

Project DUCO: An Impartial Technical Evaluation



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Executive summary

[REDACTED] requested that Dstl conduct an impartial technical evaluation of **Project DUCO**, a pilot study conducted in [REDACTED] between May and November 2013, utilising a commercial 'hybrid' Target Audience Analysis (TAA) approach. [REDACTED]

In order to achieve this Dstl utilised a multi-disciplinary project team who focussed on assessing the Method, Fieldwork, Analysis and Reporting and Communication of Project DUCO. This report presents a SWOT² analysis under each of these headings along with key findings and suggested lessons identified (recommendations) to be considered if MOD chooses to deploy this approach in the future.

An overview of the Project DUCO approach is presented at Annex A. Its over-arching strengths, weaknesses, opportunities and threats can be summarised as follows.

Strengths	Weaknesses
[REDACTED]	[REDACTED]
Opportunities	Threats
[REDACTED]	[REDACTED]

Dstl's evaluation of each of the key focus areas for Project DUCO is summarised as follows:

Method – [REDACTED]

¹ [REDACTED]

² Strengths, Weaknesses, Opportunities, Threats. This is an established problem-structuring method, which was selected to evaluate Project DUCO because it provides a balanced output.

[REDACTED]

- **Fieldwork**

[REDACTED]

It was not possible to verify whether the quantitative samples collected were representative of the target populations of interest, which SCL and Dstl have both identified as a short-coming.

[REDACTED]

- **Qualitative Analysis**

[REDACTED]

- **Quantitative Analysis –**

[REDACTED]

- **Reporting and Communication**

[REDACTED]

5 [REDACTED]

Key Recommendation:

This report has highlighted the lessons identified from Project DUCO which warrant further consideration should [REDACTED] choose to adopt this method in the future. **It is recommended that a thorough and joint project wash-up is conducted between [REDACTED] Dstl, SCL and [REDACTED] to discuss these in the first instance.**

Recommendations for future work:

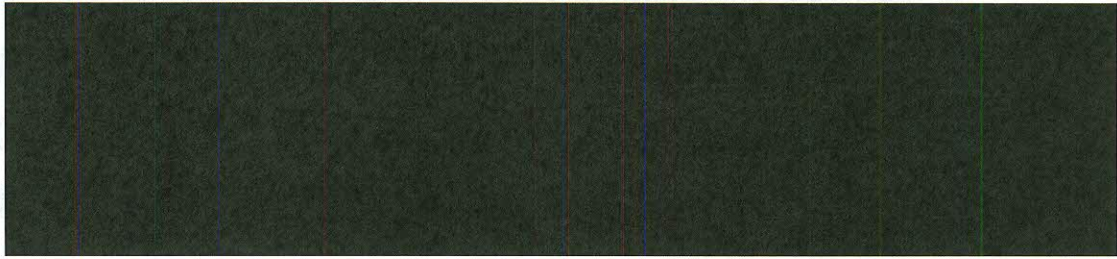
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

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[REDACTED]

[REDACTED]

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1 Introduction

1.1 Background

[REDACTED] commissioned a pilot study to assess how Target Audience Analysis (TAA) might contribute to cross-government strategic communications decision-making. Under the title 'Project DUCO', [REDACTED] trialled a 'hybrid' TAA approach in [REDACTED] from May to December 2013. The aim of the pilot was to assess the utility of this approach to identify emerging groups, the motivations behind their formation and their likely behaviours¹¹ in a given context. The pilot comprised a combination of two commercially-available methodologies:

1. The Strategic Communications Laboratories Ltd (SCL)¹² Behavioural Dynamics Institute (BDI) methodology¹³. This is a behavioural science based methodology underpinned by social psychology and anthropology principles. The pilot focussed on the first two phases of the BDI process:
 - a. Country Sweep. Structuring of the problem space through secondary research and initial primary research.
 - b. TAA. Focussed primary research and analysis of identified Target Audiences and Target Groups.

[REDACTED]

[REDACTED] In summary, SCL deployed their BDI Country Sweep methodology to identify key factors affecting instability in [REDACTED] and the Target Audiences (TA) associated with them. This approach isolated 25 key TAs as being critical to stability. The SCL TAA methodology was then deployed to hone in on understanding 'Young Unmarried Males' (YUMs), seen as one of the most critical TAs, [REDACTED]

1.2 Tasking

Dstl were tasked [REDACTED] to undertake an impartial technical evaluation of Project DUCO, and specifically to assess [REDACTED]

1. The genesis of each methodology, specifically the research / academic rigour of its development.

¹² <http://www.scl.cc/>

¹³ <http://www.bdinstitute.org/our-work/about-the-bdi-methodology/>

2. The field research and the soundness of the data collection techniques employed
3. Analysis of the field research to ensure that it is fit-for-purpose for strategic communications and that [REDACTED] can have confidence in the output.

The evaluation was undertaken as part of the Human and Social Influence (H&SI) project in the financial year 2013-14, funded from the MOD Science and Technology (S&T) research budget.

1.3 Approach

The Dstl project team comprised a Project Lead, two Principal Psychologists, an Anthropologist and a Senior Operational Analyst, all with significant experience in Defence Influence Activity and Outreach (IA&O) and in implementing social science principles to support MOD and Other Government Departments (OGD). In order to retain impartiality Dstl avoided utilising staff with previous experience in or exposure to the contractor consortium [REDACTED]
[REDACTED]

The project team adopted the following approach to conducting the evaluation:

1. Source background detail regarding both methodologies from SCL [REDACTED] [REDACTED] including underpinning academic theories, analysis processes, data collection plans and sampling strategies, field team training material, fieldwork instruments, interim outputs and previous case studies.
2. Conduct several 'walk-through-talk-through' meetings with the contractors, supplemented with consolidated question-sets delivered and responded to via email.
3. Review Project DUCO final report and associated presentation material.
4. [REDACTED]
5. Consult additional Dstl subject matter experts (SMEs) to substantiate findings, cross-check and gather additional feedback. This included a Verification and Validation (V&V) expert, a Senior Anthropologist, polling and fieldwork experts and several additional social scientists.
6. Conduct final contractor consultation to discuss initial Dstl findings and provide opportunity to clarify outstanding items.

