

M1/02-0194

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TravelScape >>

An Introduction to the TravelScape initiative



1] What is TravelScape?

TravelScape was originally configured in order to bring together appropriate entities from government, airport authorities and the broader aviation industry to share their thinking and explore the feasibility of automated border control aspirations using advanced technology and travel documentation.

The original objective of the TravelScape study was to test the feasibility of automated border control using biometrics and advanced travel documentation, within the European Union and beyond. While there have to date been various technology trials and related initiatives in this area, most have focused on a specific situation in one country only. TravelScape would take a broader view and examine the issues inherent in a cross border situation, in order to really test the ongoing feasibility of these ideas from a practical perspective. This objective still stands and it is anticipated that this study will be completed by October 2002, allowing for the conclusions to be available for presentation to interested parties during November 2002. As part of these conclusions, recommendations will be made for a practical cross border trial within the EU, together with observations and suggestions regarding the ongoing global picture.

However, with increasing international focus on aviation security, travel documentation and border control, together with the associated technical issues around these areas, the requirement for international co-ordination and communication at the practical level is becoming increasingly pertinent and necessary if we are to avoid confusion, both among citizens and with regard to the ongoing infrastructure and management of these aspirations.

As TravelScape already had the nucleus of such a communication network in place, together with a good understanding of the underlying issues, it was decided to broaden the original scope in order to encourage and support the international co-ordination and communication referred to above. Elsewhere in this document you will find details of the high level structure created in order to achieve this objective.

Developments in this area are many and frequent and it will be necessary for all TravelScape members to actively contribute to the spirit of communication and collaboration if we are to realise the maximum benefits of this association. Good progress has already been made with a significant amount of useful dialogue and the development of associated ideas. Continuing in this spirit will ensure that TravelScape makes a valuable contribution to the ongoing facilitation of secure international travel using advanced technology in an ethical and practical manner.

2] Background

Since the early 1990s there has been a great deal of interest in the concept of automated border control using some form of biometric in order to verify individual identity. Originally, this idea was conceived primarily as a means of passenger facilitation in order to reduce congestion at busy airports. Industry reports at the time suggested that air travel would virtually double within the next ten years or so, placing increasing pressure on existing services and creating additional delays for passengers. Automated border control was thus seen as a means of providing 'fast lane' immigration clearance, allowing travellers to spend less time at the airport and thus relieving pressure on both the infrastructure and supporting resources.

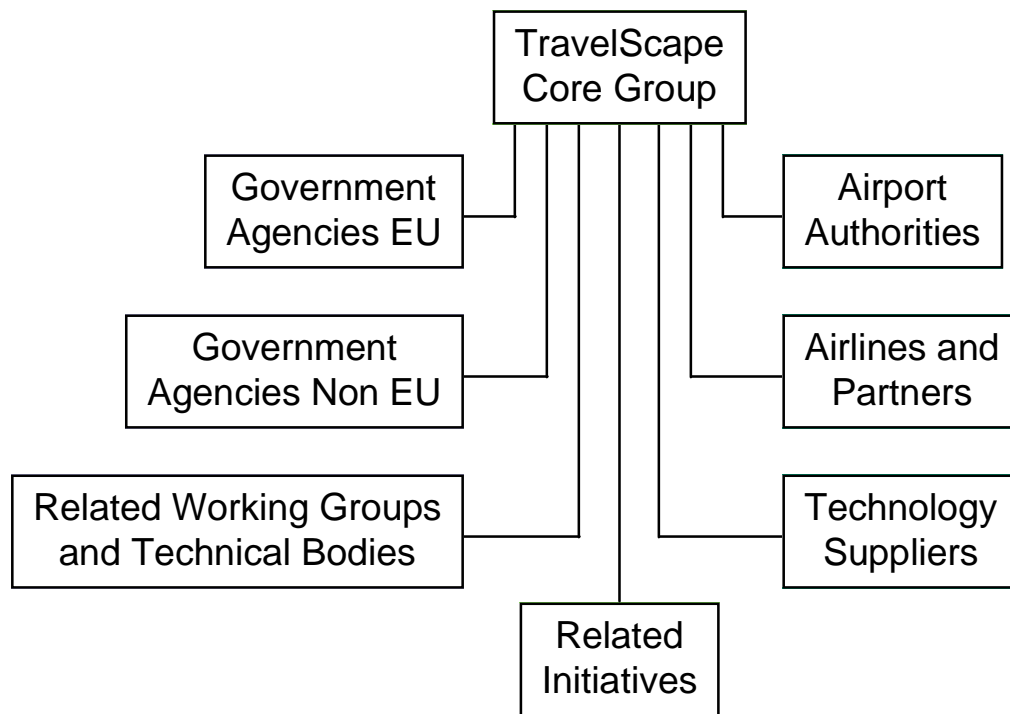
The events of September 2001 have served to change this perception somewhat and shift the emphasis more towards security. In many minds, this includes the ability to identify individuals wanted for transgressions against the state or otherwise suspected of criminal activity, as they attempt to cross the border. However, this view needs to be complemented by the processing requirements for bona fide citizens travelling legitimately between regions.

