
T m/H
↳ BRANDING
↳ GSM CONNECTIVITY →
↳ PLASTIC COLOURS.

R M ④ FUNCTIONAL → NEW FEATURES
T m → NEW PROTOCOLS

R M/H ⑤ NEW PROCESS → FDA. ←
T m/H.

Issues pointed out by key stakeholders

1. No regular structured meeting. Nothing set up as ?

     (R) ⟶ for feedback.

     to test.
     Specification development. Time point. When?

     ①. Specification. stage (early stage).

     ②. Check. (later on.).

e.g. ~~xxxxxxx~~ spec'g what the product should do ?
          software. & Products.

Service generated contributes a lot
      {specialist} telecom. service engineers.

Customer central   Telecom service engineers

Skeleton is rigid,
Below the top level, the process is flexible

~~Service~~ Feedback from:

Service ⟶

Sales ⟶ purchase products hold budges

Telehealth.

UK.
Service
Duncan. B.

Graham Mann
CSE
customer
service
engineers

8
Hayden Pickup
TSE
Telecare
Service
Engineer → Telehealth

160 Greenwood?
Nora's
Service
engineers

?
CSC
customer
satisfaction
centre.

PNC
Monitoring
Centres
(140 ish)

→ fix
→ installing upgrades
→ installing new.

monitoring centre managers, operators ....

Support telecare
customers
– training
(multiple people
technical support
customer installations.

users of the systems

fix
problem
– communicals

users. wardens....

GSM UNIT.

Managed services

equipment cost
could be higher →   1 or 2 Contracts
                     Birmingham

£2

                     Service cost !!!

£30

Value chain

Through life cost.

service (people time)

Current:
our cost.

equipment
supply
+
services

Up front equipment cost   Current situation

equipment cost is big issue

More service time   (if invoice)

chargeable. customer cost.

Future

1 <u>Front End meetings</u>

Product development team
⎣→ Attending service team and department regular meetings

Change of Tunstall → more income.
(e.g. ponds service)

2 ~~Contact~~ <u>Way that service can contribute</u>

Email.

<u>Underdevelopment</u> . ~~chat~~ forum; people can share ideas

✳ Tunstall drive the (market) → ~~old fashioned~~
· traditional
· based on relationships, trust.

<u>Characteristics</u>

⎡ Telease
| <u>Regulations</u>
⎣→ <u>New technology</u>

Government strategy/policy.

Competitibility issues
long relation with customers

<u>Reliability</u> | quality of serv..

✳ <u>Trust</u> & relationship between <u>seller and customers</u>
↓ key value of the market
to build a strong market

① Requirements, ② Interpretation of Requirements to the specification led

1. Managing a group of people meeting together

Representation to tell of what users want?

* Most issues come from initial specifications.
Not be properly specified.

Most of the spec. are very top level. to general.

Right people give the right information at the front -end.

[Quality of information].

independent thinking.

a process everyone believe and follow this process.
↕
commercial pressure

2.

①

Main problems:

1. Problem requirements.

2. Resource:

P.M. properly capture product requirements

Project Manag. to deliver the product match the ...
represent everything needs.

Requirements

↓

Project Manager.

Lead engineer.

Function Requirements (focus) How may ...

what problems has to solve

From user point of view feels like / looks like
Interactive
Aesthetics
Psychology

(Contextual)

(not covered)

Problem

How comprehensive the
Requirements should be?

Non Function Requirements

Functions · · · · · Requirements (Product Management)   Function req

Functions ─→ Project Planning ←- - (translation)

Project Planning ←- (R&D manager , project manager)

(Team)

Suggestion | De Product Requirements ──→ | Check the answer if it is valid. | ──→ Economical Filters

Reality ─→ Lead to wrong interpretation.
(Quality Control)

Far too lose !

?*
Design Partner   Product Management.   R&D

| Product Requirements |
          ↓
Detailed requirements — — — — — (Missed !)
          ↓
| Design Specifications |

6 Requirements of fully sense

Other participants
has not been asked?
n.b base priority fulfilled → Requirements

Requirements
* Capturing the issues to build into a guide
  ↳   to cover any gap
* Checklist accessed by anyone
  Add issues
                              are not involved early

Requirements capturing is weak
* [Product acceptance test] is to late   (technical support engineers)

no formal stakeholder involvement actions

mean

EF.

PRODUCT REQ'TS CAPTURE
+ SPEC.

PROD MGT.

INDUSTRIAL DESIGN

CONCEPT DEV PHASE

INITIAL PLANNING TO DELIVER PRODUCT.

(RESOURCING, TIME, EQUIPT, COSTS, RISK,)

PROJECT PLANNING

PROJ MGT + R+D MGR.

PRODUCT BREAKDOWN STRUCTURE.

- SCHEDULE
- RES PLAN
- RISKS
- COSTS
- PRODUCT SPEC.

PROJ MGT.

GATE.

DEV CONTRACT REVIEW.

PROJ MGT.

APPROVAL.

RVW RSh / PROD MGR
SS / OPS DIR.

PROD. DEVELOPMENT.

PROJ. MGR.

PROD MGR.   STARCH.   LEAD ENGR.

DEV
TEAM
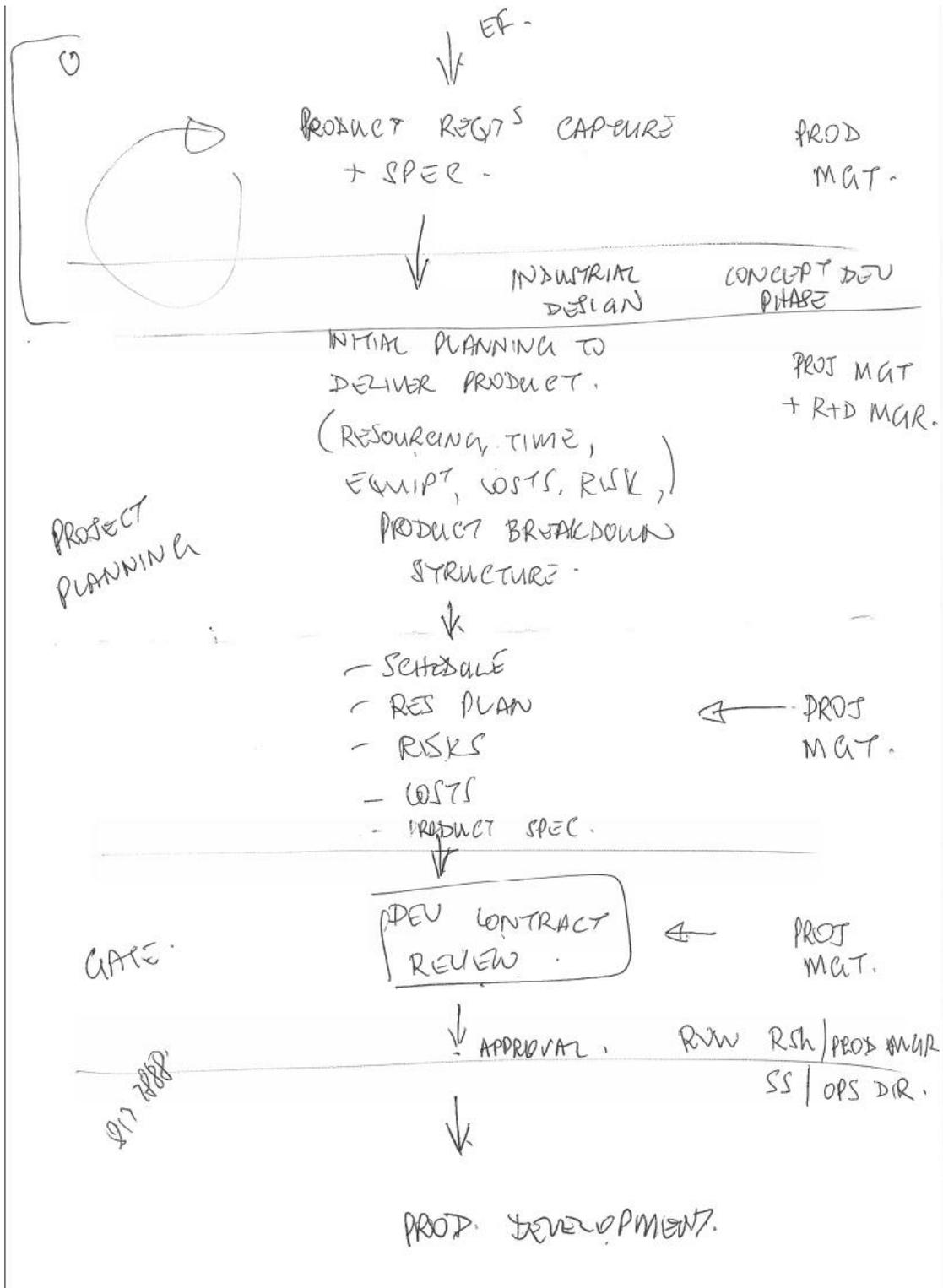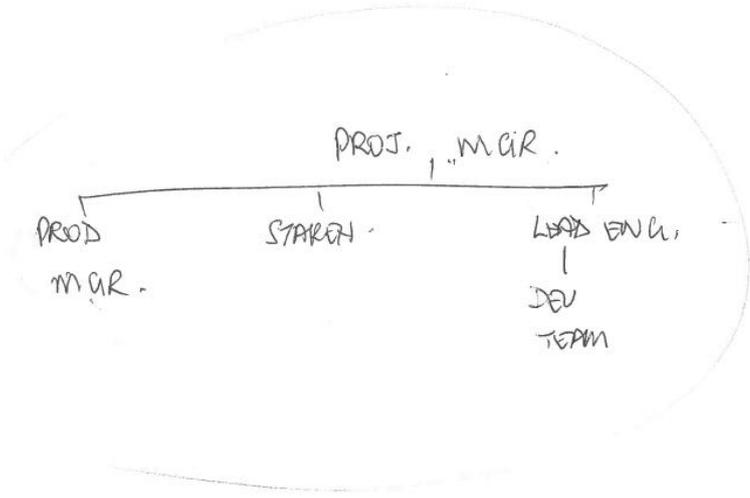
R+D MGR.
REVIEWER/
CONSULTANT.

PROD MGR.

PROJ. MGT

R+D

PROD REQTS

PROD MGT

Missed ?

REQ2S

CONCEPT DEV/
REQTS DEVELOPMENT

→ DETAILED REQTS.
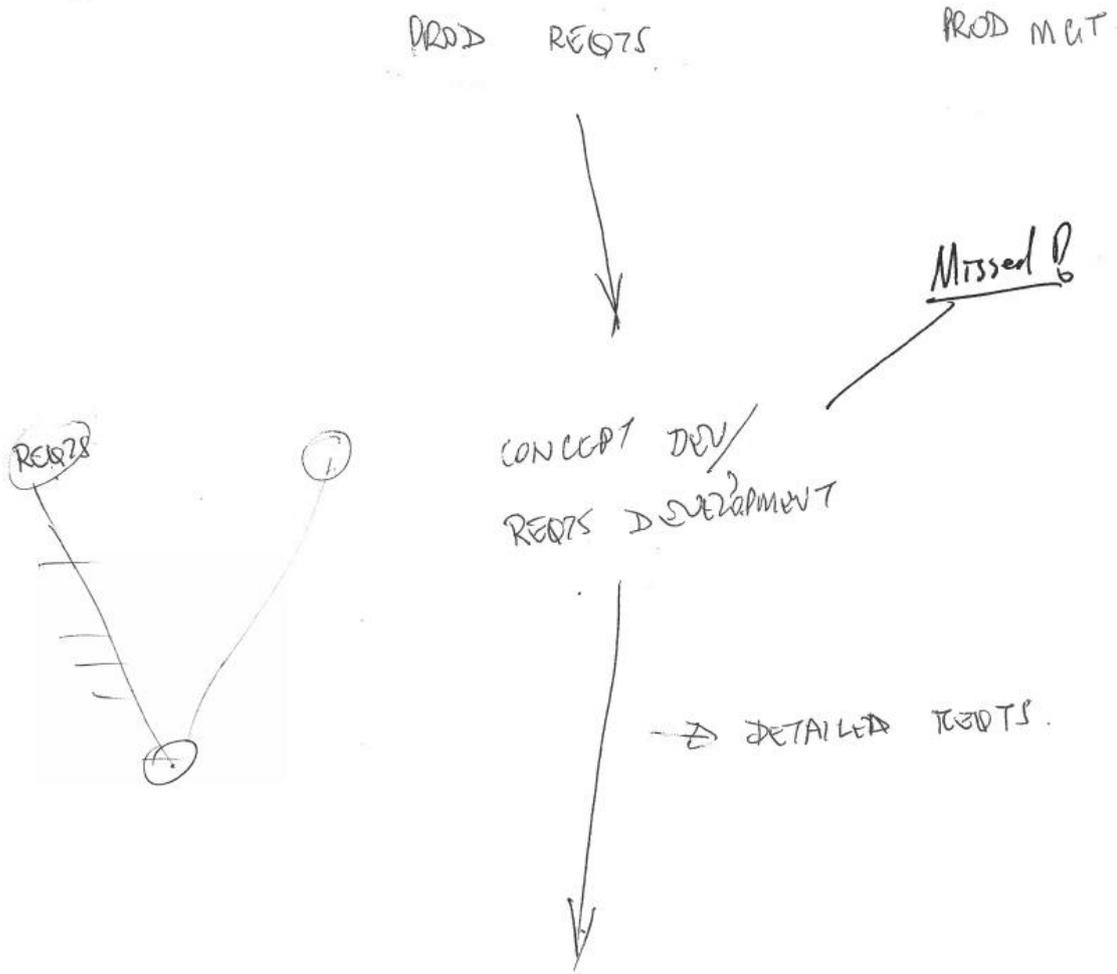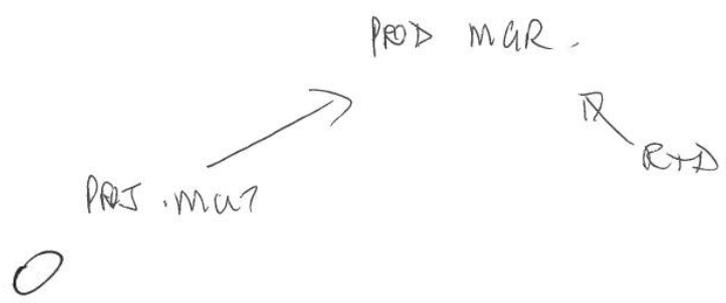
DESIGN SPECIFICATION
PRODUCT SPECIFICATION.

