

# A VIRTUAL DAY IN COURT

## DESIGN THINKING & VIRTUAL COURTS

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*Good design could be key to solving the problems that face public services in the 21st century, such as improving the productivity and cost-effectiveness of courtrooms while continuing to embody the values associated with the criminal justice system.*

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<sup>1</sup> Defined by Tim Brown as "a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity." in *Design Thinking*, Harvard Business Review, June 2008

## EXECUTIVE SUMMARY

Many commentators and experts have identified design to be not just the process of developing a tangible product, but also a valuable approach to the public sector; allowing the creation of more innovative services. Through methods like user-centred research and prototyping, design can produce public services that meet challenges such as satisfying users and saving costs.

The RSA and Cisco Systems organised a seminar to explore the potential of using a design thinking<sup>1</sup> approach to re-design courtrooms. Particularly under scrutiny was the question of whether and how videoconferencing technologies could be used in the criminal justice system without undermining the important social components of 'the day in court'.

Representatives from the Netherlands (who operate sophisticated remote video systems throughout the criminal justice system) and others from the UK's Virtual Courts pilots presented on the state of courtroom video technology in both countries. They were joined by academics and designers who presented relevant research on the performance of video technology and the value of design.

Videoconferencing technology has been advanced by some as a method of reducing the costs and delays associated with transportation of prisoners and witnesses. However many stakeholders in the criminal justice system dislike the use of video, fearing that it will degrade and undermine courtroom events. For example, court interpreters dislike interpreting over video, though research indicates that the results may be as effective as 'traditional' interpreting.

In this paper we suggest that certain characteristics of a design thinking approach could address stakeholders' anxieties over videoconferencing technology. For example involving all court users, articulating their needs and concerns, observing courtroom behaviour to develop research insights, and prototyping possible solutions, could deliver the advantages of video while resolving stakeholders' concerns. At the same time, innovation could become embedded within the agencies that comprise the criminal justice system.

This short paper summarises presentations from our seminar and draws out themes from the ensuing discussions, before suggesting these three principles of could improve the design and integration of videoconferencing technology in courtrooms in the UK:

**Inspire:** Future virtual courts work should involve all court users in generating ideas to improve stakeholders' user experience and integrate new technologies such as video.

**Prototype:** These ideas should be rapidly tested with court users, prior to pilots, to reduce the risk of failure further down the line, as well as suggesting more ideas to improve other parts of the system.

**Execute:** Criminal justice agencies should consider how to embed design thinking as an approach to innovation into their organisation's culture.

2 Ross, T., 2011, *Whitehall told to make Britain happy*, [Available at: <http://www.telegraph.co.uk/news/uknews/8655861/Whitehall-told-to-make-Britain-happy.html>]

3 Smith, O., 2011, *Victims routinely robbed of respect and dignity in court, shows research*, [Available at: <http://www.bath.ac.uk/news/2011/07/19/victims/>]

4 Bichard, M., 2008, *In tough times we need designs on the future*, [Available at: [http://www.publicservice.co.uk/feature\\_story.asp?id=10996](http://www.publicservice.co.uk/feature_story.asp?id=10996)]

## DESIGN & PUBLIC SERVICES

### BOX 1: A DAY IN COURT IN THE NETHERLANDS

Courtrooms in the Netherlands are similar to those of other countries but for one important difference: many Dutch courtrooms have been redesigned to use high quality videoconferencing technology, allowing them to connect to studios in prisons. These ‘virtual’ or videoconferencing courtrooms are effectively one court divided into two physical parts. The courtroom in the court building seats the judge, prosecutor, clerk and members of the public (and sometimes the defence lawyer), and the prison studio seats the defendant, interpreter (and sometimes defence lawyer). Though together they form the same virtual courtroom and are decorated in identical style, the two physical parts might be separated by hundreds of miles.

The Netherlands have focused on videoconferencing in courts since 2002, beginning with research and mock-up trials conducted with stakeholders, followed by a tender specification and limited roll-out of videoconferencing equipment in 2007, and the subsequent decision to roll-out nationwide in 2008. Fifteen courts, three detention centres and six penitentiary institutions are so far equipped, and over 1000 alien cases and over 100 extension of preliminary detention cases have been heard, as well as over 25 cross-border committees each year.

During this process, the Ministry has worked with many stakeholders to develop careful criteria for videoconferencing technology, especially those that are essential to giving court users a ‘true-to-life’ experience. This includes clearly representing the detail of an individual’s looks, facial expression, mouth movements, direction of view, gestures and posture, while also setting as standard that nobody should be able to manipulate the view by zooming, focusing or panning cameras. Experts in human factors have established the important viewing angles, position of screens, cameras, microphones, speakers, seats and other details.

