UNIVERSITATEA LUCIAN BLAGA DIN SIBIU

HPI Hasso Plattner Institut

CLUJ IT

Sibiu IT Cluster

SID 2025
Sibiu Innovation Days
06-07 November, Sibiu - RO

EMERGING DISRUPTIVE TECHNOLOGIES:
Balancing Innovation, Risks, and Societal Impact

Trends and platforms for efficient upskilling - from personal growth to collective impact

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How it all started

The challenges of education today

	Micro companies (<10 employees)	Small companies (10-49 employees)	Medium-sized companies (50-249 employees)	Large companies (250+ employees)
Difficulties in **finding employees** with the right skills	53%	65%	68%	72%
Regulatory obstacles or administrative burden	34%	30%	29%	26%
Limited **access to finance**, including possibly due to receiving payments late	21%	19%	13%	10%
Unfair competition	20%	14%	12%	7%
Limited demand for your products or services	16%	15%	16%	13%
Making your **business more sustainable** and environmentally friendly	10%	13%	14%	14%
Difficulties with **digitalisation**	8%	8%	8%	11%
Limited access to **foreign markets**	6%	6%	6%	5%
Other [SPONTANEOUS]	5%	3%	2%	5%
None of these [SPONTANEOUS]	8%	7%	7%	6%
Don't know/No answer	1%	1%	2%	1%

SMEs

* https://europa.eu/eurobarometer/surveys/detail/2961

FIGURE 3

2024 Global Cybersecurity Workforce Gap

4,762,963 +19.1% YoY

REGIONS

NORTH AMERICA
542,687
+4.0%

EUROPE
392,320
+12.8%

ASIA-PACIFIC
3,374,580
+26.4%

LATIN AMERICA
328,397
-5.7%

MIDDLE EAST & AFRICA
124,978
+11.8%

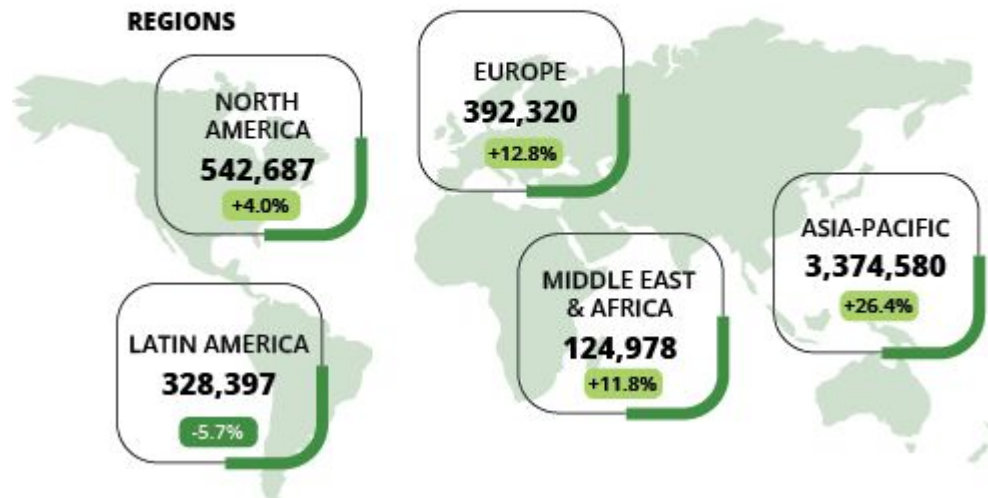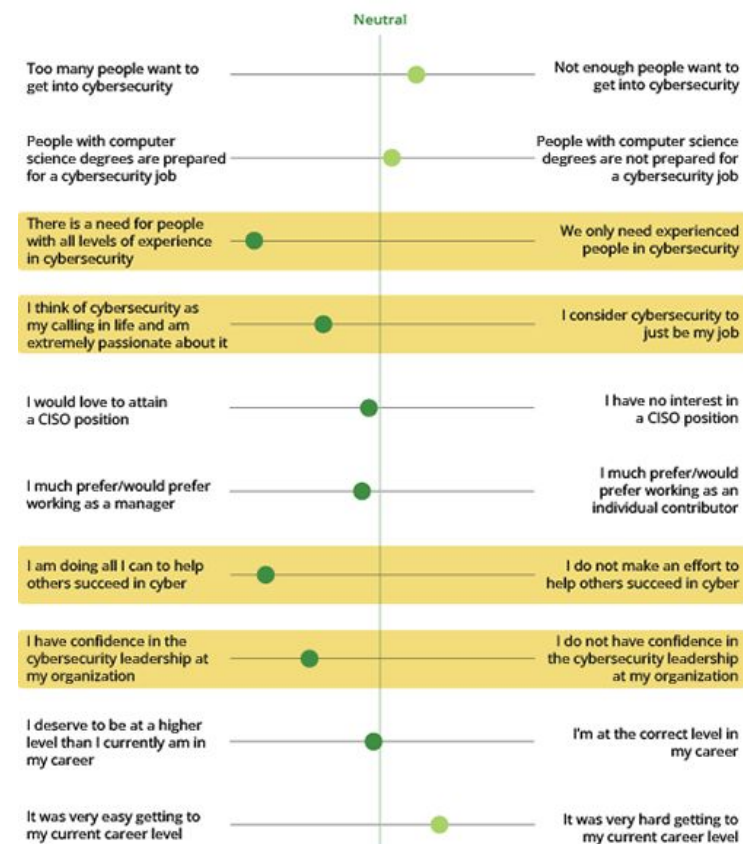* https://www.isc2.org/Insights/2024/10/ISC2-2024-Cybersecurity-Workforce-Study

