The Helen Hamlyn Centre is one of the jewels in the crown of the Royal College of Art. It is our largest discrete research centre with a highly distinctive profile, a dedicated team and an international reputation. Indeed its mix of design, social activism, applied research, and educational and business outreach demonstrates many of the core values by which the College stands.

For the academic year 2009/10, the many different facets of the centre’s programme have been pulled together for the first time in one publication – the 2010 Helen Hamlyn Centre Yearbook, which I am pleased to introduce.

This has been a year of ‘firsts’ for the centre – it has initiated its first research project in design for autism and hosted its first Fulbright Scholar from the US – it has chalked up ten years of the DBA Inclusive Design Challenge with an exhibition at the V&A and embarked on a much-anticipated development project to redesign the interior of the emergency ambulance; it has taken its resuscitation trolley into clinical trial, explored ways to improve patient privacy and dignity on hospital wards, and exported its people-centred design expertise to all corners of the globe.

Within South Kensington, the Helen Hamlyn Centre’s educational programme of awards and workshops has set out a social agenda very much in line with the aspirations and beliefs of growing numbers of RCA students and graduates – and its success in undertaking funded research serves as a beacon for the College’s emerging strategy of research hubs that cluster our expertise.

It is reassuring to know that many of the priorities of the new Coalition Government – supporting an ageing population, improving hospitals, strengthening communities and so on – are in those areas where the Helen Hamlyn Centre has consistently made its mark.

I want to express my gratitude to the centre’s team led by Helen Hamlyn Professor of Design Jeremy Myerson, and to its partners, advisers, sponsors and supporters for making the past year such a memorable one – and give special thanks to the Helen Hamlyn Trust, whose long-term support is a model of enlightened patronage.
One of my most fervent wishes in supporting the Helen Hamlyn Centre at the Royal College of Art has been to direct the practical application of design thinking towards those areas of greatest social need. So it gives me great pleasure to see in this 2010 yearbook so many of the centre’s current projects and activities addressing important social challenges in a serious, creative and engaged way.

In the early years of the Helen Hamlyn Centre, its interests were primarily in the design implications of an ageing society. More recently it has augmented that theme by developing expertise in design for healthcare and patient safety. This broadening of focus has been gradual and complementary – one of the most important requirements for an ageing population is a health service that is safe, and one of the most important considerations for a health service is to be inclusive of patients of all ages and abilities.

Within the patient safety field, there are a number of priority cases that deserve the closest design attention. I am especially enthusiastic about the project to redesign the interior of the current A&E ambulance in partnership with RCA Vehicle Design. I have wanted to see this happen for a long time, having had firsthand experience of the deficiencies of ambulances, and I await the full-scale demonstrator with great interest.

Other research studies into reducing medical error on hospital wards, improving access to public toilets for the elderly, enhancing dementia care in residential homes, creating better accommodation for adults with autism and encouraging designers to work more closely with people, provide further evidence of the centre’s commitment to improve the world around us through design.

I am grateful to the many commercial, academic, charitable and government partners who joined with the Helen Hamlyn Trust in supporting the centre’s programme of work in 2009/10. Your input is invaluable. Finally, I want to wish those research associates who are leaving us at the end of this academic year every success with The Lives of Others exhibition and in their future careers.

“It gives me great pleasure to see the centre addressing important social challenges in a creative and engaged way”
Director’s Report Jeremymyerson

The Helen Hamlyn Centre Yearbook 2010 presents our work in the round for the first time. In the past we have described our various projects and programmes in a series of publications aimed at different audiences. Here we have sought to capture all the things we do in one place – in order to show how academic research, business outreach, international workshops, product development and pedagogic enquiry interrelate right across the span of our activities in people-centred design.

Our research associates, drawn exclusively from new graduates of the Royal College of Art, provide the ‘engine room’ of the Helen Hamlyn Centre. Partnered with a range of business, government and not-for-profit organisations, they have expanded the bandwidth of the centre’s interests this year – by investigating other people’s lives using a wealth of design research techniques.

To better understand how design might improve quality of life, the 12 research associates and one Fulbright Scholar on this year’s programme have trained alongside care home workers, shadowed visually impaired people crossing the street and studied how bright artificial light affects the wellbeing of workers. They have analysed hygiene control on hospital wards, travelled out on calls with ambulance crews and measured up the public convenience for older people.

The 2010 Helen Hamlyn Research Associates exhibition, which runs at the RCA from 23 September to 7 October is called The Lives of Others. The title is a deliberate echo of the famous 2006 film about the East German spymasters, not because there is anything sinister about the design surveillance but because the work is all about attention to detail and getting under the skin of people living very different lives to a group of talented young Royal College of Art graduates.

Research associates are networked through all that we do in the Helen Hamlyn Centre. They are identified and nurtured via our education programme for RCA students, which explores and rewards inclusive and participatory design; they are attached to our growing body of academic research funded by the UK Research Councils; and they contribute to development projects that bring our work closer to market. Research associate alumni – there are more than 100 now – can also be found leading teams in our international series of Challenge Workshops for designers, which this year visited Seoul, Dublin, Oslo and Jerusalem, and is a testbed for new design thinking.

A busy and committed 12 months, then, in which the centre’s team sought to underscore socially oriented design practice with critically reflective research. I am grateful to my colleagues for their dedication. But what do the activities in this yearbook reveal about broader shifts in design? From my vantage point as Helen Hamlyn Professor of Design, I would suggest that the academic year 2009/10 was one in which we could really feel the tectonic plates moving under our feet.

I travelled widely during the year to cities in the United States, Europe, Scandinavia, Japan, South Korea and China, visiting design schools, companies and social communities, and everywhere I went there was talk of a fundamental realignment of the relationship between the designer and the user...
designer and user – especially in the context of big social challenges such as ageing populations, changing patterns of work and the need for better healthcare.

Let me explain. Designing for people has been around for nearly 60 years; it is part of the bedrock of industrial design practice, as referenced by the landmark publication *Designing for People* by the pioneer Henry Dreyfuss (Simon and Schuster, 1955). It has evolved within the defining contexts of a production-led economy, consumerism and, more recently, globalisation. The relationship between professional designers and the people who use their designs has largely been a producer-consumer relationship – and on a global scale too as design skills have been applied to create economies of scale in manufacturing and worldwide brands in marketing.

Dreyfuss signalled mainstream design interest in human psychology and user need as a way to create products and services that sell. He set a blueprint for industrial designers to treat people as passive test subjects in the design process, designing for their needs and wants from the vantage point of an expert mindset. This core belief system has remained largely unchallenged right into the new millennium.

Today, however, as Jane Fulton-Suri of design firm IDEO and others have pointed out, a paradigm shift is underway from designing for people to designing with people and, in some cases, designing by people. (It is this shift that we have been tracking in the centre’s i~design programme of research). The people in question in these new forms of practice are no longer passive consumers being studied by experts, but active participants in the design process. Human need is not being inferred by designers through impartial examination of behaviour, but translated directly into new products and services via an empathic co-design process or, in the most extreme manifestations, self-recognised by those who will benefit from the resulting design. The designer mindset is no longer just an expert one but is also becoming a participatory one.

My point is not to say that those methods to design for people are becoming obsolete – far from it, many will remain relevant and important long into the 21st century and we regularly adopt them ourselves. It is simply that they will be supplemented by increasingly democratic and bottom-up social models of design that let us focus more clearly on social inclusion.

In particular the success of designers in using their skills to ‘scale up’ to meet the challenge of globalisation will need to be matched by an ability to ‘scale down’ to address local and community needs.

It is within this vanguard that the Helen Hamlyn Centre at the RCA now operates. We are part of a global movement going against the grain of half a century of design practice, but the lives of others – whether old, disabled, excluded by technology or blinded by light – demand that we give it a go. We hope you enjoy the 2010 Yearbook and we welcome your comments.

Jeremy Myerson is the Helen Hamlyn Professor of Design

“Designers will need to ‘scale down’ to meet local needs ...”
OCTOBER 2009

Seoul Challenge
In Seoul’s Olympic stadium, Senior Research Fellow Julia Cassim leads the largest international Challenge Workshop on inclusive design ever mounted by the Helen Hamlyn Centre; 65 designers from 10 countries participate.

NOVEMBER 2009

Medical equipment show
Resus:station, the centre’s redesign of the standard hospital resuscitation trolley, goes on show as part of the Ergonomics – Real Design exhibition at the Design Museum prior to a clinical trial at St Mary’s Hospital, London.

DECEMBER 2009

Ambulance redesign
The London NHS gives the green light to fund a redesign of the current emergency ambulance interior, in partnership with RCA Vehicle Design. A full-size test rig is built to explore different layouts and configurations.

APRIL 2010

Trading Places
Ten years of the DBA Inclusive Design Challenge, a collaboration with the Design Business Association, is marked with a special exhibition at the V&A Sackler Centre for Arts Education, called Trading Places.

MAY 2010

Innovation for All
The Helen Hamlyn Centre partners with the Norwegian Design Council to support their European Business Conference on inclusive design, Innovation for All, in Oslo. This pan-Scandinavian event includes a 24 Hour Design Challenge.

JUNE 2010

Student design awards
The Helen Hamlyn Design Awards 2010 reward outstanding, socially-aware RCA student projects in people-centred design – from a device to help the elderly to operate TV remotes to a new approach to prosthetic armwear.

AYEAR IN THE LIFE OF THE
JANUARY 2010

Japaneseworkshop
Centre researchers travel to St Catherine’s College, Kobe, Japan, to participate in an international expert workshop co-organised with the Oxford Institute of Ageing, exploring the links between inclusive and sustainable design.

FEBRUARY 2010

Safer glassware
Helen Hamlyn Chair of Design, Jeremy Myerson, launches an innovation project to make beer glasses safer in his role as a member of the Home Office’s Design and Technology Alliance Against Crime.

MARCH 2010

Work in progress
Claire Fox, Director of the Institute of Ideas, is the guest speaker at a seminar and supper held at the RCA to showcase the work-in-progress of the Helen Hamlyn Research Associates 2010 – twelve new RCA graduates.

JULY 2010

Shoe design workshop
Nine shoe designers, including RCA alumni, participate in a Challenge Workshop at the University of Central Lancashire on better shoe design for people with rheumatoid arthritis, commissioned by Arthritis Research UK.

AUGUST 2010

The Lives of Others
Intense preparations are made for the annual Helen Hamlyn Research Associates show and symposium. The exhibition, The Lives of Others, is designed by Gero Grundmann of Studio Bec.

SEPTEMBER

Chinese Summer School
Helen Hamlyn Centre researchers travel to China to participate in a Summer School on ageing and design, 12-19 September 2010, organised in partnership with the RCA Innovation Design Engineering and Tsinghua University, Beijing.
INTERVIEW PATRICIA MOORE

You’re regarded as one of the founding figures of inclusive design internationally. Did you always want to be a designer?
I was convinced at a young age that I would be a painter. I had an organised studio when I was pre-school. I started as a painter at Rochester Institute. In my very first semester, I decided to change my major to industrial design but they wouldn’t let me, as it was 1970 and I was a broad! I had to hire a lawyer and go to student court to make that change. I was trouble from the beginning.

