



## D11.18

### Contextual and situational description and benchmark of events (3)

Document Identification	
<b>Date</b>	08.11.2019
<b>Status</b>	Final
<b>Version</b>	Version 1.00

<b>Related WP</b>	WP 11	<b>Related Deliverable(s)</b>	D11.18
<b>Lead Authors</b>	Jon Shamah	<b>Dissemination Level</b>	PU
<b>Lead Participants</b>	EEMA	<b>Contributors</b>	All Partners
<b>Reviewers</b>	CORREOS, TIL		

This document is issued within the frame and for the purpose of the LIGHT<sup>est</sup> project. LIGHT<sup>est</sup> has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No 700321.

This document and its content are the property of the *Lightest* Consortium. All rights relevant to this document are determined by the applicable laws. Access to this document does not grant any right or license on the document or its contents. This document or its contents are not to be used or treated in any manner inconsistent with the rights or interests of the *Lightest* Consortium or the Partners detriment and are not to be disclosed externally without prior written consent from the *Lightest* Partners.

Each *Lightest* Partner may use this document in conformity with the *Lightest* Consortium Grant Agreement provisions.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	1 of 54	
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b>	Draft



## 1. Executive Summary

These deliverables summarize the activities at LIGHTest dissemination events in YEAR3 and the project extension (the combination now called YEAR3+), to highlight the dissemination successes and activities of the project, for both evaluation purposes and information of partners that do not take part in the event.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)			<b>Page:</b>	2 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b>	Draft



## 2. Document Information

### 2.1 Contributors

Name	Partner
Jon Shamah	EEMA
All Partners	-

### 2.2 History

Version	Date	Author	Changes
0.1	13/08/2019	JS	Initial Document
0.2	19/08/2019	JS	Initial Document
0.3	03/09/2019	JS/MP	Inc LIGHTest Forum
0.4-0.8	01/10/2019	JS	Additional details
0.91	28/10/2019	All Partners	Partner summaries
0.99	28/10/2019	JS	For review

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	3 of 54	
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b>	Draft



## 3. Table of Contents

1. Executive Summary	2
2. Document Information	3
2.1 Contributors .....	3
2.2 History .....	3
3. Table of Contents	4
4. Strengthened Dissemination Plan (EEMA) and Value Proposition	6
4.1 Evolving Value Proposition and Approach .....	6
4.2 PKI Cross Border Trust.....	6
4.3 Industry 4.0.....	6
4.4 How to Guide (The Cookbook).....	7
5. LIGHTest Advisory Board	8
5.1 Advisory Board Activities .....	8
5.2 Example Advisory Board publications .....	9
6. International Exposure	10
6.1 USA.....	10
6.2 Azerbaijan.....	10
6.3 Singapore .....	10
6.4 Russian Federation.....	10
7. LIGHTest International Forum	12
7.1 LIGHTest International Forum, Washington: 19-5-17 .....	12
7.2 LIGHTest International Forum, London: 19-3-18.....	12
7.3 LIGHTest International Forum, Boston: 25-6-18.....	13
7.4 LIGHTest International Forum, London: 08-11-18.....	13
7.5 LIGHTest International Forum, Singapore: 19-11-18 .....	14
7.6 LIGHTest International Forum, Azerbaijan: 27-05-19.....	15
7.7 LIGHTest International Forum, London: 11-06-19.....	16
8. LIGHTest BLOGS	17
9. Bulletins	22
10. LIGHTest-Community Dynamic Website	27
11. Social Media Statistics (Approx)	28
12. List of External Activities in YEAR 3+	29
13. Example Scholarly Articles	32

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>			<b>Page:</b>	4 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b>	Draft



# Contextual and situational description and benchmark of events (3)



14. Dissemination Statistics	34
15. Example Conference Reports	35
15.1 Consumer Identity World Summit – LIGHTest Workshop.....	35
15.2 Azerbaijan National PKI – LIGHTest International Forum Workshop.....	35
15.3 UNHCR – LIGHTest Workshop.....	35
15.4 Internet Identity Workshop (IIW) .....	36
15.5 Swift Sibos - London.....	36
16. Partner Reports	37
16.1 EEMA .....	37
16.2 ATOS.....	37
16.3 TUG.....	37
16.4 TUBITAK .....	38
16.5 G+D Mobile Security.....	38
16.6 OIX .....	38
16.7 NLNET .....	38
16.8 DTU .....	39
16.9 Correos.....	39
16.10 Ubisecure .....	40
16.11 TLX.....	40
16.12 UPRC .....	40
16.13 FHG.....	41
16.14 USTUTT .....	41
17. Project Description	42
18. Annex 1 – Presentation highlights addressing Industry 4.0	44

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)			<b>Page:</b>	5 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b>	Draft





## 4. Strengthened Dissemination Plan (EEMA) and Value Proposition

As the project has reached its final phase, dissemination focus turns towards coordinating with exploitation activities. This continuing collaboration between WP10 and WP11 has been conducted to align dissemination efforts to support any exploitation activities. Activities continue to highlight exemplars involving the prospective use of LIGHTest to help solve existing issues in society.

### 4.1 Evolving Value Proposition and Approach

LIGHTest has a simple Value Proposition conveying a complex message:

“Lightest enables the use of a global and trusted infrastructure to determine and verify digital trust assurances to facilitate decision making and assessing risk.

By better understanding operational risk, operational costs can be better controlled. LIGHTest is providing tools for the emerging cross-border trust services market.”

Two distinct value streams emerged through YEAR3+:

- 1) Technical validation of formal trust schemes, an example being cross-border PKI interoperability. This has been investigated by the Lightest Technical Forum in its discussions with the Azerbaijan Ministry of Communications and, also, the UNHCR
- 2) Commercial Risk Transparency, where organisations self-declare their internal corporate policies as part of a commercial relationship within, say, a supply chain or Industry4.0 ecosystem. The object is to satisfy a partner’s particular risk requirements. Verification from certification bodies is often unavailable or there is no existing mechanism, so self-declaration is valuable. It can be incorporated as part of contractual obligations and thus negate the contract or impose penalties if the declarations are subsequently proven untrue.

### 4.2 PKI Cross Border Trust

LIGHTest leverages on existing infrastructures to verify electronic transactions. This ability is especially useful for transactions that are not created in the same trust scheme or country as the entity validating the transaction. This is mainly because creating new infrastructure takes time, money and possibly other unforeseen costs. The ability to validate necessary documents to form a business relationship protects business partners is essential.

### 4.3 Industry 4.0

Increasingly we operate on a European and World-wide scale. However, we don’t know our business partners and deals are sealed remotely through Cyberspace, rather than face to face. Yet despite all the risks Industry 4.0 encourages these interdependencies and links with organisations outside of our control, whether they are across and within the supply chain, between data assets, across AI management and often consuming conventional 3rd party services.

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	6 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



# Contextual and situational description and benchmark of events (3)



In Industry 4.0, the largest risks are often outside your control: These include: Just-In-Time (TIM), Process Optimisation, and Maintenance and repair operations (MRO). It is essential for Industry 4.0 to maintain integrity and transparency above and beyond business searches, for software driven supply chains and ad hoc suppliers and customers.

LIGHTest can alleviate many of these risks. A copy of the key presentation slides for the Industry4.0 presentation is to be found in Annex 1.

## 4.4 How to Guide (The Cookbook)

It is essential to move the 'theoretical' to the 'practical' and the 'LIGHTest Cookbook' does this by providing a step-by-step set of instructions to establishing a basic LIGHTest framework to demonstrate how it might be used and as a basic installation to grow a useful and practical implementation. This will be available by the end of YEAR3+, and widely obtainable.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	7 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



# Contextual and situational description and benchmark of events (3)



## 5. LIGHTest Advisory Board

There have been no new Advisory Board Members in YEAR 3+. The LIGHTest Advisory Board comprises:

Andre Boysen: Securekey (Canada)	Arif Mailov: CMS Service Center (Azerbaijan)
Esther Makaay, SIDN (The Netherlands)	Adam Cooper: Chief Architect at ID2020 (UK)
Jakob Schlyter: Kirei (Sweden)	Tim Reiniger: State of Maine (USA)
Jorge Cuellar: Siemens (Germany)	Mike Garcia: Former NIST (USA)
Slawomir Gorniak: ENISA (Greece)	Sverre Bauck: Karde (Norway)

### 5.1 Advisory Board Activities

- Bulletin Contributions in YEAR3+:**  
 Tim Reiniger, Andre Boysen, Sverre Bauck, and Mike Garcia provided topical editorials.
- Supporting external events in YEAR3+:**  
 Tim Reiniger supported LIGHTest at the Identiverse conference by joining Rachelle Sellung, Jon Shamah, and Don Thibeau on the panel at the 'Lunch and Learn' seminar for conference attendees. Additionally, Tim Reiniger and Arif Mailov attended the LIGHTest tracks at the EEMA Annual Conference and ISSE.
- Supporting General Meetings in YEAR3+:**  
 There was an approx 45% attendance rate for the Advisory Board at the LIGHTest General Meetings. The Advisory Board took an active role across all the discussions contributing and enhancing the planning and decision making.

Name	Affiliation (Country)	Helsinki	Copenhagen	Stuttgart
Andre Boysen:	Securekey (Canada)	Y	Y	
Esther Makaay,	SIDN (The Netherlands)			
Jakob Schlyter:	Kirei (Sweden)			
Jorge Cuellar:	Siemens (Germany)	Y	Y	Y
Slawomir Gorniak:	ENISA (Greece)			
Sverre Bauck:	Karde (Norway)			Y
Tim Reiniger:	State of Maine (USA)	Y	Y	Y
Mike Garcia:	Former NIST (USA)	Y	Y	Y
Adam Cooper	World Bank / ID2020 (USA)			
Arif Mailov	CMS Service Center (Azerbaijan)		Y	Y

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	8 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## Contextual and situational description and benchmark of events (3)



### 5.2 Example Advisory Board publications

A number of articles in Norwegian, relating and inspired from LIGHTest, have been published by Sverre Bauck

<https://www.cw.no/artikkel/digitalisering/digitalisering-eid>

<https://www.cw.no/artikkel/kronikk/kronikk-hva-har-ikt-politikken-gitt-oss-hva-kan-gi>

<https://www.digi.no/artikler/kommentar-digitalisering-og-globalisering-gar-hand-i-hand/440839>

<https://www.digi.no/artikler/kommentar-digitaliserer-man-bort-nasjonalstaten/449673>

<https://www.digi.no/artikler/kommentar-digitalisering-globalisering-og-politikk/452094>

<https://www.digi.no/artikler/kommentar-eu-valg-i-en-digital-tid/465665>

Tim Reiniger also published the following article:

<http://www.tshawlaw.com/images/INFORMATION LAW JOURNAL - volume 10 issue 4.pdf>

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	9 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## 6. International Exposure

International exposure for LIGHTest was one of the goals for LIGHTest. While this exposure was achieved over the course of the project, in YEAR3+ significant exposure was achieved.

### 6.1USA

OIX have targeted the US market for presenting and spreading the word around LIGHTest for a number of reasons. Although LIGHTest is a European funded project with European partners, for this to be a truly global and cross border project, awareness needed to be spread outside of the European borders. By presenting about LIGHTest in the US we were able to target a much wider audience, especially with a lot of the largest identity conferences attracting not just US attendees but delegates from a global stage, all experts in the identity space.