[REDACTED]

7. Gather and assess audience feedback from 06 December 2013 cross-Government briefing to gauge potential end-user utility¹⁸.

The evaluation was guided by the principles outlined in social science evaluation frameworks.¹⁹ Figure 1 provides an example of the types of questions used to evaluate the Project DUCO approach.

Figure 1: Project DUCO Evaluation Guiding Questions

Theme	Guideline Appraisal Question(s)
Method	<ul style="list-style-type: none"> • Is there a discussion of the rationale for the methodology? • Does the literature presented adequately summarise the current state of understanding and knowledge? • Are the descriptions clear and unambiguous? • Are limitations of the methodology and their implications discussed? • Is the methodology scalable / adaptable? • Is there a lessons learnt process?
Fieldwork	<p>Planning:</p> <ul style="list-style-type: none"> • Who conducts the data collection? What competencies / training / experience are required? • Is there discussion of how populations of interest are identified? • Are considerations of sample selections presented? • Is there any discussion on the ethical implications involved in the methodology and how these need to be considered? <p>Execution:</p> <ul style="list-style-type: none"> • Is there discussion of study locations and how / why they were chosen? • Is there discussion of access and methods of approach? • What control mechanisms are in place to ensure data collection is conducted objectively? • Is there discussion of procedures / documents used for collection / recording?
Analysis	<ul style="list-style-type: none"> • How adequately has the research process been documented? • How clear are the links between data, interpretation and conclusions? • Is there discussion of likely unintended consequence and impact?
Reporting and Communication	<ul style="list-style-type: none"> • How clear and coherent is the reporting? • Has structure / signposting been used to guide the reader? • Is confidentiality of the data and security considered?

1.4 Caveats and Assumptions

This report is issued with the following caveats and assumptions:

1. The evaluation is based on the material made available by the contractor consortium.
2. The evaluation has focussed on whether the methodology is fit-for-purpose in isolation of consideration of other commercially available TAA approaches.

¹⁸ See Project DUCO 06 Dec 2013 Post Brief Questionnaire Response Analysis. This contained an analysis of audience feedback from 40 respondents conducted by Dstl [REDACTED]

¹⁹ For example, Spencer, L et al (Cabinet Office), Quality in Qualitative Assessment Evaluation: A framework for assessing research evidence, Aug 2003 and Moore, S, Guidelines for Assessing the Reliability and Validity of Tools, Techniques and Methods Used to Support Information Operations, Apr 2006.

Therefore in-depth assessment of its 'uniqueness' or whether it is new and innovative is outside the scope of this report²⁰.

3. An evaluation of whether Project DUCO adds value and represents value for money for MOD is outside the scope of this report. It is assumed that the contractors were selected through fair and open competition or that a business case was approved for single tender.
4. Wherever possible Project DUCO was evaluated in its totality. Specific comments related to either the SCL [REDACTED] methods are annotated as such.

[REDACTED]

1.5 Report Structure

In order to answer the key questions posed by [REDACTED], Dstl's approach concentrated on four key themes / areas of focus: Method, Fieldwork, Analysis, Reporting and Communication.

The findings under each of these themes are presented in the following chapters. Each chapter begins with a summary SWOT²¹ analysis with further qualifying comments and detail provided under the relevant sub-headings presented below. Where relevant, lessons identified are drawn out for future consideration if MOD chooses to deploy this methodology elsewhere.

²⁰ For example to a lay user the varied data sources (e.g. household surveys, interviews, media reporting) used in the Helmand Monitoring and Evaluation Programme (HMEP) project delivered by Coffey International could be comparable to this method.

²¹ Strengths, Weaknesses, Opportunities, Threats.

2 Method

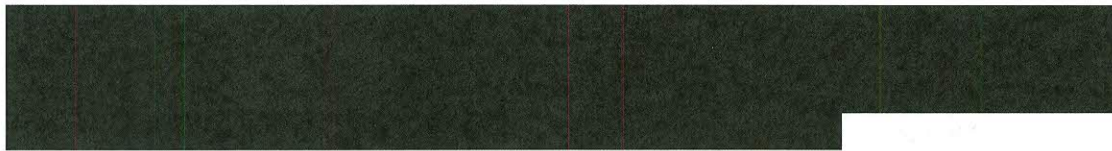
Strengths	Weaknesses
<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none">• Use of SMEs throughout process to direct and validate research.• [REDACTED]	<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none">• Replication / repeatability not feasible from report.• [REDACTED]
Opportunities	Threats
<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none">• Greater engagement with the applied psychology literature base.• Regular updating of the parameter literature base.	<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none">• Some of the theories presented have not been rigorously tested.

2.1 Overview

[REDACTED]

[REDACTED]

[REDACTED]



the theoretical basis of the BDI methods have evolved in isolation, therefore each is now considered in turn in the following sections.

Lessons identified:

- Investigate the relative value of each stage of the Project DUCO approach in order to inform decisions on the impact of removal / reduction in emphasis.

2.2 Underpinning Theories

2.2.1 Behavioural Dynamics Institute method

The BDI supporting material reviewed for this evaluation offers a concise summary of relevant psychological and anthropological theories which form the basis of the method. It is clear that the BDI has invested effort in understanding the relevant theories for inclusion and have developed training materials to ensure all staff are conversant to some degree with the principles behind their inclusion and use. Given the extent of the literature base it is important to note that there are many theories and possible approaches that could be used to inform TAA. Notwithstanding this, the theories forming the base of the BDI approach are credible, extensive and fit-for-purpose. SCL noted separately that these underpinning theories are under constant internal review and refinement in the methodology itself²⁴.

Three keystone elements of the BDI method are now focussed on for further comment:

- Research parameters;
- Desk-based research;
- Use of subject matter experts.

2.2.1.1 Research Parameters

The BDI method is grounded upon 40+ 'research parameters', listed below in Figure 2, developed from a variety of established psychological and anthropological principles. This range of theories takes into account groups and their social and physical environments, social networks and norms, an essential stance necessary to produce multi-level intervention strategies which is considered best practice in behavioural intervention research. That is, the inclusion of methodologies which are capable of understanding behaviour, as well as the environmental (e.g. cultural,



²⁴ For example a new measure of entitlement was used in Project DUCO.

political, economic) contexts is required to develop behaviour change initiatives which address inter/intra-personal factors and environmental institutional factors.