In 1974 you graduated and joined Raymond Loewy. What was it like as a woman in Loewy’s design office in New York?
It was lonely. For reference, look at the Mad Men TV series on advertising. It was very sexist, with lots of smoking and drinking in the office. I was the lone female out of 750 architects, designers and engineers. I made friends with the secretaries, the gatekeepers. My first job as a new graduate was to design an automobile for the Soviet Union.

You memorably sent Raymond Loewy a note about ageing…
I told him we were neglecting our elders in our designs. It resonated with him as he was in his 80s at the time. He was my grandfather really.

Between 1979 and 1982, you did this amazing piece of design research on the streets of North America, disguised as an old woman. How did it come about?
I was at a party. I met by chance a make-up artist called Barbara who worked for NBC in New York doing prosthetic makeup for Saturday Night Live. She also did stuff for Dustin Hoffman. I asked her: can you make me look 85? There was no thinking about it – it was in the moment. She agreed. It was a four-hour process to apply the makeup. We created nine different characters to explore different levels of disability and different levels of affluence – from Nancy Reagan stepping out of a limousine to a bag woman.

You describe some hair-raising experiences in your famous book, Disguised. You were abused, beaten up, cheated. Did you think things were that bad for elders in American society?
I grew up with my grandparents and they were revered. They struggled with some products but they were never badly treated. So I was unprepared for the cruelty and indifference I received, although sometimes people would delight with their kindness. I visited countless cities in 14 US states and two Canadian provinces and I’d be in character up to 20 hours a day. The state of my peeling latex would determine how long I stayed out.

How did you square the ethical basis of the experiment? On one level, you were conning people…
It’s a pretty fine line. I didn’t exist, so I was careful not to insinuate myself into situations or introduce myself

“We created nine different characters to explore different levels of disability and different levels of affluence – from Nancy Reagan stepping out of a limousine to a bag woman”
to people. As Captain Kirk said in Star Trek: you can’t alter history in the making. It’s about observation, immersion, role modelling. The learning comes from how people react.

**With this experiment, you effectively invented many of the current tools and techniques in people-centred design – role-playing, age suits, simulations of hand and eye conditions, and so on. But what did you learn?**

I learnt that we were doing a miserable job of research as designers. There was a place for rigorous social science research in industrial design, which meant we had to redefine how designers work. At the time designers didn’t work with other disciplines. That had to change. The tradition was that we received a brief from marketing, which told us what the product had to look like, what colour and style. There’s still a bit of that goes on now. The biggest complaint still among elders is that they don’t find anything on the shelves that suits them.

**Since that time, you have taken an interdisciplinary design approach into new areas of practice, for example rehabilitation medicine.**

Yes, we created hospital rehabilitation environments with real cash tills, cars, kitchens and real pavements so that people recovering from serious illness could learn to operate in the real world again – learn to walk, cook, drive and handle money. Rehabilitation units are a good place for companies to evaluate prototypes, so we received a lot of industrial gifts as donations. Recently I’ve been working with US servicemen coming back from Iraq with no arms and legs. It’s the hardest job I’ve ever had. The inhumanity of war I will never understand.

**You’ve also recently competed an award-winning, fully accessible mass transit system for Phoenix. How did you get involved in that?**

I was brought in after a large firm dropped out, when there was very little budget left. So I designed it with my graduate students at Arizona State University. I find that the trick in inclusive design is not to admit to the client that your main objective is people with the greatest need. So you talk about busy business executives racing to the airport with roller-bags, or nannies out with baby pushchairs, and you end up with a solution that is just right for wheelchair users too.

**Renée Zellweger has taken out an option on the *Disguised* book to make a film of your life. If you were to repeat that experiment as an old lady on the streets today, what would you find?**

In some ways things have got worse in the US. We’d see higher levels of poverty and worse living conditions. We’d also see more old people still working – that’s because the baby boomer generation know there’s a snowball’s chance in hell of being able to retire. There’s still a great deal for the Helen Hamlyn Centre to tackle.

*Above: Patricia Moore, author of *Disguised*, mentors students and team leaders during The Methods Lab workshop, 10–11 November 2009 For report, see page 54*
The Helen Hamlyn Research Associates programme teams up new design graduates of the Royal College of Art with business, government and voluntary sector organisations to collaborate on socially oriented design projects. It has two main aims: to work with external organisations to demonstrate the business value of people-centred design; and to focus the skills and knowhow of recent RCA graduates on improving people’s lives and addressing critical social issues through design.

This year 12 RCA design researchers were joined by our first ever Fulbright Scholar from the US as the programme addressed an unprecedented range of new challenges – from designing for dementia and autism to exploring what intimacy and sexuality mean to older people. The studies described here reflect the three main research themes of the centre – inclusive design, workplace design and design for patient safety. It was a year of two halves: the first six months was about working with people, treating them as active participants in the research and development of ideas. The second six months developed these findings and insights into design concepts, scenarios or guidance, each research associate using their creative voice to respond to social need.

Rama Gheerawo
Deputy Director, Helen Hamlyn Centre
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WORKPLACE DESIGN
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24 Light Volumes Dark Matters Claudia Dutson

DESIGN FOR PATIENT SAFETY
26 Design for Patient Dignity Yusuf Muhammad, Karina Torlei
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Senior associate Maja Kecman (centre) presents design concepts for hospital signs with Karina Torlei and Yusuf Muhammad. See page 26
Much of the current debate about how streets are designed is focused on the need to re-establish the balance between their functions as conduits for traffic and places for people. This has prompted a fundamental reassessment of many of the assumptions that underpin conventional street design practice. New streets should be places for everyone – and their character should become more inclusive rather than less. However, as new streetscape designs are implemented, some communities feel that the reverse is occurring.

Working in partnership with CABE Space, which instigated the study, this project focused on how blind and partially sighted people navigate the public realm in order to embed an understanding of their needs into emerging street design practice. It engaged with urban designers, engineers and people with low vision in order to share information and insights. By looking at how real people experience street environments, it sought to move the debate away from abstract ideas and towards practical interventions informed by user experience.

Central to the project was an ethnographic study that explored how eight people with different visual impairments navigate their local area. All were based in the UK and there was a spread of age and gender amongst participants. Interviews and observations were combined with shadowing; people were asked to undertake local journeys that were filmed and photographed, and to give a running commentary to reveal difficulties and open up their ‘world’ to the researcher.

Mapping techniques were developed to tie insights and experiences to specific spatial locations whilst maintaining a journey narrative. A ‘navigation map’ was developed to represent the different sources of information and feedback that each individual uses to navigate. In addition, experts in streetscape management were consulted and design professionals in different local authorities were interviewed to understand variability in practice.

The research has been used in two ways. Key insights have been packaged and presented to urban designers and highways engineers in ways that they can easily access and use, and practical interventions have been proposed that allow visually impaired people to navigate the streets.
Ross Atkin graduated from the RCA with his second Masters in Industrial Design Engineering in 2009. He obtained his first, in Mechanical Engineering from the University of Nottingham in 2005 before working in London as a designer of street furniture. He is fascinated by both things and people and enjoys solving problems that have both technical and human dimensions.

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Confidently and safely. These ideas have been written up in a publication that offers advice on the design of streetscape features for people with visual impairments as well as suggesting new kinds of provision and changes to the way standards are applied.

The project highlights the importance of engaging with people at the start of the design process and acknowledges the range of requirements that different users of public spaces have. The work with blind and partially sighted people demonstrates how inconsistent application of tactile paving standards has created uncertainty and confusion. Their experiences have been written into an installation based on Google Earth, presenting each user journey in an informative and engaging manner.

Opportunities to design new products and interventions were articulated as design briefs covering:

- Pathways and crossings: creating exemplar designs using tactile paving
- Diversions: helping people to deal with unexpected obstacles such as road works
- Sound interventions: using auditory feedback for additional orientation and guidance
- Information furniture: adding information to existing streetscape elements
- Technology: scoping and suggesting opportunities for digital support.

Sketch models based on these briefs show best practice by illustrating features that make streets accessible to long cane users, guide dog users and visually impaired people who rely on their sight. The results of this design study have been communicated to various stakeholders, including the Department for Transport, Transport for London and Guide Dogs for the Blind. The Sight Line publication is available through CABE’s website.

“The work focused on how partially sighted people really navigate…”

CABE is the Commission for Architecture and the Built Environment. It provides independent design advice and direct technical support to innovative projects across England. It champions and leads the public and professional debate about how to create great places that improve quality of life. www.cabe.org.uk
Out of Order: The problem with public toilets for older people

Continence concerns can result in older people limiting the time that they are away from home and the distances that they are willing to travel. This in turn reduces their quality of life and goes against the drive towards social inclusion and active participation within the community. However public toilet provision is not just an issue for older people – it is important for people of all ages, from parents with children to people on medication. Vandalism, cost of upkeep, extended closure and inaccessibility are amongst the issues that affect these facilities and there is an opportunity for design to play a key role in improving services.

This project, part of a three-year study led by Brunel University under the New Dynamics of Ageing research programme, aims to generate design solutions that will improve toilets for an ageing population and is now in its second year. Research was conducted to understand the perspective of two distinct groups – those who use public toilets and those who provide them. Both groups will be kept involved throughout the project to give feedback on concepts and prototypes as work progresses.

Nearly 100 interviews were conducted with users focusing on the ageing process. This gave a snapshot of how the human bladder ages and how toileting needs differ. People were asked about their experience of toilet facilities when away from home: many difficulties, anxieties and limitations were uncovered. For many people, it was important to express the central role that public toilets play in the planning and enjoyment of a simple shopping trip or a night out.

To organise the issues from respondents and consolidate the amount of data gathered, four representative personas were created to communicate and highlight the central concerns. Each character profile represents a group of interviewees in terms of age, location and lifestyle, and highlights specific concerns with toilet facilities due to age, health or family situation. The four personas are: a young woman with irritable bowel syndrome; a middle-aged man with a young family; a retiree with some age-related health problems and a locally based octogenarian with limited mobility.

Nine areas of focus came from this research: journey,
The New Dynamics of Ageing Programme is a seven year multidisciplinary research initiative with the aim of improving quality of life of older people. It is a unique collaboration between five UK Research Councils: ESRC; EPSRC; BBSRC; MRC and AHRC. www.newdynamics.group.shef.ac.uk

TACT3 (Tackling Ageing Continence through Theory, Tools and Technology) is a three-year research project that aims to reduce the impact of continence difficulties for older people. This interdisciplinary project is managed by Brunel University. http://people.brunel.ac.uk/~tact3

Gail Knight graduated from RCA Industrial Design Engineering in 2007. Her first degree was Mechanical Engineering at Imperial College, with a year spent in Lyon, France. She enjoys projects that focus on communities and urban design, and previously worked in wayfinding. She also came up with the idea for Sat-Lav, a text service to find a toilet in Westminster.
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provision, hygiene, security, privacy, location, architecture, product design and user experience. Concept designs were created around the first theme of journey, looking at planning the day and finding good-quality facilities. These include a system that helps people see which toilet facilities are available before leaving the house and a rating system that allows the users themselves to give feedback on a particular facility whilst drying their hands. Ideas were presented to some of the original interviewees for feedback.

