CO-CREATION BETWEEN ORGANISATIONS AND CONSUMERS

JULIA HAMID
Brunel University
julia.hamid@gmail.com

YOUNGOK CHOI
Brunel University
youngok.choi@brunel.ac.uk

ABSTRACT

Co-creation, the new term for participatory design, is an emerging trend in design research, which involves users and other stakeholders in the design development process. The key question this research addresses is, 'How can organisations co-create effectively with consumers at the idea-generation stage of the NPD process?' A strategic framework was built using insights from three case studies, semi-structured interviews with organisations in the UK, and observations from Action Research. Effective co-creation takes time and effort to plan and manage, but when practised with all the key elements in mind, as suggested in the framework, it can be of valuable benefit to organisations who wish to develop innovative products and services which better suit the needs and wants of their consumers.

INTRODUCTION

The term, 'Co-creation', has attracted much interest across various fields, particularly an emerging trend in design research. It can be defined as, "Any act of collective creativity shared by two or more people, applied across the whole span of a design process." (Sanders & Stappers 2008) Co-creation can be beneficial to organisations, because active collaboration with potential users in the new product development (NPD) process often leads to capturing consumers' latent needs and the development of innovative ideas. (Sanders & Simons 2009; Kristensson, Matthing & Johansson 2008) This may lead to identifying design innovation opportunities and the development of products, which better suit current and future markets, with the added benefits of competitive advantage. However, the practice of co-creation rests on the belief that anyone can be creative and contribute to the generation of ideas, a mindset not yet embedded in many organisations, acting as a barrier to co-creation (Sanders & Stappers 2008). Amongst other key concerns is the resistance to change, share, and take risks. Furthermore, background research has identified that research practitioners has a lack of understanding of the effective use of co-creation between organisations and consumers and a theoretical framework that can be easily followed. (Research-Live 2009; Sense Worldwide 2009)

The aim of this research is to explore these key barriers and develop a strategic framework to encourage and guide organisations to effectively co-create with consumers at the idea-generation stage of the NPD process. The strategic framework suggests one approach to co-creation: exercising idea-generation workshops involving active participants including designers, researchers, and consumers who are not trained in design.

METHODOLOGY

The methodology (see Figure 1) is a combination of qualitative primary and secondary research conducted to gain background understanding to accomplish the aim. This sequential process begins by identifying the research problem, applying appropriate research strategies and methods to collect and analyse research findings, after which insights are integrated from each research method to build the framework and provide final recommendations.

This research used literature reviews to provide a useful backdrop for the problem, which led to the need for this exploratory study and to identify existing theories of co-creation, to include its different models, approaches, methods, and key barriers. The case studies used in this research to gain insights from organisations practising co-creation with consumers examined how three Research Agencies (see Table 1) approached co-creation.
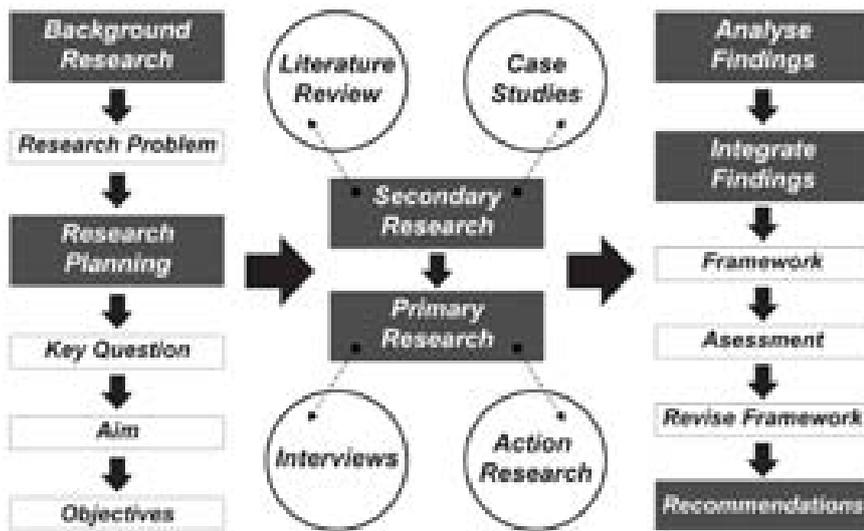
Figure 1: Research Methodology

Semi-structured interviews have two distinct purposes: firstly, to collect qualitative data from five Companies and Design Consultancies in the Industrial Design/ Brand and Product Strategy sector (see Table 1), to identify their perspectives, such as key concerns and expectations of co-creation with consumers, and the approaches they use. Secondly, they were conducted with two Research Agencies (see Table 1) to gain insights into their recommendations for successful co-creation, including various approaches and effective methods. Action Research has two distinct phases, in order to identify the main differences in participants' behaviours through observations, to identify how to successfully engage them during co-creation workshops. This approach conducted two consecutive idea-generation workshops with participants who are designers, researchers and potential con-

sumers. The observations from the first workshop were then combined with insights from other research methods, to design a second workshop involving more engaging pre-set tasks for the same brief.

