TRUST-FOOD

"Advanced Digital Skills

on Blockchain for Trusted Food Supply Chains"

Learning Paths

The TRUST-FOOD project aims to enhance the adoption of Blockchain Technology (BCT) in the agri-food sector by developing specialized training courses that reskill and upskill employees, particularly those in Small and Medium-sized Enterprises (SMEs) within the Food Supply Chain (FSC), as well as jobseekers. The project seeks to bridge the blockchain knowledge gap by providing accessible, high-quality training that reflects the latest industry advancements and business needs.

The TRUST-FOOD Learning Ecosystem revolutionizes the food supply chain by educating the industry on the benefits of incorporating blockchain technology into the agri-food sector. At the core of this initiative is the development of an integrated learning environment that leverages both theoretical knowledge and interactive learning to enhance the effectiveness of the training process. The ecosystem seeks to educate people in the labour force on cutting-edge practices in the food sector, through the use of innovative technological solutions, such as blockchain for traceability and smart contracts, and modern e-learning approaches like quizzes and videos. This dual approach ensures that learners not only acquire theoretical knowledge but also gain practical experience in applying these technologies, thereby fostering a deeper understanding and skillset.

TRUST-FOOD created and offers though the TRUST-FOOD Web Application, 20 short-duration training courses, available in 7 languages, designed to enhance and refresh the skills of the labour force.

The objectives of the TRUST-FOOD Learning Ecosystem are multifaceted and aim to cater to a
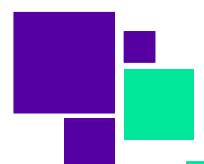
wide array of learning needs and styles. One of the primary objectives is the redesign of traditional learning materials into interactive online asynchronous short training courses. Additionally, two comprehensive Handbooks (one for trainees and one for trainers) have been created in order to facilitate the learning process. Each course within the TRUSTFOOD Learning Ecosystem adheres to a standardized structure that facilitates ease of learning and consistency across the educational platform. The courses are designed to progress from introductory topics to more advanced concepts, ensuring a thorough understanding of blockchain technologies and their implications for food supply chain management, digital assets, and regulatory compliance.
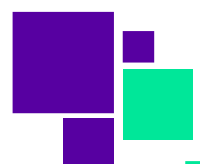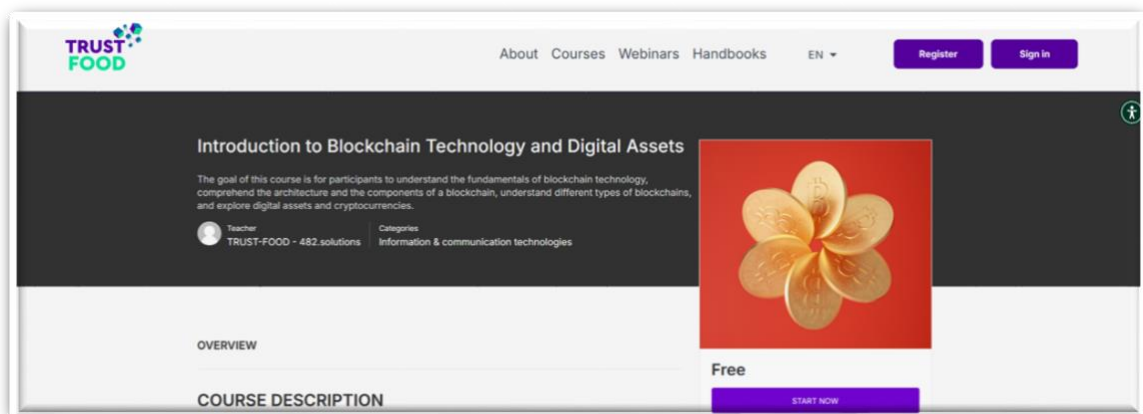
Learning Path 1: Introduction to Blockchain Applications in the Food Supply Chain

This learning path is designed for trainees who are new to blockchain technology and want to a comprehensive introduction to gradually understand its basic principles, then apply this knowledge to food supply chain contexts. More specifically, it begins with basic concepts of blockchain and digital assets. Trainees then progress to develop basic blockchain skills and explore how blockchain can enhance the food supply chain efficiency and transparency. Then focuses on adoption strategies tailored for small and medium-sized enterprises (SMEs) with roadmaps for implementing blockchain in the food supply chain and understanding specific platforms designed for this sector. Finally, trainees explore blockchain's role in quality assurance and certification, building technical and practical knowledge.

1.   **Introduction to Blockchain Technology and Digital Assets (Beginner)**

This course equips you with a comprehensive understanding of blockchain technology, its architecture, and its potential to revolutionize industries. You'll explore core concepts, delve into blockchains' structure, and learn how they ensure security. Discover the differences between public, private, and consortium blockchains, and explore the world of digital assets like cryptocurrencies and NFTs. Finally, we'll dive into how blockchain can transform food supply chain transparency and security.
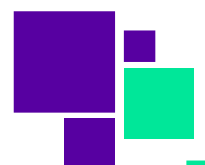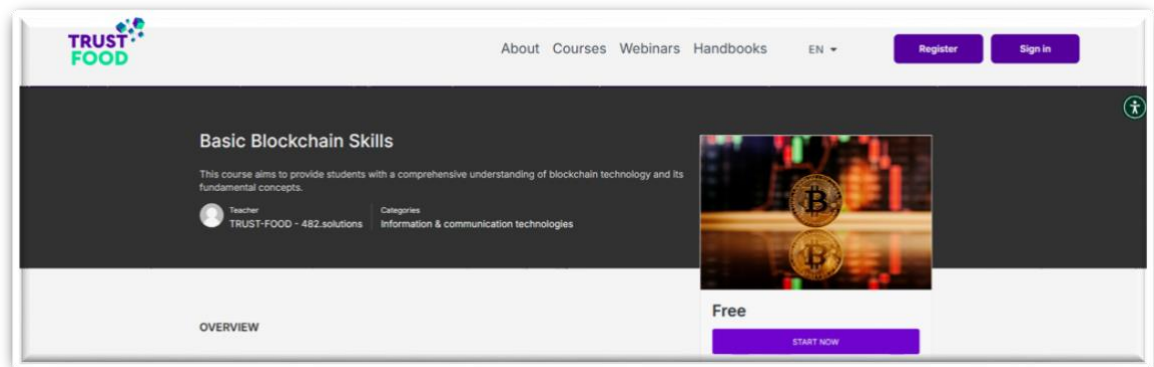

Learning Content
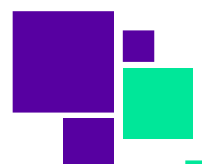
Website link	*[Introduction to Blockchain Technology and Digital Assets](#)*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

