



# ENHANCEMENT OF QUALITY ASSURANCE OF E-ASSESSMENT

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Broadening the scope of QA  
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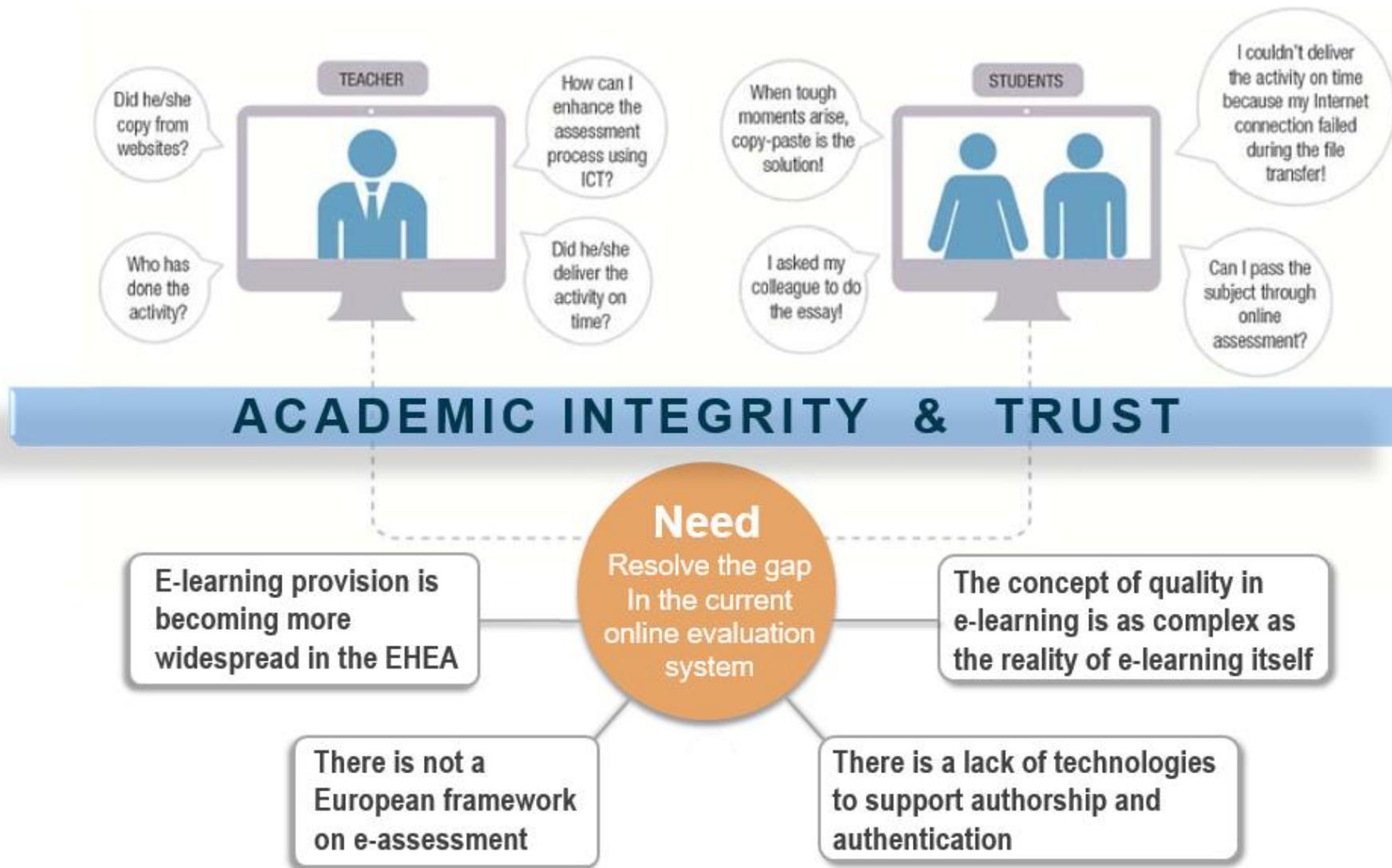


## INDEX

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- Introduction to the TeSLA project
- QA pillars in the TeSLA project
- Results
- Conclusions





# MAIN OBJECTIVES



Define and develop an **e-assessment system**, which ensures learners **authentication and authorship** in online and blended learning environments while avoiding the time and physical space limitations imposed by face-to-face examination.