The data analysis for qualitative findings was carried out by organising the data and coding them under several categories; these will be reviewed to identify patterns and themes. (Creswell, 2003) The noting of insights from findings will be written on coloured Post-its and compiled on the wall to be mapped under different themes. The interview findings were transcribed, organised and categorised from field notes on the computer; similarly the observational findings from Action Research were captured and reviewed to identify patterns. The validity of research findings will be taken into account through triangulation of data, where insights were collected

from several sources and combined during the integrate findings stage to form more confined themes, hence leading to the development of the strategic framework.

DISSCUSSION
CO-CREATION AT THE IDEA-GENERATION STAGE

Participatory design, the original term for 'co-creation', is a movement which emerged in the 1970s in Scandinavia. (Sanders & Stappers, 2008) It became more widely known when new challenges for designers emerged, as intuitive design and the passive role of the consumer no longer satisfied the changing demands of consumer needs. Hence the demand for "user participation in design" (Cross, 1971).

The new product development process (NPD) is often seen as a linear approach and a "sub-process" of innovation (Trott, 2004); The innovation process is often referred to as a funnel model in which many different ideas are gradually whittled down through different stages until eventually a small number of feasible concepts are left (see Figure 2). Co-creation activities can occur at various points during the NPD process: at the discovery stage when identifying new opportunities, throughout the design process, and in the later stages of marketing and brand development, with examples such as product customisation with NIKE ID and Dell's Ideastorm (see Figure 2). However as Sanders & Stappers suggest, the beginning of the process - also know as 'concept search', 'idea generation' or 'Fuzzy Front End' - is often ambiguous and its potential is unknown, which is when understanding the context and the users becomes important, to move forward into the design process. (Kotler 2003; Bruce & Cooper 2000; Sanders and Stappers 2008). Thus, the benefits of involving consumers as active participants at the idea generation stage in the NPD process should not be underestimated.

OVERCOMING BARRIERS TO CO-CREATION

Key findings derived from the literature and interviews revealed that co-creation is often misunderstood by many organisations, where it is regarded as an insignificant approach offering little of real value for com-
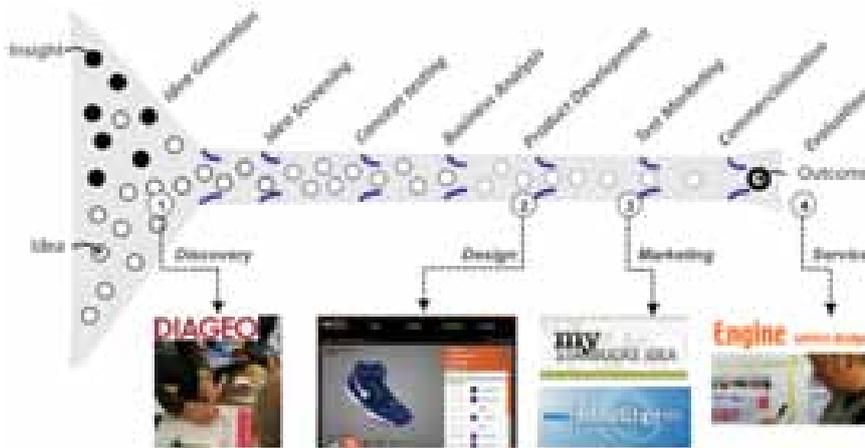
Firm	Sector	Position
Company A	Industrial Design	Strategic Design Manager
Company B	Industrial Design	Senior Design Manager
Company C	Industrial Design	Head of Industrial Design
Design Consultancy A	Branding & Product Strategy	Design Strategy and Insight Consultant
Design Consultancy B	Industrial Design	Head of User Research
Research Agency A (also used for case study)	Design Research Strategy	Founder
Research Agency B (also used for case study)	Branding & Product Strategy	Studio Director
Research Agency C (only used for case study)	Branding & Product Strategy	

Table 1: Companies, Design Consultancies and Research Agencies involved in Interviews and Case studies.

Figure 2: Co-creation activities practised across the various stages of NPD process.

petitive advantage in the market. The key barriers are a reluctance to change and share information, short-term thinking, risk-aversion, pressure from stakeholders, time and cost, consumer reliability, concerns about intellectual property and designers' egotistic concerns, and a lack of belief in "ordinary" people's ability to be creative. (Sanders & Stappers 2008; Tidd, Bessant and Pavitt 1997; Sense Worldwide 2009) Thus, for effective co-creation to take place it is necessary to challenge these organisational barriers.

