

Glossary of methods

Actors	See 'Users'.
Backcasting	The creative process of identifying or anticipating a desired situation (including underlying needs and preferences) at a determined future point, and interpolating back from there to the present circumstance. Backcasting is the antonym of forecasting.
Concept	An abstract set of ideas or way of thinking about something that helps distinguish it from other elements; can be an object/subject, relationship, or process.
Concept generation	Creative process through which designers use their own tacit knowledge and their experience for synthesising solutions from multiple sources and ideas. It combines both analytical and creative/synthetic activities and skill set.
Concept models	Diagrammatic representations of a solution's main categories and features that seek to reconcile business needs with user needs and technical capabilities.
Concept testing	Research with target users to evaluate the conceptual framework of a solution and generate refinements for that solution.
Conceptual scheme	A series of concepts connected together to form an integrated whole that specifies and clarifies the relationships between them; individually, each concept describes a unique object/subject, relationship or process; as a set, the concepts still retain common characteristics.
Context research	<p>Thorough investigation, collection of information and gap analysis of existing user research, positioning the current experience within a relevant context. There are two types of user-centred context research: Primary and Secondary research.</p> <ul style="list-style-type: none"> • <i>Primary research</i> is actual, unmediated field research focused on understanding users within their environments (home; work place; public, retail or entertainment environs). Research techniques include interviews, video ethnography and self-documentation by users. • <i>Secondary research</i> is research based on other sources, for instance a review of published articles, papers and other relevant documents useful to develop an informed point of view on the state-of-the-art within an area and to identify trends in the field. <p>Another major differentiation is that between qualitative and quantitative methods.</p> <ul style="list-style-type: none"> • <i>Quantitative research</i> focuses on statistically meaningful, generalisable insights from a small sample of users. • <i>Qualitative research</i> methods are used for identifying problems and pain points, to observe peoples behaviours, tasks and activities, and to generate initial insights into latent needs and desires.

Contextual inquiry	<p>An observational practice informed by ethnography or anthropology. It involves understanding human activity through participatory observation in a setting where the activity takes place. It involves understanding human activity through participatory observation in a setting where the activity takes place. Such inquiries are used in empathic market sensing, product development and design to capture succinctly specific elements of human activities, with a focus on factual, direct, non-mediated experiences within a context and on the dynamic interaction and mental immersion of the observational team.</p> <p>Research techniques include interviews, video ethnography and self-documentation by users and the results can be observations, insights and applications.</p>
Creativity workshops	<p>Fully immersive, day-long sessions dedicated to brainstorming aimed at stimulating innovative ideas for the design of products/services/systems. Often these activities are supported by sketching ideas (on post-its, boards, etc.) in collaboration among interdisciplinary workgroups.</p>
Customers	<p><i>See 'Users'.</i></p>
Customer journey maps	<p>A visual, process-oriented method for conceptualising and structuring people's experiences. These maps take into account peoples' mental models (how things should behave), the flow of interactions and possible touch points. They may combine user profiles, scenarios and user flows and reflect the thought patterns, processes, considerations, paths and experiences that people go through in their daily lives.</p>
Delphi method	<p>A technique for the systematic solicitation of expert opinion. A carefully selected group of experts are asked about their insights about a particular future trend. Their responses are summarised and the results sent back to the respondents, who have the opportunity to re-evaluate their original answers based upon the responses of the group. This process is then repeated in an iterative refinement of individual and group foresight, which will usually lead to the establishment of a consensus view.</p>
Diaries	<p><i>See 'Self-observations'.</i></p>
Design	<p><i>See 'Human-centred design', 'Participatory design', 'Strategic design'.</i></p>
Design ethnography	<p>Type of social science research that investigates the practices and life of a community, by becoming one of its members. It is based on learning about a context and the people living in it, by understanding their values, needs and vocabulary. It usually requires long periods of time playing this role and a faithful report of what is experienced or observed avoiding any interpretation or evaluation as far as possible.</p> <p>Within the field of interaction design, ethnography or video ethnography are methods used to capture human behaviour in the context of the person's natural environment, to gain insights about behaviour and unarticulated needs, in order to create innovative solutions. A more adequate terminology might be cultural, design or industrial ethnography.</p>

Experience modelling

User research that describes the dimensions of a user experience, suggests how to support an existing user experience, and identifies how to transform and redefine this user experience. This may include observing users in context, observing what people say and do to support the creation of useful models and frameworks that illuminate relevant aspects of experience and behaviour.