A lot of the platforms that LIGHTest would run on are American companies, for example MSFT. We've also spoken to organisations such as IETF who have the potential to support LIGHTest and they are based in the US. There is also a large developer community based in the US who would potentially wish to use LIGHTest in the future. In conclusion, the US is an important marketplace and a great way to gather further feedback and awareness on the project outside of the EU with identity experts.

Additionally Tim Reiniger contributed to the American Bar Association "Information Law Journal" citing the LIGHTest Project ([http://www.tshawlaw.com/images/INFORMATION\\_LAW\\_JOURNAL\\_-\\_volume\\_10\\_issue\\_4.pdf](http://www.tshawlaw.com/images/INFORMATION_LAW_JOURNAL_-_volume_10_issue_4.pdf)),

### 6.2Azerbaijan

The LIGHTest International Forum provided exposure into Azerbaijan to governmental contacts, public and private sector representatives in a form of introductory workshop. This is described in detail elsewhere in this document.

### 6.3Singapore

The LIGHTest International Forum provided exposure into ASEAN via a meeting in Singapore at Consumer Identity World.

### 6.4Russian Federation

The conference discussed prospects for the introduction of new technologies and communication services in the framework of a single national ICT infrastructure, including the Russian segment of the Internet, taking into account the payback of investments of telecom operators while ensuring technological independence and information security of the Russian Federation.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	10 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



EEMA held a track entitled: “International cooperation in technical issues for providing confidence and security in the use of ICT”. The track was chaired and presented by Jon Shamah, (Chair, EEMA), together with

Irina Kraeva (Dean of Moscow University of Linguistics) and Arkadiy Kremer (Chair, Russian Association of Network Services, Former Chair, ITU-T SG17-Security, Board Member, EEMA). The purpose of the track was to showcase LIGHTest in the context of cross-border trade between Private Sector organisations. In particular, the LIGHTest concept of DNS supported Trust Policy Transparency, were discussed and explained.

Of note was the anticipated intervention and subsequent conversation between Jon Shamah, Arkadiy Kramer and Mr Alexandre Kosteev, who is the senior digital advisor to The President of The Russian Federation’s Office. Mr Kosteev explained how from the Russian Federation’s view, the EU is but one trading partner and internally there are very many independent schemes within the Russian Federation that all need to be integrated, so such a concept, which can also enable external trade is of significant interest. Mr Kosteev requested that further discussions take place to investigate how LIGHTest might be incorporated. EEMA will continue this dialogue through Mr Kramer with Mr Kosteev with the goal of an eventual pilot scheme in the future. Unfortunately, as with all activities in the Russian Federation, many face-to-face meetings are required to secure action.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	11 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 7. LIGHTest International Forum

To engage the wider identity community, a number of LIGHTest International Forums were held during the course of the project. Talking to these experts in the field allowed us to gather feedback as the project progresses and feedback any comments directly back into the relevant work packages. It also allowed partners to determine how the project could potentially be progressed after the project ends, use cases and what would be required to make LIGHTest an ongoing success.

Listed below, and for completeness, are the LIGHTest forums we've held during the entire course of the project including YEAR3+ and what was covered during the sessions.

### 7.1 LIGHTest International Forum, Washington: 19-5-17

#### Attendees

20 people in attendance including advisory board and potential advisory board members, global and mostly from outside Europe.

#### Partners

OIX, USTUTT, TLX, EEMA

#### Agenda

This forum was held alongside a forum completed at the World Bank so the focus was on the legal stream of the project. Therefore, Hans Graux from Timelex presented on the fact that the laws and requirements around the LIGHTest technology are use case dependent. Hans Graux spoke about the resulting legal requirements and how they would focus on data protection and use case specific requirements such as confidentiality, data quality, liability etc.

Hans Graux spoke on the legal and policy challenges in LIGHTest giving eIDAS as an example. He finished by talking about how legal compliance would be built into LIGHTest.

Rachelle Sellung from USTUTT also covered a high-level technical overview with some use case demonstrations.

### 7.2 LIGHTest International Forum, London: 19-3-18

#### Attendees

10 in attendance from the identity space covering a global audience.

#### Partners

OIX, USTUTT, EEMA, NLNET

#### Agenda

Document name:	Contextual and situational description and benchmark of events (3)		Page:	12 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



Rachelle Sellung from USTUTT introduced LIGHTest and spoke on our unique selling points as well as covering some of the use cases. This forum focused mostly on the technical side with Martin Hoffmann from NLNET covering all the latest technical updates.

## 7.3 LIGHTest International Forum, Boston: 25-6-18

### Attendees

This forum took place at the same time as Identiverse with around 50 people in the room covering a global audience.

### Partners

OIX, USTUTT, EEMA

### Agenda

1. EU Horizon2020 Project: LIGHTest
2. Tri-Channel Update: Business, Legal and Technical
3. How an EU project on Trust Infrastructures can help the USA

## 7.4 LIGHTest International Forum, London: 08-11-18

### Attendees

James Rodwell – Global Sign  
Roger Dean – EEMA  
Eleanor McHugh – Inidsol  
Richard Trevorah – tScheme  
Andrew Hindle – Hindle Consulting  
Livia Ralph – GDS  
Rafael Prado – Experian  
Adrian Field – Lloyds  
Katrina Dow – Meeco  
Nick Mothershaw – Experian  
Matthew Pearch – iProof  
Tina Keshiro – Royal Mail  
David Nordell – CSCSS

James Rodwell – Global Sign  
Colin Wallis – Kantara  
Giles Watkins – Pridium  
Romek Szczesniak – Inidsol  
Diane Joyce – Mata Kite Group  
Salena Worrall – Interition  
Christiana Imafidon – Northrow  
Paul Naldrett – Idemia  
Peter Graham – PSG Solutions  
John Setsaas – Signicat  
David Alexander – Mydex  
Ruth Blakemore – Life Ledger

### Partners

OIX, Fraunhofer, EEMA

### Agenda

The workshop covered the legal, technical and business aspects of the project as we entered year 3 and provided use case studies as well as covering in more detail the pilot projects that are underway

Document name:	Contextual and situational description and benchmark of events (3)		Page:	13 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



with Correos and CT. CT are involved in PEPPOL which is a consortium of governments and companies in Europe making a single market for public procurement. LIGHTest will allow participants to download trust chains when needed, dramatically speeding up processes. With regards the Correos pilot, the eCorreos Digital mature cloud-based platform will be available to market-check LIGHTest to discover the benefits of using an additional trust management DNS infrastructure and its market acceptance.

1. Introduction to LIGHTest and description of the legal, technical and business tri-channel approach
2. Overview of where we are up to with the project so far
3. Update on ecosystem analysis
4. Use case studies and current work being undertaken on the pilots
5. An international perspective on cross-border trust translation
6. Technical Channel– the LIGHTest Automatic Trust Verifier

## 7.5 LIGHTest International Forum, Singapore: 19-11-18

### Attendees

Around 8 delegates from a global audience, all from outside of Europe.

### Partners

OIX, USTUTT, TUG

### Agenda

1. Introduction to Lightest and description of the legal, technical and business tri-channel approach
2. Overview of where we are up to with the project so far
3. Update on ecosystem analysis
4. Use case studies and current work being undertaken on the pilots
5. An international perspective on cross-border trust translation
6. Technical Channel– the LIGHTest Automatic Trust Verifier

We kicked the session off with an introduction from Don Thibeau (Chairman of OIX) as he set the scene in the identity marketplace and introduced the concept of LIGHTest. Rachelle Sellung (USTUTT) covered the business elements of LIGHTest; how we have been working on a tri-channel approach of Legal, Business and Technical to ensure that all needs are aligned, especially as we go into the third year of the project. Rachelle Sellung talked through many of the use cases of LIGHTest and how it could be utilised globally after the project finishes. Rachelle Sellung also spoke about the pilots that are taking place in the third year; introducing the trusted communications (CORREOS pilot) and also elnvoicing (UPRC pilot) work that is taking place to integrate LIGHTest.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	14 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



The workshop was concluded with Olamide Omolola from TU Graz who talked through how the technical infrastructure is being developed including detailed descriptions of how the trust delegation and trust propagation will work, especially cross border.

## 7.6 LIGHTest International Forum, Azerbaijan: 27-05-19

### Attendees

Governmental contacts, public and private sector.

### Partners

FHG, USTUTT, TUG

### Agenda

Usability of Trust Policy Authoring Tools – Concept, Design and Evaluation

Usability of policy authoring tools remains a challenge. Within LIGHTest a new approach was developed based on a mental concept not on design guidelines. This approach was evaluated in a user study.

### Trust Scheme Publication Authority (TSPA): Concept and Examples of Applications

The TSPA is one of the key components of the LIGHTest reference architecture, which is used in every verification process of an electronic transaction. The concept of the TSPA and the different possibilities of publishing trust schemes is presented. Second, the process of publishing trust scheme information in the TSPA as well as how to use DNS to make trust scheme membership claims discoverable by a verifier in an automated way are presented. Third, proof of concepts how the TSPA and further components of the LIGHTest infrastructure can be used are demonstrated for two possible application fields: PoC for a Trust Scheme for UNHCR, PoC for a predictive maintenance uses case for sensor data verification in the IoT.

### Automatic Trust Verification in a view of LIGHTest

This talk featured an overview of the technical process of automated trust verification using LIGHTest. We are going to look into the process from a user perspective, starting from an electronic transaction received by the central Automated Trust Verifier (ATV) component. We will show how the ATV processes this electronic transaction and how it decides about its trust. In addition, we will show how the ATV utilizes components like a trust policy and several other LIGHTest components.

### LIGHTest Tutorial Session on Automatic Trust Verification, Publication, and Policies

This was a hands-on session. It was aimed to use this as an on using various aspects of the LIGHTest tool, trust schemes, and the Policy Authoring tool.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	15 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## 7.7 LIGHTest International Forum, London: 11-06-19

### Attendees

Yoni Svehinsky – Monadd  
Joseph Spear - Mvine  
Frank Joshi – Mvine  
Alan Knipmeyer  
Jessica Mendoza – Monadd

Harvey Tate – IAG  
Colin Wallis – Kantara  
Richard Trevorah  
Katryna Dow – Mecco  
Romek Szczesniak – Inidsol

### Partners

USTUTT, OIX, EEMA

### Agenda

This was a very informal chat and dinner with some of the leaders in the identity space. It allowed us to feedback to the group where the project is up to as well as investigate how they think LIGHTest can be utilised after the project ends and how feasible the group thought this would be. In all it was a positive discussion with interest in how LIGHTest could be a valuable tool for organisations into the future.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	16 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft





## 8. LIGHTest BLOGS

### October 2018

LIGHTest and the historical perspective – Tim Reiniger, Advisory Board Member

“The LIGHTest infrastructure is something that could be used by anybody throughout the world, anyone who needs to exchange information and ideas. My hope is that in the future this will become a globally adopted infrastructure.”

<https://www.lightest-community.org/tom-reiniger-blog-post>

LIGHTest Use Case – Using a trusted infrastructure to verify transcripts – Andre Boysen, Advisory Board Member

“Students, employers and universities all have an interest in this trusted university degree infrastructure. Lower costs, lower transaction hassle, and trusted claims. Those who need to consume claims are willing to pay because it will lower their costs and increase the trust. Perhaps students could pay something too. A tiered pricing model which is low cost for university and slightly higher for industry is one way to go. Those organizations in turn could assess a fee to the student as they do today or forgo it altogether because the cost is so much lower than the current model.”