The principal approach to overcoming some of the barriers is to introduce 'Openness' to the organisational mindset, to break down resistance to innovation. (Tidd, Bessant and Pavitt, 1997) The common attitudes embedded in organisations in terms of their 'short-term' thinking, resistance to change and sharing, make them less risk-averse and more open to adopting new approaches by involving consumers as active participants in the design

development process. Furthermore, the mindset of certain designers is a substantial barrier to co-creation, because of their egotism and lack of belief in "ordinary" people's creativity. Data from interviews with industrial design firms indicate that designers often think research with consumers or users is not important, preferring to believe their own intuition and expertise will prompt the design and development of purposeful products for their users. This notion of openness is significant in organisational culture, with potential to alter designers' constricted mindsets.

The interview data suggested that in order to address pressures from stakeholders - about the constant demands for profits, a facts-driven decision-making process, and perceptions of co-creation being an expense which requires time and money - it is vital to convince them that co-creation with consumers can add value to the idea-generation stage, providing it follows

a structured disciplined approach. Moreover, consumer reliability is another common concern for organisations, particularly when participants' background and motivations are unknown. However, this can be addressed by ensuring careful planning by selecting appropriate participant profiles, simplified workshop activities and offering guidance during the co-creation process. In similar cases, intellectual property concerns and managing organisational transparency also require initial planning, which involves setting mutual agreements with participants through legal documentation prior to involving consumers in the co-creation process. (Sense Worldwide 2009) Three fundamental aspects should be incorporated when organising co-creation workshops: Preparation, Simplicity and Discipline.

HOW TO CO-CREATE EFFECTIVELY

The key findings from three case studies reveal that co-creation is not a singular activity; it is an approach which requires preparation, careful planning, organisation and management of online and offline sessions, and subsequent analysis of all the results to develop useful insights, ideas or strategies. The various organisations developed their own co-creation frameworks, using similar approaches, emphasising the importance of selecting appropriate participants and co-creation methods, and the need to refine ideas through further developments. The interview findings also indicate that co-creation needs to be a simple structured process which requires preliminary research into mar-
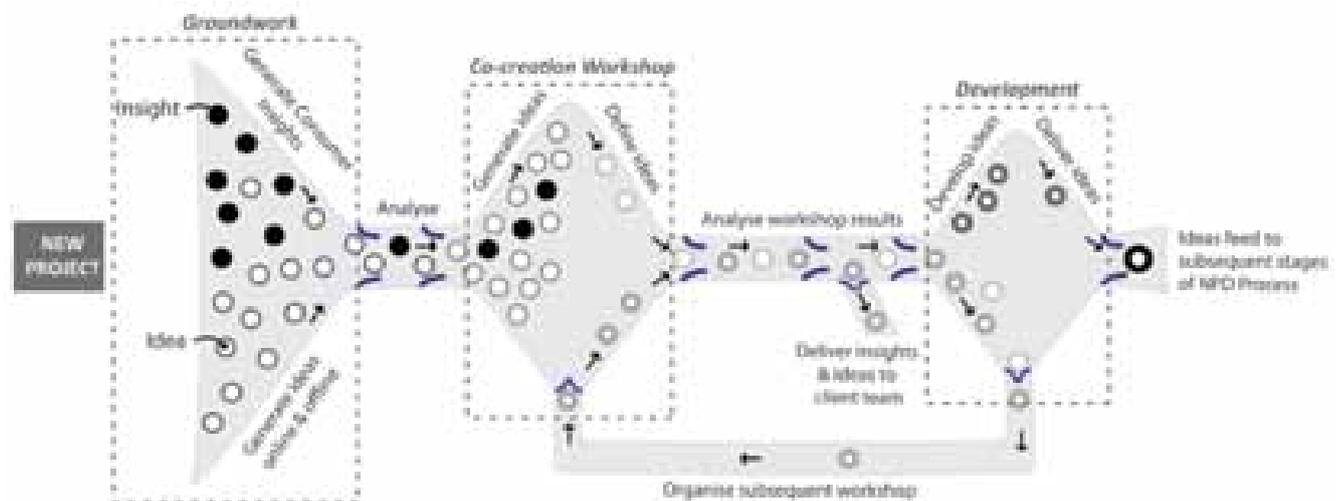

Figure 3: Processing of co-created ideas at the idea generation stage in NPD process.
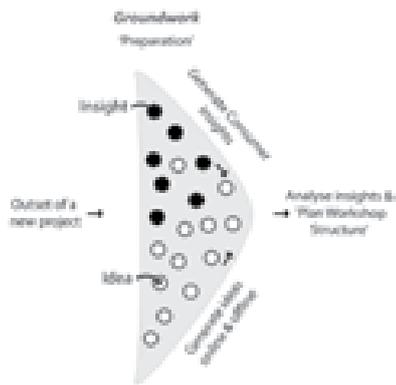
Figure 4: Idea Flow at 'Groundwork' Stage.

ket trends and competitors, and that workshop sessions require appropriate facilitation, stimulus and collection methods. Analysis and development of results can eventually inspire the design and subsequent stages of the product development process. Furthermore, the findings from the two Action Research workshops reveal that participants, especially consumers, respond to questions, images and encouraging activities which help trigger insightful thoughts and ideas. It is also important to have a facilitator to keep them focused on achieving each task, to select methods which interest and engage them in group discussions, encouraging them to share and comment on each others' ideas, thereby refining their ideas. The presence of the designer in the sessions can be beneficial in several ways, as they can visualise and conceptualise ideas generated by the group and inspire the whole session. Both workshops identified that facilitation, structured tasks and appropriate stimuli are essential in workshop sessions.