These virtual courts tend to be used for high volume, low interaction, cases in criminal and alien courts and cross-border cases. The judge decides whether each case should be tried via video, taking into account the concerns of defendants and lawyers. The benefits include cost savings through reduced transport and delays, improvements in safety (it’s easier to guard prisoners at prisons than during transportation), better experience for prisoners (who dislike transportation), improved cross-border legal cooperation and others.

“Good design keeps the user happy, the manufacturer in the black and the aesthete unoffended” said Raymond Loewy, designer of the Greyhound bus, the Shell logo and the Coca-Cola bottle. Designing a bus, logo or bottle may seem a world away from caring for patients, community policing or teaching history, but the approach of design and the delivery of public services are not so far apart. Had Loewy been a cabinet minister in the coalition government in 2011, his criteria for public service reform may have been remarkably similar; happy users and fiscal restraint.

Public satisfaction and happiness have come under increased focus in government, with senior civil servants tasked with assessing the impact of government policies on well-being<sup>2</sup>. Courtrooms are one particularly clear example where there is scope to improve; one recent study called for “fundamental reform to improve the experience of victims and vulnerable witnesses”<sup>3</sup>. At the same time, the comprehensive spending review and deficit reduction strategy has cut the budget of most departments and agencies that deliver public services, making value for money and productivity the defining features of managing public services for the foreseeable future.

The argument that design has an important role to play in public service reform has become much more common over the last five years. One champion has been Lord Bichard, previously Permanent Secretary at Department for Education and Employment, now Director of the Institute for Government and chair of the Design Council:

*“Many people think of design in terms of packaging and product design. They don’t realise design tools can go far beyond that, and can cause you to ask serious questions about business vision and service vision. Design is very much addressing the relationship with clients, customers and citizens and is relevant to the public sector, not least around services.”<sup>4</sup>*

Though design has its roots in the buses, logos and bottles that Loewy and his colleagues produced, it is now defined as much by its tools and approach (often referred to as ‘design thinking’) as the end product. The specific values, methods and approach of design thinking

5 Flood, R., *What can design add to the sector?*, [Available at: <http://www.designcouncil.org.uk/our-work/Insight/Public-services-revolution-or-evolution/Service-design-in-the-media/What-can-design-add-to-the-sector/>]

6 Cameron, D. and Clegg, N., 2010, *PM and Deputy PM letter to Public Sector Workers*, [Available at: <http://www.number10.gov.uk/news/pm-and-deputy-pm-letter-to-public-sector-workers/>]

7 Design Council, *Northern Way worklessness pilot: Sunderland City Council*, [Available at: <http://www.designcouncil.org.uk/resources-and-events/Business-and-public-sector/Public-sector-case-studies/Northern-Way-worklessness-pilot/>]

8 Design Council, *Using design to reduce injuries from alcohol-related violence in pubs and clubs*, [Available at: <http://www.designcouncil.org.uk/our-work/challenges/Security/Design-out-crime/Alcohol-related-crime/Alcohol-related-crime1/>]

9 Brown, T., *Public servants – by design* in Thomas, E., *Innovation by design in public services*, [Available at: <http://www.solace.org.uk/documents/sfi/SF1%20-%20Innovation%20by%20design%20in%20public%20services.pdf>]

10 Branson, R., 2006, [Available at: [http://articles.cnn.com/2006-04-25/travel/branson.tips\\_1\\_air-travel-boating-cruise-ship?\\_s=PM:TRAVEL](http://articles.cnn.com/2006-04-25/travel/branson.tips_1_air-travel-boating-cruise-ship?_s=PM:TRAVEL)]

make the discipline relevant to ‘intangible’ services as well as physical products and environments. The principal value of design tools to policymakers and public servants is that they lead to innovation; design is “a way of thinking that can be applied to services, and turn creativity into innovation”<sup>5</sup> summarise the Design Council.

Through drivers such as public service reform, and especially budget pressures, innovation has become increasingly sought after. “Don’t hold back. Be innovative, be radical, challenge the way things are done”<sup>6</sup> wrote the Prime Minister to public servants when appealing for cost-saving ideas. Design becomes increasingly important in difficult times, as Lord Bichard continued:

*“Recession is not the time to batten down the hatches and see things like design as one of those soft things you can forget about... This is the moment when design and skills become absolutely critical to survival, growth and success.”*

For example, design approaches were applied to public services in Sunderland to help long term unemployed people who receive incapacity benefits to find work. One design consultancy spent time with these service users, building up a picture of their needs and creating maps that showed their progression through the many different services. This research led to a number of insights; for example that a much more coordinated approach was required. The resulting ideas were prototyped with service users and community organisations. The new scheme contained a portfolio of coordinated services that supported over 1000 people, leading to work for 275 of them, in addition costing less than £5,000 per person — in contrast to the £62,000 commonly expected<sup>7</sup>.