<https://www.lightest-community.org/using-a-trusted-infrastructure>

### November 2019

Cross-border verification with LIGHTest – Olamide Omolola, TU Graz

“LIGHTest leverages on existing infrastructures to verify electronic transactions. This ability is especially useful for transactions that are not created in the same trust scheme or country as the entity validating the transaction. This is mainly because creating new infrastructure takes time, money and possibly other unforeseen costs. This post shows an example of how to use LIGHTest in practice.”

<https://www.lightest-community.org/cross-border-verification>

### April 2019

Digital Identity - Has freedom a future? – Tim Reiniger, Advisory Board Member

“Defining ‘freedom’ as the individual’s ability to exercise control over his or her own life and actions whether in physical or digital form, the question must be asked with respect to digital identity – what are the necessary policy and technology elements to ensure the possibility of human freedom? Does freedom have a future with the deployment of digital identity?”

<https://www.lightest-community.org/digital-identity-has-freedom-a-fut>

Document name:	Contextual and situational description and benchmark of events (3)		Page:	17 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



## July 2019

Platform Humanitarianism – Karl Steinacker

“Too often, the world is facing natural or man made disasters, such as earthquakes and wars. When this happens humanitarian aid kicks in and the victims receive life saving assistance. The ongoing digital transformation is about to change traditional ways of aid delivery: a sack of rice was yesterday - today smart cards and cash machines take over. In the following article the author will argue in favour of a functioning trust management system that provides sufficient levels of assurance of identities and serves as an important pre-requisite for the effective delivery of aid.”

<https://www.lightest-community.org/projecthumanitarianism>

## September 2019

LIGHTest: Onwards and Upwards – Heiko Rossnagel, Fraunhofer

“As the three-year LIGHTest project is soon to wrap up, we talked to Heiko Rossnagel from Fraunhofer about how the project has gone and what the future holds for LIGHTest.”

<https://www.lightest-community.org/lightestonwardsandupwards>

## October 2019

Climate Change, Identity, and Human Rights: LIGHTest’s Importance to the Global Community - Timothy Reiniger, LIGHTest Advisory Board Member

“In June 2019, the UN High-Level Commission on Digital Cooperation posed an important question to the global community – whether and how digital technologies can ensure the possibility of applying human rights principles. What are the necessary policy and software configurations to ensure the possibility of human rights in the overall digital domain? In my previous blog, I posed a similar question with respect to digital technologies and human freedom.

For both human rights and freedom, the answer is ‘yes’ because of human rights policies championed by Europe as reflected in the GDPR, eIDAS, and LIGHTest. Combined, these EU efforts recognize that digital identity must be configured to enable human agency and autonomy with the support of a distributed global trust assurance infrastructure.

Leveraging the DNS infrastructure for distributed and networked trust management enables the promise of digital identity as a human right. As seen in three emerging use cases, LIGHTest unleashes the possibility of a global trust assurance infrastructure for digital identity in support of persons who are physically uprooted from their communities by climate change, lack of financial inclusion, and violence.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	18 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## Contextual and situational description and benchmark of events (3)



First, last week, the United Nations Climate Summit explored the effects of climate change, to include populations being uprooted by drought, rising sea-levels, disrupted growing seasons, and increased storm severity. Persons forced to migrate due to climate change will face the need for a new legal identity but with trust assurances forged on actions undertaken with the old identity. The LIGHTest is proving to be well-suited for extending the EU information trust management model in such contexts where trust is distributed instead of centralized.

Second, NGOs are now taking interest in using LIGHTest as a method for enabling trusted digital identity to help achieve financial inclusion throughout the developing world. Recognizing that the lack of a legal identity is a barrier to accessing basic health and financial services, the UN has included target 16.9 in the UN Sustainable Development Goals: “to provide legal identity for all, including birth registration by the year 2030.” Approximately 1.1 billion people currently do not possess a legal identity or birth registration with which to participate in the global information economy.

Third, LIGHTest infrastructure for trust translation and validation is now poised to be used by the UNHCR. UNHCR officials plan to deploy the use of LIGHTest to enable data protection and consent-based sharing with respect to personal information collected for UN-issued identity credentials. Thus, LIGHTest promises to give refugees an essential tool by which to control their UNHCR-provided digital identities and attributes.

The LIGHTest stands for the principal that digital technologies are not the ends to which human beings are to be made the means. Rather, humans must be the measure of all digital technologies. It is, therefore, fitting that Stuttgart will have hosted the first and last meetings of the LIGHTest team. As the birthplace of Friedrich Schiller – Europe’s poet of human freedom and inspiration to Beethoven in composing what would later become the EU anthem – Stuttgart can now claim Europe’s heart for maintaining human rights and freedom in the digital domain for the benefit of the entire global community.”

<https://www.lightest-community.org/climatechangeidentityandhumanrights>

### October 2019

“Climate Change, Identity, and Human Rights: LIGHTest’s Importance to the Global Community, by Timothy Reiniger, LIGHTest Advisory Board Member

In June 2019, the UN High-Level Commission on Digital Cooperation posed an important question to the global community – whether and how digital technologies can ensure the possibility of applying [human rights principles](#). What are the necessary policy and software configurations to ensure the possibility of human rights in the overall digital domain? In my previous blog, I posed a similar question with respect to digital technologies and [human freedom](#).

Document name:	Contextual and situational description and benchmark of events (3)		Page:	19 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## Contextual and situational description and benchmark of events (3)



For both human rights and freedom, the answer is ‘yes’ because of human rights policies championed by Europe as reflected in the GDPR, eIDAS, and LIGHTest. Combined, these EU efforts recognize that digital identity must be configured to enable human agency and autonomy with the support of a distributed global trust assurance infrastructure.

Leveraging the DNS infrastructure for distributed and networked trust management enables the promise of digital identity as a human right. As seen in three emerging use cases, LIGHTest unleashes the possibility of a global trust assurance infrastructure for digital identity in support of persons who are physically uprooted from their communities by climate change, lack of financial inclusion, and violence.

First, last week, the United Nations Climate Summit explored the effects of climate change, to include populations being uprooted by drought, rising sea-levels, disrupted growing seasons, and increased storm severity. Persons forced to migrate due to climate change will face the need for a new legal identity but with trust assurances forged on actions undertaken with the old identity. The LIGHTest is proving to be well-suited for extending the EU information trust management model in such contexts where trust is distributed instead of centralized.

Second, NGOs are now taking interest in using LIGHTest as a method for enabling trusted digital identity to help achieve financial inclusion throughout the developing world. Recognizing that the lack of a legal identity is a barrier to accessing basic health and financial services, the UN has included target 16.9 in the UN Sustainable Development Goals: “to provide legal identity for all, including birth registration by the year 2030.” Approximately 1.1 billion people currently do not possess a legal identity or birth registration with which to participate in the global information economy.

Third, LIGHTest infrastructure for trust translation and validation is now poised to be used by the [UNHCR](#). UNHCR officials plan to deploy the use of LIGHTest to enable data protection and consent-based sharing with respect to personal information collected for UN-issued identity credentials. Thus, LIGHTest promises to give refugees an essential tool by which to control their UNHCR-provided digital identities and attributes.

The LIGHTest stands for the principal that digital technologies are not the ends to which human beings are to be made the means. Rather, humans must be the measure of all digital technologies. It is, therefore, fitting that Stuttgart will have hosted the first and last meetings of the LIGHTest team. As the birthplace of Friedrich Schiller – Europe’s poet of human freedom and inspiration to Beethoven in composing what would later become the EU anthem – Stuttgart can now claim Europe’s heart for maintaining human rights and freedom in the digital domain for the benefit of the entire global community.

*Comment from The Right Reverend Thomas J. Brown Bishop of Maine, the Episcopal Church*

"As the climate changes the need for digital identity and trust of same will be a necessary component for safety and life. We already know that communities are changing, rapidly, and that migration and

Document name:	Contextual and situational description and benchmark of events (3)		Page:	20 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## Contextual and situational description and benchmark of events (3)



displacement are likely to increase. Thank you LIGHTest for showing us the way. Your thought leadership strengthens the whole human community."

<https://www.lightest-community.org/climatechangeidentityandhumanrights>

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	21 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 9. Bulletins

Produced by WP 11 lead, EEMA, the LIGHT<sup>est</sup> newsletter is an invaluable resource for the dissemination of up-to-date information regarding the advances made by the project. The newsletter has been published quarterly since the first edition during the entire project. EEMA has delivered thirteen newsletters including internal and external versions to cater for all stakeholders. They can be found online at <https://lightest-community.org>.

Each newsletter includes updates regarding each Work Package, news of LIGHT<sup>est</sup> participation in seminars and exhibitions, project meeting overviews, informative articles and profiles from Project Partners, insights from Advisory Board members and upcoming activities and events. Highlights include...

### Project Partner and other articles in YEAR3+ have included

- Fair and Balanced Contracts for LIGHTest – Supporting Innovation and User Friendliness (Hans Graux, Attorney-at-law and Partner, TLX)
- Cross Border Trust: Trust Infrastructures and tools from Blockchain to LIGHTest (Rachel Sellung, USTUTT)
- Creating Trust in Global Supply Chains Through Transparent Self-Declared Policies (Jon Shamah, EEMA)
- Guest comment: New global challenge in the digital economy (Irina Krayeva, Rector of Moscow State Linguistic University, Moscow, Russia)
- Cross-border verification with LIGHTest (Olamide Omolola, TUG)
- Revolutions do not always come with a bang (Jon Shamah, EEMA)

### Advisory Board Contributions

- View from the Advisory Board: Enabling Digital Identity as a Human Right (Timothy S. Reiniger)
- Members of the Advisory Board discuss the LIGHTest proposition (Mike Garcia and Andre Boysen)
- How LIGHTest is a beacon for global electronic commerce (Timothy S. Reiniger)
- Digitalization of cross-domain trust gives globalization (Sverre Bauck)

### Project Partner profiles

- University of Piraeus Research Centre,

Document name:	Contextual and situational description and benchmark of events (3)		Page:	22 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



Figure 3 lists the front page of each newsletter in the period reported.

Cover Page Only Shown

Cover Page Only Shown

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	23 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



# Contextual and situational description and benchmark of events (3)



Cover Page Only Shown

**LIGHTest Newsletter**  
Edition 6  
February 2018

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 700321

### View from the Advisory Board – A US perspective on the LIGHTest Project: Commercial equivalence as a lubricant for the information economy

From the US commercial perspective, leveraging the DNS infrastructure to publish trust schemes (or contractually bound identity trust frameworks of various kinds) offers, for the first time, the promise of easy global access to authoritative and authentic trust information, and the notion of publishing trust schemes and their policies – representing commercial equivalence in trusted information versus legal equivalence – is built expressly on the EU foundation of two of the most extraordinary legal achievements of our era: the eIDAS Regulation and the GDPR. Now LIGHTest unleashes the ability for both the US and EU commercial sectors to leverage fully these pathbreaking regulations as the basis for a trust infrastructure to grow the global information economy.

At the General Meeting in Graz, Jon Shamah, highlighted two important objectives for LIGHTest:

1. Providing scalable transparency to trust services, globally.
2. Extending the EU strategy of eIDAS influence outside of original geographic and sector boundaries.

This is echoed in the D2.9 Report on page 15 – “Observing that the eIDAS Regulation provided a strong and credible trust model for electronic identification and trust services within the European Union, the goal was to find a way to extend this model both geographically (identities and trust services outside the EU) and contextually (other trust information than the trust schemes of the eIDAS Regulation.”