Support any e-assessment model (formative, summative and continuous) **covering teaching and learning processes as well as QA aspects, privacy and ethical issues, and technological requirements.**



<http://tesla-project.eu/>

# CONSORTIUM

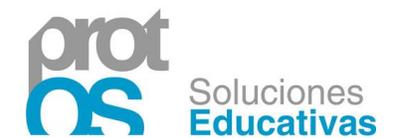
## 18 Partners

### 8 Universities

### 3 QA bodies

### 4 Research Centers

### 3 Enterprises



# TeSLA INSTRUMENTS

## DOCUMENT ANALYSIS

Involves the analysis of written material using a qualitative analysis package that describes discourse and its interpretation

### Plagiarism tools



Analyses written material and detects similarities among various written documents



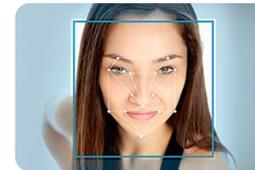
### Forensic analysis

Determines the authorship verification and authorship attribution of written documents based on the comparison of current documents with stored data

## BIOMETRICS

Allow the clear identification of humans based on some specific physical characteristics or special behaviour

### Facial recognition



Analyses facial expressions in two stages: facial detection and recognition

### Voice recognition



State-of-the-art audio description method. Speaker segmentation and cluster grouping

### Keystroke dynamics



Measures how the user writes in regards to pressure and time-based measuring

## SECURITY TECHNIQUES

Deploy a security service provided by a layer of communicating systems

### Timestamp



Generates a sequence of encoded information identifying when an event is recorded

### Digital signature



Guarantees the authenticity of a digital message or document by a mathematical scheme

AUTHORSHIP

AUTHENTICATION

CONFIDENCE

# QA PILLARS IN TeSLA



Assure and guarantee the quality  
of e-assessment processes in HE



EXPERTS



PROCESS



METHODOLOGY



IMPROVEMENT

# QA PILLARS IN TeSLA



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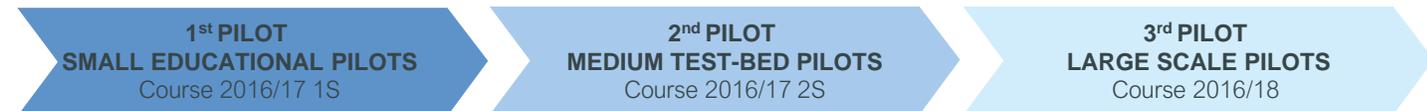
## HEAD PANEL

### Composition:

- 1 Academic
- 1 QA professional
- 1 Student
- 1 Technological expert
- 1 Secretary

### Tasks:

- Improvement of assessment methodology
- Improvement of pilots
- Approval of regular panels reports
- Harmonization role



## EXPERTS PARTICIPATION



## REGULAR PANELS

### Composition:

- 1 Academic
- 1 QA professional
- 1 Student
- 1 Technological expert

### Tasks:

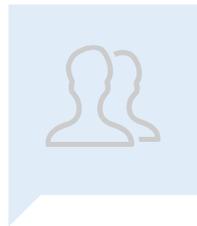
- Pilot assessment → Assessment report
- Improvement of assessment methodology
- Institutions



