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# Blockchain skills for ICT professionals - BLISS

Objectives, activities and outcomes



# BLISS Overview

## PROJECT AIM

Further strengthen key competences in VET provision for ICT professionals, by developing and making available educational resources and materials to address existing occupational skills needs and mismatches, resulting from the dynamic penetration of blockchain technology across all sectors of the EU economy

## MAIN OUTPUTS

- 5 Intellectual Outputs
- Open Educational Resources
- 1 Trainer handbook
- Content and framework for the Vocational Open Online Course
- 3 demonstration workshops
- 3 information days
- Blockchain skills certificate supplement
- 1 position paper

## TARGET GROUPS

- ICT professionals in need of CVET
- Students aspiring to get employed as Blockchain developers
- VET providers
- Sector representatives
- Other interested learners



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# Objectives

- Improve the skills and competences of ICT professionals to address existing occupational needs and mismatches resulting from the dynamic penetration of blockchain technology across all sectors of the EU economy
- BLISS will develop:
  - Educational resources and materials to address existing occupational needs and mismatches
  - High quality blockchain technology OERs across all sectors of the EU economy (including banking, accounting and government services)
  - A Vocational Open Online Course infrastructures & content to support large scale and open access participation in training activities

START DATE: 01-10-2017

DURATION: 30 Months

END DATE: 31-03-2020



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# BLISS Partnership

Partner	Official Name	Country	Role
UCBL	UNIVERSITE LYON1 CLAUDE BERNARD	France	Coordinator/Project management team
BT	BUSINESS TRAINING SA	Belgium	Partner
AICA	AICA ASSOCIAZIONE ITALIANA PER L'INFROMETICA E IL CALCOLO AUTOMATICO	Italy	Partner
EXELIA	EXELIA.E.E.	Greece	Project management team
UT	TARTU ULIKOOL	Estonia	Partner
TELESIG	TELESIG LTD	Bulgaria	Dissemination Leader



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# 2<sup>nd</sup> Semester Implemented Tasks

## April 2018 - September 2018

- BLISS learning units: curriculum outline
- VET integration guidelines
- Platform identification and research for the Vocational Open Online course
- 2<sup>nd</sup> project meeting in Brussels