There have been various trial systems implemented across the world, from the original fingerprint based system at Schiphol in the early nineties, through various developments of INSPASS in the USA and Canada, to existing systems in Israel and several others besides. Each of these systems, while undoubtedly interesting, have been developed in relative isolation, often lead strongly by the technology providers concerned, and situated mostly in a single location. This has resulted in a brace of interesting but non compatible systems. Furthermore, there are several more trials being proposed, equally proprietary in their thinking. If this situation continues unchecked, it will become increasingly difficult to provide a coherent system across borders which is passenger friendly.

If we are to avoid this situation, we must therefore look ahead and consider the feasibility of compatible cross border implementations while carefully considering security requirements, the passenger proposition, the associated legal requirements around data protection and rights to privacy and the technical challenges inherent in providing true interoperability and consistency of automated systems performance across national boundaries. TravelScape will support ongoing discussion and international co-ordination in this respect.

3] Overall structure of TravelScape

The diagram below depicts the high level structure of TravelScape and the various categories of membership. The next section explains these categories in greater detail.



4] Details of participation

TravelScape Core Group

This sub-group is concerned with the general administration and overall direction of TravelScape. It is also the primary point of contact and is responsible for general communication issues. Individuals within this core group must be able to act in an executive capacity as required, both from a general administration perspective and for the wider promotion of TravelScape where appropriate.

Government Agencies EU

This category includes passport agencies, immigration departments, ministries of interior and other government departments as appropriate within the EU. Such departments may take either a fairly passive role, primarily for communication purposes, or a more active role by contributing significantly to the TravelScape work packages. Some EU member states are already strongly represented within TravelScape. This membership will be extended to other member states as the initiative progresses.

Government Agencies Non EU

This category is similar to that described for the EU but allows for government participation from other regions such as the Americas, Asia and elsewhere. It is acknowledged that operational processes and aspirations may vary slightly across regions and participation in TravelScape gives visibility to these variances, together with the opportunity to explore co-ordinated ways forward towards common goals.

Related Working Groups and Technical Bodies

This category encompasses existing working groups from other sectors or regions where appropriate, providing a channel for ongoing communication. It also includes technical and standards setting bodies, providing visibility of work undertaken together with an appropriate feedback mechanism if and where required.

Airport Authorities

As the name suggests, an opportunity for airport authorities to become involved and share thinking re future developments in this context. TravelScape already has representation from within the EU and will be broadening this coverage as the initiative develops.

Airlines and Partners

A category for airlines who wish to share the common understanding of future requirements whilst developing an appropriate passenger proposition. This also provides the opportunity for those airlines participating in trials to share experiences accordingly.

Technology Suppliers

It is appropriate to have a TravelScape category for relevant technology suppliers in order to both understand technological developments and also provide feedback as to likely requirements. This type of ongoing communication will be essential if we are to develop efficient and practical solutions using available technology.

Related Initiatives

There are several related initiatives running across the globe, some of them relatively well established and some of them still in proposal stage. It is important to avoid duplication of effort and inappropriate developments in this respect and membership of TravelScape provides a valuable communications channel with which to check thinking without compromising individual aspirations and ideas. It also facilitates the identification of common ground and opportunities for collaboration.

The above represent categories of membership for TravelScape and interested parties may apply to the core group for further information.

5] Continuation of original feasibility study

The TravelScape feasibility study will continue as planned and deliver a final report in October 2002. Conclusions will be reached with respect to each of the work-packages which are reproduced as an annexe to this document for information. This is an important piece of work which should provide a useful stepping stone towards the realisation of broader goals. It may also suggest that further research is required in certain areas, in which case the TravelScape members may wish to undertake such research according to their position and expertise.

The feasibility study will certainly be addressing the possibility of cross border trials and there will no doubt be various options as to how these might be realised in practice, together with opportunities for involvement where applicable. The culmination of this work should help to position the aviation and travel industry in preparation for a new chapter in international travel, whilst also supporting the aspirations of government in multiple regions. TravelScape has submitted an expression of interest under the EU Framework initiative, which may also help to support further work in this context.

