LSE Team Responds to Home Office's Criticisms of *The Identity Project* Report

5 August 2005

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This document sets out the response of the LSE's ID Project Report Team to the Home Office's critique (published July 2005) of our *Identity Project* report. For ease of reference, the LSE response is based on the format of the Home Office (hereafter HO) document.

The Home Office document contains some interesting elements and we welcome the fact that the project team are engaging more fully with critics. But we are disappointed that the HO response contains substantial material errors and misrepresentation of fact. It also sets out rebuttals that cite material which is not relevant to the points in question. On a number of critically issues, HO's response rebuts aspects of the LSE report without providing alternative data (for example, on assumptions relating to population data, card loss and damage rates and the card replacement rates due to change in personal circumstances).

It is equally disappointing that the Home Office has chosen to disregard the vast majority of the LSE report. Comprehensive sections on identity fraud, policing, crime, national security, counter-terrorism, discrimination, international obligations and the UK IT environment have been ignored. Even within the two narrow areas that were chosen for rebuttal (cost projections and the alternative blueprint) 80 per cent of the relevant parts of the LSE report – some 25,000 words of analysis of costings and alternative approaches – are not commented upon.

The Home Office appears to have ignored the substantial analysis of cost assumptions published in the LSE report. As a result the rebuttals published in its response relating to cost estimates are largely irrelevant. We have, however, accepted a small number of criticisms of the alternative blueprint and will be considering these over the summer in the consultation phase for our proposals.

The Home Office's paper has confused the cost estimates provided by Kable, with those developed by LSE. We stressed in the acknowledgements section of our report that the Kable *framework* was used as the basis of our approach to developing cost projections. However, the subsequent sets of figures bear little or no relation to each other, as each was built on different parameters and assumptions.

We believe that many relevant issues not contained in the Home Office's response have the potential to form points of agreement between HO and the LSE analysis. For example, the Home Office has not criticised the *private credentials* architecture explored in the report, nor was there any disagreement expressed with the concept of an invisible identity number. We hope in the future to work with HO officials to develop these lines of research.

We note that in its response the Home Office has made a number of new claims for its identity scheme (e.g. that the checking of biographical footprints and updates of the national identity registry will be largely automated). These and other claims are not sourced in the attempted rebuttal. So we await further details before taking them into account in developing Version 2.0 of our report, due for publication in the autumn.

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1. LSE cost assumptions

LSE CLAIM	HOME OFFICE COMMENTARY
The LSE report states that, the Home Office is ignoring the advice from the Institution for Electrical Engineers (IEE) that "cost analysis should be based on typical outcomes of other complex projects not on stand alone estimates that invariably assume over-optimism and performance achievements".	This statement is incorrect. The Home Office's estimates in the Regulatory Impact Assessment include adjustments for optimism bias. In line with Treasury guidance this adjusts estimates based upon typical outcomes of complex projects. In addition the costs include allowance for contingency on operating costs. All of this was clearly stated in the RIA published on 25 May 2005.
LSE Response: We are aware that the RIA figures included an adjustment for optimism bias in line with Treasury guidance. However, in our view this adjustment is not in any way proportionate to the likely outcome of experimental projects such as the proposed national identity card. The contingency level factored into the RIA was set at a median level across a range of more conventional, less complex and lower-risk projects.	

Issuing Identity Cards: LSE Estimate: £814m - £1994m **LSE Assumptions:** 1. Card Life: Assume cards need to be replaced 1-2 times within 10 years 2. Population: Assume population of 67.5m 3. Change of Card: – 3% of cards issued replaced due to change of details, at £42 million. 4. Card Volume Figures 5. Card Damage rate – Presumption of 10%	1. The Home Office has consulted a cross section of the card manufacturing industry, and the majority has indicated that a 10-year card life would be feasible. Indeed, Hong Kong's ID card is forecast to have a 10-year life. Meanwhile, Communications Electronic Security Group (CESG) has designed an electronic security scheme that will remain robust for 10 years against people trying to create forged cards. 2. The LSE extrapolate their population figures from estimates from the 2002 consultation paper, which are not consistent with the latest population projections underlying current forecasts. 3. The Home Office's Scheme design assumes no address on the card and uses assumptions for the rate of re-issue due to name change based on actual volumes experienced by other Home Office departments which are lower than the LSE's estimates. 4. It is not clear from the LSE report how many cards they estimate will be issued in 10 years as there are several options discussed but no clarity about the number chosen. However, the lowest number quoted is significantly in excess of the Home Office's estimates. This has a significant impact upon the Home Offices and the LSE's estimates because document costs are a key cost driver.. 5. The passport damage and loss rate is 3%.
LSE Response: The Home Office's responses to these points use data that are largely irrelevant. ***1. Card Life:*** We are not aware of any groundbreaking developments in card design since the publication of the Home Office's 2002 consultation document that would allow the development of a card with a consistently reliable and dependable ten-year life. Any such claim at this point would be speculative. We understand that the focus of the CESG work on cards is on security rather	

than durability. Home Office statements to this point have generally indicated a card life of less than ten years. We accept, however, that deployment of RFID technology – while incurring greater expense - may assist card longevity. The Home Office should, however, take note of the requirements and advice set out by the International Civil Aviation Organisation (ICAO) recommending that countries move to a five-year validity period for documents.[1] The ICAO documentation also directly contradicts the Home Office's rebuttal, noting "Most Chip applications assume a chip/smartcard validity of 2-3 years - how such technology will perform over 5-10 years is yet to be tested in real world applications as the technology typically has not been deployed with consumers for that length of time."