R+D.

PRODUCT MGT DIRECTOR   (R sharp)

PROD. MGT.

PROJ. MGT.

R+D MGR.

PROJECT MGR

LEAD ENGIN

SW

VALN

MECH

ELECTRONICS

PROD.
MGR.

OTHER
STAKEHOLDERS.

PROJECT 2

Project plan

Monthly Review

Trakware S/W Dev. (software developers)

Via Dynamics UI - Designer.

Gwilson → S/W ARCHITECT

Project Agenda.
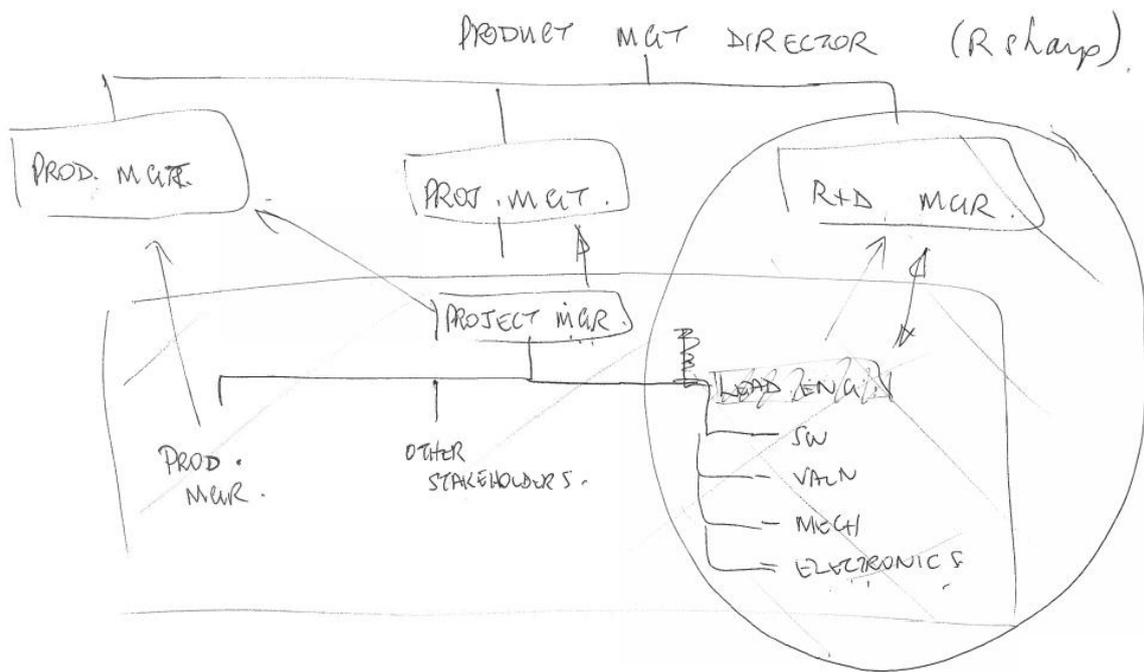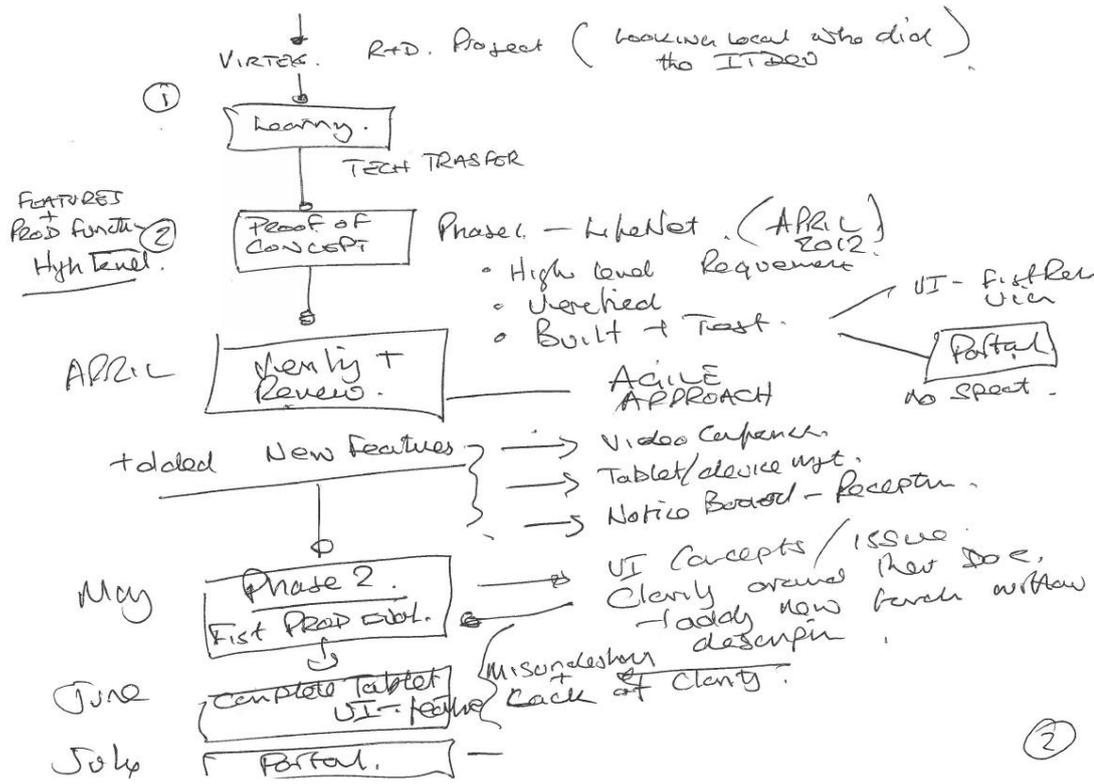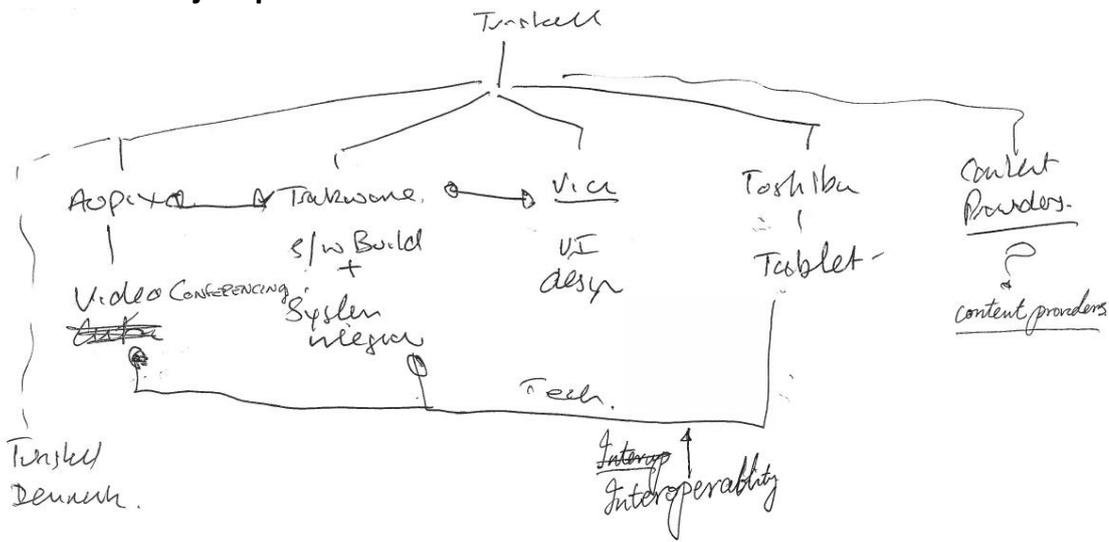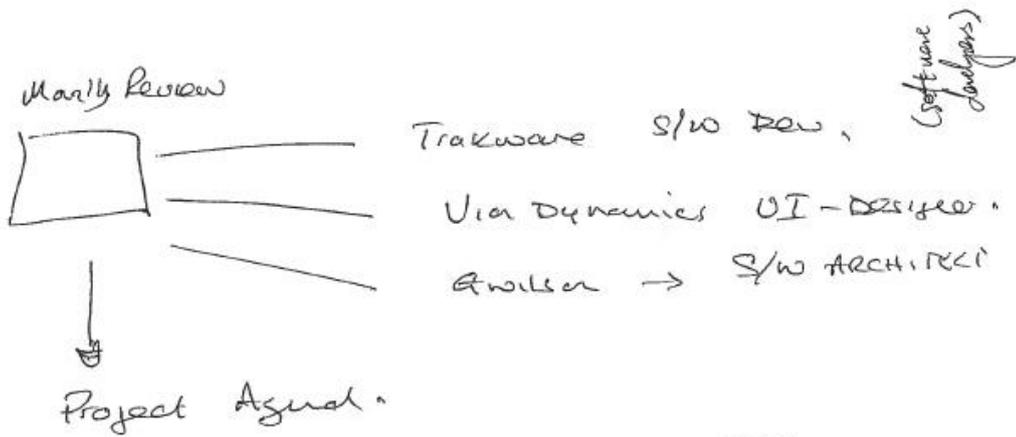
- Review + Signoff the Tablet UI.

- Review + Agree Approval for Portal UI. Redesign.

- Product Plant Delivery for Phase 2.
  - 30th June.
  - 31th July.

- Additional Features + Custom.

- Plan — next Steps.

June 25-07

Project

Inside

Partners

You
Hypothesis

Gather Trusted info

O/P

Current struct

Test ideas

Questions info evidence

Impacts on Resources + Financials for Dev.

Managed Service Proposition
Dep.

Librart Portal

Tablet Portal

Services

Install back office

Key issue.
- Current → Product Lifeline v. (Bu)

- Service — Get to market ?
  - Product/service Lifeinet
  - Integrate into Business
  - Sell.

→ No Process.
→ Selling Solution.

Selling how.

Delivery/integrate into business (in business)

1. Take order.
2. Process "
3. Fulfil
4. Bill/collect moves
5. Support.

Processes ✓
Realise ✓
Customer ✓

Minimise impact

Financial options/solutions

— MKG.

→ o INSIGHT.

→ o SHAPING PROPOSITION

→ o Take to Market
     — CHANNEL Plan

→ , Forecasting Demand

forcasting   demand — o/p

Yr1	Yr2	Yr3
£	£	£

= Sales

revenue Plan.

Strategic
+
Economic
Cttles.

System structure

①

* Social inclusion
* Operational efficiency — what are the characteristics of the target group?
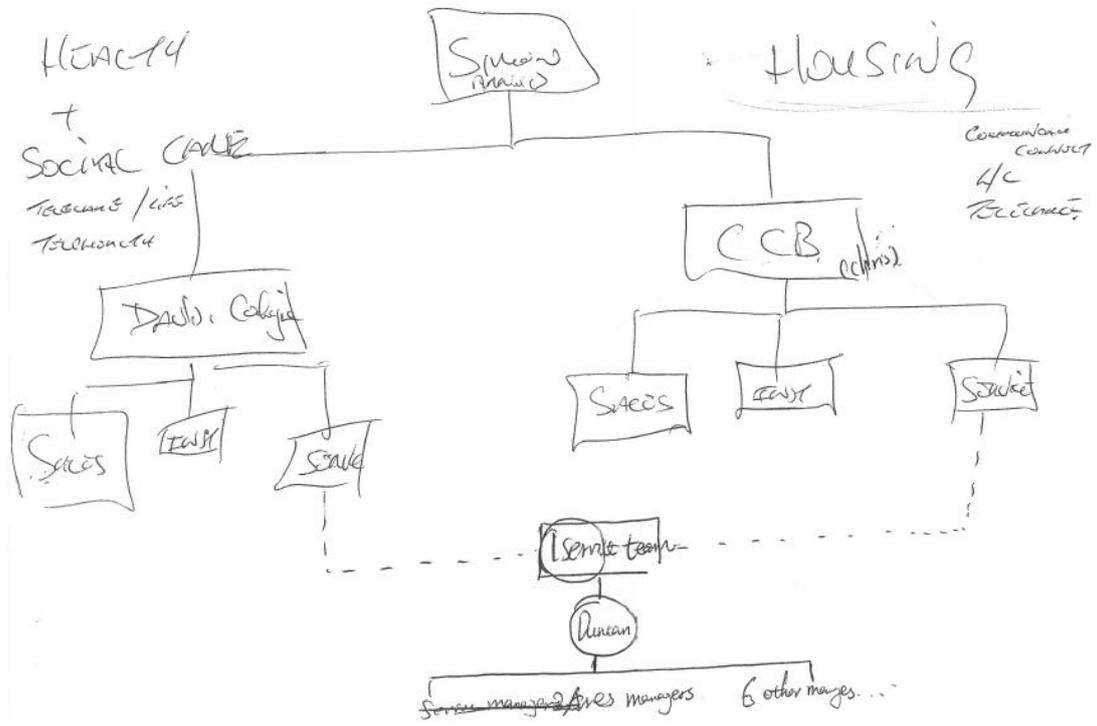
Customer Insight Brief
Product Brief
Project Brief

Brief → ○

* Who are the product derived for?
* How the solution answer the wishes and requirements from diverse groups of customers?
  — Unclear target group.
  — Does the solution consider the characteristics that target group?