The first category of added value LIGHTest brings involves digital identity providers, attribute providers, identity brokers, and Trust Mark issuers. Because the eIDAS cross-border recognition provisions for electronic identification apply only to public sector identity credentials issued by EC member states, EU-US commercial interests still have immediate need for private sources of digital identity credentials, as well as identity attribute brokering services to enable international transactions and data transfers. From the US perspective, the LIGHTest trust model of assurance that is legally defined, based on independent audits, and discoverable through public trust lists, provides a technology and policy tool for achieving identity assurance that can unleash opportunities for international data transfer. As the Social Impact Report notes – “LIGHTest can be used for any trust scheme and any trust decision, whether based on a legislative framework, contractual assurances or even individual preferences, even at a very small ad hoc scale.” (D2.9 at page 15.)

The second category of added value occurs when service providers offer validation of non-qualified trust services and the commercial equivalent of such services outside of the EU. Though the usefulness of qualified trust services for achieving legal equivalence is without doubt, in a vast number of use cases, US commercial interests merely need the ability to leverage non-qualified electronic signatures, electronic seals, and delivery services. Currently, there is no easy or scalable means by which to find these non-qualified trust services, validate their authenticity, and translate assurance levels. “Since the number of application areas is practically unlimited – LIGHTest can be used whenever trusted information must be published, validated or translated.” (D2.10 page 25.)

The third category of added value results from ability of the LIGHTest infrastructure to enable trust

Timothy S. Reiniger, The Timothy Reiniger LLC Advisory Practice

Produced by EEMA - WP11 Lead, LIGHTest

Cover Page Only Shown

**LIGHTest Newsletter**  
Edition 7 - Internal  
May 2018

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 700321

### Trusted mobile IDs using LIGHTest

Dr. Frank-Michael Kamm, G-D Mobile Security

When a service provider such as a bank wants to on-board a new customer by a fully digital flow, it faces the challenges to determine the Level of Assurance (LoA) of the customer identity, to technically link the identity to authentication credentials, and to provide a smooth and user-friendly online flow. In addition, the process must comply with existing regulations like eIDAS, GDPR and the Payment Service Directive (PSD2). If the customer has a non-European ID, this requires trust translation from the foreign scheme to eIDAS. In addition, compliance to national regulations may restrict the choice of allowed authenticators.

To address these challenges, LIGHTest WP7 develops technologies to use mobile IDs with known trust levels based on FIDO technology. The goal is to provide a mobile ID and strong authentication concept that allows a service provider to determine which overall LoA can be achieved with a specific mobile ID and authentication method.

The FIDO protocol is particularly well suited for this approach since it already provides an internal attestation scheme, allowing a relying party to verify which type of authenticator is used. By querying the LIGHTest infrastructure, it can be verified whether this specific authenticator complies with a regional or industry-specific trust schemes. As an example, a national banking regulator could establish a national trust scheme for financial applications and could publish the types of accepted authenticators. The complex landscape of involved roles and trust schemes is shown in Figure 1. Since the issuers of the primary and secondary (mobile) ID, the authenticator manufacturer and the relying party can be located in different trust schemes, a propagation of trust information (like the LoA) requires heavy use of the LIGHTest infrastructure.

With the technologies developed in WP7, service providers can obtain the overall LoA of a mobile ID and can ensure compliance with their specific trust scheme. All of this occurs in a user-friendly way and is compatible to modern authentication technologies like biometrics.

As the identity and authentication challenges are of extreme importance for the digitalisation strategy of many major service providers, this topic will gain further business relevance over the next years.

Author: Dr. Frank-Michael Kamm, G-D Mobile Security

Figure 1: Roles and relationships in the complex landscape of derived mobile IDs across different trust schemes.

Produced by EEMA - WP11 Lead, LIGHTest

Document name:	Contextual and situational description and benchmark of events (3)		Page:	24 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft





# Contextual and situational description and benchmark of events (3)



Cover Page Only Shown

**LIGHTest Newsletter**  
Edition 12  
August 2019

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 700321

**LIGHTest Developer's Workshop**

The LIGHTest Developer's Workshop was organised by BILGEM at Shangri-La Bosphorus, Istanbul on 9th and 10th July 2019, with the contribution of project partners involved in the development of LIGHTest components and piloting.

LIGHTest Developers Workshop

This workshop brought together related partners to work on the issues (bugs, change requests, etc.) encountered during testing activities. It provided the ideal opportunity for the developers and the testing team to align themselves as the end of project approaches. Furthermore, with the inclusion of piloting partners,

issues related to the pilots were also discussed at this two-day event. The first day of the workshop was dedicated to the testing of the LIGHTest components. The current status of deployment of the components and testing activities were presented by TUBITAK. The discussions on TSPA, TTA and DP services took place in the second part and were followed by discussions on the Peer-to-Peer working section. Finally, the status of text executions was presented. On the first evening, TUBITAK organised a dinner for the partners who were taken by boat to the famous Lacivert restaurant on the Bosphorus, Istanbul. All partners enjoyed the meal and had a fantastic experience on the Bosphorus.

On the second day, the progress of two LIGHTest pilots were discussed. In the first session, since The University of Pireus Research Center (UPRC) has been involved in the project, integration of LIGHTest components within the e-Procurement architecture and integration scenario were analysed with related partners. Some technical issues

Gala Dinner at Lacivert, Bosphorus, Istanbul

The Developer's Workshop was a productive session with a valuable contribution made by all participants. Jon Shamah (WP 11)

Jon Shamah, Chair of EEMA

were highlighted and addressed by the UPRC team. In the second session, CORREOS presented the current status of the integration of LIGHTest components within Trustworthy Communication Services. The day closed with a presentation

by Chair of EEMA, Jon Shamah, who introduced LOCARD – a new EU-funded project that will develop a solution to deliver cross-border chain of custody assurance for digital evidence. Jon led a discussion on the potential application of LIGHTest within the initiative.

The LIGHTest International Forum Workshop

The LIGHTest International Forum Workshop

@LIGHTest\_trust | LinkedIn | www.lightest.eu

Produced by EEMA - WP11 Lead, LIGHTest

Cover Page Only Shown

**LIGHTest Newsletter**  
Edition 12  
August 2019

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 700321

**The LIGHTest e-Procurement Pilot and PEPPOL**

Pan-European Public Procurement On-Line – or PEPPOL, for short – was a project funded in part by the European Commission aiming to provide the technical standards to enable businesses to participate electronically in procurement of all European government institutions in a uniform way. The project ran from 2008 to 2012. Today, PEPPOL is in use in 16 European countries, some of which have made its use mandatory. The project is now overseen by OpenPEPPOL AISBL, a not-for-profit organisation based in Belgium. It has around 250 members from across Europe, both governmental agencies as well as vendors and service providers.

PEPPOL does not constitute an e-procurement platform of its own but rather provides the technical and legal means to allow interoperability between existing platforms. Specifically, it provides three components:

- The PEPPOL e-Delivery Network, a network for securely and reliably exchanging messages between participating entities.
- PEPPOL BIS' Specification, a specification of standardized document formats for procurement processes, and
- PEPPOL Transport Infrastructure Agreements (TIA), providing the legal framework for communication between the many connected parties.

The LIGHTest e-Procurement Pilot focuses on the e-delivery network.

This network operates on an open four-corner model, shown in Figure 1. In this model, each organisation participating in PEPPOL chooses an access point that acts on their behalf for sending and receiving messages via the delivery network. Communication between an organisation and their access point

Free to choose ANY Access Point in ANY country

Sign ONE Agreement; Connect to ALL

Open FOUR-Corner Model

NO ROAMING fees between PEPPOL Access Points

**Sender**

1 Prepare

2

Address Registry

SML

SMP

Capability look-up

**Receiver**

Process

3

4

Exchange of PEPPOL BIS Documents between Access Points

Sender ACCESS POINT must send valid PEPPOL BIS documents

Receiver ACCESS POINT receives PEPPOL BIS documents

Figure 1. PEPPOL Architecture

@LIGHTest\_trust | LinkedIn | www.lightest.eu

Produced by EEMA - WP11 Lead, LIGHTest

Document name:	Contextual and situational description and benchmark of events (3)	Page:	25 of 54
Dissemination:	PU	Version:	V1.00
		Status:	Draft



# Contextual and situational description and benchmark of events (3)



Cover Page Only Shown

**Newsletter**  
Edition 13  
November 2019

This Project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 700321

**Q&A with Heiko Rossnagel, Fraunhofer**

As we get near the end of LIGHT<sup>est</sup>, how do you feel the project has gone? What have been the project highlights?

LIGHT<sup>est</sup> has gone incredibly smoothly as a project and I've worked on a lot of EU projects in the past! The team are all very motivated and there has been excellent collaboration right from the start.

We did face a challenge when IBM exited the project but adding a new competent partner in their place ensured we could extend the project by three months and successfully move forward.

There have been many highlights in the project, I really like the model we've created for trust schemes that was finished in WP3 and I think that this unified model is extremely helpful in discussing differences in trust schemes, something that was missing before and a major contribution by LIGHT<sup>est</sup>. There was a lot of interest in the community and also at the UN trade and commerce expert group on trust schemes and they intend on basing some of their findings on this model.

The pilots have been fascinating and allow us to create a lighthouse where we can demonstrate how LIGHT<sup>est</sup> works. A big highlight for me is seeing the reception we get everywhere we present; there is a need for LIGHT<sup>est</sup> and people are excited about what we've done.

We've already put LIGHT<sup>est</sup> into different projects, for example collaborated with Industrial Data Space in Germany.

The development of the ATV is essential for the project. The mobile aspect in WP7 has also been a highlight of the project.

The pilots have worked on real use cases, how do you feel their successes have contributed towards the project goals?

As these aren't finished yet it's a bit hard to comment. The purpose is to show that the technology we've developed works in the real world. They are designed on real use cases and they show what contribution LIGHT<sup>est</sup> could have and the benefits arising as well as contribute towards the project goals.

Now the project is nearing the end, what will be the next steps to encourage ongoing success?

We've provided a very useful infrastructure and I think that having showcased that this infrastructure works and it's been implemented in real use cases, this helps to create visibility. The ideal outcome would be that the European Commission picks it up and they publish their own trust lists using LIGHT<sup>est</sup>; I also hope that we can convince other governments and other entities to use the LIGHT<sup>est</sup> infrastructure. I think we have achieved a lot in this regard as we've already been in talks with Azerbaijan and we have a Turkish partner who we have involved on a Turkish trust scheme. I'm therefore hoping short term that we might be able to get other entities to adopt the technology.

The great thing about LIGHT<sup>est</sup> is that if you want to use LIGHT<sup>est</sup> you don't need much at all. The effort required to use the LIGHT<sup>est</sup> infrastructure is simply to set up a DNS server and then you're ready to publish the information. All the tools are available via open source and the implementation is minimal, it's around the way the data is defined. The ATV can be used as an online service so you don't have to worry about difficult installations and can rely on existing internet services.

Internally we will be discussing how as a consortium we can exploit LIGHT<sup>est</sup> but there is a lot of potential there and I think a lot of potential for future projects which could build on top of LIGHT<sup>est</sup>. As LIGHT<sup>est</sup> is now available we can start to think differently about problems and use LIGHT<sup>est</sup> as a trust anchor for other schemes. LIGHT<sup>est</sup> could be big in the area of decentralized identity management which is using blockchain. LIGHT<sup>est</sup> solves a major problem that many do

@LIGHTest\_trust
 LinkedIn
[www.lights.eu](http://www.lights.eu)
Produced by EEMA - WP11 Lead, LIGHT<sup>est</sup>

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>	<b>Page:</b>	26 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00
		<b>Status:</b>	Draft





## 10. LIGHTest-Community Dynamic Website

The Lightest Community Website is a specific globally focused outbound activity showing the global nature of LIGHTest value rather than predominantly just EU. The separate website to the 'official LIGHTest.eu' enables greater flexibility and discussion. The LIGHTest-Community website can be found at: <https://lightest-community.org> . The website continues to be refreshed and updated.