2.   Basic Blockchain Skills (Beginner)

This course unlocks the mysteries of blockchain! We'll explore hashing functions (like SHA-256 & Keccak) that link blocks for security and unveil the role of nonces. Dive deeper with hands-on skills: learn to navigate block explorers and understand transaction models like UTXO. Finally, we'll solidify your grasp of blockchain fundamentals by connecting seed phrases, private keys, and addresses. This comprehensive journey equips you to confidently navigate the world of blockchain.
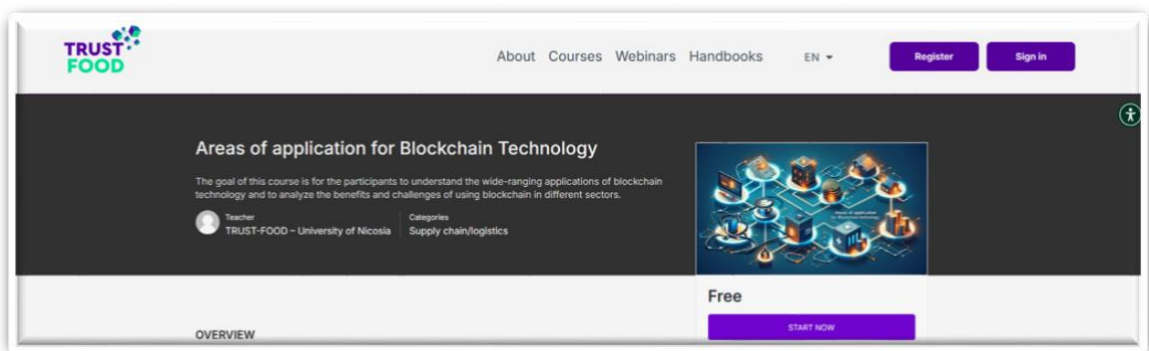
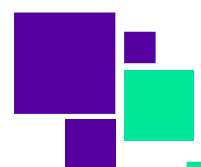| Learning Content	
Website link	*Basic Blockchain Skills*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

3. **Areas of Application for Blockchain Technology (Beginner)**

The course "Applications of Blockchain in the Agri-Food Industry" is designed to provide an understanding of how blockchain technology can be applied across different segments of the agricultural and food sectors. The course focuses on exploring the diverse applications of blockchain in enhancing traceability, transparency, and efficiency in farming, agriculture, food supply chains, seafood and fisheries, and food safety and quality assurance. Additionally, it investigates blockchain's role in verifying the authenticity of fair trade and organic certifications and its potential contribution to sustainable agriculture practices, including carbon trading. By analysing the benefits and challenges of implementing blockchain technology in these areas, the course equips participants with the knowledge to critically assess its impact and the practicalities of its adoption in the agri-food industry.

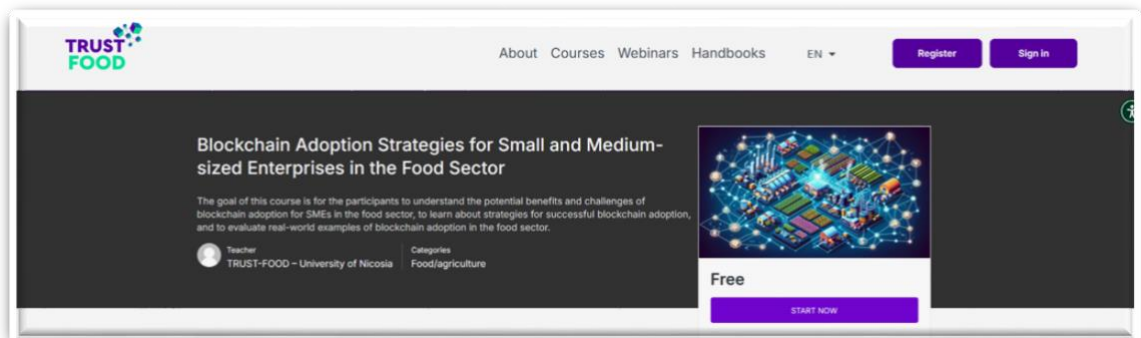| Learning Content	
Website link	*Areas of application for Blockchain Technology*
Target audience	*Food Industry Professionals, Supply Chain Managers and Logistics Experts, Food Safety Regulators and Policy Makers, Technology Professionals with an Interest in Agri-tech, Agricultural Entrepreneurs and Innovators, Food Industry Consultants and Advisors, Academics and Researchers in Food Technology and Blockchain, Students in Food Science, Supply Chain Management and Technology*

| Digital skill level	Beginner Level
Geographic scope - Country	European Union
	Greece
	Cyprus
	Netherlands
	Luxembourg
	Ukraine
	Slovenia
	Italy
	Romania
	Lithuania
	Croatia

4.   Blockchain Adoption Strategies for Small and Medium-sized Enterprises in the Food Sector (Beginner)

This course aims to equip participants with an understanding of the potential benefits and challenges associated with integrating blockchain technology in small and medium-sized enterprises within the food industry. The course investigates the transformative impact of blockchain in enhancing traceability, reducing fraud, and building consumer trust, while also addressing the technical and financial complexities inherent in its adoption. Participants will learn not only about the strategic importance of blockchain for compliance with food safety regulations but also about the pragmatic aspects of its implementation. This includes conducting a needs assessment, engaging stakeholders effectively, selecting the appropriate blockchain platform, and developing a comprehensive implementation strategy. Furthermore, the course provides real-world insights through case studies, highlighting successful blockchain implementations in the sector.
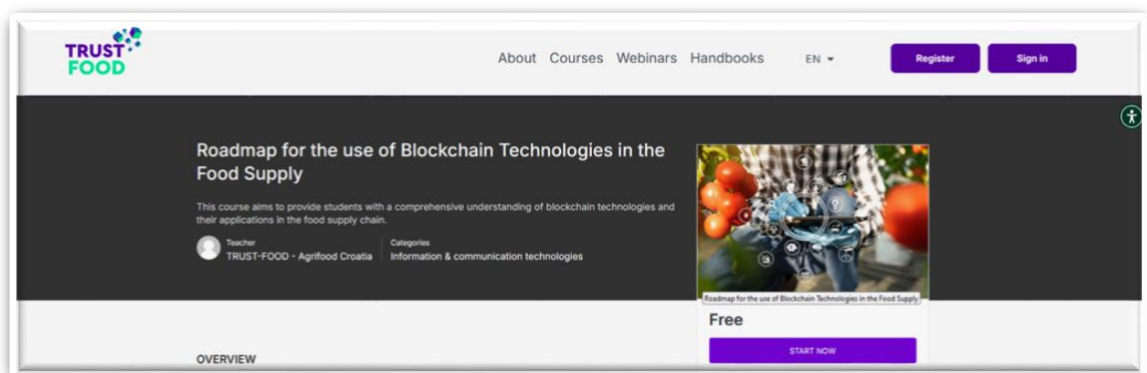
Learning Content	
Website link	*Blockchain Adoption Strategies for Small and Medium-sized Enterprises in the Food Sector*
Target audience	*Entrepreneurs and Business Owners in the Food Sector, Operations and Supply Chain Managers, IT and Technology Professionals in the Food Industry, Food Safety and Compliance Officers, Academics and Researchers*
Digital skill level	*Beginners Level, Professional Development*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*
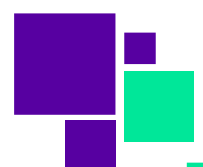
5. Roadmap for the Use of Blockchain Technologies in the Food Supply Chain (Intermediate)

