

Lessons from Europe

Report on the multi-disciplinary design education
fact-finding visit to The Netherlands, Denmark and Finland

SEPTEMBER 2007



‘Giving every student likely to work in, or with, business a wider understanding would be a great step forward. However, I believe that there is an opportunity for some universities to go further, running masters programmes that bring together the different elements of creativity, technology and business... I therefore recommend that centres of excellence be created that specialise in such multi-disciplinary programmes encompassing both postgraduate teaching and research.’

Sir George Cox,
The Cox Review of Creativity in Business

Introduction



The Cox Review of Creativity in Business, published in 2005, identified the need for the UK to exploit its creative capabilities more fully in order to respond to the growing threat from rapidly emerging economics.

The review put forward several recommendations promoting multi-disciplinarity in higher education as a driver of innovation. These included better preparing students to ‘work with and understand other disciplines’ and ‘the establishment of centres of excellence for multi-disciplinary courses that combine management studies, engineering, technology with design and the creative arts’.

For the last two years, the Design Council, working in conjunction with Higher Education Funding Council for England, has supported a network of academics engaged in the development of new multi-disciplinary courses and programmes in response to the Review. This report summarises the findings from a fact-finding mission to Europe by a delegation of academics and policy makers in September 2007. The delegation visited leading companies, universities and design studios in The Netherlands, Denmark and Finland. The purpose of the trip was to learn from existing models of multi-disciplinary education and practice and inform the development of new multi-disciplinary courses and collaborative projects in the UK.

This report builds on the findings of a previous fact-finding mission to North America in September 2006 (Report title: Lessons from America). A full list of delegate members and details of the visits can be found at the back of this report.

Summary of Key Findings

Companies and design consultancies are increasingly using multi-disciplinary teams to innovate, develop new products and services, and deliver value to clients.

Multi-disciplinary business practices have created the need for hybrid managers – people who can bridge the gap between the design world and the business world.

Designers are being expected to work alongside other specialists such as engineers, social scientists, marketers and management consultants.

The next generation of designers will need to develop key competencies around teamwork, communications, an appreciation of the role of other disciplines, and improve their business and technical awareness.

Design is increasingly represented at board level reflecting its growing strategic importance to industry. This has been supported by a shift in corporate strategies to focus on users and a broadening of design consultancy from communications and product design to strategic development.

The practice of multi-disciplinary education varies greatly across the European universities visited – and these different interpretations have been shaped by a number of contextual factors: organisational aims and structures, existing courses, government funding, location, heritage, national/local government agendas and links with industry.

There is strong evidence to show that leading European universities are responding to the changing needs of industry by developing postgraduate courses that bring together different elements of creativity, technology and business – such as the International Design Business Management course in Finland.

Both the well-established and newer universities visited are nurturing a willingness to co-operate and develop new organisational structures that support cross-disciplinary teaching and learning.

There was an emphasis on products rather than services or media content, and most of the models of innovation were based on interaction between product design, engineering and business – few other disciplines were mentioned.

Broad consensus exists that multi-disciplinary education should take place at Master's level but there is debate over the need to entirely restructure existing courses or add short courses to existing programmes.

European universities have developed highly sophisticated structures for developing and managing their engagement with industry.

Industry professionals are becoming increasingly involved in the delivery and assessment of student projects.

Giving students the opportunity to work on industry briefs in multi-disciplinary teams helps them gain crucial work experience, appreciate the value of co-creation and improve their employability.

Industry Perspectives

1. Multi-Disciplinary Design, Teamwork and Skills

The rise of new ways of working

A recurring theme across all the industry visits was a universal shift from mono-disciplinary to multi-disciplinary ways of working.



Nokia House, Espoo, Helsinki

Ten Years ago, Philips Design only employed product and graphic designers but today teams consist of creatives, technology specialists and business managers. A similar trend was found at Nokia where their 'Futures Teams' are small, diverse and multi-disciplinary - a fusion of different backgrounds, expertise and experience. The two design consultancies we visited were also multi-disciplinary in their approach to client work, drawing on a wide range of design disciplines (product, branding and graphics) as well as technical and marketing professionals.

The consensus of opinion was that multi-disciplinary teamwork organised around a creative, technical and business triangle provides a more robust way of thinking and is therefore more likely to produce innovative solutions to increasingly complex problems.

