



DELIVERABLE

Project Acronym:	ANTILOPE
Grant Agreement number:	325077
Project Title:	ANTILOPE - Adoption and take up of standards and profiles for eHealth Interoperability"

D5.3a: Report on the Regional Validation Initiatives

Revision: 25

Authors:

Devlies Jos, EuroRec

	Project co-funded by the European Commission within the ICT Policy Support Programme		
	Dissemination level		
Р	Public	Х	
С	Confidential, only for members of the consortium and the Commission Services		

REVISION HISTORY AND STATEMENT OF ORIGINALITY

Revision History

Revision	Date	Author	Organisation	Description
Draft	01.10.2014	Devlies Jos	EuroRec	Framework
0.4	05.10.2014	Devlies Jos	EuroRec	First 6 Summits included
0.5	10.10.2014	Devlies Jos	EuroRec	Paris included
0.6	12.10.2014	Devlies Jos	EuroRec	Delft, Treviso, Valladolid included
09	14.10.2014			Complete data Treviso/Valladolid
				Table 4
15	02.12.2014			Tables completed
				Chapter 5 nearly completed
18	10.12.2014			Chapters 5, 6 and 7 completed. To be
				Teviewed.
19	13.12.2014	Devlies Jos	EuroRec	Completed for review
20	17.12.2014	Devlies Jos, Karima Bourquard Core	Core Team	Reviewed
		Team		
23	09.01.2015	All	EuroRec	New input in chapter 5 about Ireland
				and Lithuania
24	30.09.2015	Devlies Jos	EuroRec	Improving executive summary with some conclusions from the handover
				conference
				Adding a comparative table section
				6.4
25	31.9.2015	Devlies Jos	EuroRec	Split the Deliverable D5.3a and D5.3b
	1	1	1	

Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Table of Contents

G	lossary:	Definitions and Abbreviations	7
E>	ecutive	Summary	8
1	Intro	oduction	10
	1.1	Purpose of this document	10
	1.2	Structure of the document	10
2	Anti	lope eHealth Interoperability Summits Strategy	12
	2.1	Summit Content	12
	2.2	Targeted Audience	12
	2.3	Involvement of the Antilope Core Team Members	12
	2.4	Involvement of the Antilope Supporting Expert Partners (SEP)	13
	2.5	Role of the Antilope Support Validation Partners (SVP)	13
3	The	Antilope Summit documentation and promotional material	14
	3.1	Umbrella Letter	14
	3.2	Standard Agenda	16
	3.3	Flyer	17
	3.4	Presentations	17
	3.5	Questionnaires	17
	3.5.	Questions related to the Summit as such (logistics etc)	17
	3.5.2	2 Statements related to the content of the educational material and the issue	of
	eHe	alth interoperability	18
4	Abo	ut the Antilope Summits	21
	4.1	Regional Distribution	21
	4.2	List of the Summits	22
	4.3	Overall figures about the summits participation	22
5	Stat	us of eHealth Interoperability in the countries	25
	5.1	Introduction	25
	5.2	Nordic & Baltic Countries	25
	5.2.	1 Iceland	25
	5.2.	2 Norway	25
	5.2.	3 Sweden	26
	5.2.	4 Finland	26
	5.2.	5 Denmark	26
	5.2.	5 Estonia	26

5.2	.7	Latvia	
5.2	.8	Lithuania	
5.3	East	tern European Countries	27
5.3	.1	Poland	27
5.3	.2	Czech Republic	27
5.3	.3	Slovakia	27
5.3	.4	Hungary	27
5.4	Wes	stern Balkan area	27
5.4	.1	Serbia	27
5.4	.2	Croatia	29
5.4	.3	Montenegro	29
5.4	.4	Slovenia	29
5.5	Sout	th Eastern European Area	29
5.5	.1	Romania	29
5.5	.2	Bulgaria	29
5.5	.3	Greece	30
			30
5.5	.4	Cyprus	30
5.5	.5	Turkey	30
5.6	Cen	tral Europe	30
5.6	.1	Germany	30
5.6	.2	Austria	
5.7	Italy	/ & Malta	
5.7	.1	Italy	
5.7	.2	Malta	
5.8	Frar	nce & Switzerland	32
5.8	.1	France	32
5.8	.2	Switzerland	32
5.9	Ben	elux	32
5.9	.1	Belgium	32
5.9	.2	The Netherlands	32
5.9	.3	Luxembourg	33
5.10	Iber	ian Peninsula	33
5.1	0.1	Spain	33

	5.10).2	Portugal	33
	5.11	Unit	ed Kingdom & Ireland	34
	5.11	L.1	United Kingdom	34
	5.11	L.2	Ireland	35
6	Ove	rview	of the responses to the questionnaires	36
	6.1	Ove	rview of the answers related to Questionnaire I	37
	6.2	Que	stions more related to the content: questionnaire II	40
	6.3	Ove	rview of the main comments	44
	6.4	lssu	es more related to the questions 14, 15 and 16	50
	6.5	Sug	gestions formulated by the attendees	55
	6.6	Mai	n Suggestions and Conclusions from the audience	55
	6.6.	1	Odense Summit (Nordic Countries)	55
	6.6.	2	Bratislava Summit (Eastern Europe)	56
	6.6.	3	Ljubljana Summit (Western Balkan)	56
	6.6.	4	Vienna Summit (Central Europe)	56
	6.6.	5	London Summit (United Kingdom & Ireland)	56
	6.6.	6	Athens Summit (South Eastern Europe)	57
	6.6.	7	Paris Summit (France & Switzerland)	57
	6.6.	8	Delft Summit (Benelux)	57
	6.6.	9	Treviso Summit (Italy & Malta)	58
	6.6.	10	Valladolid Summit (Spain & Portugal)	58
	6.7	Con	nments by the Support Validation Partners	59
	6.7.	1	Odense Summit	59
	6.7.	2	Bratislava Summit	59
	6.7.	3	Ljubljana Summit	59
	6.7.	4	Vienna Summit	59
	6.7.	5	London Summit	60
	6.7.	6	Athens Summit	60
	6.7.	7	Paris Summit	60
	6.7.	8	Delft Summit	60
	6.7.	9	Treviso Summit	60
	6.7.	10	Valladolid Summit	61
7	Con	clusio	ons by the Core Team	62
	7.1	Ove	rall support for the ANTILOPE approach	62

7.2	Comments given by the attendees by using the ANTILOPE questionnaires	62
7.3	Comments given by the Support Validation Partners	65

Abbreviation	Explanation
AT	Attendee (of the Summits), used in chapter 7
CEN	European Committee for Standardization
СНА	Continua Health Alliance
СТ	Core Team, used in the tables of Chapter 7
ETSI	European Telecommunications Standards Institute
HL7	Health Level Seven
NEN	NEderlandse Norm (Netherlands Standardization Institute)
ISO	International Standards Organisation
SEP	Supporting Expert Partner
SVP	Supporting Validation Partner

Glossary: Definitions and Abbreviations

Executive Summary

This deliverable reports on the ten 'Regional eHealth Interoperability Summits' organised by the ANTILOPE consortium, the organisational aspects as well as the validation of the ANTILOPE documentation regarding standards and interoperability.

Exact 500 mainly decision makers attended the 10 Summits organised all over Europe. The Summits were used to promote the ANTILOPE approach for interoperability, to collect comments through a double questionnaire and to involve them in a debate.

A large majority of the attendees fully support the main ANTILOPE approach regarding how to progress towards eHealth interoperability and also regarding the importance of third party assessment of the compliance of health information system to this ANTILOPE approach. The consortium confirms at the same time some conclusions of the HITCH and the EHR-Q^{TN} projects: the importance of quality management and quality assessing eHealth interoperability and services, using quality assessed testing tools and resulting in quality labels and/or certificates.

As reported in the Final Report, some of the Member States decided yet to implement the ANTILOPE use case based approach for future developments towards increased interoperability of eHealth services. Examples are Portugal and Luxembourg.

At each Summit a presentation was given per country about the "Status of eHealth Interoperability". These presentations were mostly given by a public eHealth representative of the countries. Those presentations generated interesting issues to be discussed and input for the debate. A summary statement of these presentations is included in this deliverable, the complete original presentations are stored on the ANTILOPE web site.

The country based survey highlighted important differences between the countries regarding the use of standards for data exchange as well as regarding quality testing of eHealth products and services. Compared to the EHR-Q^{TN} report, some progress has been made though fall backs has been identified too (Italy, Czech Republic...). Generally spoken National Programs are in place in the Nordic Countries (Finland, Estonia), the Benelux, France and Spain.

A questionnaire was completed by the attendees regarding the inclusion of interoperability requirements into the national regulatory framework. 52% of the respondents are confident that regulated Interoperability requirements will to be available at National level within 3 years. Cross border interoperability regulations are expected to be enforced within 3 years by 30% of the respondents only. The availability of National IOP regulated obtains a score of 28% yet in place and 52% estimate it to be present within 1 to 3 years. European level IOP scores much less 15% yet, 32% or 1 on 3 to be reached within 3 years from mid 2014. Cross-border aspects of interoperability are sometimes considered as a real hurdle. National IOP obtains a score of 28% yet in place and 52% estimate it to be present within 1 to 3 years. European level IOP scores much less 15% yet, 32% or 1 on 3 to be reached within 3 years from mid 2014.

The project used the IHE and the EuroRec networks. Both networks were used and considered as important instruments for promotion and awareness of rules and guidelines as well as for getting information from the field. Those networks should be kept alive and used.

To conclude, some bullet statements

- Use Case based approach towards interoperability largely accepted
- Use Case content may differ from country to country
- A Quality Management System, Quality Labelling and Certification are important tools to reach interoperability
- The Summits succeeded, within their budget, in reaching the decision makers
- The integration of interoperability requirements into the eHealth Framework will take in average take in average 3 years from now at national level and five years at European level, if not more
- The Summits resulted in better knowledge and in cooperation between the countries within most of the ANTILOPE area.

1 Introduction

The ANTILOPE project intends to support the adoption of existing eHealth standards in order to improve eHealth interoperability. The ANTILOPE project builds on the HITCH and the $EHR-Q^{TN}$ recommendations considering the eHealth European Interoperability Framework and related international (ISO) standards.

Compliance to eHealth standards at European level requires a common approach for testing and certification of eHealth solutions and services.

The ANTILOPE project produced a set of Deliverables completed with appropriate educational material, including a set of presentations to be brought and discussed at 10 invitational regional eHealth interoperability Summits.

1.1 Purpose of this document

The document intends to report on Task 5.3 "Organising and Reporting Regional Validation Meetings".