[REDACTED]

[REDACTED] requested that Dstl avoid nuances of academic debate / opinion regarding each individual research parameter. Therefore the following summative key points are provided:

- Inter-personal theories such as Social Learning Theory and Social Cognitive Theory are well captured within the parameters with consideration of behavioural capabilities (i.e. mastery), self-efficacy (confidence in one's ability to perform a given behaviour), observational learning (role models) and an understanding of rewards and incentives for fulfilling behaviours. Environmental or institutional factors are also well covered with aspects of common enemy identification and group norms. A useful addition to this may be the inclusion of Diffusion Theory to better understand how behaviour change messages promulgate through communities.
- The most prominent theories for explaining behaviour within the individual self of mind (intra-personal factors) are covered within the BDI literature base. There is also inclusion of intra-personal theories which consider behaviour change as a cycle as opposed to an event with 'propensity for change' using the 'trans-theoretical model of change'. A number of other measures employed by BDI take a 'snapshot'. It is important that interpreting data from other measures is done taking into account stages of behaviour change i.e. a cycle including pre-contemplation (not thought about it yet), contemplation (motivated and intends to change behaviour) preparation (has begun goal formation and taken some steps) to post action stages.
- Some of the theories contained in the information provided were dated.²⁵²⁶ Whilst they are on the whole credible, it is important to note that because of the academic fields they are based on, they require constant inspection by the project teams to ensure latest findings and data from recent applied studies are captured and reflected in BDI's use. Furthermore, some models²⁷ employed by BDI have not been sufficiently scientifically tested and although they may be widely accepted, theoretical developments should be constantly reviewed to ensure that concepts have not been superseded by further, more rigorous, testing.²⁸

²⁵ Acknowledging the fact the material was an introductory training aid, but in the absence of any other background material this point is necessary.

²⁶ SCL noted that they were aware of this limitation. As an example there is reference to many classic Anthropological texts but nothing post-2000 and a few key Anthropological theorists that would be expected to be referenced are absent (e.g. Victor Turner, Van Gennep in the Rituals parameter).

²⁷ For example, Tuckman's 'Forming, Storming, Norming, Conforming' model of group formation is based on non-representative samples but is widely used and supported.

²⁸ SCL noted that this was in fact done, but just not reflected in the training material provided.

- Throughout the parameters, there was an emphasis on cultural sensitivity²⁹ and cross-cultural values. This is a significant element of TAA and absolutely essential for successful strategic communications. For example, there was explicit reference to the need for a “*sympathetic disposition to rituals*” in relation to timing the dissemination of messages. However to ensure a truly multi-disciplinary approach, some of the parameters could benefit from including a broader theoretical basis and greater use of anthropological theories. For example, in parameters such as ‘Normative Affiliation’.³⁰
- The BDI method represents ‘best practice’ in their consideration and selection of parameters to be used in a project. There is recognition that no one theory holds enough explanatory power to conduct TAA and instead the parameters for inclusion are selected to be relevant and specific to each use case. The BDI methodology selects parameters after a thorough assessment of the problem space and the desired behavioural objectives which is preferable over other approaches which employ the current, or most popular models, and make them fit³¹. The selection of parameters, like the whole methodological approach, is logical and supported by SME judgement as well as experience developed through previous implementation.

Lessons identified:

- Resource is concentrated on parameters which are likely to incur the most insight / gain / explanatory power in the BDI approach.
- Training literature is updated to ensure continued credibility of the research parameter base.
- The limitations of the concepts discussed in the research parameters are discussed in more depth in the training material and report.

2.2.1.2 Desk-Based Research

The BDI methodology begins with Desk-based Research (DBR), a capture and review of the literature base on the area of interest. For Project DUCO this was collected under seven themes:

- Geography
- People
- Society and power structures
- Administration
- Economy
- Communication
- National security

³⁰ From the material seen, it appears that the Normative Affiliation parameter is almost entirely based in Psychology and Cultural Psychology. Norms are also extensively studied in Anthropology (and Sociology). For example Clifford Geertz (1973), Margaret Mead (1978) and Thomas Hylland Eriksen (2001) may give an additional perspective.

³¹ For example, using popular theories in isolation such as Theory of Planned Behaviour as an end-to-end explanatory tool.

[REDACTED] The themes were supplemented by additional customer Requests for Information (RFIs) [REDACTED]. It was explained that all DBR was conducted utilising standardised data capture templates, although these were not seen by Dstl, and the key facts / findings were only relied on if verified by 2-3 sources. This implied the DBR was conducted in a systematic manner and was quality assured.

The DBR drew on a wide range of available material from traditional (e.g. books, academic journals, media) and non-traditional sources (e.g. websites, social media), with acknowledgement of the potential limitations of some sources. An extensive bibliography was supplied in the final report allowing readers to cross check and investigate articles of further interest.

The DBR was presented in the final report in four consolidated thematic areas – political, economic, social and security with further ‘relevant issues’ (i.e. hypotheses drawn out from the DBR) sub-headings. It was unclear as to how the seven and then the four themes were down-selected for Project DUCO. However, the integration of the DBR material into the analysis / findings in the report was well referenced and provided an informative base of understanding upon which the fieldwork was built.

2.2.1.3 Subject Matter Expert Input

Project DUCO used three [REDACTED] ‘SMEs’ as advisors throughout the project and drew on a further 15³⁴ to verify, validate and weight initial findings from the DBR in order of importance and to refine hypotheses. [REDACTED]

[REDACTED] This use of SMEs throughout the process to provide meaningful evaluation of the data and to support field-work planning offers a significant capability advantage on current TAA practices. Furthermore this ‘independent’ input, free from Whitehall agenda, is considered a key strength of the method.

Lessons identified:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁴ Although it was noted that ~200 were contacted to get 16 responses, one of which was discounted due to inability to confirm the individual's credentials.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3 Fieldwork

Strengths	Weaknesses
[REDACTED]	[REDACTED]
Opportunities	Threats
[REDACTED]	[REDACTED]

3.1 Overview

[REDACTED]

The in-country data collection was led by SCL and focussed on three locations [REDACTED]. Fieldwork at each location was overseen by a Team Leader, known to SCL³⁸, through either having led a research team previously or by recommendation. A total of 56 individuals were recruited to act as interviewers, six to conduct the qualitative, 20 for the quantitative [REDACTED].