The overarching aim of the "Roadmap for the Use of Blockchain Technologies in the Food Supply Chain" course is to empower participants with a deep understanding of blockchain's pivotal role and transformative potential within the complex landscape of the food industry. By delving into the intricacies of blockchain technology, participants will dissect the inherent inefficiencies and vulnerabilities present in conventional food supply chains, while concurrently uncovering the myriad benefits that blockchain offers, including heightened transparency, immutable traceability, and fortified trust among stakeholders. Through an immersive journey encompassing real-world case studies, critical analysis of blockchain components, and robust stakeholder engagement, participants will not only grasp the theoretical underpinnings but also gain practical insights into navigating regulatory landscapes, addressing interoperability challenges, and harnessing blockchain's prowess to elevate food safety standards, optimize quality assurance protocols, and catalyze sustainable practices across the entire food supply continuum. Ultimately, armed with this comprehensive knowledge and strategic acumen, participants will emerge poised to architect innovative solutions and chart pragmatic pathways for the seamless integration of blockchain technologies into the multifaceted realm of food supply chain management.
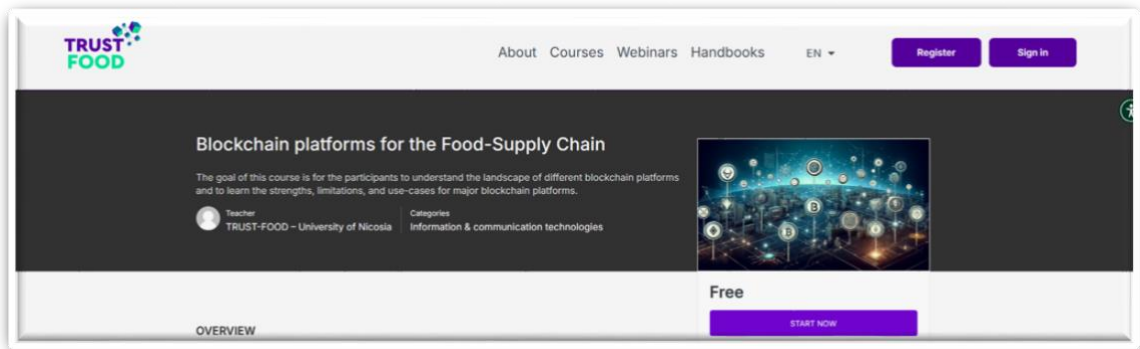

Learning Content

Website link	*Roadmap for the use of Blockchain Technologies in the Food Supply*
Target audience	*University students, university graduates, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

## 6.   Blockchain Platforms for the Food-Supply Chain (Intermediate)

The course "Blockchain Platforms" aims to provide an understanding on different blockchain platforms and their specific applications, particularly in the context of the food supply chain. Participants will gain insights into various types of blockchain platforms, each with its unique strengths, limitations, and use cases. The course begins with an introduction to the fundamental types and purposes of these platforms. This course covers major platforms like Ethereum, Hyperledger Fabric, IBM Food Trust, VeChain, Tezos, NEAR, Polkadot, and Solana. Each lesson will focus on the unique aspects of these platforms, including smart contracts, decentralized applications, private and permissioned blockchains, scalability, and developer-friendly interfaces. Participants will examine real-world case studies to understand how these platforms are applied in the food supply chain, evaluating factors such as security,

scalability, consensus mechanisms, and smart contract functionality. This course is designed to equip learners with the knowledge to critically assess and choose the most appropriate blockchain platform for various applications in the food supply chain.
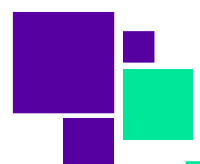

Learning Content	
Website link	[Blockchain platforms for the Food-Supply Chain](#)
Target audience	*Professionals in the Agri-Food Industry, Blockchain Developers and Technologists, Supply Chain Managers, Academics and Researchers, Students in Related Fields*
Digital skill level	*Intermediate Level, Professional Development*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania*
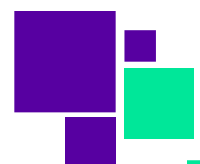
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	Croatia

7.   Blockchain Applications for Food Quality Assurance and Certification (Intermediate)

The objective of this course is to provide to interested participants, with a particular focus on SMEs owners, managers, and employees in the FSC, the knowledge and practical skills necessary to understand, implement, and leverage blockchain technology for enhancing food quality assurance and respond to certification processes. The FSC is a complex network of interconnected activities, processes, and entities involved in the production processing, distribution, and consumption of food products. It includes all the stages and intermediaries through which food travels from the initial point of production to the final point of consumption. More specifically, the FSC involves numerous stakeholders, including producers, processors, distributors, retailers, regulatory authorities, and consumers. Therefore, the FSC is a critical component of the food industry and plays a significant role in ensuring that food products reach consumers safely and efficiently. Blockchain technology is increasingly being used to enhance transparency, traceability, and trust in the FSC. Therefore, the main goal of this course focuses on gaining a good understanding of how blockchain technology is applied in the FSC for food quality assurance and certification. More specifically, the first lesson provides familiarization with the notions of food quality assurance and food quality certification under the light of the FSC. With the second lesson attendees will gain familiarity with the utilization of blockchain technology in ensuring food quality and certification, particularly within the framework of the FSC by a step-by-step process to identify stakeholders in FSC.
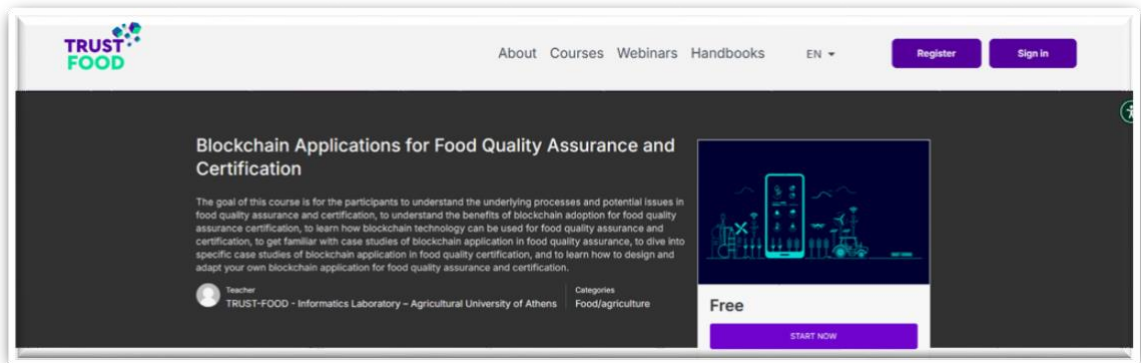
Learning Content	
Website link	[Blockchain Applications for Food Quality Assurance and Certification](#)
Target audience	*Agrifood company employees and food supply chain personnel, logistics companies, university students, university graduates, business managers, business owners*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*
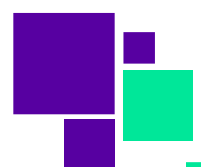
Learning Path 2: Advanced Blockchain Solutions for Revolutionizing the Food Supply Chains

This learning path focuses on exploring the synergy of blockchain with other advanced technologies in transforming food supply chains. This path is suitable for trainees with a foundational knowledge of blockchain who are ready to get in touch with more complex integrations like AI, IoT, and tokenization. More specifically, it begins with advanced Blockchain skills and then provides FinTech solutions tailored to the food sector, and in this way understanding how Blockchain enhances financial transactions and supply chain efficiency. This path also highlights the role of digital asset management and tokenization in enhancing traceability within food supply chains. Then, the "Combined Powers" courses present the challenges of the integration of Blockchain and AI and the Internet of Things (IoT). Finally, trainees have the possibility to perceive the potential of smart contracts in food supply chains with examples.