The DOW specifies: "Ten supporting validation partners will define, in a consistent way while considering local and regional context, the most suitable way to validate the ANTILOPE educational material favouring take up and use of interoperability standards, profiles and processes. They will search for an intense cooperation with identified parties in their area in order to reach the intended audience of decision makers. They will report on their validation meetings and will provide feedbacks on the potential impacts in the area. The reports should include remarks and suggestions of the participants. These reports, remarks and suggestions will be compiled in a series of deliverables, and then leveraged for input to update and upgrade the deliverables and educational material deliverables."

1.2 Structure of the document

We start this Deliverable with describing the approach of the ANTILOPE consortium regarding the content of the Summits, the targeted audience and the involvement of the local / regional and national stakeholders involved.

In next chapter we document the material made available to the SVP partners. This encompasses promotional material as well as a set of 5 presentations: one per work package as well as an overall presentation of the project.

The following chapter provides some figures regarding the complete set of Summits.

Then follows in chapter 5 a number of statements regarding the status of eHealth Interoperability in each of the countries as well as the status on quality labelling and certification in each of the member states.

Chapter 6 addresses the responses to the questionnaires and the suggestions formulated by the attendees, while the conclusions by the consortium are listed in Chapter 7.

The ten reports, one for each Summit, using an identical template, are added to this deliverable as Chapter 8.

These report does not include the presentations given during the respective Summits. The presentations are available on the Project Place sited under the header "Supportive Validation Partners": <u>https://service.projectplace.com/pp/pp.cgi/0/869243259#/tab_docs</u>

2 Antilope eHealth Interoperability Summits Strategy

2.1 Summit Content

The Agenda and the content of most of the addressed issues are identical for all the ANTILOPE Summits. This is important in order to obtain comparable results.

Each ANTILOPE Summit addressed the following issues:

- 1. Introduction and Presentation of the ANTILOPE Project by a Member of the Core Team
- 2. Status Report on Interoperability in each of the countries of the cluster
- 3. Presentations given by 2 to 4 members of the Core Team addressing
 - WP1 Redefined eHealth European Interoperability Framework
 - WP2 Quality Management Systems (in area of Quality Assurance)
 - WP3 Testing tools overview
 - WP4 Quality label and Certification Processes
- 4. Discussing and Completing the Antilope Questionnaires
- 5. Debate moderated (in most cases) by the SVP Partner or someone invited for that purpose.

2.2 Targeted Audience

The Core Team stressed, from the start of the project, that the Antilope Summits should target on "decision makers" and the most important stakeholders regarding eHealth and interoperability.

The purpose of the Summits is not to give a number of Power Point presentations on interoperability, quality and registration of eHealth products and/or services to a large audience. The purpose has always been to get the opinion of the experts present at the Summit.

The ANTILOPE Summits were therefore "invitational" meetings only.

Local, regional and national health (care) authorities are identified by several projects (HITCH, EHR-Q , Calliope,..) as key to initiate a process of quality assessment resulting in increased interoperability.

Industry is another key stakeholder. Interoperability can only be reached once the application fulfils the appropriate requirements.

Key academic and opinion leaders from the clinical and the health IT domain are our third targeted audience.

2.3 Involvement of the Antilope Core Team Members

The Core Team Members were the authors of the Deliverables as well as of the educational material.

All the Summits were attended by at least two Core Team members. They were presenting the educational material and involved in the debate.

- 1. Overall presentation of the project: local partner or Jos Devlies
- 2. WP1 Vincent van Pelt & Michiel Sprenger (2) and Karima Bourquard (1)
- 3. WP2 Morten Bruun Rasmussen (3) & Jos Devlies
- 4. WP3 Milan Zoric and Karima Bourquard (1)
- 5. WP4 Karima Bourquard & Jos Devlies (1)

The Support Validation Partners requested assistance of the core team for the Summits, presenting the Antilope documents and recommendations and assisting the Support Validation partners during the debate.

Most of the presentations were given in English, the Italian and the French Summit excepted.

2.4 Involvement of the Antilope Supporting Expert Partners (SEP)

Most of the Supporting Expert Partners attended at least one Summit.

They also contributed to the validation of the educational materials.

2.5 Role of the Antilope Support Validation Partners (SVP)

Ten SVP members are included as Beneficiary in the ANTILOPE Consortium.

Each SVP partner is responsible for organising his own eHealth Interoperability Summit, identifying and inviting key stakeholders in each of the member states of their cluster.

Each SVP partner has also to report on the Summit by using a standard template.

3 The Antilope Summit documentation and promotional material

Standard documentation was provided to each of the SVP partners and made available on the Project Place.

3.1 Umbrella Letter

The Umbrella Letter intended to explain the why and the how of the ANTILOPE project. It was made available to the SVP partners in order to be added to the invitational letter.

The Umbrella letters were to be "personalised", identifying the SVP partner.

It was left to the SVP partner to decide to translate or not the English text into one or several national languages.

<u>The letter</u>

...

Sir, My Lady,

Quality and efficiency of healthcare are an ongoing concern to you, considering the challenges of our time: the aging population and the limitation of available resources. Sharing and (re) use of health related information, patient data as well as care expertise, is generally accepted as one of the best means to optimise care at reasonable cost for patients and health authorities.

Sharing and reuse of health related information requires computerised applications that are able to produce, to exchange and to integrate that information in the care process. This means that the IT systems should be "interoperable".

The European Commission launched the Thematic Network project "ANTILOPE" in order to promote the use of standards and profiles for interoperability and foster their adoptions across the European Union. ANTILOPE will highlight the critical role played by a European Interoperability Framework and the importance of the interoperability Quality Management Systems, the use of supportive test tools in granting quality labels and certificates for interoperable solutions.

The upcoming ANTILOPE Summit in your region will provide you and other decision makers a unique opportunity to understand why quality labelling and certification of eHealth, using such test tools and associated policies are so important to deploy interoperability in your country and across Europe. For more information on your regional Summit in the Benelux, see our web site: www.prorec-be.

The main European and International Standard Development Organisations (SDO) for healthcare as well as organisations promoting quality of IT applications and healthcare devices are represented in the ANTILOPE consortium. For more information see our web site: <u>www.antilope-project.eu</u>

We will present at this ANTILOPE Summit a robust approach to facilitate as much interoperability as possible across Europe as well as within each of the European countries. We are meanwhile interested in getting successes and may be failures in realising effective eHealth interoperability in your Member State or region reported.

The ANTILOPE Summit starts with defining and describing a set of use cases that can be implemented one by one, realising stepwise interoperability in your region and/or country. In order to realise building blocks of interoperability each use case endorses specific standards and profiles for the exchange processes as well as for expressing the clinical information content. This stepwise approach based on standards and proposed by ANTILOPE is improving consistency, reducing costs and risks when deploying eHealth products, preserving at the same time enough flexibility to address specific national constraints.

ANTILOPE also proposes a quality system for testing interoperability of eHealth applications software. It relies on international standards which have proven their usability in daily operation.

ANTILOPE analyses the ways to test and certify health IT products interoperability and proposes a third party assessment of these products resulting in either a quality label or a certificate. A number of scenarios on how this Quality Label and Certification processes could be implemented are offered, considering at European and Members State level the role of the different stakeholders as the health authorities, the healthcare professional end-users and the health IT industry.

ANTILOPE finally addresses the issue of the 'testing tools' to be used in order to assess interoperability requirements. These tools are important to achieve comparability and objectivity of Quality Labels or Certificates. An inventory of existing tools is provided by the project as well as a requirement definition for new tools to be developed.

The ANTILOPE educational material will provide you and the members of your team more background information on these different topics. That educational material will be provided and used during the "Summit on Interoperability". Project deliverables are also distributed and made available on the project's web site.

Your role as national key decision maker is crucial for the initiation, facilitation, acceptance or if needed the enforcement of such a program for Quality Label and Certification, essential to guarantee the quality of the applications in order to improve quality and efficiency of care.

Your presence at our "Regional Summit on Interoperability in Healthcare" will be of great support and another step in the direction of realising that efficiency and cost containment in healthcare.

Respectful,

For the partners in the ANTILOPE consortiumDr. Jos Devlies, EuroRecIb Johanson, MedcomWP5 LeaderCoordinator

3.2 Standard Agenda

A standard agenda has been agreed on and distributed. This agenda was only a proposal. Each SVP finally defined his own agenda, including the issues listed in the standard agenda.

Logo of the SVP partner

Name & Address of the SVP partner

ANTILOPE REGIONAL SUMMIT ON INTEROPERABILITY

Area 7

City, date

Location (name of meeting facility)

Address

08:45 - 09:00	Registration	ו	
09:00 - 09:05	Welcome		
09:05 - 09:20	Roll Call of Delegates	All	
09:20 - 10:00	ANTILOPE Main Presentation – Part I	SVP partner, assisted when requested by a core team member	
10:00 - 10:30	Coffee Brea	k	
10:30 - 11:15	ANTILOPE Main Presentation – Part II	SVP partner, assisted when requested by a core team member	
11:15 - 12:00	National / Regional State of the Art	One speaker per country part of the cluster	
12:00 - 12:30	0 Introduction to the debate Core Team representat		
12:30 - 13:40	Lunch Brea	k	
13:40 - 15:00	Debate based on the ANTILOPE key messages: 20 minutes per topic / WP	All, chaired if possible by a core team member	
15:00 - 15:20	Main conclusions	SVP partner	
15:20 - 15:40	Coffee Brea	k	
15:40 - 16:00	Introducing the Questionnaires		
16:00 - 16:15	Any other issue	All	
16:15 - 17:20	Completing Questionnaire I & II	All	

<u>Remarks</u>

- Names need to be completed, e.g. who represents the SVP partner
- Partner has of course the freedom to start later

- Partner has also the freedom to include a local "hot topic", at the condition that the listed topics remain to be the core of the meeting

More weight was given from the second Summit on to the "national" and "regional" presentations, considering the positive feelings of the attendees and indeed the essential need to be aware what your neighbour is doing.

3.3 Flyer

A first flyer was produced for the Odense Summit. See chapter 8.

The flyers for the other Summits will be included in the individual reports for each of the Summits.

3.4 Presentations

Five "standard" presentations were available to the SVP Partners.

One presentation was dedicated to the Antilope overview and four presentations are the so-called "educational material", one presentation per work package (from WP1 to WP4):

All the presentations are available on the web site

3.5 Questionnaires

A standard set of question was distributed in order to collect feedback on two different issues:

- The Summit as such;
- The content, more specifically the educational material: is the message clear and easy to understand.

These questionnaires are very important as they reflect across Europe the opinion of key experts and decision makers. Indeed the attendees of the summits are on invitation only and based on expertise and role in the area of eHealth interoperability.

3.5.1 Questions related to the Summit as such (logistics etc...)

The first two questions were to identify the role of the respondent in the context of eHealth and eHealth Interoperability.