* Boundaries of ~~functions~~ design (functions, interactions, * costs, etc.)
  — When and how to set the boundaries?
  — How to manage the boundaries revisions?

* Quality control in the collaboration between outside partners.
* Quality of the outcome — Is there a proper process to test the outcome?
* Quality of the process — Is there a well-built process/approach to manage output revision?
* Quality control of the project. — agile process.

* Does Tunstall have a proper approach to examine and evaluate the design outcome from the partners? (participants, when, how?)

* Information Transfer
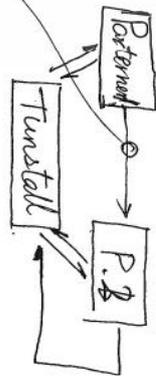
Tunstall.

Management of the collaboration.

Info.

Filter

T.   R.

P.3

Translation

Partners — Tunstall — P.3

Filter

T   R.

P1   P.2

Translation / Revision

Filter

T.

Tunstall

People who under-stand different perspects and have knowledge of related areas.

• Design boundaries understand and agreed by all stake-holders at the beginning.
  What can be changed? What can not be changed?
• How Tunstall take new ideas/input from partners on board?
• How Tunstall monitor the collaboration between partners?

P.1 ⇒ output Gate
P.2 ⇒ output Gate
Tunstall

Tunstall access to monitor the
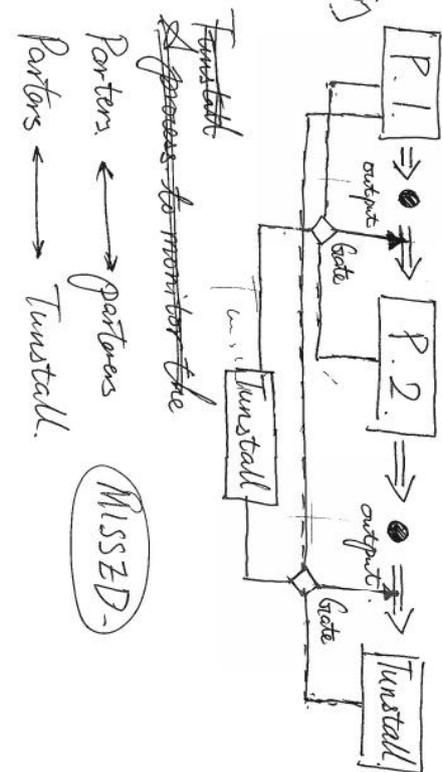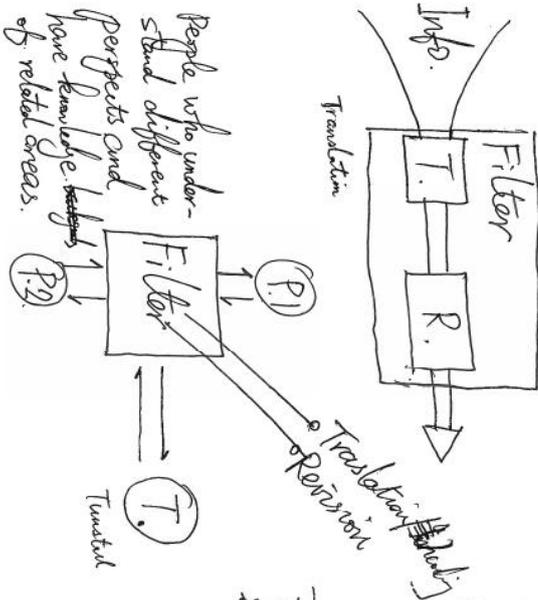
Partners ←→ Partners
Partners ←→ Tunstall.

MISSED.

*

Design quality

Stakeholders' involvement.

context of · HHC.

③

Does the design fully consider the characteristics of the target group from a professional angel?

○ Technical restrictions
Design styles

Customers
Partners

End users ⇒

High level specifications
The principle

R & D   Medical professionals
Carers,
Wardens

Product management

Development

Specifications H.

S. D
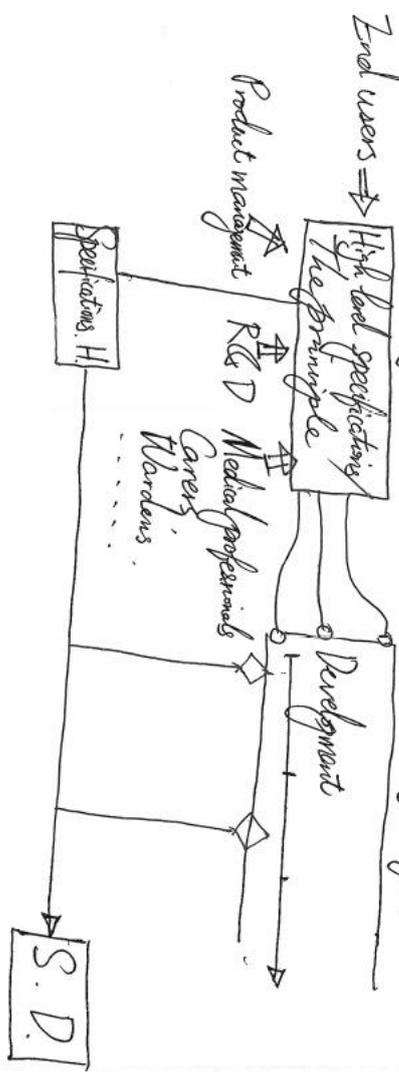
i. Does Installation contribute to ~~the~~ NPD?

Minimum.

Agree that have the Installation involved early help.

(<u>Next generation of the life call system</u>. - Installation get should
  Project , examples)   have input

- Market proposal   Strategic filter   Zcost & filter   Design & conflict

Possible Input from
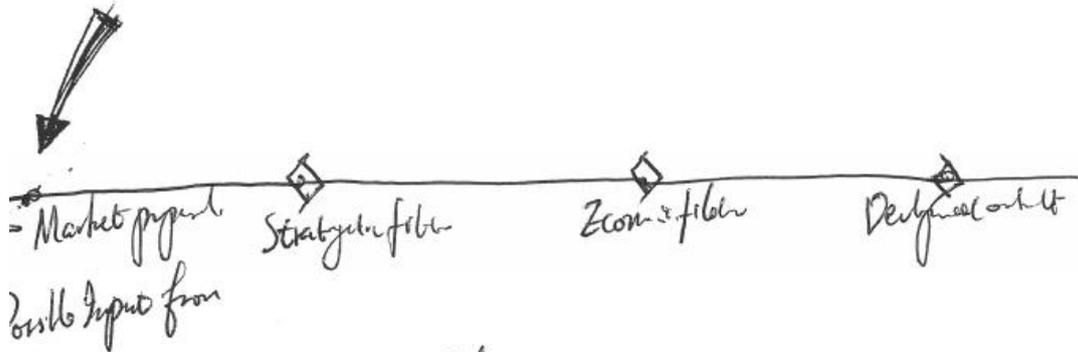
  Installation @ Concept & Refinement
             ② User information
             ③ design ideas.

~~Companies install~~

Supplier in this market do not concern endures properly.

~~Benefit of~~

Benefit from the input of Installer

1. Save cost. (easy to install.)
2. get valuable input / ideas
3. more user-centred.

No means to feed into NPD at this moment.

* Bugzilla. (database). Problems, fix. ⟶

Idea: Can we expand the function of Bugzilla?
   to record more informal feed into dev/put.

| Passively |

Field engineers meeting. — held by ~~se~~ Duncan

Idea: ~~Regularly~~ ~~Regular~~ Regular Collection of user information
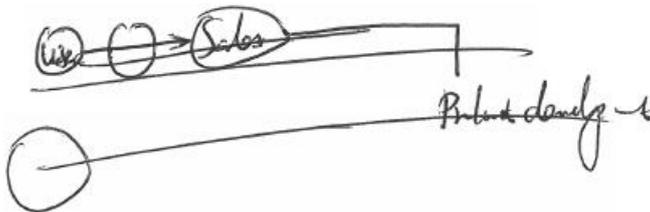
Best time to involve the Installation:

Input & Proposal

Product Specification. — Possibly

Development Contract — Possibly

in case of misinterpreting

⊢ gate process →
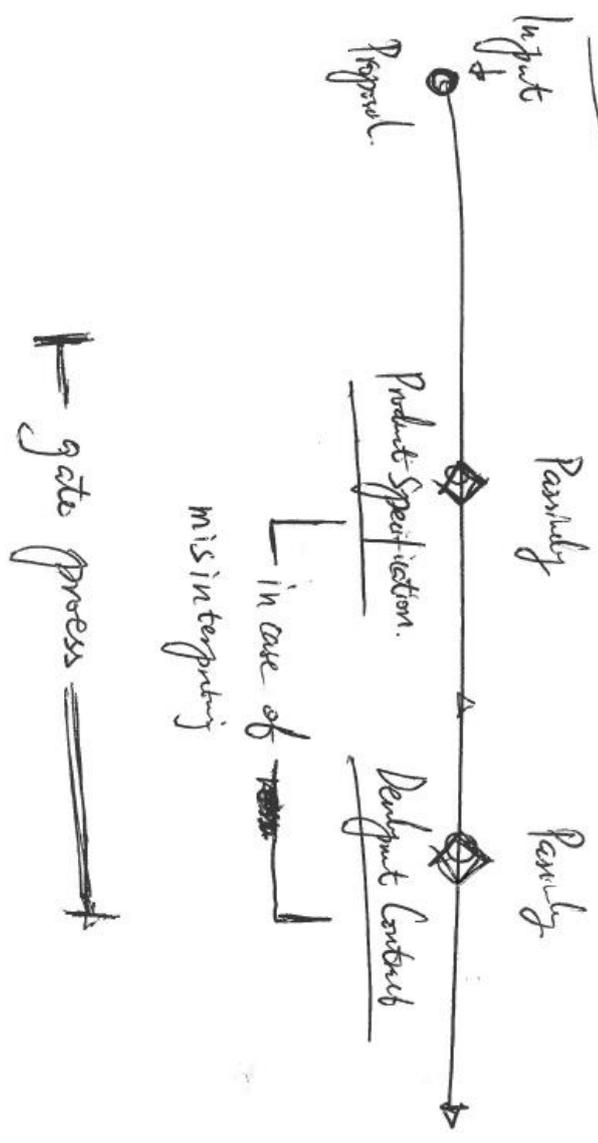
APPENDIX I: TESTING THE BRIEFING PROCESS

A review of the 2nd International Workshop on Modelling and Management Engineering

Participants	Background
Expert 1	Researcher/lecturer at Technical University of Munich (Innovation management)
Expert 2	Professor at Cambridge University (Engineering Design)
Expert 3	Professor at University of Bradford (Automotive engineering & Quality control)
Expert 4	Professor at Vestfold University College (Business development & Maritime Control System for the Future)
Expert 5	Doctoral researcher at Kaisruhe Institute of Technology (Innovation management)
Expert 6	Doctoral researcher at Technical university Delft (Innovation management)
Expert 7	Prof at Massachusetts Institute of Technology
Expert 8	Prof at Massachusetts Institute of Technology

It was a well organised and very helpful two days' conference which gave me opportunities and plenty of time to communicate with each participant. The disappointment was that I was the last one to present, thus there was very short time left to collect feedback. The questionnaire did not work very well and does not provide as much valued comments as expected. However the verbal comments from some of the experts were very instructive. Some of the comments were recorded using a voice recorder. The valuable information were summarised below:

1 Comments on the process model

1.1 What are the primary considerations in creating a design brief and a project brief?

1.1.1 Primary consideration for creating the design brief

Expert 1. To distinguish between "consideration for each"

E2. Success criteria

E6. Interesting project. Can be more focused on a specific section of innovation pocess. I get

the impression "Healthcare tools" are not well designed, so how could you approach be implemented to change the current situation?

E7. You have captured the primary considerations

1.2.2 Primary consideration for creating the project brief

E1. user knowledge

E2. Addressed user needs; company's; expected functionality; key dates; budget

E4. The task, target in the context of HHC was missing

There is too much information provided in the presentation. It is not easy to follow.

E8. You seem to have captured most relevant issues, but it is hard to judge "collective exhaustiveness"

1.3.1 Do you agree with the brief creation model we proposed?

☐ Strongly disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree

E1. Disagree

E2. Agree

E3. Disagree

E4. Neutral

E5. Neutral

E6. Agree

E7. Agree

E8. Neutral

1.3.2 The strength and weaknesses of the model

E1. not really clearly communicated; get it more focused

E2. The brief is a useful representation of the needed process. It is too complex, though, to be useful for practitioners. You are asking them to make more changes that they will be ready to make.

E3. too linear; consider iteration

E6. Look promising but how differs from the others? How did you come up with the process, was not clear from the presentation.

E7. I do not have enough information for such an assessment. This assessment should be done by practitioners, working with the model.

E8. The model appears comprehensive. It is hard to give a proper judgement based on just listening to your presentation. What is not clear is how the model is implemented. How do

you score all these contents?