2. ***Population***: Official population projections throughout the three-year gestation of the current proposals have not changed significantly. The original Home Office figure of 67.5 million cardholders was used by the LSE team as a base-line estimate for the purpose of consistency.

3. ***Change of Card***: The LSE team has never assumed that address details would be set out on the face of the card. Were this to be the case the replacement rate would have been much higher than three per cent. The Home Office is not comparing like-for-like by basing card replacement estimates on existing figures from Home Office departments. The replacement rate for an ID card will be higher because the integrity and functionality of the card will be more wide-ranging and significant. Importantly, the Identity Cards Bill also places an obligation on individuals to report any change of circumstance, thus placing a corresponding obligation on Home Office to replace cards where appropriate.

4. Card Volume Figures. We agree that more work is required on estimates of card volumes. This, however, will depend on agreement on a range of other related estimates. Even so, the LSE report concludes that the Home Office's estimate is on the low side.

5. Card Damage rate. The three per cent damage and loss rate for passports cited in the Home Office's response bears no relation whatever to the higher rate for cards that are in general and constant use. Most people use passports infrequently, a factor which is directly reflected in the lower loss and damage rate. We note that the responsible minister Tony McNulty was reported on 4 August 2005 as saying: "There are now so many almost daily occasions when we have to stand up and verify our identity." http://news.bbc.co.uk/1/hi/uk_politics/4744153.stm It is vital that a realistic card damage rate is used for ID cards that are intended to be in daily use, rather than a rate derived from passports which 98 per cent of the year sit at home in people's bedside cabinet drawers.

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[1] Biometrics Deployment of machine readable travel documents. International Civil Aviation Organisation. http://www.icao.int/mrtd/download/documents/Biometrics%20deployment%20of%20Machine%20Readable%20Travel%20Documents%202004.pdf

Readers for Public Sector: LSE estimate: £291m – £317m **LSE assumptions:** 1. Reader Life: Assume readers need to be replaced every 3 years 2. Reader Cost: The report quotes a figure of £3,000- £4,000 for readers. 3. Reader Purchase: LSE report quotes £261m for purchase of readers in low, medium and high scenarios.	1. Industry sources have indicated that card reader replacement cycles are every five years. Additionally, Kable's supporting estimates use this figure. Thus, it is confusing what LSE actually have used and meant to use. 2. This seems to confuse biometric enrolment equipment with identity card readers used as part of the verification system. Our estimate of £250-£750 is a conservative estimate for a card reader in a user organisation. The LSE projection of approx. £3,000-4,000 seems to relate to equipment used to record biometrics in an enrolment office. 3. This does not tie up directly to any of the figures published by Kable, referred to as the source of LSE costings. However, it is closest to the £265 million of their upper estimate – their lowest estimate was £142m.
LSE Response: ***1. Reader Life:*** We can see no circumstance where it would be prudent or practical to suggest a five-year life for readers. Security will be supremely important throughout the identity card infrastructure. Front-end technology such as readers must comply with constantly changing security requirements and constantly evolving user requirements. We believe the establishment of a five-year shelf life for readers would endanger the security and integrity of the scheme. ***2. Reader Cost:*** The LSE has been consistent in its view that the cost of readers will be greater than the range set out in the RIA. The decision that the Home Office must make is whether readers incorporating biometric recognition should be sophisticated and reliable enough to avoid the problem of discrimination. However, in setting out our estimate we assume that most public sector verification points will not embrace the higher-end and more expensive technology. If sophisticated readers were in fact to be needed more widely, then the overall cost number would be several times that set out in the LSE report. ***3. Reader Purchase:*** The LSE reader purchase figure is consistent with point 2 above. The LSE figures were not derived from the Kable estimate nor are the parameters for the two estimates in any way similar.	