Each of the questions can be a NG = not good, a G = good or a VG = very good.

The forms enables to add a comment to each of the issues addressed.

Nr.	Question	Comment	Answer
За	Invitation letter		NG / G/ VG
3b	Other channels for information on the Summit (web site, mail,)		NG / G/ VG
4	Logistics		NG / G/ VG
5	Project information availability		NG / G/ VG
6a/7a	Content of the presentation		NG / G/ VG
6b/7b	Quality of presentation material		NG / G/ VG
6c/7c	Presenter		NG / G/ VG
8	Introduction to the debate		NG / G/ VG
9a	Antilope Debate: Moderator's role		NG / G/ VG
9b	Antilope Debate: Involvement of the attendees		NG / G/ VG
10a	Did we reach the decision makers or the people that can easily access to the decision makers?		NG / G/ VG
10b	Is there a need for a follow-up meeting (in your country)?		NG / G/ VG
10c	Are you willing to provide contact information and/or to support attempts to connect with important decision makers?		NG / G/ VG
10a	Did we reach the decision makers or the people that can easily access to the decision makers?		NG / G/ VG

Table 1 Questionnaire I about the ANTILOPE Summits

3.5.2 Statements related to the content of the educational material and the issue of eHealth interoperability

The first two questions of the second questionnaire were also to identify the role of the respondent in the context of eHealth and eHealth Interoperability.

An approval score between 1 and 5 was expected for each of the statements. The forms also enabled to add a comment to each of the issues addressed.

Nr.	Statement	Comment	Score
3	Quality assessed interoperable eHealth services are essential to realise expected added value and to increase their adoption.		1 to 5

4	Recognised Quality Labelling and Certification organizations (certification bodies, conformance assessment bodies) and standards based quality assessed test procedures will increase reliability and acceptance of eHealth services nationally as well as across Europe.	 1 to 5
5	A European interoperability quality label and certification process is crucial to support the deployment of cross border eHealth services.	 1 to 5
6	Harmonizing existing quality label and certification processes in Europe will take in account national and regional requirements.	 1 to 5
7	Comparable and trustworthy interoperability quality labelling and certification requires the use of quality assessed testing tools.	 1 to 5
8	The use of existing and the development of new tools to test interoperability based on standards and profiles should be promoted.	 1 to 5
9	A quality management system applied to the quality labelling and certification process will improve its trustworthiness and increase its adoption.	 1 to 5
10	The quality management system, based on related ISO standards, applies to the involved organisations, personnel and procedures.	 1 to 5
11	Use Cases are important building blocks in the realisation of interoperability.	 1 to 5
12	Use cases are largely similar across the continent, enabling reuse of functional descriptions.	 1 to 5
13	Use case realisation scenarios address implementation guidelines include national and regional specificities.	 1 to 5
14	When do you expect that your country will include quality assessment for eHealth products and services in their regulatory framework?	
15	When do you expect that your country will include <u>national</u> interoperability for eHealth systems and services in their regulatory framework?	
16	When do you expect that your country will include <u>European</u> interoperability for eHealth systems and services in their regulatory framework?	
17	Do you have any suggestion, remark or proposal? Thank you for sharing this with the ANTILOPE partners.	

Table 2 Statements and Questions related to the content and the eHealth interoperability issues

4 About the Antilope Summits

4.1 Regional Distribution



Figure 1 Antilope Geographical Areas and Support Validation Partners

Ten geographical areas were defined when submitting the proposal, assigning each area to one of the Supporting Validation Partners.

Up to one exception this geographical areas did it well. The United Kingdom and Ireland decided to organise two separate events, one in London and one in Dublin. The Dublin event was integrated in the HISI 2014 Conference, November 19th and 20th, 2013. The Dublin event was finally, though focused on national strategies and on "standards", not classified as an Antilope Summit: a limited time slot was given, no questionnaire distributed.

No other changes were needed and each of the Summits was organised as scheduled in the next table.

4.2 List of the Summits

Nr.	Region		Date	Countries	Organising partner
1	Nordic	Odense, Denmark	2014.01.21	IS, NO, S, FIN, EE, LV, LT, DK	Mediq
2	Eastern Europe	Bratislava Slovakia	2014.02.26	PL, CS, SVK, H	NCZI
3	Western Balkan	Ljubljana, Slovenia	2014.04.03	SLO, RS, BH, MO, HR	ProRec-SI
4	Central Europe	Vienna, Austria	2014.04.11	A, D	Technicum Wien
5	United Kingdom/ Ireland	London, England	2014.04.30	GB, IE	IHE-UK /ProRec-UK
6	South Eastern Europe	Athens, Greece	2014.05.13	RO, BG, GR, TR, CY	HL7-Greece
7	France & Switzerland	Paris, France	2014.05.20	F, CH	InteropSanté
8	Benelux	Delft, The Netherlands	2014.06.06	B, NL, L	ProRec-BE / NICTIZ
9	Italy / Malta	Treviso, Italy	2014.06.18	I, MT	AsserItalia
10	Iberian Peninsula	Valladolid, Spain	2014.09.24	E, P	TICSalut

Table 3 List of Antilope Summit

The session of Dublin was linked to the Irish ICS Annual Congress in Dublin, November 19 and 20, 2014. The interesting session offered a limited time slot to present ANTILOPE. As the slot was limited in time, the Core Team decided to mention the event without listing it on the list of the Summits.

4.3 Overall figures about the summits participation

The figures are very disparate from Summit to Summit. Some countries deliberately limited the number of invitations, focusing on a well-defined target group. This enables them to have a more focused audience and mostly a more performant debate.

Regarding the French-Swiss Summit a more overall mailing was done to inform their affiliates on ANTILOPE. This initial mailing has been followed by a second and targeted invitation. The French SVP also organised two preparatory face to face meetings, one in France and one in Switzerland. They also organised two webinars with a large number of attendees.

In total up to 500 people attended one or more sessions. Most of them were representing public authorities and organisations empowered by law or regulation to address eHealth related issues.

214 attendees completed the questionnaires.

Success of filling the questionnaires depend at least partially on the time spend to explain each of the statements. There was of course no obligation to complete the questionnaire and some people left the meeting before the end of the meeting. Some attendees "completed" the questionnaire by providing comments without giving a score to some or all the questions.

	Invited	Attending	Presenting	Questionnaires
			Countries	Answered
Odense	~300	55	Norway Finland Denmark	15 to 21, depending on the question
Bratislava	~100	41	Poland Czech Republic Slovakia Hungary	19
Ljubljana	~100	46	Slovenia Servia Croatia Bosnia (Rep. Srpska)	24
Vienna	~100	29	Austria Germany Switzerland	14
London	~200	75	England Wales Northern Ireland (Scotland)	36

Athens	~100	65	Romania Bulgaria Greece Turkey	14
Paris	~1500	17	France Switzerland	7
Delft	~95	31	Belgium The Netherlands Luxembourg	21
Treviso	~600	72	Italy Lombardia & Veneto & Emilia Romagna & Friiuli Venezia Giulia Malta	38
Valladolid	245	69	Portugal Spain Andalusia Castilla & Léon	20
	3340	500		214

Table 4 Some figures about the Antilope Summits

5 Status of eHealth Interoperability in the countries

5.1 Introduction

Most SVP partners succeeded in inviting representatives and/or experts from each of the countries within their area. They were invited to give an overview on, the status of interoperability within their countries.

One of the surprising and permanent results of the ANTILOPE project is surely that neighbouring member states are beginning to be aware on what really happens in their neighbouring countries. A presentation about the "Status of eHealth Interoperability" generated always in an interesting exchange of information and an interesting input for the debate, more especially related to the national developments.

The presentations describing the "Status of eHealth Interoperability" in each of the member states are included in the documentation, the presentations as they are available stored on project place and are available on the Antilope website.

An attempt of producing comparable status information follows in the next chapters. It provides only an indication. A more in depth and permanent monitoring should be organised, considering the on-going evolution in most of the Member States.

5.2 Nordic & Baltic Countries

All the Nordic countries are moving towards interoperability, nevertheless at different rate of implementation.

The eHealth strategies are defined at national level either by the Ministry of Health and/or the regions. This strategy includes mandatory interoperability procedures.

A more detailed overview has been given during the Summit, more specifically about Finland,



5.2.1 Iceland

Interoperability issues are limited considering that the country has one single provider for hospital information systems as well as for primary care applications.



5.2.2 Norway

Strategy is defined nationally Testing and certification are running Testing and certification is not mandatory yet but planned to become mandatory



5.2.3 Sweden

Strategy is defined centrally Testing and certification is mandatory in some areas /some services



5.2.4 Finland

National strategy Testing and certification are mandatory Testing as well as certification is done by the health authorities?



5.2.5 Denmark

National strategy defined Testing and certification is mandatory in some area. Decision is taken to adopt the Quality Assessment as defined in ANTILOPE



5.2.6 Estonia

National strategy Testing is mandatory (but not fully implemented)



5.2.7 Latvia

Strategy is planned Testing is not mandatory



5.2.8 Lithuania

Legal base for the National Electronic Health System (Order V-151 & V-1054), followed by several 'Orders' on functional, technical and application architecture. The program for the period 2009-2015 has three large projects in progress to ensure data exchange.

Establishment and development of an electronic health record (EHR) is one of the most important development directions foreseen for the period of 2009–2015. Testing is not addressed actually.

5.3 Eastern European Countries





5.3.2 Czech Republic

No strategy is implemented nor defined



5.3.3 Slovakia

Certification process is defined (Act 153/2013) A number of test cases are defined Proprietary testing methods are used (procurement)



5.3.4 Hungary

National requirements are being defined, restarting from scratch Creating the "cooperative space" until 2015 Developing data exchange services

5.4 Western Balkan area



5.4.1 Serbia

Has since 2009 a Rulebook with a minimal set of technological and functional requirements to be met in order to allow the connectivity of the information network.

Certification is in place (10 GP systems and 2 hospital systems

certified).

eHealth interoperability use cases are defined and partially in progress . Legal framework is in place.



5.4.2 Croatia

Central eHealth platform is in place since 2006 Software applications are certified (by authorities – indirectly) ePrescription and eDispense are in place

Patient summary piloting since mid 2014

Other interoperability services are in place, mainly based on a national solution.



5.4.3 Montenegro

Public Primary Care is one integrated Health Information System Private care is not (yet) integrated Electronic receipt and electronic referral is implemented.