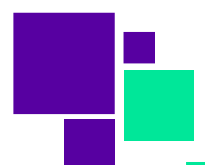### 1. Advanced Blockchain Skills (Intermediate)

This course empowers you to unlock the potential of blockchain technology! By the end, you'll possess a solid understanding of:

Blockchain Security: Demystify hashing functions and nonces, the cornerstones of blockchain security.

Blockchain Exploration: Master the use of block explorers to navigate real-world blockchains.
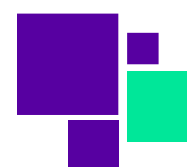
Understanding Transactions: Grasp the UTXO model, the foundation for tracking cryptocurrency ownership.

Secure Blockchain Interaction: Unravel the connection between seed phrases, private keys, and addresses for confident blockchain participation.
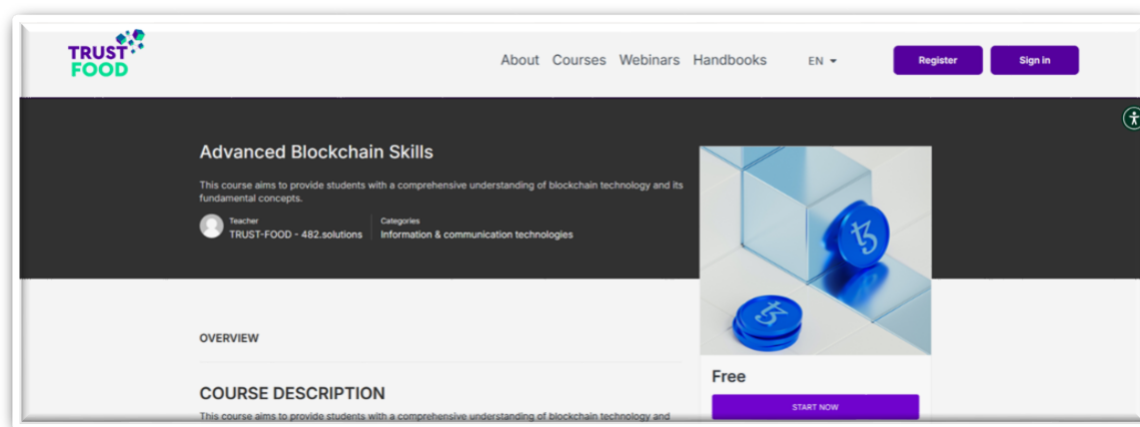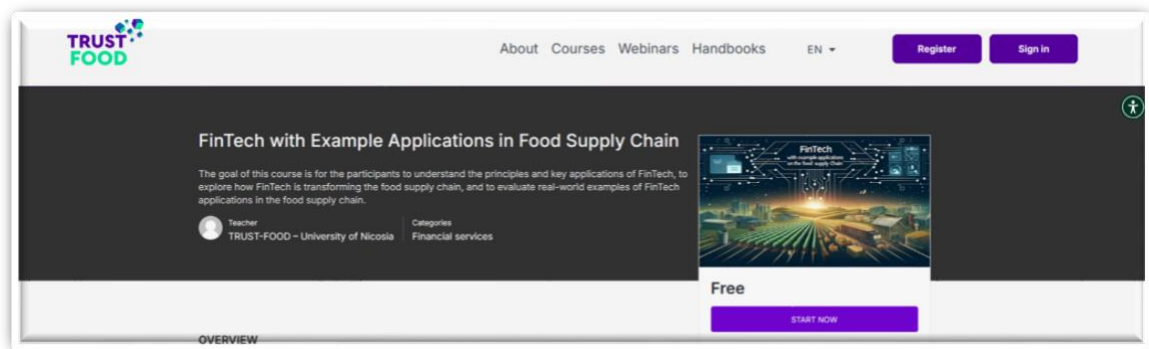
Learning Content	
Website link	[*Advanced Blockchain Skills*](#)
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

2.   FinTech with Example Applications in Food Supply Chain (Intermediate)

The objective of Course #4: Financial Technology (FinTech) with Example Applications in the Food Supply Chain is to provide a thorough understanding of FinTech, its core components, and its transformative applications in various sectors, particularly focusing on the agrifood sector. The course aims to explore the influence of FinTech innovations on the food supply chain, highlighting how technologies such as blockchain, AI, data analytics, digital payments, and smart contracts enhance efficiency, traceability, and transaction management. Participants will engage in assessing real-world case studies to understand the practical implementation of these technologies in the agrifood sector. Furthermore, the course will investigate the future trends in FinTech, providing insights into upcoming developments that could significantly impact the agrifood industry.
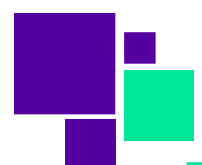

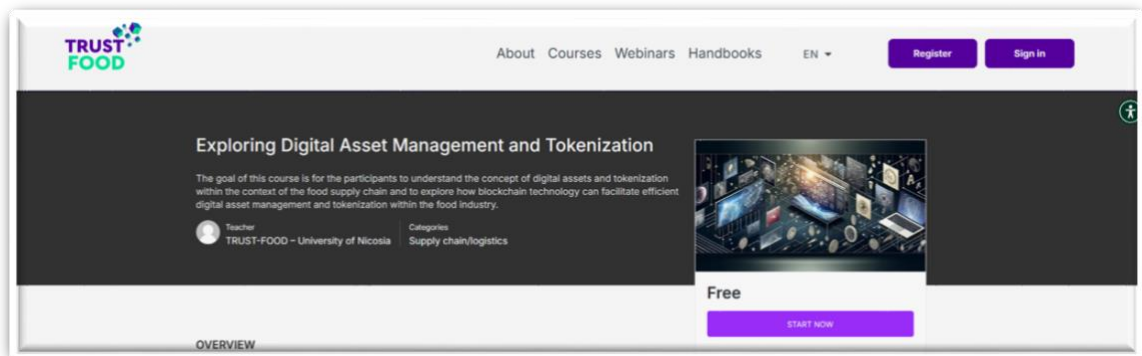| Learning Content	
Website link	*FinTech with Example Applications in Food Supply Chain*
Target audience	*Professionals in the Agrifood Industry, FinTech Entrepreneurs and Innovators, Supply Chain Managers, Financial and Banking Professionals, Academics and Researchers, Students in Related Fields*
Digital skill level	*Intermediate Level, Professional Development*
Geographic scope - Country	*European Union*

	Greece
	Cyprus
	Netherlands
	Luxembourg
	Ukraine
	Slovenia
	Italy
	Romania
	Lithuania
	Croatia