Managing the National Identity System LSE Estimate: £2261m – £5341m **LSE Assumptions:** 1. Assume high volumes of maintenance transactions 2. The footprint check as envisaged by LSE costs £10-£20 and involves significant manual effort. 3. Assume a re-enrolment of biometrics every 5 years	1. The LSE range of estimates is based upon a different number of maintenance transactions to the volumes underpinning the Home Office's estimates which are based upon the Home Office Actuaries Department (GAD) and Office for National Statistics (ONS) data and the UK Passport Service (UKPS) and Driver & Vehicle Licensing Agency (DVLA) experience. 2. The footprint check figures in the LSE report appears to assume a manual check based upon 60,000 person years (although the report is ambiguous). The Home Office's anticipated processes are largely automated and thus will be at a fraction of this cost. 3. Quote from the National Physical Laboratory report "Feasibility study on the use of biometrics": "in the case of facial recognition it would seem advisable to update the templates at least every 10 years. Fingerprints and iris should be considerably more stable". Thus, we would not need to retake biometrics for the majority of citizens during the 10 year validity period of their passports.
LSE Response: ***1. Assuming a high volume of maintenance transactions.*** We would like to receive full details of the Home Office's estimates. This information has not been made available in sufficient detail. If the data is made available, and if it varies significantly to our own assumptions, we will adjust our estimates accordingly. ***2. Automated footprint checks.*** The LSE team had not gained sight of any evidence to support the claim that the Home Office proposals will embrace "largely automated" biographical footprint checking. Indeed such a claim would appear to be inconsistent with evidence given by officials and ministers. A senior HO official told the Home Affairs Committee that background checking would be "very rigorous".[2] If HO now intends establishing automated data matching regimes as a means of establishing identity we would welcome further information on this point, because such an approach would introduce a new dynamic into any assessment of	

[2] Evidence given by Katherine Courtney, 11 December 2003 http://www.publications.parliament.uk/pa/cm200304/cmselect/cmhaff/130/3121104.htm

the proposed scheme.

3.Assuming a re-enrolment of biometrics every 5 years. The LSE costings are *not* based on the assumption that the whole population has to reenrol every five years but only that the chip cards need to be replaced and securely posted out every five years (http://is.lse.ac.uk/IDcard/doublecounting.pdf fourth paragraph).

The Home Office comment also cites the NPL data in a specious way. While it may well be possible for fingerprints to remain consistent for many years for particular individuals, the response paper fails to point out that the proposed identity scheme will require several forms of biometric, each subject to varying degrees of change for each individual. The LSE estimate is a median figure that takes into account changes across all biometrics. It also takes into account the large number of individuals who would have to update their biometric more frequently.

Specific Other Staff Costs Over 10yrs: £1719m – £4056m 1. Significant staff costs in footprint checks 2. Assume all maintenance transactions are face-to-face	1. The LSE's presumption of a largely manually driven system has driven up staff costs. It is difficult to tell whether this is the same cost as in the managing the National Identity System. 2. LSE estimates for staffing the National Identity Register are based upon a different Scheme design where by change of personal circumstances entail a face to face meeting which is obviously a cost intensive process. The Home Office's own estimates are based upon a simpler and more cost effective process and total only a small fraction of the LSE estimate of £800 million-£4 billion.

LSE Response:

1. Significant staff costs in footprint checks. See response on possible automatic biographical footprint checking above.

2. Assume all maintenance transactions are face- to-face. The Home Office's claim is made on the basis of data that has not yet been made available. We will adjust our estimate if relevant information is provided. However, given the high level of integrity assumed in the Home Office's proposals we cannot see how a fully automated process will be possible without resort to a conventional password or PIN solution, either of which would undermine the Home Office's stated objectives.

Marketing Costs LSE Estimate: £500m - £1bn	We believe this is a significant overestimate. Our benchmarks include high profile Home Office marketing campaigns such as: Department of Work & Pensions pensions credit campaign - £15.58m in 2003/2004; Department of Work & Pensions bank payment campaign - £25m over 3 years; Department of Health tobacco education spending: £20m in 2004/2005 Due to the level of public awareness the marketing campaign is expected to cost significantly less than LSE estimate.
LSE response: The LSE report did *not* set out an estimate for marketing costs or indeed for any line item of that nature. Such a figure would, however, most likely be somewhat higher than the range suggested in HO's response document.	

2. The LSE 'alternative blueprint' for ID cards.

LSE ALTERNATIVE BLUEPRINT	HOME OFFICE PROPOSAL
The LSE represents a "distributed" approach There is no central register. Instead, information is on the card and backed up in third party data centres, placed all around the country. User organisations can only access information on the card that is relevant to their needs.	**The Home Office proposes a "centralised" approach** There is one central register. User organisations can verify a very limited set of facts against the register to authenticate a person's identity and help them retrieve and manage records held on their own systems.
The LSE proposal risks the security of personal information • Chips: The LSE proposal would hold a significant amount of sensitive data on the chip of the card such a medical and financial records. Information on stolen card chips could be extracted, thus having all an individual's information on the chip constitutes a significant risk. *LSE response:* This statement is incorrect. The LSE blueprint does not require or even suggest the storage of sensitive personal data on the chip. We envision the storage of multiple certificates, sectoral identifiers and possibly an encrypted biometric. Storage of	**We propose a more secure but user-friendly card** We will be limiting the information on the card's chip, which acts instead as a means of connecting a person to their record on the National Identity Register. Neither the Register nor the card's chip will contain information such as medical or financial records. *LSE response:* This entire statement is a *non sequitur*. The data on a chip does not necessarily need to have anything to do with data contained in the National Identity Register. User-friendliness of a card may well involve a greater amount of secure data and authentication potential built into the card itself. This functionality can be developed separately to the relationship between a card and a database. **We will provide more secure storage of your information:** Instead of allowing data to be stored in several distributed "data backup sources" operating with different levels of security controls, data storage operations will be in a small number of highly secure environments. These would be staffed by security vetted specialists who would be subject to maximum security working processes involving segregation of role and comprehensive audit trail functionality.