3.2 Sample size and Composition

The DUCO fieldwork comprised the following samples:

BDI Questionnaires	BDI Interviews	BDI TAA Interviews	[REDACTED]	[REDACTED]
1557	79	32	[REDACTED]	[REDACTED]

There was no evidence in the report of any power calculation being conducted to establish how many people were required in these samples. This calculation would require an estimate of the population size, the margin of error required in any answers, and the desired confidence level required in any inferential statistics. As [REDACTED] the SCL [REDACTED] research has aimed for (and achieved) a sample size (n) of at least 1000, it is likely that a high enough number of interviews have been achieved

³⁸ And described as a 'trusted partner'.

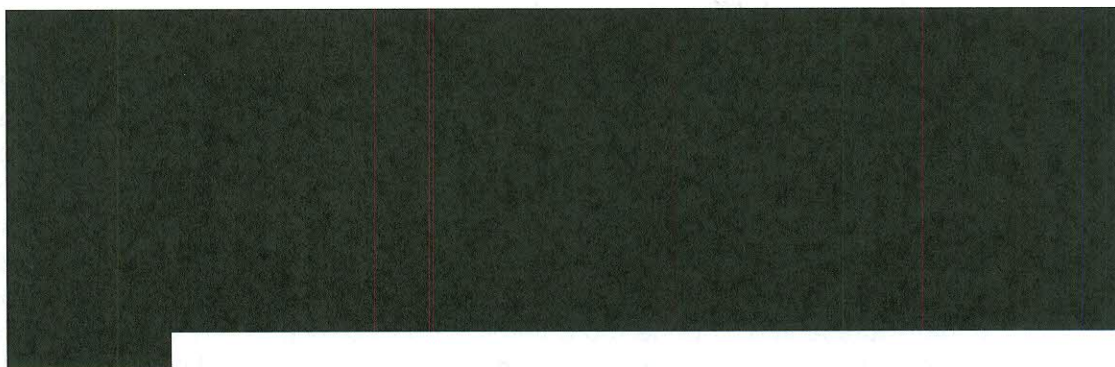
to generalise population results from, at a reasonable confidence level. However this assumes that the sample is representative of the whole population.

Representativeness of the sample is crucial to generalising the results of a sample to that of the overall population. Representativeness is less important for qualitative research as this is reliant on learning rich data about individual's opinions and beliefs.

The BDI Country Sweep analysis identified the TA for investigation as YUM who are often unemployed or on very low incomes and lacking purpose, which according to the report is a group of approximately [REDACTED]. Unfortunately the report did not contain a detailed demographic breakdown of respondents for the BDI element of the fieldwork⁴⁰, which is normally given in any survey results. During face-to-face meetings with SCL, they suggested that they were not happy with the representativeness of the sample collected during the quantitative research, and as a result couldn't place confidence in the quantitative data.

Subsequently the demographics were supplied by SCL separately, but this sample is difficult to interpret. It is clear that 319 quantitative interviews were conducted in total with young single males but further detail on their marital status can only be assumed. The breakdown of these 319 YUM by other demographics (e.g. education, occupation) is unavailable, and would be required for a true evaluation of the sample's representativeness. In addition, as no power or sample size calculations were performed it is unknown if 319 is a large enough sample to generalise results to the entire population of YUMs.

Additional interviews were conducted among a sample of the whole population [REDACTED]. To assess whether this sample is representative, the demographics of the whole sample must be known. It is unknown if SCL obtained this information, typically derived from a census, prior to designing their sampling. Without comparing the demographics of the sample to the demographic of the overall population, it is not possible to conclude if a population is representative.



Lessons identified:

- Ensure representativeness of TAA sample to enable a blend of qualitative and quantitative analysis to enhance evidence base.

³⁹ Page 216, although this is likely to be the total and not the further 'unmarried' sub-group aged 18-24.

⁴⁰ Other reports do, so this is surprising. For example, SCL Defence, [REDACTED], Sept 2011. SCL Defence, Phase 1 Stability Campaign Planning [REDACTED], January 2012

- Clearer communication is required between [REDACTED] SCL and their data collectors as to TA of interest.

3.3 Sampling Strategy

3.3.1 Behavioural Dynamics Institute

The quality of data gathered is the key output of fieldwork, and is directly affected by practical limitations on how, where and when subjects are selected and interviewed. Due to the security situation the fieldwork target areas were selected in advance of deploying the field teams using a grid overlay of each city and crude Google Earth imagery / mapping analysis to ascertain residential areas to focus on. This was then adapted on the ground as required using the local knowledge of the field team as required.

Once at the pre-determined location, the Country Sweep fieldwork used two sampling strategies:

1. Snowball sampling. Here initial respondents were part of the informal networks of the various interviewers, and these people then recommended others to take part. The fieldwork team found that being 'recommended' dramatically increased the likelihood of a potential respondent subsequently taking part.
2. Systematic door-to-door. Each interviewer was given detailed instructions on which neighbourhoods in each location to visit. Once on the right street the interviewer visited every fifth house in neighbourhood to ask for respondents to take part in interviews. If possible the interviewer asked for a pre-determined member of the household to take part, but if they were not available they spoke to anyone who was willing.

Both strategies are commonly used in fieldwork and are a robust approach to finding a good mixture of different respondents.

The final report suggests that during the TAA phase stratified sampling⁴¹ was used to recruit respondents. However following discussions it became apparent that the only sampling strata used was geographic location. This was due to the lack of detailed population information available [REDACTED], which is needed to calculate the number of people in each sampling strata. As a result the same snowball and systematic sampling methods were deployed in the TAA phases as the Country Sweep. The lack of required recruitment 'quotas' may have caused some groups to be over or under-represented. Furthermore there is no evidence of any weighting of responses in the analysis, which is typically conducted to make a sample's characteristics match that of the population.⁴²

⁴¹ This is a method whereby samples are taken from each stratum or sub-group of a population to make the data collected representative of that population.