3.   Exploring Digital Asset Management and Tokenization (Intermediate)

The objective of this course is to understand the fundamentals of digital assets and tokenization within the context of the food supply chain. The course begins with a foundational objective, which is to ensure that participants gain a solid understanding of the fundamentals of digital assets and tokenization. This knowledge is contextualized within the food supply chain, highlighting the relevance and application of these concepts in this specific area. A significant part of the course is dedicated to exploring how blockchain technology can be utilized to manage digital assets efficiently and facilitate the process of tokenization in the food industry. This exploration will not only cover theoretical aspects but also delve into practical applications, demonstrating how blockchain can transform the way digital assets are handled in the food sector. Finally, the course aims to bridge the gap between theory and practice. It focuses on the application of the acquired knowledge about digital assets and tokenization to real-world scenarios in the food supply chain. This objective is crucial as it allows learners to translate their understanding into practical skills that can be applied in real-life situations, enhancing the relevance and impact of their learning experience.
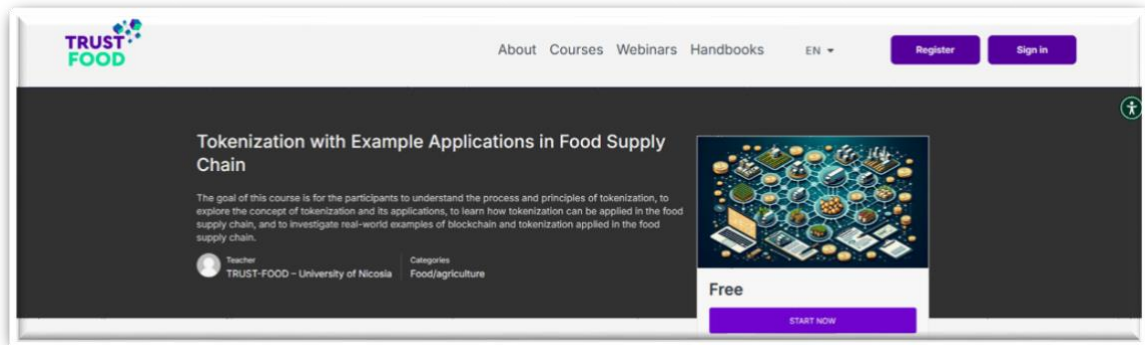
Learning Content	
Website link	*[Exploring Digital Asset Management and Tokenization](#)*
Target audience	*Generic, Agrifood Industry Professionals, Technology Professionals and Developers, Business Strategists and Entrepreneurs, Supply Chain and Logistics Managers, Educators and Academics, Students in Related Fields, Technology Consultants and Advisors*
Digital skill level	*Intermediate Level*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*
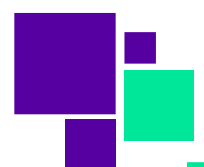
4.   Tokenization with Example Applications in Food Supply Chain (Intermediate)

The objective of Course 5: "Tokenization with Example Applications in Food Supply Chain" is to provide a understanding of tokenization, its applications and its role in various industries, with a special focus on the food supply chain. The course is designed to guide learners through the fundamental concepts of tokenization, explaining how it works, and the benefits and challenges associated with it. It describes the integral role of blockchain technology in enabling secure and transparent tokenization and explores different types of tokens, including governance, utility, security, platform, and non-fungible tokens (NFTs). Additionally, the course highlights how tokenization can be applied specifically in the food supply chain, enhancing traceability, verifying food safety, and improving transparency and accountability in sourcing and delivery. Learners will also have the opportunity to examine real-world implementations of tokenization and look ahead to future trends, gaining insights into how this technology could continue to evolve and impact the food supply chain.
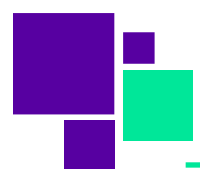

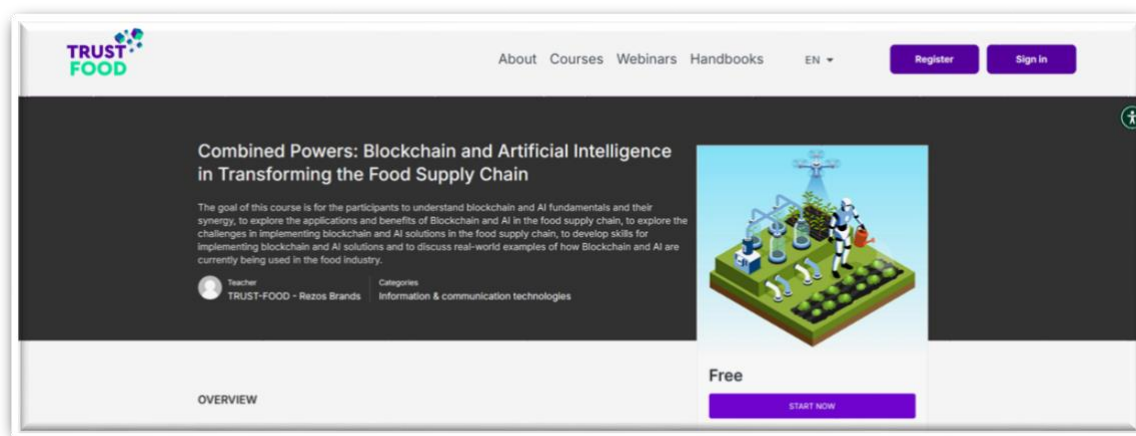| Learning Content	
Website link	*Tokenization with Example Applications in Food Supply Chain*
Target audience	*Professionals in the Agrifood Industry, FinTech and Blockchain Enthusiasts, Technology Developers and Entrepreneurs, Academic Researchers and Students*

Digital skill level	*Intermediate Level*
Geographic scope - Country	*European Union*
	Greece
	Cyprus
	Netherlands
	Luxembourg
	Ukraine
	Slovenia
	Italy
	Romania
	Lithuania
	Croatia

5.   Combined Powers: Blockchain and Artificial Intelligence in Transforming the Food Supply Chain (Intermediate)

This course introduces us to the concepts of Artificial Intelligence and Blockchain Technology. It aims to approach AI by categorizing it and comparing it to human intelligence followed by an introduction to Blockchain Technology and smart contracts. The limits of the blockchain and the solutions of artificial intelligence are defined to highlight the importance of the blockchain - Artificial Intelligence synergy and the future direction of this synergy is being explored. Additionally, the concept of the Food Supply Chain is introduced. In order to elaborate on the supply chain processes, it is broken down into five stages: production, processing, distribution, retailing, consumption. Each stage of this chain is explained and also the challenges affecting the whole journey of the product from farm to fork are categorized into four different categories and further analysed. Furthermore, the optimized structure of the Food Supply Chain with the beneficial changes provided by the blockchain technology solutions is approached. The current applications of Artificial Intelligence and blockchain technology in the food supply chain are discussed aiming at highlighting the beneficial impact on the whole process. With a goal to explore the optimization of the supply chain efficiency, the combination of the future direction
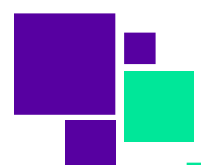
of artificial intelligence and blockchain technology is the main topic up next. As blockchain and AI technologies continue to evolve, we can expect to see increased adoption of their applications across the food industry, leading to a more sustainable, resilient, and trustworthy food system. The potential of these two technologies' evolution is presented through various applications in different fields, such as tokenization, decentralized marketplaces, sustainability tracking or food safety compliance. Finally, we investigate the results of integrating artificial intelligence technologies with smart contracts and how AIdriven smart contracts can enhance traceability and efficiency in the food supply chain. Also, the results of predictive analysis and real-time decision-making with AI and blockchain are examined. Course #19 is completed with the presentation of use cases of these innovative technologies and real-world examples.

