BlockNet Project Multiplier Event

Vilnius University

Vilnius University (online), Dec 3, 2020



http://Project-BlockNet.eu



Prof. Vladislav V. Fomin



Erasmus+

Disclaimer
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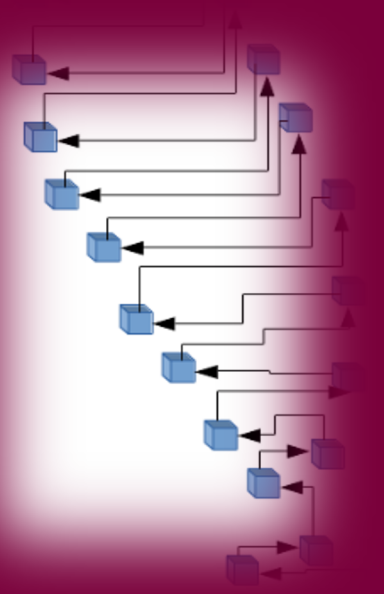
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The many promises of blockchain

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Blockchain technology will:

- transform how humans transact - value can be exchanged as quickly as information;
- facilitate peer-to-peer payments, manage records, track physical objects and transfer value via smart contracts, **all without a third party**;
- address the issues of trust, sharing, and privacy as part of human society…



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440

Goals of the project

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- Project BlockNet (“BlockChain Network Online Education for interdisciplinary European Competence Transfer”) is funded by the European Commission in the context of the Erasmus+ program “KA2-Cooperation for Innovation and the Exchange of Good Practices. Strategic Partnerships for higher education”.
- The fundamental goal of BlockNet is the development and practical implementation of an interdisciplinary Blockchain Technology (BCT) Online Course.
- To date, there are no interdisciplinary courses providing students of different majors with knowledge of BCT, its applications and impact on business environments, as well as comprehensive essential skills to be prepared for the interdisciplinary work they will face in future projects

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440

Project-BlockNet.eu Partners

Vilnius University

Established in 1579

20.000 students

University of Copenhagen

Established in 1479

40.000 students

University of Tartu

Established in 1632

15.000 students

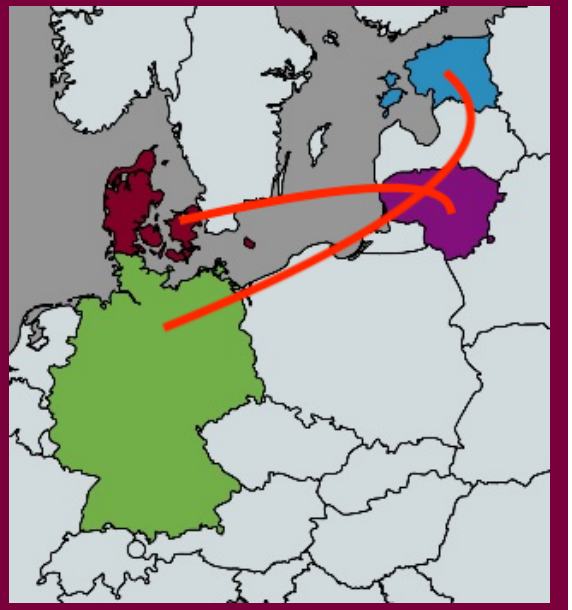
TU Dortmund

Established in 1968

35.000 students

110.000 students in four partner universities!

1422 years of teaching experience!