5.4.4 Slovenia

Secure eHealth network in place as well as an interoperability backbone (eZdravje) Participation to epSOS project ePrescription is operational since April 2014

National patient summary is planned

5.5 South Eastern European Area



5.5.1 Romania

No structured national strategy is defined yet. Some 'private' intiatives Advisory Committee for Health Services is installed (CCTSS)



5.5.2 Bulgaria

National strategy is defined in 2006 but not implemented NHIF (National Health Insurance Fund) is the driving force Patient Summary was created by NHIF Legal framework is defined in Health Act of April 2014 Nearly no interoperability (exchange) between stakeholders (NHIF excepted)



5.5.3 Greece

Ministry of Health has overall responsibility on eHealth: National eHealth Board Legal Framework is present (2010 & 2013) Electronic prescription is mandatory, epSOS compatible / based on

on international interoperability standards

the Competence center under MoH is IDIKA National patient summary in development Actually no program for quality labelling and certification is defined



5.5.4 Cyprus

No legal framework Hospitals in one network (Public hospitals) Exchange limited to registries and administrative issues No quality labelling and certification strategy regarding IT systems in use



5.5.5 Turkey

Strategic program published in 2003 Saglik-NET : national eHealth dedicated Semantic interoperability through a "health coding reference center"

NHIS (National Health Information System) for integrating and sharing patient and care related data based on a "Transmission

Data Sets", HL7 CDA mapped. It can be considered as a kind of patient summaries uploaded on a daily basis.

ePrescription is implemented.

5.6 Central Europe



5.6.1 Germany

No national "center of gravity", many regional projects Testing and Certification of National Health Card (Gematik) components

Several cooperation initiatives (not national, individual

organisations).

In Germany a certification scheme for a "middle-ware" platform within and between hospitals and European notified bodies was developed. A workgroup of the German notified bodies are currently working on consensus in further details. News and results are expected in April 2015.



5.6.2 Austria

Since April 2014 functional testing of the components of the Austrian national electronic health record project ELGA has started. For this purpose a dedicated testing lab was built by ELGA. Integration tests in the major Austrian hospital holdings will take

place in 2015. These testing activities involve the central components (audit log, security token services, patient informed consent / access settings) together with the integration provider companies.

Additional activity is now being planned to also connect the clinical systems to the above components. For this purpose concepts are discussed to build an ELGA test system that copies the functionalities of the operative ELGA system. This test system might then enable software vendors to test their products. Technikum Wien as the Austrian Antilope SVP is in contact with the major stakeholders (ELGA, Austrian medical chamber, Austrian Economic Chamber) in order to explore ways to integrate structured testing and testing tools into this landscape. First meetings on these issues are planned for early 2015.

5.7 Italy & Malta



5.7.1 Italy

Important regional autonomy regarding the organisation of healthcare and also of eHealth: quality assessment is done per region. As far as documented no quality labelling is defined at national level.

ePrescription project implemented in Veneto are running (GP HER abd Pharmacy systems certified : 29 in total)

ePrescription and Patient Summary on top of standard data exchange implemented in Lombardia Region



5.7.2 Malta

No special eHealth legislation is defined yet Semantic interoperability through gradual implementation of HL7 is available since 2012

Technical interoperability is based on HL7 standard

The National Patient Summary Project is linked to the epSOS project With myHealth portal : patient access to specific data.

5.8 France & Switzerland



5.8.1 France

Quality Labelling and Certification is performed by AsipSanté, a public organisation.

Homologation is done as well for the administrative as for the clinical applications (DMP Dossier Medical Partagé). Focus is not on the

functionality of the Electronic Health Record but rather on the ability of GP and hospitals softwares to interact with the DMP. 141 applications are homologated. Different profiles of applications are concerned: 36 clinical practice systems, 60 hospital applications.



5.8.2 Switzerland

"Stratégie Cybersanté Suisse": confederal strategy is validated since 2007 Each canton remains responsible for its own implementation of that strategy Federated approach based on a new law on the "Dossier électronique du patient" (LDEIP) since 2013. Means to reach the goal: 1) homogeneous

standards 2) certification of the implementations 3) federal funding Law will be applicable to all cantons from 1.1.2017 on

5.9 Benelux



5.9.1 Belgium

Legal definition of EHR since 1999, linked to quality labelling and certification, primarily for the GP information systems.

Actually nearly the complete ambulatory care softwares are certified. (GP, nurse, physiotherapist).

Certification is open on voluntary basis but with incentives for the users of certified applications. Hospital quality criteria include in the aggregation for the social security.

Patient Summary, ePrescription, eDispensation, Patient Migration and Software Migration as well as all professional data exchange in place and based on a national xml standard.

Locator services with several "hubs" and one linking metahub.

Standard facilitating services provided by the authorities (authentication, authorisation, encryption, secure messaging, authentic sources etc...)

Quality labelling and certification is outsourced.



5.9.2 The Netherlands

In the Netherlands, national information standards are developed in a joint process by healthcare providers together with the national competence centre for standardisation and eHealth, Nictiz. Software vendors implement the standards into their applications, after which they return to Nictiz to test their application on a functional level

against the national specifications. Nictiz uses the ART-DECOR tooling to perform the tests and administer the standards. If the test is performed successfully, a so-called "XIS qualification" is granted by Nictiz. Also, network service providers can have their network tested against a national standard for healthcare service providers. This test includes the confidentiality, integrity and availability of the service provided by the network provider. When succeeded, the ZSP ("healthcare service providers is granted by Nictiz.



5.9.3 Luxembourg

eHealth program was defined in 2006 and several implementations are available on the field of data exchange imaging and laboratory results.

Creation of G.I.E. Secure Network.

The National Agency for eHealth since 2010, is developing a national eSanté platform.

The agency provides support for vendors to get compatible with the requirements

The agency contributes to the epSOS project and is particularly interested by the cross border ePrescription.

5.10 Iberian Peninsula



5.10.1 Spain

Healthcare is regionally organised and provided. This results in important needs and requirements for interoperability between the regions.

State of the Art statements were provided for Catalunia, Andalusia and Castilla Leon.

Catalunia has its own "Service of Accreditation for iSalut" for applications as well as for devices.

<u>Andalusia</u> foresees three phases of a SOA oriented certification: technological (xsd, xslt,), semantic and clinical validation. In total 58 certified applications by the Servizio Andaluz de Salud.

<u>Castilla & Léon</u> is more focused on terminology(services) to increase interoperability.



5.10.2 Portugal

Central organisation (SPMS) is depending from Ministry of Health and responsible e.a. for provision of shared services, cooperation for innovation and change management etc.. SPMS was a contributor of the epSOS project They are focusing on the creation of "skills"



5.11 United Kingdom & Ireland

5.11.1 United Kingdom

Although health services in each of the four countries comprising the United Kingdom are modelled on the NHS each have their own implementation and are progressively diverging

from the NHS in England. Some key issues will be highlighted here.. In summary each country is addressing the interoperability challenge in their own way but none are investing in software quality labelling



<u>England</u>

NHS England in its report *NHS Five Year Forward View* sets out the vision for development of health services including in which is a strong emphasis on the need for IT and interoperability. A follow up report by

the DH NIB *Personalised Health and Care 2020* provides a framework for health organisations to invest in IT. The DH strategy includes these features

- Vision of NHS "Integrated Digital Care record" all levels integrated
- Underpinned by interoperability standards
- Using open API's
- Not only technological interoperability More importance given to the clinical headings, information flows and business drivers to define priorities



Northern Ireland

The Northern Ireland health service is the most integrated of all the four UK NHS based services combining both health and social care. Recognising the demographic and funding challenges it was likely to face the NI government through the DH embarked on a strategy to

create a Northern Ireland Electronic Care Record the status of which is

- A Virtual central record with "core data" (diagnosis, medication, lab, encounters, documents, imaging,...)
- Operational since July 4th 2014 across the province
- Built on existing hospital EHR systems interoperable through interface engine and portal technologies
- Progressive expansion and enhancement



Wales

Somewhat similar to Northern Ireland in adopting a centralised policy of national systems eHealth investment is based on their report "Informing Healthcare Strategy 2003". The strategy advocates an incremental approach to eHealth system adoption and a pragmatic use

of standards

The design is based on a Service oriented "messaging fabric". NHS Wales Interoperability strategy is devised around an interoperability toolkit (SDK). Welsh eHealth is under national leadership (and funding) and received consistent political sponsorship allowing the implementation and roll-out of national systems for PAS, Laboratory and Clinical Portal



<u>Scotland</u>

For many years the Scottish NHS has adopted a mix of centrally provided 'corporate' systems with systems selected by individual health boards. More recently Scotland has taken more of a national approach as evidence by standardising on a single supplier for hospital EHR systems. Interoperability remains a

challenge as it does in all the countries with HL7 being the most common standard deployed



5.11.2 Ireland

The Irish public health system, in part due to the 2008 world financial crisis, is well behind many of its European partners in the adoption and investment in eHealth. Recently the Irish

government has committed to an eHealth strategy in which establishing national infrastructure and clinical systems form a key part. Ireland has an active standards movement which is advocating Antilope as beacon to the adoption of interoperability as the strategy moves forward

Quality Labelling and Certification has been done on initiative of the GP Association

6 Overview of the responses to the questionnaires

The questionnaires were distributed to the attendees before the start of the Summit. Not all the attendees completed the forms, despite the SVPartners insisted, clearly explaining why the forms should be completed.

Most of the Summits did foresee a slot at the end of the Summit to discuss that questionnaire, but some attendees needed to leave before the end of the debate.

The statements and questions were yet listed in chapter 3.

6.1 Overview of the answers related to Questionnaire I

		11	2	3	4	5	6	7	8	9	10	Total
За	Invitation letter	41	43	50	17	46	32	12	20	40	27	328
3b	Other channels for information on the Summit (web site, mail,)	34	43	46	14	36	28	20	34	54	16	325
4	Logistics	38	45	62	18	65	28	20	34	62	36	408
5	Project information availability	31	43	54	18	44	32	16	30	39	24	331
6a	Content of the presentation	34	35	47	20	51	28	18	30	49	23	335
6b	Quality of presentation material	30	39	45	20	33	28	14	27	59	20	315
6c	Presenter	36	31	41	18	31	26	15	29	47	23	297
7a	Content of the presentation	22	37	46	11	29	28	20	24	43	28	288
7b	Quality of presentation material	34	41	48	11	33	26	18	24	49	26	310
7c	Presenter	18	31	52	6	31	27	22	18	43	26	274
8	Introduction to the debate	24	29		13		29	20	29	51	26	221
9a	Antilope Debate: Moderator's role	31	37	43	15	54	34	16	39	50	21	340
9b	Antilope Debate: Involvement of the attendees	25	35	21	11	52	32	17	41	39	17	290
10a	Did we reach the decision makers or the people that can easily access to the decision makers?	7/6	16/7	13/7	3/1	4/27	10/2	4/2	14/1	10/19	10/6	91/78

¹ (1) Nordic Countries (2) Eastern Four (3) Western Balkan (4) Austria/Germany (5) UK (6) South Eastern Europe (7) France & Switzerland (8) Benelux (9) Italy/Malta (10) Spain/Portugal

10b	Is there a need for a follow-up meeting (in your country)?	11/4	11/8	12/10	4/2	15/17	16/3	5/1	11/6	22/6	7/8	114/65
10c	Are you willing to provide contact information and/or to support attempts to connect with important decision makers?	10/1	11/8	14/7	3/10	30/2	11/1	4/2	16/1	22/5	15/1	136/38

Table 5 Overview of the results of the first questionnaire regarding the Summit

The scores are obtained by accounting 1 for a G (Good), +3 for a VG (Very Good) score and -3 for a NG (Not Good).