Learning Content	
Website link	*Combined Powers: Blockchain and Artificial Intelligence in Transforming the Food Supply Chain*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees, food supply chain personnel and technology professionals/developers*
Digital skill level	*Intermediate Level, Continuing Education*
Geographic scope - Country	*European Union*
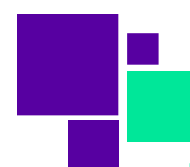
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	Ukraine
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	Romania
	Lithuania
	Croatia

6. Combined Powers: Blockchain and Internet of Things in Transforming the Food Supply Chains (Expert)

The course on "Combined Powers: Blockchain and Internet of Things in Transforming the Food Supply Chain" is designed to provide a comprehensive understanding of how Blockchain and the Internet of Things (IoT) can revolutionize the food industry. It aims to present and discuss the fundamentals of both technologies, their individual roles, and the synergy they create when integrated within food supply chains. Participants will explore the challenges and solutions involved in this integration, examining how Blockchain and IoT can enhance supply chain efficiency, reduce waste, and improve traceability. The course also includes an evaluation of real-world examples and applications in the food sector, offering insights into smart farming, efficient transportation, and food safety. Lastly, it provides potential future trends and developments in Blockchain and IoT within the food industry.

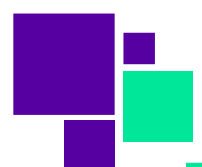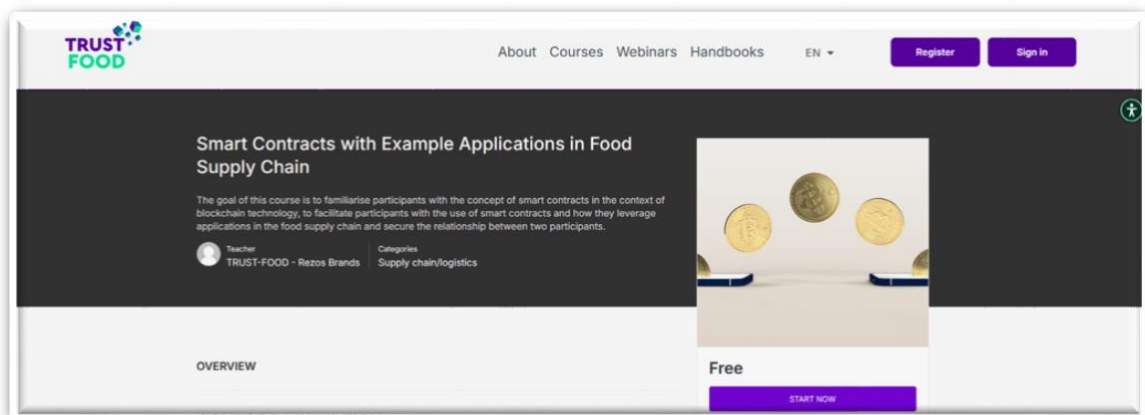| Learning Content	
Website link	[Combined Powers: Blockchain and Internet of Things in Transforming the Food Supply Chains](#)
Target audience	*Supply Chain Professionals, Technology Developers and Innovators, Business Executives in the Food Industry, Academics and Researchers*
Digital skill level	*Advanced Level, Professional Development*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*
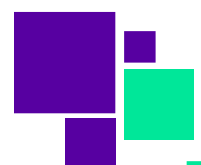
### 7.	Smart Contracts with Example Applications in Food Supply Chain (Expert)

The objective of this course is to provide interested participants, with a particular focus on SMEs owners, managers, and employees in the Food Supply Chain (FSC), the knowledge and practical skills necessary to understand, implement, and leverage blockchain technology as regards its relevance and application to smart contracts. The course consists of 9 lessons that will gradually equip the participants with the adequate knowledge and critical thinking skills necessary to understand, evaluate, and potentially contribute to the implementation of smart contracts in the Food Supply Chain.

Smart contracts that employ blockchain technology provide efficiency, transparency, and reliable transactions. Various types of contracts are investigated aimed at addressing problems encountered in the sector. By presenting the challenges currently faced in the FSC, participants can appreciate the potential benefits that smart contracts provide. Finally, by examining real-world applications trainees can grasp the practical implications of this technology, enabling them to make informed decisions and contribute effectively to the advancement of the food supply chain industry.

Fostering an innovative and collaborative mindset will be essential as participants move through the course in order to grab emerging opportunities and overcome any barriers to the adoption of blockchain technology. Furthermore, it emphasizes how crucial it is to keep learning and adapting as the area of blockchain technology quickly expands to keep participants at the forefront of business advancements.

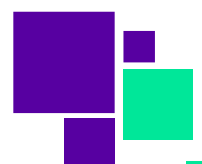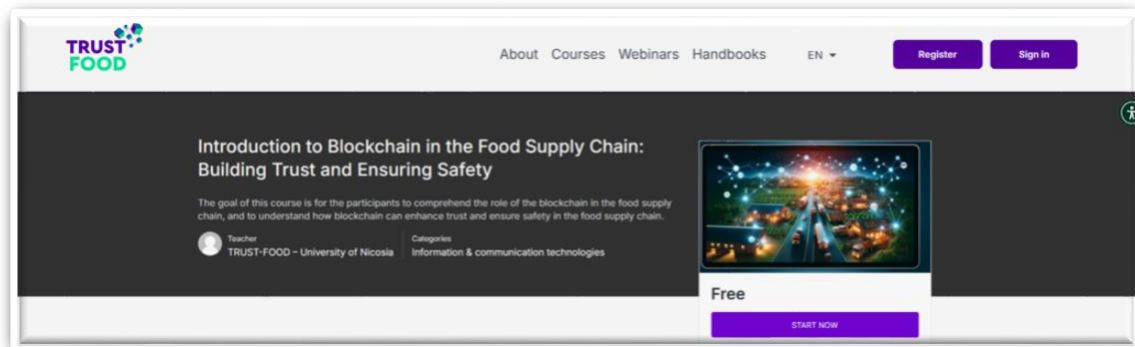| Learning Content	
Website link	*Smart Contracts with Example Applications in Food Supply Chain*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel with basic programming skills*
Digital skill level	*Advanced Level, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

Learning Path 3: Governance, Ethics, and Regulatory Frameworks in Blockchain-Enabled Food Systems

This learning path focuses on the ethical, governance, and regulatory dimensions of blockchain in the food supply chain, including sustainability goals and responsible innovation. It's ideal for trainees interested in policy, governance, and ethical aspects. In specific, it begins by giving emphasis on the blockchain potential to build trust and ensure food safety. Then it goes deeper into traceability and integrity, showcasing how blockchain ensures transparency in food supply chains. Further, trainees explore the intersection of blockchain with climate action and energy transition, addressing sustainability challenges. The integration of ESG (Environmental, Social, and Governance) principles and the UN's Sustainable Development Goals (SDGs) in blockchain-enabled food supply chains is also covered, highlighting its role in ethical and sustainable practices. The path examines also MiCA regulation and Central Bank Digital Currencies (CBDCs), offering insights into regulatory frameworks. It concludes with an exploration of relevant ethical considerations and governance.
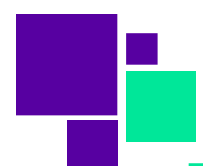
1. **Introduction to Blockchain in the Food Supply Chain: Building Trust and Ensuring Safety (Beginner)**