Project-BlockNet.eu Associated Partners















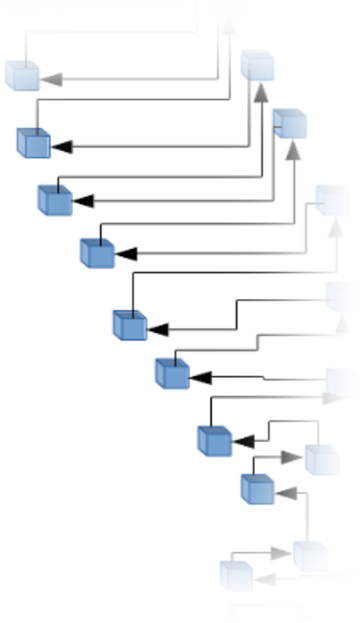




Few words about Project-BlockNet.eu

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- ERASMUS+ Strategic Partnership project launched in 2018
- The first project of this size (ca. 350.000 €) to be coordinated by Kaunas Faculty of Vilnius University
- The „trend setter“: one large project is launched at Kaunas Faculty each year following BlockNet:
  - FUSE IT (https://www.knf.vu.lt/en/fuseit) // Mark(eting) Tech Edu (2019)
  - CyberPhish (https://www.knf.vu.lt/aktualijos) // Cyber Security Edu (2020)
- Just-in-time for the growing demand for online education
- Catering to the growing demand for Interdisciplinary education
- Focused on “technology of the future”



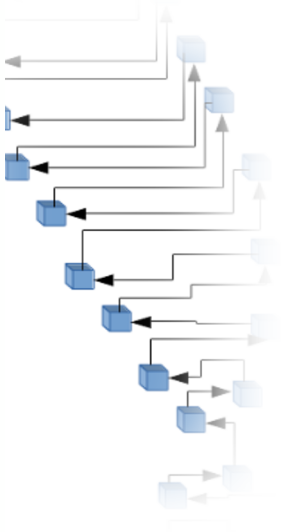
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The trailblazing Project-BlockNet.eu

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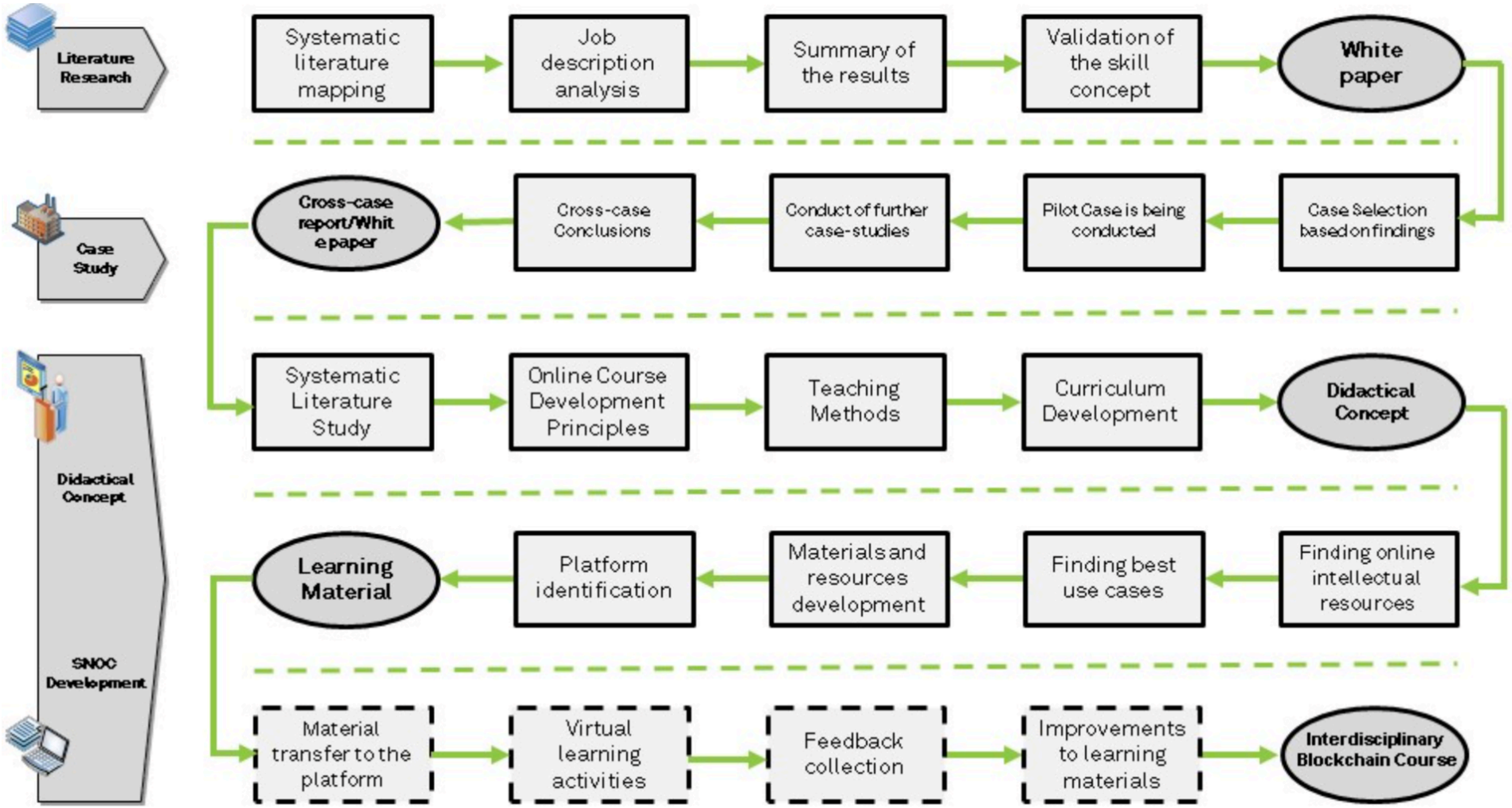
- What was promised: Developed a new interdisciplinary course
- Important “extras” obtained along the road:
  - Developed the interdisciplinary (skills) competence model for BlockChain technology specialists
  - Developed a method for developing the (skills) competence model for nascent technologies
  - Published N papers along the way
  - Became a foundation for BSc, MSc, and PhD thesis writing
    - 20+ MSc, 4 PhD, etc.
  - Promoted/used at several external to the Project Consortia universities
    - University of Latvia, Excelia Business School in France
  - Contributed to the fast-growing Open.eStudies portal at VU, as well as to similar initiatives at the partner universities
- Else?