The integrated research findings indicate that co-creation at the idea-generation stage typically accompanies the outset of a new project and has three stages: *Groundwork, Co-creation Workshop and Development* (see Figure 3), similar to the 'innovation funnel' model in Figure 2 in which ideas are generated, defined and delivered along a evaluation process, until they are fed into subsequent stages of the NPD process. *Learning and refining* is also an essential step in sustaining the successful practice of co-creation with consumers; and finally it is necessary to '*Stimulate*', '*Engage*' and '*Inspire*' all stakeholders at the various stages of the co-creation process identified from

the Action Research findings.

THE GROUNDWORK

As discussed earlier, 'preparation' is one of the fundamental aspects of effective co-creation. It is essential to set out the foundation for the subsequent stages in the co-creation approach. At this stage, (see Figure 4) numerous consumer insights and initial ideas, elicited and generated through online and offline networks, will be analysed to provide a better understanding of the context, to guide the planning stage of the co-creation workshop.

Three case studies indicate that co-creation often begins with research exploring the wider context to uncover insights; this includes understanding emerging consumer needs, identifying trends and competitors. One agency starts by first uncovering insights from observations and interviews, to prepare for setting up goals and selecting the appropriate methods to use in co-creation. Similarly another agency indicated that knowledge of the market, trends and competitors provides a focus for setting up structured disciplined workshops, thereby saving time for both researchers and participants. Action Research findings indicate that this was vital for a better understanding of the context, to guide the design of the two co-creation workshops and to provide the appropriate stimuli.

Another aspect of preparation is building a network of consumers online and/or offline, as a basis for screening for selecting consumer profiles suitable for participation and to brief them with vital knowledge about the project prior to participation. Case study insights suggested that online communities have easy access to large quantities of creative ideas through a network of people with different cultural backgrounds and expertise. The primary aim is to create a consumer forum
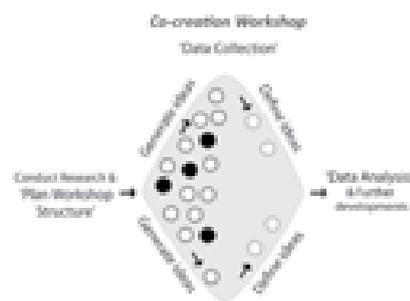
where interesting topics are shared and discussed, to gain wider perspectives on key issues and opportunities, and as a source for spotting trends.

THE CO-CREATION WORKSHOP

A typical research process first defines a problem and its research objectives, develops a strategy, carries out data collection and analysis, and finally presents the findings. (Creswell 2003 and Kotler 2003). This approach also applies when conducting co-creation workshops, because as previously noted, co-creation should be a 'disciplined' process. Figure 5 illustrates the three key stages of the co-creation workshop: *planning workshop structure, data collection and data analysis*, with groundwork and further development taking place respectively.

Workshop planning: according to case study findings, the development of a strategy or plan for the workshop is a significant step. One research agency's approach to co-creation is a hierarchy where the methodology is a precondition to the selection of methods, tools and techniques. Moreover, prior to developing a methodology it is important to first identify the goals and objectives to help decide the subsequent stages, implying that a clear goal will guide the selection of activities during workshop sessions, e.g. if the goal is to generate ideas, 'brainstorming' and other games may be useful (see Figure 6). The purposes of any co-creation session should thus be identified at the planning stage. Action Research findings also revealed the importance of setting clear goals for workshops, leading to better time management and better quality ideas from the facilitator.