Similarly, the Home Office and Design Council’s *Design Out Crime* project demonstrated how design could reduce violence, theft and other criminal problems. One challenge was to reduce the amount of alcohol-related violence, which results in 87,000 incidents each year and costs the NHS £2.7 billion. Pint glasses have remained fundamentally the same since the 1960s and often explode into loose shards when broken. One campaigner framed the situation: “We are still serving a mind-altering substance in a potential weapon”<sup>8</sup>. The designers spent time with stakeholders to look at the problem from all perspectives, talking to publicans and manufacturers as well as observing users and abusers of glasses. Through testing and prototyping, they developed an updated glass which included a layer of bio-resin on the inside, causing the glass to remain in shape even if broken, rendering it a far less effective weapon.

Leading exponent of ‘design thinking’ Tim Brown identifies three principles when using the approach in the public sector; ‘inspire’, ‘prototype’ and ‘execute’<sup>9</sup>. Designers know that inspiration can come from anywhere; Brown cites Richard Branson, who takes a notebook on each Virgin Atlantic flight to collect a list of possible improvements<sup>10</sup>. Designers prototype new ideas; before even thinking about planning pilots, it’s faster and cheaper to test new services or systems using easily available resources. Designers help organisations execute ideas rather than passing them over to someone else; design initiatives should lead to transformation within an organisation – in which every staff member becomes involved in design thinking.

Through initial discussion and desk research, the RSA and Cisco Systems jointly hosted *A Virtual Day in Court* in July 2011, a seminar which explored the potential of using design thinking to improve the courtroom environment. Particularly under scrutiny was the question of whether a design approach could help integrate the kind of videoconferencing technology used in the Netherlands into the UK court system.

Four speakers presented their experience of videoconferencing technology, courtrooms and design. Some of their insights and the resulting discussions are summarised in the following sections, which also suggest ways in which design thinking could be used to improve the productivity and experience of court.

11 Carlen, P. 1976, *The Staging of Magistrates' Justice*

12 July 1857 Westminster Review (Vol. 68)

13 Ipsos Mori, 2003, *Experiences Of The Criminal Justice System — The Latest From Victims And Witnesses Of Crime*, [Available at: <http://www.ipsos-mori.com/researchpublications/researcharchive/767/Experiences-Of-The-Criminal-Justice-System-8212-The-Latest-From-Victims-And-Witnesses-Of-Crime.aspx>]

14 HM Government, 1999, *Youth Justice and Criminal Evidence Act 1999*, [Available at: <http://www.legislation.gov.uk/ukpga/1999/23/part/11>]

15 Unless otherwise referenced, quotations are from speakers and delegates at the joint RSA / Cisco seminar held on 14th July 2011

16 Travis, A., 2010, *Ministry of Justice faces £2bn cuts sparking fears for 15,000 jobs*, [Available at: <http://www.guardian.co.uk/society/2010/aug/10/ministry-justice-jobs-cut-third>]

17 Whitehead, T., 2010, *Spending Review: what it means for the Ministry of Justice*, [Available at: <http://www.telegraph.co.uk/news/newstoppers/spending-review/8034370/Spending-Review-what-it-means-for-the-Ministry-of-Justice.html>]

## COURTROOM DRAMA

There are many features that make courtrooms unusual environments; their formality, symbolism, tradition, authority, and handling of events that are important and often emotional. Linda Mulcahy, Professor in the Department of Law at LSE, describes the position the courthouse occupies in our culture as “a temple of law in which the positioning of walls, windows and stairwells is used to prepare people for the drama of the trial and to designate place and hierarchy at law’s altar”.

However in practice, courtroom design is driven more by tradition (prescribed in minute detail by *The Court Standards and Design Guide*) than a conscious attempt to provoke reflection on the gravity of the situation. The proceedings of courts are often baffling to new participants, described by Criminologist Pat Carlen as a ‘Theatre of the Absurd’<sup>11</sup>, and good design has rarely been a priority:

*“Courts of law were originally held in old town halls, the halls of baronial castles, and even in gaols. The arrangements for them were always hasty, the ventilation invariably defective, and the rooms having been built for another purpose, generally unsuitable.”<sup>12</sup>*

This account continues to tell one 19th century story in which air was mistakenly pumped into a bail court from a main sewer: “the court was cleared in an instant, judge, officers, lawyers, witnesses, and jurymen fled for their lives in the wild confusion of a rout”.

