PrivAcy pReserving Infrastructure for Surveillance

Deliverable D7.3
Dissemination Material

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Table of Contents

1 INTRODUCTION 4
2 PRESENTATIONS ..... ERREUR ! SIGNET NON DEFINI.
3 PUBLICATIONS ..... ERREUR ! SIGNET NON DEFINI.
3.1 PUBLICATIONS ABOUT PARIS ..... ERREUR ! SIGNET NON DEFINI.
3.2 RELATED PUBLICATIONS ..... ERREUR ! SIGNET NON DEFINI.
4 WEBSITE 5
5 FACTSHEET 7
6 PROJECT PRESENTATION 10

Document History

Version	Status	Date
v0.1	Draft of sections, first content	01/12/2014
v0.2	Update of all sections	15/12/2014
v0.3	Integration of the flyer	31/12/2014
v0.4	Integration of the storyboards	16/01/2015
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Approval		
	Name	**Date**
Prepared	Antonio Kung	16/01/2015
Reviewed	All Project Partners	16/01/2015
Authorised	Antonio Kung	16/01/2015
Circulation		
Recipient	**Date of submission**	
Project partners	16/01/2015	
European Commission	16/01/2015	

Executive Summary

The dissemination material and activities of the first 6 months of the PARIS project are presented.

1 Introduction

The dissemination of information is a key requirement of the PARIS project. PARIS research, development, and conclusions are valuable only if they are not shared with other projects, universities and companies. PARIS has disseminated its information in the following ways:

- **Website**: the PARIS website
- **Factsheets**: A PARIS factsheet for general distribution
- **Project Presentation**: slides for a general presentation of the PARIS project to be shown at conferences and workshops.
- **Flyer**: documentation for general distribution
- **Storyboards**: video for explaining the project on the web

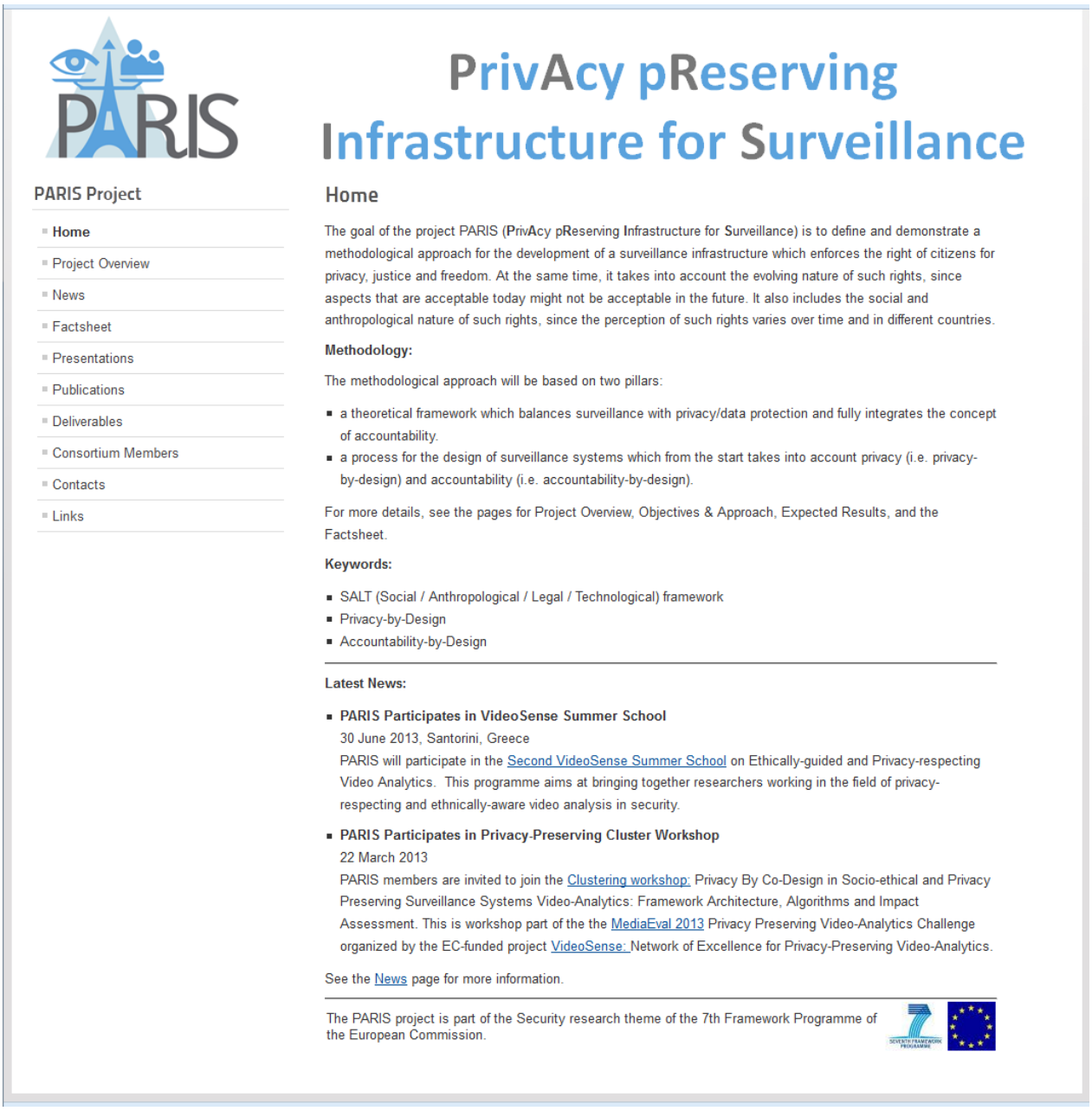
The following sections detail these activities and documents.

2 Website

The PARIS website is found at www.paris-project.org. There are currently web pages for the following topics:

- **Home**: General introduction to the project.
- **Project Overview**: The methodological approach and theoretical framework.
- **News**: Notable activities of members of the project.
- **Factsheet**: The basic administrative details of the project.
- **Presentations**: Papers presented in academic and industrial symposiums and conferences.
- **Publications**: Papers published in professional and academic journals.
- **Deliverables**: A list of TERESA deliverables, with the public ones available in a pdf file.
- **Consortium members**: A list of the consortium members with links to their websites.
- **Contacts**: Contact information for each partner of the project.
- **Links**: Links to related projects and related information.

The general look of the site layout is presented on the following page.



PARIS

PrivAcy pReserving Infrastructure for Surveillance

PARIS Project

- **Home**
- Project Overview
- News
- Factsheet
- Presentations
- Publications
- Deliverables
- Consortium Members
- Contacts
- Links

Home

The goal of the project PARIS (**P**riv**A**cy p**R**eserving **I**nfrastructure for **S**urveillance) is to define and demonstrate a methodological approach for the development of a surveillance infrastructure which enforces the right of citizens for privacy, justice and freedom. At the same time, it takes into account the evolving nature of such rights, since aspects that are acceptable today might not be acceptable in the future. It also includes the social and anthropological nature of such rights, since the perception of such rights varies over time and in different countries.

Methodology:

The methodological approach will be based on two pillars:

- a theoretical framework which balances surveillance with privacy/data protection and fully integrates the concept of accountability.
- a process for the design of surveillance systems which from the start takes into account privacy (i.e. privacy-by-design) and accountability (i.e. accountability-by-design).

For more details, see the pages for Project Overview, Objectives & Approach, Expected Results, and the Factsheet.

Keywords:

- SALT (Social / Anthropological / Legal / Technological) framework
- Privacy-by-Design
- Accountability-by-Design

Latest News:

- **PARIS Participates in VideoSense Summer School**
  30 June 2013, Santorini, Greece
  PARIS will participate in the Second VideoSense Summer School on Ethically-guided and Privacy-respecting Video Analytics. This programme aims at bringing together researchers working in the field of privacy-respecting and ethnically-aware video analysis in security.
- **PARIS Participates in Privacy-Preserving Cluster Workshop**
  22 March 2013
  PARIS members are invited to join the Clustering workshop: Privacy By Co-Design in Socio-ethical and Privacy Preserving Surveillance Systems Video-Analytics: Framework Architecture, Algorithms and Impact Assessment. This is workshop part of the the MediaEval 2013 Privacy Preserving Video-Analytics Challenge organized by the EC-funded project VideoSense: Network of Excellence for Privacy-Preserving Video-Analytics.

See the News page for more information.

The PARIS project is part of the Security research theme of the 7th Framework Programme of the European Commission.

3 Factsheet

A factsheet for general distribution was created with the target audiences of the general public and professionals in related domains. The factsheet has been updated during the project in order to match with current progress. The following two pages present the content of the general PARIS factsheet.

PARIS

PrivAcy pReserving Infrastructure for Surveillance

The goal of the project PARIS is to define and demonstrate a methodological approach for the development of a surveillance infrastructure which enforces the right of citizens for privacy, justice and freedom. At the same time, it takes into account the evolving nature of such rights, since aspects that are acceptable today might not be acceptable in the future. It also includes the social and anthropological nature of such rights, since the perception of such rights varies over time and in different countries.

At a Glance

Contract number
312504

Project co-ordinator
Antonio Kung

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Programme Area
SP7-SECURITY

Partners
Trialog (France)
AIT (Austria)
INRIA (France)
KU Leuven (Belgium)
Universidad de Malaga (Spain)
Université de Namur (Belgium)
Thales (France)
Visual Tools (Spain)

Project funding
3.49 million Euros

Duration
36 months, starting 01/01/2013

Objectives

- **The definition of a Socio-contextual ethicAl, Legal and Technological (SALT) framework.** This will provide for an evolving understanding of the balance between the concept of private vs. public in a surveillance system.
- **The development of a SALT framework management tool.** The tool allows for a digital reference and representation of a SALT framework. It is used by stakeholders as a reference, including the design of surveillance systems. It includes mechanisms for creating and updating a SALT framework.
- **The definition of a SALT compliant process for surveillance.** It uses a reference SALT framework and integrates process activities and process artifacts for Privacy by Design and Accountability by Design.
- **The evidence of the value of SALT compliant process for surveillance in two cases.** A laboratory demonstration will show how a surveillance system can be developed using a SALT compliant process for video data lifecycle management-based applications.

Methodology

PARIS will define and demonstrate a methodological approach for the development of surveillance infrastructure which enforces the right of citizens for privacy, justice and freedom and takes into account the evolving nature of such rights, e.g. aspects that are acceptable today might not be acceptable in the future, and the social and anthropological nature of such rights, e.g. perception of such rights varies.