Multi-disciplinary teams require new skills

The shift to multi-disciplinary ways of working requires employees to develop new skills and to think in unorthodox ways. When asked how multi-disciplinary teams are structured, most accepted there wasn't a 'winning formula' that guarantees success. However, having experimented with different approaches an understanding of how they work, and more importantly why they work, is beginning to emerge.

In terms of key competencies it was felt team members need to have strong communications skills and an appreciation of the role of other disciplines in the innovation process. Most felt it was also important to approach problems from the user's perspective and to have a high tolerance for ambiguity. An ability to be entrepreneurial was also seen as a key attribute. In terms of personal characteristics, openness, empathy, passion and respect for others were all mentioned. The concept of 'paternity' was also used to describe the ability to co-create an idea and then let it go.

Multi-disciplinary teams need to have flat hierarchies. Mikal Hallstrup, Director of Designit in Denmark likened the roles of team members to those of musicians, conductors, and composers. He stressed the need for individuals to develop their own opinions, approach problems from different angles, and to avoid what he called 'group speak' – lots of designers sitting around agreeing with each other. He felt it was important to be provocative, ask what non-users think, and importantly never base solutions on creativity alone. According to Phil Linberg, Senior Design Manager at Nokia, risk taking is important and teams should be "encouraged to experiment, not be afraid to fail, and be rewarded for tangential thinking".

'There is beauty in not seeing all the roadblocks'

Phil Linberg, Nokia

'Don't have all the dreamers on one table'

Hans Robertus, Philips Design

‘Hybrid mixes make people interesting.’

— *Bill Sermon, Nokia*

‘Each side doesn’t need to be an expert, but they need to value each others contribution. Designers fall into the trap of thinking business isn’t creative.’

Bill Sermon, Nokia

Hybrids and Specialists

For Hans Robertus, Senior Director at Philips Design, the rise in multi-disciplinarity has created the need for hybrids who can work horizontally across the disciplines as “motivators, co-ordinators and enablers”. These are people who have the expertise and communication skills to bridge the gap between the design world and the business world.

Designers who develop their business skills are clearly well placed to become hybrid managers - especially as they are traditionally good at communications and problem solving. However, executives are also taking advantage of these new opportunities by developing new creative skills to compliment their business expertise. It was also interesting to note the strategy of Desigence, a leading design consultancy firm in Finland, which actively recruits business graduates into key design management roles. When discussing career development at Nokia, Bill Sermon, Vice President, made the point that people join the company as specialists and become generalists as their career develops. He feels hybrids develop over time, and what makes them interesting is the combination of knowledge and experience they bring to the table.

Despite the focus on the emerging need for hybrids it is important to stress that across all the visits the general consensus was that innovation teams need a mix of hybrids and specialists to be effective.



View from Nokia House, Espoo, Helsinki

2. Growing Strategic Importance of Design

‘No-one can win with technology alone’

Anne Stenros, Kone

Design represented at board level

Design is represented at board level at both Philips and Nokia, and also plays a key role in executive decision making at Kone.

At Philips, the profile of design has benefited from the rise of the creative industries and recognition at board level of the link between design, innovation and business competitiveness. According to Hans Robertus, these factors have resulted in a strong desire to incorporate creative design skills into the business process although he admitted this has created challenges around communications because few executives retain strong skills in both disciplines. At Nokia, the process of embedding design within the company has been ongoing for the past 10 years, and the key to its success has been tolerance, empathy and communications on both sides. For Bill Sermon “designers should be able to understand financial issues, and the CEO should appreciate design”. At all three companies design is viewed as a strategic discipline that has a key role to play in the development of innovative products and services, and therefore must be represented at the highest levels.

‘We need people who understand people, who can identify latent needs, and uncover future trends’

Bill Sermon, Nokia

Shift in company strategies to focus activities on human factors

The profile of design has also been raised by a trend across all the companies to focus activities around people and users – traditionally a key area of strength for designers. For example, this is reflected in Philip’s mission statement ‘Value for people, through valuing people’ and their President Stefano Marzano’s view that design as essentially a human-based activity where the focus should be on people not products, and benefits rather than features. With their corporate slogan ‘Connecting People’ Nokia is also strongly focused on end users and a comment made by Anne Stenros, Vice President of Design at Kone that “no-one can win with technology alone” reflects the growing importance of design at a company that built its success on engineering excellence. A drive to understand people has led Nokia and Philips Design to experiment with including ethnographers and psychologists in project teams. It is suggested their ability to provide insights into human behaviour has led to new ways of seeing and the identification of unmet needs.