other data, such as emergency health information, would be at the discretion of the individual, but only under conditions of robust security. • Data Centres: The distributed nature of data backups at numerous "trusted third party sites", such as post offices, banks or commercial organisations such as banks, poses a significant risk. There would be potentially thousands of data centres, giving thousands of people access to the information. There is no indication of how the LSE proposes to ensure this is secure without substantial expenditure and large scale training and vetting of staff. *LSE response:* This rebuttal is misleading and incorrect. In the LSE scheme staff in Trusted Third Party organizations would have no access whatever to personal information. At no point have we ever suggested that access to data would be permitted by anyone other than the individual to whom it relates. **The LSE proposal could be much more expensive** • Chip Size: The chip size required to hold all the information necessary would be very large and thus the price of the card would be much more expensive.	*LSE response:* elsewhere in the rebuttal the Home Office has stated that its scheme will involve "one central register". It now says there will be "a small number" of environments. We request full disclosure of the proposed data environment. **This approach is common sense:** For example, a bank or supermarket does not leave small amounts of cash in its tills overnight; it transfers this cash to a safe – a highly secure central environment. This is more cost-effective than making every individual till as secure as the safe. *LSE response:* This analogy is mystifying. Banks and supermarkets do not transfer their cash overnight to a central repository such as the Bank of England. They store cash in secure distributed and local environments, in exactly the same fashion proposed for data in the LSE model. **Our approach complies with industry best practice has been recognised as more effective:** A centralised database model is recognised by leading IT, security and resilience specialists to provide the most secure and cost-effective way to administer the personal details of individuals. Requirements for the National Identity Register will comply with such industry standard best practice. The LSE model would not. *LSE response:* We contest the validity of all these assertions. Many leading security and IT experts have warned against a centralized approach. We are not aware of any "industry standard best practice" that would apply to the Home Office's model.

LSE response: we agree there is a possibility that the chip size required for the LSE model will be greater than that needed for the envisioned Home Office model. If this were to be the case the additional cost (perhaps in the order of £1 - £3) would be offset by the additional utility, security, functionality and privacy that the card would offer. This aspect will be considered during the summer consultation phase. • Custom Readers: The cost of customised readers that would only provide restricted access to card information depending on the user organisation would be significant. *LSE response:* the Home Office has stated elsewhere in its rebuttal that it is committed to developing a system that protects privacy. In any privacy friendly identity system card readers must limit access and disclosure of information according to necessity and proportionality. We cannot imagine a privacy friendly system where this is not going to be a requirement.	

Despite that, it would be of less use to the citizen • Travel: A system which operated with minimal verification of a person's identity would be unlikely to meet International Civil Aviation Organisation standards for travel documentation. *LSE response:* This claim is incorrect. In the LSE alternative model data mandated by the ICAO can both be stored securely in the chip and can harness embedded digital certificates to permit a higher level of verification for the purposes of travel.	

	LSE ALTERNATIVE BLUEPRINT	GOVERRNMENT PROPOSAL
Security	The LSE proposal allows for the easy creation of multiple identities and provision of false information • No Biometric Check: They propose no "one-to-many" biometric check on enrolment. Hence, there is no way to see if the person has enrolled without obtaining very strong third party corroboration which is not possible under the LSE's proposal. *LSE response:* This comment is misleading. While we do not support the "one to many" mass comparison of biometrics proposed by the Home Office, the LSE model does incorporate limited biometric elements. The Home Office's proposal for national mass matching of biometrics is technically infeasible and functionally dangerous. • Poor Third Party Corroboration: The LSE propose to replace a personal interview and footprint check with reliance on a wide range of approved	The Home Office proposes a more robust system that will offer greater protection against the creation of multiple or false identities The creation of a register of limited registrable facts where a person's record is linked to a set of unique biometrics will combat attempts to create multiple identities. Our plans to build on UKPS processes to include a personal interview and biographical footprint check on enrolment, rather than to rely on referees, will provide assurance to citizens and organisations that information on the register is correct.

	referees, who will only be checked at random. Referees can be easily coerced or bribed (e.g. companies don't trust them for job applications) and thousands of potentially fraudulent applications would go unchecked. This is loosely based on the system UKPS wishes to replace. It offers no benefit in improving identity documentation and would see us fall behind progress being made to improve documents on an international level. *LSE response:* we acknowledge that, ideally, additional work will be required over the summer to strengthen the corroboration element of the LSE proposal. However, we are confident that the "triangulation" model we have outlined forms a rational, cost effective and secure basis for national registration. The Home Office has also recognized that its own proposal could permit false applications or applications under false identities. Equally, corruption in the application procedure is not limited to the LSE model.	