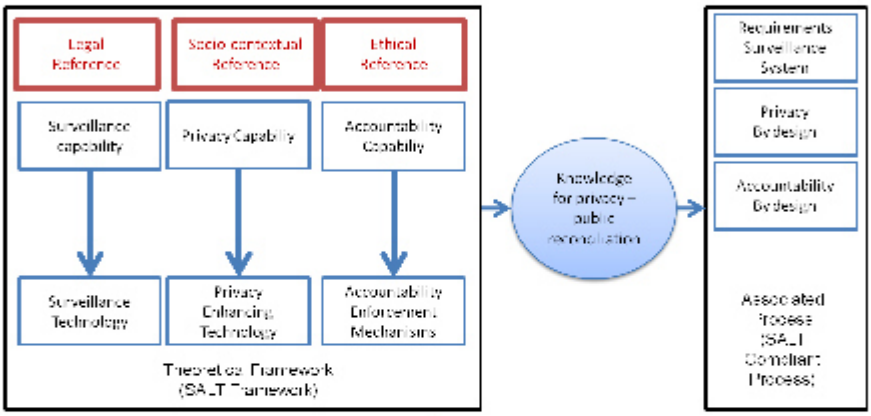
The methodological approach will be based on two pillars:

- a theoretical framework which balances surveillance with privacy/data protection and fully integrates the concept of accountability.
- a process for the design of surveillance systems which from the start takes into account privacy (i.e. privacy-by-design) and accountability (i.e. accountability-by-design).

SALT Framework

The theoretical framework is called SALT: Socio-contextual / ethical / Legal / Technological. This framework will first be defined in a generic way, and guidelines will be provided to define specialised conceptual frameworks, e.g. for a given country. Examples of SALT frameworks will be provided. The case of SALT frameworks interplay (i.e. exchanging surveillance data) will be analysed. A framework management tool will be developed (1) to allow for the creation and edition of a conceptual framework and (2) to subsequently act as a reference to surveillance system designers.

A SALT compliant design process will then be defined, i.e. surveillance and privacy balance according to the specialized framework will be ensured through the process. Two use case will be demonstrated, one based on video search technology which focuses on the archived data, and one based on biometrics technology which focuses on embedded systems sensor like data. The two use cases will used different SALT frameworks. The resulting methodology will be promoted through associations and standardization bodies.



SALT Management Tool

The tool allows for a digital reference and representation of a SALT framework. Stakeholders involved in the operation of a surveillance system, user associations, government representatives, lawyers, surveillance operators, and surveillance systems providers need adapted access to the SALT framework as a reference, i.e. detailed information on their domain of interest and high level consistent information on other aspects. The tool is based on a unified common digital representation of the elements of a SALT framework which is structured in such a way that such separation of concern can be ensured. The benefit of this tool is the assurance that a common understanding is reached between stakeholders.

The tool includes mechanisms for creating and updating a SALT framework. There could be many SALT frameworks (e.g. one per country). Therefore the same tool should allow for the creation and different frameworks. A given framework could also evolve since its social-contextual, ethical, and legal references change over time. The surveillance, privacy, and accountability capability could also evolve. The tool should allow for updates.

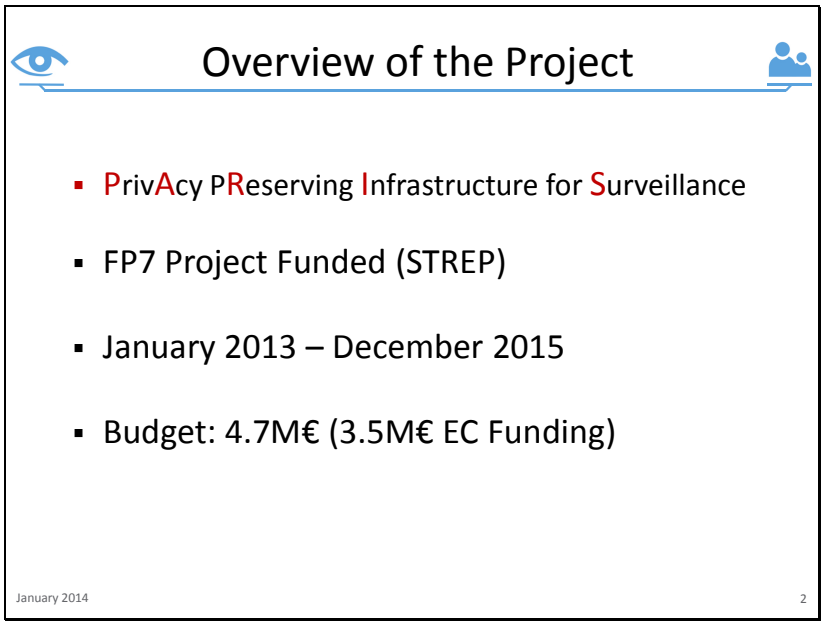
The tool includes information to allow for reasoning. It will integrate information and guidelines to allow for reasoning, based on the provision of the rules specified to reach the proper public / private balance and the rules for the potential interplay between SALT frameworks. The tool could also include some automated reasoning capability (to be investigated during the project).

The tool is used as a reference for the design of surveillance systems which comply with a given SALT framework. Designers of surveillance systems and stakeholders in the entire value chain, from technology providers to system integrators, should be able to use a SALT framework as a reference throughout the design and subsequent deployment and operation of surveillance systems. Specific information can be provided such as rules, constraints, and guidelines on the balance between surveillance, privacy, and accountability capability.

4 Project Presentation

A general slide presentation is available to all partners to show at meetings and conference in order to communicate the basic concepts and goals of the project. The presentation is continuously updated with the project results.

The following pages present the contents of the PARIS slide presentation.



Consortium

- Academic Partners
  - Austrian Institute of Technology (Austria)
  - INRIA (France)
  - Katholieke Universiteit Leuven: Interdisciplinary Center for Law & ICT (Belgian)
  - Univ. of Malaga (Spain)
  - Univ. of Namur (Belgian)
- Industrial Partners
  - Thales (France)
  - Trialog (France) - Coordinator
  - Visual Tools (Spain)

January 2014 3

Mission

- Define and demonstrate a methodological approach for the development of surveillance infrastructure which
  - enforces the right of citizens for privacy, justice and freedom
  - takes into account the evolving nature of such rights, e.g. aspects that are acceptable today might not be acceptable in the future
  - takes into account the socio-contextual and ethical nature of such rights, e.g. perception of such rights varies

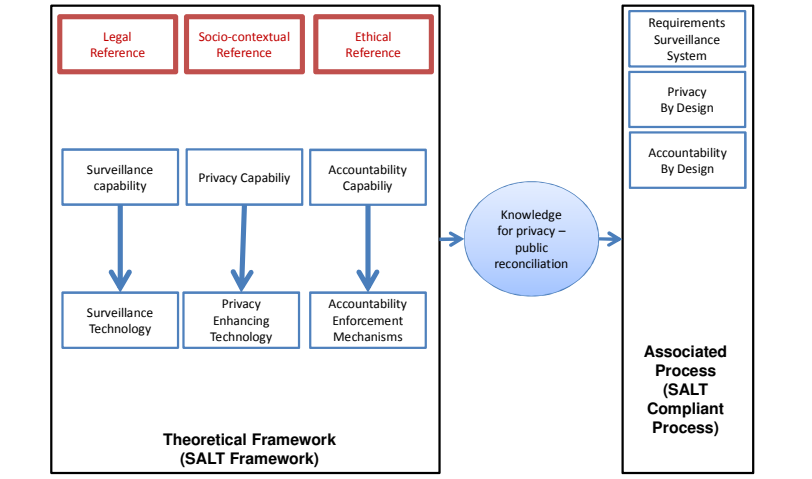
January 2014 4

Methodological Approach

- Based on two pillars:
  - A theoretical framework
    - reconciling surveillance and privacy/data protection
    - integrating the concept of accountability
  - An associated process for the design of surveillance systems
    - integrates from the start privacy (i.e. Privacy-by-Design)
    - Integrates from the start accountability (i.e. Accountability-by-Design)

January 2014 5

The two Pillars



January 2014 6

Objectives

- **O1: Definition of SALT: a Socio-contextual, ethicAl, Legal and Technical framework**
  - for an evolving understanding of the balance between the concept of private (vs. public) in a surveillance system
- **O2: Development of a SALT framework management tool**
  - digital reference and representation of a SALT framework
  - includes mechanisms for creating and updating a SALT framework
- **O3: Definition of a SALT compliant process for surveillance**
  - combines a reference SALT framework and processes for Privacy-by-Design and Accountability-by-Design
- **O4: Provide Evidence of the Value of SALT Compliant Process for Surveillance in Two Cases**
  - laboratory demo of video data lifecycle management based applications
  - lab demo of biometrics based applications

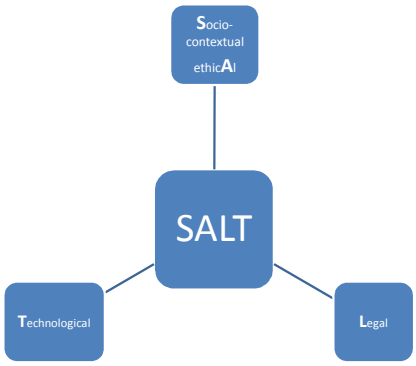
January 2014 7

Issues

- Avoiding win/lose, either/or, unnecessary tradeoffs
- Integrating the multiple perceptions of privacy
  - depends on socio-contextual and ethical factors
  - depends on legislation/regulatory factors
- Evolution
  - new technologies, online social media, mobile connectivity
  - changing perception of privacy and surveillance

January 2014 8

PARIS Main Concepts

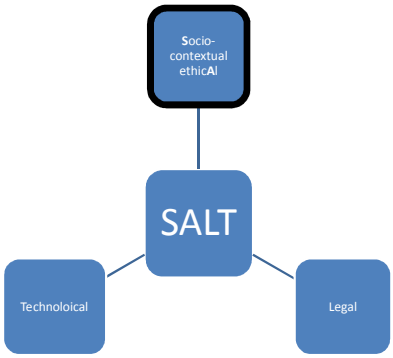


- SALT frameworks
  - Collection of concepts and overarching principles
    - concerning privacy in public spaces
    - that will be used as reference for the design of surveillance systems
  - Includes **S**ocio-contextual ethic**A**l, **L**egal, **T**echnical viewpoints
- SALT frameworks management
  - Capability to customise and enhance SALT frameworks

January 2014 9

SA in the SALT Framework

Socio-contextual ethicAl

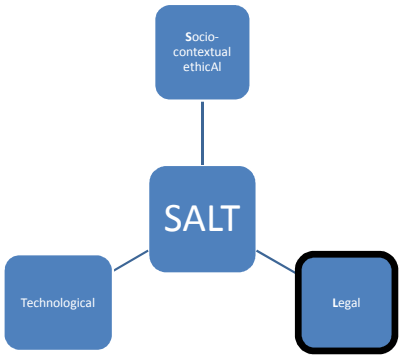


- Rationale
  - Integrate the socio-contextual and ethical perspective in the framework
  - Take into account local perceptions of privacy & surveillance (country or regional level)
  - Need for a reference that can be used for privacy impact assessment
- Needs
  - Integrate framework concepts and principles emerging from specific socio-contextual and ethical studies
  - Provide features to update framework as privacy is better understood in a local context