New models of innovation based on collaborations

All three companies talked about new models of innovation and product development based around the notion of co-creation – both within the company and working with other companies.

Philips believes the major advancements of the future will be the result of companies working together. In order to facilitate what they call ‘radical innovation’ they have launched a new initiative called the ‘Creative Transformation Lab’ which provides a space where multi-nationals can pool their knowledge and create new products and services collectively. In recognition of the new demands this will place on senior executives they have developed a masterclass series, called ‘Value Network Creation’, to help develop the skills they will need to work in such radically new ways.

The notion of innovation through partnerships was also evident at Kone who are developing branding projects with Finnish textiles company Marimekko and exploring new materials with 3M. Nokia also stressed a shift in strategy to develop mobile phone services through alliances and move away from a transactional model to a relationship model.

There was also evidence of innovation models based around human factors where companies are co-creating with users and customers to develop new services and tackle major social issues. Emerging models include Nokia's sophisticated student projects 'Oasis' and 'Only Planet' which help them to test new offerings and generate ideas in markets they don't yet have a presence in.

This shift to collaborative ways of working is further evidence of the need to equip future designers and business leaders with the skills and vision they need to work with others and collaborate across the disciplines.

'Managing collaborations will be the DNA of the company'

Hans Robertus, Philips

Broadening of design consultancy into strategic management

From the company presentations at Designit and Desigence, two leading design consultancy firms in Denmark and Finland, it is clear design consultancy is becoming more sophisticated and moving into strategic development and business design. Both firms offer a wide range of services to clients and employ staff from a variety of backgrounds. Indeed, the presentation at Desigence was given by employees from three different backgrounds: branding, product design and business management. Both companies are intensely client focused, and designers must understand the company's business objectives and be able to convey the value of design to clients in business terms. A clear aim for both companies is to educate their clients in strategic design and develop long term relationships.

3. Recruiting design graduates

What does industry look for in new graduates?

In terms of the skills they seek in graduates, Bill Sermon argued that Nokia looks at education and achievement but more important is something that makes them different – that sets them apart from others – this could be an interest, attitude, experiences, or an unusual combination of skills.

For Anne Stenros, at Kone, in addition to the fundamentals in design graduates need to view design as a strategic tool, have experience of prototyping using real materials, be innovative, culturally aware, and possess a passion for design excellence. An ability to understand business and the relationship between design and business competitiveness was essential for both the design consultancy firms when recruiting new graduates. When looking for new recruits Mikal Hallstrup at Designit said they look for "chemistry, competence, mindset, attitude, motivation, self image, drive, and a can-do attitude". For Heikki Rajasalo, Brand and Design Consultant at Desigence "Graduates should know the value of design to a company – you can't sell a service unless you know what it is".

'The working life of a designer will be multi-disciplinary so they should be educated this way. They should be encouraged to be playful and to try new things'

Phil Linberg, Nokia



View from Kone building, Helsinki

Educational Perspectives

1. Multi-disciplinary Learning in Higher Education

Evidence of multi-disciplinary education in Europe

Evidence from the trip suggests the value of multi-disciplinary approaches to education is fully recognised across the countries visited and that Higher Education Institutions (HEIs) have developed a variety of collaborative models which enable multi-disciplinary teaching and learning.

This can be understood as a response to demands from industry but is also the result of HEIs working to develop new approaches to teaching and learning that better reflect the needs of a rapidly changing world.

There was a trend for the lead partner in these collaborative models to be the design department/university and for variations of 'design thinking' to lie at the heart of the programmes. It was striking that the concept of multi-disciplinary education varied greatly in both form and meaning across the HEIs we visited – and how these different interpretations have been shaped by a range of contextual factors.

Willingness to collaborate across departments and institutions

Central to the success of all the multi-disciplinary programmes we visited was willingness on the part of faculty members to collaborate across the disciplines and forge working relationships between departments.

Students on the Master's course at The Technical University Delft (TU Delft) work across 3 departments - Industrial Design, Design Engineering, and Product Innovation & Management - and similarly at The Technical University Eindhoven (TU Eindhoven) the course rationale is the integration of business, design, user and technology disciplines with teaching taking place across a number of university departments.