To successfully model the user experience we need to describe a variety of scenarios of use and their relevance for a given population of users. Even though the focus of the modelling is on the action/interaction pattern, the analysis also comprehends motivation factors, scientific knowledge, social factors, economic theories and evidence factors.

Experience models

A useful conceptual representation of a user experience; used as the foundation for opportunity generation and solution design. They show how people experience, understand and act upon activities, environments, interactions, tools and objects, and reflect upon modal needs, behaviours and latent desires.

Experience models are often either segmentation models or process models.

- A *segmentation model* describes a typology of users based on patterns of behaviours, attitudes, desires, strategies and/or objects they use.
- A *process model* is a description of the stages of an activity or event through time and the relationships within it.

A solid experience model becomes the focal point that clients and team members use to talk about the experience and the solutions, as it is easy to understand, expresses the relationships clearly and unambiguously, can be used alone or with other models to indicate opportunities, transforms the perspective of the client and defines values.

Focus group

Representative samples of a target group, usually involved in qualitative-quantitative research, with the aim of understanding behaviours, needs and preferences of a specific population relative to innovative products, services and systems that are under development.

Forecasting

The process of thinking about the future as an extension of the past and present. In this sense, forecasting is an extrapolative process based on known data, facts, values and behaviour.

Foresight

The human capacity to think ahead and consider, model, create and respond to future eventualities and possibilities.

Futures scenario

Shared motivational alternatives based on a hypothetical sequence of events constructed for the purpose of focusing attention on casual processes, relationships and decision points.



experientia

PUTTING PEOPLE FIRST

Human-centred design Putting People First. Human-centred design is based on the simple premise that in order to create and deliver valuable and compelling solutions for people, businesses or governments, designers have to understand experience and apply that understanding to strategy and design. This approach guides the systematic and iterative development of desirable, usable, useful and sustainable solutions for governments, businesses and their constituents.

Idea generation Idea generation is a process of imagination. It refers to the project phase dedicated to developing creative and comprehensive ideas for problem solving. Idea generation methods often merge intuition and analysis pending on personal and organisational preferences.

The basis for all idea generation is creativity, commonly defined as the 'ability to combine ideas in new ways to solve problems and exploit opportunities'.

Creativity fosters innovation in:

- enabling people to think beyond the boundaries of accepted frameworks
- re-examining assumptions and reinterpreting facts, ideas and past experiences
- stimulating a corporate culture of openness to new insights and solutions
- supporting organisational decision making and problem solving.

Typical methods and techniques to encourage idea generation are brain or body storming, mind mapping, story telling, improvisation, experience modelling, opportunity mapping, method cards, wizard-of-oz prototyping, inspiration chests, innovation workshops etc.

Innovation workshop Fast-paced collaborative workshops that involve all the stakeholders to develop a range of innovative ideas and future concepts for interactive products and services. They open possibilities that might not be considered and suggest new directions for the development of strategic future products and services.

Iteration The repetition of a cycle of processes with a view toward moving ever more closer to desired results. In design the term is used to describe how the organisation or designer can progressively refine concepts and components through research and feedback from various stakeholders.

Interviews A research interview is a structured social interaction between a researcher and a subject who is identified as a potential source of information, in which the interviewer initiates and controls the exchange to obtain quantifiable and comparable information relevant to an emerging or previously stated hypothesis.