6] Ongoing communication

Part of the undoubted value of TravelScape lies in ongoing communication and the co-ordination of related effort. This will be placed on a firmer basis via the provision of a monthly newsletter, distributed to all TravelScape members. This newsletter will contain details of related developments, important legislation, technical and standards development, operational issues and more. The value of this mechanism will be proportional to the contributions of all TravelScape members, who are therefore strongly encouraged to provide regular updates to the TravelScape core team. This communications vehicle may also be used to provide details of conferences, symposiums, general meetings and other events considered pertinent

to TravelScape members and their respective organisations. In addition, government members may use this channel to disseminate appropriate information and seek feedback if required.

7] Contacting TravelScape

A full list of members and contact details will be provided by TravelScape upon request. In the short term, initial contact may be made via;

Harald Bresser Schiphol Group
tel +31 20 601 3217
email bresser@schiphol.nl

Julian Ashbourn British Airways
tel +44 20 8738 8086
email julian.1.ashbourn@britishairways.com

All such communication is treated in confidence unless explicitly indicated for wider dissemination.

Annexe 1] The original TravelScape work-packages

WP1 Future Travel Documentation
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Work package leader	
Telephone no.	
Email address	

Objectives

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| To reach conclusions as to the most likely future travel documentation |
| To understand likely timescales of the introduction of new ideas |
| To identify areas of potential compatibility / incompatibility |
| To identify the most desirable solutions which facilitate ABC |
| To identify opportunities to influence where appropriate |
| To produce a statement of current position and overall feasibility |
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Description of work

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| Collate knowledge and thinking from existing working groups such as ICAO |
| Explore the relevant issues from both a technical and practical perspective |
| Explore areas of potential compatibility |
| Explore alternative approaches |
| Align existing proposals with current technical reality |
| Consider applicability to cross border automated border control |
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Deliverables

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| Statement of current situation identifying both enablers and inhibitors to a cross border initiative (include technical evaluation) |
| Projection of likely future travel documentation in key geographic areas |
| Recommendations for a short term cross border initiative which aspires to compatibility with future projections |
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WP2 Registration / Enrolment Process

Work package leader	
Telephone no.	
Email address	

Objectives

To define and document a robust and well considered registration process which might be acceptable throughout the European Union
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To identify associated issues from a practical and operational perspective
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To consider issues of scalability and timing re large user populations
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To identify data management and associated security issues
--

To identify background checking requirements
--

To identify and define minimum data requirements
--

To consider the practical implications of multiple biometrics

Description of work

Produce draft registration process for discussion and evaluation
--

Test the longer term practical workability with the various bodies involved

Examine the options for large scale registration
--

Explore the user psychology and usability issues
--

Align proposals with typical journey / on-airport activities
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Deliverables

A proposal for a minimum standard registration process which will be acceptable within the EU

A statement / report on how such a standard might be implemented or otherwise satisfied outside of the EU in order to promote cross border interoperability between participating countries

WP3 Technical & Infrastructural Issues

Work package leader	
Telephone no.	
Email address	

Objectives

To identify, acknowledge and offer solutions to outstanding technical and infrastructural issues which might impede the adoption of ABC

To identify research or commercial entities who might be able to develop solutions or contribute to standards where appropriate

To consider the practical implications within typical airport environments

To identify and document perceived weaknesses in current enabling technologies

To suggest ways of moving forward

Description of work

Evaluate the on-airport environment and create high level systems architecture map which might support longer term automated border control

Consider current biometric technologies and identify potential strengths and weaknesses for this application - especially regarding wider scale use

Explore the feasibility of agreeing standard biometric template formats

Explore future passenger / carrier / government interaction and associated technical challenges around integrating automated border control

Liaise with Future Travel Documentation group

Deliverables

A synopsis of current technical capabilities and a realistic assessment of how a cross border ABC initiative might be supported in the short and longer terms

An assessment of scalability issues from a technical perspective

A recommendation as to the use of agreed biometric techniques and data formats

A report on serious issues likely to impede the wider scale adoption of cross border automated border control, together with suggested resolutions

WP4 Immigration Processes & Legal Issues

Work package leader	
Telephone no.	
Email address	

Objectives

Identify and document the key immigration processes and responsibilities, outlining any perceived differences between EU member states

Do the same for other interested nations

Identify any legal issues which might impact upon the wider scale adoption of ABC in general and the TravelScape / Schiphol Triangle proposal in particular

Identify typical on-airport immigration scenarios and associated responsibilities

Description of work

Liaise with various immigration departments in order to understand future aspirations (with or without ABC) and existing concerns

Explore the potential impact of ABC upon existing processes

Explore the relationships between immigration, passport agencies, airport authorities and other entities in relation to the ABC concept

Explore transaction times, fallback procedures, resourcing and associated issues

Explore legal issues across the EU and the current understanding regarding the use of advanced ID technologies such as biometrics

Deliverables

A report outlining the potential impact of ABC upon immigration processes, including perceived benefits, responsibilities, resourcing and so on.