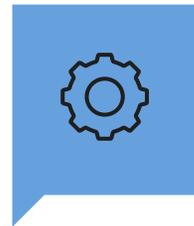
# QA PILLARS IN TeSLA



Assure and guarantee the quality  
of e-assessment processes in HE



EXPERTS



PROCESS

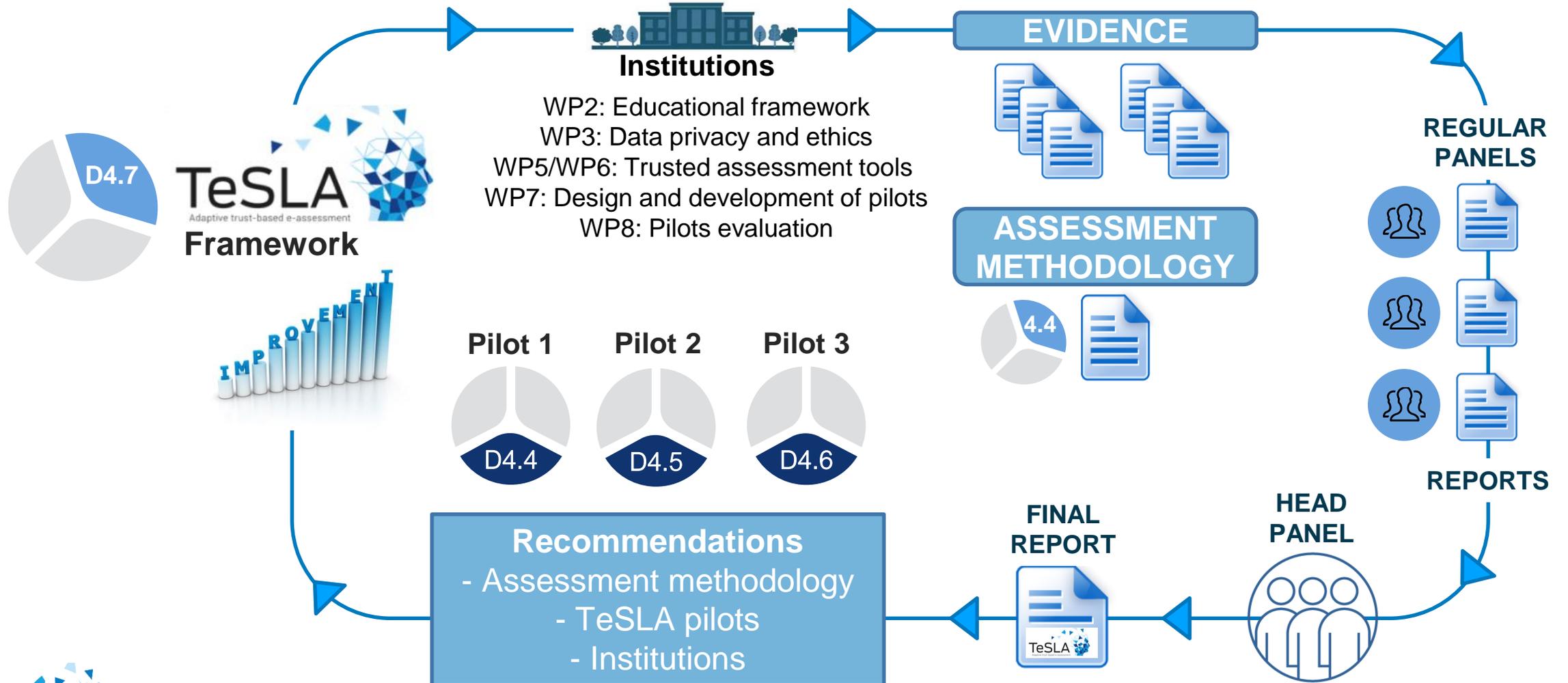


METHODOLOGY



IMPROVEMENT

# EVALUATION PROCESS



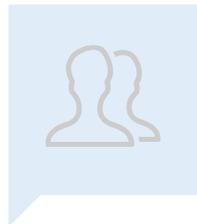
# PILOT UNIVERSITIES



# QA PILLARS IN TeSLA



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EXPERTS



PROCESS



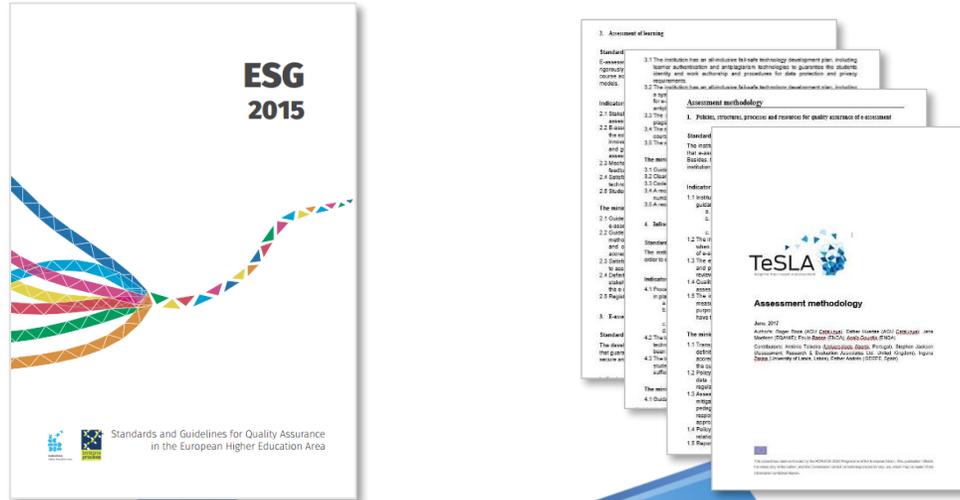
METHODOLOGY



IMPROVEMENT



## REVIEW METHODOLOGY

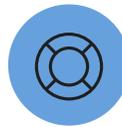


## STANDARDS

1. Policies, structures, processes and resources for QA of e-assessment.
2. Assessment of learning.
3. E-assessment system security, capacity and authenticity.
4. Infrastructure and resources.
5. Student support.
6. Teaching staff.
7. Learning analytics.
8. Public information.



## INDICATORS



## EVIDENCE

## 1. POLICIES, STRUCTURES, PROCESSES AND RESOURCES FOR QA OF E-ASSESSMENT

*The institution has appropriate policies, structures, processes and resources **to ensure that e-assessment is timely and fair**, and it includes **ethical and legal considerations**. Besides, the proposal for the e-assessment is aligned with the **pedagogical model** of the institution and ensures the constant achievement of its objectives.*



1. **Two different scenarios** in regard to e-assessment policies:
  - ✓ e-assessment is **permitted**.
  - ✓ e-assessment is **not permitted**.
2. All HEIs have **well defined policies and processes** for QA procedures in place (general purposes).
3. **Traditional universities** that have recently included blended and online provisions should **develop specific policies on e-learning and e-assessment**.
4. HEIs transitioning to e-learning/e-assessment should be supported by the **full involvement of their QA units**.

## 2. ASSESSMENT OF LEARNING

*E-assessment methods are varied, facilitate pedagogical innovation and determine rigorously the level of achievement of learning outcomes. They are consistent with course activities and resources and adapt to the diversity of learners and educational models.*