Interpretation of the results for the questions 3 to 9

The high score for question 4 regarding accommodation etc... illustrates the efforts done by the SVP partners . The score is nevertheless without importance for the project as such.

When we address the Summit content wise, we have the highest score for the debate, as managed by the local partners. On the other hand the participation of the attendees. This very positive judgement of the attendees is also what the attending core team members reported.

We have on the other hand a lower score for bringing the content, the results of the project as such. This might be due to language aspects.

Interpretation of the results for question 10a, b and c

A majority of the attendees confirmed that we reached the decision makers, more especially the eHealth / health authorities, frequently delegates from the Ministries of Health. This majority (91/169) increases to 77/109 when we consider that the UK and Italy, implemented a different invitation approach. In the UK the targeted audience were the attendees at Digital Health Festival. The focus in Italy was more on the members of the association rather than on public decision makers, also considering the political conditions. The UK and Italy are the two only countries with more NO answers on question 10a.

A large majority of the attendees confirmed that the ANTILOPE Summit should be followed by complementary initiatives, offering at the same time their services to favour the realisation of the ANTILOPE recommendations.

6.2 Questions more related to the content: questionnaire II

The totals presented in this overview are the sums of the scores given in the questionnaires: five times a score 4 results in '20'.

Nr.	Statement	1	2	3	4	5	6	7	8	9	10	
3	Quality assessed interoperable eHealth services are essential to realise expected added value and to increase their adoption.	59	74	98	53	137	61	31	87	172	80	852
4	Recognised Quality Labelling and Certification organizations (certification bodies, conformance assessment bodies) and standards based quality assessed test procedures will increase reliability and acceptance of eHealth services nationally as well as across Europe.	55	58	107	51	115	57	30	86	158	74	791
5	A European interoperability quality label and certification process is crucial to support the deployment of cross border eHealth services.	50	65	96	48	90	59	29	79	159	74	749
6	Harmonizing existing quality label and certification processes in Europe will take in account national and regional requirements.	49	61	93	47	79	60	29	87	160	72	737
7	Comparable and trustworthy interoperability quality labelling and certification requires the use of quality assessed testing tools.	54	60	99	51	140	66	31	84	190	82	857
8	The use of existing and the development of new tools to test interoperability based on standards and profiles should be promoted.	55	57	101	48	148	61	34	84	152	80	820
9	A quality management system applied to the quality labelling and certification process will improve its trustworthiness and increase its adoption.	49	61	100	50	119	58	29	76	147	72	761
10	The quality management system, based on related ISO standards, applies to the involved	47	69	97	52	140	57	30	70	147	71	780

	organisations, personnel and procedures.											
11	Use Cases are important building blocks in the realisation of interoperability.	59	61	108	56	130	63	33	93	176	72	851
12	Use cases are largely similar across the continent, enabling reuse of functional descriptions.	47	58	89	49	97	50	20	76	132	59	677
13	Use case realisation scenarios address implementation guidelines include national and regional specificities.	51	48	99	48	112	49	24	80	152	61	724
	Maximal score per site	105	95	120	70	180	70	35	105	190	100	1070

Table 6 Overview of the answers of the content related questionnaire II

We are comparing the obtained scores against the maximum score possible. The maximum is as many times a score of 5 as forms returned. The maximum has been fixed on 1.070. This is 21 times a maximum score.

Nr.	Statement	Score	%
3	Quality assessed interoperable eHealth services are essential to realise expected added value and to increase their adoption.	852	79,63%
4	Recognised Quality Labelling and Certification organizations (certification bodies, conformance assessment bodies) and standards based quality assessed test procedures will increase reliability and acceptance of eHealth services nationally as well as across Europe.	791	73,93%
5	A European interoperability quality label and certification process is crucial to support the deployment of cross border eHealth services.	749	70,00%
6	Harmonizing existing quality label and certification processes in Europe will take in account national and regional requirements.	737	68,88%
7	Comparable and trustworthy interoperability quality labelling and certification requires the use of quality assessed testing tools.	857	80,09%
8	The use of existing and the development of new tools to test interoperability based on standards and profiles should be promoted.	820	76,64%
9	A quality management system applied to the quality labelling and certification process will improve its trustworthiness and increase its adoption.	761	71,12%
10	The quality management system, based on related ISO standards, applies to the involved organisations, personnel and procedures.	780	72,90%
11	Use Cases are important building blocks in the realisation of	851	79,53%

	interoperability.		
12	Use cases are largely similar across the continent, enabling reuse of functional descriptions.	677	63,27%
13	Use case realisation scenarios address implementation guidelines include national and regional specificities.	724	67,66%

The top three statements are

7	Comparable and trustworthy interoperability quality labelling and certification requires the use of quality assessed testing tools.	857	80,09%
3	Quality assessed interoperable eHealth services are essential to realise expected added value and to increase their adoption.	852	79,63%
11	Use Cases are important building blocks in the realisation of interoperability.	851	79,53%

The three lowest scores are obtained for the following statements

12	Use cases are largely similar across the continent, enabling reuse of functional descriptions.	677	63,27%
13	Use case realisation scenarios address implementation guidelines include national and regional specificities.	724	67,66%
6	Harmonizing existing quality label and certification processes in Europe will take in account national and regional requirements.	737	68,88%

Interpretation of the results for the questions 3 to 13

These figures confirm the "ANTILOPE" main recommendations, highlighting the importance of

- Quality testing interoperable eHealth services
- Comparable and trustworthy testing tools to assess this interoperability
- Use cases as building blocks for a full implementation of interoperable eHealth services?

These figures illustrate at the same time some doubts regarding – at least actually – cross border interoperability services and the re-use "as such" of some/most of these developments in different member states.

One of the conclusions out of this set of results is the evident scepticism related to statements with a cross border dimension;

6.3 Overview of the main comments

This section repeats the comments "as written down" by the Summit attendees in the questionnaires.

The country ID is given when known., otherwise we will refer to a Summit.

One should consider the date of a Summit to interpret some of the comments, more precisely when suggesting complementary work to be done, e.g. more elaborated examples. Some improvements were done to the "educational material" between the first (February 2014) and the last Summit (October 2014).

3	Quality assessed interoperable eHealth services are essential to realise expected added value and to increase their adoption.
	[Odense] Yes definitely, fitted to practical trusted and vendor-neutral exchange.
	[Ljubljana] Involvement of the key national stakeholders is very important (those who use eHealth services). Or get one stakeholder who has large structural power in the country/region.
	 [Vienna] Yes, at least one element is quality, to realise value in general, but adoption is not guaranteed, though Medical community consensus is a foundation for interoperability.
	(UK) Success depends on many more factors than just quality and interoperability – in particular it relies on clinical involvement and committed leadership both from the top and clinically

4 Recognised Quality Labelling and Certification organizations (certification bodies, conformance assessment bodies) and standards based quality assessed test procedures will increase reliability and acceptance of eHealth services nationally as well as across Europe.

[Odense] Not if expensive or bureaucratic

[Ljubljana] It is important that EU/international standards are available [Vienna]

• The sentence contains two distinct topics - this is not good. Organisations and test procedures and organisations. Reliability: Yes, agreed, acceptance is influenced by labels and certification, but much more dependent from other things, especially use

• "will increase reliability": YES! Acceptance: NO! (UK) Unlikely this will happen in the near term without NHS leadership

[NL]

- Standards and requirements must be clear
- Condition is to learn from existing models for accreditation and certification. We don't need a separate model for healthcare interoperability
- End user attitude on eHealth needs other stimulant.

5	A European interoperability quality label and certification process is crucial to						
	support the deployment of cross border eHealth services.						
	[Ljubljana].						
	 epSOS was a good use case of a such need. However, it proved another/specific 						
	approach where no formal European rules were set, instead they were rather project—wide only.						
	 Score=2, if cross border means outside EU. And also some countries have their standards. 						
	[Vienna]						
	• Yes AND no! Yes: the certification process will ensure that e.g. security standards						
	are reliably in place. No: crucial to certify the important interoperability aspects -						
	> but: importance is depending on main things: privacy, healthcare quality, emergency,						
	 It is needed only for the cross-border interfaces and high-level use cases between countries! 						
	(UK) Cross border sharing of data is not a priority						
[BE] A pragmatic approach will win from standards. Organisations will do by							
	later formalise the way they share information						
	[NL]						
	1. The process can also be a hurdle to overcome						
	2. Not if it's set-up separately from what is already existing in other domains						
	3. Due to political issues, this will delay the process						
	Worldwide, not only European. We are a worldwide patient.						

н	armonizing existing quality label and certification processes in Europe will take					
a	account national and regional requirements.					
[(Ddense] Yes - but these are minor in %					
•	Not limited to cross-border services!					
•	Yes, but here Antilope needs improvement - semantic interoperability needs					
	improvement on how to go cross border - the EIF has deeper analysis nee improvement on how to go cross border - the EIF has deeper analysis					
	There should be some kind of comments to how this is done in the project. A					
	consequences.					
ſ	[Liubliana					
	lupliana					
Γ,	LJUDIJana aking into account the national and regional requirements is important for u					
T	LJUDIJana aking into account the national and regional requirements is important for us atisfaction. National and regional requirements depend on local business specif					
Ta Sa /i	LJubIJana aking into account the national and regional requirements is important for us atisfaction. National and regional requirements depend on local business specif					
Ta sa /i	Ljubijana aking into account the national and regional requirements is important for us atisfaction. National and regional requirements depend on local business specif ssues					
T sa /i [LJubijana aking into account the national and regional requirements is important for us atisfaction. National and regional requirements depend on local business specif ssues Vienna]					
T sa /i [LJubljana aking into account the national and regional requirements is important for us atisfaction. National and regional requirements depend on local business specif ssues Vienna] This is a MUST requirement, but on the other hand very challenging, depending					
T sa /i [LJubljana aking into account the national and regional requirements is important for u atisfaction. National and regional requirements depend on local business specif ssues Vienna] This is a MUST requirement, but on the other hand very challenging, dependin on the type of regulator					
T sa /i [●	LJubijana aking into account the national and regional requirements is important for u atisfaction. National and regional requirements depend on local business specific ssues Vienna] This is a MUST requirement, but on the other hand very challenging, dependin on the type of regulator Let us focus on processes with not too much national or regional determined					
T sa ∕i [LJubijana aking into account the national and regional requirements is important for u atisfaction. National and regional requirements depend on local business specif ssues Vienna] This is a MUST requirement, but on the other hand very challenging, dependin on the type of regulator Let us focus on processes with not too much national or regional determined (Comment from organiser: most likely expresses that there should be only very					
τ; sa /i [●	LJubijana aking into account the national and regional requirements is important for u atisfaction. National and regional requirements depend on local business specif ssues Vienna] This is a MUST requirement, but on the other hand very challenging, dependin on the type of regulator Let us focus on processes with not too much national or regional determined (Comment from organiser: most likely expresses that there should be only very few regional differences)					
T sa /i [LJubijana aking into account the national and regional requirements is important for u atisfaction. National and regional requirements depend on local business specif ssues Vienna] This is a MUST requirement, but on the other hand very challenging, dependin on the type of regulator Let us focus on processes with not too much national or regional determined (Comment from organiser: most likely expresses that there should be only very few regional differences) National and regional requirements HAVE TO be taken into account!!!!					