January 2014 10

L in the SALT Framework

Legal

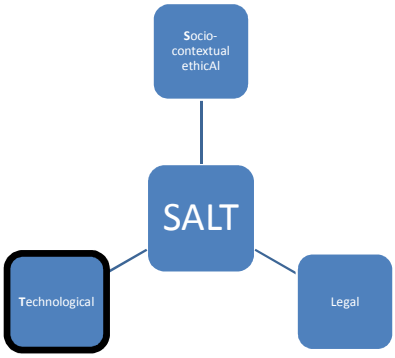


- Rationale
  - Integrate legal viewpoint on privacy & surveillance
  - Take into account specific legislation on privacy & surveillance
  - Need for a reference that can be used for privacy impact assessment
- Needs
  - Integrate in framework concepts and principles emerging from legislation
  - Provide features to update framework as legislation evolves

January 2014 11

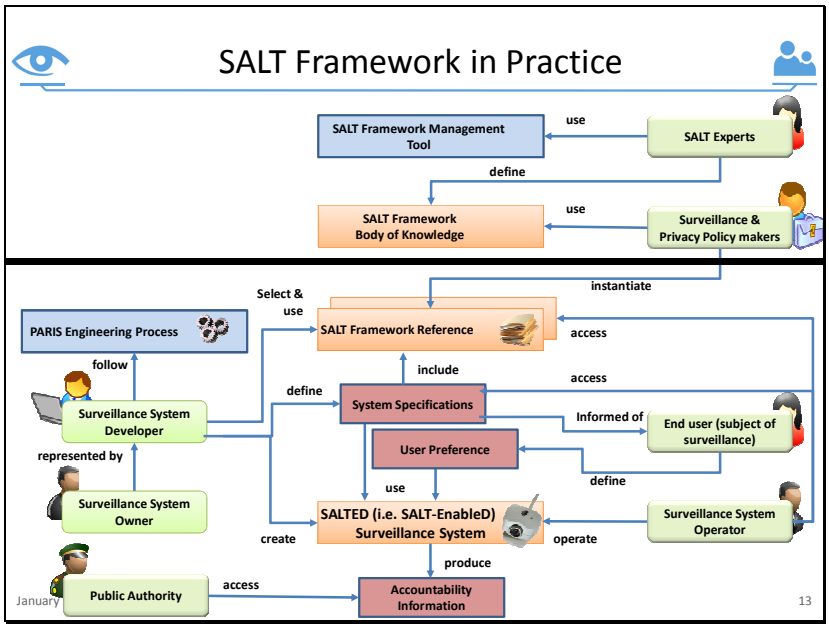
T in the SALT Framework

Technological



- Rationale
  - Integrate technology viewpoint on privacy & surveillance
  - Need for a reference that can be used for privacy impact assessment
- Needs
  - Integrate in framework concepts and principles emerging from technology status
  - Provide features to update framework as technology evolves

January 2014 12


SALT Framework in Practice
SALT Framework Management Tool
use
SALT Experts
define
SALT Framework Body of Knowledge
use
Surveillance & Privacy Policy makers
instantiate
Select & use
PARIS Engineering Process
SALT Framework Reference
access
follow
include
access
define
System Specifications
Informed of
End user (subject of surveillance)
Surveillance System Developer
represented by
User Preference
define
use
Surveillance System Owner
SALTED (i.e. SALT-EnableD) Surveillance System
Surveillance System Operator
create
operate
produce
Public Authority
access
Accountability Information
January
13

For more information, visit the PARIS website:
www.paris-project.org
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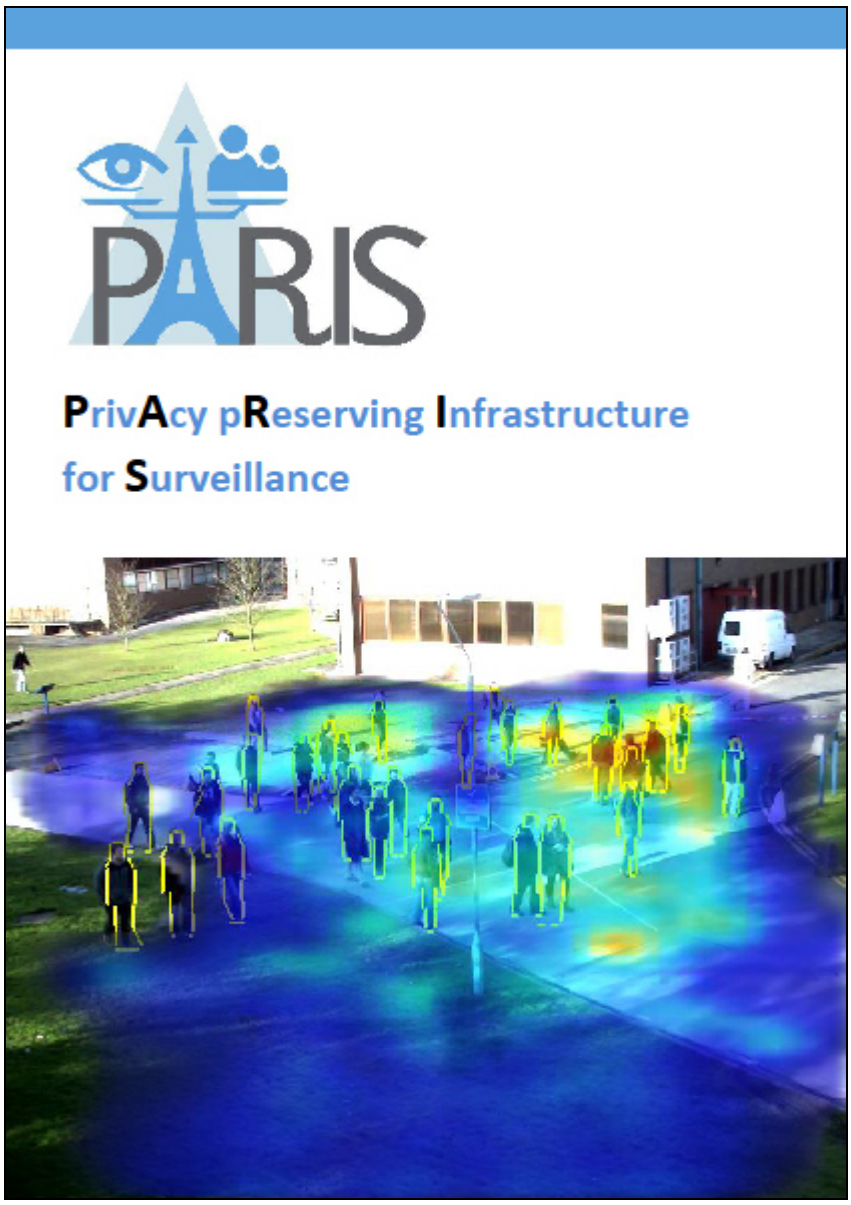
PARIS
January 2014
14

5 Flyer

A flyer has been also prepared. In particular, it has been distributed in CPDP 2015 (included in the conference bag). It consists in 4 pages summarizing the project. The following picture presents the flyer.



Problem Statement

Designing privacy-aware surveillance systems is a complex task. Some problems still exist:

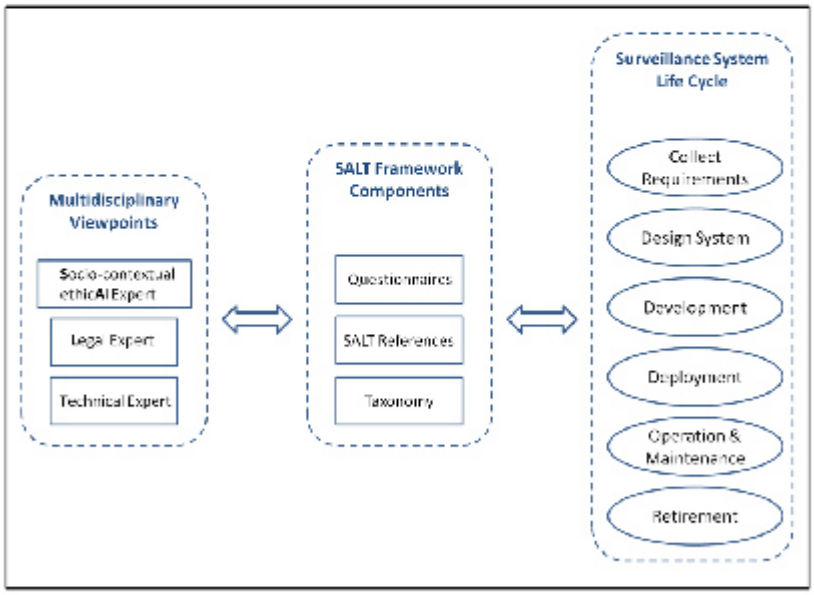
- The design of privacy-aware surveillance systems requires a specific methodology.
- There is currently no experience in multidisciplinary practice. Ethics and legal experts do not know how to interact with system designers. Conversely, it is difficult for designers to integrate socio-ethical and legal requirements.
- There is continuous evolution and evaluation of social perception, laws, technologies, and practices.

Main Objectives and Contributions

- The definition of a framework with Socio-contextual ethicAl, Legal and Technological (SALT) viewpoints. This will provide an evolving understanding of the balance between the concept of private vs. public in a surveillance system.
- The development of a SALT framework management tool. This tool facilitates a digital reference and representation of a SALT framework to be used by stakeholders as a reference. It includes mechanisms for creating and updating a SALT framework.
- The definition of a SALT compliant process for surveillance. It uses a reference SALT framework and integrates process activities and process artefacts for Privacy-by-Design and Accountability-by-Design. The value of the SALT compliant process for surveillance will be demonstrated by two cases. A laboratory demonstration will show how a surveillance system can be developed using a SALT compliant process for video data in lifecycle management-based applications.

PARIS Demonstrators

- **Privacy-preserving Video Archive Search System: a video archive search examines a large amount of video data for incident investigation. This usually involves search, analysis, and collection of video surveillance data from the crime scene.**
- **Biometrics Surveillance System: detection of unauthorized access to a building with security requirements while preserving the subject's privacy. In the case of an intrusion, the re-identification mechanism using an innovative biometric technology facilitates the work of security operators and the collection of evidence for law enforcement.**



PARIS
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Project Details
Start date: Jan 2013
Duration: 36 months
Reference: SEC - 312504
The PARIS project is funded by the Seventh Framework Programme of the European Commission.
TRIALOG
AIT
TOMORROW TODAY
Inria
KU LEUVEN
iMinds
ibbt
ma
UNIVERSIDAD DE MALAGA
crids
THALES
VISUAL TOOLS

6 Storyboards

In order to enhance the audience, the project has prepared some storyboards. It consists on videos on the following topics:

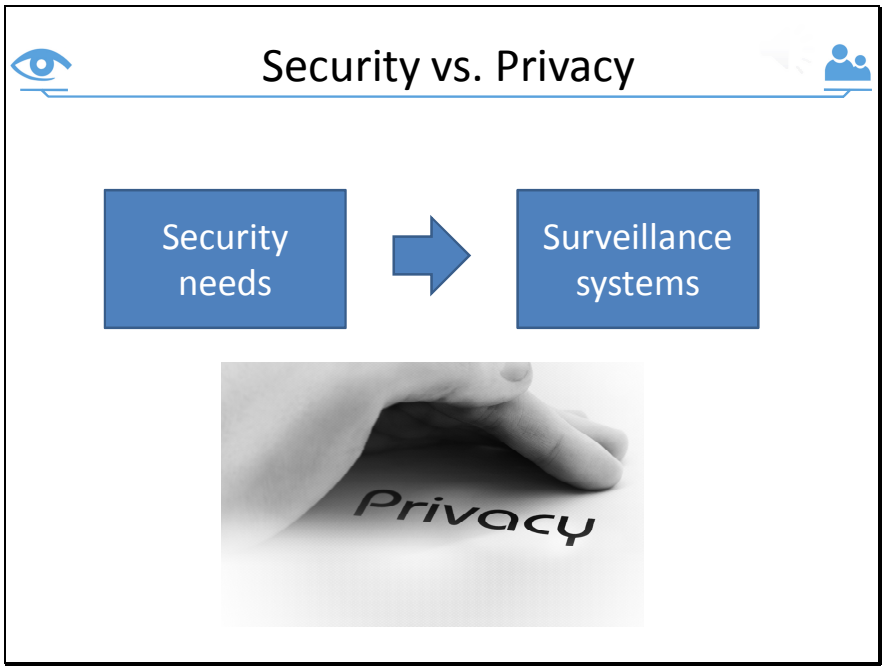
- General. Presents the challenges and the contributions of the project
- Tools. Presents the requirements and the targeted tools.

