**BLISS overview**

**AIM**

- Strengthen key competences (initiative, entrepreneurship and digital skills) in VET provision for ICT professionals
- Address existing occupational needs and mismatches, resulting from the dynamic penetration of blockchain technology across the EU economy

**MAIN OUTPUTS**

- Training & Assessment material
- Trainer handbook
- Vocational Open Online Course
- 3 demonstration workshops (FR, BE, EE)
- 3 information days (IT, GR, BG)
- Validation report
- Blockchain skills certificate supplement
- Position paper

**TARGET GROUPS**

- ICT professionals
- Students
- VET providers
- Field experts
- Policy makers
- Other interested learners

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**BLISS project**

Co-funded by the Erasmus+ Programme of the European Union
The BLISS consortium

Université Claude Bernard Lyon 1

EXELIA

AICA

TELESIG

BLISS project

Co-funded by the Erasmus+ Programme of the European Union
Accomplishments since the start of BLISS

- Online survey: 154 respondents from June 2019 to March 2018
- Definition of BLISS Learning Outcomes
- Grouping of learning outcomes into learning units
- VET Integration Guidelines
- 1st Quality Assurance Report
- Development & review of Training and assessment materials
- Development of Trainer Handbook in ENG

BLISS project

Co-funded by the Erasmus+ Programme of the European Union
Accomplishments since the start of BLISS

- **May - June 2019**: VOOC descriptive & additional materials
- **Jul. - Aug. 2019**: Subtitles on videos
- **Sep. - Oct. 2019**: VOOC pilot-run in EN
- **November 2019**: Multiplier events in FR, EE, IT & BG
- **December 2019**: VOOC in all partner languages
- **November 2019**: 2nd Quality Assurance Report
- **December 2019**: Multiplier events in BE & EL
- **Dec. 19 - Jan. 20**: Blockchain skills certificate supplement
- **March 2020**: Position paper

Co-funded by the Erasmus+ Programme of the European Union
Learning Unit 1: Blockchain essentials for ICT professionals

U1: Defines the essential blockchain characteristics & addresses the fundamental features of blockchain technology

Main Topics Covered:

- Blockchain terminologies
- Distinction between databases and blockchain ledgers
- Cryptography, hash functions and digital signatures
- Principles and paradigms of distributed systems
- Blockchain consensus algorithms
- Blockchain structures & types of blockchain
Learning Unit 2: Blockchain platforms

U2: Selects appropriate technical options for blockchain design and implementation. Specifies, refines, updates and makes available a formal approach to design solutions, necessary to develop and operate a blockchain application.

Main Topics Covered:

- Understanding smart contracts and Ethereum platform
- Introducing Solidity
- Hyperledger platform
- Network architecture
- Setting up a network and a new ledger
- Writing Hyperledger Smart contacts

BLISS project
Learning Unit 3: Communicating the business merits, challenges and implications of blockchain technology

U3: Examines how the characteristics of blockchain technology can disrupt and/or innovate existing business models and business processes. Existing blockchain-based use cases in industries such as finance, public services, provenance, supply chains etc.

Main Topics Covered:
- Promoting Blockchain usage
- Traditional to digital economy & blockchain context
- New business models or new technologies for existing business models?
- Building & integrating the blockchain value model
Learning Unit 4: Practical design and development of blockchain applications

U4: Introduces process- and state-based modelling languages suitable for requirement analysis and design of blockchain applications.

Main Topics Covered:

- Requirements, analysis & design of blockchain technology
- Blockchain types & frameworks
- Exploring the chaincode (smart contract)
- Hyperledger fabric’s state database
- Bridging hyperledger fabric to the off-chain world
- Access Control and Connecting to User Interface

BLISS project
The toolkit can be used by trainers to organize and implement a training program for ICT professionals in blockchain technology based on the BLISS educational resources and training materials.

The manual provides:

a) Guidelines on how to train current ICT professionals & VET students
b) Instructions on how to develop additional material and resources
c) Case studies
d) Practical exercises
e) Background readings
BLISS learning outcomes

- **Unit 1: Blockchain essentials for ICT professionals**
  - Give an account of the advantages and disadvantages of the features of a specific blockchain application, namely in terms of security, decentralization and consensus attainment
  - Autonomously explain the operation of a smart contract in a given blockchain

- **Unit 2: Blockchain platforms**
  - Evaluate the feasibility of implementing the specified decentralized blockchain
  - Provide expertise to report on a detailed plan of tests of the specified decentralized blockchain application
BLISS learning outcomes

- **Unit 3: Communicating the business merits, challenges & implications of blockchain technology**
  - Interpret the legal, regulatory and consumer challenges to wider blockchain adoption and conformance
  - Monitor the intervention of blockchain technology in business models
  - Analyse blockchain SWOT (Strengths, Weaknesses, Opportunities, Threats) for specific industry scenarios
  - Intelligibly present blockchain industry business models
  - Communicate business opportunities behind the limits of the blockchain

- **Unit 4: Practical design and development of blockchain applications**
  - Critically evaluate the technical options for blockchain solution suitable to varied practical scenarios
  - Report on the feasibility of selected blockchain solution to the specific scenarios
  - Account for optimization of application development, maintenance and performance by employing design patterns and by reusing proved solutions
  - Autonomously report on the advancement of the application development
About the BLISS VOOC...

https://www.openlearning.com/courses/bliss-mooc

- Languages: English, French, Dutch, Italian, Estonian, Greek, Bulgarian

- Discussion forum to exchange ideas between learners

BLISS project
5th Transnational Project Meeting

- Venue: Athens, Greece
- Host: EXELIA
- Date: Friday 29\textsuperscript{th} November 2019

- Partners met-up to discuss the results of the VOOC pilot-run, the development of the 5\textsuperscript{th} Intellectual Output and final activities of the last months
Demonstration workshop in France

- Université Claude Bernard Lyon 1 (Lyon)
- Tuesday 5\textsuperscript{th} & Thursday 21\textsuperscript{st} November 2019
- 60 participants
Demonstration workshop in Estonia

- University of Tartu (Tartu)
- Saturday 9th November 2019
- 72 participants
Demonstration workshop in Belgium

- Business Training (Brussels)
- Tuesday 17th December 2019
- 40 participants
National information day in Italy

- AICA Associazione Italiana per l’informatica e il calcolo automatic (Milan)
- Thursday 21st November 2019 (divided in 2 sessions for students & ICT professionals)
- 80 participants
National information day in Bulgaria

- TELESIG Ltd. (Plovdiv)
- Thursday 21st November 2019
- 54 participants
National information day in Greece

- EXELIA (Athens)
- Tuesday 14th January 2020
- 68 Participants
Blockchain Skills Certificate Supplement

WHAT IS IT?

A document that provides additional information to that included in the official ICT vocational training certificates and transcripts, such as the skills, knowledges and competences acquired by learners and the work areas to which the program qualifies participants. It makes the official certificate more easily understood, especially by employers or institutions abroad.

WHO IS IT FOR?

ICT professionals who have successfully completed a VET course that incorporates the BLISS learning outcomes.

WHO ISSUES IT?

VET providers that have integrated part of BLISS learning outcomes into their training offerings (as component of a broader ICT training program).
Position paper

OBJECTIVE: To support the integration of blockchain skills in the e-competence framework (e-CF) - the European standard for ICT professionals

TARGET GROUP: bodies and stakeholders active in the ICT sector and participate in policy learning consulting

The position paper also seeks influence policy-making initiatives, seeking to increase the provision of high quality skills and competences & bring closer the VET world with the needs of the labour market

BLISS project
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