The future of work in blockchain: Ireland and Europe

@CHAISE_EU
@CHAISE.EU
@CHAISE_EU
@CHAISE_EU

European Forecasts for Blockchain Labour Market, 2020 – 2026

28,092	Approx 46%	12,966	14,972
new jobs	of new jobs for 'new entrants'	new jobs for graduates	new Blockchain graduates forecasted

Irish Forecasts for Blockchain Labour Market, 2020 – 2026

850	Approx 44%	370	390
new jobs	of new jobs for 'new entrants'	new jobs for graduates	new Blockchain graduates forecasted

Key Points

Emerging technology has the potential to create many new jobs

- Global blockchain market is predicted to grow from 7 billion to over 160 billion by 2029

European Commission has identified Blockchain Technology as one of the key emerging technologies that is shaping Europe's future

- Blockchain is accepted internationally as both an emerging technology and emerging skill set, as reflected in the European Commission's blockchain strategy and the UK's National Blockchain Roadmap

Employers seek technical competencies combined with transversal skills and business acumen

- Most popular technical competencies in blockchain job adverts are coding, solutions design, frontend/backend development, and development of decentralized applications. The most prevalent business skills advertised are use case development, product development, product management, marketing, and finance skills. Finally, the most common transversal skills advertised are co-operation, teamworking, self-determination, self-competence, and communication skills

Need to expand specialist blockchain training courses/modules, as growth in emerging technologies largely relies on the availability of a competent and versatile workforce

- Training costs associated with blockchain companies recruiting from the general ICT graduate population may act as a constraint on growth

Importance of raising awareness about the transformative power of blockchain technology

What is Blockchain?

Blockchain is a ledger which cannot be changed that facilities the process of recording transactions and tracking assets in a business network

Such assets can be 'tangible' (house, car, cash, government services, land) or 'intangible' (intellectual property, patents, copyrights, branding). Virtually anything of value can be tracked on a Blockchain network

A simple analogy for understanding this technology is a video of an Excel sheet documenting all changes, to a process or product, by all parties

How many people work in Blockchain?

Blockchain technology is still developing from concept to application stage and labour market impact remains relatively limited

At present, the number of blockchain vacancies far outstrips the vacancy rate for other jobs

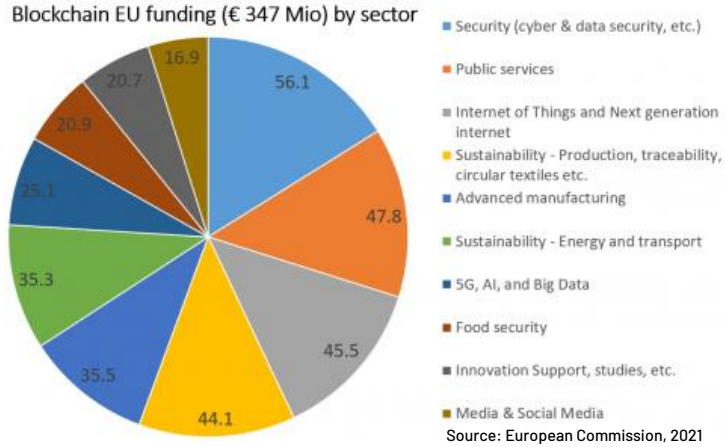
Our research uses a novel methodology to describe the nature of the current employment market in blockchain and provides a basis to forecast future demand and potential skills gaps

Interesting Use Cases:
Examples in the areas of supply chain (Ireland Craft Beverages; Blackwater Distillery; Moyee Coffee;), sport (Equideq), learning credentials (IOB), financial inclusion (AID:Tech) and societal (HEHOP)

Related EU projects and reports

- Blockchain4EU project (Joint Research Centre)
- Blockchain for digital government
- Blockchain Now and Tomorrow
- Distributed Ledger Technologies (DTLs) for Social and Public Good – Where to next?
- Digital Skills and Jobs Platform

Demand for blockchain skills is likely to grow rapidly as the technology continues to develop & adoption spreads across sectors



Source: European Commission, 2021

The creation of these resources has been funded by the ERASMUS+ program of the European Union under grant no. 621646-EPP-1-2020-1-FR-EPPKA2-SSA-B.