The fluidity of these collaborations was also a key observation and nowhere was this more apparent than in Finland which boasts two well established multi-disciplinary programmes. Both the International Design Business Management (IDBM) and Product Development Project (PDP) are run jointly across 3 universities (Helsinki School of Economics, University of Art and Design Helsinki, and the Helsinki School of Technology) and create truly multi-disciplinary teaching and learning environments by drawing on faculty members from all three institutions and mixing students with different backgrounds (design, technical, management) in project teams. The IDBM has been running for 12 years and is the most integrated programme we saw. It is highly regarded within industry with Nokia, Kone and Desigence sponsoring student projects and recruiting graduates into management positions.



Café at the Design Academy, Eindhoven

‘500 years of culture & institutional structures restricts change.’

— Michael Thomsen, WorkCamp07

Organisational structures that enable multi-disciplinary teaching

In addition to an ethos of collaboration amongst faculty the majority of the programmes we visited benefited from organisational structures and funding arrangements that support cross-disciplinary education and research.

For the newer institutions, like the Design Academy in Eindhoven and Kaospilots in Denmark, they have avoided the issue of silos between academic disciplines by developing flexible structures that support the way they want to work. The Design Academy has developed a model based around 125 part-time ‘coaches’ who work a maximum of 1.5 days a week, the vast majority of which are practising professionals. Similarly Kaospilots does not have formal academic departments and delivers teaching via an extensive network of consultants and ‘team managers’. The Faculty of Industrial Design at the TU in Eindhoven was established in 2001 in response to industry’s call to educate engineers who understand the user and as a result has a very fluid structure and a working environment more akin to a multi-national business than an educational institution.

Clearly this is not a route open to most HEIs in the UK where legacy, existing structures and academic silos are significant barriers to change. In this sense, Finland’s ability to develop successful multi-disciplinary courses is even more impressive given that the participating universities are the leading economic, technical and creative HEIs in the country. Furthermore, in recognition of the success of IDBM and the need to foster entrepreneurship in Finland the government has sanctioned an ambitious project to create a new ‘Innovation University’ by merging the three universities together which will be operational by 2009, and located on a new site by 2015-2020.

‘We get engineers and designers talking the same language – and we get them early’

Jeu Schouten, TU Eindhoven



Caption goes here, Place goes here

When should multi-disciplinary teaching be introduced?

A question arising from the Cox Review was the stage at which multi-disciplinary teaching and learning should be introduced. The general consensus of opinion from the European examples was that students at undergraduate level should continue to focus on the development of 'core' skills and multi-disciplinary activities should be introduced at post-graduate level. This view was endorsed by faculty at TU Delft who feared standards would drop if students didn't develop their technical abilities before moving on to team-based activities. However, their situation is somewhat different to others in that almost all their students stay on and take a Master's degree.

This was not a view shared by everyone - with some arguing skills such as teamwork and co-creation should be introduced earlier in the curriculum. Faculty at the TU in Eindhoven argued by the time students finish their undergraduate studies language barriers have already developed and this is a key reason why students find it difficult to co-operate later on in their studies.

Restructure existing courses or add electives in innovation?

There is debate over whether entire courses need to be re-structured along multi-disciplinary lines or whether it is possible to achieve the same results by adding short courses in innovation to existing programmes.

The Helsinki School of Entrepreneurship (HSCE) and WorkCamp07 are both examples of intensive innovation courses using students to solve real-world industry problems. Both initiatives are in the early stages of development.

The HSCE is positioned as a 'rapid prototyping programme' and involves mixed groups of students working on raw start-up ideas through a process that includes a 1-day teambuilding workshop and a 3-day creative boot camp. For Executive Director Peter Kelly, they want to create "a sheltered place to fail" where the aim is to promote entrepreneurship in a country that is culturally risk adverse. Kelly commented "during the piloting phase 2 business students dropped out because they couldn't cope with the ambiguity. We were most impressed with the designers but they lacked confidence".

WorkCamp07 is a course in 'dramatic innovation' developed and run in partnership between Zentropa Workz agency and the University of Copenhagen. Based on the 'Hero's Journey' concept used in the film industry it forms multi-disciplinary teams and over a 5 week period students work through a highly structured process to solve real life problems sponsored by companies. According to Michael Thomsen "companies pay for access to talent and a process to tackle their problem". He strongly believes that innovation within a university setting is not possible because "you need a neutral space where everyone is equal, as soon as people arrive at WorkCamp they know the rules inside the space are different".



Entrance to University of Art and Design, Helsinki

2. Teaching and Learning Strategies

Learning through workshops, teamwork and projects

Project-based learning was championed by all the programmes we visited and the collaborative ethos at departmental level was evident in student's willingness to develop ideas jointly.