Though no longer environmental hazards, courtrooms are still unfamiliar and unnerving to many. Fear of intimidation, poor treatment from solicitors and barristers, little awareness of what to expect and delays have all been identified as factors that contribute to witnesses’ negative experiences of court<sup>13</sup>. Little research is conducted on the design and architecture of courtrooms, and the fields are unfamiliar territories for legal professionals:

*“The absence of research on the experience of internal space in courtrooms can, in part, be explained by lawyers’ obsession with the word. When we teach our students about law we do so through the medium of the written judgment or transcript as though these give a complete account of why a case is decided in a particular way ... In this sense lawyers have traditionally looked upon space within the court as a depoliticized surface...”*

The design and use of courtroom space is anything but neutral however. Mulcahy refers to one high profile case in which the physical design of the courtroom (through raising the dock to allow a juvenile defendant to see the proceedings) was later considered to have contributed to an abuse of human rights, needlessly exposing the defendant to hostility from the public. One solution now provided for in legislation, softens courts for young or vulnerable witnesses by allowing ‘special measures’, for example by giving evidence remotely through video link<sup>14</sup>.

*“The buildings themselves were very purposefully designed to be authoritative, to induce fear, and that’s why they are a bit scary and horrible. We may believe that what we want to communicate now is different, but certainly the way we interact with these buildings has changed.” Clive Grinyer, Director of Customer Experience, Cisco<sup>15</sup>*

Poor design and user experience is not the only problem with court rooms. Another is their cost; in the spending review of 2010, the Ministry of Justice’s overall budget was cut by 26% (or £2 billion), from £9 billion; £1.1 billion of which funds courtrooms in the UK<sup>16</sup>. As part of a suite of measures, the Ministry has proposed closing 103 magistrates’ courts and 54 county courts, projected to save £15.3 million a year<sup>17</sup>. The plans have proved controversial, and as with all public services, innovation is widely sought after.

18 HM Government, 2010, Supplementary memorandum submitted by the Ministry of Justice, [Available at: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmjust/162/162we13.htm>]

19 Assessment of Videoconference Interpreting in the Criminal Justice Service

20 Ministry of Justice, 2010, *Virtual courts pilot: outcome evaluation report*, [Available at: <http://www.justice.gov.uk/publications/research-and-analysis/moj/virtual-courts-pilot-outcome.htm>]

21 Djanogly, J., 2010, *Court closures and other issues within the Minister's remit*, [Available at: <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmjust/uc520-i/uc52001.htm>]

## A VIRTUAL VISION

### BOX 2: VIRTUAL COURTS IN THE UK

Seemingly more indecisive than the Netherlands, the UK have experimented with the use of video technology in courts since 1999. Pilots at that point indicated that increased use of video could bring benefits to the criminal justice system<sup>18</sup>, but progress has been comparatively slow since.

Though videoconferencing facilities are quite extensively installed throughout the UK<sup>19</sup>, their use in practice seems to be limited. Two current initiatives test the potential of video technology in courts; 'live link' which allows police officers to give evidence from police stations, and the 'virtual court' programme which allows prisoners to appear in court from police stations.

Live link was first used in Croydon, and Camberwell Green (now joined by Medway) was the first virtual court. A recent Ministry of Justice evaluation reported that the London virtual court did reduce prisoner movement and time from hearing to charge, but that the new system was too expensive in the original format<sup>20</sup>.

Changes have since been made reducing costs by more than a third in London, and virtual courts are now expanding to Kent, Bromley, Westminster, Cheshire and Hertfordshire. However there is still significant resistance to increased use of video technology in the criminal justice system.

The ideas proposed to reduce courtroom costs range from 'pop-up courts' in shopping centres, to converted double-deckers (the 'justice bus') that dispense instant justice. But one idea in particular has caught some stakeholders' attention; videoconferencing technology. Ministers have expressed admiration for greater use of the technology in court. "The justice system has not kept up with society generally in terms of use of technology" said Jonathan Djanogly, minister at the Ministry of Justice when giving evidence to the House of Commons Justice Committee, continuing:

*"We are going to have to catch up. That means, particularly, more use of telephone and more use of videoconferencing. I have seen pilot videoconferencing; I have seen where videoconferencing is being used; and I have been very impressed."*<sup>21</sup>

Advocates of videoconferencing technology promise that it could reduce the costs of court in a number of ways. During the initial stages of the criminal justice process, it could allow defendants held in police custody to appear in court without the time and costs associated with travelling to the courtroom. This potential saving applies to police officers too, allowing them to give evidence and return to their other duties more swiftly. Video could allow cost-effective access to translation services; this issue becomes more acute as the impending EU directive on the *Right to interpretation and to translation in criminal proceedings* requires member states to provide access to translation and interpretation services.