During the next phase of the project, organisations that provide and maintain toilet facilities were interviewed. These were organised into public bodies such as local authorities, regional authorities and planning departments, semi-public facilities such as stations, parks and shopping centres, and private facilities such as department stores. The manufacturers of permanent and temporary toilet facilities were also interviewed.

The nine areas that the users focused on were presented to this group, but the concerns of the providers were more angled towards financial constraints and problems regarding accidental or intentional misuse. The final year of work will integrate this research to develop a range of design ideas to improve toilet provision and services for both users of public spaces and providers alike.

“Poor public toilet provision can reduce quality of life not just for the elderly but for people of all ages...”
According to recent Age UK surveys, around a third of people over 65 report feelings of loneliness resulting from isolation and bereavement. Although social participation and cross-generational contact are suggested as remedies to seclusion and depression, little is mentioned about the possibility of intra-generational contact. This stems from an assumption that older people no longer form new relationships. Research supports the opposite view: older people are entering into new, intimate relationships and sexual activity continues into later life.

This project, developed in collaboration with Age UK and the AIDS Community Research Initiative of America, aimed to create a visual communication campaign that respects an older person’s right to intimacy by exploring and questioning existing stereotypes.

Though the available literature on older people’s sexuality is scant, medical analysts agree that drugs such as Cialis and Viagra have led to an expected rise in sexual activity among older adults. Unfortunately, this cohort is particularly vulnerable to sexually transmitted infections (STIs) because of a lack of physician screening, stigma that silences them from talking about their sex lives and reduced immunity. By 2015, half of the US population living with HIV or AIDS will be over the age of 50. In the UK, one in 12 people diagnosed with HIV is over the age of 50. According to the Health Protection Agency, half of these infections are thought to have been acquired when the person was older than 50.

Despite this, few age-appropriate HIV or STI prevention messages exist. Instead of focusing narrowly on disease prevention, this project took a broader, qualitative approach to sexuality in later life, arguing that intimacy
Andy Chen spent 2009/10 as a Fulbright Scholar at the RCA. He graduated from Princeton University in 2009 where he founded the university’s first graphic design initiative, the Student Design Agency, and was awarded its highest general undergraduate distinction, the Pyne Honor Prize. Subsequently, Andy worked with Paula Scher at Pentagram and Neville Brody at Research Studios. His work has been featured on ABC’s 20/20 and in Businessweek.

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INClusive DESIGN is a necessary component of healthy ageing. Ten older people participated in interviews, workshops and home visits to speak about attitudes to sexual health protection and talk about existing stigmas from a personal point of view. They were asked to respond to a series of images, questions and design provocations using images and words to articulate their needs, fears and aspirations. People ranging in age, geographical location in the UK, sexual orientation and gender, including male, female and transgender individuals, actively participated in the research.

The output from the project is a three-part communication effort that takes an inclusive and holistic approach to older people’s sexuality. Safe Sex at Every Age is a poster campaign that encourages older people to protect their sexual health. In contrast to messages of fear that typify most safe-sex ads, this campaign uses humour and honesty to dispel stigma, addressing older people’s sexuality as specific to them without making youth-based comparisons. The designs employ ample use of white space and clear, confident typography to communicate directly and unambiguously with older adults. The campaign is designed for distribution by direct mail to senior organisations, healthcare providers and retirement communities.

Love Is addresses a wider audience. This public communication campaign encourages the mainstream public to respect an older person’s right to intimacy. The work is designed to combat stereotypes and stigmas by portraying older sexuality as dignified and respectful – an essential first step for including this age group in the conversation about sexual health. The campaign has been designed for display in public outlets including subway platforms, bus shelters, and on the sides of buses.

Imaging Intimacy is a 40-page book that incorporates all of the designs and documents the ethnographic research that led to their production. It has been designed as a digital document to be distributed to HIV/AIDS researchers, care providers and other stakeholders. These ideas have been displayed at the 18th International AIDS Conference in Vienna in 2010 and will be pursued in different ways by the supporting organisations.

The Fulbright Commission was created in 1948 and offers the only bi-national, transatlantic, academic awards programme between the US and the UK. It is part of a global programme conceived by Senator J William Fulbright, to promote leadership, learning and empathy between nations through educational exchange. Since its inception, nearly 300,000 women and men from all over the world have had their lives changed by the Fulbright programme.

www.fulbright.co.uk

Age UK has been formed from the merger of Age Concern and Help the Aged to be here for everyone in later life. It believes that age needs respect, kindness and sometimes help. It aims to improve later life for everyone through our information and advice, campaigns, products, training and research.

www.ageuk.org.uk
Fashioning Technology: Applying human behaviours to mobile communication

There is a growing interaction between communication technology and fashion. Belts, bags, shirts, wallets and other items of clothing are incorporating technology. Conversely, phones, MP3 players and other devices are now seen as ‘fashion statements’ or being used as personal accessories. This design study explored the social impact of mobile communication, aiming to make digital interaction less intrusive in an age when people are expected to be constantly available and connected. It mapped the shift from carrying a device to wearing technology on the body or embedding technology within it – and looked at how accessories and everyday objects in the home can become intelligent and interactive.

The research associate began the project by exploring the interactions between people and technology, focusing on handheld, worn and implanted technologies. Following this work a set of briefs was created and a month-long workshop held with 30 Masters students from four RCA departments – Fashion, Textiles, Innovation Design Engineering and Vehicle Design – who participated in the study during the spring term. They formed inter-disciplinary teams to work on design propositions that included an intelligent toothbrush to help monitor personal health by gathering data from saliva and a set of objects to help with digital addiction, such as a candle that turns off nearby devices during romantic dinners. All the projects used everyday items to hide technology and proposed interactions based on familiar gestures such as a handshake or raising a glass to toast (see pages 20–21).

The research associate built on the insights and propositions to focus on evolving a new digital etiquette in order to manage, prioritise and even postpone a response to the stream of communication from our mobile devices. A user group of 15 people – ranging from teenagers to older workers and from phone addicts to technophobes – were interviewed and shadowed to see how they dealt with unexpected calls and interruptions. Working meetings, romantic dinners, the daily commute...
Clara Gaggero is an award-winning designer, co-founder and director of Vitamins and tutor of Design and Innovation at Queen Mary University of London. Clara studied Industrial Design at the Politecnico of Torino, Italy, then she moved to Berlin where she founded her own fashion label. She worked in furniture design before coming to London where she studied Industrial Design Engineering at the RCA, graduating in 2007. clara@claragaggero.com

The research showed that people can better cope with real interruptions such as a colleague visiting their desk or a waiter coming to take an order because the body language and situation communicate clues about the urgency and nature of the disruption. However digital communication lacks this human subtlety, so the project looked at ways to mimic real-life interruptions, making smartphone alerts more personal and less binary.

Concepts are built around a new type of digital protocol based on two ideas. The first, SmartCall, uses software and services to enrich voice calls with a deeper level of information. It communicates the reason for the call, the urgency and the timeframe for response rather than just using a ring or vibration to notify. This information is attached to the call as a short message that flashes up on the phone screen.

The second idea, SkinDisplay, makes the interaction with the phone more discrete and subtle, by allowing the receiver to read the SmartCall information without having to look at the phone. The receiver will read the information, magically, just by touching the device. Raised lettering will appear on the back of the phone, containing the caller’s identity, importance and reason for the call. This short message will be transferred through pressure: the receiver will just need to press the phone between their fingers and the words will be imprinted on their hand. The receiver will then be able to read the message on their skin and then erase it by simply rubbing their fingers together.

Taken together, these ideas suggest ways of communicating digitally that are more closely based on face-to-face communication and on the complexities of human behaviour.

“...The project creates a new digital etiquette to manage and prioritise communication from mobile devices...”

Research In Motion (RIM) is a leading designer, manufacturer and marketer of innovative wireless solutions for the worldwide mobile communications market. RIM’s portfolio of award-winning products, services, and embedded technologies include the BlackBerry® wireless platform, the RIM Wireless Handheld™ product line, software development tools, radio-modems and software/hardware licensing agreements. www.rim.com
Images of work from seven groups of RCA students drawn from the Departments of Fashion, Textiles, Innovation Design Engineering and Vehicle Design. These formed part of the Fashioning Technology research associate project (see previous spread). The brief to students was to design ideas around ‘BlackBerry® for Body and Life’. An exhibition of the project outcomes, curated by Clara Gaggero, was held at the Italian Cultural Institute in London in April 2010, entitled White Feast.

FASHIONING TECHNOLOGY STUDENT PROJECTS
PenPen is a communication device that allows people to physically write, then digitally capture information.

The Aladdin’s lamp postage stamp downloads data when you rub it.

BlackBerryWisp uses your fingertips to communicate using gesture or sign language.

Loop slips onto any glass or cup turning it into a communication tool using the gesture of toasting.

Sur face is a textile that enables video calling from a pillow, curtain or cushion.

BlackBerry Aid uses a toothbrush to gather and transmit health data through the simple act of brushing your teeth.

Black-out Berry is a kit of four products that aim to combat technology addiction.

Images from an exhibition of the work held at the Italian Cultural Institute in London in April 2010.
In today’s knowledge-led economy, corporate companies are looking at new ways to build and share knowledge as they strive to become learning organisations in the face of unprecedented competition. A key part of this process has been to experiment with office redesign to create settings more suitable for knowledge work. However, many of the results have been inconclusive and the jury is still out on what works and what doesn’t.

Academic workspace is also changing as market pressures drive new property strategies and the academy seeks more relevance and impact. Nowhere is this more apparent than in the shifting scenery of the academic library where digital technology has reshaped how people learn, carry out research and use information. The library is emerging as a new typology of workplace as it combines settings for concentrated work, collaborative activity and social exchange. This project asks if a reinvention of the academic library could hold vital clues to developing new settings for knowledge workers in the corporate workplace.

It was important to understand how the future library might adapt to support researchers by looking at how they work on a day-to-day basis. An initial literature review showed that despite the vastly different fields of research, the basic journey is very similar. The project developed a generic cycle of research (discover-gather-analyse-create-share) and used this model to delve into the lives of 14 researchers – among them a physicist, historian, sociologist, law professor and economist. They were asked about the spaces they use and the tools they need throughout their research journey. Expert interviews...

Catherine Greene
RCA Department: Design Products
Research partners: Haworth, DEGW, Unwired

Living Library: Settings for access and sharing in the knowledge economy
were also held with architects, librarians and facilities and service managers.

The study clearly pointed to the need to create new services and settings within the library, in particular to address the lack of effective collaborative space that prevents group working for many researchers.

Technological advances are seeing increasing numbers of academics work remotely using social networking, e-mail and instant messaging services to stay in touch. But this leaves little opportunity for serendipitous knowledge exchange to take place.

The study also revealed the importance that researchers place on the type of space used during the 'create' phase of research, when they are focused on producing outputs. At this stage they often seek a change of environment, preferring a quiet yet atmospheric space more conducive to concentration.

These and other insights have informed the design of a suite of new library settings and services that expand the role the library can play in the research process. The library has moved from a building focused on information retrieval to a series of spaces where researchers actively engage with and share ideas. New settings include a Smart Study bookable room that remembers a researcher's individual preferences, a Datalab to help researchers to visualise information, and a Canopy that creates boundaries and defines group and individual spaces.