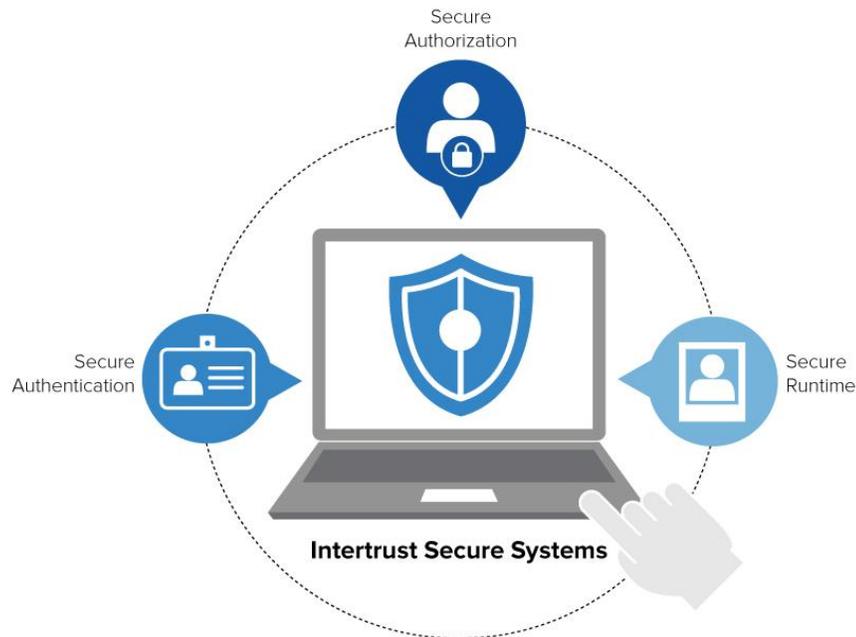


1. Diversity of assessment methods is applied in all HEIs.
2. HEIs offer diversified methodology for assessing SEND students.
3. Chosen assessment methods are aligned with learning outcomes.
4. Collaborative assignments are still a challenge.

## RESULTS

### 3. E-ASSESSMENT SYSTEM SECURITY, CAPACITY AND AUTHENTICITY

*The development and implementation of the e-assessment include protective measures that **guarantee learner authentication and work authorship**. The e-assessment system is secure and fit for purpose.*



1. All HEIs are aware of technical and security implications.
2. All HEIs address academic integrity issues. However, they need to **define the threshold level** of normal behaviour vs. suspicious behaviour.
3. Even the TeSLA system complies with the European GDPR, **students need to be provided with enough information to be confident enough to share personal data**.
4. The implementation of a register of external attacks and technical problems needs to be improved.



## RESULTS

### 5. STUDENT SUPPORT

*Students are aware, have access and use effective and well-resourced **support services** for counselling, orientation, tutoring and facilitation in order to increase retention and success. Student support **covers pedagogical, technological and administrative related needs** and is **part of institutional policies and strategies**.*



1. All HEIs have **well-established support mechanisms** to meet all student needs (administrative, technical and pedagogical).
2. **SEND students receive an appropriate and wider range of support.**
3. **Student satisfaction surveys need to be revised and redesigned** (when necessary) in order to **improve support services.**

## 6. TEACHING STAFF

The teaching staff is **skilled and well-supported** in relation to **technological and pedagogical requirements and e-assessment methods**.



1. Teaching staff should be **trained on the innovation of the pedagogical practices** (including e-assessment) and should **receive technical training**.
2. Teaching staff should be **provided with updated information, guidelines and well-defined procedures** to deal with the **academic integrity** and the implementation of a **new assessment system**.
3. Some HEIs need to include procedures for the evaluation of teaching staff satisfaction.

## 7. LEARNING ANALYTICS

The institution has an **information management system (IMS)** that enables agile, complete and representative collection of data and indicators derived from all aspects related to e-assessment methodology and authenticity and authorship technologies.



1. All HEIs **agree** on the **potentiality and value of having an IMS in place** for the improvement of the learning process.
2. HEIs need to enhance an IMS for the **systematic collection of data related to the QA of e-assessment.**
3. HEIs should clearly **define the process around the use and analysis of personal data** (build trust).

## RESULTS

### 8. PUBLIC INFORMATION

*The institution appropriately **informs** all stakeholders of **pedagogical development, the e-assessment method, and resources technology**. The institution **publishes reliable, complete and up to date information** on pedagogical methods and technical support. Students should be made aware of the hardware requirements and learning resources technology and technical support.*



1. All HEIs have **well-established systems and accurate information available.**
2. HEI websites are:
  - student-oriented;**
  - easy to navigate;**
  - structured based on the needs and requirements of users.**and provide transparent information on:
  - how new technologies for assessment**
  - ensure fair and correct results;**
  - software and hardware requirements.**

## CONCLUSIONS

- Innovation projects, as **TeSLA**, can contribute to provide more **confidence to HE system**.
- Depending on the background and origins of institutions (on-campus vs off-campus) and taking into consideration European and national regulations, **resources and efforts to meet QA requirements on e-assessment may vary**.
- **Fully online universities comply with most of the QA elements** defined from the e-assessment point of view.
- **Traditional universities** offering new blended programmes **should pay attention to new elements** (i.e. pedagogical model, VLE, student's and teacher's support, etc.).
- **TeSLA system** can be seen as an **opportunity to enhance QA of e-assessment systems**.



THANK YOU FOR YOUR ATTENTION

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