Video has other potential advantages beyond cost reduction; it could allow vulnerable or expert witnesses, or other criminal justice professionals (such as probation officers), to appear in court, potentially improving their experience (while further reducing their costs). The trouble and costs of transferring and protecting witnesses called to give evidence from prison could also be minimised. Some of the benefits of video have already been realised in the UK's Virtual Courts pilots:

*"I think we've already shown we can greatly reduce the amount of prisoner movement between prisons and courts, and that's both cost efficiency and also the carbon footprint."*

*"Over the Christmas period we ran a drink drive campaign where prisoners were charged in the morning and appeared before the court the same day. In one case there was a 90 minute gap between charge and appearing before the bench; so obviously there's a clear advantage for swift justice."* — **Bob Platt, Virtual Courts Programme, Kent Police**

Though there are potential advantages to videoconferencing technology there are also pitfalls. Some see using video technology a solely technocratic solution to wider problems. If pushed through without regard for their effect on the complex social and cultural components of the

22 Soubry, A., 2010, *Court closures and other issues within the Minister's remit*, [Available at: <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmjust/uc520-i/uc52001.htm>]

23 Braun, S. & J. L. Taylor (Eds.), 2011, *Videoconference and remote interpreting in criminal proceedings*, Guildford: University of Surrey, [Available at: <http://www.videoconference-interpreting.net/BraunTaylor2011.html>]

24 BBC, 1999, *UK Court video links hailed a success*, [Available at: <http://news.bbc.co.uk/1/hi/uk/395868.stm>]

criminal justice system, solutions like video may well fail to meet their proponents' claims. Part of the value of a design-led approach is that it allows engineering to be considered alongside people; mitigating the risk of a technically-excellent solution that is socially inappropriate:

*"Putting the technology in is never enough. We have to really work hard to design every aspect of it so that it really can be made to work ... We have to be cynical about technology, we don't always accept what technology throws at us, it doesn't always fit with how we really want to do things and frequently technology actually modifies the way we do things."*

— Clive Grinyer

It's not difficult to find those who are more cautious than Ministers about the use of video technology – or 'Virtual Courts' as they have become known in the UK. Among professional interpreters, for example, there seems to be a perception that increasing use of video is driven solely by parsimony:

*"Judicial services cite quite a range of reasons why they consider the use of video mediated interpreting ... to do with cost savings of course, but also security issues for example.*

*Interpreters usually just perceive it as a cost cutting exercise."* — Sabine Braun, Centre for Translation Studies, University of Surrey

Others suggest video technology may remove certain social 'checks and balances' currently inherently built in to the open court system that prevent abuses of human rights:

*"What we have at the present with open courts is we get to see [the accused] walk into the court. I understand all the cost benefit analyses, saving the environment, and so on. But I'm fearful that unless we the public can see the person — that they're in good condition, that they've not disappeared into the system, and only appear face on in the video — that 'things' can happen."* — Delegate

While some express concerns that 'virtualisation' carries semantic baggage from the world of computer games and the internet that is inappropriate for the importance and gravity of a courtroom event:

*"I think the use of 'virtual' probably isn't the correct word, because for me 'virtual' seems to evoke characters that we make up in a virtual world, and they're not really real people or real personalities."* — Delegate

In fact there is no shortage of concerns. Police officers may desire the convenience of not having to transfer prisoners to court, but prisoners might feel robbed of their 'day in court'. Victims may feel satisfied by the swift justice that video technology can provide, but interpreters can dislike the lack of eye contact with the defendant. A frequent point of view is expressed by Anna Soubry, criminal barrister and member of the Justice committee in response to Jonathan Djanogly's evidence: "You cannot beat a person giving their evidence in the flesh, so that you can assess them face on as to whether they are telling the truth or not"<sup>22</sup>.

The complex combination of legal, social, cultural and technological challenges is a compelling reason why design processes, which actively seek out contributions from everyone and can generate innovation from such insights, should be essential to such initiatives.

The EU *Right to interpretation and to translation in criminal proceedings* legislation has prompted valuable research into video technology. Dr Sabine Braun leads the AVIDICUS<sup>23</sup> project; an EU-funded investigation into the viability of interpreting and translating via video. Among other outcomes, this study provides a review of the current use of video for interpretation in the criminal justice system, as well as objective data on the comparative performance of interpreters using video and 'traditional' interpreting.

The study finds that video-mediated interpreting has become common at certain stages of the criminal justice system and appears to be growing. The study also indicates tensions between judicial services and interpreters over video-mediated interpreting, with interpreters displaying several anxieties; fear of the unknown in the changing landscape of interpreting, fear of pay loss, increased dependency on technology, the feeling of exclusion from the decision-making and implementation process, and the prevalence of out-dated and inadequate equipment in some institutions.<sup>24</sup>



The objective results of the studies that compare video-mediated interpreting and traditional interpreting are more encouraging for proponents of video technology. Over forty interpreting sessions were conducted with legal practitioners, interpreters and others who played the role of suspects or witnesses. Though known problems of video-mediated interpreting (such as problems with regional accents and distortions) were magnified, very similar results were achieved in each approach:

*“The difference in objective measures; in the actual interpreting performance is rarely significant ... it’s clearly lower than one might have expected and it’s clearly not big enough to explain all the resistance that comes from interpreters...” — Sabine Braun*

Dr Braun draws from this that there is an urgent need for “informed dialogue” between all parties involved, and notes that simply exposing interpreters to more video interpreting is unlikely to change their minds. She continues:

*“...it doesn’t seem impossible to interpret [over video], but nevertheless the interpreters find many reasons to be opposed and actually also perceive it as being much more difficult.”*

Such studies lend credibility to the practicality of using video in court, but highlight the social and cultural changes that it brings. How could the disagreements between groups be resolved? How could the potential benefits of video technology be realised? How could we retain those values and features of ‘the day in court’ that are important while reducing the poor experiences that people associate with court?