They are illustrated in a short animation and presented with the project findings on a dedicated project website at www.livinglibraries.rca.ac.uk. The Living Libraries project will be presented in a masterclass at the British Library in November as part of the WorkTech 2010 conference.

Catherine Greene graduated from the National College of Art and Design in Dublin in 2004 with a degree in Textile Design. Moving to London she worked as a project manager before studying Design Products at the RCA, graduating in 2007. Since then she has worked at the Helen Hamlyn Centre on several projects. She is a passionate design researcher and enjoys working on projects ranging from workplace to inclusive design. catherine.greene@network.rca.ac.uk

Haworth is a world market leader in the design and production of office worlds. Its head office is in Michigan, USA and it is from here that Haworth has developed into a global player over the last 25 years. The company is represented in more than 120 countries and maintains development and production facilities in China, France, Germany, Italy, Portugal, Spain, Switzerland, India, Canada and the USA. www.haworth-europe.com

DEGW is a strategic business consultancy. It makes complex issues simple. Its people help clients to capitalise on a vital dynamic: the relationship between people and the design of physical place to enhance organisational performance. www.degw.com

Unwired is the knowledge division of the Cordless Group. It provides a range of resources including reports and thinktanks allowing people to predict the future of work in the context of technology and people, the physical workplace and the work process. www.unwired.eu.com

1 Canopy concept design defines boundary for research collaboration
2 Media Swap concept creates a point of convergence between physical and digital research
3 Research associate Catherine Greene (right) conducts user interview in the British Library
There is more to light than enabling us to see. Artificial lighting in the built environment has a profound effect on a person’s physiological and psychological health. Light affects our mood and has an impact on our biology. At the outset of a lighting design, the amount of light needed to complete a visual task is established and this typically drives the scheme. But although it is important to establish lighting conditions for good visual acuity, once that level is set, there is very little room for manoeuvre or to address perceptual qualities that are more subtle and variable.

This two-year project, supported by the charitable trust of lighting manufacturer Megaman, set out to investigate why levels of artificial light in commercial interiors such as offices, shops and showrooms are increasing, and look at the impact of high levels of light on the people who have to work under them.

Standards for lighting in an office are derived from a mechanical interpretation of productivity that is directly linked to the brightness of light. There is a belief that the more light an office has, the faster a task can be completed with accuracy. In retail, lighting is based on the psychology of sales, with the eye being attracted to the brightest points in any visual field.

As a result, many commercial environments are over-lit. Qualities of light that can better support the wellbeing and health of employees are typically not addressed – and an excessive level of artificial light not only puts stress on workers but also on the environment through greater energy consumption.

The research identified two trends in architectural lighting: a sustainable approach, where the amount of light is reduced through technological interventions; and a wellbeing approach, where light levels are raised to stimulate alertness. The project has occupied a space between these conflicting strategies by working with light at a qualitative rather than quantitative level and suggesting alternative methods for architectural lighting.

The study has explored cultural, physiological and behavioural perceptions of light: variables such as hue, colour, direction and movement, the physical and temporal properties of light with particular reference to the person who will be experiencing its effect; and the technology

“Quality of light that can better support the wellbeing and health of employees is typically not addressed … ”
Claudia Dutson graduated from the University of East London with a degree in Architecture before studying at the RCA. Since graduating in 2008, her research has been centred around the physiological and psychological experience of interior environments in architecture. She has spent two years at the Helen Hamlyn Centre on this project to investigate these themes in relation to artificial lighting. claudia.dutson@rca.ac.uk

A key outcome of the study is a publication entitled Light Volumes Dark Matters, which critically reflects on the application of artificial light in buildings. The work is not a new set of rules or guidelines but a manifesto intended to challenge the engineering-led approach of existing codes and make the argument for a more sustainable and inclusive lighting agenda. It encourages designers and architects to rethink the way in which they deliver lighting in the workplace and give space for the serious consideration of the people who will be living with their decisions.

Megaman Charity Trust Fund was established in 2008 in recognition of the role played by the private sector in meeting the social needs of the community. It shows its support in two major areas: education and environmental protection. It is funded by endowment and ongoing contributions from Neonlite International Holdings Limited, the parent company and owner of the renowned trademark Megaman. Megaman is dedicated to innovating energy-efficient lighting products to provide the best solution to worldwide markets. www.megamanuk.com
Design for Patient Dignity: Enhancing the experience on hospital wards

Since 2009, the National Health Service has had a priority of ensuring that hospital wards are single-sex. Whilst this has been achieved for most patients, around one in ten report that they shared sleeping accommodation with a member of the opposite sex – a situation that adds to their personal stress levels at an already worrying time.

This project, led by Helen Hamlyn senior associate Maja Kecman, took on the challenge set by the Department of Health and the Design Council of improving privacy and dignity for all patients. Out-dated patient communication, confusing signage for toilets and bathroom facilities and revealing ward gowns can all negatively impact on the patient experience of a hospital stay. The designers were briefed to consider the clothing provided to patients and the quality of information available to them, and to explore ways in which a greater sense of privacy could be achieved for patients.

The research began by addressing the patient journey through the hospital in order to define key areas for improvement. An evidence base was gathered through immersive research with a wide range of hospital users, including patients and their families, carers, frontline NHS staff and suppliers. Observations, interviews, workshops and design provocations yielded many insights and identified opportunities for change. Design concepts were evaluated, refined and tested with selected users to create final prototypes that could be developed for production.

Several new ideas resulted, each aimed at reducing vulnerability and improving dignity. A new signage system allows ward staff to easily change facilities from male to female without having to wait for hospital technicians. The blue and orange signs use simple icons, protrude above bathroom and toilet doors and are designed to be visible from a distance.

To better communicate with patients about their hospital stay, a Patient Information Sheet doubles as a disposable tablemat to be placed in each bay with ward information on it. It can be personalised by staff or contain details about the particular day, such as meal...
Yusuf Muhammad graduated from the University of Nottingham where he studied Mechanical Design, Materials and Manufacturing Engineering. He went on to study Industrial Design Engineering at the RCA. Yusuf was recently awarded 1st place in the Toyota IQ Design Challenge 2009 and also won the James Dyson Award 2009.
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Karina Torlei graduated from RCA Industrial Design Engineering in 2008. Her first degree was BEng in Product Design Engineering from Swinburne University in Melbourne, Australia. Before the RCA, Karina worked at Tomra Systems, Norway and for designer Ross Lovegrove in the UK. She is one of the founders of Artica Technologies, a company set up to commercialise a low energy cooling technology.
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The Design for Patient Dignity: Enhancing the experience on hospital wards

Yusuf Muhammad

Graduated from the University of Nottingham where he studied Mechanical Design, Materials and Manufacturing Engineering. He went on to study Industrial Design Engineering at the RCA. Yusuf was recently awarded 1st place in the Toyota IQ Design Challenge 2009 and also won the James Dyson Award 2009.
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Times and visiting hours.

The Mixed-Sex Ward Divider is a separation device.
Reconfiguring the architectural layout of a building is expensive so this simple, pullout screen is fixed to either side of the ward and suspended from the ceiling. It can be pulled out to different lengths, concertina-style, to create a barrier across or down the middle of the ward, dividing the room and ensuring privacy and segregation of the sexes.

The project also redesigned two garments to accommodate different needs. For very sick patients in intensive care, the ICU Cover drapes over them attaching to the arms and neck. It is made of a non-woven, disposable fabric to aid infection control. Perforated slits make it easy to fit monitoring equipment or tear open in an emergency. For most other patients, the Inclusive Gown fits a range of sizes and body shapes. The garment can be securely worn with the opening at the back or the front with butterfly sleeves allowing easy access to the patient’s arms. A pocket on the outside of the garment can be used for personal belongings, whilst a pocket on the inside is big enough to support a catheter bag.

The Helen Hamlyn Centre’s prototypes were launched by the Design Council at an exhibition in London in March 2010 alongside work by other design teams as part of a national design initiative.

1 Separation device for mixed sex wards
2 Inclusive gown for patients of all sizes
3 New sign system for toilets and bathrooms
4 Research associates Karina Torlei and Yusuf Muhammad size up a gown
Living in the Community: Housing design for adults with autism

Autistic Spectrum Disorders (ASD) including Aspergers affect one in 150 people. These are lifelong and complex neurological conditions that affect social development, interaction and communication, and can cause unusual behaviours and interests. The environment in which an adult with autism lives can have profound impact on their wellbeing, exacerbating behaviours that may inhibit progress and diminish motivation and confidence. This project looks at how residential buildings can be made more autism-friendly.

Autism is characterised by problems with social functioning that can seriously affect a person’s ability to live independently. Adults with autism therefore often need support in managing everyday tasks. Historically, this has been provided in residential institutions but the emphasis is now shifting to community-based models of support that take place in people’s homes, whether they are owned, rented or shared. In the UK, accommodation and support is typically provided in residential homes or those of foster families or parents.

With an increasing number of people being diagnosed with autism and the parents of autistic adults getting older and less able to provide care, there is a need for alternative accommodation. Recognising the urgency to meet the housing and support needs of this population, the UK Government issued its Autism Strategy in March 2010, directing councils to take into account the needs of adults with autism in local housing planning, design and allocation. This means that more housing opportunities will become available. However, there is a distinct lack of documented design guidance and therefore a risk of placing people in buildings that will not meet their needs. The consequences of not providing appropriate accommodation can be family dependence, stress, incidences of aggression and social isolation.

To better understand the housing needs of adults with autism, the research started by looking at how people are currently supported in homes, observing and participating in the daily activities of staff and residents. Seven homes for autistic adults were visited and residents were interviewed in situ. This led to the selection of four people, each on a different part of the autistic spectrum, to act as drivers for design ideas. Workshops with people with autism were also set up to provide feedback on selected issues. To broaden the perspective, verify the project’s output and ensure wider dissemination of its findings, an expert reference group drawn from the fields of design, architecture and autism was established.

“There is a distinct lack of design guidance to help create appropriate housing for adults with autism...”
Andrew Brand has a Masters degrees in Engineering from Loughborough University and in Industrial Design Engineering from the RCA. He has worked in the automotive, medical and heavy plant industries and is a Chartered Mechanical Engineer, delighting in opportunities to combine technical and design skills. Andrew is a founding member of start-up company Squease, developing smart clothing for people with autism, and the design collective BREAD. andy_brand01@hotmail.com

The research led to four main design themes. Architects and designers should design residential buildings to: enhance the motivation, confidence and self-esteem of residents by encouraging exploration of their environment and providing spaces for developing interests and skills; reduce the triggers of agitation and anxiety and provide comprehensible, coherent spaces that meet the sensory needs of individuals; keep residents and staff safe in a robust environment that is tolerant of unintended use; and improve the operating efficiencies of the building, creating a sense of wellbeing for everyone who uses the building, including staff, visiting family and friends.

These themes were used to generate design recommendations and concepts for the location, orientation, structure, layout and interior design of residential buildings created specifically for adults with autism. Key findings and design guidance have been published in a book that is aimed at planners, housing providers, architects and designers to promote the design of buildings that increase independence and improve quality of life of adults with autism. The project now enters a second year focusing on the detailed design of different spaces within these homes.