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440

The Roadmap of Project-BlockNet.eu



The BlockNet course in numbers

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1300
Lecture slides

520
Minutes
(9 hours) of YouTube video examples and cases

950
Minutes
(16 hours) of voice-over narration

18
ECTS of study courses in 7 modules

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440

BlockNet: BlockChain Network Online Education for interdisciplinary European Competence Transfer

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BCT-BASICS | IT-SECURITY | BUSINESS | SCM | COM. SCI.

#	Topic
1	Introduction to distributed ledger technologies and properties (2h), business development (1h), and digital entrepreneurship (30 min)
2	Introduction to cryptography (2h) and information systems for blockchain (2h) and challenges
3	Business processes (2h) and requirement (2h) specification
4	Blockchain-enabled supply chain processes and modeling (4h)
5	Cryptocurrencies (2h) and tokenization (1h) and token-based exchange mechanisms (1h)
6	Introduction to platform and application development (1h), programming models (1h), and smart contract programming (2h)
7	Online case development and project presentations

#	Topic
1	Cryptographical methods (2h) and security design for distributed information systems (2h)
2	Blockchain components and security methods (2h), secure platforms and tools (1h), and enterprise models (1h)

#	Topic
1	Business activities & processes and (2h) and innovation management using information systems (2h)
2	Blockchain components and security methods (2h), business transformation (1h), and blockchain-enabled business processes (1h)

#	Topic
1	Supply chain processes (2h) and information systems (2h)
2	Blockchain components and relevant frameworks (2h), business transformation (1h), and blockchain-enabled supply chain processes (1h)

#	Topic
1	Introduction to cryptography (2h), distributed computing (1h), and information systems (1h)
2	Blockchain components and systems development (1h), platforms (1h), and programming models (2h)

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440

Publications of the Project-Blocknet.eu

https://www.knf.vu.lt/en/blocknet#publications

1. Düdder, B., Fomin, Vladislav V., Gürpinar, T., Henke, M., Iqbal, M., Janaviciene, V., Matulevičius, R., Straub, N., & Wu, H. (2020). Interdisciplinary Blockchain Education: Utilizing Blockchain Technology from Various Perspectives. Frontiers in Blockchain, in press. https://www.frontiersin.org/journals/blockchain