experientia

PUTTING PEOPLE FIRST

Laboratory observations	Qualitative or experimental studies used to analyse cognitive and behavioural responses of people in specific (recreated) situations. Usability laboratories usually apply techniques such as simulations, video observations or observation through mirror walls.
Map	<i>See 'Opportunity map'.</i>
Market research	Quantitative studies often based on the use of questionnaire/interview techniques to uncover social phenomena and trends on a larger scale, providing results at a statistical level.
Models	<i>See 'Concept models', 'Experience models', 'Task models'.</i>
Modelling	<i>See 'Experience modelling'.</i>
Mood boards	Mood boards are visually stimulating collections of images, artefacts, colour or material trends, used to suggest different design directions. They are tools for inspiration, often used to generate discussion within the project team about issues which are difficult to describe in writing or verbally, such as styles, forms, meanings, emotional qualities, lifestyles or cultural trends.
Observations	<i>See 'Laboratory observations', 'Self-observations'.</i>
Opportunity map	<p>A qualitative and experience-based analysis aimed at identifying gaps in the current user experience in order to reveal new business opportunities. The analysis is often structured through a matrix of roles, career stages and tasks, or a description of activities, information sources and needs.</p> <p>Opportunity maps allow discovering desired qualities, and to support, enhance and change priorities and strategy development.</p>
Participatory design	<p>A term used to describe various activities through which users provide input, ideas and feedback to researchers and designers to help shape the concept and design of new products and services. Participatory design methods encourage the direct involvement of users or consumers in the design process, increasing the potential for a cross-fertilisation not only among the different professions and competences that can contribute to a foresight activity, but also among the principal stakeholders that might be affected by the ideas and decisions there developed. These design projects can become symbolic processes able to engage people in constructing their own context and 'point to something meaningful' that they have constructed (Stacey et al., 2000).</p> <p>The impulse to involve as many participants as possible in design research and planning should be tempered with the understanding that even small samples of people can provide a great deal of information. (The field of human computer interaction, for example, has shown that much can be learned from a test group of as few as a dozen people.) Participatory design activities include concept testing, collaborative prototyping, card sorting and scenario testing - that aim to foster the evolution of concepts and the development of prototypes.</p>



experientia

PUTTING PEOPLE FIRST

People	Preferred way of calling users, customers, actors... <i>See 'Users'.</i>
Persona	Personas identify the user motivations, expectations and goals responsible for driving behaviour, and bring users to life by giving them names, personalities and often a photo. Although personas are fictitious, they are based on knowledge of real users. Some form of user research is conducted before they are written to ensure they represent end users rather than the opinion of the person writing the personas. By generating insight and better expectations on how these profiles will likely behave in a given context of use and scenario of use, these profiles and personas allow us to increase our understanding of user requirements.
Primary research	<i>See 'Context Research'.</i>
Process flows	Visualised representations of the interactions between the user and product or service functions in the design solution.
Prototype testing	Testing interim solution designs with users in order to evaluate the usefulness and usability of the design. Depending of the phase of the design process it is possible to use: <ul style="list-style-type: none">• <i>Lo-fi prototypes</i>, which are developed with simple tools — paper, screen, video, wizard-of-oz, walk-through — to illustrate the conceptual design and include enough detail to showcase the project vision and to support user studies or heuristic evaluations.• <i>Hi-fi prototypes</i>, more sophisticated prototypes that show applications, appearance models and functional models. They are physical, visual or virtual representations of the project before it is committed to manufacturing or further refinement and are used for evaluation of the completed design, for user experience assessments and/or for marketing purpose.
Prototyping	<p>Prototyping is an essential element of an iterative design approach, where designs are created, evaluated, and refined until the desired performance or usability is achieved. Its main role is to manifest possible experiences, behaviours or form factors and is key to evaluate people's experience of the service or application before final roll-out.</p> <p>Prototypes help to test benefits, drawbacks or other issues related to the use-to-be by different stakeholders in the intended contexts. There are 3 main types kinds of prototypes:</p> <ul style="list-style-type: none">• <i>Appearance prototypes</i>: dynamic, visual, three-dimensional and environmental representations of what a product, service or application may look like. As opposed to a functional prototype, most functions actually don't work, but their look and feel is simulated. Appearance prototypes or models are used to evaluate the initial customer experience or reaction, in-store experiences and to refine aspects of colour and material choices. Together with functional

prototypes they are used for stage-gate evaluations in a business decision-making process.

- *Conceptual prototypes*: they can be interactive and enable to test user acceptance, usage benefits and drawbacks by multiple users in various contexts. They may take the form of paper, video, software or three-dimensional prototypes. These visual representations help to explain the concepts vision to various stakeholders – clients, users and colleagues.
- *Functional prototypes*: models or software solutions to demonstrate product or service functionalities and to test these before committing the project for further development.

Three-dimensional modelling and prototyping fosters informal communication between the designers and engineers about technical feasibility of the concept products.