'Give children a lump of clay and they won't know what to do with it. Given them Lego that is constrained and they will immediately make something'

Michael Thomsen, WorkCamp07

All of the student projects we saw were based on multi-disciplinary teams, ranging in size from three people to a maximum of 10. The majority of student projects were in response to industry briefs, but some were students developing their own ideas in response to market needs. A good proportion of these projects involved students conducting research abroad which was usually funded by sponsoring companies. It was also interesting to note the level of involvement industry sponsors have on student learning and the engaged role they play in many of the projects.

Emphasis on industry briefs

Working on company briefs was seen as an ideal way for students to gain industry experience and enhance employability. However, an over-emphasis on industry briefs can be seen to have an adverse impact on efforts to support student entrepreneurship. In this sense, it was interesting to contrast the HSCE model which focuses on student enterprise (idea generation and start-ups) with that of IDBM which aims primarily at preparing graduates for middle management positions in Finland. Striking a balance and understanding the impact of these two approaches was seen to be important.

Benefits of multi-disciplinary teaching for students

Across all the programmes the notion of rapid prototyping was a constant theme and all the institutions had modern and well equipped facilities and work spaces. Prototyping was also being outsourced to industry partners. There was general agreement that working in team-based environments helped students develop core 'competencies', gain crucial work experience, and apply their knowledge in practical settings. The key benefits for students were exposure to real environments, individual and collective decision making, developing trust and respect in other disciplines, problem solving, risk taking, personal development, and communications.

On a number of occasions it was mentioned that for teamwork to function it is important to build student's confidence, their trust, and ensure they understand the value of solving problems jointly. The Helsinki University of Technology (TKK) has developed an innovative way of illustrating the value of teamwork by removing a team member at a critical point of a project and asking students to reflect on the impact this had on effectiveness. At Kaospilots they have adopted a strategy of telling students they are the best to encourage participation and boost self awareness. For Peter Kelly of the HSCE finding ways of "building comfort and trust levels amongst students is really important"



Technical University Delft



Student workspace, TU Eindhoven

‘MBAs are handcuffed, and would like to be released’

Peter Kelly, HSCE

‘Our students are better prepared to start working’

Markku Salimäki, IDBM

New terminology for students and lecturers

Building on the need to create working environments similar to those found in industry many of the HEIs visited have dropped traditional terms such as ‘students’ and ‘lecturers’. For example, at the TU in Eindhoven project teams are made up of competency coaches (academics), project coaches (industry representatives) clients (industry sponsors) and junior employees (students). Other programmes used terms such as coaches, supervisors, team leaders, and consultants to describe teaching staff and industry professionals who deliver course materials and run student sessions.

New approaches to assessment

In terms of assessment there was a general shift away from exams to projects and assignments. The TTK has introduced a system where teams of students grade their own performance. This is beneficial in building team spirit and encourages team members to deal with issues such as students who don’t contribute.

At the TU in Eindhoven students complete a self evaluation exercise every 6 months where they are asked to reflect on their own performance and the competencies they have developed. Kaospilots also focus on student performance and final exams focus not on testing learning but on student’s ability to reflect on their performance.

All the institutions mentioned the increasing role industry professionals are playing in the delivery and assessment of student work in terms of presentations and feedback at the end of projects.

‘Team building requires time, intensive oversight & guidance, & compromise.’

— Peter Kelly, HSCE

3. Links with Industry

Models for engaging with companies

All of the programmes visited have developed structured ways of engaging with industry.

The Design Academy runs a ‘Friends of the Academy’ scheme where companies pay a membership fee of 15 thousand euros which enables them to set a student brief. Anne Mieke, Executive Board member at the Design Academy explained that they “want to understand what the struggle is within industry. We work with companies, not for them”. In terms of managing industry expectations she made the point that they try to place the emphasis on future thinking and energy rather than tangible outcomes. Corporate members of the scheme include Nike, Swarovski and Peugeot.



Student Project, Eindhoven

Kaospilots also undertakes consultancy projects for industry as a way to generate revenue and provide students with the opportunity to work on real-life projects. For Christer Lidzeliuss, CEO of Kaospilots, “companies pay for the possibility of failure”.

Incentives for companies

In terms of incentives a common response was that companies use student projects as a way to test new ideas and to recruit the brightest students. Anne Stenros of Kone commented “we don’t get new innovations through the IDBM, we get directions to the future”. For Jan Schoormans at the TU in Delft there is a difference between engaging with large multi-nationals and SMEs. In terms of the latter, “they are really keen to work with us but they want very tangible outcomes and lack capital resources”.