2. Iqbal, M., Matulevičius, R. (2020) Managing Security Risks in Post-Trade Matching and Confirmation Using CorDapp. In: Robal T., Haav HM., Penjam J., Matulevičius R. (eds) Databases and Information Systems. DB&IS 2020. Communications in Computer and Information Science, vol 1243. Springer, Cham. https://doi.org/10.1007/978-3-030-57672-1_24. URL: https://link.springer.com/chapter/10.1007/978-3-030-57672-1_24

3. Mammadzada, K., Iqbal, M., Milani, F., Garcia-Banuelos, L., Matulevičius, R. (2020) Blockchain Oracles: A Framework for Blockchain-Based Applications Accepted at the BPM 2020 Blockchain Forum. LNBIP, Springer.

4. Iqbal, M. (2020). A Reference Model for Security Risk Management of the Blockchain-based Applications, Accepted CAiSE 2020 Doctoral Consortium, CEUR-ws.org.

5. Düdder, B.; Fomin, V.; Gürpinar, T.; Henke, M.; Ioannidis, P.; Iqbal, M.; Janavičienė, V.; Matulevičius, R.; Straub, N.(2020): Curriculum Guidance Document. Project BlockNet IO3 White Paper. URL: https://www.knf.vu.lt/dokumentai/failai/projektai/blocknet/Project_BlockNet_Intellectual_Output_3.pdf, checked on 6/22/2020

6. Düdder, B.; Fomin, V.; Gürpinar, T.; Henke, M.; Ioannidis, P.; Iqbal, M.; Janavičienė, V.; Matulevičius, R.; Straub, N.. (2019): Exploring the Blockchain Skills Concept and Best Practice Use Cases. Project BlockNet IO2 White Paper. Edited by BlockNet Consortium. URL: https://www.knf.vu.lt/dokumentai/failai/projektai/blocknet/Project_BlockNet_Intellectual_Output_1_and_2.pdf

7. Guerpinar, T., Straub, N., Kaczmarek, S., Henke, M. (2019). Blockchain-Technologie im interdisziplinären Umfeld. ZWF Zeitschrift für wirtschaftlichen Fabrikbetrieb. 114. 605-609. 10.3139/104.112117. URL: https://www.researchgate.net/publication/336885205_Blockchain-Technologie_im_interdisziplinaren_Umfeld

8. Janaviciene, V., Fomin, V. V. (2019). Systematic Literature Mapping on Blockchain Application in the Context of Economics, Finance and Management. The 11th International Scientific Conference “New Challenges of Economic and Business Development – 2019: Incentives for Sustainable Economic Growth,” 310–319.