2 Transforming the model into a tool that can be used in practice

2.1 What the key features of the brief creation tool should comprise? (Tick all that apply)

☐ Enquiring   ☐ Coaching   ☐ instructing   ☐ Referencing   Other:

E1. Enquiring + Referencing

E2. Coaching

E3. Coaching + Referencing

　　Checklist

E6. Enquiring

E7. Enquiring + Coaching + Instructing + Referencing

All these are important

E8. Referencing

2.2 What function do you expect from the tool we are developing? (Tick all that apply)

☐ Collecting data   ☐ Screening data   ☐ Coaching research and design approaches

☐ Mapping players

☐ Defining project requirements   ☐ Defining design functions

☐ Forging the innovation/development process

☐ Planning for downstream applications   Other:

E1. Collecting data + Screening data + Mapping players + Defining design functions + Forging the innovation/development process

Collecting and organising data;

Mapping data,   Give it some semantic meaning

E2. Coaching research and design approaches

E3. Did you check if there are already tools available?

E6. Defining project requirements

E8. What is the purpose of the software tool?

What is the deliverable outcome?

Personally- not sure a software tool is needed

2.3 What is the best form of the brief creation tool?

☐ Web page application   ☐ Software   ☐ Toolkit   ☐ Cards   ☐ Excel templates
Other:

E1. Web page application +   Software

Mobile application (SOS, Andriod, etc)

Direct feedback from users

Actually more like information on small easily "digestible" links

E2. Webpage application

E3. for SMEs should be as easy as possible

Iterative to use with customers/consumers (e.g. cards) / Check also NOVONO NORDISKS innovation way

Check EDC inclusive design work & publications and tools (website)

E6. Toolkit

Other comments:

- E2: Considering narrowing down the focus of you PHD thesis

- Two scenario for future development pointed out by E2 & E8:

Scenario 1. Going back to businesses. Working with them as closely as possible. Presenting to them the ideas (e.g. proposed process and approaches). Asking businesses which part of the ideas attracts them most, and how they think the ideas can be applied in practice. Then developing something based on the gained knowledge.

 Scenario 2. Developing a tool based on the knowledge withdrew from research, which was what I planned to do, then bringing the tool to companies. In this scenario, the developers can expect to receive feedbacks on some of the ideas, but should be prepared that the tool/approach "will never be applied" by companies in practice.

If there is no well-built business connections that can be exploited, or it will take too much time to build new connections under the time constraint of a doctoral course, they suggest me following the plan that I described in the presentation, but following the route of scenario 1 after the doctoral course, if I plan to continue to work in the same filed.

- E7 & E8: A software tool may not work
E7 and E8 said they like the models which I presented and appreciated some ideas inside. However, a software tool developed based on my proposed process will be too complex to be accepted by businesses, especially the SMEs. They also said I should not be ambitious to change the current situation a lot. I think the key point from E2 on developing and applying an innovation/management tool/model was carrying out comprehensive research but presenting to customer "a simple picture". He suggested me defining the most significant and attractive ideas embedded in my research outputs, and developing something based on this selected knowledge. He also suggested considering using more simple forms to bring the ideas to customers, like cards, pencils, etc.

E2 &E8 highlighted that if a tool/approach is developed first before being taken to companies,

the developer should be prepared that the tool/approach would never be applied by customers in practice.

APPENDIX J: A FICTITIOUS BRIEF FOR AN IMAGINARY COMPANY

<table>
<tr><td colspan="2" align="center"><h2>X</h2>

DESIGN BRIEF</td></tr>
<tr><td>Project name</td><td>X</td></tr>
<tr><td>Author(s)</td><td>David Green, Project manager at FLEX
davidgreen@flexhealthcare.ac.uk
Mike Feather, Chief designer at FLEX
mikefeather@flexhealthcare.ac.uk</td></tr>
<tr><td>Participants of the brief creation process</td><td>Roger Barnett, Director of R&D
RogerBarnett@flexhealthcare.ac.uk
Liz Brown, senior researcher from Marketing, Liz Brown@flexhealthcare.ac.uk</td></tr>
<tr><td>Completion Date</td><td>2nd Feb 2013</td></tr>
<tr><td>Date Edited</td><td>15th May 2013</td></tr>
<tr><td>Issue</td><td>1.0</td></tr>
</table>

1. CONTEXT

1.1 Project summary

The X project aims at improving the quality of life for older people through the use of online social networks combined with mobile technologies. FLEX Healthcare is developing a mobile social networking platform customised to the needs of older people, supporting interactions with their peers and families, as well as easy access to information.

X is intended to provide solutions suitable for the range of segments and market environments present across the territories in which FLEX Healthcare operates. This considers both functional and connectivity requirements.

The X product is based on the existing Connect/Caresse processor/platform and firmware (X old). At a future stage, the platform may be replaced by that which will be developed for the other Next Generation products (beginning with X2). The introduction of "X new" will depend primarily upon production and BOM cost considerations.

1.2 Overview of the design task

The Next Generation product range is intended to provide solutions suitable for the range of segments and market environments present across the territories in which FLEX Healthcare operates. This considers both functional and connectivity requirements.

1.3 Design commissioner/Project owner

David Green, Project manager of FLEX Healthcare, davidgreen@flexhealthcare.ac.uk

1.4 Design executor

Mike Feather, Chief designer of FLEX Healthcare, mikefeather@flexhealthcare.ac.uk

2. BUSINESS FIT

2.1 Industry review

FLEX is one medium-sized healthcare company with over fifty years in product development. It is one of the leading health suppliers in the UK, and also has a presence in over ten countries. It is traditionally a manufacturing focused company but is transferring into providing both products and services. The design process of most FLEX products were outsourced to external design companies, but FLEX is building up its own design team, to improve the product performance across the entire product line.

2.2 Business objectives in terms of this design project

- Reduce social isolation & vulnerability
- Live independently longer
- Digital accessibility & social inclusion
- Support carers
- Creation of a care network

2.3 Other factors

The design solution must deliver the functions:

- Data transfer: with this information we can evaluate if the requests/responses have the format required
- Calls to third-party services: with this information we can evaluate the integration with third-party services
- Android Platform
- Access to & from any PC

3. MARKET FIT

3.1 Competitor review

- Mindings (spin off from University of Cambridge service currently in pilot) http://www.mindings.com/
- Memo Touch (USA based service launched in 2011) http://memotouch.com
  Family members and care professionals log into the secure caregiver website remotely, at any time, wherever they have internet access.

  14day free trial of the service.

  Pricing: 6months subscription $29, 12 month for $25 per month ex tablet. Technicolor - icontrol

- Media Touch, DECT phone G711/G722(HD),
  WIFI, DSL, VOIP/Video calling H262, H264, MPEG 720p quality

  Android 2.4, Q1 2012

  Home automation

DORO Smart phone/Tablet (Android) support & services platform including device management.

Other e.g. Connect video/messaging gateway

DIADEM & Sheffield County Council http://www.project-diadem.eu

- Creates software components that can front-end existing services with an intelligent, supportive, and personalised User Interface;
- Performs research to select the most effective technology features and strategies to assist the target group;
- Produces a trial system and demonstrate proof of concept as an interface to existing services;
- Identifies, and where necessary extend, relevant standards;

- Develops hardware layouts for places where several users share one access point, such as public libraries;
- Establishes guidelines and working practices for deploying the technology and assisting disabled citizens.
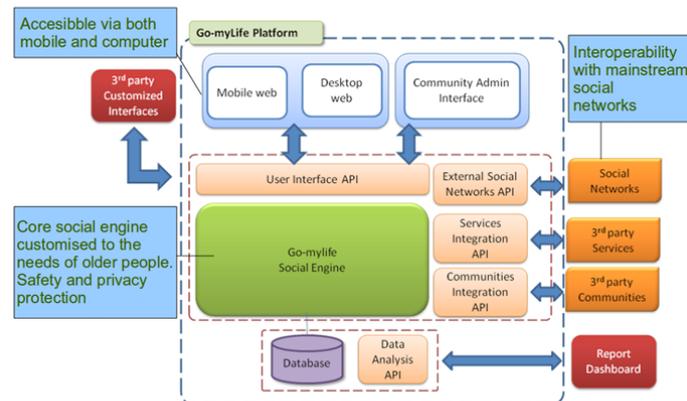
Housing 21 has received EU funding to work on a technology project to develop 'MyLife', a customisable touch screen application for people with dementia.

- reduce social isolation and boredom
- stimulate cognitive ability
- enable people with dementia to live at home for longer
- enhance participation and independence
- reduce the family caregiver's stress.

4. DESIGN FIT

4.1 Design objectives

The design of X and its associated social inclusion service aims to help deliver an improved level of care and quality of life for the active elderly, and residents with long term conditions.

Regarding the residents:

- Accessibility to multiple communication platforms
- Breaking isolation barrier. 'Walled garden' effect that illness creates
- Reassurance, care & family are contactable
- Independence in accessing info & society
- Improved quality of life
- Remaining active & engaged helps target dementia and depression

Regarding care providers:

- Increased Efficiency
- Accessibility to patients needs & care requirements
- Improved level of care
- Knowledge of patient wellbeing
- Improving social community success/uptake/accessibility
- Tighter supervision & control over contacts
- Simplifying broadcasting messages

Regarding friends & families:

- Comfort & Security of knowledge
- Accessibility to loved one
- Social Inclusion within neighbourhood/family network

4.2 Buyers

The main buyers are public sectors which purchase the products and then provide them to people with low income. They are usually focused on product price and the reputation of suppliers when making a purchase. They also consider the cost for installation, repair and installation.

The other category of the buyers is individuals – the end users and their families. Compared with the previous category, they tend to give more considerations to more expensive product models which have higher performances in functionality, agronomics, user interaction, and appearance.

Local Authorities   Health Authorities   Private Housing   Private Care Providers   Individuals

Customers purchasing X

4.3 User & application environment

X is designed for active elderly and other residents with long term conditions. Some of the target users are dementia patients or have learning difficulties. Many of the target users live in bungalow or extra care facility. The initial research shows that around 99% of these people are from the 50 – 85 age group. 20%-30% of these people live on themselves. They are most interested in: ease of use, durability, overall performance, cost, readily available repair service, product appearance and functionality.

Another category of the target users is carers who support users in their lives. Most of them are interested in ease of use.

The product will be designed to be used in house. Our initial research shows that most people may use the product in living room. Some photos of the typical application environment have been attached below:
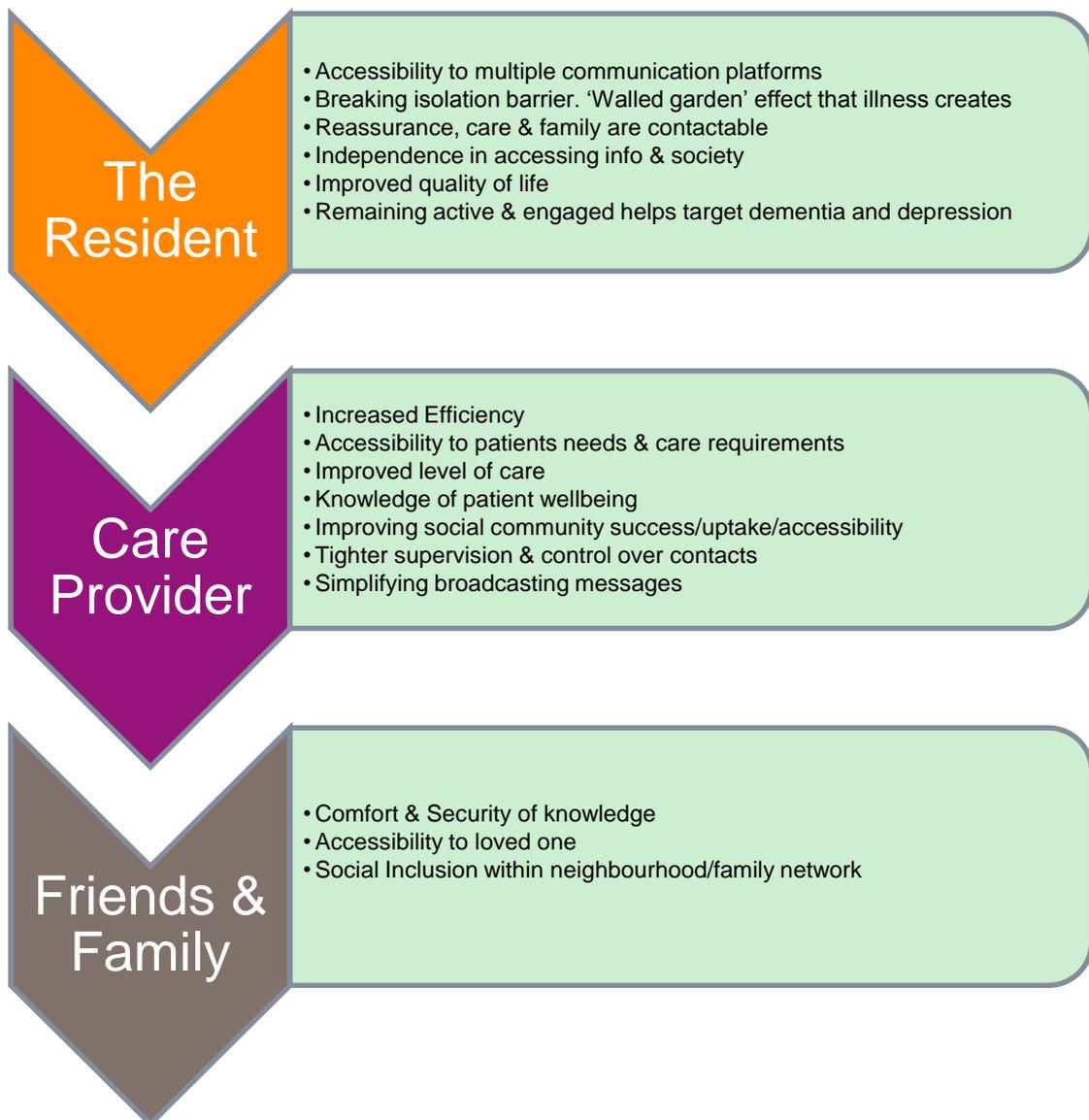
4.4 Product languages

The products from of FLEX were designed to be like white box, which is simple but may cause audience confusion within the complicated and already cluttered distinguish the different products. There is also a lack of visual cohesiveness and clarity.