7	Comparable and trustworthy interoperability quality labelling and certification				
	requires the use of quality assessed testing tools.				
	[Odense]				
	Quality assessed testing tools - yes				
	 And good specifications and definitions 				
	[Ljubljana]				
	This is especially true within the country borders (99%); cross-border				
	interoperability comes latter.				
	Quality tools save time and increases quality of testing, but it is not a necessary				
	part.				
	[Vienna]				
	Yes, if testing can be automated. Some interoperability aspects (legal view,				
	semantical (partly)) are hard to be tested with tools. So required in which areas				
	of interoperability				
	 You cannot manage what you cannot measure. 				
	(uk) Tools are definitely of value but possibly need to be locally developed due to				
	national requirements				
	[NL]				
	1. To use (testing) tools you must be able to be specific (regarding user				
	requirements / specifications)				
	2. It is a precondition				
	3. The test tools need to be mature & tested before taken into use				

8	The use of existing and the development of new tools to test interoperability based on standards and profiles should be promoted.						
	[Odense]						
	 We need also general-level tools not strictly connected to a certain standard/profile. 						
	• Yes						
	Only if those existing are found to be insufficient						
	 Make it clear how to do this and how it works together with local/regional extensions and variances. 						
	[Ljubljana]						
	- Funding?						
	 Tools based on standards and profiles are more reliable. 						
	[Vienna]						
	• Hm, seems right, but has no impact. What's the reason? Statement should have a "because" part added.						
	• I am a fan of testing and I believe that extensive testing always reduces overall time of work!						
	[NL]						
	Testing can start before: review specifications before development starts						
	They should be free available as well (no barriers)						

9	A quality management system applied to the quality labelling and certification
	process will improve its trustworthiness and increase its adoption.
	[Odense] A qualitative management system is good but I am not sure that it will
	improve its trustworthiness and increase its adoption
	[Vienna]
	 Why? How does QM increase adoption?
	 Change sentence: A quality management system applied to the quality labelling and certification process will improve its trustworthiness and increase its adoption by HCPs, not necessarily by patients.
	• This is definitely the case, as seen at the processes around the IHE
	Connectathon tests (concerning labelling)
	[NL] Look existing quality management systems

10	The quality management system, based on related ISO standards, applies to the					
	involved organisations, personnel and procedures.					
	[Odense]					
	Bureaucratic? / Costly?					
	ISO only? What about others?					
	[Vienna]					
	• Fine, challenging! (Question should be rephrased: The quality management system, based on related ISO standards, has to cover the involved organisations, personnel and procedures.)					
	• You have to get together al involved staff for raising quality.					
	[NL] Adoption of standards is on the working floor. We should not reach out to a higher level. (no top /down approach)					
	(UK) All tenders for PAS/EPR systems require ISO compliance					

11 Use Cases are important building blocks in the realisation of interoperability.					
[Odense]					
Yes but only part					
Absolutely - a great approach!					
• But should be verified with elaborated examples. That is not the case					
at the moment.					
[Ljubljana] Use cases could be a good starting point for the discussions in					
the countries with the early stages of eHealth development					
[Vienna]					
 Absolutely. But defining actors / roles is crucial, because they differ from country 					
to country (Nurse is not nurse!!)					
• Unless you start with use cases, built solutions eventually will not cope with the					
needs of real life! This is essential!!					
[NL]					
• The functionality is the purpose of the whole process not the data					
exchange as such					
• There needs to be alignment with existing standard. At some point best					
practices from use cases can be included in (formal) standards for future					
reference.					
[BE] Important but not the only approach					
(UK) They are helpful but even in the UK they need local adaptation as the					
health systems vary in important degrees					
<i>ICH1</i> Even more					
12 Use cases are largely similar across the continent, enabling reuse of functional					
descriptions.					
[Odense]					
Only partly true					
Language barrier - semantic interoperability is a must					
But include examples of what extensions and variations, means and what					
impact it has on interoperability					
[Ljubljana]					
- Different healthcare organisations require different roles of physicians					
pharmacists etc.					
- There are specifics in different countries and therefore the reuse can be difficult.					
 Not many Antilope use cases relate to primary HC setting 					
[Vienna]					
 When it comes to claims and reimbursement similarities will diminish. 					
I do not think so. They should be but our own experience showed that this is					
difficult even within organisations of a certain size.					
[CH] I dough it will be good.					
[NL] Yes & no: we see both regional and national use cases					

13	Use case realisation scenarios address implementation guidelines include national and regional specificities. [Odense] • Well defined! • Difficult - see 4 • There is a need to be more explicit on this issue with examples of what it means in the Antilone world and for interoperability.				
	[Ljubljana] It is important that the national and regional specificities are taken into account				
	[Vienna]				
	 Clinical use cases are very similar from the functional point of view, legal regulations are country specific and constitute the main challenge for interoperability. 				
	 ??? Use cases may reflect national / regional specifities. This realisation scenarios as well as implementation guidelines must include / cope with these use cases as well. 				
	(UK) They must recognise local conditions – won't work if generic				

6.4 Issues more related to the questions 14, 15 and 16

The last part of questionnaire enabled the attendees to express their opinion on <u>when</u> the required decisions / implementations will be implemented.

	14				
	When do you expect that your country will include quality assessment for eHealth products and services in their regulatory framework?				
	Yet	1 to 3 years	5 years	➤ 5 years	No answer
1	3	2	1	1	
2	1	5	1	2	8
3	2	11	4	7	
4	0	5	3	3	
5					
6	1	2	1	9	
7	1	4		2	
8	18		2	1	
9	7		12	13	
10	1	5	8	2	

Table7 Overview of the answers to question 14

Main comments regarding this question

(EE) The Estonian Health Information system was established in 2009 [Ljubljana]

- 1. Debate: there is hardly any SW system that hasn't been Q assessed. However, yes, there are some, for example one-man-band SWs. The Q assessment differentiated them from the better quality SWs.
- 2. Serbia: Quality assessment has happened once against the initial Rulebook. Not sustainable yet (upgrades of criteria, Re-assessment, organisation, funding..)
- 3. Question: what is the meaning of the term "national interoperability"? Some solutions already in place, as defined in the 'General agreement' between the National Health Insurance Institute (the payer) and the healthcare providers.
- (D) Hard to say

(A) Austria is on the right way for it, but the next 5 years have to focus on ELGA. I guess this will be necessary in the context of ELGA when general practitioners have to join ELGA since there are many different IT systems to be connected

(B) Already in place

Before including assessment there must be incentives in place to use / convince all stakeholders to use the products and the services

(NL) Alignment with requirements set in "kwaliteitswet zorginstellingen" is needed

(UK) it does not appear to be on the agenda and as most of our PAS/EPR suppliers are American. The question is what's in it for them?

	15				
	When do you expect that your country will include national interoperability for eHealth				
	systems and services in their regulatory framework?				
	Yet	1 to 3 years	5 years	5 years	No answer
1	3	2	1		
2	1	5	2	2	7
3	2	11	4	7	
4	3	3	2	1	
5					
6	1	5	3	5	
7	3	2	1	2	
8	15		4	2	
9	10		15	7	
10	3	6	9		

Table8 Overview of the answers to question 15

Main comments regarding this question

[FIN] Already in place (ITK)

(EE) From 2009

[Ljubljana] What is considered as national interoperability? Some solutions e.g. for reimbursement, reporting.. are already in place, requested by the national authorities.

(A) Elga is starting now

(D) N/A, because the healthcare system is only regulated indirectly by the legal framework in Germany

[B] Since 1999

(NL) In process

(UK) Already on the agenda for GP systems via GPSoC, but depends on how integrated

care agenda moves forward for Trusts

	16				
	When do you expect that your country will include <u>European interoperability</u> for eHealth systems and services in their regulatory framework?				
	Yet	1 to 3 years	5 years	➤ 5 years	No answer
1	2			2	
2	1	5	2	1	8
3	2	11	5	7	
4	1	2	3	6	
5					
6	1	3	2	8	
7	1			3	3
8	4		15	2	
9	9		12	10	
10	1	4	9	2	

Table9 Overview of the answers to question 16

Main comments regarding this question

[Ljubljana] The European interoperability should be more precisely defined at the first place (B)

- For the moment, European Interoperability is real and usable
- "epSOS like" specifications
- [L] Hard to give expectations at this timd

The next table illustrates the different expectations regarding the integration interoperability as a requirement for eHealth systems, at national and at European level. National IOP obtains a score of 28% yet in place and 52% estimate it to be present within 1 to 3 years. European level IOP scores much less 15% yet, 32% or 1 on 3 to be reached within 3 years from mid 2014.

15					
When do you expect that your country will include <u>National interoperability</u> for eHealth systems and services in their regulatory framework?					
16					
When do you expect that your country will include <u>European interoperability</u> for eHealth systems and services in their regulatory framework?					
Yet	1 to 3 years	5 years	5 years	No answer	

41	34	41	26	7
22	25	48	41	11

6.5 Suggestions formulated by the attendees

The questionnaire offered the possibility to formulate suggestions to the consortium. These suggestions are not directly related to one identified 'statement'.

[Odense]

• Tools and guidelines for interoperability testing are needed.

• Must simplify interoperability. / Must adopt patient centricity

• Highlight national governance and ownership issues. / Emphasize that interoperability = alle levels of the framework and not just technical.