Until the end of YEAR3+ the website presented over 30 news stories/blogs, together with all 13 newsletters. There are 12 downloadable presentations, together with 3 videos.

The use of two separate websites for LIGHTest reflects the original proposition to maintain a separation between the contractually obligatory EU LIGHTest website at <https://lightest.eu> and the LIGHTest Community website.

The contractually obligatory EU LIGHTest website is maintained by the project coordinators, while the community website has been maintained by WP11.

For the sake of synchronisation, only deliverables published on the lightest.eu website will be re-published on the LIGHTest Community website.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	27 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 11. Social Media Statistics (Approx)

The community website provides a platform to allow for dissemination of all the latest news as well as document all upcoming events where interested parties could find project participants from LIGHTest and listen to their latest presentations.

In relation to social media, we have focused efforts on Twitter and LinkedIn and where possible we send people back to the website to encourage interaction with the project. Social media is an excellent platform to reach a large global audience that may be difficult to get hold of through other means. It allows us to reach out and follow hashtags around events that we're presenting at. Our tweets and LinkedIn posts are focused on current LIGHTest news and this news is also retweeted from twitter accounts with over many thousands of followers.

### Website:

In YR3 there have been approx.1000 visits to the <https://lightest-community.org> and <https://lightest.eu> websites.

### Twitter:

When we have appropriate news stories, public deliverables available or are speaking at events, we will post about these on Twitter and also the LIGHTest LinkedIn Group. These also get retweeted by partner accounts.

- Over 458 followers (increase from 300 in second year)
- Over 84,000 tweet impressions from 154 tweets (40,000 from 80 tweets in second year)
- 724 engagements with the tweets which includes liking and re-tweeting
- 121 clicks on the links in the tweets which could be to news posts or back to the LIGHTest site itself
- 142 re-tweets

### YouTube:

- LIGHTest introductory video – 32 views
- Panel at Economics of Identity OIX event (Rachelle Sellung speaking on LIGHTest) – 48 views
- Emerging Cross Border Trust Services - 27 views
- Hans Graux at Timelex (legal) presenting at LIGHTest forum – 21 views
- LIGHTest business introduction – 35 views
- LIGHTest technical introduction – 28 views
- LIGHTest legal introduction – 25 views

### LinkedIn:

- 45 members (27 at the end of the first year)
- 34 Posts added over the year promoting all news and public deliverables

Document name:	Contextual and situational description and benchmark of events (3)		Page:	28 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



## 12. List of External Activities in YEAR 3+

In the second period, there have been 26 external activities in 12 countries across 4 continents. These activities comprised: 3 workshops, 2 panel discussions and 23 Presentations. Each presentation consisted of a description and explanation of the LIGHTest project and examples of use-cases. The panels and workshops explored the various project concepts in depth. Country and activity breakdowns are seen in Figure 8

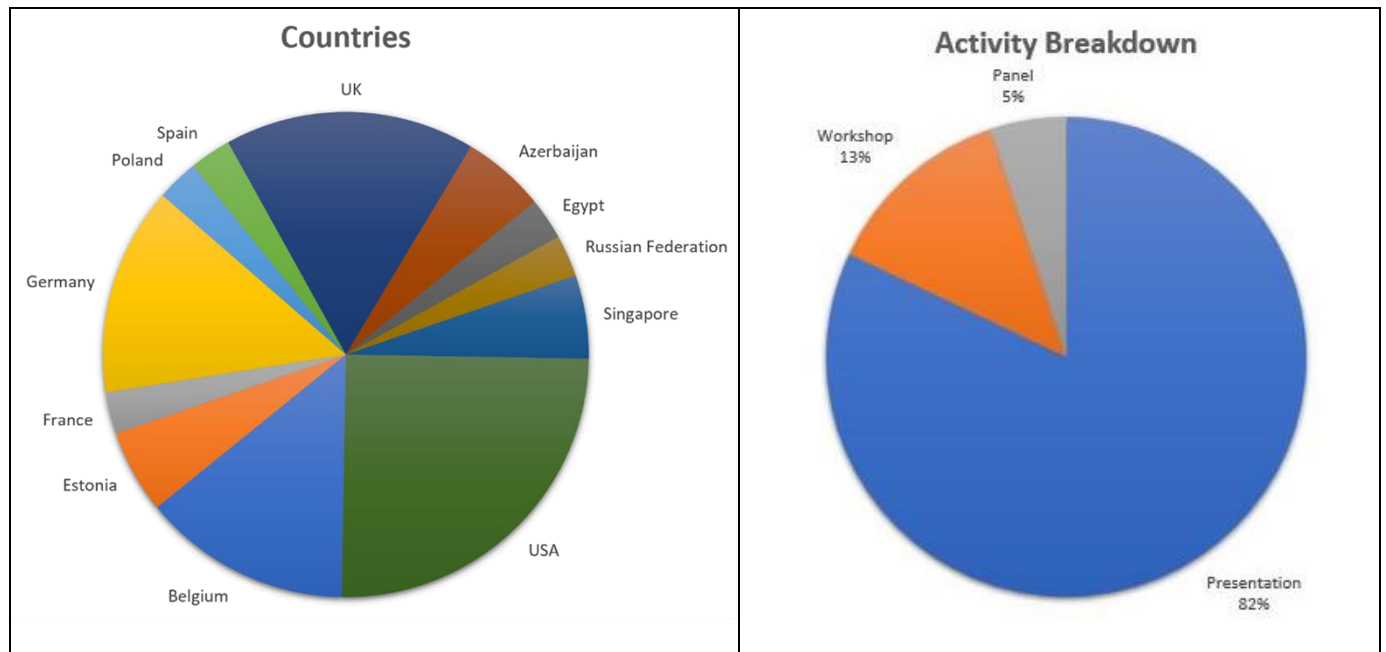


Figure 8

Dates	Partner	Attendee	Action	Type	Name	City	Country
13/06/2018	Tubitak	Edona Fasllija	Presentation & Discussion	Conference	EEMA Annual Conference	London	UK
13-14/06/2018	EEMA	Jon Shamah	Presentation	Conference	EEMA Annual Conference on Identity	London	UK
24-27/06/2018	OIX	Don Thibeau and Rachelle Sellung	Presentation	Conference	Identiverse	Boston	USA
25/06/2018	All	All	Presentation	Forum	International Lightest Forum	Boston	USA
2-3/05/2018	EEMA	Jon Shamah	Presentation	Conference	Connect:ID	Washington DC	USA
24-26/09/2018	EEMA	Jon Shamah	Presentation	Conference	Smartweek	Marseille	France

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	29 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



03/10/2018	EEMA	Jon Shamah	Presentation	Conference	LEPS Industry Meeting	Murcia	Spain
17-18/10/2018	EEMA	Jon Shamah	Presentation	Conference	RANS2018	Moscow	Russian Federation
7-8/11/2018	EEMA	Jon Shamah	LIGHTest Track	Conference	ISSE2018	Brussels	Belgium
7-8/11/2018	ATOS	Alberto Crespo	LIGHTest Track	Conference	ISSE2018	Brussels	Belgium
7-8/11/2018	USTUTT	Rachelle Sellung	LIGHTest Track	Conference	ISSE2018	Brussels	Belgium
14/09/2018	OIX	Don Thibeau	Presentation	Conference	ID2020 Summit	New York	USA
25-27/09/2018	OIX	Don Thibeau	Presentation	Conference	Federal Identity Forum and Expo	Tampa	USA
15-17/10/2018	OIX	Don Thibeau	Presentation	Conference	Hedera Hashgraph Developer Conference	Dallas	USA
18/10/2019	CORRE OS	Javier Salazar	Demonstration	Conference	ID4ME Summit	Madrid	Spain
1-2/11/2018	EEMA	Jon Shamah	Presentation	Conference	ISSE 2018	Brussels	Belgium
09/11/2018	OIX	Don Thibeau	Presentation	Conference	Economics of Identity	London	UK
20/11/2018	OIX	Don Thibeau Rachelle Sellung	Presentation & Panel	Conference	Consumer Identity World	Singapore	Singapore
19/11/2018	All	All	Presentation & Panel	Forum	International Lightest Forum	Singapore	Singapore
30/10/2018	USTUTT	Rachelle Sellung	Presentation	Conference	AMECSE 2018	Cairo	Egypt
26/02/2019	CORRE OS	Javier Salazar, Carlos Balot	Workshop	F2F Meeting	UNE, National observers for Postal Services Standardization	Madrid	Spain
05/03/2019	EEMA	Jon Shamah	Stand /Presentation	Conference /exhibition	eProcurement World	London	UK
10-12/03/2019	OIX	Don Thibeau	Presentation	Conference	ID2020	San Francisco	USA
27/05/2019	TUG	Stefan More, other partners	Presentation	Forum	International Lightest Forum	Baku	Azerbaijan
27/05/2019	USTUTT	Rachelle Sellung	Presentation	Forum	International Lightest Forum	Baku	Azerbaijan
14/03/2019	OIX	Don Thibeau	Presentation	Conference	IDM Europe	Frankfurt	Germany
24-17/03/2019	OIX	Don Thibeau	Presentation	Conference	Know ID	Las Vegas	USA
28/03/2019	EEMA	Jon Shamah	Presentations	Conference	Open Identity Summit	Garmisch	Germany
28/03/2019	EEMA	Jon Shamah	Presentation	Conference	EPPE Conference	Szcecin	Poland
29/04/2019	OIX	Don Thibeau	Presentation	Conference	Connect:ID	Washington	USA
17/05/2019	OIX	Don Thibeau	Presentation	Conference	ID&Cloud Conference	Munich	Germany

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	30 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



17/05/2019	USTUTT	Rachelle Sellung	Presentation	Conference	ID&Cloud Conference	Munich	Germany
20/05/2019	EEMA	Jon Shamah	Network	Conference	eGovernment Conference	Tallinn	Estonia
04/06/2019	EEMA	Jon Shamah	Network	Conference	eConcertation	Brussels	Belgium
11/06/2019	OIX	Don Thibeau	Presentation	Forum	International Lightest Forum	London	UK
11/06/2019	USTUTT	Rachelle Sellung	Presentation	Forum	Identity Week	London	UK
18-19/06/2019	EEMA	Jon Shamah	Presentation and Discussion	Conference	EEMA Annual	London	UK
18-19/06/2019	USTUTT	Rachelle Sellung	Presentation and Discussion	Conference	EEMA Annual	London	UK
18/06/2019	TUBITAK	Burçin Bozkurt Günay	Presentation and Discussion	Conference	EEMA Annual	London	UK
25/06/2019	OIX	Don Thibeau	Presentation	Conference	Identiverse	Washington	USA
17-18/09/2019	EEMA	Jon Shamah	Network/ Meetings	Conference	eID Forum	Tallinn	Estonia
23/09/2019	OIX	Don Thibeau	Presentation	Conference	SIBOS	London	UK
23/09/2019	EEMA	Jon Shamah	Presentation	Conference	SIBOS	London	UK
25/09/2019	EEMA	Jon Shamah	Network	Conference	ENISA Trust Services Day	Berlin	Germany
26/09/2019	EEMA	Jon Shamah	Network	Conference	ENISA CAB CA Day	Berlin	Germany
6-7/11/2019	EEMA, USTUTT, FHG	Jon Shamah, Rachelle Sellung, Heiko Rossnagel	Workshop	Conference	ISSE 2019	Brussels	Belgium
2019	CORRE OS	Víctor Martín	Business Discussions	F2F meeting	UPU	Madrid	Spain