FIGURE 10

In your opinion, where do you land in each of the following scales in terms of your cybersecurity career and cybersecurity careers in general?

Neutral

Too many people want to get into cybersecurity — Not enough people want to get into cybersecurity

People with computer science degrees are prepared for a cybersecurity job — People with computer science degrees are not prepared for a cybersecurity job

There is a need for people with all levels of experience in cybersecurity — We only need experienced people in cybersecurity

I think of cybersecurity as my calling in life and am extremely passionate about it — I consider cybersecurity to just be my job

I would love to attain a CISO position — I have no interest in a CISO position

I much prefer/would prefer working as a manager — I much prefer/would prefer working as an individual contributor

I am doing all I can to help others succeed in cyber — I do not make an effort to help others succeed in cyber

I have confidence in the cybersecurity leadership at my organization — I do not have confidence in the cybersecurity leadership at my organization

I deserve to be at a higher level than I currently am in my career — I'm at the correct level in my career

It was very easy getting to my current career level — It was very hard getting to my current career level

Base: 15,852 global cybersecurity professionals

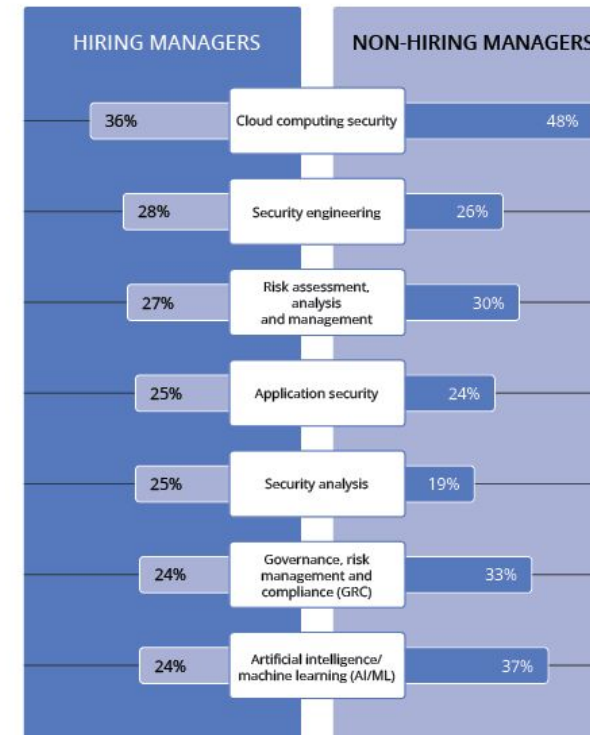# The challenges of education today

FIGURE 16

51%
of respondents somewhat or completely agree that nontechnical skills will be more important for cybersecurity professionals in an AI-driven world.