A registered charity since 1994, the Kingwood Trust has worked steadily to provide a new approach to support for people with autism and Aspergers. In ordinary houses, close to local shops and services, individuals and small groups of people are helped to take control of their lives and to develop interests and skills through which they may begin to gain in self confidence and reduce the most disabling aspects of their condition. Kingwood’s key goal is to provide a full life within the community for people with autism and Aspergers, with the dignity and sense of fulfilment this can bring.

www.kingwood.org.uk
Designing Out Medical Error: Interdisciplinary research on elective surgical wards

Medical error in hospitals is high on the political agenda and rarely out of the news. Human errors and systemic failures lead to preventable harm and unnecessary suffering for patients. It is reported that as many as one in ten patients in hospital may suffer the effects of error in their care, resulting in costs of £2 billion annually. It is estimated that over half of these cases may have been avoidable.

A key aspect of the problem is that healthcare processes continue to evolve whereas the design of much ward-based equipment remains largely unchanged. Daily patient care involves a complicated interaction of many tasks and processes, supported by products that co-exist within the patient’s bed space with little thought for safe integration and context of use. In short, current treatments are not effectively supported by available equipment.

Research associate Grace Davey is working closely with senior associate Jonathan West as part of a multidisciplinary team of designers, clinicians, clinical psychologists and business experts. This team is looking at this problem from a number of perspectives, as part of a three-year study called DOME (Designing Out Medical Error).

The DOME research has led to a focus on the space around the patient’s hospital bed. Through rigorous analysis, observations and user interviews, five healthcare processes have been identified as posing the most risk to the patient: handwashing, staff handover, isolation of infection, medication delivery and measurement of the patient’s vital signs such as blood pressure and temperature.

By working alongside hospital staff at St Mary’s Hospital in London, and by analysing where errors can occur for each of the processes, the research team has identified underlying causes and begun to develop a number of design interventions that will be piloted in order to better support clinical processes on hospital wards.

One of the first pieces of equipment that the team has developed is the Carestation, a central hub for treatment in the bed space. Observational research identified that medical staff were not complying with hand hygiene and infection control protocols because the necessary
reminders and equipment were not always easily accessible. Positioning all the equipment in one convenient place would encourage staff to abide by these rules.

The Carestation concept could also support medication delivery, monitoring of vital signs and staff handover by providing a central place to keep notes and provide a surface to work on. The creation of this idea was a direct result of DOME’s interdisciplinary approach and an understanding that all five high-risk processes are interconnected and impact on each other. Further new products are being designed through iterative consultation with user and expert reference groups – and a parallel strand of research is drawing on solutions for reducing error in analogous industries such as rail, marine and chemicals. The DOME project completes its work in September 2011.

1 Images from consultations with frontline staff at St Mary’s Hospital, London
2 Research associate Grace Davey (left) discusses the Carestation concept model with senior associate Jonathan West

Grace Davey trained in Engineering at Bristol University, followed by Industrial Design Engineering at the RCA. Her interests look at how design can make a difference and she has developed people-centred techniques to enable this. Awards include Imperial Young Innovator of the Year, Dyson Award finalist and two MADE awards. A central focus of her work is design within the healthcare sector.

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The Engineering and Physical Sciences Research Council (EPSRC) is the main UK government agency for funding research and training in this area, investing around £850 million a year in a range of subjects from mathematics to materials science, and from information technology to structural engineering.

www.epsrc.ac.uk

Designing Out Medical Error (DOME) is a research collaboration between the RCA Helen Hamlyn Centre, Imperial College London and St Mary’s Hospital Paddington. It is funded by the EPSRC. The project aims to better understand and map healthcare processes.

www.domeproject.org.uk

The Helen Hamlyn Centre Yearbook 2010
Redesigning the Ambulance: Improving mobile emergency healthcare

There are many problems with the design of existing ambulances that impact negatively on patients and paramedics alike. Some of the most pressing issues concern the treatment space in the back of the emergency ambulance. This environment is difficult to keep clean given the frequency of use and the resultant lack of opportunity to scrub the vehicle down can lead to hygiene and infection control problems. Ambulance crews also suffer from poorly thought-out ergonomics, badly laid out equipment and difficult-to-access storage spaces, all of which can affect performance in critical, life-threatening situations.

There has been virtually no standardisation of ambulance specifications across the UK, which has created logistical and managerial problems for ambulance trusts. A patient in need of emergency treatment will have a different ambulance experience depending on where they are geographically in the UK. All these problems combine to compromise safety and make the ambulance service more intimidating.

This project builds on the Helen Hamlyn Centre’s involvement in the Smart Pods research study completed in 2009, which proposed a new system of mobile healthcare to treat patients in the community as well as in hospitals. It is estimated that by providing proper on-the-spot treatment, up to 40 per cent of patient

“The ambulance interior is difficult to keep clean and paramedics suffer from poor layout and ergonomics...”
journeys to hospital could be avoided, resulting in a significant reduction in operational costs for the NHS.

The current project focuses on the first stage in achieving this goal by improving the existing emergency ambulance. The aim is to enhance key aspects of the design of the interior in order to improve the patient experience and provide a treatment space that meets the demands of healthcare today.

In order to understand the complexity of the ambulance service, research began with an immersive study that involved joining ambulance crews on several 12-hour shifts, riding in the vehicle on callouts and observing and documenting everything that happened. This gave the opportunity to interview ambulance crews, healthcare providers and patients in situ and observe issues firsthand. Through these experiences and by working closely with an Emergency Care Practitioner who was seconded to the research team, key insights were gathered and translated into sketch designs.

A full-scale rig simulating the existing treatment space was created to mock-up ideas in cardboard and foam. Groups of paramedics were then invited to engage and evaluate the different proposals, focusing on opportunities for development. Some of the most promising ideas include a side-loading trolley layout that also removes the separation between the front of the cab and the treatment space, leaving enough room for one paramedic to have 360-degree access to the patient; built-in washing facilities; a repositionable monitoring and communications system; larger windows in the sides and roof to allow more natural light inside the ambulance; and the reconfiguration of consumables into treatment packs.

Many of these ideas are incorporated in a proof-of-concept model that is being exhibited in September as part of the London Design Festival 2010 at the RCA. A fullsize working demonstrator is planned for April 2011 to build support and momentum for the development of a new fleet of emergency healthcare vehicles. This body of design work aims to result in a redesigned ambulance that will support a system of pre-hospital care and replace existing models as they become obsolete.

Gianpaolo Fusari is an Industrial Design graduate of the Universidad Iberoamericana in Mexico City (2003). After working at Rojkind Arquitectos and creating studiojakai, his own design practice, he moved to the UK. He graduated from RCA Innovation Design Engineering in 2009 and is a founder member of the design collective BREAD Ltd. gianpaolo@fusari@gmail.com

Yusuf Muhammad graduated from the University of Nottingham where he studied Mechanical Design, Materials and Manufacturing Engineering. He went on to study Industrial Design Engineering at the RCA. Yusuf was recently awarded 1st place in the Toyota iQ Design Challenge 2009 and also won the James Dyson Award 2009. yusuf.muhammad@network.rca.ac.uk

NHS London is the Strategic Health Authority for all of the Greater London area. It is responsible for a £13 billion budget for the whole of London and for overseeing the performance of health care delivery across the capital. This includes the London Ambulance Service (LAS), the busiest emergency ambulance service in the UK. The LAS provides free healthcare at the point of delivery and employs around 5,000 staff. It operates from 70 ambulance stations, serving 7 million people who live and work in the London area. www.london.nhs.uk
Design for Dementia: Improving dining and bedroom environments in care homes

People with dementia occupy approximately two-thirds of all residential care beds available in the UK. Alzheimer’s disease is the principal cause of dementia and admission. With friends and family caring for loved ones at home for longer, people with dementia are admitted into care homes with more limited mental capability. Typically, 70 per cent of care home residents exhibit significant confusion and other cognitive impairments. The proposition behind this work is that a well-designed environment can provide better support through familiarity, clarity of purpose and minimising distraction.

This project addresses two important areas in the care home – dining spaces and bedrooms – both of which host activities fundamental to daily living. The aim was to create environments and products that maximise the existing abilities of the residents, promoting independence and improving their experience of living within the building.

An immersive research method was adopted, which recognised the difficulties of studying people affected by dementia and allowed the researchers to become part of the everyday routine. Numerous care homes were visited, where residents and staff were interviewed and observed. Focus groups were held with people in the early stages of dementia. Best practice and emerging theories in dementia care were researched in order to establish which elements of the designed environment could be used to reinforce good practice.

A key insight was that the design of care environments directly impacts on a resident’s ability to care for themselves and on their dependency on staff. By designing to help them complete basic tasks such as dressing or eating, their quality of life could be improved and staff workload reduced, thereby allowing time for more meaningful engagement between carers and residents.

Being able to eat and drink in a dignified manner is very important. Building on work done in the first year of the project, the dining strand of the study looked to improve the care home experience by designing facilities to run food-related activities, furniture to improve physical access at the table and tableware to help maintain eating skills for longer.

“Seven out of ten care home residents exhibit cognitive impairment or some form of significant confusion...”
Outputs include exemplar interior layouts that integrate meal services with the important amenities needed to run group events such as baking and gardening. A specially designed table and light work together to promote a better eating experience for residents. Tableware includes pieces that compensate for poor vision and dexterity, and improve the experience for those who can no longer feed themselves.

The bedroom is the one place in a care home that can be identified as a resident’s personal space. It is a place of refuge where identity is reinforced through familiar objects. It is also a room where a range of tasks such as dressing and sleeping need to be conducted whilst taking account of the range of ability that different residents might have.

Design work for the bedroom environment has focused on developing new dressing furniture designed specifically for people with dementia. Drawers allow residents to see inside without the need to open them and whole outfits fit onto a single hanger design so clothing can be easily prepared and laid out by staff for a resident to dress themselves. Room layouts can be reconfigured as needs change, using rail and hook systems drawn from the retail sector.

The research findings and design ideas that have resulted from this project have been written up in a design sourcebook that can help designers, specifiers, managers and owners of care homes to make the many small improvements that can have a big positive effect on the experience of care homes for residents with dementia and the staff support for them.

Gregor Timlin was born in Dublin. He studied Furniture Design at the Dublin Institute of Technology, where he was awarded the DIT Gold Medal for Academic Achievement. He graduated from the RCA Design Products department in 2008 and has since worked in the Helen Hamlyn Centre researching design for dementia care. gregor.timlin@network.rca.ac.uk

Nic Rysenbry completed a Bachelors in Industrial Design in New Zealand and then moved to London in search of new challenges. He found these in retail design, then at RCA Design Products and most recently with the Helen Hamlyn Centre, where working in inclusive design seems the perfect culmination of the previous 10 years. nic@nicrysenbry.co.uk

Bupa's Care Homes provide some 35,000 beds principally in the UK but also in Spain, New Zealand and Australia for older people in need of care and refuge. Bupa endeavours to provide the highest possible standards of care in all its markets and its collaboration with the RCA Helen Hamlyn Centre is a reflection of its commitment to provide leadership in the design and provision of dementia care, perhaps the greatest health and social care challenge affecting ageing populations. www.bupa.co.uk
In recent years the Helen Hamlyn Centre has built a portfolio of research studies funded by the UK Research Councils. Many of these awards explore in greater academic depth key subjects piloted via the research associates programme; and research outcomes are often developed with industry partners. Over the past year, our flagship funded research projects have included a major collaboration with Imperial College London to design out medical error in hospitals and a study looking at continence and ageing, led by Brunel University.