The design solution is expected to consistently incorporate company branding elements, but with stronger visual appearance across existing products from competitors. The visual design must focus on the potential buyers of the product.

FLEX's Product Portfolio

4.5 Potential opportunities and requirements in post-sale environments

The Resident
- Accessibility to multiple communication platforms
- Breaking isolation barrier. 'Walled garden' effect that illness creates
- Reassurance, care & family are contactable
- Independence in accessing info & society
- Improved quality of life
- Remaining active & engaged helps target dementia and depression

Care Provider
- Increased Efficiency
- Accessibility to patients needs & care requirements
- Improved level of care
- Knowledge of patient wellbeing
- Improving social community success/uptake/accessibility
- Tighter supervision & control over contacts
- Simplifying broadcasting messages

Friends & Family
- Comfort & Security of knowledge
- Accessibility to loved one
- Social Inclusion within neighbourhood/family network

4.6 Future development which could lead to design changes

The regulation XXXXX may be changed from XXXX. This needs to be further explored by the marketing group. The Marketing must keep the whole team updated in the monthly group meeting.

5. PLAN / DESIGN PROCESS

5.1 Design strategy

Develop design concepts that are uniquely different from all competitors' while still communicating "FLEX quality."

Producing 6-8 design ideas in Phase 1 of the design process, these concepts should be evaluated in house and with our software development partner XXX. In phase 2, 3 design ideas will be developed into concepts. Prototypes must be produced and be tested with the target audience. The result will define the features of the find design concept.

5.2 Time frame, Budget and Measures of success

- Phase 1–Comprehensive visual audit of existing company portfolio, as well as a visual audit of the top three competitors' portfolios. The total time frame for this phase shall be seventeen business days (including the six business days for individual review by key stakeholders).
  The total cost for this phase will be £xxx.
- Phase 2–Develop a maximum of six creative design concepts that meet business objectives. Phase 2 will require six weeks of concept development time and one week for design brief project team discussion and approval.
  The total time for phase 2 is seven weeks. The total budget for phase 2 is £xxx.
- Phase 3–Test all concepts with target audiences.
  Six approved design concepts will be sent to David Green. The concepts will also be presented in a group meeting with executives of marketing, sales, R&D, Opinions and Installation and Services. When practical, the concepts will also be evaluated with at least five users in each regions and geographies. No information shall be given to the members of the target audience. They will only be asked, "Could you please give me your immediate reaction to each of these design treatments?"
  The total time allotted to phase 3 is four weeks: one week for distribution of materials and three weeks for interviews. The budget for phase 3, including duplication and distribution of the materials, is £xxx.
- Phase 4–Select three concepts and further refine each. Retest all three with target users. Based upon the testing of the initial six design concepts, the design brief project team, in collaboration with the design team, will select three design concepts for further refinement. The design team will require three weeks for this refinement process. The cost of this further refinement process will be £xxx. This budget will cover the same categories of items as described in phase 2. Upon refining three of the original design concepts, all three will be tested in an identical manner as described in phase 3 as well as at least three target public sectors. Once again, the testing process will require four

weeks and an expenditure of £xxx of the total budget. These test result transcripts will also be added to the appendix of this design brief. The total time for phase 4 will be seven weeks, and the total budget for phase 4 will be £xxx.

- Phase 5–Select one concept, fully develop it, and perform final testing.

    The results of the phase 4 design concept testing will be analysed and discussed by the design brief project team and the design team. One concept will be approved for final development and ultimate presentation to senior management for approval. The four members of the design team shall collaborate producing comprehensives and models for this design solution. Key stakeholders who will be involved in this phase 5 work other than the design brief team include:

    - The law department for final legal review
    - A representative from marketing from each major geography worldwide
    - A representative from procurement
    - All external vendors who will manufacture or produce the components of the project
    - A representative from sales for all major geographies
    - A representative from the corporate distribution function
    - A representative from the finance function, who shall produce a final accounting analysis for the project.

    In addition to fully developing the selected design concept by the design team, each key stakeholder will be accountable for producing a written plan for implementation of the project from his or her functional perspective:

    Sales and marketing will develop internal and external communication plans

    - Procurement will begin the process of preparing vendor bids and awarding contracts
    - The law department will prepare a written opinion concerning any legal issues
    - Distribution will prepare a definitive plan for replacing existing materials in the distribution system with the new materials once they are available.
    - Finance will prepare a full financial report for the project, to be available at the time of presentation to senior management for final approval Phase 5 will require eight weeks to complete. The final design development process has been budgeted at £xxx.

At the conclusion of the final development of a design solution, an external testing agency will be engaged to professionally test the solution with the target audience worldwide. The testing agency will be given four weeks for testing and preparing a report on the test results. The budget for external testing has been set at £100,000. The total time frame for phase 5 is twelve weeks. The total budget, including the cost of testing, has been set at £xxx. The external agency test result summaries will be added to the appendix of this design brief. At the conclusion of phase 5, the design team, the external testing agency, and the entire design brief project team shall meet to formally approve the design solution. This meeting will be scheduled as a full-day meeting. One week prior to this meeting, all members of the design brief project team shall be sent PDF files of the design solution, the test results, and all formal written plans produced by additional key stakeholders. This will allow the design brief project team to attend the final approval

meeting with substantive knowledge of the entire plan, as well as the business rationale for the approval of the final design solution that the team previously selected.

• Phase 6–Develop approval presentation. The co-owners of the project shall be accountable for preparing a senior management approval presentation and for making this presentation to (name) on (date and time). The design team shall prepare all visual artefacts for this approval presentation. The final approver will be sent all materials, including the design brief and all reports from key stakeholders, one week prior to the final approval presentation.

The co-owners of the project will require two weeks for preparation of this approval presentation. The budget for the development and production of the approval presentation is £xxx.

• Phase 7 – Implement approved design solution. In order to implement the approved new design concept for the entire project line in a short period of time, a subcommittee of the design brief project team shall be formed to develop an implementation plan.

This plan shall include specific instructions for rapid liquidation of current supplies of printed collateral sales literature, catalogues, owners' manuals, and packaging. Additionally, this plan will include the consumer communications plan and a new sales and marketing plan for the rollout, in addition to describing any variations required by different geographies. The implementation plan shall become an integral part of the senior management's final approval presentation. This detailed implementation plan will be developed during the same time period as the final approval presentation as described in phase 6 (total time two weeks). Since each of the corporate functions will develop its portion of the implementation plan individually, no budget has been assigned to this activity. The goal is to achieve full worldwide implementation of the new company portfolio design within one business quarter (three months). Manufacturing and distribution of the new materials, as well as disposal of the current manifestations of all artefacts, is estimated to cost £xxx.

APPENDIX K: EVALUATION OF THE TOOLKIT

EVALUATION WITH EXPERTS

Participants	Background	Format
Expert 1	Post – doctoral researcher in innovation management	Via Skype
Expert 2	Senior Project Manager of a leading automotive manufacturer	Face-to-face
Expert 3	Professor of automotive reliability engineering; Director in quality improvement	Via Skype
Expert 4	Academic support advisor at a British university	Face-to-face
Expert 5	Associate dean of research & enterprise at a British university	Face-to-face

Questions and Feedback

Q1. What are the strengths and weaknesses of the toolkit respectively (general impression)?

Strengths(S) and Weaknesses(W):

From Expert 1:

S: it's a good brief toolkit for complex groups, design department with several interacting groups.

Excellent design. Very handy tool to be used in design innovations. I like the page with "the briefing thinking model very much.

W: Not really, just what I refer in question 6.

From Expert 2:

S: It is a nice tool. Looks smart. Likes the idea of checklist, which ensures that project managers are aware of the considerations from different aspects in project planning.

W: It may need to adapt to individual companies to be functional. Some project managers may still prefer the traditional paper format when writing a brief.

From Expert 4:

S: "…looks good but text heavy (background)…"

W: "…would need introduction before background?"

Q2. What do you think about the design briefing process introduced in the toolkit?

Q2.1. The four-step briefing process:

From Expert 1: There is an emergent concern with improving the project brief, before jumping to a design brief, so I think it's important to keep it as a corner stone of the toolkit.

From Expert 2: Agree. Easy to understand.

From Expert 4: Good image. Simple and clear.

<u>Q2.2. The "triangle thinking framework":</u>

From Expert 1: It's a basic triangle, fundamental to design, always good to remember. The toolkit shows the complexity behind the triangle in an interactive way.

From Expert 2: Agree with the model.

From Expert 4: Fine.

<u>Q3. Do you think this toolkit can support in both writing up and applying design briefs?</u>

From Expert 1: Yes, no doubt.

From Expert 2: Yes.

From Expert 4: Yes, I think so.

<u>Q4. What do you think about the user-interaction design of the toolkit?</u>

From Expert 1: Simple and straightforward.

It works for complex design groups; individuals would just get insights from it without filling it. It's quite simply, straightforward; the circle with the triangle and all the complex connections allows you a more intuitive understanding between the parts, while the table allows writing down what you're thinking. It's a very strong page of the framework that's where people will stop to use the toolkit.

From Expert 2: Clear and easy to follow, intuitive.

From Expert 4: Good, very detailed, but text heavy.

<u>Q5 Do you think webtool is good format in realising the intended functions?</u>

From Expert 1: Yes, it will complement the communication between team elements from different departments inside complex companies.

Webtool is more suitable for big complies/more complex projects

From Expert 2: Agree but also pleased to see the "print" function.

From Expert 4: At first viewing, yes. I like the traffic light system.

<u>Q6 Do you have any further suggestions on improving the toolkit?</u>

From Expert 1: Users would benefit from jumping directly to the briefing part, without having to go through the theory.

If you embed the methods bank in the process, the user might do not be aware of its importance as a stream in researching the problem. So, I suggest improving the connections, the links between the process and the methods bank, without a complete integration of both. This way, people will set the methods bank part as a set supporting

research, otherwise, this notion might get lost.

From Expert 2: Integrate the tool into a company's current procedures.

From Expert 4: Include a home page which introduce what the toolkit is, and why it was designed, and who is it for.

APPENDIX L: EVALUATION WITH THE SMES IN THE HOME HEALTHCARE SECTOR

L1 PARTICIPANTS

Participant	Responsibility
Participant 1	Senior project manager of a leading automotive manufacturer
Participant 2	Lead engineer in a healthcare supplier
Participant 3	Product development director in a healthcare supplier
Participant 4	Hydration nurse of peninsula community health (She participates in product development for patients with long term conditions)
Participant 5	Business development manager

L2 COMPANY OVERVIEW

L2.1 Question sheet

Evaluating the toolkit for creating strong product design briefs

Project context:
It is known that a strong design brief is vital to successful product design while relatively few companies engage in any structured approaches to the development of the design brief. This inevitably leads to a multitude of (often very costly) design modifications as the product life develops. SMEs often have poor briefing processes since they may not have separate divisions to represent the many functions such as design, marketing, sales and services, which may be involved in the development of briefing documents. However even in larger companies we have found that communication (or rather lack of it) between the various divisions adversely affects the generation of adequate design briefs. Therefore, a web-based toolkit for creating design briefs has been produced in this research to improve product innovations in SMEs.

* Required

1. **Your name** *

   _____

2. **Responsibility** *

   _____

3. **Company / Organization** *

   _____

4. **How many employees does the company/orgnization have?** *
   Check all that apply.

   ☐ 0 - 10
   ☐ 0 - 50
   ☐ 50 - 250
   ☐ 250+

Untitled Page

5. **1. Does your company/organization employ a formal process in new product development (NPD)?**
   Check all that apply.

   ☐ Yes
   ☐ No
   ☐ Other: _____

6. **Are you/your team engaged in creating a design brief in NPD projects?**
   Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	In all projects

7. **2. How do you value a strong design brief/briefing process in delivering successful new products?**
   Mark only one oval.

	1	2	3	4	5	
Not relevant	◯	◯	◯	◯	◯	Very important

8. **3. Please describe the role of the design brief in new product innovations?**

   _____

   _____

   _____

   _____

   _____

9. **4. How does your company/organization manage the briefs of completed projects?**

   _____

   _____

   _____

   _____

   _____

10. **5. Can you still find the briefs written for the projects which had been completed before 2013?**
    Check all that apply.

    ☐ Yes
    ☐ No
    ☐ Other: _____

11. **5.1 If yes, is it easy to find the brief, and why?**

    _____

    _____

    _____

    _____

12. **5.2 If not, what do you think are the causes?**

_____

_____

_____

_____

_____

13. **6. Have you ever used any tool which aids in creating a briefing document?**
    Check all that apply.