Reflexivity

A coupled feedback feed-forward process in which reality helps shape the participants thinking and the participants thinking helps shape reality.

Research

See '*Context research*', '*Market research*', '*Primary research*', '*Secondary research*'.

Scenario

Scenarios are character-based story lines describing the assumed practical context of use for a product or service. They help to communicate the essence of the product /service idea within a defined and probable context of use. Through the different phases of the design process scenarios are used to shape the design of concepts, test prototypes and validate the design of the solution.

See also '*User scenarios*'.

Self-observations

Method used when it is difficult or impossible to directly access a certain place (like people's homes) or access is too time consuming. It consists of asking people to provide self-observations about their activities in the form of log reports or diaries, for example. Although this method involves the subjectivity of the participants in the data collected, it can be valuable to get a glimpse of life through the eyes of the people that are being studied.

Simulation

Any process that projects future results based upon possible scenarios: involves an exploratory environment in which a learner can construct less-constrained solutions and try out ideas without having a fixed or determined path to knowledge.

Sketches

Visualisations of ideas or concepts to clarify functions, behaviours, appearances or material usages. They are intended to explore possible development directions for the designer and/or communicate these to clients and team members. Sketching is a fast-paced and informal process.

Strategic design

Strategic design helps to manifest the company's vision/image/goal of a marketplace to come, the position/placement of its products and services

in relation to other competitors, and its answer to people's anticipated needs. Strategic design is based on and shapes mid- to long-term business strategy and goals. It concerns the whole product system, i.e. the integrated body of products, services and communication, with which a company presents itself to the market and society, giving form to its strategy.

Tacit knowledge	Knowledge that is not easily expressed in words. Tacit knowledge is highly personal, difficult to formalise, express and share with others. Tacit knowledge has two dimensions or facets: cognitive models and technical skills.
Task model	Description of how users think about and accomplish goals which serves as a foundation the concept, functionality and features of a product, service or website, etc.
Technology roadmaps	Analytic representations used to forecast technology development, to project opportunities and needs of future market, and to help envision the necessary steps towards meeting user's needs through new products or services. The roadmap document visualises opportunities, requirements and dependencies for the short to mid-term future (2-10 years).
Testing	<i>See 'Concept testing', 'Prototype testing', 'Usability testing'.</i>
Trend exploration	A forecasting technique which builds on the assumption that certain social, economic or technological trends or patterns identified in the past will manifest themselves in the future and that one can forecast future trends by observing how certain patterns have changed in the past and projecting or extrapolating that change into the future.
Usability	Usability is the extent to which users can access the functionality of a system with effectiveness, efficiency and satisfaction to achieve specific goals.
Usability testing	Testing final or near-to-final designs with users in order (medium/high fidelity) to evaluate the usability (i.e. ease of use) of the solution. We distinguish between: <ul style="list-style-type: none"> • <i>Formative testing</i> in which researchers get new requirements and a new vision from an existing product by involving people into some scenario-based activities; • <i>Summative testing</i>, used to evaluate/measure the interface/interaction by involving people into task-based activities;
Use cases	A technique for requirements analysis and the design of user interfaces. Use cases describe scenarios of users interacting with a product, service or application to achieve specific goals or tasks.
User	A term chosen to refer to people involved during the design, evaluation or actual usage of new products, services or technological systems. Actors, customers, participants and people are other terms in common usage and

	reflect the design philosophy most relevant to the situation or process described.
User-centred design	<i>See 'Human-centred design'.</i>
User scenarios	Personalised, fictional stories with characters, events, products and environments; used to shape the design of concepts, test prototypes and validate the design of the solution.
User requirements	<p>User requirements outline:</p> <ul style="list-style-type: none">• the problems (individual) users have in their work that they expect the system to solve;• the solutions they have in mind for an expressed or implied problem;• the desired attributes of whatever solution ultimately is provided;• the true fundamental needs, that is, the functions the system must let them perform. <p>The aim is to identify the real functional requirements that will satisfy the real user's real business needs. Functional requirements describe the intended behaviours, tasks or functions of the system to be designed.</p>
User segments	Representations of user groups that provide the basis for a strategic design that will meet user and business needs.
Workshops	<i>See 'Creativity Workshops'.</i>