After selecting a clear goal, it is important to choose the people to participate in the workshop who may include various stakeholders in the project. Interview findings suggest that key stakeholders can include consumers, research and design team members and multi-disciplinary representatives from among the clients; its benefits can include an increased ability to capture insights which are valuable to each discipline, to get the best thinking through team analysis and prevent misunderstandings in the later stages of the NPD process. (Beyer & Holtzblatt 1998) Further case studies and interview insights suggested that co-creation can be more
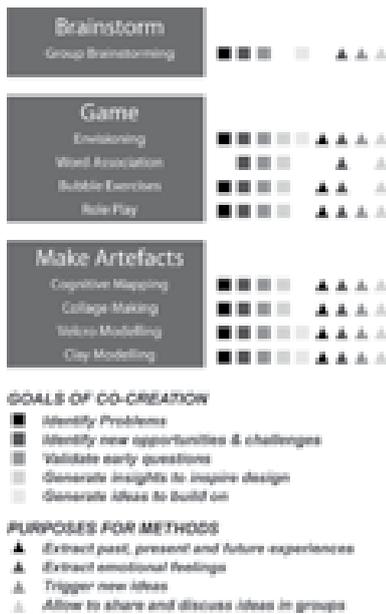

Figure 5: Idea Flow at 'Co-creation Workshop' stage.

Figure 6: Mapping of 'Co-creation' methods.

effective by involving small groups of people which are easier to manage and to engage with. It may also be useful to include a small number of participants in the workshop who have visualisation skills and a design background, because their 'problem-solving' and 'creative' skills' can guide the ideation process. (SenseWorldwide 2009; Stappers & Sanders 2003)

In market research participating consumers are selected based on demographic, psychographic or other considerations to achieve a range of perspectives. (Kotler 2003) Alternatively, an interviewee suggested an online or offline 'screening process' to identify individuals with relevant knowledge, attributes and enthusiasm who would engage in co-designing with other participants. This process can include setting small tasks or simple questions to people via online and offline networks. Moreover, one case study's approach uses a distinctive segmentation model to select suitable consumers as participants for each project.

After setting the goals and selecting participants for the co-creation workshop, it is necessary to select the methods to achieve these goals. The research findings identified three key categories of methods for co-creation workshops: *'brainstorming', 'games'* and *'making artefacts'*. Each category has different activities which can help elicit consumer insights and/or generate ideas (see Figure 6). One of the main pur-

poses of co-creation methods is to help understand consumers' past, present and future experiences and emotions (Sanders 2005), to develop a source of inspiration for designers or create empathy for them. Activities such as 'cognitive mapping', 'collage-making' and 'envisioning' can be of great help in identifying latent consumer needs. Another key purpose of these tools is to elicit ideas from participants during workshop sessions; brainstorming in small groups can generate new ideas and encourage sharing and discussion of personal experiences to discover problems and new areas of opportunity, and to validate researchers' and designers' questions. 'Games' can help gain understanding of consumers' priorities, and it was suggested that "Play is a sequential decision-making exercise structured around a model in which the participants assume the role of operating the simulated situation." (Cross 1972) Moreover, games may be a way to interact with others in a more comfortable and less judgmental environment (Laurel 2003), thus acting as a useful way to engage group discussions.

Interview findings indicate that visual stimuli can elicit inner feelings and 'warm up' participants during co-creation sessions. Action Research findings revealed that moodboard was a good source of inspiration for participants. Moodboard is a presentation of images representing aspects of target users' lifestyles and environments expressed in a visual form, which can help stimulate new ideas. One interviewee emphasised the importance of capturing ideas generated during the co-creation workshop, which can be easily reviewed during the analysis process. In the second phase of Action Research findings, participants were more able to share and discuss ideas using a flipchart, which enabled them to refer to their own and each others' ideas.

Data collection: Once the workshop planning stage is completed, clear goals should be defined before selecting participants and appropriate co-creating methods. A key aspect to consider at this stage is how to manage the idea-generation session. Interview insights revealed that skilful facilitation is the key to successful co-creation with con-

sumers; one interviewee stated that a good facilitator should be "constantly adaptable and have the ability to see, view and manipulate the process" and thus guide the participants through each workshop task. Other interview insights suggested the facilitator should not exert too much control over the participants, because it is vital to "let them be expressive of their own ideas." Participants should be encouraged to feel confident enough to engage in group discussions and sharing ideas. Another interviewee recommended that a successful co-creation workshop requires allowing participants to carry out a set of structured tasks, with the researchers there to guide them through each stage and utilise stimuli to trigger insights. This was identified as crucial from the first phase of Action Research findings, where there is a constant need to focus on the conversations between participants to align with the goal of the tasks, some of which are open-ended. On the other hand, it is vital to control the atmosphere, so participants feel comfortable to be involved, and to encourage the sharing and discussing of insights and ideas. (Berg 2006) Similarly, the findings from observational studies of two workshops suggest that making participants feel relaxed and at ease can contribute to engaging them in deep conversations. Moreover, giving them space to move around and complete tasks away from the desk can also help stimulate and motivate them, as the second phase of the Action Research indicated.