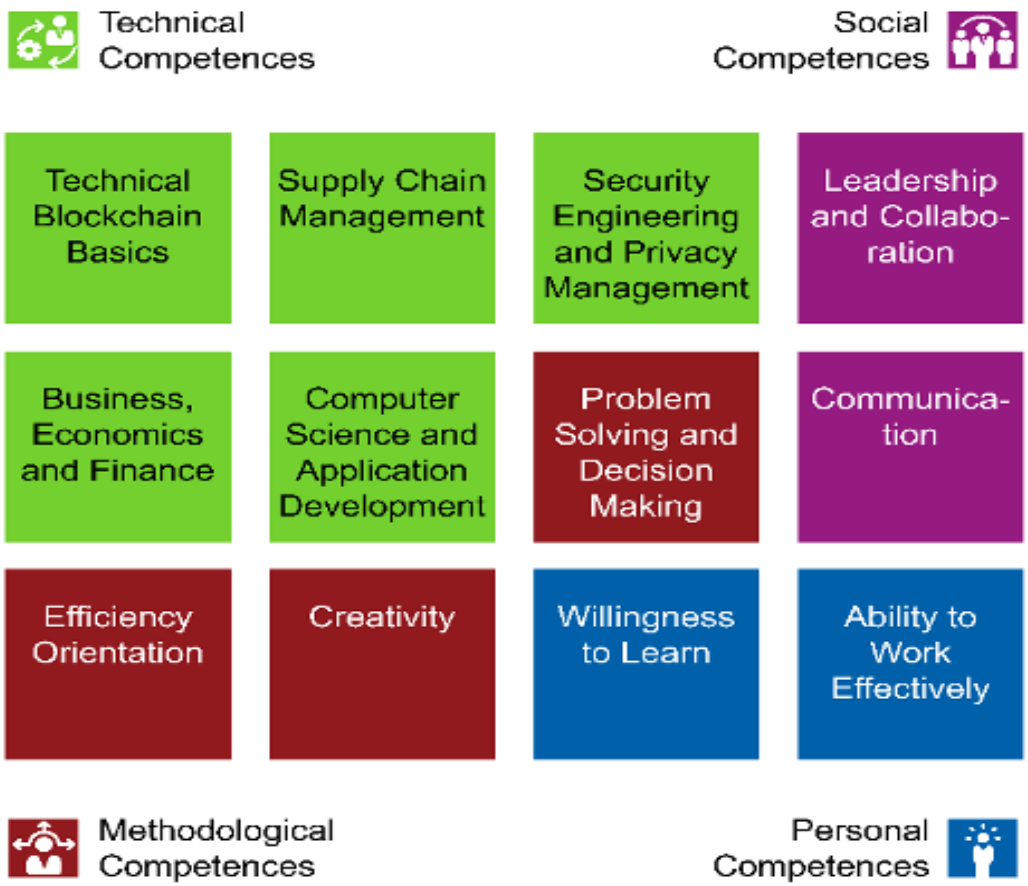
9. Iqbal, M., Matulevičius, R. (2019) Blockchain-Based Application Security Risks: A Systematic Literature Review. In: Proper H., Stirna J. (eds) Advanced Information Systems Engineering Workshops. CAiSE 2019. Lecture Notes in Business Information Processing, vol 349. Springer, Cham https://link.springer.com/chapter/10.1007/978-3-030-20948-3_16

10. Iqbal, M., Matulevičius, R. (2019) Comparison of Blockchain-Based Solutions to Mitigate Data Tampering Security Risk. In: Di Ciccio C. et al. (eds) Business Process Management: Blockchain and Central and Eastern Europe Forum. BPM 2019. Lecture Notes in Business Information Processing, vol 361. Springer, Cham. URL: https://link.springer.com/chapter/10.1007/978-3-030-30429-4_2