The objective of Course #6, "Introduction to Blockchain in the Food Supply Chain: Building Trust and Ensuring Safety" is to provide participants with an understanding of blockchain technology and its applications in the food supply chain. This course aims to describe how blockchain can enhance transparency, improve food safety and foster trust among various stakeholders within the food supply chain. Participants will be guided through a journey that starts with understanding the essentials of the food supply chain and the challenges faced by its stakeholders. The course will also discuss the core principles of blockchain technology, its key features such as immutability and decentralization, and the different types of blockchain, including their advantages, disadvantages, and real-world applications. The course will also explore how blockchain's inherent characteristics can be leveraged to build trust among food supply chain stakeholders and ensure food safety, underlined by real-world examples. Finally, the course will conclude by examining real-world implementations of blockchain in the food supply chain through case studies and future trends in the field.
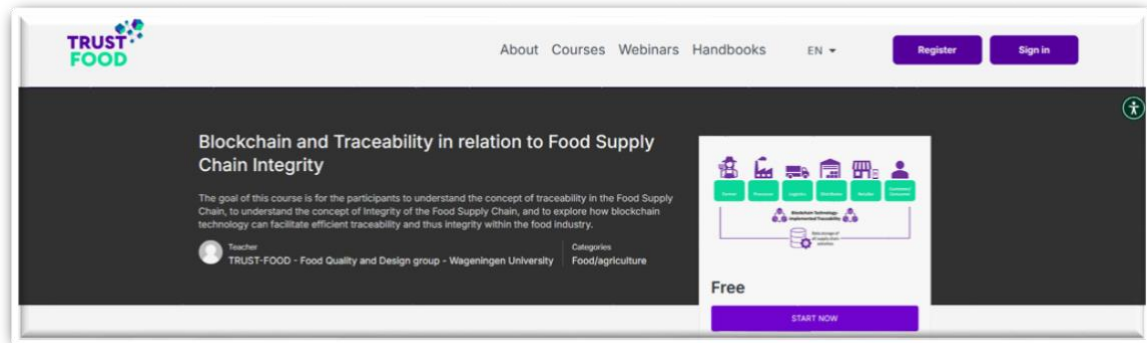
Learning Content	
Website link	*Introduction to Blockchain in the Food Supply Chain: Building Trust and Ensuring Safety*
Target audience	*Food Industry Professionals, Supply Chain Managers and Logistics Experts, Food Safety Regulators and Policy Makers, Technology Professionals with an Interest in Agri-tech, Agricultural Entrepreneurs and Innovators, Food Industry Consultants and Advisors, Academics and Researchers in Food Technology and Blockchain, Students in Food Science, Supply Chain Management and Technology*
Digital skill level	*Beginners Level*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania*

	Lithuania
	Croatia

2. Blockchain and Traceability in Relation to Food Supply Chain Integrity (Intermediate)

The objective of this course is to provide interested participants, with a particular focus on SME owners, managers, and employees in the food supply chain, the knowledge and practical skills necessary to understand and implement blockchain technology in traceability systems to support food supply chain integrity. Participants will familiarise themselves with the topic of food supply chain integrity, comprehend the traceability systems principles and their application in food supply chains, and get an understanding of the basic operating principles of blockchain technology and how they can support traceability systems. Participants will gain insight into how to design and practically use blockchain-based traceability systems through concrete examples from the food sector.

Learning Content	
Website link	*Blockchain and Traceability in relation to Food Supply Chain Integrity*
Target audience	*Food professionals working in small and medium enterprises in the food sector, such as employees working in procurement, supply control, quality control, and assurance*

	(QC and QA) and senior managers (QC and QA). The module is also useful for just graduated students (University, Applied Science) who start searching for a job
Digital skill level	*Intermediate level, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

3. Climate Action, Energy Transition, and Blockchain in Food Supply Chain (Intermediate)

Equip participants with the knowledge and skills to leverage Blockchain technology for achieving climate action, energy transition, and a more sustainable food supply chain. This objective captures the essence of the course by highlighting the following key points:

Knowledge: Participants will gain a comprehensive understanding of the Climate-Energy-Food nexus and the importance of sustainable agriculture in a changing climate.

Skills: The course will equip participants with the ability to design and implement Blockchain solutions to support net-zero transition within the food supply chain.

Focus on Sustainability: The objective emphasizes the application of Blockchain technology for positive environmental impact within the food sector.
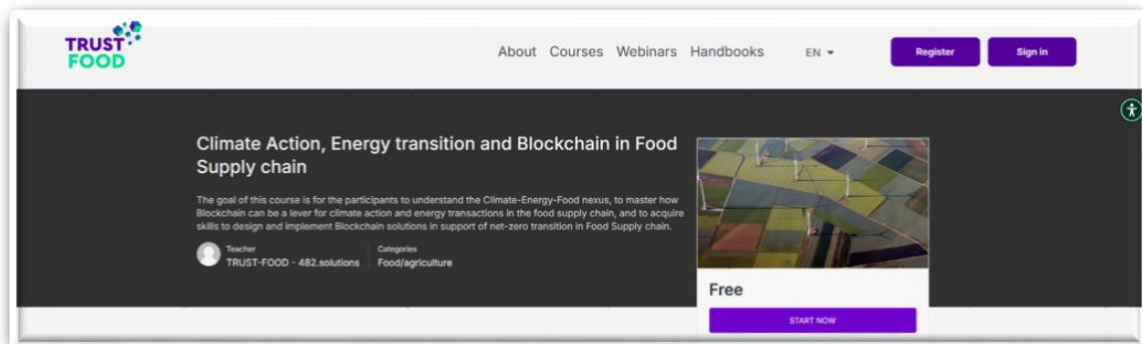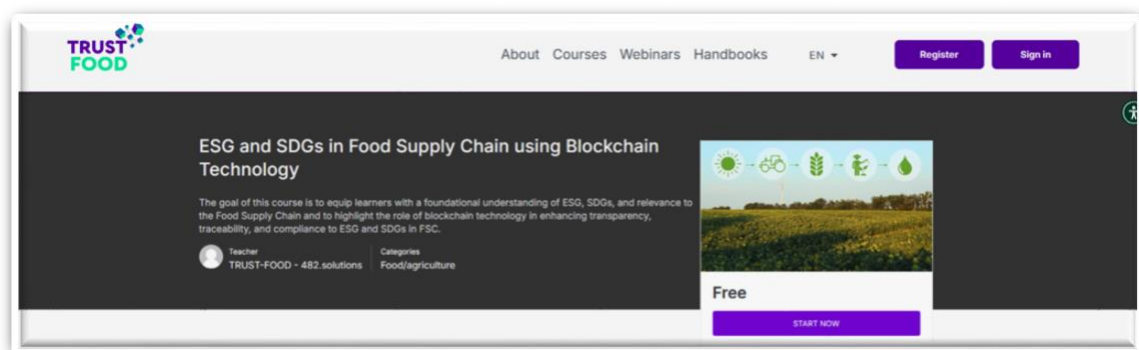
Learning Content	
Website link	*[Climate Action, Energy transition and Blockchain in Food Supply chain](#)*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

4.   ESG and SDGs in Food Supply Chain using Blockchain Technology (Intermediate)

By the End of This Course, You Will Be Able To:

1. Grasp the Fundamentals: Define and explain Environmental, Social, and Governance (ESG) principles and their importance in the food supply chain. Explain Sustainable Development Goals (SDGs) and their relevance to the food industry.