Base: 15,571 global cybersecurity professionals

* https://www.isc2.org/Insights/2024/10/ISC2-2024-Cybersecurity-Workforce-Study

FIGURE 6

What technical skills are you most looking for right now when hiring?

What technical skills do you think are most in demand for security professionals looking to advance their careers?

HIRING MANAGERS		NON-HIRING MANAGERS
36%	Cloud computing security	48%
28%	Security engineering	26%
27%	Risk assessment, analysis and management	30%
25%	Application security	24%
25%	Security analysis	19%
24%	Governance, risk management and compliance (GRC)	33%
24%	Artificial intelligence/ machine learning (AI/ML)	37%

Base: 7,698 global cybersecurity professionals   Base: 8,154 global cybersecurity professionals

Creating what I wished existed
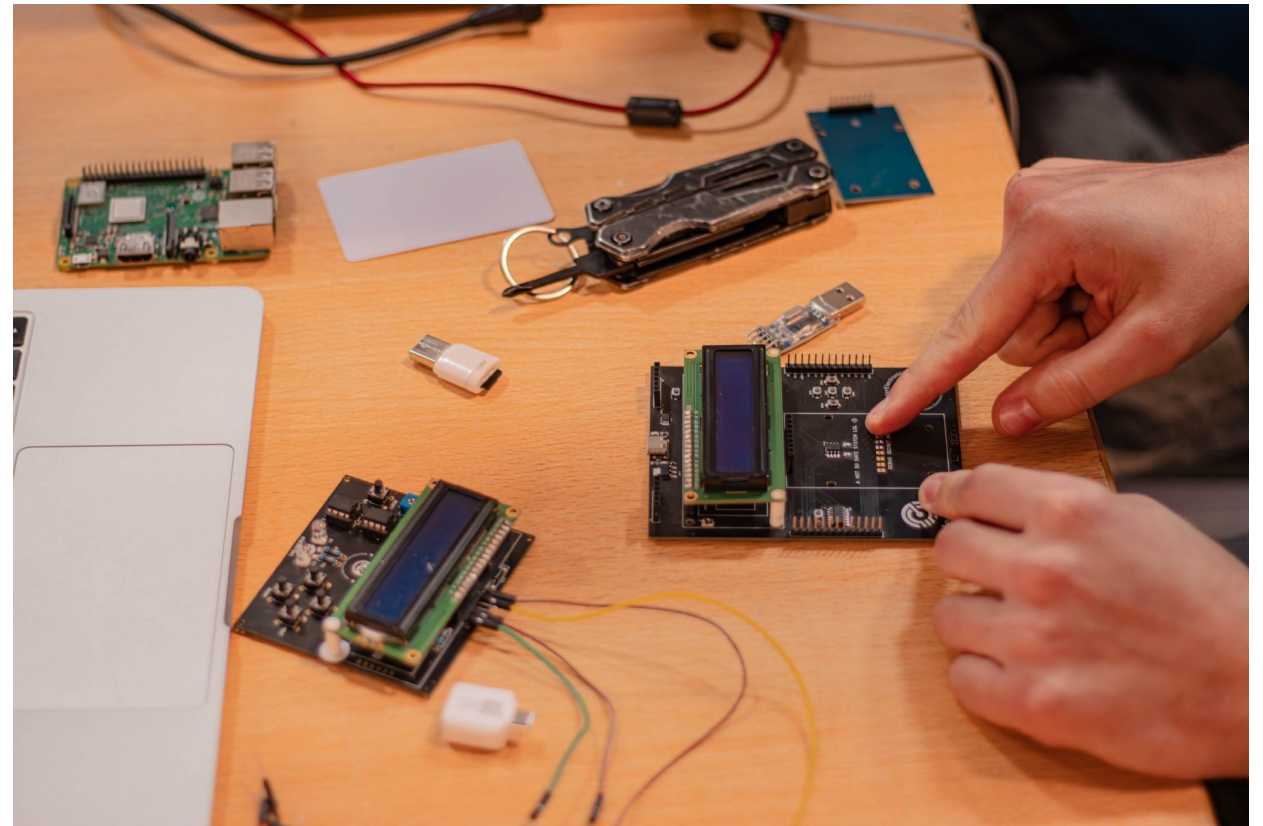
Building scalable learning ecosystems