Funded research projects focus on the centre’s core themes of inclusive design, workplace design and design for patient safety. Looking ahead, we are building strategic partnerships to expand into new areas. We are working with the Central St Martins Design Against Crime Research Centre (DACRC) and UCL’s Jill Dando Institute of Crime Science to address fear of crime in the elderly, and collaborating with the Oxford Institute of Ageing to investigate how a combination of population ageing and climate change will affect the future of the city. All of this research is underscored by our biannual Include conference, which holds its next edition at the RCA in April 2011 on the role of inclusive design in social innovation.
DOME (DESIGNING OUT MEDICAL ERROR) is a three-year research project funded by the Engineering and Physical Sciences Research Council (EPSRC). It aims to better understand and map healthcare processes on hospital surgical wards, establishing an evidence base to design hospital equipment and products that improve operational efficiency and reduce instances of medical error.

A multidisciplinary research team from the RCA Helen Hamlyn Centre, Imperial College London and St Mary’s Hospital, Paddington, has brought together designers, clinicians, ergonomists, psychologists and academics in the fields of design, clinical medicine, patient safety and business.

Design skills are often engaged late in the development of hospital equipment. As a consequence, designs may show little regard for the systems in which they work or the contexts of use. The DOME study is piloting a collaborative methodology that allows systems and products to be considered concurrently, paving the way for process reforms as well as new designs, and enabling hospitals to learn from analogous industries about handling risk and eradicating errors.

The project has completed its first two years of research. Thorough clinical study has provided a focus on five processes that occur around the patient’s bed space: hand washing, isolation of infection, staff handover, the measurement of vital signs (temperature, blood pressure etc) and medication delivery. New design concepts for each process have been generated with experts and end users. The aim is to complete initial prototypes for testing by the end of the project in September 2011.

RCA research team: Jeremy Myerson; Ed Matthews; Jonathan West; Grace Davey; Beverley Norris. See pages 30–31

TACT3 (TACKLING Ageing Continence through Theory, Tools & Technology) is a three-year research project focused on: improving continence interventions and services currently delivered by the NHS; developing assistive devices for continence management; and challenging the environmental barriers that prevent people with continence difficulties from being away from home.

Led by Brunel University, its partners include the Universities of Sheffield, West of England and Manchester, Bristol Urological Institute and the Dalarna Research Institute in Sweden. Its work is looking at the built environment, health service provision and assistive technology. Older people are involved in all aspects of the research.

The Helen Hamlyn Centre is leading an investigation of the environmental barriers, from public toilet provision to the internal layout of the lavatory cubicle. This work has engaged both users and providers of toilet facilities. The research has now completed its second year and is entering a design application phase.

TACT3 is one of eleven Collaborative Research Projects funded by the New Dynamics of Ageing programme. This is a seven-year multidisciplinary research initiative with the ultimate aim of improving quality of life of older people – it is a unique collaboration between five UK Research Councils, ESRC, EPSRC, BBSRC, MRC and AHRC, and is the largest and most ambitious research study on ageing ever mounted in the UK.

RCA research team: Jo-Anne Bichard; Gail Knight. See pages 14–15
The Helen Hamlyn Centre Yearbook 2010

I-design 3
Designing with people
Funder: EPSRC

THE I–DESIGN programme of research, funded over a ten-year period by the EPSRC, has teamed the RCA Helen Hamlyn Centre with a range of academic partners to advance the study and practice of inclusive design.

The first two phases of i–design mapped the territory of inclusive design and built the business case for its adoption; i–design 3, running from 2006-10, is developing new tools and techniques to enable designers to work more effectively with people at a practical level. The i–design 3 research continues our collaboration with the Engineering Design Centre at Cambridge University as well as Cambridge’s Well-being Institute and Loughborough University’s Ergonomic and Safety Research Institute (ESRI).

While researchers at Cambridge and Loughborough have developed new scientific data and tools on population capability and human performance within contexts of use, such as light and cold, the role of the Helen Hamlyn Centre has been to create a bridge between hard data and empathic design practice – to bring scientific facts alive for designers through personas, case studies, and practical advice on research methods and ethical consent in user research.

A key task is to understand how to construct small groups of users that accurately reflect much larger sections of the population. All of this work will be consolidated in a new web-based resource called www.designingwithpeople.org, which aims to inspire and support designers to design more inclusively. The i–design 3 project will conclude its work in spring 2011, with a launch of its tools and resources at the Include 2011 conference at the RCA. A film of the project is also being made by communication expert and research associate alumnus, Marie Lenclos.

RCA research team: Jeremy Myerson; Yanki Lee

Welcoming Workplace
New Demographics New Workspace
Funders: AHRC and EPSRC

THE WELCOMING WORKPLACE project, funded by two UK Research Councils, the AHRC and EPSRC, as part of the Designing for the 21st Century initiative, concluded its work with a major new book published by Gower.

Written by the lead researchers Jeremy Myerson, Jo-Anne Bichard and Alma Erlich, New Demographics New Workspace: Office Design for the Changing Workforce gives an in-depth account of the Welcoming Workplace project, which conducted research among older workers in knowledge industries in the UK, Japan and Australia. The book explores ways in which the office environment can be redesigned to offer an ageing workforce greater levels of comfort, flexibility and fitness for purpose in the 21st century knowledge economy.

The publication, which features the satirical work of Financial Times cartoonist Roger Beale, was launched at a special event in London hosted by furniture company Haworth in June 2010. At a time when the pensions crisis continues and the UK Government is actively looking at measures to raise the retirement age, the book’s topical analysis of the future of the workplace in the context of demographic change has attracted widespread comment and coverage.

RCA research team: Jeremy Myerson; Jo-Anne Bichard; Alma Erlich; Matthew Harrison; Catherine Greene
One of the highest priorities for the Helen Hamlyn Centre, especially in the growing area of healthcare and patient safety, is that designs rooted in user research should make a difference in society. To achieve this, a key focus of our work is on creating a bridge between research and development. We do this via development projects that test, refine and validate concepts and build a network of support around them. Proof-of-concept and innovation activities of this kind are essential to achieve change in the real world, building on the outcomes of both our funded research studies and our research associate projects with industry.

Our flagship development project in 2010 is an interior redesign of the emergency ambulance, which builds on a body of research undertaken by the Helen Hamlyn Centre since 2005. In addition, we are continuing to develop the Resus:station, a hospital trolley which provides the equipment to resuscitate patients during a cardiac arrest; this project began life as a research associate study and is now in clinical trials. We are also working with the Hamlyn Centre for Robotic Surgery at Imperial College to develop a new operating console for robot-assisted surgery.
Redesigning the Ambulance

Vehicle interior remodelling

Funder: London NHS Regional Innovation Fund

THE HELEN HAMLYN CENTRE is working with the RCA’s Vehicle Design Department on a one-year development project to redesign the interior of the standard accident and emergency (A&E) ambulance. Funded by NHS London through the Regional Innovation Fund, the project aims to provide ambulance crews with a treatment space fit for the 21st century. It builds on five years of research funded by the EPSRC and the National Patient Safety Agency, including the Smart Pods project on rethinking mobile emergency healthcare. This created a solid evidence base, identifying ten areas for improvement inside ambulances.

The London Ambulance Service is providing input, testing and prototype validation for the project team, which includes Imperial College Healthcare and NHS Foundation Trust, the University of the West of England, and vehicle and equipment manufacturers. London NHS funding will enable the RCA to construct a mobile demonstration unit for evaluation by ambulance trusts throughout the UK from May 2011, showing a better treatment space (above), equipment storage innovations and advances in digital communications.

The long-term aim is to augment the improved emergency ambulance with an integrated mobile healthcare system for the UK. This includes a fleet of community treatment vehicles to treat minor complaints at the London 2012 Olympics (below), replacing unnecessary admissions to A&E departments with rapid, on-the-scene treatment.

Helen Hamlyn Research Associates Gianpaolo Fusari and Yusuf Muhammad (see pages 32-33) are part of the RCA project team led by Ed Matthews of the Helen Hamlyn Centre and Professor Dale Harrow and Richard Winsor of Vehicle Design.
**Resus: station**

**Clinical trial**

Funder: Wellcome Trust

THE RESUS:STATION, a new piece of hospital equipment that supports the resuscitation process during a cardiac arrest, has been in development at the Helen Hamlyn Centre since 2005. The project, led by senior associate Jonathan West, was co-designed in partnership with clinicians and psychologists at Imperial College London. Its ergonomic and technical benefits over existing ‘crash trolleys’ are many.

Clinical equipment is laid out openly and logically to allow instant access; the trolley can divide into three separate units so each member of the ‘crash team’ has their respective kit beside them; stock is tagged with Radio Frequency Identification (RFID) technology; and the entire process is ‘logged’ using new technology to enable better post-event evaluation by medical staff.

Taken together, these features made such a compelling case for the Resus:station to receive further backing that the Wellcome Trust funded a clinical trial and a manufacturing partner, Bristol Maid, also invested in the development and took out a European licence to make the product.

During the past year, a series of simulation resuscitation trials of the new trolley design has been completed, with positive results and good feedback from frontline clinicians. Five prototype trolleys are now in clinical trial on wards at St Mary’s Hospital, Paddington.

Development of the project software is also advancing. This consists of three separate programmes: the first to log the medical interventions during the resuscitation; the second to guide nurses and resuscitation officers on restocking the trolleys; and the third to debrief, review and learn from specific resuscitations.

**Robot-Assisted Surgery**

**Surgeon’s console**

Partner: Imperial College Hamlyn Centre for Robotic Surgery

A COLLABORATION with the Hamlyn Centre for Robotic Surgery at Imperial College London has resulted in the design and prototyping of a surgeon’s operating console. A Helen Hamlyn Centre team comprising Ed Matthews and research associate alumni Edward Goodwin and Richard Hartshorn worked closely with Professor Guang-Zhong Yang at Imperial, to explore new opportunities for 3D visualisation in robot-assisted surgery. In addition to improving the surgeon’s view and improving comfort during long, intense surgical procedures, the new console shown here aims to enhance team dynamics and communication in the operating theatre.
The Challenge Workshops is the Helen Hamlyn Centre’s knowledge transfer programme for professional designers, focusing on techniques in inclusive design practice as a tool for innovation. Its origins lie in the first DBA Inclusive Design Challenge held at the Royal College of Art in 2000. Over the past decade it has consistently shown how close interaction with disabled and older people can be a direct route to innovation in mainstream product and service design. In 2010, we marked the tenth DBA Inclusive Design Challenge with a project brief looking at active ageing, a key theme for the centre, and with a special travelling exhibition called Trading Places, which made its debut at the V&A Sackler Centre for Arts Education in April.