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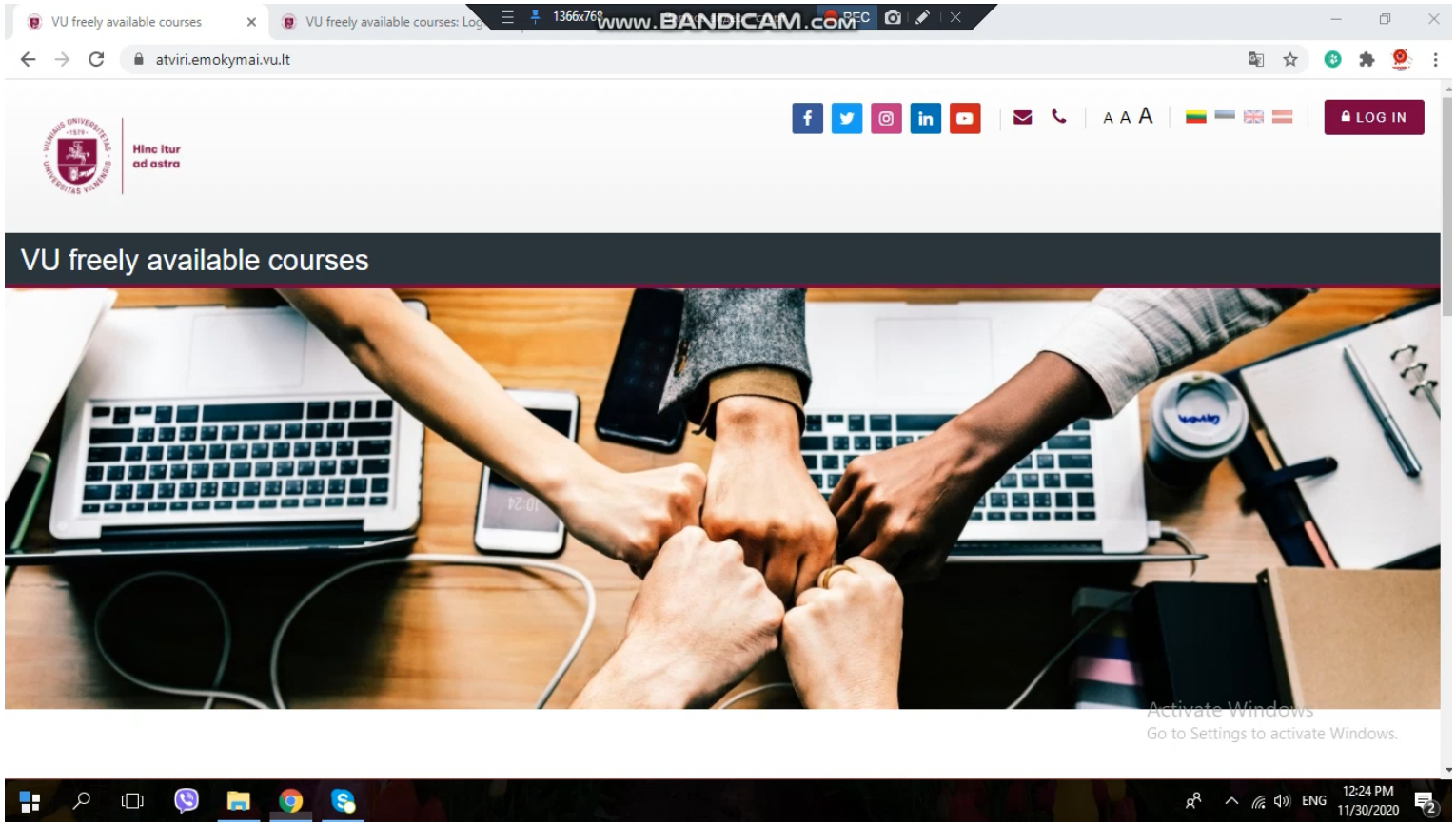


Domain-specific competence model for Blockchain implementations

Düdder, B.; Fomin, V.; Gürpinar, T.; Henke, M.; Ioannidis, P.; Iqbal, M. Janavičienė, V.; Matulevičius, R.; Straub, N. (2019): Exploring the Blockchain Skills Concept and Best Practice Use Cases. Project BlockNet IO2 White Paper. Edited by BlockNet Consortium. URL: https://www.knf.vu.lt/dokumentai/failai/projektai/blocknet/Project_BlockNet_Intellectual_Output_1_and_2.pdf