• A larger focus, including better specs for semantic interoperability especially cross border

• Promoting the use of standards is also about supporting vendors during (early) development phases. Would be nice if you not only focus on test + certification. But nice work, anyhow :-)

• There should be some ideas of what happens after Antilope. / Use case - profile - realisation is good. / A common framework for creating use case standard is a possibility that the project should consider for instance the countries]

[Ljubljana] Providing technical interoperability is easy (protocols, code tables...). Don't forget on standardization and quality of the exchanged data.

(B) Beside improving EHR's and exchange of care data, we may not forget to educate the users into a good use of their EHR. This improves quality and facilitate interoperability.

(CH) Keep up the great work

(NL) Ultimate customers, i.e. citizens, should be part of discussion and suggested benefits

(UK) Interoperability is a critical issue as is the quality of software especially as the NHS gets more involved with open source. However, little will happen to either of these unless there is sustained leadership from government (politicians have no idea about this subject), DH and NHS. Would be helped if EC shows some real leadership and not just talk.

6.6 Main Suggestions and Conclusions from the audience

We are centralising here the main conclusions out of the debates that followed after the presentations. These conclusions are complementary to the comments collected in direct relation to the questionnaires.

6.6.1 Odense Summit (Nordic Countries)

- The set-up of a Quality Manual was recognised by all audience and mentioned to be very relevant and a must for the Interoperability and certification efforts. The proposed set-up was well proven and of good quality.
- The use of tools was not much discussed, but very relevant, as well as setting up a labelling and certification on national and European level.
- The feedback from the audience was very positive to the content of Antilope seems to be very relevant.
- Use of standards, possibilities for interoperability, the scope of Antilope and how Antilope's work could be extended in the future were also discussed.

6.6.2 Bratislava Summit (Eastern Europe)

Use cases should be further developed. Also the semantic interoperability should be further discussed.

6.6.3 Ljubljana Summit (Western Balkan)

- A mixture of the presentations on (i) the state of the art in the countries of the region and (ii) Antilope /European perspective of the eHealth interoperability proved to be very successful concept of the event.
- The section with 'National presentations' seemed to be the most interesting part of the Summit.
- Many concerns were raised about the true interest and priorities of national authorities concerning eHealth interoperability. Mostly they do recognize the need and importance of it, but the initiative is expected to come from external sources (EU?).
- The resources available for the eHealth interoperability highly depend on the available budget for the health care in the country overall. There is a huge gap between the more and the less developed countries.
- The topics discussed within Antilope are very important and relevant for the future eHealth developments.
- The labels such as 'eHealth compliant' are highly important and desirable. However, it is hard to set up such labeling system without legal enforcement. Or at least incentives from the authorities.

6.6.4 Vienna Summit (Central Europe)

The comments given to question 17 of the questionnaire are considered and listed here as overall comments and suggestions. More technical suggestions were formulated too and discussed with the core team. They are part of the Summit report.

- Perfect idea! It is interesting to keep in touch on the IHE profiles!
- It needs a European regulation not just a directive

• Sentences in English are still hard to understand. It would be helpful to add a reason or an impact description. But the approach is helpful and straightforward - Good!! Recommendations / results of Antilope should be summarised similarily, to allow easy understanding and adoption.

- See above: Medical community consensus is a foundation for interoperability.
- Good initiative!

• I would appreciate very much not to install a further board for driving development of Antilope methods and tools, but to (re-) use existing boards and working groups! In Austria I think IHE Austria would be the appropriate board, probably also at international level. IHE groups could be the right place for that. This would foster that testing issues are worked out together with use case specifications. The final goal should be automated testing.

6.6.5 London Summit (United Kingdom & Ireland)

The following comments are taken direct from the questionnaires and the debate and are not stated in any particular order or priority so they are given equal weightings

• For those new to the challenges of interoperability they would be helped by having research information available

- NHS England senior people must get involved in this
- Lack of key stakeholder personnel committed to facing this challenge
- Policy makers at the Department of Health must get involved
- Slides in a number of the presentations were far too detailed
- Not sure if the summit reached the decision makers

- Until there are standards the need remains for a lobby group
- Very interesting to hear the views in the debate from such a varied cross section of people
- Not a decision maker but now prepared to discuss this with my NHS management
- Needs to be followed up to keep the momentum

• As a clinician I would like some real world examples of standards in action especially in relation to quality and patient safety

- Follow up needed related to the issues we (NHS) faces
- The debate exposed a lot of concern about the subject (interoperability)
- Representation from the government would have been great

• There needs to be an agreed standard. Commissioners are unclear about what their providers (hospitals etc.) should use to enable roll-out of interoperability

In summary the very lively debate highlighted many issues both technical and cultural/organisational surrounding the whole question of interoperability. It was recognised that IT practitioners and clinicians understand the need yet gaining engagement senior stakeholder management and politicians is extremely difficult and often frustrating.

6.6.6 Athens Summit (South Eastern Europe)

One of the most important and interesting outcomes of the questionnaire was that although most of the attendees think that the use cases have differences across the continent, they don't think that national and regional specificities shall be addressed as implementation guidelines.

6.6.7 Paris Summit (France & Switzerland)

Antilope has contributed to build a very effective exchange platform about interoperability between concerned regions.

We should have expected a higher participation for the summit, but this apparent low attendance must be balanced with the fact that two information webinars and two preliminary meetings were organised before.

6.6.8 Delft Summit (Benelux)

The answers to the questionnaire were representative for the persons attending the Summit in Delft, as all the attendees were granted a small local present after handing over a completed form. Sufficient time was spend on discussing each of the questions.

Some interesting positions were defended:

1. The need to make use of standards is out of any discussion, but standards should be unambiguous, should cover the complete domain of the health and should be available for free.

2. The use of profiles is at least recommended for data exchange. They should flexible and easily customised to national / regional requirements.

3. Most delegates believe that interoperability requirements will be included in national regulation before the end of the decade.

4. The same majority of delegates believe that this will NOT happen at E.U within that same period of 5 years.

5. Quality assessing eHealth products is essential to reach interoperability.

6. The quality assessment should make use of quality assessed tools. The absence of such tools cannot be a reason for not validating eHealth products.

6.6.9 Treviso Summit (Italy & Malta)

• eHealth and the digitalisation of SystemCare seem to be a "killer-application" for Italy and Europe, too.

• To deal the issue at regional / national and European level seems to be a good solution to address the lacks of national government.

• The challenge facing Italy today is to build a technology architecture for eHealth from what regions have already achieved at the local level. There is a decree dedicated to Electronic Health Records that already provides this mode of operation. We hope that future determinations will maintained this bottom-up approach.

• In spite of everything, within national territories, professionals and appropriate skills are widespread. They would be ready to innovate and modernize the national health through solutions and process related to eHealth and interoperability.

6.6.10 Valladolid Summit (Spain & Portugal)

• At Spanish and Portuguese level, each region has its own health provision model, which involves a huge variety of IT systems, which do not interoperate or interoperate little between them.

Currently some interconnectivity test, more or less advanced, had been started at regional level. These tests are still new, and in general, they are based on local specifications instead of in international standards. Therefore, in general, those pilots cannot be generalized at the national and international levels.

• In some regions, the most basic integration profiles (identified by Antilope and/or the ehealth interoperability framework) are already implemented and well established. There is likely not to be modified to fit the standard, therefore does not make sense to think of standard test as proposed Antilope..

• In general, the few new projects that are undertaken are focus on few basics areas of interoperability like pathology, radiology image distribution, hospital at home and others. It is important to point out that there are profiles areas like pathology, that interoperability processes are more complicated than others like radiology.

One reason of the absence of new projects may be the lack of uniformity in the processes of health among different territories, so the involvement of management in defining clinical processes and nomenclature are strongly necessary. Another necessity is creating a common global dictionary.

In addition, all the participants concluded that it is needed to pass a real and simulated test in all projects, since too many real variables may be difficult to simulate. Moreover, it should be needed for interoperability testing conducted the test on a large scale.

Another factor that hinders this type of projects is the lack of funding.

• It must be considered that there are many types of interoperability (business, technology, etc.) that are linked. The projects are working on many fronts that seem not to advance, but when they begin to converge, we are going tol see the results.

• There is not anticipated demand for services not related to "interoperability testing" that is based on international standards for the next three years. However, it is essential to develop clear and concise rules of action that do not lead to doubt or misinterpretation. The opinion of a great number of participants in the debate was that we currently stay in a transition period in which there are many great technologies competing between them to be the predominant, and in a few years it will be defined the predominant.

However, to start to use interoperability testing we cannot wait that it is developed the predominant technology completely. We have to start developing interoperability protocols, and go to adapted, improve and expand the scope in collaboration with suppliers.

• Create incentives for providers, developers, etc. to interoperate has to be a must to promote the use of interoperability.

• Finally, it is pointed out the lack of standard education and training of students in the universities.

6.7 Comments by the Support Validation Partners

6.7.1 Odense Summit

• Great interest among summit countries to follow e-Health interoperability initiatives like Antilope.

• Invite decision makers, but also technical staff and vendors.

• Important to invite a broad number of organisations and vendors to reach the target group.

• Antilope gives a good overview and address important issues regarding having e-Health Interoperability on the scene.

• The Antilope project encourages having national efforts to be done setting up national test and certification schemes and mandatory certification to establish a vendor neutral market.

• International use cases are important as a frame, but must be adjusted to local needs.

• Suggestions: Continue the work informing about setting up European and national interoperability testing/certification bodies. And important to make programs for disseminating interoperable IT systems.

6.7.2 Bratislava Summit

Use cases should be further developed. Also the semantic interoperability should be further discussed.

6.7.3 Ljubljana Summit

- The Summit was a very valuable experience. Although Slovenia has a rich tradition of organizing eHealth events, such regional / international events are always well accepted.
- The push from the EU side in organizing such events is very helpful and welcome.
- EC should keep the momentum in seting up the eHealth interoperability scene.

6.7.4 Vienna Summit

• One main concern of attendees was the further development and governance of the testing, labelling and certification scheme. The challenge is to cover both European as well as regional concerns. The attendees agreed that a "one fits all" European scheme is not possible because the legal frameworks are regionally different.

• Looking especially at the recommendation under Q17 in 4.2.1 the attendees strongly recommended to establish a platform for the discussion and harmonisation effort. This platform should be faithful to the "founding principles" coherence, transparency, openness, consensus, voluntary application, independence from special interests and efficiency according to Regulation (EU) No 1025/2012.

• It was further noted from some attendees that existing boards and discussion platforms are definitely preferred. It is important that these platforms have a strong regional network. On the other hand there must be straightforward links and strong communication to the activities at EU level. The workforce with the required expertise is very limited. This harmonisation effort should therefore be organised in a lean and efficient way.

