DBA Design Challenge: engaging design professionals with inclusive design

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The value and relevance of inclusive design is increasingly recognised by design professionals in the UK. An initiative that has encouraged this is the DBA (Inclusive) Design Challenge. Organised by the Helen Hamlyn Research Centre (HHRC) at the Royal College of Art (RCA), it was launched in 2000 in collaboration with the Design Business Association (DBA), a major professional organisation of designers.[3]

The triggers for the event were the publication of two official reports - the Audit Commission's 'Fully Equipped'[1] and the report published in August 2000 by the Department of Trade and Industry [2]. The former highlighted the poor levels of design endemic to the disability aids and equipment sector, while the latter described the difficulties disabled people have in using everyday consumer products.

As an initiative, the DBA Design Challenge aimed to raise the profile of inclusive design among small manufacturers and service providers in the care and disability sectors and help them identify and exploit innovation opportunities. Its key focus was the development of new inclusive products and services that could span niche and mainstream markets. In practice, the DBA Design Challenges has succeeded in attracting high levels of participation from mainstream design consultancies. Small manufacturers and service providers, however, have lagged far behind in their take-up of the prototypes or scenarios generated.

The evolution of DBA Design Challenges
For the DBA Design Challenges, leading design consultancies are teamed with young disabled users and challenged to develop innovative scenarios for new inclusive products and services for the mainstream market. Since 2000, the project has undergone three stages of development (Table 1):
1. Trial stage: DBA Design Challenge 2000
2. Development stage: DBA Design Challenges 2001-2003
3. Mature stage: DBA Design Challenge 2004

In 2000, four design firms participated in the first Challenge, working with disabled user groups and individuals over a period of six weeks. This trial stage featured: a short project period, small and focused user groups and no competitive element. The results were presented to an audience of 240 representatives from the design, disability, academic, public sector and

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[3] It drew on the experience of three previous design challenges organised by the DesignAge programme whose achievements led to the establishment of the HHRC in l999.

business communities at an evening event at the RCA. The response was so positive that the DBA Design Challenge became an annual event and a mechanism whereby designers, disabled users and experts could be brought together in short-term collaborative design projects. The participating design firms all felt that user groups had been a key tool to enable them to understand rapidly the fundamentals of inclusive design and were unanimous in praising the new creative insights gained through dialogue with their disabled contemporaries. They suggested turning the event into a design competition based on a live design project to further attract the design community. This was taken into consideration the following year.

From 2001 to 2003, the DBA Design Challenges followed an identical procedure:

Mid September:	DBA Design Challenge launch event with presentation of example projects from previous years.
Late September:	Deadline for short written proposals from potential participants.
Early October:	Shortlist announcement.
October-November:	Visits to and mentoring of short-listed firms; provision of project-specific resource packs; organisation of user forums, further mentoring.
Early December:	Presentations by short-listed entrants to judging panel with final presentation and Award Ceremony the next day.

The evolution of an organisational procedure and the expansion of user groups to include those with diverse and severe disabilities reflects the formalisation of the event. Participants were chosen to illustrate the vital ergonomic imperatives of the project and underscore the more subtle psychological issues that needed to be addressed. The lateral coping strategies developed by such users in response to their disabilities inspired the designers and stretched them creatively.

The resource packs contained general information about inclusive design, specific information pertinent to the proposed project and the contact details of experts with whom they could discuss their ideas. Each year, in five to six firms were shortlisted and one or two winners were selected at the Award Ceremony. Follow-up interviews were carried out with participating firms to elicit feedback that was used to improve the subsequent DBA Design Challenges.

In 2004, the fifth year of the event, the DBA Design Challenge entered its mature stage. Based on the feedback from previous participants, more user groups were organised during the design process at the concept generation and evaluation stages with longer periods in between. The event was launched in June, shortlisted in July and judged in December 2004. The Award Ceremony is scheduled for February 2005 to facilitate greater media exposure and attract interest from the public and potential clients.
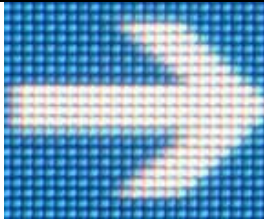
Table 1. Main features of three stages of development
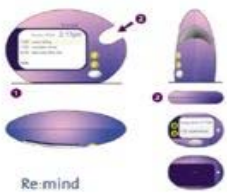
Trial stage: small user groups	Development stage: award ceremony	Mature stage: more user involvement

Design exemplars resulting from DBA Design Challenges

DBA Design Challenges have become an invaluable mechanism to promote dialogue and collaboration between the design, disability, voluntary, academic, public sector and business communities. A number of inclusive design exemplars have been generated. Those resulting from 2000 to 2003 are listed in Table 2.