    ☐ Yes

    ☐ No

14. **6.1 If yes, can you please tell me the name of the tool?**

    _____

L2.2 Responses from participants
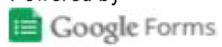
5 responses

Publish analytics

Summary

Your name

████████████
████████████
████████████
████████████
████████████

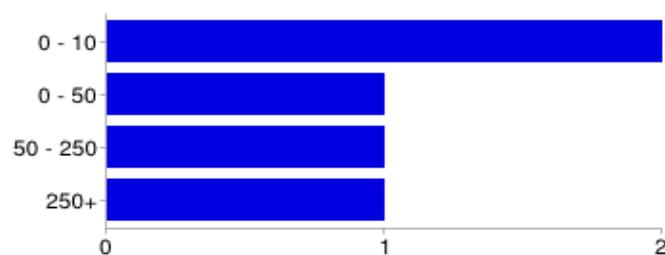**Responsibility**

Innovative health products

Lead Engineer

Hydration Lead Nurse

Project Manager

Business Development Manager

Company / Organization

████████████
████████████
████████████
████████████
████████████

How many employees does the company/orgnization have?

0 - 10	**2**	40%
0 - 50	**1**	20%
50 - 250	**1**	20%
250+	**1**	20%

Untitled Page

1. Does your company/organization employ a formal process in new product development (NPD)?
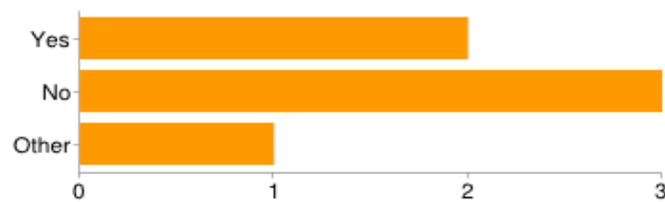
Yes	**2**	40%
No	**3**	60%
Other	**1**	20%

Are you/your team engaged in creating a design brief in NPD projects?

1	**0**	0%
2	**3**	60%
3	**1**	20%
4	**1**	20%
5	**0**	0%

2. How do you value a strong design brief/briefing process in delivering successful new products?
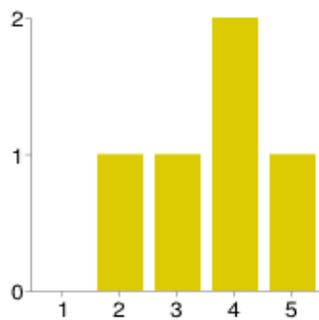
1	**0**	0%
2	**1**	20%
3	**1**	20%
4	**2**	40%
5	**1**	20%

3. Please describe the role of the design brief in new product innovations?

The design brief needs to encapsulate the essence of the product offering so that there is a clear understanding of: Who the customer is How is the customer/product strategically important to the organisation Customer needs set in ranked priority Competitive offerings so as to ensure differential advantage based on highly rated customer needs Price point Target manufacturing cost and manufacturability Logistics issues For example an IKEA design brief always starts with a price point. Product needs to fit with there operational processes ie Warehouse sales, self assembly etc Actual design is low on the list

It usually starts with a client innovator either flagging a problem, or that and a solution they have conceived. Then we investigate, research needs & market, scope etc, experiment and shape the project teh design counil 'Double Diamond' is a good model of how things happen The design brief is not as formal as poss it should be because we are so close it is like briefing yourself - we agree with or understand from the client the sort of Functional needs, and develop responses from there agree that the design brief is an important step in ensuring success

I work for the NHS - albeit a newly formed community interest company providing NHS care to adult community care in Cornwall (not mental health - different trust) The organisation has 13 small community hospitals with approx. 20 beds per hosp. It also provides ' district nursing care / community nursing care' to hundreds possibly thousands of frail vulnerable people (predominantly elderly) who live either in their own homes or in residential or nursing homes (care homes). Also acute care in the community for end of life care, acute discharge, cancer patients, long term conditions, tele health and more recently is starting to formerly merge with social care provided by Cornwall council, This will include people who require a funded 'carer' to come into the persons home 2-4 times a day to provide very basic care, such as getting out of bed / toileting / continence care/ washing and dressing/ basic food and drinks. Often staff only have a 15 - 30 mins time slot and are employed by an outside agency.

We are not familiar with the design process

### 4. How does your company/organization manage the briefs of

completed projects?

No

not well is prob best answer as there often is not one document that is' The' design brief and nothing else

As a company we are completely new to the concept of design or briefing - so I would suggest that my 'Hydration Project ' should be viewed as a 'first' !

5. Can you still find the briefs written for the projects which had been completed before 2013?
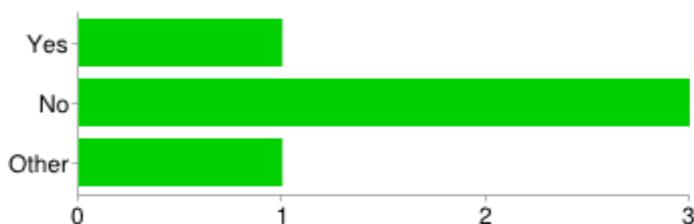
Yes	**1**	20%
No	**3**	60%
Other	**1**	20%

5.1 If yes, is it easy to find the brief, and why?

N/A

We have hard copy project folders of every project which contain all teh work, notes from client, samples of devices which are close but don't do this job, doodles, IP searches, designs as we have developed them Mk1, Mk2, Mk3,Mk4........ prototypes etc, so although the single 'brief' doc may never have existyed in that form, we can re-trace all info, dialogue, and decisions etc relating to the development

5.2 If not, what do you think are the causes?

Where do I start!?!? Fundamentally - as an organisation as far as I am aware we have never had this as part of our skill mix - certainly not linked to front line clinical staff - which is where I am from. However , I have so many ideas / problems that I believe intelligent design could help overcome or transform - I may well be wrong, but I know for a fact that front line staff have been struggling with so many problems (to the best of their ability) and fundamentally need help from an outside source - which I believe should originate from 'design'

We do not have a formal system for transferring the briefing documentation. We currently reply on emails and verbal communication

There is no formal briefing documents.

6. Have you ever used any tool which aids in creating a briefing document?

Yes	**0**	0%
No	**5**	100%
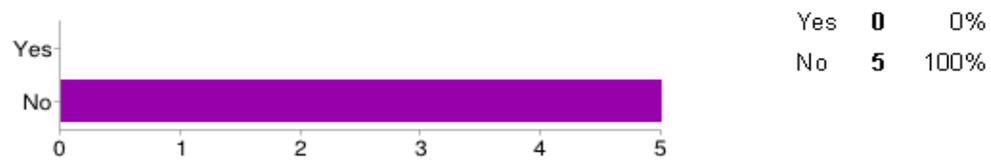
6.1 If yes, can you please tell me the name of the tool?

No responses yet for this question.

L3 EVALUATION OF THE TOOLKIT

L3.1 The question sheet

Evaluating the toolkit for creating efficient product design briefs

Name of Interviewee:	Company/Organization:
Responsibility:	Date:

	please tick the box which you agree				
1. GENERAL IMPRESSION					
1.1 Your General impression of the toolkit	1	2	3	4	5
Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?					
Do you agree that this toolkit can support in improving new product development?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Any why?					
2. THE PRINCIPLES					
2.1 The proposed four-step design briefing process	1	2	3	4	5
Strengths & Weaknesses:					

1

2.2 The "two triangle process model" for Implementing the briefing process	1	2	3	4	5

Strengths & Weaknesses:

2.3 The "thinking model"	1	2	3	4	5

Strengths & Weaknesses:

3. VIUSAL AND INTERACTION DESIGN

	1	2	3	4	5
3.1 Overall impression	1	2	3	4	5
3.2 Structure (whether each stage is section in a logical order)	1	2	3	4	5
3.3 Interface	1	2	3	4	5
3.4 Colour	1	2	3	4	5
3.5 Easy to follow	1	2	3	4	5

Your comments and recommendations:

2

4. FEASIBILITY					
4.1 Do you think webtool is good format in realising the intended functions?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
And why:					
4.2 Can this toolkit be easily adaptable to your current company procedures?	Very difficult	easy	Neutral	Easy	Very easy
And why:					

3

L3.2 Filled-up question sheet

- **From participant 1**

Evaluating the toolkit for creating efficient product design briefs

Name of Interviewer: ▓▓▓▓▓▓▓▓	Company/Organization: ▓▓▓▓▓▓▓▓
Responsibility: PROJECT MGR.	Date: 27-2-14

	please tick the box which you agree				
1. GENERAL IMPRESSION					
1.1 Your General impression of the toolkit	1	2	3	4	(5)

Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?

- TOOLKIT IS SIMPLE & CLEAR TO FOLLOW.
- GREAT BOOST FOR THE BOARD TO SEE STATUS OF INDIVIDUAL PROJECTS / DESIGNS
- WILL AID RESOURCE ALLOCATION
- THE CHECKLIST IS GOOD FOR PROMPTING THOUGHT.
- SOME MAY BE PUT OFF BY THE UPFRONT TIME & EFFORT.

Do you agree that this toolkit can support in improving new product development?	Strongly Disagree	Disagree	Neutral	Agree	(Strongly Agree)

Any why?
- MAY AID IN BREAKING DOWN DEPARTMENTAL BARRIERS
- AID TEAMWORKING
- PROACTIVE BETTER THAN REACTIVE.
- REDUCE ERRORS
- BETTER 'SHELF' ENGINEERING.
- BETTER DESIGN
- REDUCTION IN PARTS.
- SAVE MONEY

2. THE PRINCIPLES					
2.1 The proposed four-step design briefing process	1	2	3	(4)	5

Strengths & Weaknesses:
- MAY PUT SOME OFF INVESTING IN UP FRONT ACTIVITIES — SOME MAY FOCUS ON SHORT TERM GAINS OF 'DOING AS BEFORE'
- ONCE PROCESS FOLLOWED AND SUCCESS SHOWN WILL GIVE LARGER LONG TERM GAINS. AS MORE PROJECTS TAKE THIS UP — THEN QUICKER/EASIER IT WILL BE.

1

2.2 The "two triangle process model" for Implementing the briefing process	1	2	3	(4)	5

Strengths & Weaknesses:

- SIMPLE MODEL COVERING A TOUGH TOPIC
- THOUGHTFUL PROCESS, TIME WELL SPENT
- MAY HAVE TO BE FORCED THROUGH BY THE BOARD TO MAKE IT HAPPEN, PEOPLE RELUCTANT TO CHANGE.
- PROCESS GOOD THOUGH.

2.3 The "thinking model"	1	2	3	4	(5)

Strengths & Weaknesses:

EXCELLENT SPACIAL MODEL,
MAKES TEAM THINK
HIGHLIGHTS WHERE THEY FIT IN.
HIGHLIGHTS CONSIDERATIONS.

3. VIUSAL AND INTERACTION DESIGN

3.1 Overall impression	1	2	3	4	(5)
3.2 Structure (whether each stage is section in a logical order)	1	2	3	4	(5)
3.3 Interface	1	2	3	4	(5)
3.4 Colour	1	2	3	(4)	5
3.5 Easy to follow	1	2	3	4	(5)

Your comments and recommendations:

DROP DOWN PORTIONS VERY GOOD.
PLEASED TO SEE 'PRINT' FUNCTION FOR HARD COPIES
GREAT ICONS.
EASY FOLLOWING ROUTE THROUGH TOOLKIT.
GREAT WHO, WHAT & WHEN WITH PHOTOS ETC.

2

4. FEASIBILITY					
4.1 Do you think webtool is good format in realising the intended functions?	Strongly Disagree	Disagree	Neutral	Agree	(Strongly Agree)
And why:					

4.2 Can this toolkit be easily adaptable to your current company procedures?	Very difficult	easy	Neutral	(Easy)	Very easy

And why:
- ALTHOUGH INTENDED FOR SME's ~ WOULD MAKE GOOD TOOLKIT FOR LARGE COMPANIES.
- NEVER VERY EASY WHEN ADAPTING COMPANY PROCEDURES - BUT THIS MAY BE WORTH IT.
- SHORT TERM PAIN FOR LONG TERM GAIN.
- GREAT FOR NEW COMPANY.

3

- **From participant 2**

Evaluating the toolkit for creating efficient product design briefs

Name of Interviewee:	Company/Organization:
~~████████████~~	~~████████████~~
Responsibility:	**Date:**
Senior Product Designer	10 March 2014

	please tick the box which you agree

1. GENERAL IMPRESSION				
1.1 In general, the toolkit has real value to companies in the New Product Development process.	Strongly Disagree	Disagree	Agree	Strongly Agree

Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?

Checklist of considerations

The brief building tool

Co-authoring and sharing the briefs

1.2. There are clear opportunities to use the toolkit specifically related to our work, which would improve our NPD process.	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

We have a structure NPD process which includes developing a brief and the activities required in order to do this well. The 'creation' element of the tool kit would be very useful for streamlining the document generation process and assigning certain tasks to certain members of staff.

1

2. THE PRINCIPLES

2.1 The proposed four-step design briefing process is clear and beneficial	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

2.2 The "two triangle process model" is helpful to the briefing process	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

2.3 The "thinking model"	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

We use something similar in a check list

3. VIUSAL AND INTERACTION DESIGN

	Strongly Disagree	Disagree	Agree	Strongly Agree
3.1 The toolkit interface is clear (after a short introduction).		Disagree		

2

3.2 The toolkit process and structure for writing a brief is in a logical order.			Agree	
3.3 The interface icons have clear meaning			Agree	
3.4 The colours used in the interface are sympathetic to the user and aid navigation		Disagree		
3.5 The toolkit interface can be improved				Agree

Your comments and recommendations:

The thin white type on black gives best contrast but is too small. **Make bigger and bolder**

The greyed out areas are too faint. Increase contrast here. Hidden options are never a good idea as people miss them of get frustrated finding them.