The Challenge model has proved so influential over time that we have extended and adapted it to suit different contexts and durations in the UK and internationally. 24 and 48 hour versions have proved especially popular. In the past year, there have been Challenge Workshops in Seoul, Dublin, Jerusalem and Oslo, staged as part of major design events and conferences, as well as one on shoe design organised with the University of Central Lancashire for Arthritis Research UK.
CHALLENGES IN FIVE CITIES

44  London  DBA Inclusive Design Challenge
47  Trading Places at the V&A Sackler Centre
48  Seoul  48 Hour Inclusive Design Challenge
49  Dublin  24 Hour Inclusive Design Challenge
50  Jerusalem  Challenge Workshop
51  Oslo  24 Hour Inclusive Design Challenge

UK designer Jim Dawton and team at the 48 Hour Inclusive Design Challenge, Seoul. See page 57
Clinic wins DBA Challenge on active ageing

The Helen Hamlyn Centre Yearbook 2010

The Helen Hamlyn Centre Yearbook 2010

Partner: Design Business Association

Clinic wins DBA Challenge on active ageing

The DBA Inclusive Design Challenge is the UK flagship of the Challenge Workshops programme. Run since 2000 in collaboration with the Design Business Association (DBA), it engages professional design teams to work closely with disabled and older people over a mentored five-month period to innovate on a given theme. In 2010, to mark the tenth year of the DBA Challenge, the brief was ‘Active Ageing: designing for our future selves’.

Four finalists drawn from DBA member consulting firms looked at the challenges faced in helping a rapidly ageing population to remain active. The teams presented their proposals first to a panel of judges in January and then to a capacity audience at the RCA on 4 March 2010 (above right). Sanctuary Care and the Department for Work and Pensions sponsored the event.

The winner of the 2010 DBA Inclusive Design Challenge was Clinic, which devised a not-for-profit communications initiative called Sage & Onions. This is aimed at stimulating activity and community participation among people of different age groups by encouraging them to trade their time and skills with each other. The judging panel praised the work as ‘a witty and vibrant piece of communication design that gives local bartering a brand identity and national profile’. RCA Rector Dr Paul Thompson presented the DBA Challenge trophy, designed by glass artist Louis Thompson, to the Clinic team (above left).

Anna Eagle, MP, Minister of State for Pensions and the Ageing Society, and Emma Soames, Editor at Large at Saga Magazine, were the keynote speakers at the award ceremony. Eagle noted that active ageing, the theme of this year’s Challenge, was timely now that the demographic tipping point had been reached with more people aged over 65 in the UK than under 16. ‘This is the first time in the history of our society that this has been the case,’ said Eagle. ‘Ageing societies worldwide have recognised that the role of designers is extremely important in the way in which this transition is made.’

Emma Soames went on to describe how ‘my grandfather, Sir Winston Churchill, didn’t get his biggest job until he was 65 years old’. She told the audience of designers: ‘We know that old age isn’t for wimps but it’s not for romantics either. You’re in a powerful position to make the lives of this ageing population logistically less challenging, visually more appealing and, above all, to make independence a more viable option for much longer.’

“We ageing societies worldwide have recognised that the role of designers is extremely important”
SAGE & ONIONS is a national communications initiative to encourage cross-generational community participation. It provides a template and support system for local bartering networks and events, so that people can exchange the experiences they can offer with the experiences they want, with no money changing hands. For example, older people could offer cookery lessons in exchange for tuition in computer skills.

The Sage & Onions concept offers an opportunity to overcome the ‘digital gap’ that can exclude them from the mainstream – while younger people can get something in return for their technical knowledge.

For anyone needing some help, the scheme enables them to stay independent – and give something in return for that assistance. As the network grows, a virtual currency and an online trading service could be established. www.clinic.co.uk

FOOTNOTE is a new system by which difficult online forms and guides can be made accessible to anyone, via a Wiki-style set of advisory notes left by previous users who give tips on how to navigate the process successfully. With more Government services going online and many older people intimidated by the digital revolution, a big problem looms as the elderly stay offline and face increasing isolation, unpaid bills, diminished access to essential services, and exclusion from such things as online shopping and banking, remote working or social media.

Footnote aims to resolve this. Using a Wiki database, it allows notes to be written for web pages, which can be seen and edited by other Footnote users. Simple tips, recommendations, warnings and advice can be passed between a global community of users. Footnote retrofits the internet with an online instruction manual that is user-friendly to all. Footnote is free, with revenue generated by a business-facing service. www.bwa-design.co.uk
THERE ARE 900,000 people over the age of 50 out of work in the UK at an estimated cost of £30 billion to the economy. Open is an awareness campaign and accreditation scheme designed to highlight and address issues of ageism in the workplace. Designed to talk to employers, employees and those looking for work, Open highlights the undervalued but crucial resource of the older worker.

The Open Age Brackets campaign uses a clear graphic approach that avoids clichéd and unrepresentative images of older people. It tackles the four key myths inherent to ageist attitudes, which centre on the use of technology, training, the ability to adapt to new situations and productivity. It shows how a company can expect better retention rates and knowledge transfer, increased diversity and customer satisfaction by employing older workers. An accreditation scheme gives businesses the tools to educate their staff on the negative impact of ageism and create a truly non-discriminatory, open workplace.

**Epitype**

**Open**

**Shortlisted: DBA Inclusive Design Challenge 2010**

MOVE IS A ‘FUTURES’ CONCEPT – an adaptive surface to provide assistance for all aspects of independent living such as eating or working. Its top surface uses morphing and shape identification technology to recognise the shape of objects placed on it and then adapt for improved grip and stability. This function is inspired by emerging technologies where small particles or liquid crystals can be manipulated or moved to change shape using electrical current, heat or light.

The underside of MOVE uses nano-fibre technology, which enables millions of tiny fibres to become rigid and stick to anything when charged with a current. The surface has particular commercial application in care homes. Powered by a wireless hub located in close proximity, this sends a power signal to individual or multiple units without the need for constant charging and the clutter of power cables.

**1HQ**

**MOVE – Adaptive Surface**

**Shortlisted: DBA Inclusive Design Challenge 2010**

MOVE IS A ‘FUTURES’ CONCEPT – an adaptive surface to provide assistance for all aspects of independent living such as eating or working. Its top surface uses morphing and shape identification technology to recognise the shape of objects placed on it and then adapt for improved grip and stability. This function is inspired by emerging technologies where small particles or liquid crystals can be manipulated or moved to change shape using electrical current, heat or light.

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www.1hq.co.uk
TO MARK TEN YEARS of the DBA Inclusive Design Challenge at the Royal College of Art (2000-2010), an exhibition called Trading Places ran at the Sackler Centre for Arts Education at the V&A from 19 April to 25 May 2010. The exhibition, sponsored by Sanctuary Care, was a collaboration between the Helen Hamlyn Centre, the Design Business Association and the Victoria & Albert Museum.

Trading Places was curated by Julia Cassim and designed by Bond & Coyne. The title refers to the unique process behind the Challenge model, which over a decade of activity has seen 500 professional designers from 41 DBA member firms ‘trade places’ with older and disabled people in order to find new ways to design more inclusively.

A creative industries night was held at the Sackler Centre on 27 April in partnership with the DBA and V&A to celebrate the show. A special supplement was published in Design Week on 22 April to tie in with the event.

The Trading Places exhibition gets a further showing in London at the Battle of Ideas, held at the RCA on 30-31 October 2010, before travelling to Boston’s Institute for Human Centred Design in the USA in November as part of the Build Boston event and to Seoul in December at the invitation of the Korean Institute of Design Promotion and the British Council.

“The Trading Places title refers to the unique process behind the Challenge...”
Architects and designers rethink Dublin’s city centre

THE FIRST 24 HOUR Universal Design Challenge to be held in Ireland took place on 6-7 November 2009 during Dublin’s Design Week, led by the Helen Hamlyn Centre. Five multidisciplinary teams of Irish designers and architects worked through the night on a brief to demonstrate to the design community and the public how inclusive or universal design could transform the built environment of Dublin’s historic city centre.

Five routes were selected running north and south of the River Liffey, each with a different set of challenges.

Each team undertook a journey along their assigned route with a disabled design partner. Insights gained from this journey were used to design interventions that would improve the journey for people of all ages and abilities.

The design proposals were presented at a public event held at the Digital Exchange, chaired by Sean McNulty of the Institute of Designers in Ireland. Challenge patron Michael Wolff and Dublin’s Lord Mayor, Emer Costello, gave keynote speeches.

The judges’ prize went to a team led by architect Peter Crowley of Pac Studio for ‘What a Load of Bollards!’ – a project they described as ‘an innovative reconfiguration of a current obstruction into a valuable navigational marker that turns a problem into an opportunity; Dublin becomes a city you can meander through by getting the bollards to work in a simple and inclusive way’ (above).

A team from the Centre for Design Innovation in Sligo, led by Justin Knecht, won the audience prize for ‘My Way’, an online service that allows people to navigate the built environment by the route most appropriate to their needs.
Israeli students go from process to product

THIS FIVE-DAY workshop held from 7-11 March 2010 at Hadassah College, Jerusalem, brought together Hadassah’s third year industrial design students and their visual communications counterparts from the WIZO Design Academy in Haifa.

Working with SHEKEL, a non-profit organisation employing adults with learning disabilities, this workshop reversed the usual process by which designers progress their ideas. The aim was to design a new portfolio of products for an organisation whose main products were ceremonial candles and sewn items and which undertook contract assembly of plastic products.

The group studied the existing capabilities of the workers and the equipment available to understand the limitations and the possibilities, particularly relating to the production process and maintaining quality control. From this, they were asked to work in teams to design a signature product or family of products, with tolerance for manufacturing error. They were also required to design the manufacturing process, create design guidelines and develop a brand for each of the products.

Among the proposals was a project that created a set of urban gardening products – a bird house, a collection of planters and a label system that stores and dispenses seed (above). Other teams came up with a signature casual handbag, a durable lunch bag to replace the standard brown paper one, a set of drawers and a candle with integrated packaging.

The Hadassah students have continued to work with SHEKEL, refining and developing the products for regular production, since the workshop took place.
Norwegian teams make digital technology inclusive

TWO YEARS AFTER introducing the Challenge Workshops model to Scandinavia at the first European Business Conference on Inclusive Design in Oslo, the Helen Hamlyn Centre was back in the Norwegian capital to lead another 24 Hour Challenge from 20-21 May 2010, as part of the Innovation for All conference hosted by the Norwegian Design Council.

Designers from the UK, Japan, Germany, Turkey and the USA joined their Norwegian counterparts to form four teams with a brief to address inclusive digital technology. Working through the night, the teams were mentored by Julia Cassim, the Challenge facilitator and Michael Wolff, the UK government advisor on inclusive design who is also the Challenge patron.

The results were decided by the popular vote of conference delegates. A team led by Jørgen Solstad of Kadabra won the prize for best idea with Sound Cloud, an innovative application that pairs a still image with a sound clip to allow you to travel through the landscape of images in your picture archive via sound and not vision alone. The concept was inspired by David Hole, the team's design partner, a blind heavy metal and opera fan who uses his camera extensively. The prize for best presentation went to a team led by Marianne Støren Berg of KODE Design for Cupola (above), a cup that allows you to drink with dignity and without the risk of spillage.

Norway’s Minister of Children, Equality and Social Inclusion, Audun Lysbakken, presented the prizes and commented that we need more and better design solutions in order to achieve a truly inclusive society. He quoted the Finnish architect Eero Saarinen: ‘Always design a thing by considering it in its next larger context – a chair in a room, a room in a house, a house in an environment, an environment in a city plan.’