Security	• Use of Kiosks: The proposed use of kiosks, with the facility to allow a second person into the kiosk with the applicant allows for coercion and keyboard logging to capture personal data. *LSE response:* The purpose of allowing access to the kiosk by a second person is to facilitate assistance to those who wish support. As this companion would be an invited health professional, friend or family member it is difficult to envision circumstances where intrusion or coercion would apply. Additionally, only very limited non-sensitive data is entered onto the system at the first stage of application. • Maintenance Procedures: The LSE proposal allows the update of information "at will" but fails to impose any need to check that updated information is correct or to prevent changes to be made under duress. *LSE response:* we note a major contradiction in this rebuttal. Elsewhere in the Home Office's response the claim is made that the	**The Home Office's proposal offers greater privacy in enrolment** Based on our public research, there is strong support for the enrolment model proposed by the Identity Card Programme, involving specialist staff in a secure and private environment. *LSE response:* This assertion appears to be largely without foundation. The model proposed by Home Office is a lengthy and data-driven personal interview involving the collection of multiple biometrics. It would be far more intrusive than the process proposed by the LSE. **The Home Office will provide more secure storage of personal information:** As previously mentioned, instead of allowing data to be stored in several distributed "data backup sources" operating with different levels of security controls, data storage operations will be in a small number of highly secure environments, staffed by security vetted specialists who would be subject to maximum security working processes. *LSE response:* See our comments elsewhere in this section. **The Home Office have been working with acknowledged security experts to ensure the Scheme will meet highest industry standards:** The programme is working with acknowledged security specialists, Communications-Electronic Security Group, National Infrastructure Security Co-ordination Centre and other organisations to ensure appropriate measures are in place to maintain a secure and resilient system. The National Identity Register will be formally security accredited in accordance with Home Office policy.

	updating of data in the HO model will be "largely automated" with no requirement for face-to-face meetings or manual verification. Why then is the Home Office criticizing this element of the LSE model? • Social Networks: Although acknowledging the problem of corruption through social networks, the LSE proposal allows application processing and maintenance processes to be done by thousands of people across the country in public and commercial organisations instead of by a number of vetted, trained staff in a dedicated agency. *LSE response:* We have previously acknowledged the importance of strengthening the LSE model to take account of risks in the application procedure. We welcome further dialogue with the Home Office to achieve this aim. However we also assert the inherent common sense of our model.	

	• Security of Data Centres: Plans for storage of data would fail to provide the same level of security as the Home Office's proposals without incurring substantial cost. *LSE response:* We vigorously contest this claim. The LSE's report contains a substantial assessment of the risks inherent in a centralized approach. While in the LSE model there is a theoretical risk of isolated cases where security may be compromised, the Home Office model places the entire national reserve of data at risk. **The LSE's proposal indicate no sign of a security risk assessment** There is no indication that a professional risk assessment has been conducted. Indeed, the LSE's demand that there is complete transparency in all processes would provide valuable information on how to attack the system to organised crime, hackers. Some secrecy is required to protect the data of citizens as well as the interests of national security.	

	LSE response: Additional risk assessment on the LSE's model will be conducted over the summer. We believe the Home Office's focus on non-disclosure is in many circumstances prejudicial to a secure and robust identity system, though we agree there should be consideration of certain limits with regard to full disclosure.	
Cost effectiveness	**The LSE's proposal is not costed:** Very little evidence is provided that any serious work has been done to cost the LSE's proposal. It is extremely vague. Some of the figures provided are wrong and, given their proposal, they appear to have been naïve in considering its potential cost to the citizen and State – for example, they appear to have failed to recognise the significant costs Trusted Third Parties would incur. *LSE response:* Full costings for the LSE model will be calculated on completion of the consultation phase. However, the Home Office should be aware that its own scheme will also	**The Home Office's plans build on planned infrastructure required for the UK Passport Service** The agency which will issue ID cards would incorporate the functions of the UK Passport service which has to build an infrastructure to incorporate certain biometric identifiers into existing identity documentation in any case. The key additional costs focus only on: • Extending the scheme beyond the 80% of people aged 16+ who will have passports in 2008 • Materials associated with the manufacture of the card • Recording, matching and storing 3 types of biometric information • Providing an on-line verification service which can validate ID cards and other identity enquiries for user organisations. *LSE response:* we acknowledge that the Home Office is proposing to build on the existing passport infrastructure. We contend that this approach is not necessarily the most appropriate, secure, cost effective or functionally useful way to develop an identity system. Once the LSE's consultation has