Open.eStudies.VU.lt
7 COURSES ON BLOCKCHAIN

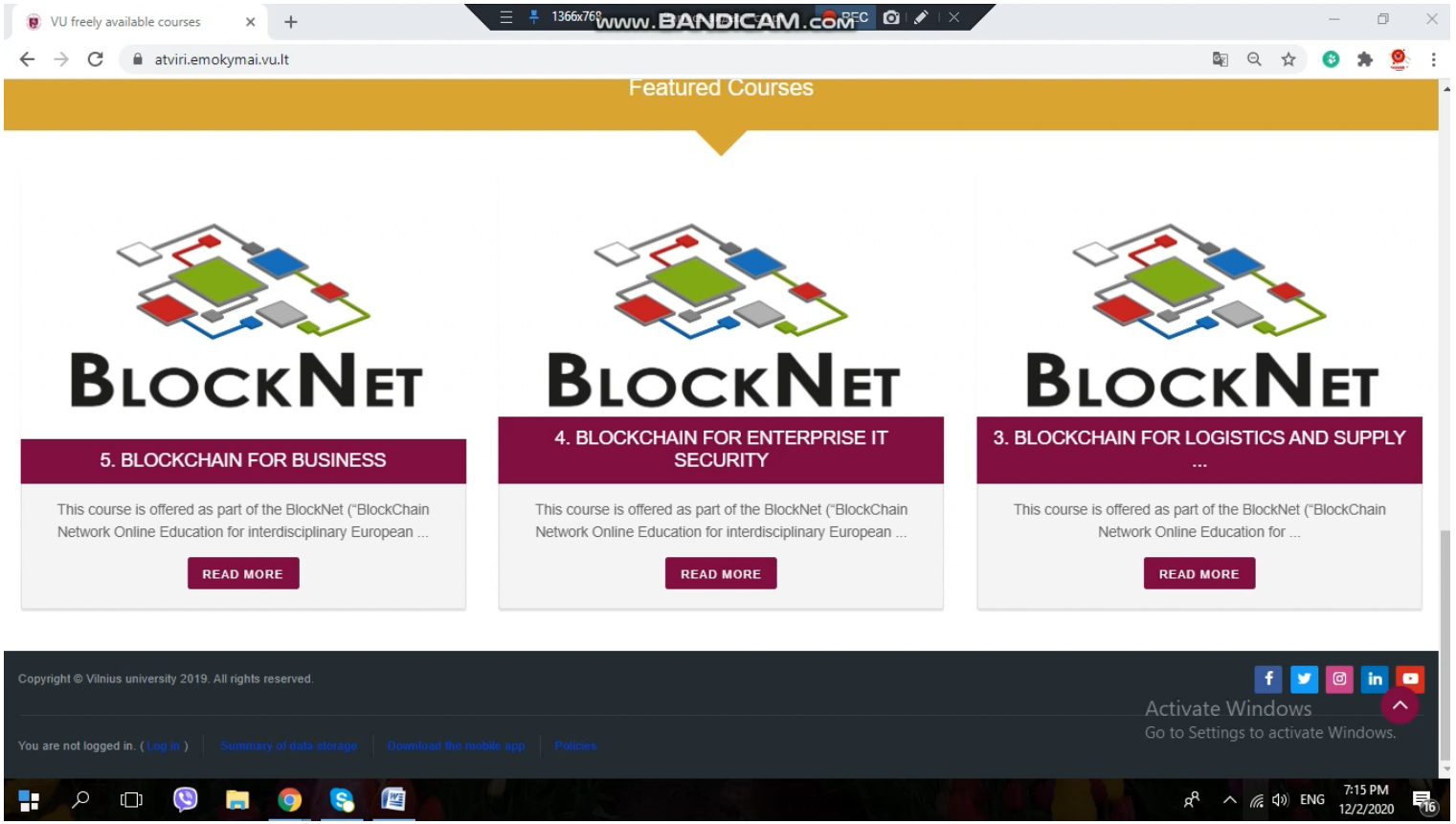
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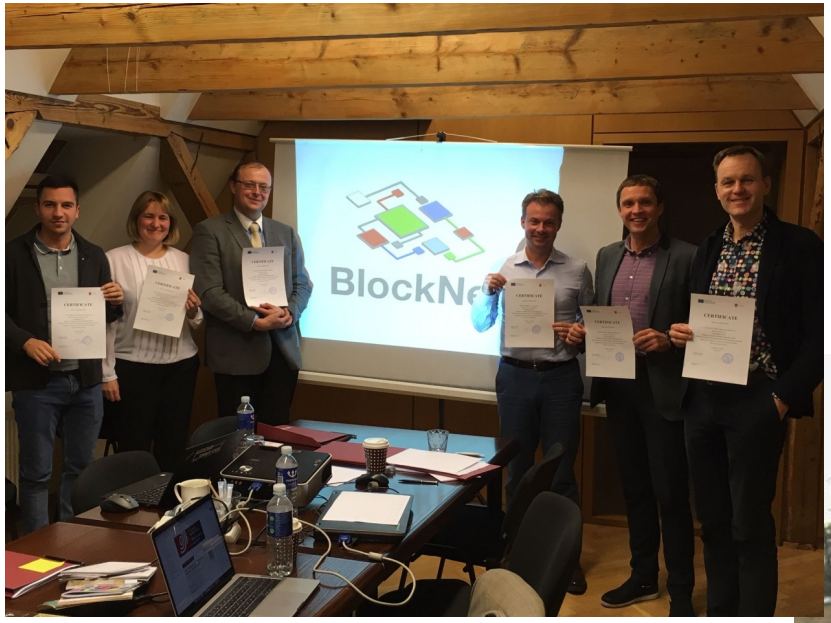
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COURSES ON BLOCKCHAIN