The following section explores these questions, using the design thinking principles that Tim Brown identifies; ‘inspire’, ‘prototype’ and ‘execute’ as a framework to explore how the UK’s Virtual Courts pilots could be improved in the future.

**25** See the study on Immigration bail hearings by video link by Bail for Immigration Detainees and the Refugee Council

**26** Parker, S., Paun, A., McClory, J., 2009, *The state of the service*, [Available at: <http://www.instituteforgovernment.org.uk/publications/17/the-state-of-the-service>]

**27** Booth, R., 2010, *Magistrates call for courts in shopping centres*, [Available at: <http://www.guardian.co.uk/uk/2010/aug/17/magistrates-courts-shopping-centres>]

## INSPIRING IDEAS

Design thinking should involve everyone in the design process from the beginning. In the criminal justice system this would include defendants, magistrates, police officers, members of the public, court reporters, solicitors, barristers, maintenance staff, witnesses and more.

But rather than involving everyone, the UK's Virtual Courts pilots may have prioritised the needs of one group above those of another. For example on hearing that defence lawyers initially voiced concerns about a particular aspect of the Virtual Courts pilot which was later altered to suit them, one delegate said:

*"I'm a little concerned that defence lawyers appear to be so comfortable with the system, for the reason that, having sat in a number of jurisdictions over twenty years, the court system tends to be business as usual for the lawyers, including the judges, and not so much for the people that appear before it whether virtually or in person."*

Dr Braun contributed further insights from prior research<sup>25</sup> that suggest the prisoners' perspective may be neglected, and reminded the seminar of the centrality of the prisoner to the proceedings:

*"[Some prisoners] feel isolated if they are in a prison and everyone else is in a courtroom ... we should include this group very much more in the research to see how they are actually affected. Because these proceedings are not about the judge, they are not about the interpreter, they are about these people."*

Prioritising one group's needs over another will lead to problems in such a significant change to the way that courts operate:

*"The interpreter's responses are also very interesting as they reveal on the one hand that there are objective difficulties for the interpreter, on the other hand they also reveal resistance to change on the part of the interpreter. ... Many feel excluded from the process of this change; they are not always consulted properly."*

Clive Grinyer presented the design thinking perspective on the role of the designer, not initially to suggest ideas, but to carefully listen to all those involved:

*"What we actually need if we're going to build systems – and design systems – that we don't just want some designer to come in and say 'it's going to be like this' we need to build it on a real understanding of what the issues are for all these stakeholders."*

The multitude of stakeholders in court, including prisoners, witnesses, solicitors, barristers, magistrates, judges, police officers, court staff, interpreters and members of the public should be involved. The objective of this early stage of the process is to gather insights that could be used to inspire ideas that could help the video technology benefit courtrooms.

This approach to ideas may seem counter cultural to innovation in the public sector, which tends to begin at the senior level of an organisation; "Civil servants tend to see their own senior managers as the primary source of innovation in government" suggested the results of one survey<sup>26</sup>. Such top down ideas are not unknown in the criminal justice sector, with delegates mentioning the proposed 'justice bus' and pop-up court ideas as examples<sup>27</sup>. The design perspective on such ideas was summarised:

*"One of the things about design thinking that's very transferable to everybody is that you must never have one idea. You must have three ideas. Politicians are really bad at this, and CEOs are bad as well – they're so amazed when they have one idea that they just stick with it! Justice bus great, shop window great – but we need a better vision of what it is we're talking about." – Clive Grinyer*

Designers have a wide range of tools to generate insights from listening to people. These include traditional social research methods such as in-depth interviews, discussion groups and surveys but also more unusual approaches that are designed to uncover people's normally hidden attitudes and behaviours.