	incur a cost to business. These costs are *not* currently taken into account in the Home Office estimates. We note that on 4 August 2005 the Better Regulation Executive in the Cabinet Office was reported to have asked the National Audit Office to investigate the costs to businesses of the Home Office ID card proposals. **Claims of possible savings in the LSE proposal are incorrect:** The report claims £1- 3bn. could be saved on maintenance costs, as it claims that no maintenance is required under the LSE solution. In reality, this is very unlikely. The maintenance costs of an efficiently administered scheme should not approach this figure. In addition, the LSE appear to believe that they will accrue very little cost from services provided by trusted third parties to citizens updating and backing up their information, which is also highly unlikely – it would be costly to both the citizen and the Home Office. *LSE response:* These costs will be itemized on completion of the consultation phase.	been completed in the autumn the two approaches can be compared and contrasted. **The LSE system would require the development of a completely new infrastructure, which would pose a much higher risk and greater cost.** The benefits of the Home Office's scheme will outweigh the costs, whereas the LSE scheme will have very few benefits: The ID Cards Programme is working with identified stakeholders who have substantial benefit to gain through the introduction of an ID cards scheme . They have indicated that the benefits are based on having trust in the information on the Register. The security weaknesses in the LSE would erode these benefits. *LSE response:* The LSE scheme contains none of the systemic security vulnerabilities inherent in the Home Office model. We have also worked with stakeholders who wish to benefit from an identity system and who wish to avoid endemic security flaws. Our model has the additional advantages of being largely under the control of the citizen him or herself, while also being based on the concept of informational self-determination. The implementation costs of any ID card scheme will be strongly affected by the degree of citizen support and acceptance for it. The LSE scheme provides a strong basis for achieving a high level of citizens support, while the HO scheme will fuel citizen worries and likely levels of resistance to implementation. **The Home Office's approach would allow a more controlled, planned rollout, reducing the risk of delivering the scheme** The rollout of ID cards will be managed by e.g. linking their issue to passport renewals. This would not be practical with a network of kiosks and third parties suggested by LSE – workflows and manpower requirements would be extremely difficult to plan.

	The LSE's proposal could be significantly more expensive: The LSE have provided no evidence about how much their network of "trusted third parties" could cost. These are likely to be significant, especially with regard to technology, manpower and the need to provide these third parties with a return for their service. Costs would include: • Need to rent floor space for kiosks • Need to pay trusted third parties for staff time • Need to provide significantly more staff training • Need to significantly increase staff security vetting • Need to deliver a profit to trusted third parties • Need to extend security to thousands of data centres • Need to provide a much more powerful card chip • Need to use much more sophisticated readers • Increased staff times for document and referee checking • Loss of revenue from identity services checks against a central register	*LSE response:* We acknowledge that the rollout of the Home Office scheme may be conducive to more precise targets and resources management than would be possible in the current LSE scheme. This is an aspect that will be considered over the coming few months during the consultation phase. We hope to achieve a more predictable rollout model during this period. **The Home Office's proposals are costed** There has been a great deal of effort put into costing the proposals to allow the Home Office to get the best value for money during the procurement process. The LSE proposal is not costed and indeed would appear highly expensive. *LSE response:* see our comments above.

	LSE response: we are aware of these and other cost and opportunity factors. Some have already been taken into account. Others are not relevant to the alternative model. Several await further assessment during the consultation phase. The key difference between the LSE model and the Home Office model is that we will abandon our approach if it is deemed too costly or technically challenging.	
Functionality and benefits	**The LSE's proposal would offer little benefit to society:** As the LSE report recognises, confidence in the ID Cards Scheme having robust and incorruptible processes that prevent criminals from laundering their identities, or enrolling multiple or false identities, is fundamental to the delivery of many of the benefits of the scheme. The LSE scheme could not deliver this – it would add no value to existing methods of proving identity. *LSE response:* The Home Office has never quantified the extent of criminal use of false identity or the criminal use	**The Home Office's proposal offers key benefits to society and the individual:** The Home Office's proposals will allow organisations to place a high degree of trust in the scheme. The security weaknesses in the LSE proposal would erode these benefits. For example: • citizens will not be given the option to update their address with several public organisations at one single source. Thus, the opportunity for better Home Office customer service would be lost · *LSE response:* This assertion is not correct. The LSE architecture is designed to achieve a multiplicity of functions of this nature. Customers can choose to create notification of a change of circumstance that can be carried across a range of organizations. Whether this facility can be enacted will depend on Home Office decisions to use the appropriate technology.

	of multiple identities. Existing estimates are rough and ready and contested. The value to society of this alleged benefit cannot therefore be fixed. **The LSE proposal would be less user-friendly** • Lack of Trust: The weakness of the LSE's enrolment process would mean very few organisations are likely to accept their card as proof of identity, placing additional burdens on the citizen to prove this in another way. *LSE response:* Unless the Home Office is proposing to provide or require comprehensive online access with consequential disclosure of personal details such as address, customers will still be required to provide forms of documentation other than the identity card. The Home Office should clarify precisely what levels of disclosure will be permitted and under what circumstances requests for data can be made by commercial organizations. We do not agree with the assertion that the LSE model will not be trusted.	• the ability to speed up Criminal Records Bureau disclosures from 4 weeks to 3 days would be lost, with consequences for organisations employing people in positions of trust. *LSE response:* We cannot see why this process cannot be enabled using the LSE architecture. Job applicants would need only to create the appropriate permissions, in much the same way as they currently sign a consent form authorizing access and disclosure of data. **Our proposal would be more customer-focussed and inspire greater public trust:** The Home Office's ID Cards Scheme is being designed to inspire public trust and keep any burden on the citizen to a minimum: • Track Record: We are building the agency on the success of UKPS' track record – they have been rated top of the FDS customer satisfaction survey for large public and private organisations for the last two years • High Standards of Service: Specialist staff will conduct enrolment with the individual in a safe and discreet environment, where facilities to assist those with special needs will be available. Latest technology will be used to allow easy, secure maintenance of key information through a number of different channels – internet, post and telephone