Data analysis: the initial step of analysing the results of the co-creation session is to edit the raw data captured, transcribing all the activities which occurred into written text, then organising or coding operations to uncover patterns of "human activity, action, and meaning". (Berg 2006) Evaluating results can be done using "a three-phase structure" that allows researchers to be inspired through their presence, to review the captured data and search for interesting insights and organise data to search for patterns. (Visser, Stappers, Lugt & Sanders 2005) Case study insights revealed that some organisations adopt a similar approach to analyse workshop results, because of time and budget limitations. The interview
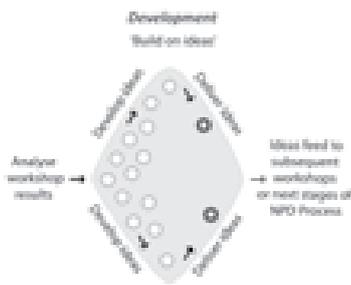
Figure 7: Idea flow at the 'Development' stage.

findings indicate that, the attendance of a multi-disciplinary team from their organisation or from the client team during the workshop session brought different perspectives to the analytical stage to inform or inspire new ideas. Designers may benefit from reviewing all the raw materials, including video or audio tapes from the session, to establish the origin of particular insights and ideas, to avoid creating something not suited to consumer needs.

DEVELOPMENT

The research findings indicate that insights and ideas generated from co-creation workshop are not necessarily the end of the process. Some of the ideas can be further developed before they are delivered to the subsequent stages in a more refined form. This part of the research may be described as a convergent and divergent process where ideas are developed and delivered (see Figure 7).

Ideas can be refined in several ways: case studies and interview insights revealed that organisations often select the best ideas generated by the workshop for their online network to seek further validation from wider perspectives. More commonly, however, organisations explore the ideas generated in the first workshop by holding another co-creation workshop with the key stakeholders. Alternatively, they can process these ideas using two different routes: either by developing a design brief for the client to feed into the subsequent stages of their NPD process, with the data including a summary of all the workshop results and a strategy for utilising these ideas to develop tangible solutions, or by passing on all the ideas to the design team, including raw data and edited materials, to inspire the designers to develop something suitable for production. In order to communicate the

results of co-creation workshops to an alternative source, such as the client or the design team, the data captured from these sessions should inform and inspire their team members, with the results in an "accessible, shareable, useful and understandable" form. (Visser, Stappers, Lugt & Sanders 2005)

PARTICIPANT BEHAVIOURS

The findings from Action Research reveal that participants' behaviours differ with varying methods, when activities and collection methods were applied in the two consecutive co-creation workshops. It is useful to utilise visual stimuli such as images and diagrams to elicit insights from participants and encourage interactive activities such as game-based tasks carried out as a team, to encourage sharing and discussion of ideas, and to document ideas on a flipchart to inspire participants with their own ideas throughout the workshop session.

RECOMMENDATIONS

Figure 8 shows the results of earlier discussions of research findings and generated insights and the overall layout of the strategic framework for effective co-creation between organisations and consumers at the idea-generation stage of the NPD process. At the outset of a new project, the approach is a continuous process with six key stages: *'prepare, plan, manage, analyse, build and learn'*. Each stage can unlock certain barriers to co-creation when conducted appropriately. Several steps and guidelines must be followed in order to achieve the six stages. Furthermore, there are three key elements to consider: the need to 'stimulate, engage and inspire' all stakeholders at various stages of the co-creation process, which are better achieved through design-led activities such as use of visual materials and creative thinking.

PREPARE

At the outset of a new project, the initial stage for effective co-creation with consumers requires 'preparation', which is best achieved by conducting research and building networks of online and offline communities to provide inspiration to the subsequent stages. The purpose of conducting preliminary research is to understand the context, identify consumer needs and wants, and to sensitise partici-

pants with preparatory tasks such as workbooks or diaries. Typical research methods would include observation, interview, ethnography, contextual enquiry, probing and keeping a diary. These can be used in combination, depending on the purpose of the research. Networks can be built by organisations to explore topics through online and offline approaches, to gather wider perspectives, undertake a trend search, to engage consumers through sharing and discussion of issues and ideas, and ways of stimulating and sensitising participants.

PLANNING THE WORKSHOP

The co-creation workshop should be thoroughly planned, including setting goals, selecting appropriate participants and engaging relevant methods. Setting clear goals for the workshop will stimulate the process, while the criteria can identify problems, new opportunities and challenges, to validate early questions, elicit insights to inspire design and generate ideas for further development. The participants should include research and design team members and a multi-disciplinary project team from the client. The selection process for consumer participants can include a screener and assigned tasks or questions, and the selected profiles should be self-motivated, confident, open to challenge and creative. They may also be lead users who are able to engage in discussions. The three key methods categories - 'brainstorming', 'games' and 'making artefacts' - are used to elicit past, present and future experiences and emotions from the participants, to trigger new ideas and share group discussions. Stimuli such as images, stories, video clips and objects can help engage participants and stimulate thoughts and ideas. It is also important to collect insights and ideas by using field notes, recordings, flipchart sheets, and through the researcher or designers' memory.