2. Comprehend the Role of Blockchain: Analyze how blockchain technology enhances transparency, traceability, and compliance with ESG and SDG goals in the food supply chain. Explain how blockchain can be used to monitor, report, and verify ESG and SDG performance within the food industry.

3. Apply Practical Knowledge: Evaluate real-world case studies to understand how blockchain is currently being used to achieve ESG and SDG goals in the food supply chain.

4. Navigate the Regulatory Landscape: Explain the existing regulatory environment surrounding ESG and SDGs in the food supply chain. Analyze how blockchain technology can facilitate compliance with these regulations.

5. Analyze Stakeholder Impact: Assess the potential implications of implementing blockchain for ESG and SDGs on various stakeholders within the food supply chain (e.g., farmers, consumers, policymakers).

6. Anticipate Future Trends: Identify emerging trends and future applications of blockchain technology for advancing ESG and SDGs in the food supply chain.
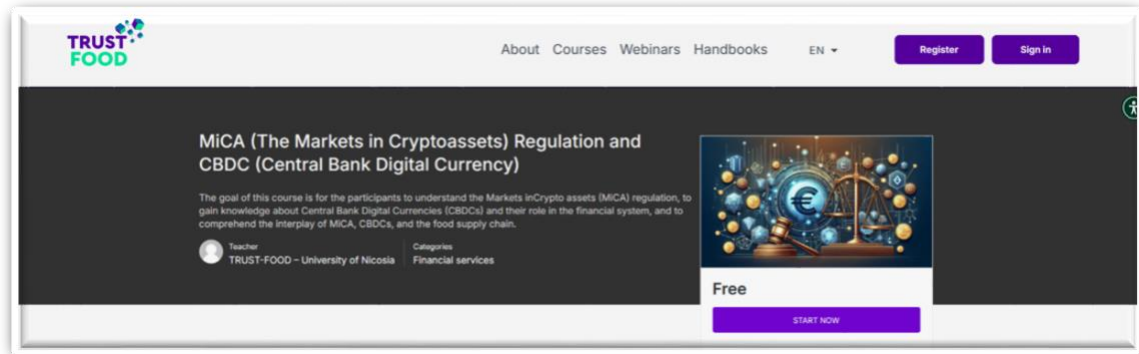

Learning Content

Website link	*ESG and SDGs in Food Supply Chain using Blockchain Technology*
Target audience	*University students, university graduates, business managers, business owners, agrifood company employees and food supply chain personnel*
Digital skill level	*Beginners, Professional Development or Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*

5. MiCA (The Markets in Cryptoassets) Regulation and CBDC (Central Bank Digital Currency) (Expert)

The objective of this course, named "MiCA Regulation and CBDC" is to provide an in-depth understanding of the Markets in Crypto Assets (MiCA) regulation and Central Bank Digital Currencies (CBDCs). The course begins with an introduction to MiCA, covering its origins, principles, and objectives. It then progresses to a detailed analysis of MiCA regulation, exploring its implications for businesses and individuals in the crypto-asset space. The course also introduces CBDCs, examining their rationale, functionality, and impact on the global economy. A significant focus is on the impact of MiCA and CBDCs on crypto-assets within the food supply chain, highlighted through real-world case studies. This comprehensive approach aims to equip

learners with critical knowledge of MiCA and CBDCs, and their intricate relationship with the food supply chain.
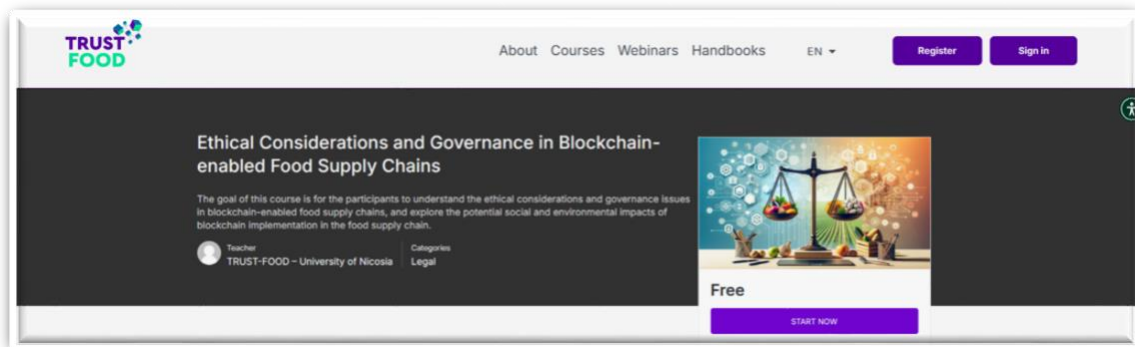

Learning Content	
Website link	*[MiCA (The Markets in Cryptoassets) Regulation and CBDC (Central Bank Digital Currency)](#)*
Target audience	*Financial Professionals, Regulatory and Compliance Officers, Blockchain and FinTech Entrepreneurs, Legal Professionals, Academics and Researchers, Students in Finance and Technology, Supply Chain Professionals, Tech Enthusiasts*
Digital skill level	*Advanced Level, Professional Development*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania*

| | *Lithuania* |
| | *Croatia* |

6. Ethical Considerations and Governance in Blockchain-enabled Food Supply Chains (Expert)

The course "Ethical Considerations and Governance in Blockchain-enabled Food Supply Chains" is designed to present the interplay of ethics, governance, and technology in the context of agrifood and food supply chains. It aims to equip participants with the skills to analyse and address the ethical implications of using blockchain in food supply chains, including issues related to fair trade, organic labelling, and animal welfare. Additionally, the course focuses on understanding the governance structures and decision-making processes necessary for the effective management of these supply chains. Participants will also explore the broader social and environmental impacts of blockchain technology, such as energy consumption and e-waste, and learn strategies to mitigate these effects. The course concludes with an examination of the current regulatory landscape, identifying the opportunities and challenges that lie ahead for the use of blockchain technology in the food business.

Learning Content	
Website link	*Ethical Considerations and Governance in Blockchain-enabled Food Supply Chains*
Target audience	*Professionals in Supply Chain Management, Blockchain*

	Technology Enthusiasts, Sustainability and Ethics Officers, Regulatory and Compliance Professionals, Academics and Researchers
Digital skill level	*Professional Development, Continuing Education*
Geographic scope - Country	*European Union* *Greece* *Cyprus* *Netherlands* *Luxembourg* *Ukraine* *Slovenia* *Italy* *Romania* *Lithuania* *Croatia*