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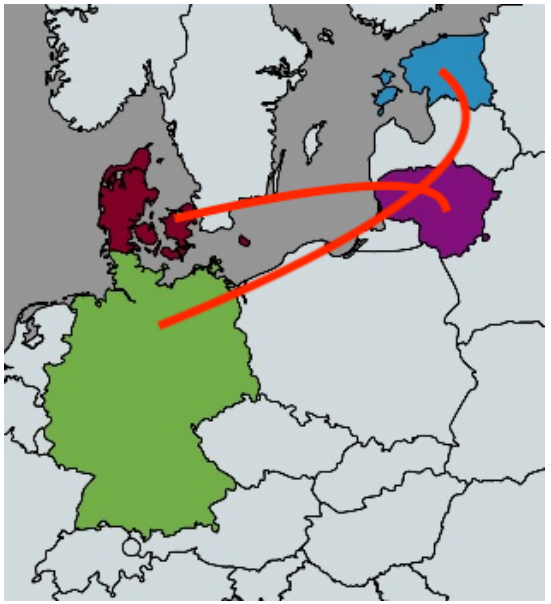


BlockNet-Project-People-Years









The kick-off meeting in Kaunas, 2018

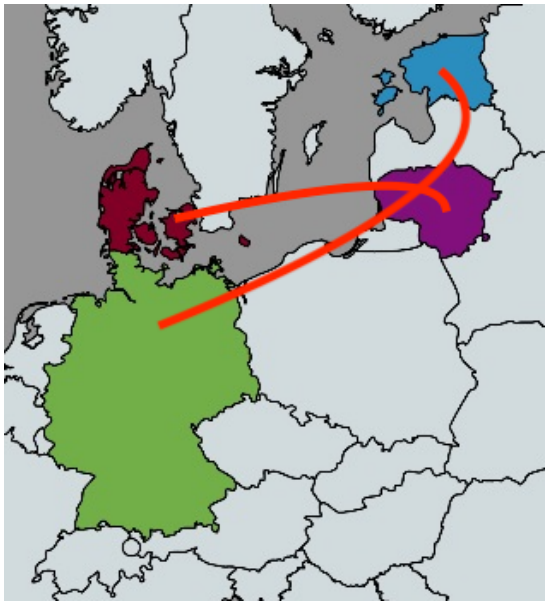
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BlockNet-Project-People-Years



Meeting in Tartu in 2019



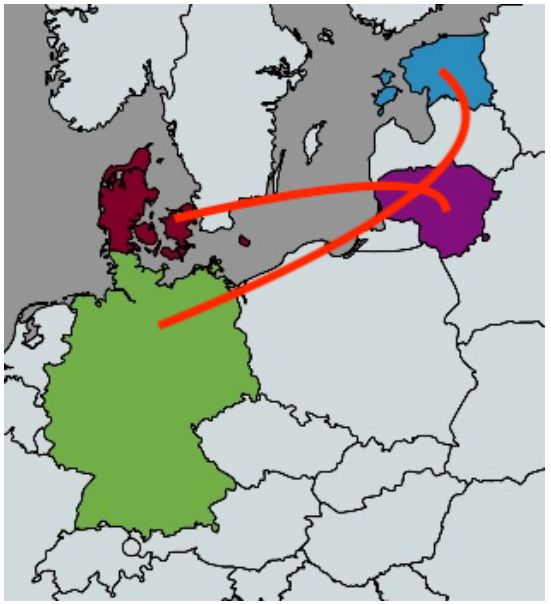


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BlockNet-Project-People-Years







Meeting in Dortmund in 2019

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Blockchain in economics, finance and management

Vilnius University



Thank you for staying awake!

Prof. Vladislav V. Fomin

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The creation of these resources has been (partially) funded by the ERASMUS+ grant program of the European Union under grant no. 2018-1-LT01-KA203-047044.

440