# Designing in science and technology-based enterprises

# **Workshop 1 output December 18, 2006**

# Concepts generated by participants - capture from wall (hardly edited)

This document is a written version of several clusters of post-it notes on which participants wrote down concepts and questions emerging as they reflected on how they understood the designing of services in science and technologybased enterprises. In a way it represents the participants' understanding at that time, informed by their contexts and disciplines, and the ways in which they conceive of "the world" and what can be known about it.

#### **SERVUCTS**

Yesterday's concepts are no good for emergent service logics

Categorisation of service types What's a product and what's a service Intangibility

Service definitions too diverse to help Distinctions between product and service Distinctions between goods and services obsolete, arbitrary and unhelpful

Services = customers create value. Goods = customers destroys value

Goods manufacturing frameworks corrupt the nature of services

#### REALIST - OBJECTIVIST

Process of delivery

Service produce and service process require design Conceptual view v practical view

A great idea CAN be made even better Creating value out of multiple influences Delivery Margin

What is the relationship between size of company and openness to different perspectives of thinking for product/service development (Inverse proportion/direct relationship) Process v organizational view of design

**MONEY VALUE CREATORS USERSHIP** 

External or internal design source Co-production

Academic spin off tech enterprises like to still be associates with academia

Concept of risk assessment in sci-tech companies RCA: capabilities – markets – users

Operation of services Think a long way forward in the process as part of the specification

#### **SUBJECTIVIST**

How do we notice when "the world" changes? Emic v etic (inside out vs outside in approach) The theories about human behaviour and needs that designers/managers/engineers build into services

#### OTHERS/MISSING CONCEPTS

#### THEORIES of KNOWLEDGE

SMEs, and sci/tech disciplines act more at a tacit level of knowledge acquisition and development and application so how can you reveal their theories of meeting business/ people needs?

How multi disciplinary teams work together to design services and deal with their different kinds of knowledge

**POLITICS** ORGANIZATIONAL MATTERS PEOPLE IN ORGANIZATIONS

#### Communication

Design is a great glue for connecting departments and crossing silos (politics)

Breaking through organizational barriers in order to get access to research

Public relations – avoid or interrogate

Independence of research, control of research What are politics or systems in this discussion?

Language

Ethnography

**Experiences** 

Path dependence

In crowd

Who actually is involved in the designing of services Obligations and gifts

#### GOODS v SERVICES

Services are often a method of generating £££ for

Services can be seen as temporary cash generator for start up of product

Scientists often crap at selling services – they'd rather be in the lab

Selling services can be a stopgap activity for technology firms and so their heart isn't in it Service selling is often not as scaleable as developing a killer technology

### PEOPLE/USERS/CUSTOMERS

User research – ethnography and markets

People in the design process

Barrier

Do designers talk about how they impose on "the world"?

Technique and outcome – service blueprint and flowchart

What is NOT a science and technology service? There is little difference in this broad process to technology and service design

#### **COMPLEXITY**

Accidental design Interdependency Services interdependencies Working with complexity

## **TECHPLEXITIES**

The complexity of technology-based enterprises and of services

Consider opportunities well beyond the 'selling'

#### **UTOPEOPLE - CUSTOMERS**

People are the main consideration in any design process

Modularity of service production

Mobilizing customers

Design for groups of users

Keep checking back – how are we doing (iteration

and feedbacks) In-market innovation

New market innovation

Support

Measurement

Categories

# PROTHODS – methods and processes

DESCRIPTIONS

PRACTICE

**PROCESS Prototyping** 

Design techniques for services

Balance coherence and fluidity

Technological complexity and interdependencies Do design disciplines grounded in the arts eg new service design have something to offer of value tech/sci companies?

## CO-PRODUCTION - BOUNDARY OBJECTS AND LANGUAGE

Translation

Science and technology and Design need a common

language – through Education

Boundary objects

Abstraction and manipulation

Design skill = working with desire (the unconscious

Freud and Lacan)