The Innovation for All conference, attended by 190 delegates from 10 countries, included leading speakers from BT, Smart Design, Think Electric Vehicles, the United Nations, Panasonic and Scandic Hotels. The event gave the Helen Hamlyn Centre, which was an official conference partner, visible profile in the Nordic region.
Korean design challenge centres on social interaction

IN PREPARATION FOR its designation in 2010 as a World Design Capital by the International Design Alliance (IDA), a consortium of global design organisations, the Korean city of Seoul held a Design Olympiad in 2009 with a focus on all that is sustainable, experiential and participatory. The setting was Seoul’s Jamsil Sports Complex, built for the 1988 Summer Olympics, and the Helen Hamlyn Centre was invited to run a 48 Hour Inclusive Design Challenge.

The event, the largest to date of the international Challenge Workshops, was sponsored and co-organised by the British Council as part of its Creative Cities project and the Seoul Metropolitan Government. Held on 12-14 October 2009, it involved 65 designers from 10 countries in Europe, Asia and Australasia. Teams were led by eight designers from UK and Norway, all with experience in inclusive design practice. Each team was paired with older and disabled Seoul citizens and asked to respond to a brief that was centred on leisure, pleasure and social interaction.

The range of design responses was from inclusive theatre seating and reconfigured green spaces to a sensory-memory sharing device.

A campaign to create vertical gardens in the city for older people won the award for best presentation. The overall winner was a team led by former Helen Hamlyn research associate Cian Plumbe of Studiohead for its innovative karaoke game, inspired by the team’s deaf design partner for the majority of the singing population who are tone deaf (above).
Yanki Lee  
Research Fellow, Helen Hamlyn Centre

The Helen Hamlyn Centre’s education programme has traditionally concentrated on encouraging RCA students to adopt a people-centred design approach. Recently we have expanded that remit across a range of public engagement and professional networks in the UK and internationally. We have also sought to underscore our approach with funded academic research: the i~design study with Cambridge University will result in a web-based educational resource for the global design community on designing with people.

RCA students remain a key educational priority and we have concentrated this year on engaging this important community through The Methods Lab interdisciplinary initiative, and on rewarding outstanding graduate projects through the Helen Hamlyn Design Awards 2010. This dual approach has been augmented in the wider world by two significant new initiatives: Designing Our Tomorrow (DOT), an EPSRC-funded public engagement project taking inclusive design into secondary schools; and a RCUK-funded Summer School in China on design and ageing, linking academics and researchers from the RCA with Beijing’s prestigious Tsinghua University from 12-19 September 2010.
STRANDS OF THE PROGRAMME

54 Exploring people-centred design:
The Methods Lab

55 Supporting people-centred design:
www.designingwithpeople.org

56 Rewarding people-centred design:
Helen Hamlyn Design Awards 2010
Students tackle sustainable lifestyles for all

THE METHODS LAB is an interdisciplinary workshop for RCA students from different design disciplines to work together to explore aspects of inclusive design as a platform for innovation. It was set up by the Helen Hamlyn Centre in 2008 and is a core component of its education programme.

For the academic year 2009/10, The Methods Lab adopted the theme ‘how to design sustainable lifestyles for all’ with the aim of exploring the relationship between inclusive and sustainable design. From cycling to recycling, there are many barriers that older people and those with disabilities face in terms of participating in a greener society.

This Methods Lab took place on 10-11 November 2009 and was attended by a record 40 RCA designers and researchers from seven RCA departments. They formed four teams and worked with creative partners from disabled communities to co-design concepts responding to the brief during a two-day intensive workshop.

Two of the creative partners were hearing impaired and two had MS (Multiple Sclerosis). They were initially asked to describe their daily lives to inspire the teams. Each team also included a Helen Hamlyn research associate and member from the University of the Third Age (U3A). All design proposals emerging from the workshop included the needs and aspirations of their creative partners but also suggested the potential for wider application in mainstream markets.

To launch The Methods Lab, an opening event was held on the evening of 9 November 2009 at which Patricia Moore, an international pioneer of inclusive design, was in conversation with Professor Jeremy Myerson, Director of the Helen Hamlyn Centre (see pages 8-9). The event was attended by more than 100 RCA students and staff, and Patricia Moore subsequently advised and critiqued the design teams as they developed their ideas.

“The workshop explored how all citizens can lead more sustainable lives...”
Launching an open access website for designers

As part of the final stage of the i-design research project, a ten-year collaboration with Cambridge Engineering Design Centre and other academic partners (see Funded Research, page 36), the Helen Hamlyn Centre is developing an open-access website for designers.

This web-based resource aims to offer the global design community a wealth of useful information on the practice of people-centred design. It is based on academic research led by Dr Yanki Lee and has been informed by user interactions by RCA students and graduates working with the Helen Hamlyn Centre over the past decade.

The website has four main sections. A Methods section maps and evaluates common design methods in practice and classifies them in a framework that explores the current shift from designing for people to designing with and by people. Designers can browse exemplar projects related to each method and identify the most appropriate method for their current project.

An Ethics section offers guidance on good practice in working with users. Designers can work through the three stages of consent, confidentiality and conduct, step-by-step, in order to understand principles of user involvement.

An Activities section uses the centre’s track record of inclusive design projects to present precedents and case studies related to the activities of daily living. Insights on user behaviour are grouped under four themes: Personal Care, Household Maintenance, Work & Money and Communication.

Finally, a section on People is based on 10 individuals from the Helen Hamlyn Centre’s user network – their vision, hearing, dexterity, mobility and cognition capabilities correspond to different scales on Cambridge University’s population capability data, and their life experiences can act as an inspiration for designers.

The website will be piloted in autumn 2010 and formally launched in April 2011 at the RCA’s Include conference.

“The Helen Hamlyn Centre is developing an open-access site for designers”
The Helen Hamlyn Design Awards is an open competition for final-year RCA students. It rewards creativity and practicality in people-centred design across a range of art and design disciplines. College professors and heads of department nominate entrants, and shortlisted projects are judged by an external panel of experts and displayed during the annual RCA Graduation Shows.

A range of sponsored prizes reflect the research interests of the Helen Hamlyn Centre in inclusive design, workplace design and design for patient safety, and a personal award is given by Lady Hamlyn.

In 2010, a new award was introduced to reward work in participatory and co-design by RCA graduates and alumni of the Helen Hamlyn Research Associates Programme. This was given to Ben Wilson for his Scooterkit project.

Katie Gaudion

RCA Department: Textiles

Textile Props for Multi-Sensory Environments

A COLLECTION OF TEXTILE PROPS for healthcare practitioners to use with adults and children during sensory integration therapy in special multi-sensory environments. Each prop encourages touch, movement and play for those with unusual sensory processing patterns and has particular application for those on the autistic spectrum.

Judges’ comment:
“This project shows a total understanding of the Helen Hamlyn Centre ethos of socially conscious design. In an important area, the designer has shown intelligence and compassion. The objects themselves are beautiful.”

Winner, Helen Hamlyn Design Award for Creativity
Ed Rose
RCA Department: Innovation Design Engineering
Take Me Home

MANY PEOPLE STRUGGLE TO NAVIGATE the London bus network successfully because they don’t understand how different routes connect. This system puts all the information about routes and changes into the pocket of the bus passenger on an Oyster-plus card. That data is accessed using printed maps in bus stops, which contain embedded digital information via a microdot pattern.

Judges’ comment:
“A well-conceived and elegant solution that solves a problem for all ages and abilities.”

Winner, Age UK Award for Inclusive Design

Becky Pilditch
RCA Department: Innovation Design Engineering
Super Prosthetics – Experiments in Armwear

THIS PROJECT CHALLENGES conventional approaches to the design of prosthetics by exploring armwear as an object of empowerment, choice and identity. A series of design experiments were conducted with lead user Holly Franklin to create wearable objects that explore the relationship between Holly, her hands and her peers, for positive social interaction.

Judges’ comment:
“A great example of a designer really understanding the medical condition and user need in order to redefine the problem and rethink the purpose of prosthetics. Inclusivity is based on analytical skills and ergonomic studies.”

Winner, ClearBlue Design Award for Healthcare and Patient Safety
Tom Stables
RCA Department: Design Products
Remote Control

TELEVISION REMOTE CONTROLS can be bewildering and difficult to use for the elderly, especially as many TV and DVD systems now require the operation of multiple devices. This project places multiple remote controls in a casing with custom graphic overlays to create a complete easy-to-follow information system. The overlays deliver information in sequence and isolate only the buttons needed.

Judges’ comment:
“This project makes technology accessible for those who most need it through the simplest of low-tech solutions. It solves a real problem for older people.”

Winner, Technology Strategy Board Award for Independent Living

Ben Wilson
RCA Department: Design Products Graduate 2001
Scooterkit

IN THE SUMMER OF 2009, former Helen Hamlyn Research Associate Ben Wilson worked with pupils from local schools in west London as part of Design Camp, organised by Latymer Upper School in association with ReachOutRCA, to design and make scooters from an off-the-peg kit of parts. The week-long collaboration created a set of new scooter designs and instilled confidence in a group of novice designer-makers.

Judges’ comment:
“A brilliantly effective piece of co-design introducing young people to the intricacies and rewards of the design process.”

Winner, Helen Hamlyn Design Award for Alumni
Lucy Wood

RCA Department: Architecture

Foyerism

THE LONDON BOROUGH OF CAMDEN is blighted by social segregation and school overcrowding. To address the social exclusion problem of ‘two Camdens’, this architectural project redevelops the outdoor space of schools in a ‘condensed urban playground’ between Kings Cross and St Pancras stations. Centralised sports facilities, arcades and performance spaces are used to reactivate the public realm.

Judges’ comment:
“A beautifully presented project creating a community hub at the heart of a massive commercial development.”

Joint winner, GMW Architects Award for Working Life

Jamie Tunnard

RCA Department: Design Products

Desk Lamp/Projector

THIS PROJECT DEVELOPED a dual function desk lamp housing an LED bulb in the lamphead for use as a normal lamp and also a miniature projector to display moving images. The lamphead can be easily positioned to adjust the size of the image and switch between desktop and wall projection.

Judges’ comment:
“A clever piece of technology integrated into a familiar everyday object, opening up huge possibilities in the workplace.”

Joint winner, GMW Architects Award for Working Life
PEOPLE AND PARTNERS

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Prof Jeremy Myerson

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Rama Gheerawo

Senior Research Fellows
Julia Cassim
Ed Matthews
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Maja Kecman
Jonathan West

Training Intern
Audrey Dodo

Fulbright Scholar
Andy Chen

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* Seconded from the National Patient Safety Agency

Research Associates 2010
Innovation Design Engineering
Ross Atkin
Andy Brand
Grace Davey
Gianpaolo Fusari
Clara Gaggero
Gail Knight
Yusuf Muhammad
Karina Torlei

Design Products
Catherine Greene
Nic Rysenbry
Gregor Timlin

Architecture
Claudia Dutson

Research Partners
AHRC
Age UK
Bupa
CABE
DEGW
DOME
Department of Health
Design Council
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