⁴² For example, if 20% of the population were aged 18-24, but only 10% of the sample was in this age range, their answers' relative importance would be doubled to match their proportion of the population.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.4 Training

3.4.1 Behavioural Dynamics Institute

The field team were trained using a train-the-trainer method as the security situation and administrative issues⁴⁴ did not permit UK-based SCL staff to enter [REDACTED]

The Team Leaders were trained directly by SCL staff, and had the research parameters and methodology explained to them alongside the practical considerations of fieldwork techniques. The Team Leaders then used the training materials provided by SCL to deliver training to their staff, either in English or in local language as appropriate. Training covered the specific fieldwork instrument to be used, some context concerning the research parameters, basic fieldwork techniques (e.g. awareness of bias), a test run with another fieldworker, and provision of feedback directly from SCL⁴⁵ to ensure appropriate interview styles were used.

Given that SCL used interviewers with previous experience where possible, and are experienced in teaching their methodology in various countries, it is likely that the

[REDACTED]

⁴⁴ One cited was inability to gain visas.

⁴⁵ For example via Skype.

training was fit-for-purpose. However the quality of the training given by the Team Leaders to the interviewers cannot be independently assessed.

3.5 Fieldwork Instruments

Copies of the fieldwork instruments used for Project DUCO were provided by SCL [REDACTED]. This comprised the expert interview guide, qualitative interview guide, quantitative questionnaire [REDACTED]

At face value it appeared that the instruments were well constructed and designed by experienced researchers who used the opportunity to pilot and test their instruments⁴⁸. This included having the questionnaires translated into [REDACTED] and then back into English again, to test if the intended meaning was still present. Furthermore SCL noted that they maintain a 'data bank' of tried and tested questions that relate to the research parameters and are included in fieldwork instruments as required. Following is not an exhaustive list, however some minor discrepancies in the SCL instrument design were noted:

- In isolated cases the wording of the scales did not match at each end of the scale (e.g. disagree completely vs. absolutely agree). This could lead to misinterpretation and confusion amongst respondents.
- There was no evidence that interviewers started with a different item each time to prevent order bias when asking respondents for a rating of a number of similar statements⁴⁹.
- Some of the scales were altered due to [REDACTED] cultural nuances⁵⁰. Although this is an advantage of SCL's iterative research process, not all of the scales used are described in the report's methodology section. In

⁴⁸ This statement is made with the caveat that any researcher will have their own preference for structuring an instrument and for designing the questions, which can make a detailed critique entirely subjective.

⁴⁹ Start points are rotated as a standard fieldwork practice to avoid fatigue or novelty (e.g. answering a new type of question) skewing responses to the same statements each time.

⁵⁰ For example difficulties in interpreting Likert scales.

addition, some of those that are included are either not described adequately, or are not fully referenced (e.g. the Influenceability scale, which has been designed and tested only by SCL).

- The length of some of the instruments could lead to respondent fatigue which causes a drop in quality of data as respondents give quick and less considered answers.

3.6 Interview Procedure

The way in which a person is recruited and interviewed is important to limit response bias. All SCL interviews were conducted verbally and face-to-face, which makes the inter-personal relationship between interviewer and respondent important. It also makes the environment around the interview important; both for ease of interview and to limit the influence of outside factors on a respondent's answers.

The report gives some detail about the interview procedure, and the aspects of interviewing that were important for the interviewer to maintain. As training was provided to field teams it is likely that researchers were sufficiently prepared for the interviews, and were skilled in not introducing interviewer-bias to any responses.

Other potential biases may also have been present, that are not acknowledged in the report. Though it is not possible to eliminate all possible biases, the description of the interview procedure should cover how the interviews are conducted in more detail. This will give the author the chance to explain other possible biases, and any steps taken to minimise them. Some other aspects of interview procedure that could be covered are:

- How the interviewer recorded any responses. Some of the interviews were recorded on a Dictaphone, whilst in others the interviewer had to write a summary of the answer on to a paper questionnaire. In the latter case there are implications for what information the interviewer chooses to record, and to how much attention they can give this task whilst attempting to maintain the interview's flow.
- Gender differences between interview and respondent. It is possible that [REDACTED] norms of gender interaction may have made some respondents more or less likely to answer truthfully to someone of the opposite gender. Although SCL suggested that this was not an issue, any steps taken to minimise this possible bias should be described in the report. For example SCL may have used mixed gender teams of interviewers, or suggested a female interviewer return if only a male interviewer was available at the initial respondent recruitment.
- Presence of others near to the interview. As the qualitative and quantitative interviews took place in a mixture of environments (household, cafes, interviewer base), it is likely that others were nearby when an interview took place. This could have caused a respondent to alter their answer, particularly if they felt at danger of being overheard.

Lessons identified:

- Acknowledge potential data collection bias and mitigation steps more explicitly in the final report.

3.7 Data Entry

Data entry of the in-country results was conducted by the field teams along with an additional team of coders and data entry staff from a SCL partner company [REDACTED]

Initial qualitative research and expert interviews were transcribed from recordings (or written summaries if required), and translated into English. This translation was conducted by trained researchers known to SCL from previous fieldwork. Once all of the data had been transcribed it was sent to the UK for the SCL team to conduct their qualitative analysis, which produced an initial set of hypotheses and code frame⁵¹. These transcriptions are the origin of the respondent quotes that are used throughout the final report.

For later qualitative fieldwork, the field team used the code frame (translated [REDACTED] to give each answer a numeric code. Coding is a common technique used to enable content analysis⁵² of large amounts of data, where common 'free text' answers are each given the same code in order to enable more efficient analysis. The code frame was designed and maintained by the core SCL team, which should have ensured that the codes stayed linked to the hypotheses generated in the expert interviews. As the answers were coded [REDACTED], it is likely that any possible problems with translation of answers will have been avoided.

Once the answers were coded, the data entry for the qualitative and quantitative questionnaires will have been conducted in a similar fashion. In the qualitative, the code numbers relating to the full written answers were entered onto a spreadsheet. For the quantitative, the number that accompanies each possible answer (e.g. agree strongly is 1, disagree strongly is 5) is entered onto a spreadsheet. The process of coding and entering data is not difficult if well organised, with the most likely errors arising from the odd mistake in the volume of data being entered.