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	31 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 13. Example Scholarly Articles

- **A Verified Prover Based on Ordered Resolution<sup>1</sup>.**  
Anders Schlichtkrull, Jasmin Christian Blanchette, and Dmitriy Traytel. 2019. In Proceedings of the 8th ACM SIGPLAN International Conference on Certified Programs and Proofs (CPP '19), January 14–15, 2019, Cascais, Portugal. ACM, New York, NY, USA
- **GTPL: A Graphical Trust Policy Language<sup>2</sup>**  
Sebastian Alexander Mödersheim , Bihang Ni. H. Roßnagel et al. (Hrsg.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019
- **TPL: A Trust Policy Language<sup>3</sup>**  
Sebastian Mödersheim, Anders Schlichtkrull, Georg Wagner, Stefan More, and Lukas Alber, DTU Compute, Formal Methods, Technical University of Denmark. Institute for Applied Information Processing and Communications (IAIK), Graz University of Technology, Inffeldgasse 16a, 8010 Graz.
- **Lessons learned – Conducting a User Experience evaluation of a Trust Policy Authoring Tool<sup>4</sup>**  
Stephanie Weinhardt , Doreen St. Pierre. Roßnagel et. al. (ed.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019.
- **Harmonizing Delegation Data Formats<sup>5</sup>**  
Georg Wagner, Olamide Omolola, Stefan More. L. Fritsch, H. Roßnagel, D. Hühnlein (Eds.): Open Identity Summit, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2018
- **Implementation of Distributed Light weight trust infrastructure for automatic validation of faults in an IOT sensor network<sup>6</sup>**  
Isaac Henderson Johnson Jeyakumar, Sven Wagner and Heiko Roßnagel. H. Roßnagel et al. (Eds.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019.

<sup>1</sup> <https://dl.acm.org/citation.cfm?doid=3293880.3294100>

<sup>2</sup> <https://dl.gi.de/handle/20.500.12116/20998>

<sup>3</sup> [https://link.springer.com/chapter/10.1007/978-3-030-33716-2\\_16](https://link.springer.com/chapter/10.1007/978-3-030-33716-2_16)

<sup>4</sup> <https://dl.gi.de/bitstream/handle/20.500.12116/20988/proceedings-17.pdf?sequence=1&isAllowed=y>

<sup>5</sup> <https://www.lightest.eu//static/papers/07-Harmonizing%20Delegation%20Data%20Formats.pdf>

<sup>6</sup> <https://dl.gi.de/handle/20.500.12116/20996>

Document name:	Contextual and situational description and benchmark of events (3)		Page:	32 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft





# Contextual and situational description and benchmark of events (3)



- **DNS-based Trust Scheme Publication and Discovery - LIGHTest's Trust Scheme Publication Authority**  
Georg Wagner, Sven Wagner, Stefan More, Martin Hoffmann. Herausgeber et al. (Hrsg.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019
- **Unified Data Model for Tuple-Based Trust Scheme Publication<sup>7</sup>**  
Sven Wagner, Sebastian Kurowski, Heiko Roßnagel. H. Roßnagel et. al. (Eds.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019.
- **Policy-based Access Control for the IoT and Smart Cities<sup>8</sup>**  
Olamide Omolola, Stefan More, Edona Faslija, Georg Wagner, Lukas Alber. Herausgeber et al. (Hrsg.): Open Identity Summit 2019, Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, Bonn 2019
- **Revisiting User Privacy for Certificate Transparency<sup>9</sup>**  
Daniel Kales, Graz University of Technology, Olamide Omolola, Graz University of Technology, Sebastian Ramacher, Graz University of Technology.
- **LIGHTest, eine leichtgewichtige Infrastruktur für globales und heterogenes Vertrauensmanagement<sup>10</sup>**  
Heiko Roßnagel, Sven Wagner. DuD • Datenschutz und Datensicherheit 2019.
- **Usability of Policy Authoring Tools: A Layered Approach<sup>11</sup>**  
Stephanie Weinhardt and Olamide Omolola. Institute for Human Factors Engineering, University of Stuttgart, Institute of Applied Information Processing and Communications, Graz University of Technology.

Other papers can be found at: <https://www.lightest.eu/downloads/papers/index.html>

<sup>7</sup> <https://dl.gi.de/handle/20.500.12116/20982>

<sup>8</sup> <https://www.lightest.eu/static/papers/09-Policy-based%20Access%20Control%20for%20the%20IoT%20and%20Smart%20Cities.pdf>

<sup>9</sup> <https://www.lightest.eu/static/papers/10-Revisiting%20User%20Privacy%20for%20Certificate%20Transparency.pdf>

<sup>10</sup> <https://link.springer.com/article/10.1007%2Fs11623-019-1096-4>

<sup>11</sup> <https://www.lightest.eu/static/papers/11-Usability%20of%20Policy%20Authoring%20Tools%20-%20a%20Layered%20Approach.pdf>

Document name:	Contextual and situational description and benchmark of events (3)		Page:	33 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



## 14. Dissemination Statistics

Activities for YEAR3+	Estimate
Organisation of a Conference	5
Organisation of a Workshop	4
Press release	1
Scholarly Articles	15
Non-scientific and non-peer-reviewed publication (popularised publication)	5+
Exhibition	1
Flyers	4
Training	1
Social Media / Blogs	60+
Website	1
Communication Campaign (e.g. Radio, TV)	1
Participation at a Conference	>30
Participation at a Workshop	>4
Participation at an Event other than a Conference or a Workshop	3
Video/Film	4
Brokerage Event	1
Pitch Event	0
Trade Fair	1
Participation in activities organized jointly with other H2020 projects	4
<p>The estimated number of persons reached, in the context of all dissemination and communication activities (direct and indirect), in each of the following categories. Open Source communities are listed with both 'Industry' and 'Higher Education' categories.</p>	
<b>Activities</b>	
Scientific Community (Higher Education, Research)	4,000 (30%)
Industry	6,000 (46%)
Civil Society	2,000 (15%)
General Public	0
Policy Makers	250 (2%)
Media	750 (7%)
Investors	0
Customers	2
Other	0

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	34 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 15. Example Conference Reports

### 15.1 Consumer Identity World Summit – LIGHTest Workshop

In November 2018, the LIGHTest team headed over to Singapore to present at a pre-conference workshop at Consumer Identity World. Consumer Identity World is a set of global conferences that aim to educate their delegates about finding the best consumer identity and access management strategy for their customers. The LIGHTest project team took half a day to introduce LIGHTest to delegates from all around APAC. The aim being to introduce the concept of LIGHTest, describe the work done so far, and gather feedback from the delegates. The session kicked off with an introduction from Don Thibau, Chairman of OIX, as he set the scene in the identity marketplace and introduced the concept of LIGHTest. Rachelle Sellung from University of Stuttgart covered the business elements of LIGHTest; how the project has been working on a tri-channel approach of legal, business and technical to ensure that all needs are aligned, especially as the project enters its third year. Rachelle Sellung talked through many of the use cases of LIGHTest and how it could be utilised globally after the project finishes. Rachelle Sellung also spoke about the pilots that are taking place in the third year; introducing Correos and the elnvoicing work that is taking place to integrate with LIGHTest. The workshop was concluded with Olamide Omolola from TU Graz who talked through how the technical infrastructure is being developed including detailed descriptions of how the trust delegation and trust propagation will work, especially cross border. Speaker: Rachelle Sellung, University of Stuttgart.

### 15.2 Azerbaijan National PKI – LIGHTest International Forum Workshop

From 27th – 30th May, a delegation from LIGHTest (Heiko Roßnagel from Fraunhofer; Rachelle Sellung, Sven Wagner and Stephanie Weinhardt, from the University of Stuttgart; Stefan More and Lukas Alber from TU Graz) hosted the LIGHTest International Forum Workshop in Baku, Azerbaijan. The three-day event began with an introduction to the project and a close look at trust infrastructures and how they are developing digitalisation. Highlights from the workshop included sessions focusing on: Usability of Trust Policy Authoring Tools - Concept, Design and Evaluation Usability of policy authoring tools remains a challenge. However, in a user study, delegates were shown how LIGHTest offers a new approach which has been developed based on a mental concept as opposed to design guidelines.

### 15.3 UNHCR – LIGHTest Workshop

LIGHTest and UNHCR joined forces to work on offering digital solutions to problem faced by refugees. One use case for the LIGHTest cross-domain trust infrastructure was identified that could be applied in the UNHCR DAFI programme for education, a scholarship program for refugees who want to go to university. The trust infrastructure will help with the verification and acceptance of important documents for the application process in an Academic or University setting. The outcome of the meeting was the lead up to the definition of the prototype of a UNHCR trust scheme which started at the end of August 2019. This will lead to a LIGHTest – UNHCR demonstrator and the set-up a pilot project. The demonstrator for the UNHCR’s DAFI scholarship program will be completed by the end of the project

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	35 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



and will show how a UNHCR trust scheme could look on a basic level and how it could be demonstrated in the Academic Use Case that is focused on the DAFI program for refugees.

### 15.4 Internet Identity Workshop (IIW)

Don Thibeau from Open Identity Exchange presented LIGHTest on October 2019. IIW is the Internet Identity Workshop and have been meeting twice a year since 2005. Their aim is to move codes, practice and conduct in the identity space forward. IIW brings together the largest concentration of talent dedicated to designing and building identity systems that empower individuals.

### 15.5 Swift Sibos - London.

The 2019 SWIFT at Sibos programme took an exploratory look at how a need for increasingly sophisticated security, real-time technology solutions, and the role of data is already shaping a brand-new payments landscape.

The audiences for both conferences were primarily made up of the development community, identity and security experts and those from the telecommunications space.

At these conferences Don Thibeau talked about the LIGHTest project in general in an introductory manner, covering how the project has been progressing so far and focussing on the tri-channel approach of business, legal and technical. At all of these conferences, the audience was particularly interested in the pilots and what they are achieving. They are also asking for further details on the software, when it can be tested in a real-world environment and require more information on licensing.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	36 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 16. Partner Reports

Many partners will have completed specific dissemination activities as the related Work Packages may have started early in the project.

### 16.1 EEMA

EEMA is the Dissemination lead for LIGHTest and is responsible for orchestrating the communications and dissemination activities of the consortium, amounting to over 30 actions in YEAR3+. The aim of EEMA's own dissemination activities continues to be to place LIGHTest as part of the strategic goals of the European Commission, in expanding its ability to trust global supply chains and reduce the friction in conducting business between two remote entities operating within different Trust Schemes. EEMA itself attended and contributed to over 15 events (some reported in the above table). LIGHTest was represented at EEMA's own Annual Conference in London and ISSE 2018, and ISSE 2019 in Brussels. In EEMA's wider role in Europe as a leading Not-for-Profit Think-Tank, the LIGHTest project is continually raised as a topic and promoted.

EEMA was responsible for publishing the LIGHTest Newsletters, illustrated in this deliverable. EEMA continues to develop the LIGHTest Community website, together with OIX, to promote our aims and generate support for LIGHTest in a more global environment.

During YEAR3+ Members of the Advisory Board continued to be highly active in promoting LIGHTest.

EEMA has also participated with ATOS, OIX, NLnet and FHG in scoping the exploitation plans for LIGHTest into the future.