	• Travel: The card proposed would not be ICAO compliant and as a result, could not be used as a travel document in the EEA like many other national ID cards are. *LSE response:* This assertion is not correct. The LSE card system will be more robust and trustworthy than many national ID systems in Europe. See our comments above and in the international section of the report. **The LSE proposal has customer service weaknesses** There are a number of serious weaknesses in the LSE's customer service model: .· Time Needed: Enrolment would require three visits to a trusted third party instead of one visit to an enrolment centre. An individual would still need to undertake a completely separate enrolment for a passport. *LSE response:* This assertion is only partially valid. There will be many occasions where applicants under the Home Office scheme will be required	

	to pay a second visit to an enrollment centre (for example to provide additional documentation or to re-register biometrics). The third visit under the LSE scheme referred to in the Home Office response would be simply to collect and validate the card. This is a secure process that the Home Office should consider carefully in the gestation of its own proposals. Special Needs: The kiosk solution does not cater well for those with special needs or those with requirements due to their faith. *LSE response:* This is incorrect. As outlined above, the kiosk solution was designed specifically to meet special needs. Facilities: The facilities would be less private and less secure compared to an enrolment centre. The Home Office's research shows it would not inspire public trust. *LSE response:* This assertion has no basis in fact. Kiosks can provide more privacy and security than conventional Home Office facilities (consider the often intrusive design of existing facilities for passport applications,	

	DWP benefits applications and National Insurance Number applications). Additionally, we are not aware of any Home Office research on public attitudes to the LSE model. If such research exists we would be anxious to see it. Staff: Staff would not be specialists – they would be bank, post office or job centre staff. It would be difficult to train them to a high standard without massive cost and they would not be focussed on this task alone. Thus customer service would suffer. *LSE response:* This observation is only partially valid. In the Home Office model users would still be required to undertake training. One key aspect of the LSE model is that staff would not be required to undertake training to the same extent as would be the case in the Home Office model. Some key skills in the two models would require equal levels of staff development. Training to use biometric equipment, for example, would be a requirement in both models but comprehensive training for registration of applicants would not be required for the vast majority of staff managing the LSE model.	

CLAIM	HOME OFFICE COMMENTARY
The LSE have claimed that the Home Office has not consulted widely in the development of its proposals and has implied that, as a result, the proposals are not reliable	The Home Office has consulted very widely and have conducted in-depth research with members of the public. In total, we have consulted with over 300 public and private organisations in accordance with best practice and we continue this process. This is significantly more than the consultation involved for the LSE proposal. *LSE response:* We have no doubt that the Home Office's consultation exercise has been bigger than the one conducted by the LSE. However, our point is that the Home Office consultation was chiefly intended to justify a pre-determined design for the scheme. The LSE consultation involved listening with a more open mind to what business and civil society stakeholders wanted to achieve from an ID card scheme. In addition, we have employed expert assistance in setting requirements for the Scheme, involving fellows and members of the British Computer Society, the Institute of Electrical Engineers (IEE), the Institute of Electrical and Electronics Engineers (IEEE), the Information Systems Audit and Control Association (ISACA), the International Information Systems Security Certification Consortium and CESG certified consultants. We have also consulted with leading biometric experts from globally renowned universities in the biometrics field such as San Jose and Cambridge Universities. *LSE response:* The Home Office is aware that the LSE has also worked with fellows and members of these and other credible institutions. There will also be independent assurance. The Home Office's Biometrics Assurance Group will review biometric aspects of the Identity Cards Programme. Sir David King, the Home Office's Chief Scientific Adviser, will chair the Biometrics Assurance Group which is being established as a panel of internationally eminent specialists in biometrics and related technologies. In addition an Independent Assurance Panel will cover Project Management, Finance, Procurement and the other aspects of the Programme not covered by the Biometric Assurance Group. It will be chaired by Alan Hughes, a former Chief Executive of First Direct Bank. *LSE response:* We are encouraged by this news and await the outcome with interest.