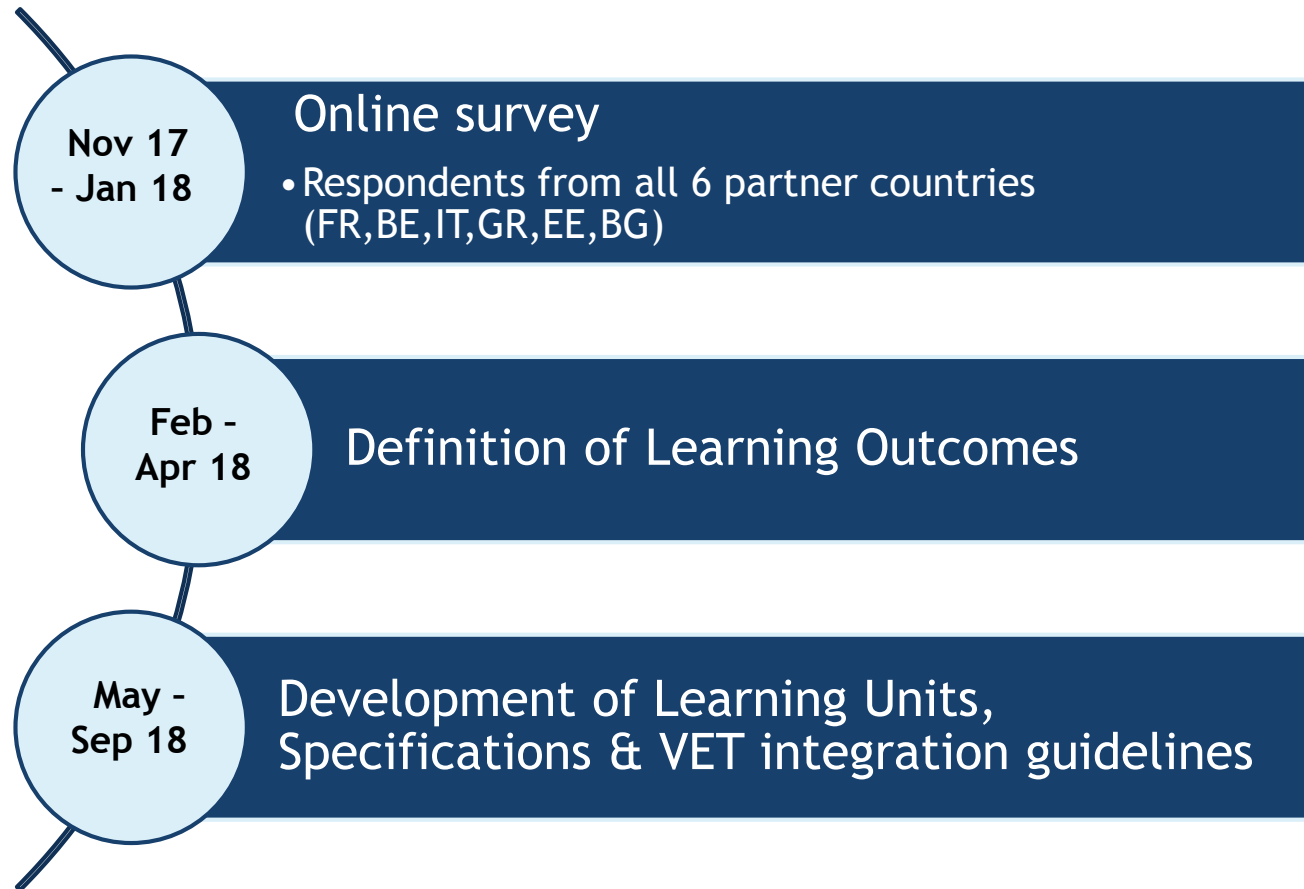


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# 2<sup>nd</sup> Semester Project Progress



# BLISS Learning Units

- **Unit 1:** Blockchain essentials for ICT professionals
- **Unit 2:** Blockchain platforms
- **Unit 3:** Communicating the business merits, challenges and implications of blockchain technology
- **Unit 4:** Practical design and development of blockchain application



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# Learning Unit 1

<b>Title</b>	<b>U1: Blockchain essentials for ICT professionals</b>		
<b>EQF level</b>	EQF 4		
<b>Abstract</b>	Defines the essential blockchain characteristics. Addresses the fundamental features of blockchain technology		
<b>Learning Outcomes</b>	<ul style="list-style-type: none"><li>• 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</li><li>• Autonomously explain the operation of a smart contract in a given blockchain scenario</li></ul>		
<b>Skills developed</b>	<ul style="list-style-type: none"><li>• Identify blockchain characteristics in a given setting</li><li>• Analyse existing blockchain applications according to a given context</li></ul>	<ul style="list-style-type: none"><li>• Critically evaluate cryptography features to a blockchain application</li><li>• Identify crucial security attributes in a blockchain</li><li>• Differentiate decentralized autonomous systems, such as distributed ledgers suitable to a given blockchain application</li></ul>	<ul style="list-style-type: none"><li>• Select consensus algorithms suitable for specific blockchain applications</li><li>• Formalise and assess smart contracts adequate to given blockchain contexts</li></ul>