**28** See 'Shadowing', 'Rapid Ethnography', 'Fly on the Wall' and 'Character Profiles', 'A Day in the Life' from IDEO Method Cards

**29** See 'Flow Analysis' and 'Error Analysis' from IDEO Method Cards

**30** See 'Historical Analysis', 'Long-Range Forecasts' and 'Cross-Cultural Comparisons' from IDEO Method Cards

For example, a designer may choose to conduct observational (or rapid ethnographic) research with the various stakeholders. By shadowing prisoners, magistrates, solicitors, witnesses, interpreters and others throughout a courtroom event, notes and sketches could be collected on each stakeholder group's attitudes and behaviours. These data could subsequently be developed into character profiles or personas for each group, allowing designers to reflect on the impact that each design decision will have on different stakeholders.<sup>28</sup>

Another relevant approach might be to conduct a flow analysis, creating a visual representation of the information or activity that comprises the day in court; defendants, barristers, case histories, evidence and so forth. This analysis can then be used to identify bottlenecks, and provoke alternatives that achieve the same objective but in a different way. Special attention can be placed on listing things that go wrong, determining, for example, how the design of courtrooms could mitigate or contribute to human or other errors.<sup>29</sup>

A third method might include analysing the design of courtrooms over history and into the future – paying attention to social, cultural and technological trends over time. This method could help identify how these trends have affected the development of courtrooms, and how forecasts of these trends could affect courtrooms in the future. Conducting a similar exercise across different cultures could also highlight differences, helping to customise imported designs from different cultures.<sup>30</sup>

The aim of this stage of the process should not be simply to replicate existing court practices with new technology, but to think about our vision for courtrooms in the 21st century, as one delegate suggested:

*“If we’re talking about design perhaps what we should be thinking is; instead of ‘how we replicate what we already have’, could we be thinking in terms of; ‘we now know we have the capability to link the imprisoned world with the world outside imprisonment, what do we want to do with that capability?’”*

31 Buchenau, M., Fulton Suri, J., 2000, *Experience Prototyping*

32 See 'Scenarios' and 'Scenario Testing' from IDEO Method Cards

33 See 'Role-Playing', 'Bodystorming', 'Quick-and-Dirty Prototyping' and 'Experience Prototype' from IDEO Method Cards

34 Bason, C. 2010, *Leading Public Sector Innovation*

## PROTOTYPING PEOPLE

As well as inspiration, designers lay emphasis on prototyping. Originally a method of rapidly testing the form and function of new products, new forms of prototyping are equally appropriate for exploring the experience of using or delivering a service or systems. When (re) designing a system that greatly relies on 'hardware' — whether screens and cameras or the judge's bench and witness stand — prototyping brings particular benefits.

Broadly defined, a prototype is "any kind of representation, in any medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system we are designing"<sup>31</sup>. For example in the criminal justice system it could be mock-up of part of a courtroom, in which the activities of a day in court could be role-played. Prototyping has three primary outcomes:

- To understand existing user experiences and their context
- To explore and evaluate design ideas
- To communicate ideas to an audience

There is an important distinction between prototyping and a pilot. A pilot is a fully-working functional test of a system, whereas prototyping occurs much earlier in the design process, allowing ideas to be tested swiftly, ensuring the inevitable failures are inexpensive and low-impact, and developing a growing store of knowledge from each prototype. Rather than sequential stages of the design process, 'inspire' and 'prototype' are overlapping principles of design thinking. Prototyping is especially valuable before piloting expensive and complex experiments, which have many unpredictable potential pit-falls, as warned by Clive Grinyer:

*"What tends to happen is that we put very expensive systems in for a pilot, but so many mistakes have already been made that that pilot is likely to fail, because we haven't even gone back and prototyped that experience."*

The Virtual Courts pilot may have tested the technology satisfactorily, but without early prototyping, it is impossible to consider the wider aspects of the new system. Other elements of the system, such as barristers' difficulty in cross examining over video, or interpreters' dislike of 'reading' their client, or even remembering to train staff, are easily forgotten:

*"It's not always the technology [that fails]. I recently sat on a live link case at Croydon, and the failure was just down to staff being unable to deal with the equipment properly."*

— Alan Hutchings, HM Courts Service

Prototyping sounds like it might yield valuable outcomes, but what does it actually involve in the context of a public service? There are a variety of prototyping methods. A designer might create scenarios; stories with characters (drawing on the personas developed earlier) that describe the context of a re-designed day in court. These scenarios would then be tested by presenting them to different user groups and asking for their reactions, which can then be used to iterate design propositions.