The video are composed of slides with a narration explaining the slide. The video will be shown to the advisory boards and then published in you tube. The project will update these videos with the last results and will study if other topics must be addressed. The following subsections present the two storyboards.

6.1 General Sotryboard

Surveillance Systems

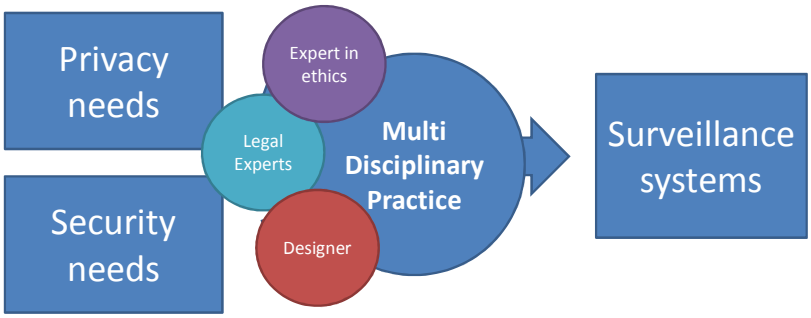
Security vs. Privacy

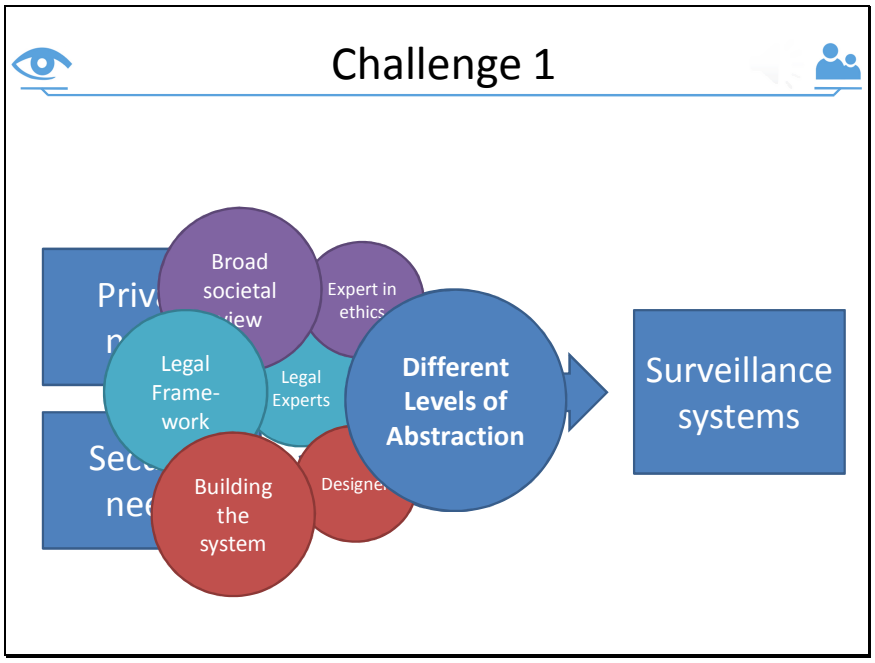


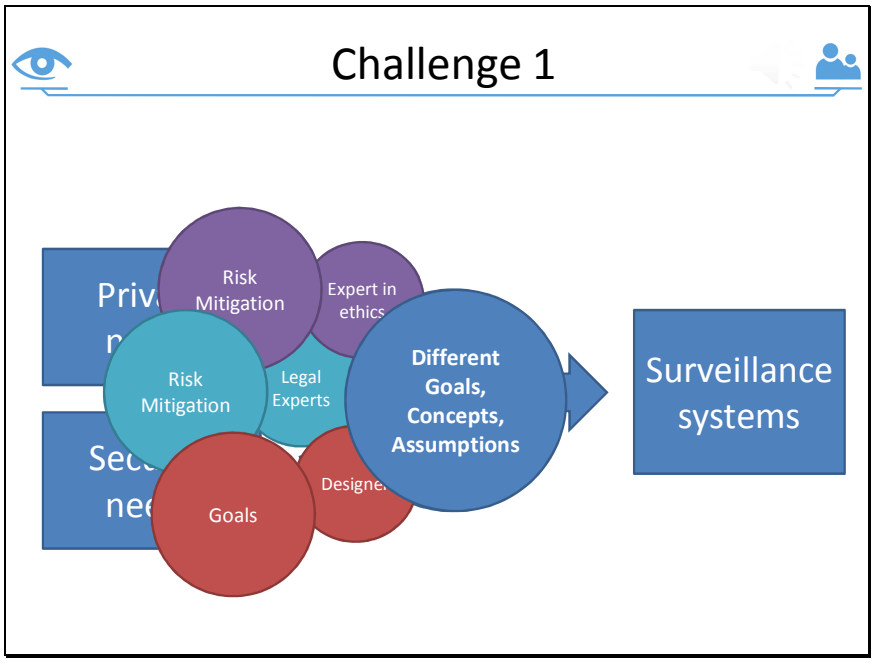
PARIS Objective

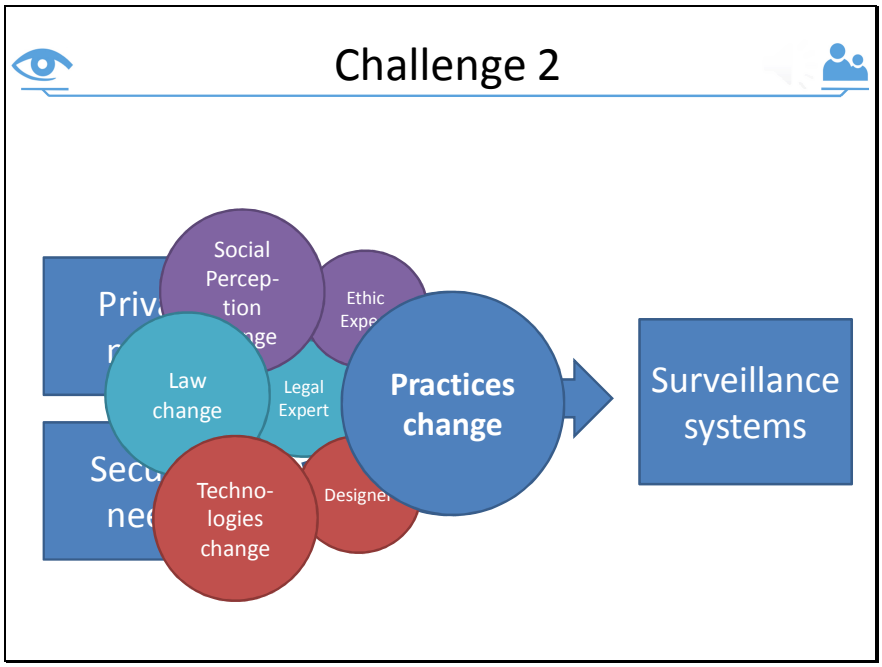
Integrate Privacy-by-Design in Surveillance systems

Challenge 1



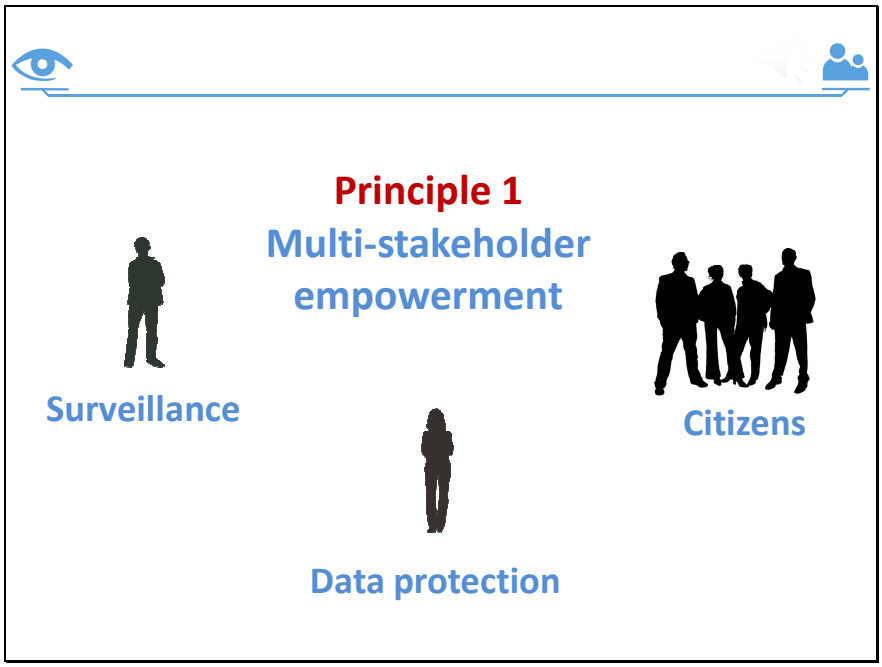

Challenge 1
Broad societal
Expert in ethics
Legal Frame-work
Legal Experts
Building the system
Different Levels of Abstraction
Surveillance systems