Location and regional dimensions have also played a key role in the types of relationships HEIs have been able to develop and this has shaped the direction of their teaching. For example, TU Delft has developed expertise in the healthcare sector given that so many healthcare companies and hospitals are based in the region. Similarly, the presence of large and powerful companies such as Philips and Nokia in Eindhoven and Helsinki respectively has meant university programmes have been heavily influenced by them.

Alumni networks

All of the institutions visited have mature and well developed alumni networks that they use to engage with past students who are now practicing professionals. This was cited on numerous occasions as one of the best routes into companies.

Members of the delegation

- **Alice Frost**, *Head of Business and Community Policy*, Higher Education Funding Council for England
- **Ms Dani Salvadori**, *Head of Enterprise & Innovation*, Central Saint Martins College of Art & Design
- **Professor Fran Lloyd**, *Director of Research in Faculty of Art, Design and Architecture*, Kingston University
- **Jesse Belgrave**, *Design Skills Manager*, Design Council
- **Dr Kamil Michlewski**, *Senior Lecturer Newcastle Business School*, Northumbria University
- **Ken Newton**, *Senior Lecturer Product Design*, University of Teesside
- **Lesley Morris**, *Head of Design Skills*, Design Council
- **Mike Goatman**, *Senior Lecturer – Manufacturing*, Cranfield University
- **Niti Bhan**, *Design Consultant*
- **Professor Robin Baker**, *Director*, Ravensbourne College
- **Dr Steve Harding**, *Corporate Development Manager*, University of Central England

List of meetings

Technical University Delft

- Jan Schoormans, *Professor of Consumer Research and Head of the Department of Innovation and Management*
 - Richard Goossens, *Faculty of Industrial Design*
 - Prabhu Kandachar *Design Engineering*
-

Design Academy Eindhoven

- Anne Mieke, *member of Executive Board*
 - Yolande van Kessel, *Head of Education*
-

Technical University Eindhoven

- Professor Jeu Schouten, *Dean of Faculty of Industrial Design*
 - Dr. Lucas Asselbergs, *Policy Officer Industrial Design*
-

Philips Design

- Hans Robertus, *Senior Director, Philips Design*
 - Frank Bosboom, *Holland Branding Group (Philips Design Associate)*
-

KaosPilots

- Christer Lidzelius, *Chief Executive Officer*
 - Tina Broberg, *Project Manager and Consultant*
 - Majbrit Gottrup, *Project Manger*
-

Designit

- Mikal Hallstrup, *Managing Director*
-

Workcamp07

- Michael Thomsen, *Managing Partner, Zentropa Workz*
 - Brett Patching, *Aarhus School of Architecture*
-

University of Art and Design Helsinki

- Yrjo Sotamaa, *Rector, University of Art and Design Helsinki*
 - Peter Kelly, *Director, Helsinki School of Creative Entrepreneurship*
 - Markku Salimaki, *Director, International Design Business Management Programme*
-

Nokia

- Bill Sermon, *Vice President, Design*
 - Kurt Walecki, *Director, Strategy and Portfolio*
 - Phil Linberg, *Senior Design Manger*
 - Anna Valtonen, *Senior Design Manager*
-

Kone

- Anne Stenros, *Vice President, Design*
 - Heli Aalto, *Communications Specialist*
-

Helsinki University of Technology

- Kalevi Ekman, *Head of Product Design*
-

Desigence

- Heikki Rajasalo, *Brand and Design Consultant*
 - Virva Haltsonen, *Design Consultant*
 - Antti Pitkanen, *Designer*
-



The **Multi-disciplinary Design Network** was formed in 2006 and is run by the Design Council, in partnership with NESTA and HEFCE.

Design Council is the national strategic body for design. Its mission is to inspire and enable the best use of design in the UK so that it is the most competitive, creative and sustainable nation.

The **Higher Education Funding Council for England (HEFCE)** distributes public money for teaching and research to universities and colleges. In doing so, it aims to promote high quality education and research, within a financially healthy sector. The Council also plays a key role in ensuring accountability and promoting good practice.

The **National Endowment for Science, Technology and the Arts (NESTA)** is an independent body with a mission to make the UK more innovative. They invest in early-stage companies, inform policy, and deliver practical programmes that inspire others to solve the big challenges of the future.