As well as helping iterative design development, scenarios can help communicate the value of a new concept to the different stakeholder groups.<sup>32</sup> Designers might also prototype a revised courtroom through role-play; assigning a role to each member of the design team and enacting courtroom activities. By testing services and physical environments (using roughly made props), the designers can empathise and improve the system for the different stakeholders involved.<sup>33</sup>

Christian Bason, Director of MindLab, a cross-ministerial Danish innovation unit, describes how they explored new solutions to climate change by running workshops in which participants don't just imagine the future, but physically enact it (prototyping as role-play):

*"In the workshop one of the groups believed that people would be motivated to use more mass transport, thus reducing CO2 emissions, if only buses were more comfortable and individualised. So they enacted a day in a person's life waiting at the bus stop, catching a smart new electric minibus and experiencing the higher service level of the CO2-free collective transport of the future."<sup>34</sup>*

**35** Brown, T., Public servants – by design in Thomas, E., Innovation by design in public services, [Available at: <http://www.solace.org.uk/documents/sfi/SFI%20-%>

**36** Bason, C. 2010, Leading Public Sector Innovation

**37** Campbell, E. 2010, *What is Embedded Design?*, [Available at: <http://www.thersa.org/projects/reports/what-is-embedded-design>]

## EMBEDDING EXECUTION

“Execution is where things can fall apart or simply limp along” warns Tim Brown<sup>35</sup>. But to ensure that the knowledge and ideas gathered through prototyping deliver on their promises, they must be developed to a stage at which they become embedded within the existing system. This would mean running pilots, but also embedding design and innovation into organisational culture; whether the Ministry, police, CPS, HM Courts or other organisation.

Christian Bason suggests that public managers are often good at management and find it harder to be inspired. However he notes that the public sector’s challenges of scarcer resources, ageing, chronic health problems, increased citizen expectations make good management alone somewhat limited: “The organisation that excels at operations excels at doing things right. But what if it is no longer doing the right thing? The only true leadership option is, of course, to strike an effective balance between inspiration and execution.”<sup>36</sup>

A small but noticeable trend in recent years has been for public and private sector organisations to recruit in-house designers rather than out-source design work to consultancies. These ‘embedded designers’ are often tasked with applying ‘design thinking’ in a broad sense to the organisation’s functions and structure.

For example Skills Development Scotland, who deliver Modern Apprenticeships among other skills development initiatives for people of all ages, recruited a service design team to improve their operation. The team’s role is partly to research customer experience and use the insights to determine the future direction for their services, and partly to help others within the organisation to understand the value of design, through clearly articulating the customer’s voice. Tony Coultas, Head of service Innovation, explains:

*“The real benefit of trying to build a service design function in-house comes from its ability to help the whole organisation deliver better customer experience, especially in facing the certainty of diminished resources over the next five years. You can’t just have one part of the organisation understanding how design thinking can benefit their work: the whole organisation needs to know it.”<sup>37</sup>*

## CONCLUSIONS & RECOMMENDATIONS

This short report has summarised some of the pressures facing courtrooms such as the need to reduce costs, improve productivity and improve user experience. Both social and technological innovation is required to solve these problems, and design is one approach which could bring benefits. Other countries' use of video technology shows promise, but is a change that requires a comprehensive understanding of the social and cultural impact, as well as the technological and legal effects.

A 'design thinking' approach would involve all courtroom stakeholders, observing their behaviours, work practices, recording their attitudes and working with them to swiftly prototype new concepts. Such an approach would be multidisciplinary, including not only the technical skills of engineers and architects but the input of criminal justice professionals, including lawyers and judges, expert groups such as translators and interpreters, prisoners and others.

The Netherlands approach provides a blueprint, and contrasts in its thoroughness with that in the UK. The Dutch Ministry of Justice created a programme which included a framework for a design-led approach to creating new courtroom environments throughout their criminal justice system. This gives the potential for a whole system approach to the problem. By contrast, the early adopters in the UK have been challenged by problems which arise from innovating in a single process which then has to integrate with more traditional ways of managing the rest of the system.

We present three conclusions about how these lessons can best be applied as the UK develops its use of video technology in court. The three important principles of applying design in the public sector also hold true for the courtroom:

**Inspire:** Future virtual courts work should involve all court users in generating ideas to improve stakeholders' user experience and integrate new technologies such as video.

**Prototype:** These ideas should be rapidly tested with court users, prior to pilots, to reduce the risk of failure further down the line, as well as suggesting more ideas to improve other parts of the system.

**Execute:** Criminal justice agencies should consider how to embed design thinking as an approach to innovation into their organisation's culture.

## FURTHER INFORMATION

The below list of organisations and links is a far from comprehensive mixture of private, public and third sector organisations involved in the application of design in the public sector:

Engine

<http://www.enginegroup.co.uk/>

Design Council

<http://www.designcouncil.org.uk/our-work/support/public-services-by-design/>

IDEO

<http://www.ideo.com/expertise/public-sector/>

Innovation Unit

<http://www.innovationunit.org/>

live|work

<http://www.livework.co.uk/>

MindLab

<http://www.mind-lab.dk/en>

NESTA

[http://www.nesta.org.uk/areas\\_of\\_work/public\\_services\\_lab](http://www.nesta.org.uk/areas_of_work/public_services_lab)

Service Design Network

<http://www.service-design-network.org/>

thinkpublic

<http://thinkpublic.com/>