I am not sold on the scrolling idea. Point and click on hotspots and menu on left is fine

4. FEASIBILITY

	Strongly Disagree	Disagree	Agree	Strongly Agree
4.1 The toolkit is a good format in realising the intended functions?	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

	Strongly Disagree	Disagree	Agree	Strongly Agree
4.2 The toolkit will fit well into current company procedures?	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

I think we would could use a simplified version...brief creation tool

An email from participant 2 with more comments:

From: ~~█████████~~ ac.uk>
Sent: 28 February 2014 16:35
To: FAN YANG
Subject: Re: consent form and qeustuion sheet for the seminar

Skype crashed this end.

Have to go now too.

I was listening and tend to agree with most of what what discussed:

Check list/star diagram I like. Get sme's thinking about all these important areas.
Complexity versus easy to use is something to consider.
Really like the toolkit as it is. Great bit of UI design.
Agree with brief developing and evolving from exploration to pre design.
Does the tool kit help develop design brief or project brief or both.
It feels a bit like a risk assessment tool...need to retain the joy of innovation, new ideas and intuition (experts with experience)

Given that sme tend not to use this kind of model it needs to be offered in a 'manageable format' and not scare them? It needs to be resource efficient.

I will complete the questions and get back to you next week.

Good work. Thanks for sharing.

~~█████████~~

On 28 Feb 2014, at 12:01, FAN YANG <FY138696@falmouth.ac.uk> wrote:

Dear all,

Keir   1 of 6 ▲ ▾

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Evaluating the toolkit for creating efficient product design briefs

Name of Interviewee:	Company/Organization:
~~[redacted]~~	~~[redacted]~~
Responsibility:	Date:
Director	14ᵗʰ March 2014

	please tick the box which you agree

1. GENERAL IMPRESSION

1.1 In general, the toolkit has real value to companies in the New Product Development process.	Strongly Disagree	Disagree	Agree **X**	Strongly Agree

Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?

I think the three key factors and subsequent factors was very helpful. In my experience the business and market factors are often neglected.

1.2. There are clear opportunities to use the toolkit specifically related to our work, which would improve our NPD process.	Strongly Disagree	Disagree	Agree **X**	Strongly Agree

Your comments and recommendations:

I think we could include the subsequent factors within the feasibility section of our own new product development toolkit.

2. THE PRINCIPLES

2.1 The proposed four-step design briefing process is clear and beneficial	Strongly Disagree	Disagree	Agree **x**	Strongly Agree

1

Your comments and recommendations:					
These are fairly standard steps that are well recognised. I think it is helpful to highlight the information that is needed in the preparation phase.					

2.2 The "two triangle process model" is helpful to the briefing process		Strongly Disagree	**Disagree**	**Agree X**	Strongly Agree

Your comments and recommendations:

I think this is an interesting way of visualising the additional work of complexity and you go on to develop the brief.
However, I think the conventional double diamond type model, or define, investigate, redefine cycle, is probably a more accurate depiction of what actually happens.

2.3 The "thinking model"		Strongly Disagree	Disagree	**Agree x**	Strongly Agree

Your comments and recommendations:
As I have indicated, I think this is a very useful checklist and it also shows some of the inter relationships between these factors.

3. VIUSAL AND INTERACTION DESIGN

	Strongly Disagree	Disagree	Agree	Strongly Agree
3.1 The toolkit interface is clear (after a short introduction).		X		
3.2 The toolkit process and structure for writing a brief is in a logical order.			X	

2

3.3 The interface icons have clear meaning			X	
3.4 The colours used in the interface are sympathetic to the user and aid navigation		X		
3.5 The toolkit interface can be improved			X	

Your comments and recommendations:

There is a lot of content. The visual design is very strong and original but I am not sure it aids understanding. The items are in logical order, the icons a clear. However there is a lot of text on the screen at any one time. I would look at how this could be displayed in smaller chunks.
I do not think the black background colour is very helpful.

4. FEASIBILITY

4.1 The toolkit is a good format in realising the intended functions?	Strongly Disagree	Disagree X	Agree X	Strongly Agree

Your comments and recommendations:

I am undecided about this, because the screen design needs looking at to make it more readable.

4.2 The toolkit will fit well into current company procedures?	Strongly Disagree	Disagree X	Agree	Strongly Agree

3

Your comments and recommendations:

We currently have a clear process. However as I have indicated, I think there are some elements that could be included, particularly with regard to our feasibility section.

4

- **From participant 4**

-

Evaluating the toolkit for creating efficient product design briefs

Name: ██████████████████	Company/Organization: ██████████████████
Responsibility: Hydration Nurse	Date: 28-2-14

	please tick the box which you agree

1. GENERAL IMPRESSION

1.1 In general, the toolkit has real value to companies in the New Product Development process.	Strongly Disagree	Disagree	Agree	(Strongly Agree)

Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?

The "Star gazing" model
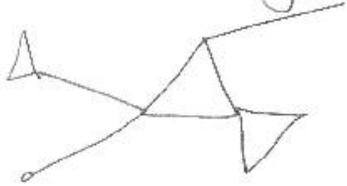
1.2. There are clear opportunities to use the toolkit specifically related to our work, which would improve our NPD process.	Strongly Disagree	Disagree	(Agree)	Strongly Agree

Your comments and recommendations: New product development

I think it would greatly support Communication + planning. Keeping all in loop.

2. THE PRINCIPLES

2.1 The proposed four-step design briefing process is clear and beneficial	Strongly Disagree	Disagree	(Agree)	Strongly Agree

0. Preparation 1. Identification 1.5 Research & Development 2. Refinement Design Brief

1

Your comments and recommendations:

2.2 The "two triangle process model" is helpful to the briefing process	Strongly Disagree	Disagree	Agree	Strongly Agree
			(circled)	

Your comments and recommendations:

Yes — love it very visual + makes perfect sense

2.3 The "thinking model"	Strongly Disagree	Disagree	Agree	Strongly Agree
			(circled)	

Your comments and recommendations:

3. VIUSAL AND INTERACTION DESIGN

	Strongly Disagree	Disagree	Agree	Strongly Agree
3.1 The toolkit interface is clear (after a short introduction).			✓	
3.2 The toolkit process and structure for writing a brief is in a logical order.			✓	
3.3 The interface icons have clear meaning			✓	
3.4 The colours used in the interface are sympathetic to the user and aid navigation			✓	
3.5 The toolkit interface can be improved				

2

Your comments and recommendations:

4. FEASIBILITY

4.1 The toolkit is a good format in realising the intended functions?	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

4.2 The toolkit will fit well into current company procedures?	Strongly Disagree	Disagree	Agree	Strongly Agree

Your comments and recommendations:

3

- **From participant 5**

-

Evaluating the toolkit for creating efficient product design briefs

Name of Interviewee:	Company/Organization: NISW
~~(redacted)~~	~~(redacted)~~
Responsibility: Business Development Manager	Date:

	please tick the box which you agree

1. GENERAL IMPRESSION				

1.1 In general, the toolkit has real value to companies in the New Product Development process.	Strongly Disagree	Disagree X	Agree X	Strongly Agree

Which part/feature of the toolkit you like most or find most useful? How can the toolkit be further improved?

Difficult to say without hands on experience. In principle anything that facilitates greater market and customer awareness and internal communication is a good thing. Most products fail because of lack of informed research

1.2. There are clear opportunities to use the toolkit specifically related to our work, which would improve our NPD process.	Strongly Disagree	Disagree	Agree X	Strongly Agree

Your comments and recommendations:

We work in an advisory capacity so the value would be to our customers. I think that the tool kit would benefit very small companies more than larger ones who will have established processes. I also think it could be valuable to Universities where research needs to become more commercial to get funding

2. THE PRINCIPLES	

1

2.1 The proposed four-step design briefing process is clear and beneficial		Strongly Disagree	Disagree	Agree X	Strongly Agree

Your comments and recommendations:

Agree

2.2 The "two triangle process model" is helpful to the briefing process		Strongly Disagree	Disagree	Agree X	Strongly Agree
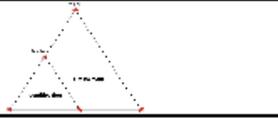
Your comments and recommendations:

Agree with the initial triangle of Market, Business and product/design
Not sure about the extension – it didn't really add anything in my view

2.3 The "thinking model"		Strongly Disagree	Disagree	Agree	Strongly Agree X

Your comments and recommendations:

Excellent. Clear thinking and strategy are the key to success. It does need to be a learning model so that users can add more dimensions as they become more experienced. Ie it becomes a knowledge bank. Also needs to be tailored to specific company needs

3. VIUSAL AND INTERACTION DESIGN

2

	Strongly Disagree	Disagree	Agree	Strongly Agree
3.1 The toolkit interface is clear (after a short introduction).			X	
3.2 The toolkit process and structure for writing a brief is in a logical order.			X	
3.3 The interface icons have clear meaning			X	
3.4 The colours used in the interface are sympathetic to the user and aid navigation			X	
3.5 The toolkit interface can be improved			X	

Your comments and recommendations:

I think you need to work on workflow and collaboration aspects

4. FEASIBILITY

4.1 The toolkit is a good format in realising the intended functions?	Strongly Disagree	Disagree X	Agree X	Strongly Agree

Your comments and recommendations:

Yes possibly however I'm unconvinced that it could be a business

4.2 The toolkit will fit well into current company procedures?	Strongly Disagree	Disagree x	Agree	Strongly Agree

3

APPENDIX M: SCREENSHOTS OF THE TOOLKIT

Figure 4.18 Introduction of the interface

Left menu

Header menu

Section name

Content

WHAT IS DESIGN BRIEF?

BRIEFING PROCESS POSITIONING

WHY THE DESIGN BRIEF MATTERS?

CURRENT SITUATION

PURPOSE OF THE TOOLKIT

BACKGROUND

What is a design brief?

The design brief is a design oriented written agreement which outlines the business objectives, and the design strategy to meet these objectives. It focuses primarily on the business objectives and the desired results of the design – not the aesthetics. It is usually drawn up after the project brief/proposal has been signed off and marks the beginning of the design phase.

The design brief is part of the design functions of a design company or a product/service supplier which innovates. It serves as one of the guiding documents for a project. If we see the design process as a sub-project of the whole innovation, the design brief can be viewed as part of the project plan.

A design brief is a living document. It usually incorporates both flexible and inflexible elements. For example, product functions, user interaction and visual effects are usually flexible, while deadlines, financial resources, production and retail merchandising requirements are often not. The flexible elements evolve with the project becoming more transparent and rigid as the project matures. It must be noted that whether an individual element is flexible or inflexible depends on individual projects.

Figure 4.18 Introduction of the interface

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Figure 4.20 Instruction of the left menu

Figure 4.20 Instruction of the left menu

THE
TOOLKIT
CREATING A BRIEF
FOR

CLICK TO START

Figure 4.21 Front page

Figure 4.21 Front page

INTRODUCTION

Welcome to the Design Brief Toolkit. The Toolkit is the output of a doctoral research project and aims to improve the process of creating and applying design briefs in product innovation. It has been developed with the home healthcare field in mind, but can also be applied in other industries.

The toolkit produces two major sections:

1. FOUNDATION

This section introduces the principles and approaches applied in the process of creating and applying strong design briefs. There are three parts of the Foundation section: Background, Principles and Methods Bank.

2. THE BRIEF

This section guides users through the process of preparing and writing a strong brief. It ensures that all critical input from diverse disciplines can be properly addressed in the process. There are two parts to The Brief section: Preparation and Write a Brief.

FOUNDATION

THE BRIEF

Report Abuse

Figure 4.22 Introduction

Figure 4.22 Introduction

WHAT IS DESIGN BRIEF?

BRIEFING PROCESS POSITIONING

WHY THE DESIGN BRIEF MATTERS?

CURRENT SITUATION

PURPOSE OF THE TOOLKIT

??

BACKGROUND

What is a design brief?

The design brief is a design oriented written agreement which outlines the business objectives, and the design strategy to meet these objectives. It focuses primarily on the business objectives and the desired results of the design – not the aesthetics. It is usually drawn up after the project brief/proposal has been signed off and marks the beginning of the design phase.