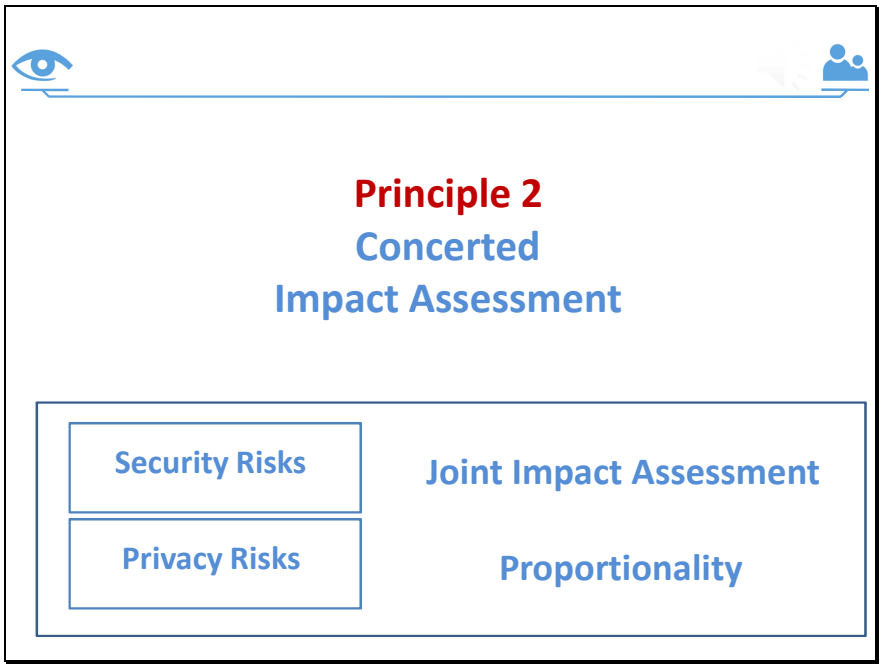

Challenge 1
Risk Mitigation
Expert in ethics
Risk Mitigation
Legal Experts
Goals
Different Goals, Concepts, Assumptions
Surveillance systems

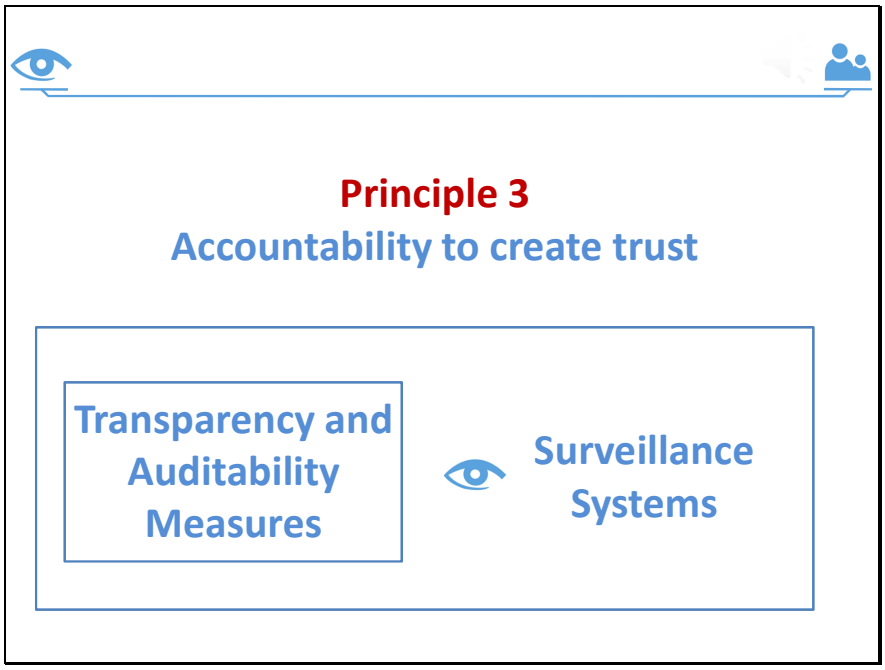


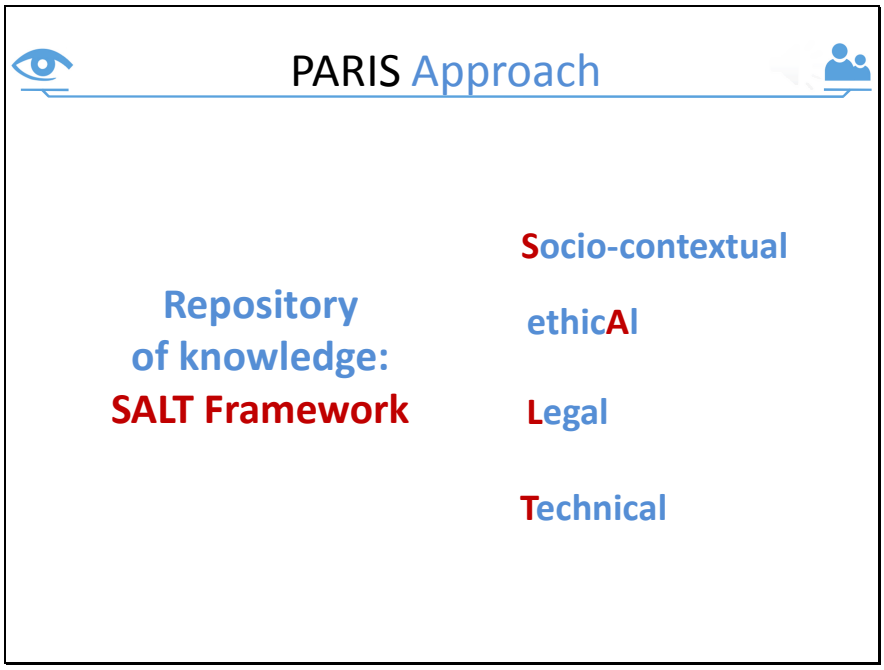
PARIS Principles

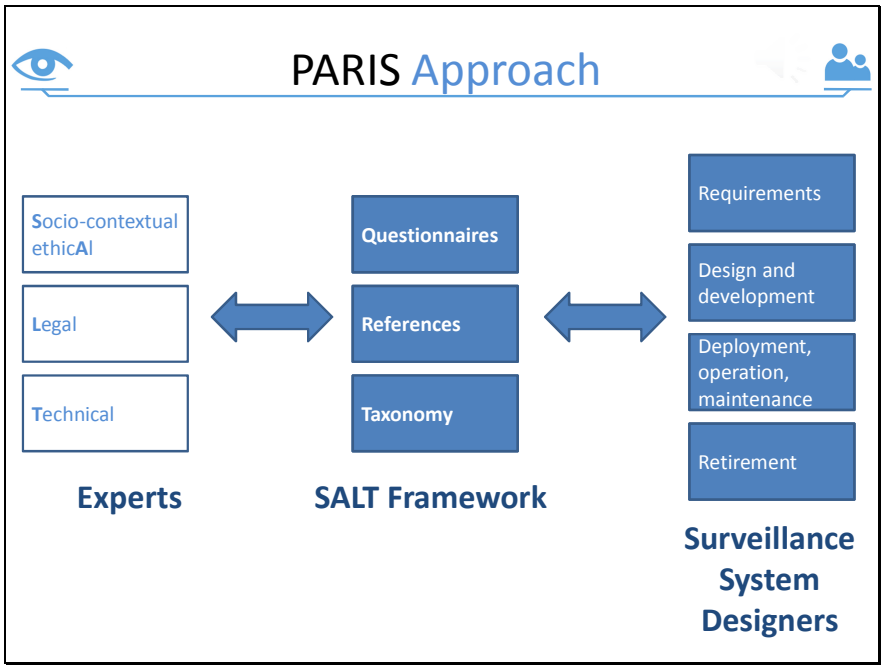
- **Principle 1:** Multi-stakeholder Empowerment
- **Principle 2:** Concerted Impact Assessment
- **Principle 3:** Accountability to create trust

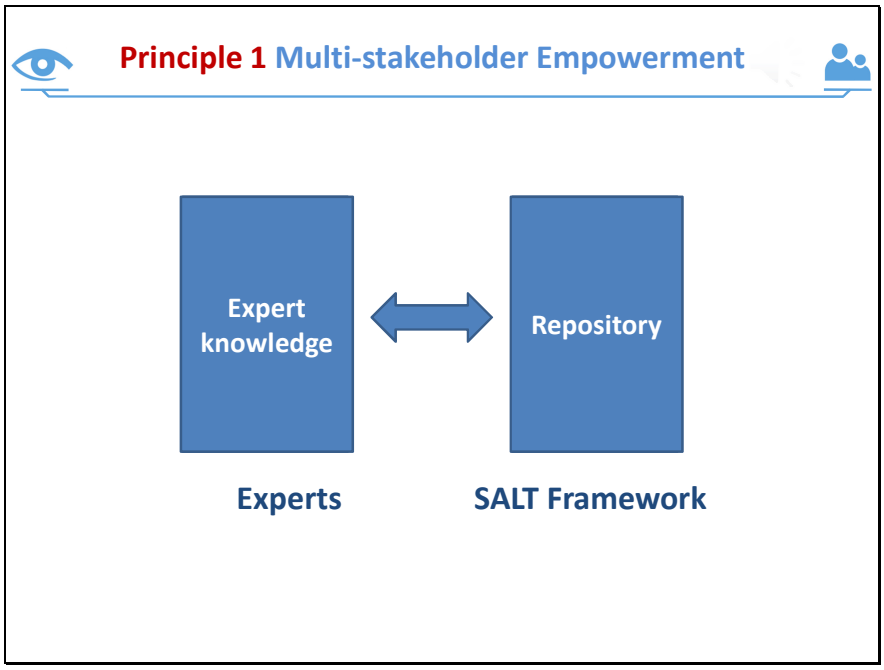

Principle 1
Multi-stakeholder empowerment
Surveillance
Citizens
Data protection

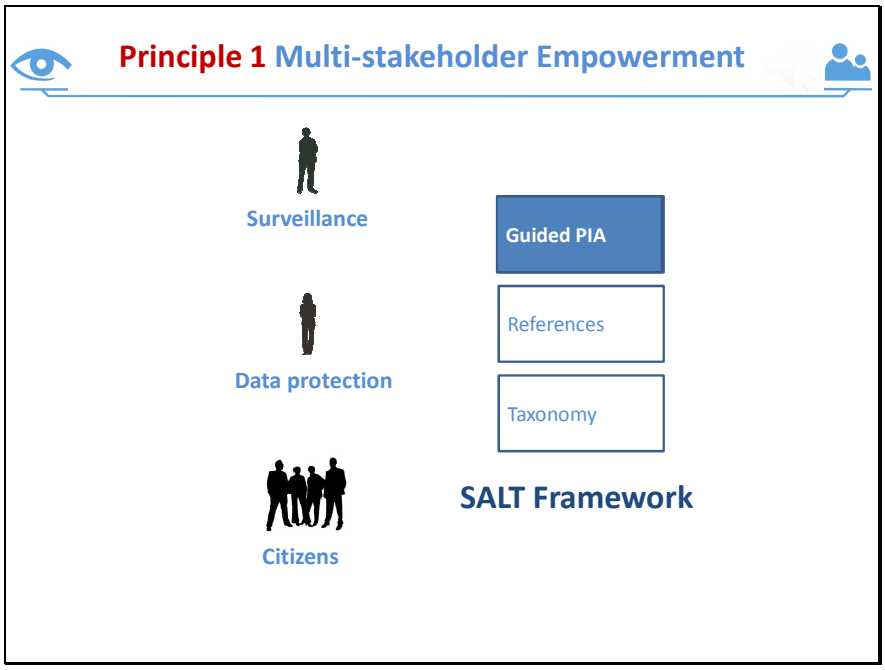

Principle 2
Concerted
Impact Assessment
Security Risks
Privacy Risks
Joint Impact Assessment
Proportionality