MANAGING THE WORKSHOP

The co-creation workshop is best managed with effective facilitation and a controlled atmosphere. The facilitation process should start at the planning stage by selecting the appropriate methods, stimuli and data recording methods. The research findings and discussion indicate that effective facili-
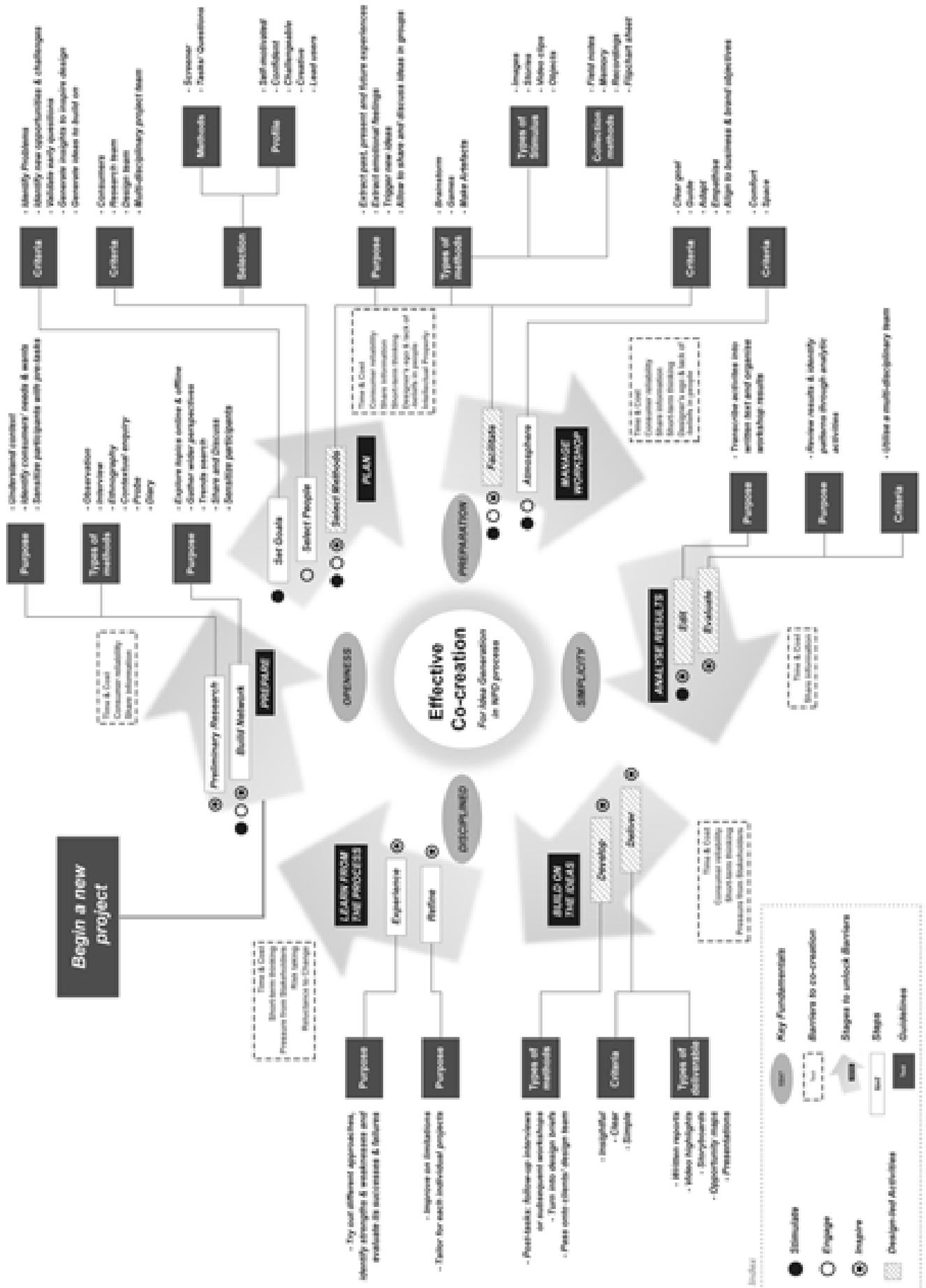
Figure 8: Strategic framework for effective co-creation at idea generation stage in NPD process.

tation at a workshop depends on having a clear goal, guiding the process, adapting to changes, empathy with inspirational ideas, and the alignment of ideas to business and brand objectives. The facilitation should stimulate and engage participants and inspire the design process, through design-led activities. Providing comfort and space encourages stimulation and engagement amongst participants.

ANALYSING WORKSHOP RESULTS

Making sense of the co-creation session follows on from effectively managing the workshop. Results can be analysed by first editing the raw data and then evaluating them. The research findings and discussions indicate that effective analysis of data is achieved by organising the workshop results by transcribing all the activities into written text. The results can then be reviewed and analysed to identify patterns. Effective evaluation can be done using a multidisciplinary team during analysis sessions. Creative thinking can also be applied to analysis of the workshop findings. The findings should thus inform and inspire the design process.