3.8 Quality Control

Throughout the fieldwork process, human errors are possible that may introduce bias or invalidate results. Quality Control (QC) processes can be introduced to spot and correct these errors. SCL indicated they had QC arrangements in place (e.g. field testing instruments). For example, the check of an interviewer's training in mock interviews or the double translation of questionnaires. The iterative process used by SCL also enabled QC, as the results were checked and questionnaires redesigned based on early responses⁵³. The fieldwork process was also adapted when culturally-specific issues were encountered as already discussed.

⁵¹ A code frame is a list of numeric codes that represent commonly occurring free-text answers.

⁵² Content analysis is a broad term referring to the range of analytical techniques that allow an objective and systematic analysis of written or spoken communication.

⁵³ For example, it was discovered that [REDACTED] did not understand Likert scales.

Other QC measures that are common in UK research have either not been conducted, or the information is inconclusive about whether they have been attempted. Not all of the QC processes below may be possible, but the lack of such measures can only increase the chance of low quality data entering the research.

- Back-checking of questionnaire results, where a respondent is contacted following their interview to check that they took part, and some of the answers they gave. This process prevents interviewers from fabricating results or respondents.⁵⁴
- Double data entry, where the numeric codes or answer given in each questionnaire are entered into a spreadsheet twice, by two different people. The results are then compared, and any differences or mistakes investigated. This process prevents key-stroke errors impacting the data.

An International Standard Organisation (ISO) in Quality Management (ISO 9001:2012) is available, which although generic and not specific to field research is held by a number of large research companies. This standard provides a high level assurance that a company has some sort of quality management process, but does not provide assurance that specific quality control procedures are in place. A more specific ISO (20252:2012) on Market, Opinion and Social research sets out the standards required for QC in research projects and fieldwork.



Lessons identified:

- SCL consider obtaining ISO certification as an internationally accepted proof of adherence to good fieldwork quality management or QC practice.



3.9 Ethical / Legal Considerations

All data collection or empirical studies conducted on behalf of MOD require ethical approval from the Scientific Advisory Committee (SAC) and MODREC⁵⁵. These approvals have not been obtained or examined by Dstl.⁵⁶

The SCL report does detail a number of ethical considerations regarding their fieldwork.



Respondents were also assured that their answers were confidential, and that they could withdraw from the research at any time. These measures conform to

⁵⁴ It is accepted that this was difficult due to the security situation 

⁵⁵ As laid out in JSP 536 - Ethical Conduct and Scrutiny in MOD research Involving Human Participants.



standard practices in social science, and should be detailed alongside a statement about MODREC approval to confirm that the study was ethically sound.

3.10 Risk Assessment

SCL noted that they have a risk assessment process in place to protect their field teams, although this was not scrutinised.

4 Analysis

Strengths	Weaknesses
<p>SCL:</p> <ul style="list-style-type: none"> • Comprehensive summary of Desk Based Research provided. • Engagement with SMEs throughout. • Logic for hypotheses generation / refining. • Use of summary tables. <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none"> • Analysis 'process' unclear from report. <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
Opportunities	Threats
<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none"> • Involve end-user in hypothesis down-select. • Present demographic sample breakdown. <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none"> • Division of parameters needs better distinction (e.g. prognostic, descriptive). <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>

4.1 Overview

[REDACTED]

Empirical evidence (both quantitative and qualitative) is a key tenet of Evidence-Based Decision Making (EBDM) facilitating more informed decision-making in Government.

Given the strong theoretical and methodological base used for Project DUCO the analysis in the final report presented fails to reflect this. A strength of the BDI method is that it is based on a combination of qualitative and quantitative analysis. In practice, the majority of the data in the final report is derived from qualitative sources. Review of previous SCL reports⁵⁷ noted a more appropriate balance of quantitative and qualitative analysis as being the norm. During discussions it became apparent

⁵⁷ For example, SCL Defence, [REDACTED], Sept 2011. SCL Defence, Phase 1 Stability Campaign Planning [REDACTED], January 2012

that the mid-project change in timelines⁵⁸ left too little time for this element of the project to be conducted to the desired standard, a fundamental issue.

Lessons identified:

- Allow sufficient time in the project plan for the analysis phase and / or develop more robust contingency plans to manage potential changes in delivery dates and unforeseen circumstances.
- Conduct regular milestone meetings with customer to communicate the impact of such changes to the project.

4.2 Behavioural Dynamics Institute

4.2.1 Qualitative Analysis

The majority of data presented in the final report is based on qualitative analysis. A variety of qualitative analysis techniques were used in the analysis phase. For example, content analysis was used to initially interpret the data and to extract key themes. This is an established method.

It also appears that qualitative data analysis was inductive, that is, the data itself drives the structure of analysis without the researcher imposing a pre-determined framework. This fits with the grounded theory⁵⁹ approach used in BDI but examples of the coding frameworks used and emerging themes are not evident in the final report to support this.

Grounded theory allows for the inclusion of the researcher and therefore the researcher's experiences to be used throughout the analysis of qualitative data. This makes it very important that those conducting the analysis are familiar with the country and nature of study in order to achieve the results. The use of SMEs and experienced UK-based researchers supported this and is considered a key strength of the BDI element of Project DUCO.

Qualitative data analysis requires a high level of methodological rigour in its analytical processes. Although this is harder to evidence than quantitative data analysis there are measures of best practice. These include providing full transcriptions, analytic memos, coding notes, emergent categories and assessments of theoretical saturation. As previously mentioned it can be unclear in the final report where evidence support comments and this would be a useful addition to track the validity of statements made. That said, there is also evidence of best practice within the report in the use of direct quotations to support assertions.