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Figure 4.23 Introduction

PRINCIPLES

The principles behind better design briefing

A design brief sets the course of an entire design project, and contributes to the establishment of the overall project development process. Brief creation happens in the fuzzy front-end of a project cycle, and is therefore full of uncertainties. Brief creation activities often involve iterative feedback loops between marketing, design, manufacturing, and other functions. Although these iterations may not be amenable to project management techniques, a level of structure and control is necessary to ensure success and to avoid unexpected risks. To ensure the consistent high quality of design briefs, it is essential to build up a formalized but flexible brief creation process which fully addresses the characteristics of individual projects, companies, and industries. It is apparent from this research that a combination of the following five approaches benefits the brief writing process:

Figure 4.24 Principles

Figure 4.24 Principles

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COMMON PROBLEMS

1. Lack of front-end research
2. Intuitive decision making
3. One-way communication
4. Departmental barriers
5. Localized information management

SOLUTIONS

1. Research-based: resolving questions, uncertainties, and disagreement in the process of writing up a brief based on research instead of all intuition. *See more details*

2. Consensus and understanding: giving thorough consideration to diverse factors, for example, the economic feasibility of an idea, and reaching a consensus between all involved. *See more details*

3. Transparency (within security limits): centralising information management with open access to all involved in the project development, within security limits. *See more details*

4. Presentation and access: following a formalized format and providing rich information instead of, or that supports, 'abstract' written briefs. Using a variety of techniques, e.g., image, video and collage. *See more details*

5. Centralized management: managing briefing documents centrally and as company assets. *See more details*

Figure 4.26 Critical issues in design briefing as well as resolutions (screen cut)

Figure 4.26 Critical issues in design briefing as well as resolutions

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Figure 4.27 Clicking the related-subject icon by the side of Three Key Factors section leads users to the Key Factors page within the Writing a Brief section
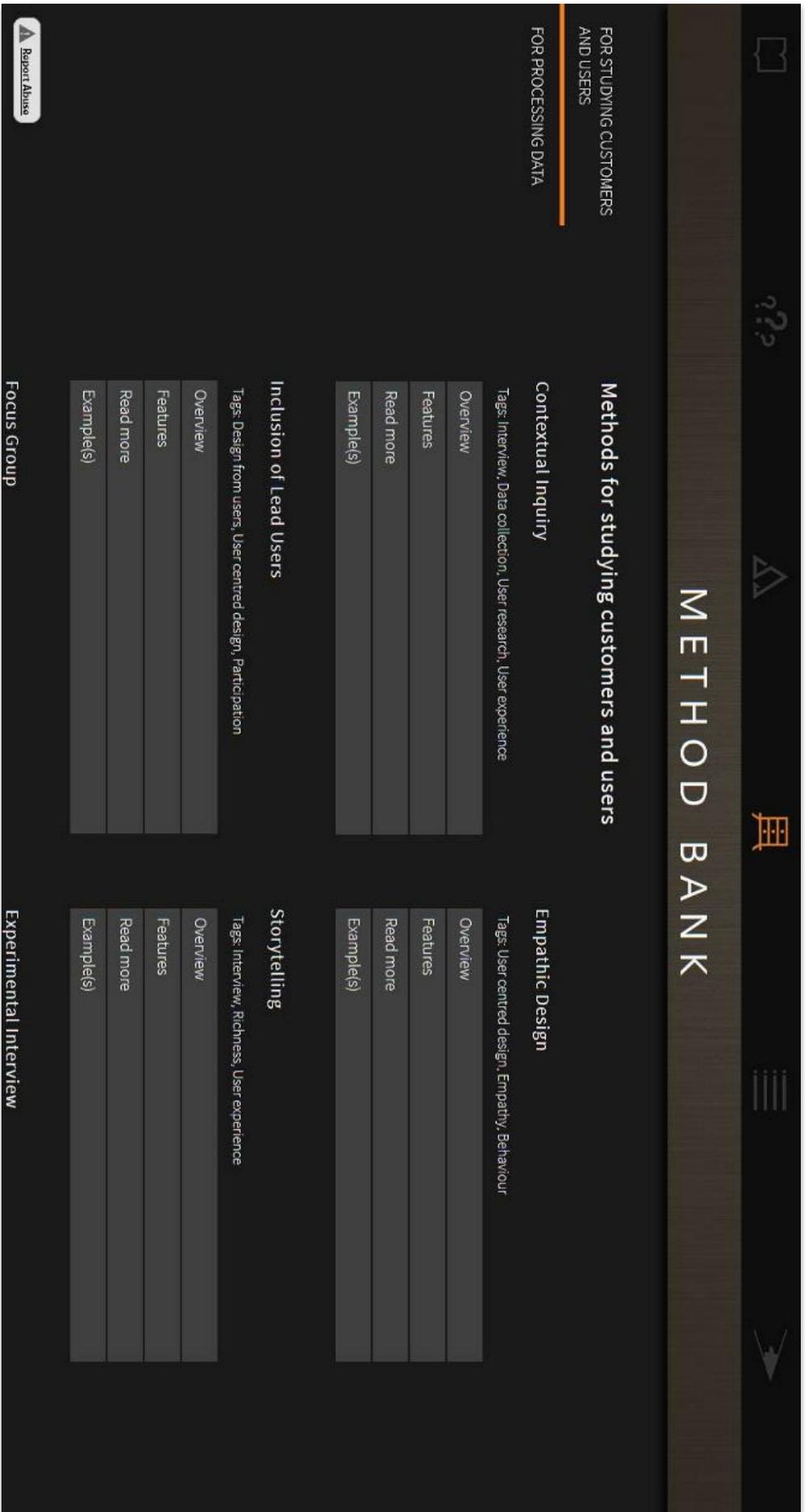
Figure 4.27

Figure 4.28 Method bank

Figure 4.29 An example of a method:

❸

Inclusion of Lead Users

Tags: Design from users, User centred design, Participation

Overview

Features

Read more

Please note that the resources in this block do not belong to the author of this toolkit.

To open the webpage(s) below, please copy and paste the link(s) in a new tab.

http://web.mit.edu/people/evhippel/papers/Herstatt-EvH%20Journal%20Product%20Innov%20Management.pdf

Example(s)

❹

Inclusion of Lead Users

Tags: Design from users, User centred design, Participation

Overview

Features

Read more

Example(s)

Please note that the resources in this block do not belong to the author of this toolkit.

To open the webpage(s) below, please copy and paste the link(s) in a new tab.

www.youtube.com/watch?v=kbQ5mAEE1lk

PREPARATION

SECTION 1

SECTION 2

Self-assessment

This checklist incorporates the considerations in understanding a company's current situation. It can be used by design commissioners to assess whether they themselves are fully aware of the key factors in defining a design task that is fit for purpose.

SECTION 1: UNDERSTANDING BUSINESS STRATEGIES

1.1 Business positioning
■ Which industry are we in?
■ What are the industry characteristics in terms of new product/service innovation?
■ What is our brand value?

1.2 Overall business strategy
■ What is our business mode and strategy?
■ Is this strategy under a transformation? If yes, what influence it is likely bring on this project in terms of, for example, team members, management framework, and sales strategy?

1.3 The business-level new product development (NPD) process
■ Is there a formal business-level NPD process?

Figure 4.30 An example of a method
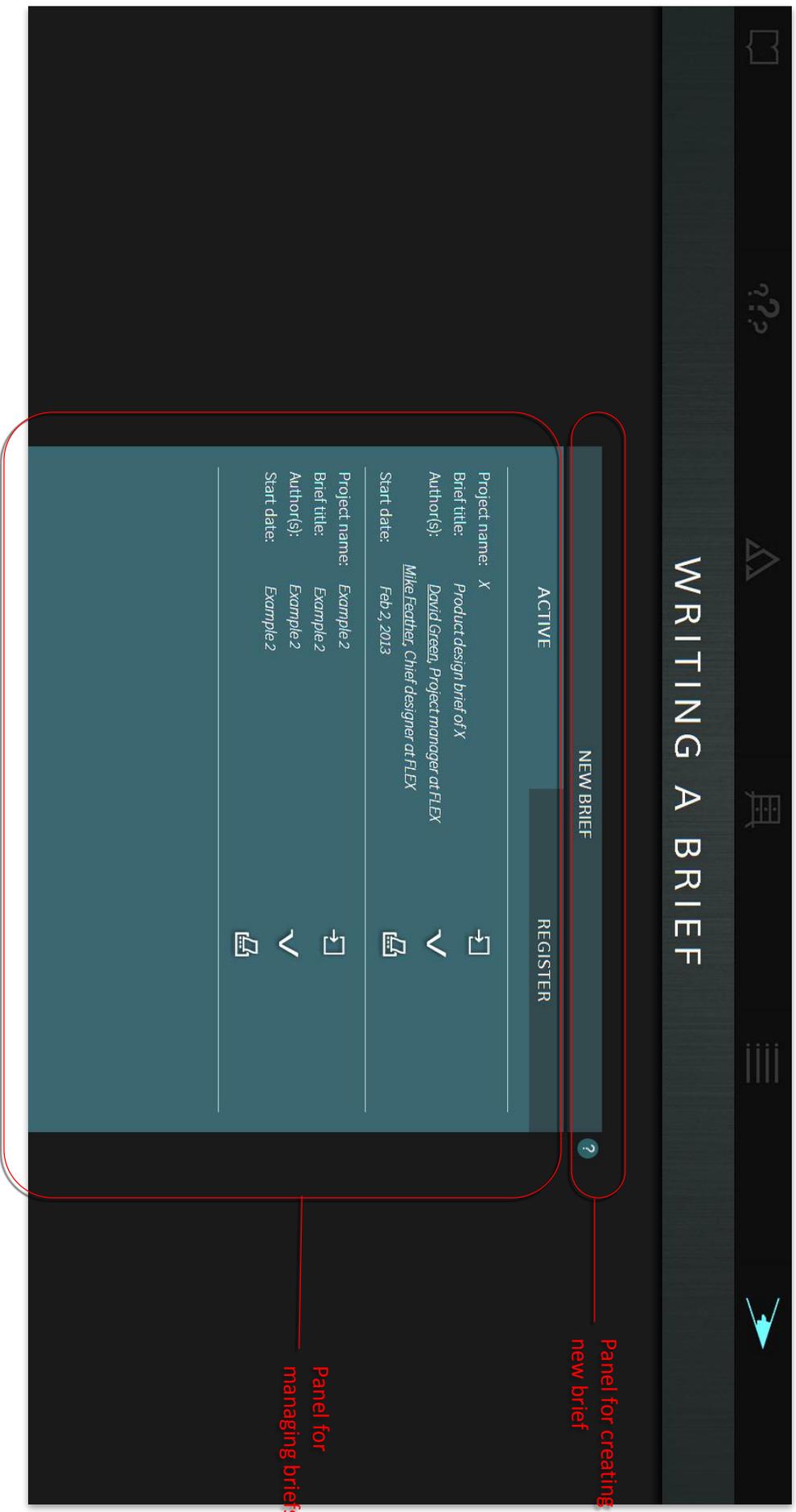
Figure 4.33 Panels on the page of Brief creation & management
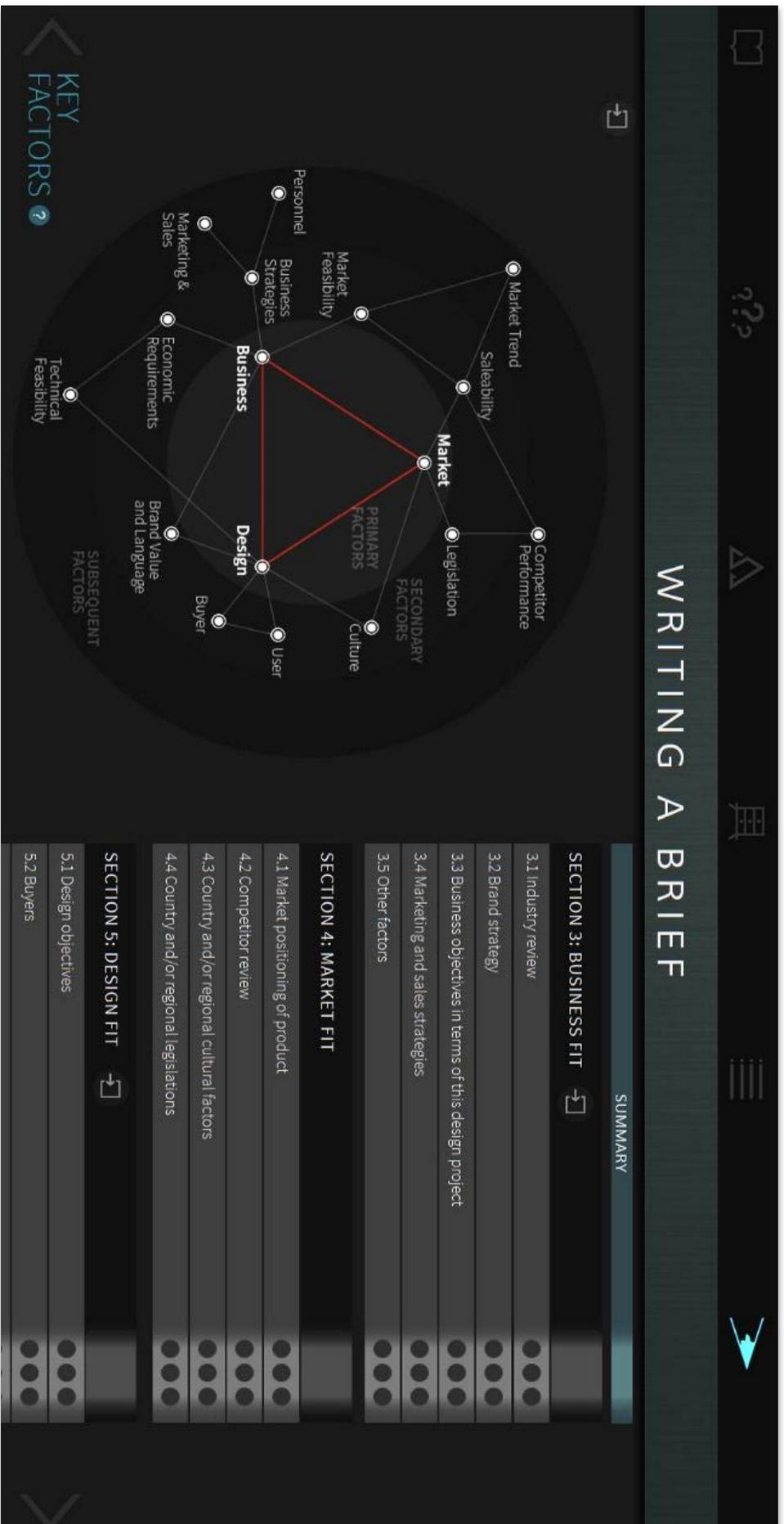
Figure 4.37 The Context page

Figure 4.38 The Key Factors page

Figure 4.40 The Plan/Design Process page