### 16.2 ATOS

Atos participated with other partners in the different dissemination activities such as conferences participation like ISSE2018 in Brussels, Belgium, during 7th -8th November 2018, as well as promotion through its yearly publications where the firm present predictions and trends for the technologies of the future. Atos also supported all dissemination activities via on-line communication using its internal social networks, regular newsletters and web site, exploiting synergies with already running research projects where Atos is involved.

### 16.3 TUG

Year 3 started at TUG with a lot of dissemination activities. Earlier in February 2019, TUG participated in the presentation of the Trust Policy Authoring Tool (TPAT) at International Conference on Information Systems Security and Privacy (ICISSP 2019).

In March 2019, TUG presented LIGHTest at the Open Identity Summit (OID2019). The focus of the presentations revolved around the core LIGHTest components i.e., Automatic Trust Verifier (ATV), and

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	37 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



TPAT. Furthermore, We showed how these components could be extended to other areas such as access control, IoT and others.

Later in May 2019, we travelled to Azerbaijan and conducted a technical workshop for developers. The workshop focused on how the LIGHTest components that TUG is developing can be used in practice. The trip was successful, and we got valuable feedback from the participants.

Finally, in July 2019, we had a paper on the Trust Policy Language (which was the basis of the TPAT) accepted at IFIP International Conference on Trust Management (IFIPTM 2019). This paper further increased our visibility in the trust community.

### 16.4 TUBITAK

TUBITAK has attended "Transforming the way we trust: The LIGHTest Project" panel organized in the annual EEMA conference organized in London, 18/06/2019. TUBITAK presented a high-level of functionality and interoperability of Lightest components implemented within the Lightest project. Also, a high overview of the verification methodology based on Minder Testbed, certified as a conformance and interoperability Testbed by CEF, is also presented by TUBITAK.

TUBITAK has also attended to the Open ID Summit conference organized in Garmisch, 28/03/2019. Since TUBITAK is a partner in the FutureTrust project, connection areas of Lightest and FutureTrust projects are discussed with participants on the focus of the go.eIDAS initiative.

### 16.5 G+D Mobile Security

There was no dissemination activity by G+D Mobile Security in this period.

### 16.6 OIX

OIX have presented on LIGHTest at a number of conferences across Europe including EIC, Economics of Identity and IDM Europe as well as taking LIGHTest to an international audience by presenting at Consumer Identity World in Singapore and the following conferences in the United States: ID2020, KNOW Conference, Connect:ID, and Identiverse. OIX have also facilitated two successful LIGHTest International Forums one in Singapore and one in London which has helped to spread the word on what LIGHTest is doing as well as gather feedback from prominent members of the identity space. OIX have helped with 9 different blog posts on the site, including an interview with Heiko about how the LIGHTest project has developed and what the future may hold for the project. OIX also facilitated a webinar on Cross Border Trust: Trust Infrastructures and tools from Blockchain to LIGHTest with Rachelle Sellung from USTUTT.

### 16.7 NLNET

During project's third year NLNET participated in two events supporting EEMA's dissemination activities. We helped staff the LIGHTest booth at eWorld Procurement & Supply in London on 5th March, explaining LIGHTest to attendees. At the EEMA Annual Conference on June 19 in London we presented

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	38 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## Contextual and situational description and benchmark of events (3)



the technical aspects of the project during a LIGHTest session and participated in a lively discussion about the project, its goals and uses.

### 16.8 DTU

DTU was the lead in designing a Trust Policy Language and TU Graz was implementing it, which was of course a closely concerted effort getting theory and practice together in a clean, simple and elegant way. This effort has resulted in a common publication between DTU and TUG, which was published and presented at the IFIP Trust Management Conference (IFIP TM) on 17-19th of July 2019 in Lyngby, Sebastian Mödersheim from DTU giving the presentation. We consider this one of the scientifically most important publications, promoting LIGHTest also to the research community especially on Trust. LINK: <http://ifiptm2019.compute.dtu.dk/IFIPTM19/IFIPTM.html>

DTU has also developed a graphical language for TPL, called GTPL, that thanks to its visuality makes it more intuitively accessible to many professionals. We presented this at Open Identity summit 28-29th of March 2019 in Garmisch-Partenkirchen, again Sebastian Mödersheim giving the presentation. LINK: [https://websites.fraunhofer.de/Open\\_Identity\\_Summit\\_2019/](https://websites.fraunhofer.de/Open_Identity_Summit_2019/)

DTU has co-developed and connected to LIGHTest the RPx prover which we can use to automatically verify trust policy decisions with an extremely high level of confidence. We presented this at the CPP conference 14-15th of January 2019 in Cascais, Portugal, Anders Schlichtkrull giving the presentation. LINK: <https://popl19.sigplan.org/track/ CPP-2019>

Finally, DTU has also organized and chaired the Øresund Security Day on the 22nd of May 2019 in Lyngby, a workshop for researchers and industry in the Øresund region (Copenhagen - Lyngby - Malmø - Lund). This workshop gave us a great opportunity to present LIGHTest and in particular our ongoing theoretical work in LIGHTest on automated machine-checkable verification. LINK: <http://osd2019.compute.dtu.dk>

### 16.9 Correos

Víctor Martín, Deputy Director of Digital Business in Correos, participated remotely in several private meetings as part of the workshops of the Steering Committee follow-up meetings of UN UPU (Universal Postal Union) .post during 2019, getting the chances and opportunities to explain and explore synergies of LIGHTest Project with all .Post initiatives.

On February 26th, Javier Salazar and Carlos Balot, team members of Correos pilot team, attended a Private meeting on the Madrid offices of UNE, Spanish standardization body that interacts with CEN / CENELEC. As CEN / CENELEC National observers for Postal Services Standardization specialized in Digital Services, they had the chance to explain and discuss the possibilities of LIGHTest at a international standardization level.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	39 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## Contextual and situational description and benchmark of events (3)



Correos team member, Javier Salazar, had the chance to participate on the ID4me Summit 2019 in Madrid, Spain. The meeting held on October 18<sup>th</sup> gave the opportunity to test the LIGHTest use case and market acceptance for eID trust based on DNS TLSs, by formal and informal conversations with DNS and eID experts.

### 16.10 Ubisecure

Ubisecure will publish a LIGHTest related podcast in the podcast-series 'Let's Talk About Digital Identity' <https://www.ubisecure.com/lets-talk-about-digital-identity-podcast/>

The podcast will present LIGHTest as a project and some of its results in the form of an interview. Mr Oscar Santolalla acting as host of the podcast-series interviewed Rachelle Sellung of the University of Stuttgart who represents the LIGHTest project. The podcast will go live in the beginning of November 2019.

### 16.11 TLX

Timelex has engaged in several dissemination activities where the legal and policy aspects of LIGHTest outputs were presented. Notably, Timelex presented the legal approach, legal challenges and legal toolbox developed in the LIGHTest project at the EEMA Annual Conference which took place on 18-19 June in the Microsoft Offices, London, UK. During this session, discussions were also held on the legal and policy potential of LIGHTest as a way of modernising, streamlining and internationalising the eIDAS governance model. Furthermore, LIGHTest results were presented during the Beltug X-change on 'Cyber defence and your 360° security perimeter' on 25 April 2019, indicating how LIGHTest could be used as a tool for communicating information on trusted devices

### 16.12 UPRC

Since November 2018, when UPRC joined the LIGHTest consortium, UPRC has contributed to the dissemination of LIGHTest outcomes through various channels and carrying out the following dissemination activities. UPRC profile and relevant expertise and the eProcurement pilot were presented in one of the LIGHTest newsletters (Edition 10, February 2019). Additionally, UPRC has assisted EEMA in the tri-channel approach by creating content for the eProcurement pilot in the form of PowerPoint slides.

There have also been discussions regarding the trust establishment in PEPPOL using LIGHTest in the Exchange Summit in Vienna on October 1, 2019 and also in regular teleconferences that are being held within the eDelivery community of OpenPEPPOL to increase the visibility and range of LIGHTest and the LIGHTest community and to discuss with OpenPEPPOL the possibility of considering the adoption of the LIGHTest infrastructure and tools within the PEPPOL network.

The two use cases that have been identified in the eProcurement pilot and the solutions that are being developed using LIGHTest tools were presented in the OpenPEPPOL Community Meetings (eDelivery track, Enhanced security Work Group) that took place in Brussels on October 15-16, 2019.

Document name:	Contextual and situational description and benchmark of events (3)		Page:	40 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft





## Contextual and situational description and benchmark of events (3)



Additionally, a paper with the title “Application of Automated Trust Verification and Delegation Mechanisms in PEPPOL eProcurement network” by Konstantinos Douloudis, Maria Siapera, Jerry Dimitriou, and Andriana Prentza was submitted to 16th European Mediterranean & Middle Eastern Conference on Information Systems (EMCIS 2019) that will take place in Dubai on December 9-10, 2019 and is at the moment undergoing the review process of the conference.

### 16.13 FHG

In the third year, Fraunhofer was present in discussions at a UNCITRAL Expert group meeting on Identity Management and trust services in November 2018. Fraunhofer joined the International Forum held in Baku, Azerbaijan, where they help present a technical and overview of LIGHTest. Lastly, the Fraunhofer-Gesellschaft introduced the LIGHTest project at the Baku E-trade forum in Azerbaijan on October 21 2019.

### 16.14 USTUTT

In the third year, USTUTT presented LIGHTest at the EAB RPC conference in Darmstadt, Germany, before presenting the emerging cross border trust services market with LIGHTest at the Africa and Middle East Conference on Software Engineering, AMECSE 2018 Conference in Cairo, Egypt, on October 30, 2018. After that, the USTUTT partners presented LIGHTest at the ISSE 2018 in Brussels on November 7th, 2018. Following that, USTUTT presented and hosted an International Forum in London at the Economics of Identity event. On November 20, 2018, USTUTT discussed use case studies and the work being undertaken on the pilots at the Consumer Identity World APAC 2018 in Singapore. The international LIGHTest Forum was hosted in Baku, Azerbaijan, where an Introduction to the LIGHTest Project with a technical emphasis was presented in May 2019. In June 2019, USTUTT presented LIGHTest in London at the Identity Week first and then at the EEMA Annual conference. The last presentation took place at the ISSE Annual Conference in Brussels, Belgium on November 6, 2019 where overall results and project pilots have been showcased.

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	41 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## 17. Project Description

LIGHTest project to build a global trust infrastructure that enables electronic transactions in a wide variety of applications

An ever-increasing number of transactions are conducted virtually over the Internet. How can you be sure that the person making the transaction is who they say they are? The EU-funded project LIGHTest addresses this issue by creating a global trust infrastructure. It will provide a solution that allows one to distinguish legitimate identities from frauds. This is key in being able to bring an efficiency of electronic transactions to a wide application field ranging from simple verification of electronic signatures, over eProcurement, eJustice, eHealth, and law enforcement, up to the verification of trust in sensors and devices in the Internet of Things.

Traditionally, we often knew our business partners personally, which meant that impersonation and fraud were uncommon. Whether regarding the single European market place or on a Global scale, there is an increasing amount of electronic transactions that are becoming a part of people's everyday lives, where decisions on establishing who is on the other end of the transaction is important. Clearly, it is necessary to have assistance from authorities to certify trustworthy electronic identities. This has already been done. For example, the EC and Member States have legally binding electronic signatures. But how can we query such authorities in a secure manner? With the current lack of a worldwide standard for publishing and querying trust information, this would be a prohibitively complex leading to verifiers having to deal with a high number of formats and protocols.