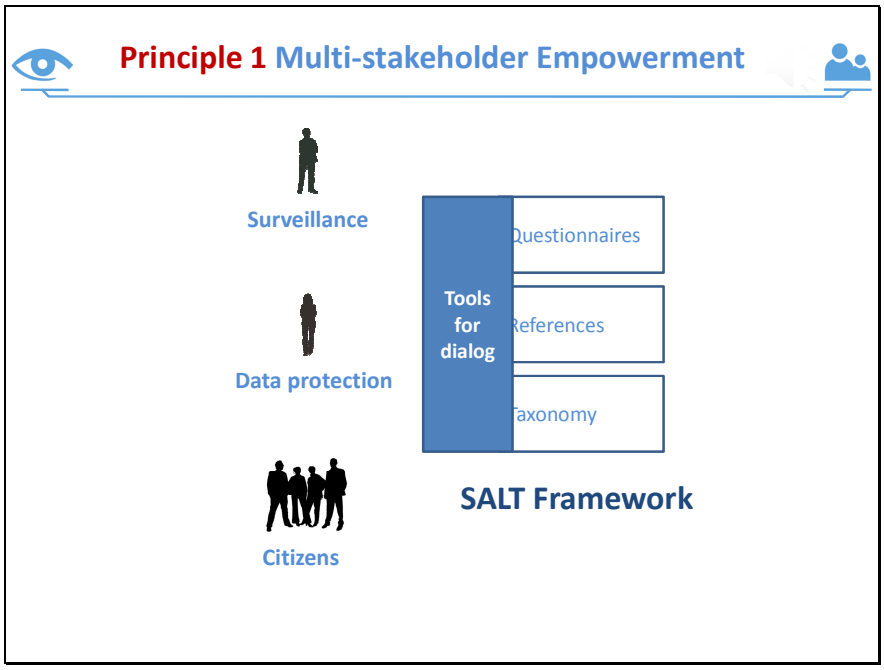

Principle 3
Accountability to create trust
Transparency and Auditability Measures
Surveillance Systems

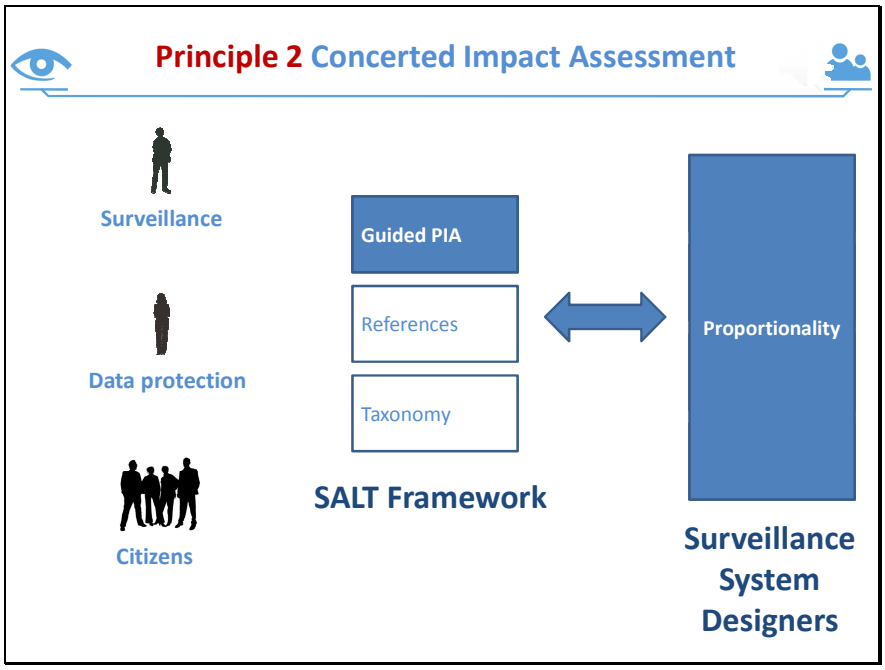

PARIS Approach
Repository of knowledge:
SALT Framework
Socio-contextual
ethicAl
Legal
Technical

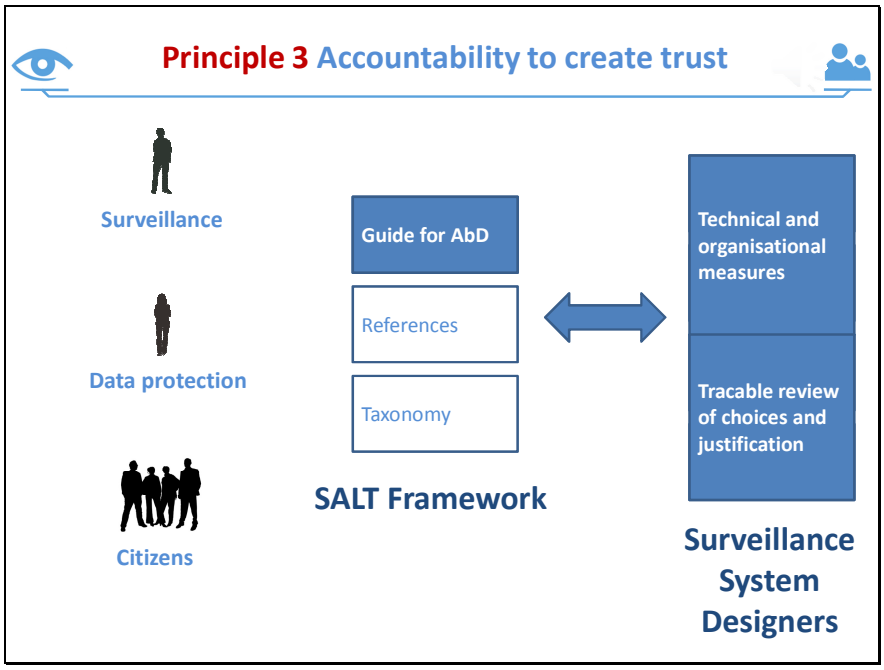

PARIS Approach
Socio-contextual ethicAl
Legal
Technical
Questionnaires
References
Taxonomy
Requirements
Design and development
Deployment, operation, maintenance
Retirement
Experts
SALT Framework
Surveillance System Designers


Principle 1 Multi-stakeholder Empowerment
Expert knowledge
Repository
Experts
SALT Framework


Principle 1 Multi-stakeholder Empowerment
Surveillance
Data protection
Citizens
Guided PIA
References
Taxonomy
SALT Framework


Principle 1 Multi-stakeholder Empowerment
Surveillance
Data protection
Citizens
Tools for dialog
Questionnaires
References
Taxonomy
SALT Framework


Principle 2 Concerted Impact Assessment
Surveillance
Data protection
Citizens
Guided PIA
References
Taxonomy
SALT Framework
Proportionality
Surveillance System Designers


Principle 3 Accountability to create trust
Surveillance
Data protection
Citizens
Guide for AbD
References
Taxonomy
SALT Framework
Technical and organisational measures
Tracable review of choices and justification
Surveillance System Designers

Conclusion

- PARIS approach: SALT frameworks
- PARIS further contributions
  - Toolset based on modelling techniques
  - Use case on biometrics (use of body prints for securing access to buildings)
  - Use case on video archive search

For more information, visit the PARIS website:

www.paris-project.org

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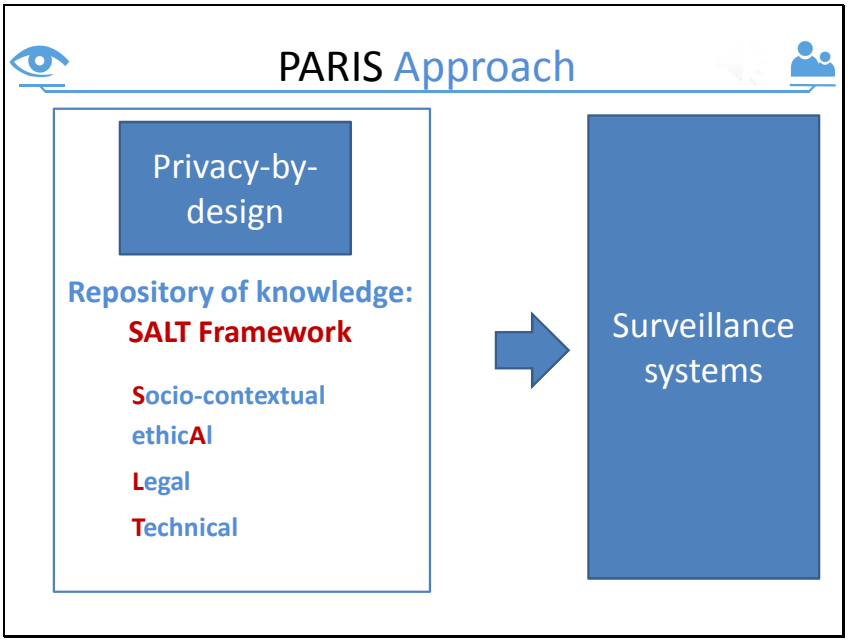
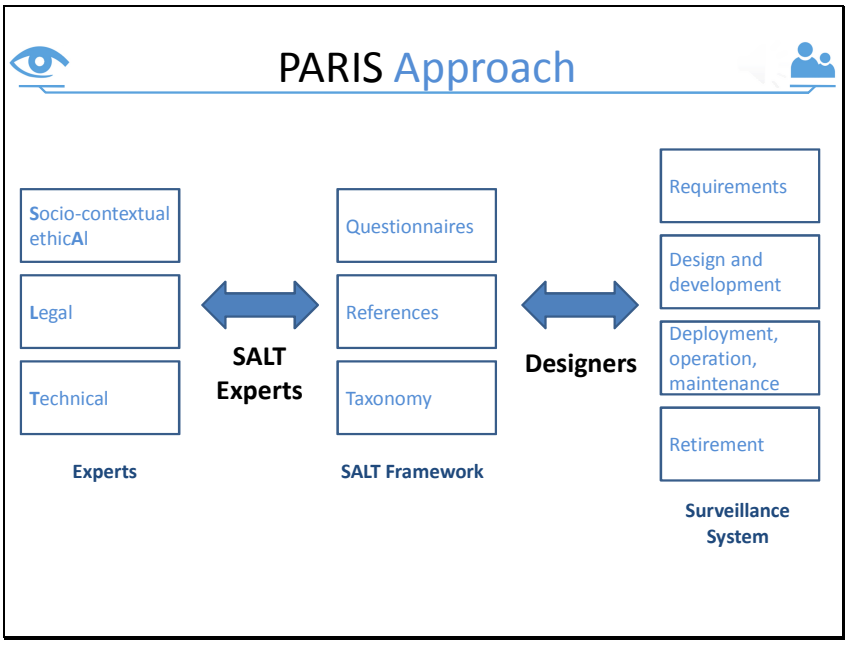
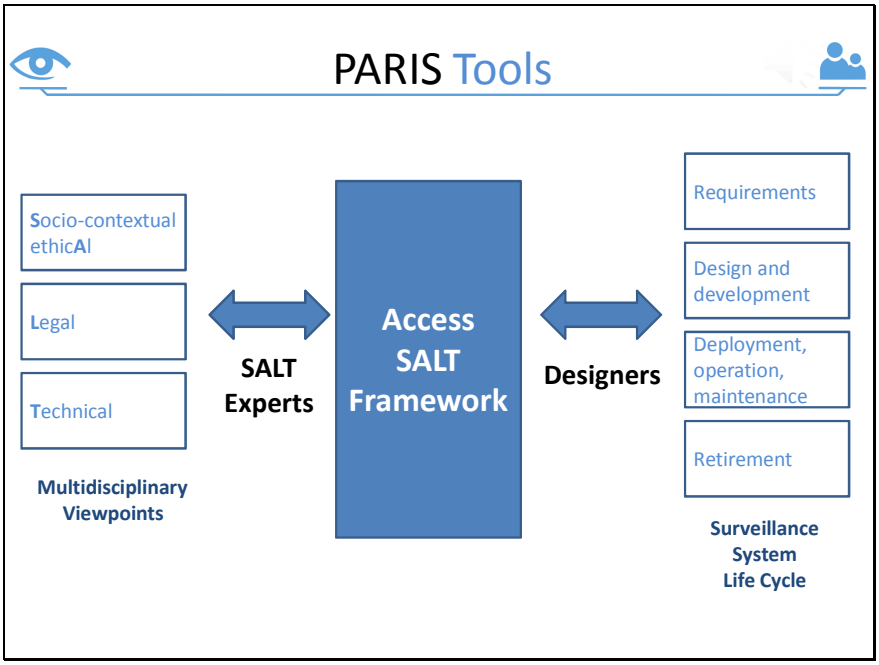
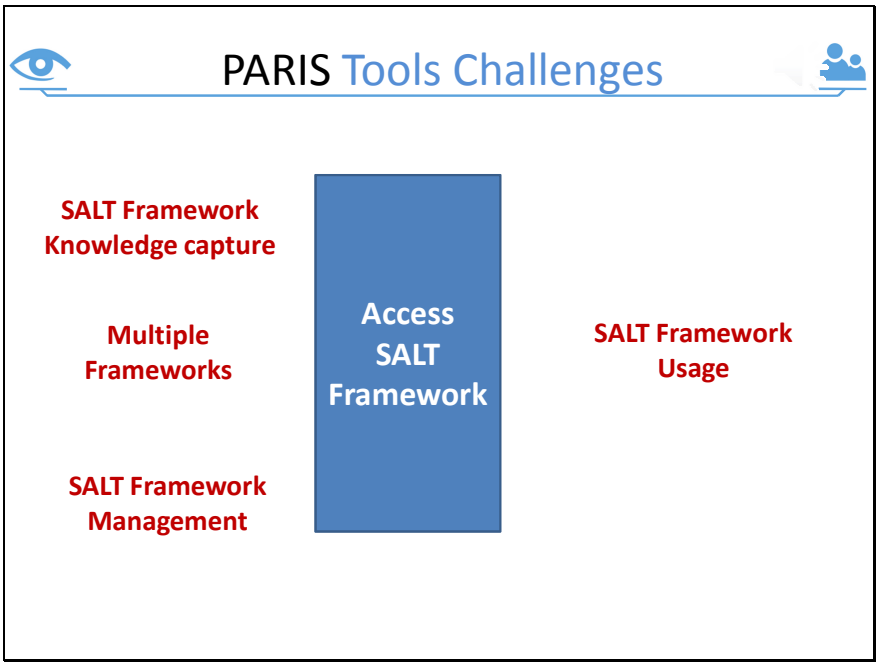
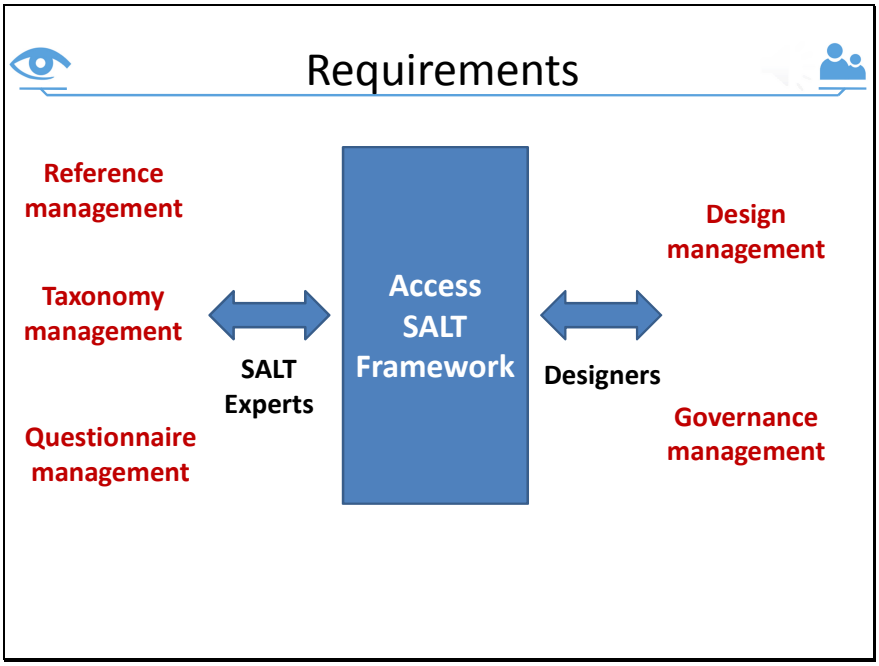
6.2 Tools Storyboard

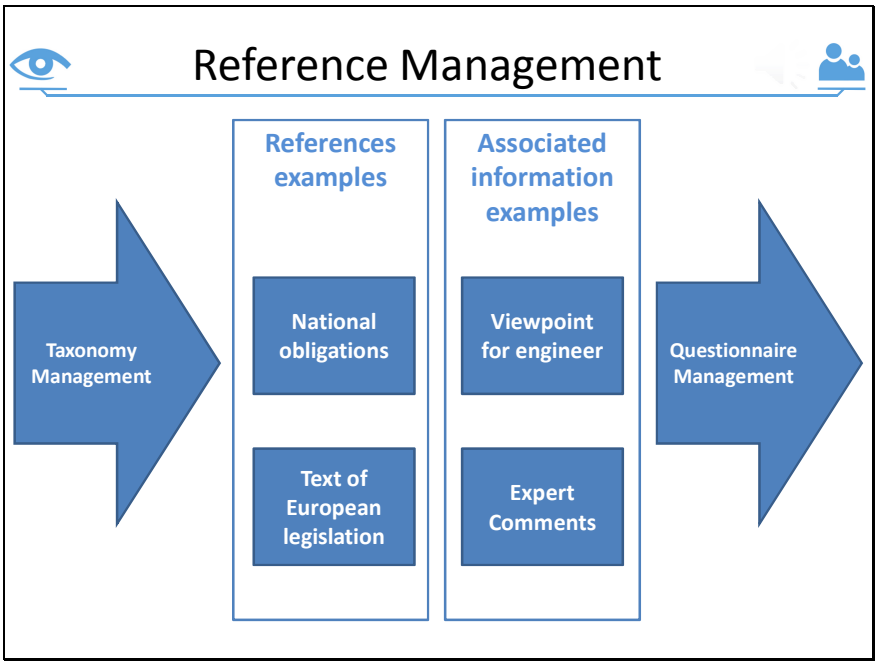


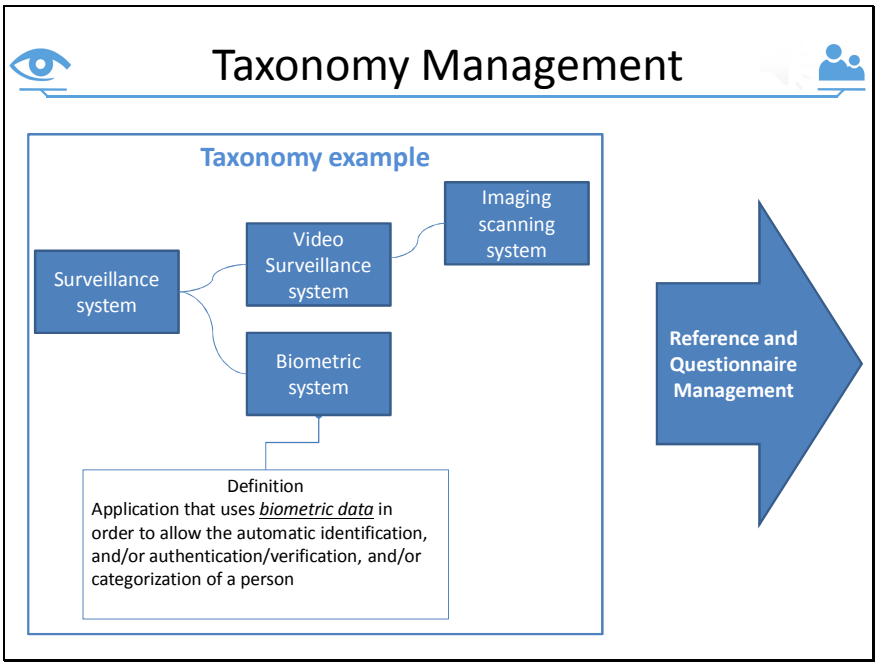

PARIS Approach
Socio-contextual ethicAl
Legal
Technical
Experts
SALT Experts
Questionnaires
References
Taxonomy
SALT Framework
Designers
Requirements
Design and development
Deployment, operation, maintenance
Retirement
Surveillance System

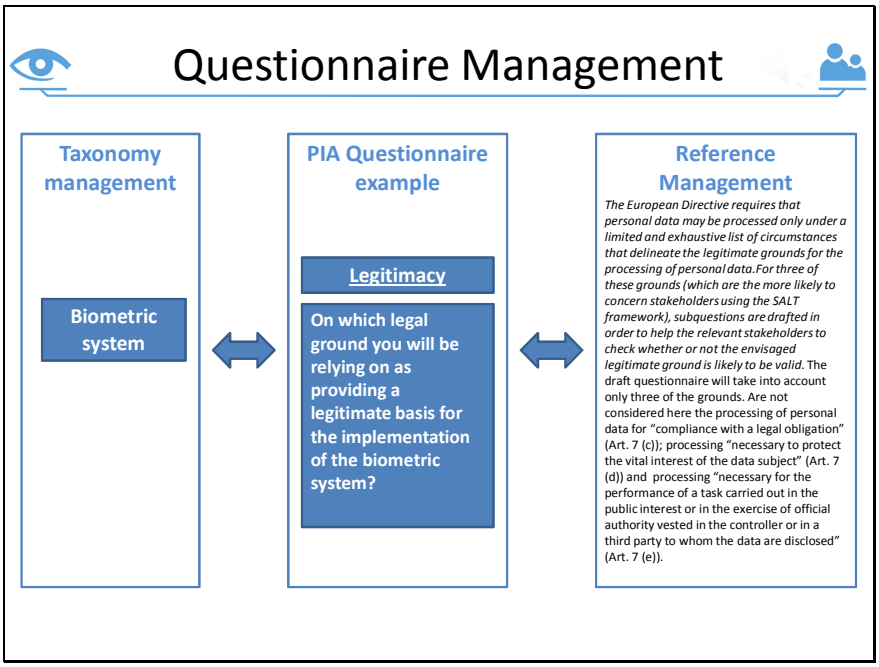

PARIS Tools
Socio-contextual ethicAl
Legal
Technical
Multidisciplinary Viewpoints
SALT Experts
Access SALT Framework
Designers
Requirements
Design and development
Deployment, operation, maintenance
Retirement
Surveillance System Life Cycle