A synopsis of differences (where they exist) between EU member states and other nations which might impede the adoption of ABC, together with suggested resolutions

A statement outlining the legal position as to the use of biometric data, as currently understood within the EU and beyond.

WP5 Practical On-Airport Deployment

Work package leader	
Telephone no.	
Email address	

Objectives

- To understand and document typical existing journey processes
- To recommend a deployment strategy which could be used in the majority of airport situations
- To identify the physical requirements associated with such a deployment
- To identify the operational and resourcing requirements associated with such a deployment
- To identify and document the interfaces to existing systems and processes

Description of work

- Consider existing processes in depth and identify areas impacted by ABC
- Consider the human / operational element
- Consider the optimum points at which a biometric check could / should be undertaken and why
- Consider future passenger facilitation at airports and how the ABC concept would fit - include increasing use of on line booking / mobile devices etc.
- Consider responsibilities across the airport environment and journey process

Deliverables

- A report outlining the practical implications of deploying ABC within a typical airport environment
- A flowchart of the options around the booking / journey process and how they fit with the ABC concept
- A statement outlining responsibilities from a security perspective and how ABC might be seamlessly integrated into both the existing and aspirational picture
- Recommendations for technical support and fallback procedures

WP6 Roles and Responsibilities

Work package leader	
Telephone no.	
Email address	

Objectives

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| To clearly define roles and responsibilities among those interested in the concept of automated border control, within government, airport authorities, carriers and relevant third parties |
| To clearly define the boundaries between the facilitation of travel and other governmental aspirations |
| To understand likely future developments in this context |
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Description of work

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| Understand and document existing responsibilities and processes around typical end to end journeys |
| Explore current aspirations and the associated responsibilities |
| Explore in particular the use of passenger data and it's transition throughout proposed systems and processes, outlining responsibilities accordingly |
| Explore the impact and potential of the ABC concept on both existing processes and aspirations |
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Deliverables

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| Report on agreed roles and responsibilities in relation to the automated border control concept. This should include the registration process, background checking and end to end journey operations. |
| Synopsis of perceived differences (if any) within the EU. |
| Synopsis of perceived differences internationally. |
| Proposed resolution of associated issues. |
| Synopsis of the carrier position. |
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WP7 Associated Developments & Passenger Proposition
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Work package leader	
Telephone no.	
Email address	

Objectives

To understand and document associated developments (such as increased API requirements for example) and how they fit with the ABC concept

To understand the passenger perspective and develop a more acceptable passenger proposition

To explore likely future developments in the aviation and travel sector and understand how these align with the ABC concept

To formulate a (high level) 3, 5 and 10 year forecast of international travel facilitation, linked with associated societal developments
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Description of work

Explore the current situation both within the EU and externally regarding the various existing API requirements and where this is leading

Explore the situation regarding passenger profiling and understand aspirations in this respect
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Consider the passenger proposition and the impact upon the aviation and travel industry if this is not handled well

Consider associated technology developments

Deliverables

Report on developments in API, their impact upon current processes and their relevance to the ABC concept

Report on the passenger perspective, how related developments are likely to be perceived and synopsis of potential passenger benefits

Statement as to the feasibility of incorporating ABC into currently understood plans and aspirations (API / screening etc)
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Report on the relationship between ABC and non travel related societal developments such as national ID cards etc.
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WP8 The Global Perspective

Work package leader	
Telephone no.	
Email address	

Objectives

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| To consider the global position regarding the future of ABC |
| To explore opportunities for collaboration |
| To explore the feasibility of technical and operational standards |
| To understand the carrier and airport authority perspective |
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Description of work

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| Identify and liaise with various governmental departments to ascertain the feasibility and likelihood of collaboration re ABC |
| Liaise with airport authorities to ascertain the practical implications of potential collaborations |
| Incorporate the carrier and passenger perspectives |
| Explore the feasibility of internationally acceptable technical standards where appropriate |
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Deliverables

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| Report on the global position and real world opportunities for cross border automated border control |
| Report on inhibitors to international collaboration with suggestions as to possible resolutions |
| Statement as to the relevance of the TravelScape proposal and suggested next steps |
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