BUILDING ON THE IDEAS

Ideas from co-creation workshops can be built on through further developing them to eventually deliver results to the appropriate parties. It may be appropriate at this stage to adopt the use of visual materials and provide creative deliverables to inspire the design process. The ideas can be developed through follow-up interviews or more workshops. Alternatively the ideas can be converted into a design brief, or the results can be passed on to clients or the design team. Data insights should be delivered to clients or the design team clearly and simply, using written reports, video highlights, storyboards, opportunity maps and presentations.

LEARNING FROM THE PROCESS

Continuous learning from the workshops is essential, using personal experiences to inspire and refine the outcomes through trial and error. Try out different approaches, identify strengths and weaknesses and evaluate successes and failures, to improve on the limitations and tailor the approach for each individual project.

ASSESSMENT OF THE FRAMEWORK

Four senior members of well-known organisations were invited to assess the strategic framework and offer feedback and advice against five key questions. Their key findings were that while the framework may not give value to organisations, it offers a good general overview of co-creation for organisations less familiar with it. The framework was described as "thorough" but at the same time "confusing visually". The framework's key weakness was that co-creation was limited to conducting workshops. However, the interviewees said there are other ways to approach co-creation, and their recommendations include testing the framework through a project to prove its validity, and to further develop and define key aspects for each step of the six-stage process.

CONCLUSION

This research presents an exploratory study in effective co-creation between organisations and consumers and identifies its significance when practiced at the idea-generation stage. It has explored ways to challenge some of the key barriers to co-creation, through four fundamental principles: 'openness, preparation, simplicity and discipline'. The outcome is a strategic framework comprising six key stages, providing general recommendations for use by organisations as a starting point or a thorough guide to practicing effective co-creation. It may, however, be necessary to adjust the approach to individual needs, depending on the purpose and available time and budget for each project.

Finally, it is important to note that this framework is only one of a number of ways to explore co-creation with consumers through idea-generation workshops using active participation from consumers, multi-disciplinary team members from the organisation and professional designers and researchers. It is also vital to test the strategic framework in practice, to prove its validity and further develop and define the key aspects for each step of the six-stage process.

REFERENCES

Berg, B. 2006. *Qualitative Research Methods for the social Sciences. 6th ed. Boston; London: Pearson/Allyn & Bacon.*

Beyer, H. and Holtzblatt, K. 1998. *Contextual Design: Defining Customer-Centred Systems. San Fransisco: Morgan Kaufmann.*

Bruce, M & Cooper, R. 2000. *Creative Product Design: A practical guide to requirements capture management. Chichester: Wiley, 2000.*

Creswell, J. 2003. *Research Design: qualitative, quantitative, and mixed method approaches. Los Angeles, Calif.; London: SAGE.*

Cross, N. (Ed.) 1972. *Design Participation: Proceedings of the Design Research Society's Conference 1971. Academy Editions, London, UK.*

Kotler, P. 2003. *Marketing Management: 11th edition. New Jersey: Prentice Hall.*

Kristensson, P., Matthing, J. & Johansson, N. 2008. *Key strategies for the successful involvement of customers in the co-creation of new technology-based services. International Journal of Service Industry Management, Vol. 19, No.4, pp474-491.*

Laurel, B. 2003. *Design Research: Methods and Perspectives. Cambridge, Mass: MIT Press.*

Research-live, 2009. *Is co-creation over-hyped? [Online] www.research-live.com/features/is-co-creation-over-hyped?/4000848. article. Last Accessed July 26, 2010.*

Sanders, L. 2005. *Information, Inspiration and Co-creation. Proceedings of the 6th International Conference of the European Academy of Design, University of the Arts, Bremen, Germany.*

Sanders, E. and Stappers, P. 2008. *Co-creation and the new landscapes of design. CoDesign, Vol.4, No.1, pp5-18*

Sense Worldwide 2009. *The Spirit of Co-Creation: Risk-Managed Creativity for Business. White Paper. [Online] www.senseworldwide.com. Last Accessed August 01, 2010.*

Stappers, P. and Sanders, L. 2003. *Generative tools for context mapping: tuning the tools. The Third International Conference on Design & Emotion. Loughborough: Tayer & Francis.*

Tidd, J., Bessant, J. and Pavitt, K. 1997. *Managing innovation: Integrating technological, market and organizational change. West Sussex: Wiley and Sons.*

Trott, P 2004. *Innovation Management and New Product Development. Harlow : Financial Times Prentice Hall.*

Visser, F., Stappers, P., Lugt, R. and Sanders, L. 2005. *Contextmapping: experiences from practice. CoDesign, Vol. 1 No. 2, pp119-149.*