• The Antilope deliverables were received well as a strong contribution to the implementation of eHealth in Europe. However it was pointed out that above interoperability many additional requirements like usability and function of ICT systems must be satisfied. Adoption by large populations does not only depend on interoperability.

• Attendees agreed that the deliverables as they are available now are good foundations for further work. However much more work is necessary. It is expected that many challenges will only become gradually visible as certification becomes mandatory on large scales over time.

6.7.5 London Summit

The summit took considerably more effort to organise in relation to gaining the commitment of individual presenters from the four UK countries and attracting the volume of attendees we required for a successful event. In part this was due to the fact that the subject matter had been previously covered at numerous healthcare IT conferences and seminars over the previous few years.

We attempted to gain the attendance of senior NHS executive directors but the detailed nature of Antilope presentations etc. was deemed to be at level reserved for IT management and not policy decision makers, even though we tailored the agenda to provide more of a balance.

Nevertheless, the summit was a success in that it further raised the importance of the subject and provided for a very positive debate

6.7.6 Athens Summit

The Summit has received very positive comments from the participants, but also from other listeners that were taking part in other events of the eHealthForum 2014 which took place in the same Venue. Despite this, the number of participants that filled the questionnaires was unfortunately relatively small, and therefore the conclusions that can be made are limited.

6.7.7 Paris Summit

Organising two preliminary meetings to address the quality of the deliverables before the meeting was really useful to prepare the summit. Each attendee had a deep understanding and knowledge about the job done, so the debate was of very high quality.

6.7.8 Delft Summit

One of the acquired advantages of the ANTILOPE summits is that authorities (from the public administration mainly) get acquainted to each other and start to be aware what happens in neighbouring countries.

The Benelux Summit was therefore successful, considering the presence of most of the public authorities competent for eHealth services of each of the three countries.

There was a large consensus on the importance of quality assessment of eHealth products, EHR systems included.

6.7.9 Treviso Summit

• Much more work is necessary. First of all at the national level. Graphs for Antilope Statement N° 13-14.15 find little confidence in the country's ability to achieve the objectives in the short term.

• All attendees agree with Antilope Sentences and understand the importance of giving new impetus to the process of change in the digital healthcare. Only regarding statement N° 10 (quality management) and N° 12 (Use cases) attendees partially agreed.

• Central authority and decision makers were not represented, due to the general Italian situation about eHealth, defined at the regional level. The summit has put even more emphasis on the lack of a national governance system.

• The very technical cutting of the summit has not helped to attract them.

• With these premises, the debate has focused on national issues in conclusion, leaving aside the technical discussion.

• The Antilope Solutions have successfully made their entry in Italy, but the summit has shown that in Italy the time is not ripe for their application. Many technical aspects (e.g. digital identity and privacy; absence of inter-regional standards and services; etc.) need to be defined at inter-regional level anymore

6.7.10 Valladolid Summit

In conclusion, the assessment of the Summit, from TicSalut point of view is positive, especially for the large number of participants, the wide typology of stakeholders represented and the great participation and interest generated by the debate.

However, there were some negative aspects as little assistance from representatives of Portugal, due to the use of unsuitable promotional channels there.

Finally, from TicSalut we appreciate the great support received by the Core and Expert Team of the project.

7 Conclusions by the Core Team

Appreciations, comments and suggestions were made by the Summit attendees as well as by the Support Validation Partners. The Core Team regrouped the most important ones and provided some answers to the statements.

7.1 Overall support for the ANTILOPE approach

The project intends to promote the use of standards in order to progress towards eHealth interoperability.

The Summit attendees approved with a large majority the main recommendations of the project:

- The importance of quality labelling and certification of eHealth interoperability services, based on a third party assessment, using quality testing tools and quality assessed processes, compatible with the ISO17000 standards suite
- The importance of a interoperability testing quality management system at the level of product and or at the level of the services developed. This interoperability testing quality management system should be applicable at the level of the organisations involved as well as at the level of the personnel involved.
- The ANTILOPE use case based approach to implement interoperable eHealth services.

The same standards and recommendations apply to quality labelling and certification of eHealth applications in general.

7.2 Comments given by the attendees by using the ANTILOPE questionnaires

Two different questionnaires were completed by some of the attendees.

- The first questionnaire addressed issues related to the events as such. Comments on logistic and other aspects are important but considered as "not affecting" the use of standards and the progress in using interoperable eHealth services.
- The second questionnaire addressed more specifically content related aspects. They were all considered by the consortium and influenced later versions of the ANTILOPE documentation.

All the comments of the attendees are reported in chapter 6.7 of this deliverable. We will not repeat all these comments. Only the comments highlighting some specific aspects and/or expressing a different opinion on some issues (suggesting some improvements) will be addressed.

1	Semantic Interoperability & Quality of the content
AT ²	 Address all levels of interoperability, semantic interoperability included (Odense) Providing technical interoperability is easy (protocols, code tables). Don't forget on standardization and quality of the exchanged data (Ljubljana) Interoperability is a critical issue as is the quality of software especially as the NHS gets more involved with open source
СТ	Semantic interoperability is addressed by other project as Semantic Health Net and specific projects as openMedicine.

2	Quality Manual
AT	The set-up of a Quality Manual was recognised by all audience and mentioned to be
	very relevant and a must for the Interoperability and certification efforts. The
	proposed set-up was well proven and of good quality. (Odense)
СТ	Quality is an important issue anywhere anytime issues related to eHealth is addressed: eHealth applications as the EHR, eHealth services as data exchange as well as quality assessing the use and the quality assessment.

3	Test Tools
AT	 The use of tools was not much discussed, but very relevant, as well as setting up
	a labelling and certification on national and European level. (Odense)
	The final goal should be automated testing. (Vienna)
	3) The quality assessment should make use of quality assessed tools. (Delft).
	4) The absence of such tools cannot be a reason for not validating eHealth
	products. (Delft)
СТ	Objective, fair, and trustworthy quality assessing an application and/or services requires high quality testing tools.

4	U	se Cases & Profiles
AT	1) 2) 3) 4)	A common framework for creating use case standard solutions is a possibility that the project should consider. (Odense) Use cases should be further developed. (Bratislava) One of the most important and interesting outcomes of the questionnaire was that although most of the attendees think that the use cases have differences across the continent, they don't think that national and regional specificities shall be addressed as implementation guidelines. (Athens) The use of profiles is at least recommended for data exchange. They should be flexible and easily customised to national / regional requirements. (Delft)
СТ	lmı sho	plementing as well as validating interoperability and/or interoperable services build be use case based approach.

 2 AT = attendees in chapter 7

5	Standards
AT	The need to make use of standards is out of any discussion, but standards should be unambiguous, should cover the complete domain of the health and should be available for free. (Delft)
СТ	 The war on standards and the commercial approach by the standardisation bodies hampers their generalised integration into the applications and services. The need to comply to standards relates also to the quality labelling and certification on its own.

6	A number of political /strategic statements
AT	 Many concerns were raised about the true interest and priorities of national authorities concerning eHealth interoperability. Mostly they do recognize the need and importance of it, but the initiative is expected to come from external sources (EU?). The resources available for the eHealth interoperability highly depend on the available budget for the health care in the country overall. There is a huge gap between the more and the less developed countries.
СТ	Political and strategic decisions, including the financial counterpart, should create the context for high quality interactive services.

r	
7	Role of the authorities
AT	1) The labels such as 'eHealth compliant' are highly important and desirable.
	However, it is hard to set up such labeling system without legal enforcement. Or at least incentives from the authorities. (Ljubljana)
	NHS England senior people must get involved in this. (London)
	3) Policy makers at the Department of Health must get involved. (London)
	4) Interoperability is a critical issue as is the quality of software especially as the NHS gets more involved with open source. However, little will happen to either of these unless there is sustained leadership from government (politicians have no idea about this subject), DH and NHS. Would be helped if EC shows some real leadership and not just talk
СТ	The role of the authorities is mainly one of creating the regulatory and legal framework, initiating the process and favouring the use of quality labelled and certified products and services.

7.3 Comments given by the Support Validation Partners

The Support Validation Partners not only formed the link between the end user and the ANTILOPE Core Team, they are – most of them – important stakeholders in their region and domain experts.

The Support Validation Partners did have up to four opportunities to validate the ANTILOPE recommendations: we organised two joint meetings of core team and support validation partners, the partners were requested to validate the deliverables and they finally had an opportunity to add their own comment to the Summit reports. This section addresses more especially the comments made through the Summit reports.

1	Importance of certification based on third party testing and certification schemes
SVP	 (1)The Antilope project encourages having national efforts to be done setting up national test and certification schemes and mandatory certification to establish a vendor neutral market. (Odense) (2) One main concern of attendees was the further development and governance of the testing, labelling and certification scheme (Vienna)
СТ	Functional quality and interoperability requires third party testing and certification to prove the compliance to rules and requirements

2	Cross border interoperability testing and certification		
SVP	 International use cases are important as a frame, but must be adjusted to local needs; (Odense) The challenge is to cover both European as well as regional concerns. The attendees agreed that a "one fits all" European scheme is not possible because the legal frameworks are regionally different (Vienna) 		
СТ	Most of the partners dough on portability of testing and certification from member state to member state.		
	 There are at least two approaches possible 1) First quality assess an application or service at European level and then downsize to national or even regional variants 2) Introduce first compatible applications and services at National or Regional level and upgrade national labels to European labels Most partners believe that starting with national services might provide better results. 		

3	Th	The importance of maintaining the network of stakeholders involved in quality assessing EHB systems and/or Interoperability services:		
SVP	1) 2)	The Summit is a very valuable experience. The EC should keep the momentum setting up the eHealth interoperability scene. (Ljubljana) Looking especially at the recommendation under Q17 the attendees strongly recommended to establish a platform for the discussion and harmonisation effort. This platform should be faithful to the "founding principles" coherence, transparency, openness, consensus, voluntary application, independence from special interests and efficiency according to Regulation (EU) No 1025/2012. (Vienna)		
	3)	One of the acquired advantages of the ANTILOPE summits is that authorities (from the public administration mainly) get acquainted to each other and start to be aware what happens in neighbouring countries. (Delft)		
СТ	Cross Border face-to-face and other meetings for experts directly involved in quality labelling and certification, leading towards interoperability, will result in knowledge and improved alignment of each others eHealth strategy.			

4	Interoperability and functionality of eHealth applications and services
SVP	 The Antilope deliverables were received well as a strong contribution to the implementation of eHealth in Europe. However it was pointed out that above interoperability many additional requirements like usability and function of ICT systems must be satisfied. Adoption by large populations does not only depend on interoperability. (Vienna) There was a large consensus on the importance of quality assessment of eHealth products, EHR systems included. (Delft)
СТ	Interoperability and functionality are complementary. The project addresses both.