# Learning Unit 2

<b>Title</b>	<b>U2: Blockchain platforms</b>		
<b>EQF level</b>	EQF 4-5		
<b>Abstract</b>	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.		
<b>Learning Outcomes</b>	<ul style="list-style-type: none"><li>• Evaluate the feasibility of implementing the specified decentralized blockchain application within a suitable blockchain platform</li><li>• Provide expertise to report on a detailed plan of tests of the specified decentralised blockchain application</li></ul>		
<b>Skills developed</b>	<ul style="list-style-type: none"><li>• Identify the differentiating characteristics of the various blockchain platforms</li><li>• Analyse and characterise different blockchain protocols according to given criteria</li></ul>	<ul style="list-style-type: none"><li>• Select and formalise requirements of a blockchain protocol for specific scenarios</li></ul>	<ul style="list-style-type: none"><li>• Plan and design the specifications of a decentralized blockchain application for a given scenario</li></ul>



# Learning Unit 3

Title	<b>U3: Communicating the business merits, challenges and implications of blockchain technology</b>		
EQF level	EQF 5-6		
Abstract	Introduces how the characteristics of blockchain technology can disrupt and/or innovate existing business models and business processes. Examines existing blockchain-based use cases in industries such as finance, public services, provenance, supply chains etc.		
Learning outcomes	<ul style="list-style-type: none"> <li>• Interpret the legal, regulatory and consumer challenges to wider blockchain adoption and conformance</li> <li>• Monitor and intervention of blockchain technology in business models</li> <li>• Analyse blockchain SWOT (strengths, weaknesses, opportunities and threats) for specific industry scenarios</li> <li>• Intelligibly present blockchain industry business models</li> <li>• Communicate business opportunities behind the limits of the blockchain</li> </ul>		
Skills developed	<ul style="list-style-type: none"> <li>• Recognise potential regulatory and legal frameworks for blockchain operation, including consumer protection and taxation</li> </ul>	<ul style="list-style-type: none"> <li>• Provide detailed examples of the blockchain transforming power in specific contexts</li> <li>• Project strengths and weaknesses of the blockchain technology in a given scenario</li> </ul>	<ul style="list-style-type: none"> <li>• Describe blockchain business and business logics</li> <li>• Outline latest trends in the blockchain technology, and the directions of growth across impacted industries</li> </ul>



# Learning Unit 4

Title	U4: Practical design and development of blockchain application		
EQF level	EQF 5-6		
Abstract	Introduces process and state-based modelling languages suitable for requirement analysis and design of blockchain applications. Identify a use case, selection of suitable platform, design a solution that delivers value, and develop a proof of concept in accordance with defined specifications.		
Learning Outcomes	<ul style="list-style-type: none"> <li>• Critically evaluate the technical options for blockchain solution suitable to varied practical scenarios</li> <li>• Report on the feasibility of selected blockchain solution to the specific scenarios</li> <li>• Account for optimisation of application development, maintenance and performance by employing design patterns and by reusing proved solutions</li> <li>• Autonomously report on the advancement of the application development</li> </ul>		
Skills developed	<ul style="list-style-type: none"> <li>• Examine the key characteristics, potential benefits and challenges of blockchain in different types of scenarios, such as the banking and finance sector, business operations, public administration and government services</li> </ul>	<ul style="list-style-type: none"> <li>• Collect, formalise and validate functional and non-functional requirements of given scenarios</li> <li>• Explain and communicate the design/development of use case/POC, at their different phases, to potential users and stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Perform tests and evaluate test results against POC specifications</b></li> <li>• <b>Develop and apply appropriate software architecture</b></li> </ul>



# Assessment Materials

40-60  
lecture  
notes/  
presentation  
slides

20-30  
multiple  
choice  
questions

5-10 short  
response  
questions

2-3 case  
studies

2-4 timed  
categorisation  
exercises



# 2<sup>nd</sup> Transnational Project Meeting - Brussels

- Date: 23<sup>rd</sup> - 24<sup>th</sup> May 2018
- Venue: Business Training Office - Brussels
- With the participation of all project partner, the meeting agenda discussed project progress and the upcoming activities and tasks



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# Contact Info

**Partner Name:** (please add your organization's details)

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