Economic and Social Research Council
digital futures at work research centre
University of Sussex Business School
ESRI Economic & Social Research Institute
CPI Institute of the Republic of Slovenia for Vocational Education and Training
Blockchain Ireland Education, Skills and Innovation Working Group

chaise blockchain skills for Europe

The future of work in blockchain: Ireland and Europe

@CHAISE_EU
@CHAISE.EU
@CHAISE_EU
@CHAISE_EU

Blockchain Jobs

- Vast majority of emerging blockchain jobs (81%) in Europe are concentrated in three detailed occupational groups: Software and Applications Developers and Analysts; Information and Communications Technology Services Managers; and Business Services and Administration Managers
- Skill requirements for companies engaging in blockchain are heavily concentrated in the areas of ICT and computer science

Workforce Characteristics

Education:
65% Postgraduate
23% Undergraduate

Gender:
<80% male | >20% female

Age:
26-30 approx. 37%
31-35 approx. 30%

Employment form:
mostly full-time

Main occupations:

- BC Architect
- BC Developer
- BC Manager

Main skills:

BC Architect

- Coding (C++, Python, Java)
- Systems & Networked thinking, analytical competence, problem solving
- Skills for (Blockchain) Use Cases development
- Business Development Skills
- Data /Network Security

BC Developer

- Coding (C++, Python, Java)
- Develop Decentralised Applications (on Ethereum, Bitcoin, Stellar)
- Systems & Networked thinking, analytical competence, problem solving
- Design-thinking competence, versatility & perspective taking
- Frontend/Backend Development

BC Manager

- Communication
- Cooperation competence & Team-working ability & emotional/ Social intelligence
- Self-determination & Autonomy
- Self-management/ organisation/ regulation & self-responsibility
- Decision competence & Responsibility-taking

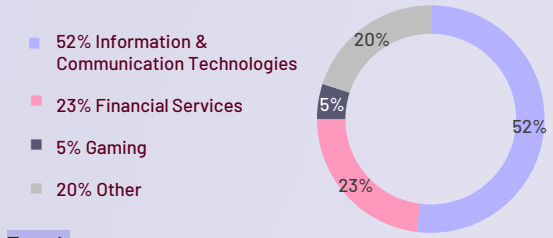
Employer Characteristics

Startups dominating the scene, but there is an increased number of corporate early adopters.

Age:
Average age is 35 years.

Size:
Majority of companies have less than 10 employees.

Industry/Sector :
Most of the companies operate in ICT Sector.



Trend:
Increased adoption of Blockchain technology in companies offering the following services: gaming industry, visual intelligence solutions, supply chain, decentralized cloud storage, healthcare, secure data encryption, digital advertising, education and consulting.

Challenges:
- Approx. 50% of firms experience recruitment difficulties
- Lack of regulation and standardisation

Opportunities:
- The global Blockchain market is expected to grow substantially
- Increased investment in blockchain technology by SMEs
- Growing interest in the technology by national governments

Skills Requirements & Provision

Ranking of skills and comparison with the previous year.

	Skills	Importance	Change
Tehnical & Blockchain specific Skills	Coding (C++, Python, Java)	54,17%	0 —
	Blockchain Solutions Design	50,00%	0 —
	Develop Decentralised Applications	35,00%	+2 ^
Professional / Buisness Skills	Use Cases development	45,83%	+1 ^
	Product Management Skills	35,00%	+2 ^
	Product Development Skills	35,00%	-2 v
Transversal Future Skills	Cooperation / Teamworking	55,00%	0 —
	Self-determination & Autonomy	50,83%	+3 ^
	Communication	50,00%	-1 v

The interviewees highlight that:
- Demand from both education and job market seems to continue to increase and organizations are actively providing continued education through workshops, seminars, integration into existing programs to meet this demand
- "We don't only need builders of the technology but also appliers, who understand where it can be beneficial and disadvantageous to apply".

The creation of these resources has been funded by the ERASMUS+ program of the European Union under grant no. 621646-EPP-1-2020-1-FR-EPPKA2-SSA-B.

PUBLICATIONS AVAILABLE AT:
https://chaise-blockchainskills.eu/publications-and-reports/

ESRI BLOCKCHAIN SKILLS CONFERENCE, 1 JUNE 2022:
https://www.esri.ie/events/virtual-conference-blockchain-skills-conference

chaise
blockchain skills for Europe