4.2.2 Quantitative Analysis

There is limited discussion of the BDI quantitative results in the final report, and where they are used best practice has not been followed. The quantitative analysis should be present as part of the 'triangulation' of results of the different research

⁵⁸ The DUCO delivery date was altered from February 2014 to December 2013, [REDACTED]

⁵⁹ Grounded theory is a systematic social science methodology which involves the discovery of theory through the analysis of data, essentially a reverse engineered [hypothesis](#). It is described as 'the discovery of theory from data systematically obtained from social research' by Glaser & Strauss (1967).

techniques, a key tenet and strength of the BDI method. As already discussed this is an acknowledged short-coming. Whilst these circumstances are accepted it is important to note the following:

1. The quantitative results were used as a 'sense-check' of the qualitative findings⁶⁰. Sense-checking was described as comparing the results of each prior qualitative stage with the quantitative results to see if they are in broad disagreement or not. If the quantitative disagreed with the previous result, the findings were removed altogether but if the two results do not disagree the finding is kept in. This is not a best practice use of the quantitative output, as it essentially turns a 'non-disagreement' into a quantitative confirmation of a finding, which using statistical methods is far harder to achieve.
2. It appeared that no formal hypothesis testing was carried out with the quantitative data. This would normally be the role of the quantitative research stage in a large research project, and would be carried out by drawing conclusions from inferential and, to a lesser extent, descriptive statistics:
 - a. Inferential statistics are used to generalise any findings from a particular sample to that of the entire population. Inferential statistics could have been used to support any strategy development by giving confidence that the attitude of the current sample of YUMs is held by the entire population of YUMs. Other inferential statistics are able to verify that any perceived differences between groups (e.g. YUMs versus the general population) are truly significant differences. These are the statistics that can either confirm or deny previously generated hypotheses, and it is best practice to include them at the conclusion of a research process.
 - b. Descriptive statistics are ways of describing or summarising data in meaningful ways (e.g. 80% of the sample held the same attitude) to aid understanding. Some very high level descriptive 'yes / no' statistics are used in Country Sweep findings. There are also descriptive statistics in the TAA findings covering the locus of control and entitlement scales. The numbers and graphs presented do illustrate some information about the scale results, however they are lacking further explanation of what the results mean and mention is made of a significant difference between groups without giving an explanation of which inferential statistic or confidence level this significant difference is derived from.
3. Quantitative analysis could also clarify any possible biases introduced in fieldwork and sampling, by comparing results between groups that are supposed to be from the same population. For example a comparison should have been made between respondents [REDACTED], to check that their answers were similar and not predicted by their location. A further check could examine interview procedure bias, by verifying that the answers of those that replied online or via computer were not different from those interviewed face-to-face.

⁶⁰ As noted in discussions with SCL.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Lessons identified:

- A 'version three' of the report which incorporates the BDI quantitative findings, [REDACTED] should be developed and reissued.
- Acknowledge analysis limitations and caveat findings accordingly. Readers need to be able to understand the basis of evidence used to support recommendations.
- Clearly sign-post use of quantitative results in any reporting of findings and results. This will ensure readers understand which findings are based on opinion shared by many people, and which are based on detailed questioning of far fewer individuals.

[REDACTED]

4.4 Access to Raw Data

Increasingly MOD is moving to 'capture once use multiple times', that being to access raw data from projects so that it can be re-used, for example, to conduct further hypothesis testing.

Lessons identified:

- The raw data⁶¹ from Project DUCO is issued to [REDACTED] for wider exploitation in the user community.

4.5 Strategy Options

[REDACTED]

⁶¹ In a format both SCL [REDACTED] are comfortable with.

[REDACTED]

[REDACTED]

[REDACTED]

4.6 End-User Involvement

[REDACTED]

[REDACTED]

[REDACTED]

⁶² All the references on the programme options, for example, are from the DBR or are excerpts from the BDI interviews.

5 Reporting and Communication

Strengths	Weaknesses
<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none"> Vox-pop videos used as supporting evidence. Bibliography [REDACTED] at a Glance provide additional background detail. 	<p>[REDACTED]</p> <ul style="list-style-type: none"> [REDACTED]
Opportunities	Threats
<p>[REDACTED]</p> <p>SCL:</p> <ul style="list-style-type: none"> Dashboard summary. 	<p>[REDACTED]</p> <ul style="list-style-type: none"> [REDACTED]

5.1 Overview

[REDACTED]

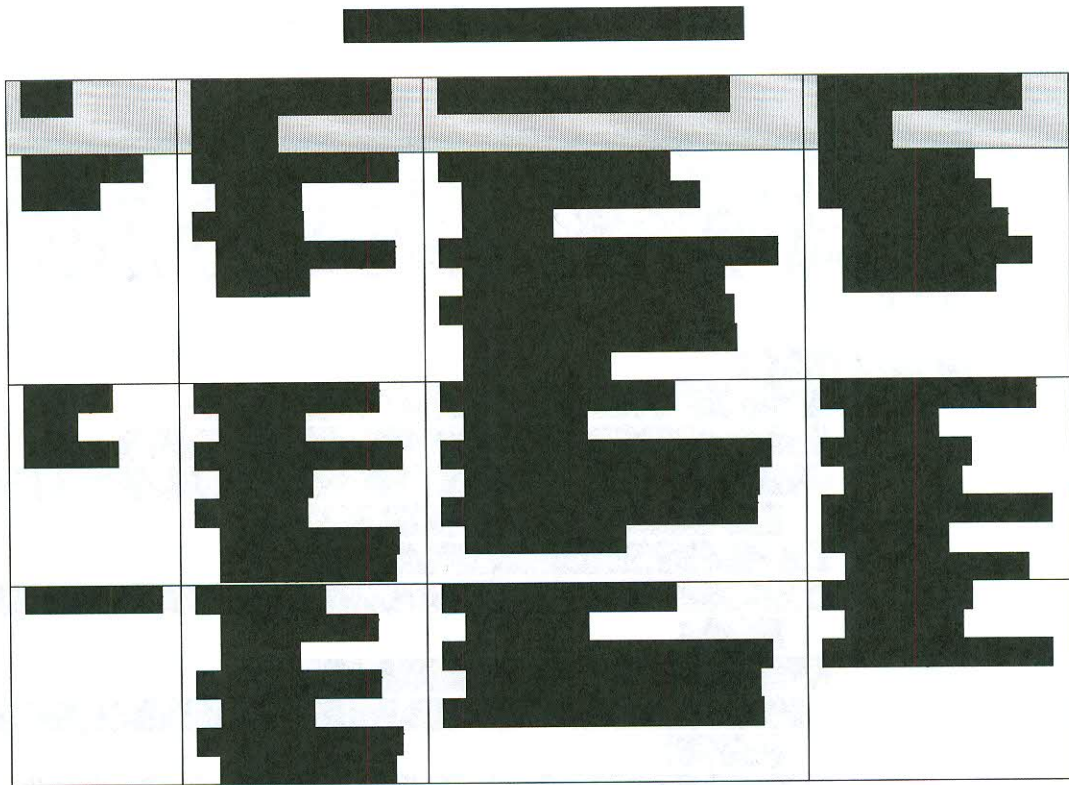
[REDACTED]

5.2 Format

The report⁶³ was issued as a 460 page pdf file containing five chapters (executive summary, introduction, research, findings, strategy) and a large appendix. This was supplemented by a series of verbal briefings and accompanying slide packs highlighting key findings.