The LSE claims that the Home Office plans to vet people's "life history and activities" in the enrolment process.	We have no intention of vetting a person's life history and activities. We are simply confirming the true existence of an identity before issuing an ID card-that is not the same as obtaining details about someone's life activities or their credit history. *LSE response:* This is new information. Statements from officials and ministers have up until now indicated that a comprehensive biographical check will be conducted. We are also surprised to hear that credit reporting data will not be used, despite indications to the contrary. According to a ministerial answer given by Des Browne on 27th January 2005 the Home Office Identity Cards team have held discussions with both Equifax and Experian. We also understand that credit reference company databases will be used in determining future passport applications.[3]
The LSE suggests that the Identity Cards Scheme infringes of the European Convention on Human Rights (ECHR) and the Data Protection Act DPA).	The Identity Cards Scheme and legislation is compliant with ECHR and DPA. We have published documents which set this out. We note that the LSE report did not quote the Council of Europe Commissioner for Human Rights, Mr. Alvaro Gil-Robles, who has said: "The issuing of some form of identifying document to all residents does not seem to me to be objectionable in principle, nor does the right to private life guaranteed by the Article 8 of the Convention preclude it. I carry an identity card myself and find it more useful than annoying". *LSE response:* The Home Office has not correctly represented the stated position of the Commissioner. His words, directly following those quoted above, are: "What is important is the range of information stored, the range of persons with access to this information and the purposes for which the information might be used. Put simply, an identity card should be no more than its name suggests – a document containing sufficient information, and no more than is necessary, for establishing an individual's identity for relevant administrative purposes… The information should be used solely to establish identity for legitimate administrative purposes clearly specified by law and solely to the extent that those purposes require. Access to such information should, therefore, be conditioned by the same criteria." We agree entirely with the Commissioner's views. They are based on an understanding of law and an awareness of best practice in data protection. The Home Office's proposal could not be further from the requirements set out by the Commissioner. His full comments are at: http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/08_06_05_human_rights.pdf paragraphs 154 and 155 (also available at www.libertysecurity.org/IMG/doc/CommDH_2005_6_E.doc)

[3] Computing, 20th July 2005, http://www.computing.co.uk/computing/news/2140091/passport-service-sharing-scheme

The LSE implies that the Home Office plans to use ID cards as entitlement cards	This is not the case. The ID card will be used as secure proof of identity but user organisations will use their own business rules to assess entitlement, although some pieces of verified identity information will assist that process. *LSE response:* This rebuttal appears confused. We have not in any way misjudged the likely range of circumstances where cards may be used within the private sector. However, such situations should not be regarded as "entitlement". We understand the extent of the provisions of the Identity Cards Bill and took at face value the assertion by former Home Secretary David Blunkett before the Home Affairs Committee that the card could be used for services and applications such as video rental. The Bill makes explicit provision for use of the cards for entitlement to public services. We note that current minister Tom McNulty was recently reported as apologizing that the Home Office ID cards scheme has been 'oversold' as a panacea for too wide a range of problems (*Guardian*, 4 August 2005, p.1).
The LSE implies that the Home Office has designed the IT architecture for the Scheme already without consultation with industry.	The Home Office is working to define the requirements of the IT architecture and possible reference solutions prior to procurement. To work on defining these requirements, we have employed industry experts and continue to involve consultations with a wide range of public and private organisations. *LSE response:* We are not sure how this implication was derived. The Home Office has most definitely consulted with industry, but chiefly to justify a pre-conceived architecture – see our comments above.

The LSE claims that the Home Office's scheme will allow "a full flow of information across sectors and other boundaries".	This is incorrect. Information can only be verified from the register with consent or in accordance with required identity checks for public services authorised by Parliament. Instances where information is provided without consent are strictly regulated in the Bill and will be subject to independent oversight. In addition, user organisations will be accredited and subsequently audited to ensure the proper use of information. No user organisation actually gains access to the Register to search for information – it is provided to them based on a properly authorised request. Finally, there is a criminal offence in the Bill of unauthorised disclosure of information from the Register. *LSE response:* This statement misrepresents LSE's analysis. The LSE report warned that the Home Office's model was intended to "*enable* a full flow of information across sectors and other boundaries". This technical capacity would most definitely be enshrined in the proposal. Our alternative blueprint, from which this partial quote was drawn, would establish technical limits on the flow of data.
The LSE alleges that public trust in the scheme is "weak".	The Home Office published research into attitudes regarding the Identity Card Scheme on 28 June. Conducted by Taylor Nelson Sofres (TNS) and using advanced "conjoint analysis" techniques, it showed a high degree of support for the Home Office's model of issuing ID cards (~70%) at costs similar to the current best estimate of the unit cost of issuing a combined passport/ID card package. In addition, the recent UK Passport Service biometric enrolment trial of 10,000 showed that the vast majority of participants reacted positively and their overall experience of the process met or exceeded their expectations. *LSE response:* The Home Office cites an exceptional finding. Most recent opinion polls suggest that the public exhibit a range of substantial concerns that undermine the critical level of trust required for the successful implementation of the official identity card proposals. Public support for the HO scheme has been falling and when citizens are asked about costs support falls away very rapidly. The results of the UKPS trial are irrelevant to the overall measurement of trust. Securing and maintaining a public consensus that is *overwhelmingly* supportive of a new ID card scheme will be fundamental to its likely costs, implementation timetable and future efficacy. We believe it is plain to all impartial observers that the current HO scheme does not command such support.