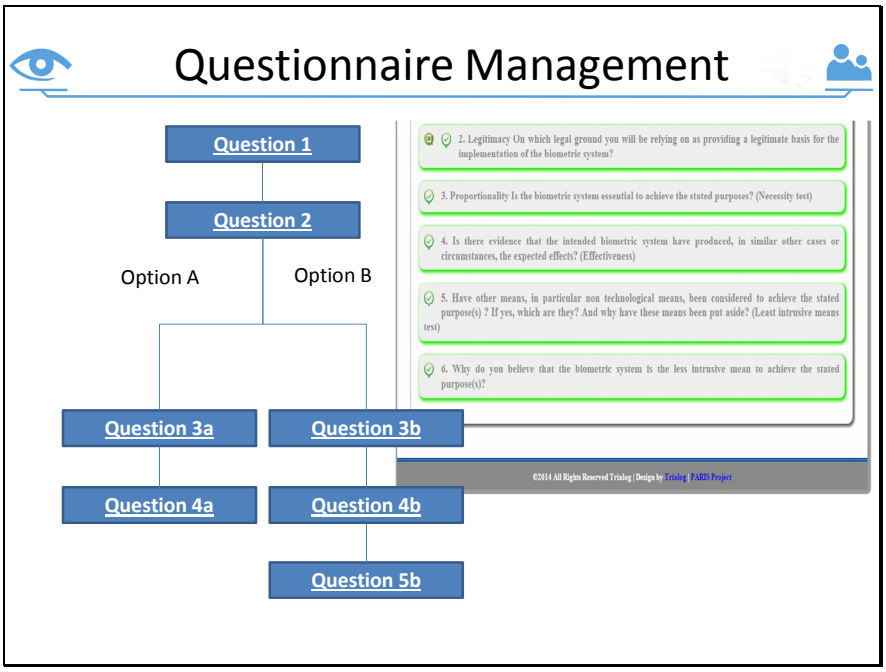

PARIS Tools Challenges
SALT Framework Knowledge capture
Multiple Frameworks
SALT Framework Management
Access SALT Framework
SALT Framework Usage


Requirements
Reference management
Taxonomy management
Questionnaire management
SALT Experts
Access SALT Framework
Designers
Design management
Governance management


Reference Management
References examples
Associated information examples
Taxonomy Management
National obligations
Text of European legislation
Viewpoint for engineer
Expert Comments
Questionnaire Management


Taxonomy Management
Taxonomy example
Surveillance system
Video Surveillance system
Imaging scanning system
Biometric system
Definition
Application that uses biometric data in order to allow the automatic identification, and/or authentication/verification, and/or categorization of a person
Reference and Questionnaire Management


Questionnaire Management
Taxonomy management
Biometric system
PIA Questionnaire example
Legitimacy
On which legal ground you will be relying on as providing a legitimate basis for the implementation of the biometric system?
Reference Management
The European Directive requires that personal data may be processed only under a limited and exhaustive list of circumstances that delineate the legitimate grounds for the processing of personal data.For three of these grounds (which are the more likely to concern stakeholders using the SALT framework), subquestions are drafted in order to help the relevant stakeholders to check whether or not the envisaged legitimate ground is likely to be valid. The draft questionnaire will take into account only three of the grounds. Are not considered here the processing of personal data for "compliance with a legal obligation" (Art. 7 (c)); processing "necessary to protect the vital interest of the data subject" (Art. 7 (d)) and processing "necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller or in a third party to whom the data are disclosed" (Art. 7 (e)).


Questionnaire Management
Question 1
Question 2
Option A
Option B
Question 3a
Question 3b
Question 4a
Question 4b
Question 5b
2. Legitimacy On which legal ground you will be relying on as providing a legitimate basis for the implementation of the biometric system?
3. Proportionality Is the biometric system essential to achieve the stated purposes? (Necessity test)
4. Is there evidence that the intended biometric system have produced, in similar other cases or circumstances, the expected effects? (Effectiveness)
5. Have other means, in particular non technological means, been considered to achieve the stated purpose(s) ? If yes, which are they? And why have these means been put aside? (Least intrusive means test)
6. Why do you believe that the biometric system is the less intrusive mean to achieve the stated purpose(s)?
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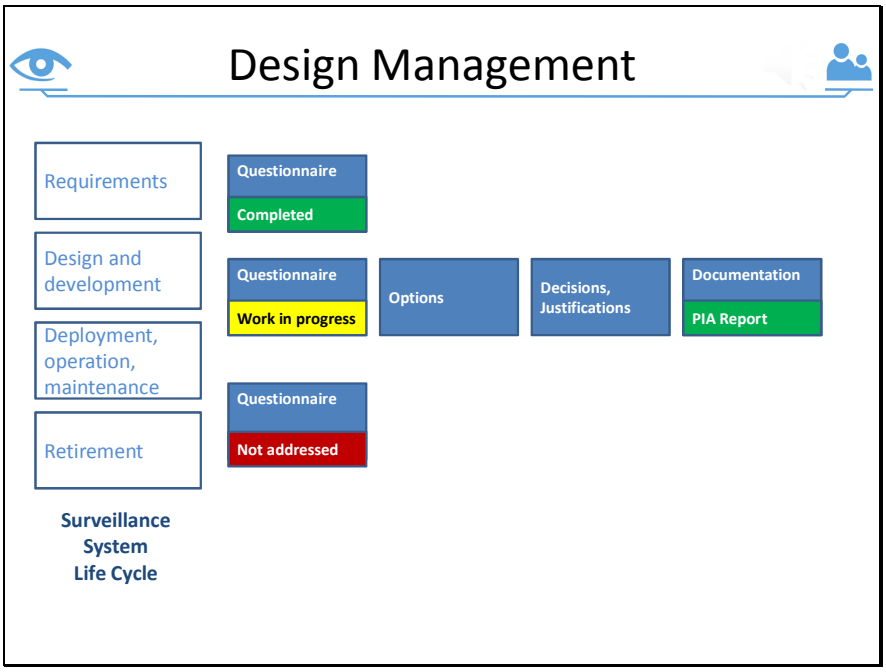
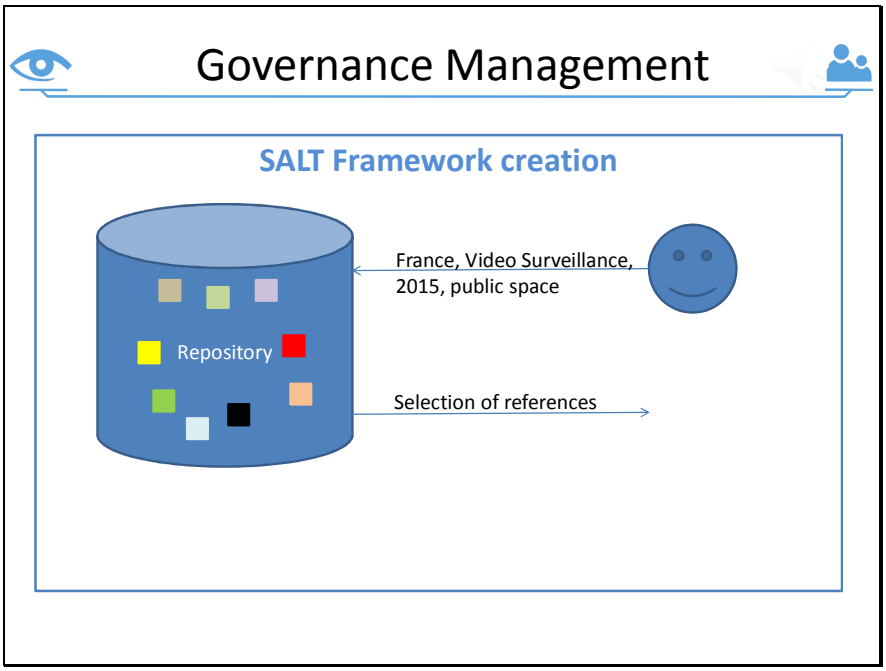
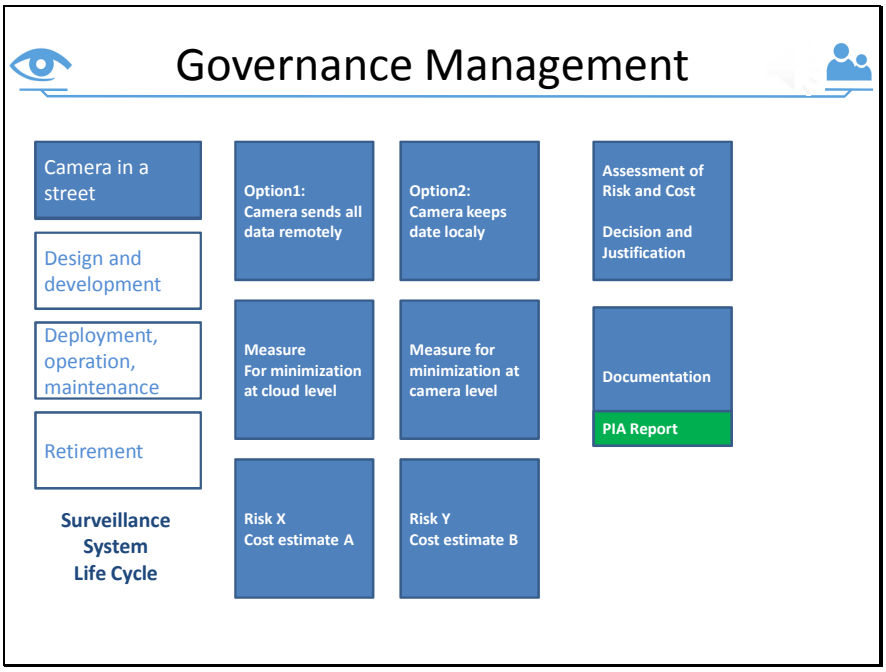

Design Management
Requirements
Design and development
Deployment, operation, maintenance
Retirement
Surveillance System Life Cycle
Questionnaire
Completed
Questionnaire
Work in progress
Options
Decisions, Justifications
Documentation
PIA Report
Questionnaire
Not addressed


Governance Management
SALT Framework creation
Repository
France, Video Surveillance, 2015, public space
Selection of references


Governance Management
Camera in a street
Design and development
Deployment, operation, maintenance
Retirement
Surveillance System Life Cycle
Option1: Camera sends all data remotely
Option2: Camera keeps date localy
Assessment of Risk and Cost
Decision and Justification
Measure For minimization at cloud level
Measure for minimization at camera level
Documentation
PIA Report
Risk X Cost estimate A
Risk Y Cost estimate B

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