The ability of the variety of end-users to exploit the wealth of information in the report is key. In Project DUCO's case, this was a difficult balance to strike when the potential audience includes several Government departments and staff in a variety of roles with differing requirements of the report. In order for the contents to be exploited to the maximum, the information in it should be presented in a way that appeals to all possible end-users.

⁶³ Project DUCO: A Behavioural Dynamics Approach to Stability [REDACTED], Country Sweep and Target Audience Analysis Report, December 2013



5.3 Content and Structure

The report is comprehensive and well referenced, highlighting the quantity and depth of information obtained during the pilot. The provision of additional contextual information such as the [redacted] at a glance' overview, the diaspora analysis and the bibliography give the reader the opportunity to investigate areas of interest further if required.

There was some use of illustrations and alternative ways of presenting the information (e.g. the derived group profiles, causal loop diagram). Supplementary information such as the 'TAA dashboard'⁶⁵, illustrated in Figure 7 below, introduced in the briefing provides an audience-friendly overview of the findings, and 'vox-pop' videos serve as a novel data source to enhance the empirical evidence.

⁶⁵ Further detail was requested regarding the analysis behind this and it was noted that this is still under-development and is intended as a visualisation rather than decision-support tool.

5.5 Cohesion

Project DUCO has been advocated as a ‘hybrid’ combination of two complementary TAA methods. Indeed SCL [REDACTED] have deployed their methodologies together previously⁶⁹. The logic of fusing the approaches and utilising [REDACTED] to add further nuanced understanding of the focus TA (YUMs) is sound. The report, however, generally treats them separately and appears rushed in bringing results together in places. This adversely affects its flow.

From further discussions it is apparent that SCL [REDACTED] did follow a process to bring together their data, it is just not evident in the report. They conducted their analysis independently then came together to cross-check findings. Where there was contradictory evidence, this was left out of the final report.

Lessons identified

- Consider alternative ways of jointly presenting the results and ensure that collaborative processes and working practices are clearly articulated.

5.6 Dissemination

Appropriate dissemination mechanisms are key to exploitation of the contents in the report, especially to a diverse, geographically dislocated audience. However this does need to be considered within the context of ensuring security and integrity of the data.

Lessons identified:

- Consider alternative methods of dissemination, for example a password protected webpage with an in-built search engine⁷⁰ and / or a hyperlinked pdf.

5.7 Security

The research undertaken for Project DUCO was unclassified and [REDACTED]

[REDACTED]. Through discussions it was ascertained that some SCL staff are vetted and they have rudimentary security mechanisms in place (e.g. ‘a locked cabinet’), [REDACTED]. However, it is not thought that they have the capability to handle any electronic material above unclassified nor considered the secure dissemination of documents. This is a concern if the Project DUCO method is used more widely for further TAA projects.⁷²

⁶⁹ Projects in [REDACTED] were cited.

⁷⁰ SCL already have this capability.

⁷² As has been indicated by [REDACTED]

Lessons identified:

- Ensure final reports are given the appropriate protective markings.
- Ensure SCL / [REDACTED] adhere to basic security measures and / or gain accreditation to handle Official - Sensitive material.

6 Conclusions and Recommendations

[REDACTED]

The main concerns with the results from Project DUCO that Dstl have identified were:

[REDACTED]

The lack of quantitative data [REDACTED]

All of these issues can be overcome for future projects. This report has highlighted a series of lessons identified from Project DUCO which should be considered if [REDACTED] choose to adopt this method again. **It is therefore recommended that a thorough and joint project wash-up is conducted between [REDACTED], Dstl, SCL and [REDACTED] in the first instance.**

Recommendations for future work:

[REDACTED]

[REDACTED]

List of abbreviations

[REDACTED]	[REDACTED]
BDI	Behavioural Dynamics Institute
COA	Course of Action
DBR	Desk Based Research
EBDM	Evidence Based Decision Making
FST	Full Spectrum Targeting
H&SI	Human and Social Influence
IA&O	Information Activities and Outreach
ISO	International Standard Organisation
MOD	Ministry of Defence
[REDACTED]	[REDACTED]
MOE	Measures of Effect
[REDACTED]	[REDACTED]
OGD	Other Government Departments
QC	Quality Control
RFI	Request for Information
SCL	Strategic Communications Laboratory
SAC	Scientific Advisory Committee
SME	Subject Matter Expert(s)
[REDACTED]	[REDACTED]
SWOT	Strengths, weaknesses, opportunities, threats.
S&T	Science and Technology
TA	Target Audience
TAA	Target Audience Analysis
TSA	Target Systems Analysis
V&V	Verification and Validation
YUM	Young Unmarried Male

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⁷⁶ The authors can supply this separately upon request.

Initial distribution

[Redacted]

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Initial distribution

1.	[REDACTED]	[REDACTED]
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37.	[REDACTED]	[REDACTED]
38.	[REDACTED]	[REDACTED]
39.	[REDACTED]	[REDACTED]
40.	[REDACTED]	[REDACTED]

Report documentation page

v4.0

* Denotes a mandatory field

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* Denotes a mandatory field

16a.	Abstract: *	This report contains the results of an impartial technical evaluation of Project DUCO, a pilot study conducted in [REDACTED] between May-November 2013, utilising a commercial 'hybrid' Target Audience Analysis (TAA) approach. The valuation focussed on the method, fieldwork, analysis and reporting and communication.		
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18.	Report announcement and availability *			
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18b.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UK MOD has no rights of distribution
18c.		<input type="checkbox"/>	<input type="checkbox"/>	Can be distributed to UK MOD and its agencies
18d.		<input type="checkbox"/>	<input type="checkbox"/>	Can be distributed to all UK government departments
18e.		<input type="checkbox"/>	<input type="checkbox"/>	Can be distributed to all UK defence contractors
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18h.	Additional availability:			
18i.	Release authority role: *	Author		

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