The EU-funded LIGHTest project attempts to solve this problem by building a global trust infrastructure where arbitrary authorities can publish their trust information. Setting up a global infrastructure is an ambitious objective; however, given the already existing infrastructure, organization, governance and security standards of the Internet Domain Name System, it is with confidence that this is possible. The EC and Member States can use this to publish lists of qualified trust services, as business registrars and authorities can in health, law enforcement and justice. In the private sector, this can be used to establish trust in inter-banking, international trade, shipping, business reputation and credit rating. Companies, administrations, and citizens can then use LIGHTest open source software to easily query this trust information to verify trust in simple signed documents or multi-faceted complex transactions.

The 39-month LIGHTest project starts on September 1st and has an estimated cost of almost 9 Million Euros. It is partially funded by the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321. The LIGHTest consortium consists of 14 partners from 9 European countries and is coordinated by Fraunhofer-Gesellschaft. To reach out beyond Europe, LIGHTest attempts to build up a global community based on international standards and open source software.

The partners are ATOS (ES), Timelex (BE), Technische Universität Graz (AT), EEMA (BE), G+D Mobile Security(DE), Danmarks Tekniske Universitet (DK), TUBITAK (TR), Universität Stuttgart (DE), Open Identity Exchange (GB), NLNet Labs (NL), CORREOS (ES), Ubisecure (FI) and University of Piraeus

<b>Document name:</b>	<b>Contextual and situational description and benchmark of events (3)</b>		<b>Page:</b>	42 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



# Contextual and situational description and benchmark of events (3)



Research Center – UPRC (GR). The Fraunhofer IAO provides the vision and architecture for the project and is responsible for both, its management and the technical coordination.

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	43 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



18. Annex 1 – Presentation highlights addressing Industry 4.0

## Trust in Industry 4.0 using LIGHTest



A Lightweight Infrastructure for Global Hetrogeneous Trust Management




2019

LIGHTest<sup>™</sup> has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



v100

---

### Trust in a changing world



**In the old days**

- our world was smaller
- we knew our business partners
- deals were sealed in personal contact


2019

LIGHTest<sup>™</sup> has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



<b>Document name:</b>	Contextual and situational description and benchmark of events (3)	<b>Page:</b>	44 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00
		<b>Status:</b>	Draft



# Contextual and situational description and benchmark of events (3)



## Who is EEMA?



EEMA is

- The leading independent, not for profit, European Think Tank concerned with identification, authentication, and Trust.
- Projects, work channels and awareness activities to inform and develop digital society
- Based in Brussels, and operates across Europe .... and beyond



LOCARD



FutureTrust

go.eIDAS



© LIGHTest Consortium

2019

LIGHTest has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



## The European LIGHTest Project – A European Project for Global Benefit



- Horizon 2020
- Innovation Action
- Started September 1, 2016
- 40 months
- Estimated cost of 8.7 Mio Euros
- 14 partners from 9 countries
- Coordinated by Fraunhofer



© LIGHTest Consortium

2019

LIGHTest has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



Document name:	Contextual and situational description and benchmark of events (3)		Page:	45 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



5

## Trust in a changing world

---



### Increasingly

- we operate European and World-wide
- we don't know our business partners
- deals are sealed remotely through Cyberspace



© LIGHTest Consortium **2019**


LIGHTest has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



6


## In Industry 4.0 smart interactions are mainly conducted virtually

---




### Interconnectivity

- across and within the supply chain
- between data assets
- across AI management
- consuming conventional 3<sup>rd</sup> party services



© LIGHTest Consortium **2019**

LIGHTest has received funding from the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321



<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	46 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft



## But can you trust all parts or owners of your de-centralized Industry 4.0 processes and controls?



**Your largest risks are outside your control**

- Just In Time (TIM)
- Process Optimisation
- Maintenance and repair operations (MRO)

## Industry 4.0 – The Open Door



Despite all the risks Industry 4.0 encourages these interdependencies and links with organisations outside of your control

Document name:	Contextual and situational description and benchmark of events (3)		Page:	47 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## But can you trust all parts or owners of your de-centralized Industry 4.0 processes and controls?



**Your largest risks are outside your control**

- Just In Time (TIM)
- Process Optimisation
- Maintenance and repair operations (MRO)

## Interaction - Integrity & Transparency



- For Industry 4.0, we need Integrity and transparency above and beyond business searches, for software driven supply chains and ad hoc suppliers and customers
- Dynamic factors to consider with the partners are:
  - Quality Mandates
  - Safety
  - Ethics
  - Environmental
  - Documentation / Compliance
  - Security (Cyber and Physical)
  - Resilience
  - Access Control
  - Authorisation

<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	48 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft





## How can we know whether a remote someone or something is trustworthy?

### We need Help....

- Trusted **Authorities**
- Trusted Third Parties that publish **Reputation** Ratings for hardware, services and organisations



## What does LIGHTest do? Infrastructure for Publication and Querying of Trust Schemes

- Create a global Standard Way for publishing Trust Lists..
- ..on a global Trust Infrastructure

- Across domains
- Accommodate diverse perceptions of trust
  - No global agreement needed
- Authorities:
  - EC and MS for qualified signature and trust services
  - Business registers
  - Professional registers (health, justice, law-enforcement, ..)
  - Corporate internal registers
  - ...



Document name:	Contextual and situational description and benchmark of events (3)		Page:	49 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## What does LIGHT<sup>est</sup> do? Trust Policy and Automatic Trust Decisions

- Make it automatic for Verifiers to **query Trust Lists**
- Combine multiple queries to **validate**
  - an **Electronic Transaction or Interaction**
  - against an easy to author **Trust Policy**



## What does LIGHT<sup>est</sup> do?

### Infrastructure for the Publication and Querying of Delegations for individuals

#### Delegation:

- Organization publishes Trust List on..
- ..who can sign/act in its name for which purposes



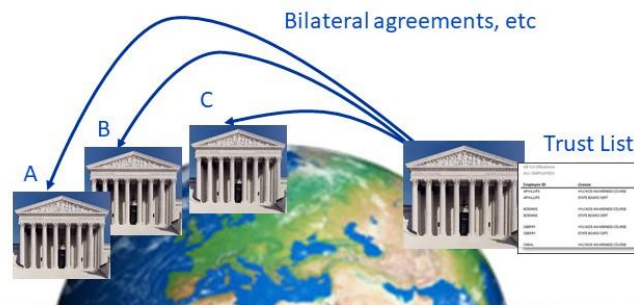
Document name:	Contextual and situational description and benchmark of events (3)		Page:	50 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft

## What does LIGHT<sup>est</sup> do?

### Infrastructure for the Translation across Trust Domains

Authority publishes Trust List on..

- ..which authorities from other trust domains are trustworthy
- ..how to translate foreign into native trust schemes
  - NIST: Level "3" == EC eIDAS: Level "substantial"



## Prerequisites to Automate Verification of a Trust Policy

- Machine Readable and understandable Trust Policy
  - Both parties need to have readable schemes
- Comparison / Analysis Tool for Trust Policy
  - Example: NIST Level "3" == EC eIDAS Level "substantial"
  - May require translation capability
  - Needs understanding of any delegation issues
- Discovering where the Trust Policy details are located
  - Where can the counterparty's policy be found reliably?

Policy Authoring

Verification and Analysis

Publisher

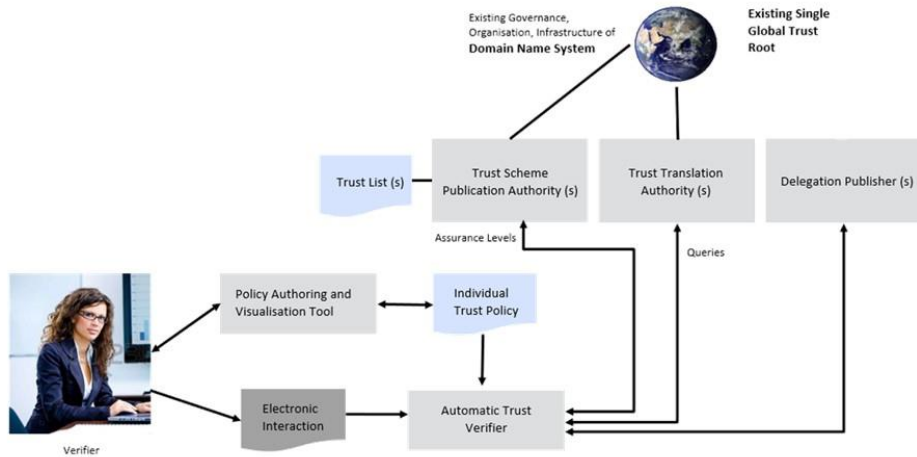
Document name:	Contextual and situational description and benchmark of events (3)		Page:	51 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



# Contextual and situational description and benchmark of events (3)



## LIGHTest Architecture



### LIGHTest Components

- Policy Authoring and Visualisation Tool
- Automatic Trust Verifier
- Trust Scheme Publishing Authority
- Trust Translation Authority
- Delegation Publisher



## Industry 4.0 trustworthiness – an example policy

• Quality Mandate - certification of services	Y/N
• Safety - do staff health conditions comply to...?	Y/N
• Ethics - is there a business ethics policy?	Y/N
• Environment - is their a carbon reduction strategy?	Y/N
• Compliance – does the company comply to ISO.....?	Y/N
• Security (Cyber / Physical) - is there a dedicated CSO?	Y/N
• Resilience – is there a resilience strategy implemented ?	Y/N
• Off-site data backup ?	Y/N
• Access Control	
• Biometrics (fingerprint) ?	Y/N
• Offboarding Process?	Y/N
• Authorisation / Delegation Policies	
Purchasing Manager Grade C < €50,000	Y/N



Document name:	Contextual and situational description and benchmark of events (3)		Page:	52 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



## What LIGHT<sup>est</sup> is and what LIGHT<sup>est</sup> is NOT

- LIGHTest allows you to use a global, known and trusted infrastructure to to:
  - Retrieve declared policy and certification details from partners
  - Verify those declared policies and certifications from Trust Lists
  - Determine trust assurances behind partners
  - Facilitate your own decision making
- LIGHTest does not provide an alternative to eIDs, business registers or certifications
- LIGHTest does not allow you to outsource trust decisions

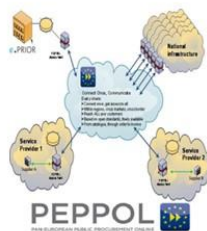


## LIGHT<sup>est</sup> Pilot Demonstrations



### e-Correos (by Correos)

- Spanish Postal Service, one of largest world-wide
- electronic registered delivery service
- Identities of users
- Citizens and businesses receive official notifications from various administrations



### PEPPOL e-Invoicing e-Invoicing in OpenPEPPOL environment

- Approach applicable to other PEPPOL applications
- Demonstrates easy of integration of LIGHT<sup>est</sup> in existing product
- Demonstrates "delegation-enabling" an application with LIGHT<sup>est</sup>.



Document name:	Contextual and situational description and benchmark of events (3)		Page:	53 of 54	
Dissemination:	PU	Version:	V1.00	Status:	Draft



Thank You



[www.lightest-community.org](http://www.lightest-community.org)  
[info@lightest-community.org](mailto:info@lightest-community.org)  
[@LIGHTest\\_trust](https://twitter.com/LIGHTest_trust)  
[www.linkedin.com/groups/12017516](https://www.linkedin.com/groups/12017516)



<b>Document name:</b>	Contextual and situational description and benchmark of events (3)		<b>Page:</b>	54 of 54
<b>Dissemination:</b>	PU	<b>Version:</b>	V1.00	<b>Status:</b> Draft