Table 2. Inclusive design exemplars from DBA Design Challenges

2000	2001	2002	2003
'Jumbo' pack by Factory Design	Packaging design by SiebertHead	'Handle with Care' by Sieberthead	'Factory Wares' by Factory Design
'Sensory Web' by Priestman Goode	'Mobospace' by BDG McColl	'c system' by Coley Porter Bell	'Eye Speak' by Lewis Moberly

Driving interface by Renfrew Group	'Inspiration Park' by Imagination	Smart Wearables by Pearlfisher	Digital Wayfinding by Roundel and Dalton Maag
Accessible Sports Website by Designhouse	'Re:mind' by Marketplace	'i-connect' by Fitch:London	'Life Circle' by Seachange
	'Kettlesense' by Alloy Total Product Design	'Shop Sense' by Kinneir Dufort & Appliance Studio	'ello' by Seymourpowell

Details of these projects can be found on the web site of the Helen Hamlyn Research Centre *http://www.hhrc.rca.ac.uk/events/DBAChallenge/* and in the *Innovate* journal *http://www.hhrc.rca.ac.uk/programmes/sbp/innovate.html.*

Impact of the DBA Design Challenges
To date, a total of 25 design companies have participated in the DBA Design Challenges, the majority small or medium sized firms. Over 100 designers have been involved. Few had any prior experience of working directly with users[4], let alone those with disabilities. They valued the experience highly to the point that two companies re-entered the Challenge to gain greater experience in this area.

Around 40 enthusiastic users have contributed to the DBA Design Challenges as individuals or representatives of such voluntary organisations as Arthritis Care and the British Computer Association of the Blind. These users and their organisations are starting to demand that design be more inclusive[5]. More

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[4] Their experience of focus groups was generally that of being an observational third party not a direct participant.
[5] SCOPE, the main charity for cerebral palsy has made the promotion of inclusive design a major plank of their 2004 policy document 'Time to get Equal'

than 1000 people have attended the award ceremonies and public awareness of inclusive design is growing because of media reports and the HHRC and other publications concerning the event.

The 25 inclusive design exemplars covered the areas of product, environment, communication, transport and clothing design. The range of design solutions has shown that inclusive design can be applied across design disciplines.
The open nature of the briefs of DBA Design Challenges leaves the companies free to frame their proposals. Their investment in terms of time and company resources has varied from company to company as have the design results. Of the 25 projects, 10 have commercial potential with two having been patented.

DBA Design Challenges in retrospect and in the future
A number of factors account for the less competitive design solutions of the DBA Design Challenge:
- Some companies had no business plan in mind when they entered the DBA Design Challenge. They started with 'blue-sky' concepts and little consideration of the practical constraints of commercialising the outcomes.
- The majority of companies carried out the project during their 'spare' time (evenings and weekends). Once the presentation was over, they resumed their routine work and did not have time to advance the project.
- Five companies chose to challenge themselves by doing something different, i.e. beyond their expertise – one branding and graphics company ended up designing a product.
- Sometimes designers were overwhelmed by the comments of user groups and could not synthesise their ideas – this led to ambitious but superficial design solutions.
- Since presentation was crucial, some companies spent too much time packaging the presentation rather than developing the concept.
- The involvement of manufacturers and potential clients was insufficient, and the media exposure limited.

Its knowledge transfer remit aside, it would be beneficial if more commercially viable design solutions were generated as a result of the DBA Design Challenges. Consequently, there are a number of areas for improvement:
- The provision of a mechanism to facilitate the commercialisation of the design solutions such as helping the team find potential client partners before the projects go into the public domain. The so-called NIH (Not Invented Here) factor, has been cited by the design firms as a reason why manufacturers are reluctant to consider taking on some of the prototypes that have been developed. This applies especially to product design but is less evident for such areas as communications and interface design where the project has allowed the firm to present an inclusive portrait of their best working practice and has been instrumental in securing commissions for new work.
- A greater level of manufacturer involvement would be helpful. This has primarily been the responsibility of the firms. Two in the 2004 Challenge have secured interest from manufacturers before the Award event

scheduled for February 2005. Two other projects from previous challenges that are under consideration have resulted from introductions by the HHRC. It is a particularly problematic issue. Designers enter the Challenge in a spirit of altruism and devote large amounts of their free time and company resources to participation. Were a client to be engaged early on, it could be argued that the project was essentially commercial in origin and that design time should be compensated. It would also weaken the altruistic and education nature of the experience and hamper the creative freedom that has been so attractive to participating designers since this quality is absent from much of their commercial work. This in turn would be a major disincentive to participation.

- In the debriefing interviews held after each Challenge, the designers have expressed a desire for greater levels of publicity. This was a major factor in the decision to hold the Award event two months after the judging to allow for greater media exposure.

- So far, around half of the participating companies have been from the communication/branding design sector, however, only six DBA Design Challenge projects (a quarter) have focused on communication design. This may be due to the widespread misconception within the design world that inclusive design is relevant only to product or environmental design. With a greater number of exemplars from disciplines other than these, this perception will change.

- Greater support to help the participating companies pinpoint the design focus quickly and concentrate on solving key problems. This is essentially a time/human resources issue and would require greater inputs than is feasible under the present level of funding.

- Using good examples to inspire entry companies and encourage them to explore inclusive solutions within their specialised field – to push the boundaries rather than follow conventions. (Where companies have chosen to work outside their area of expertise despite advice to the contrary, the result has rarely been outstanding.)

As evidenced by the follow-up interviews, all the participant companies were unanimous in their belief that the DBA Design Challenge process had been enjoyable and rewarding. Specifically, the user groups were found to be extremely useful [3, 4] and the overall benefits cited included: gaining competitive advantage, getting media exposure, enhancing internal teamwork, access to 'critical users', and the acquisition of new skills. As a result, the DBA Design Challenge can be seen as a strategy in engaging design professionals with inclusive design.

References
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