Educational Programs

Community - Hacking Village
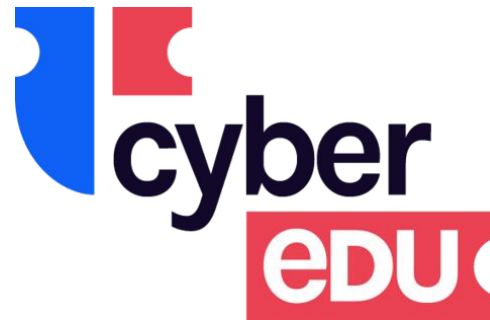
Public & private resilience

What happens when learning becomes experiential

What happens when learning becomes experiential

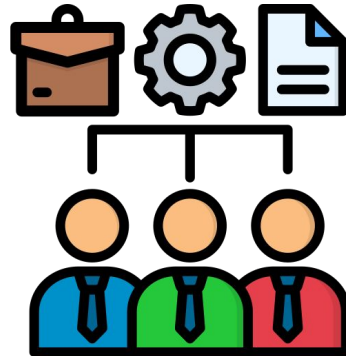
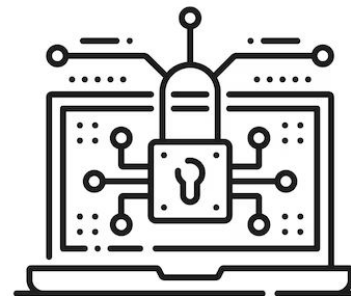Growth of CyberEDU Educational Programs (2020–2025)
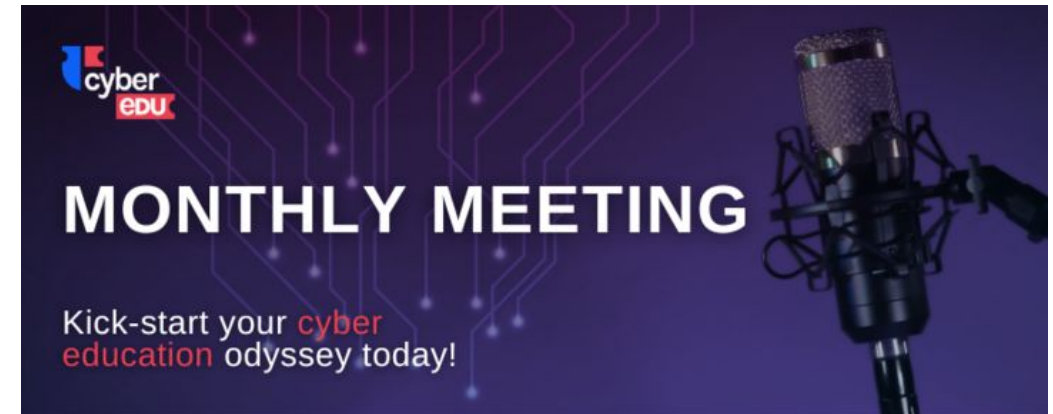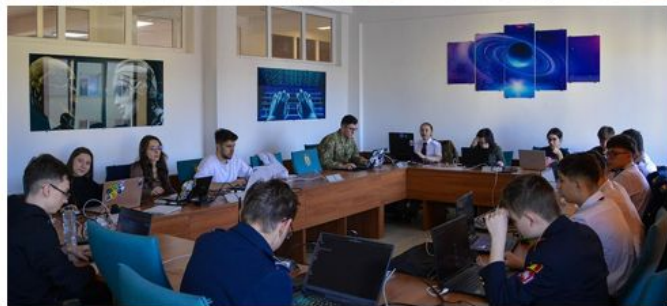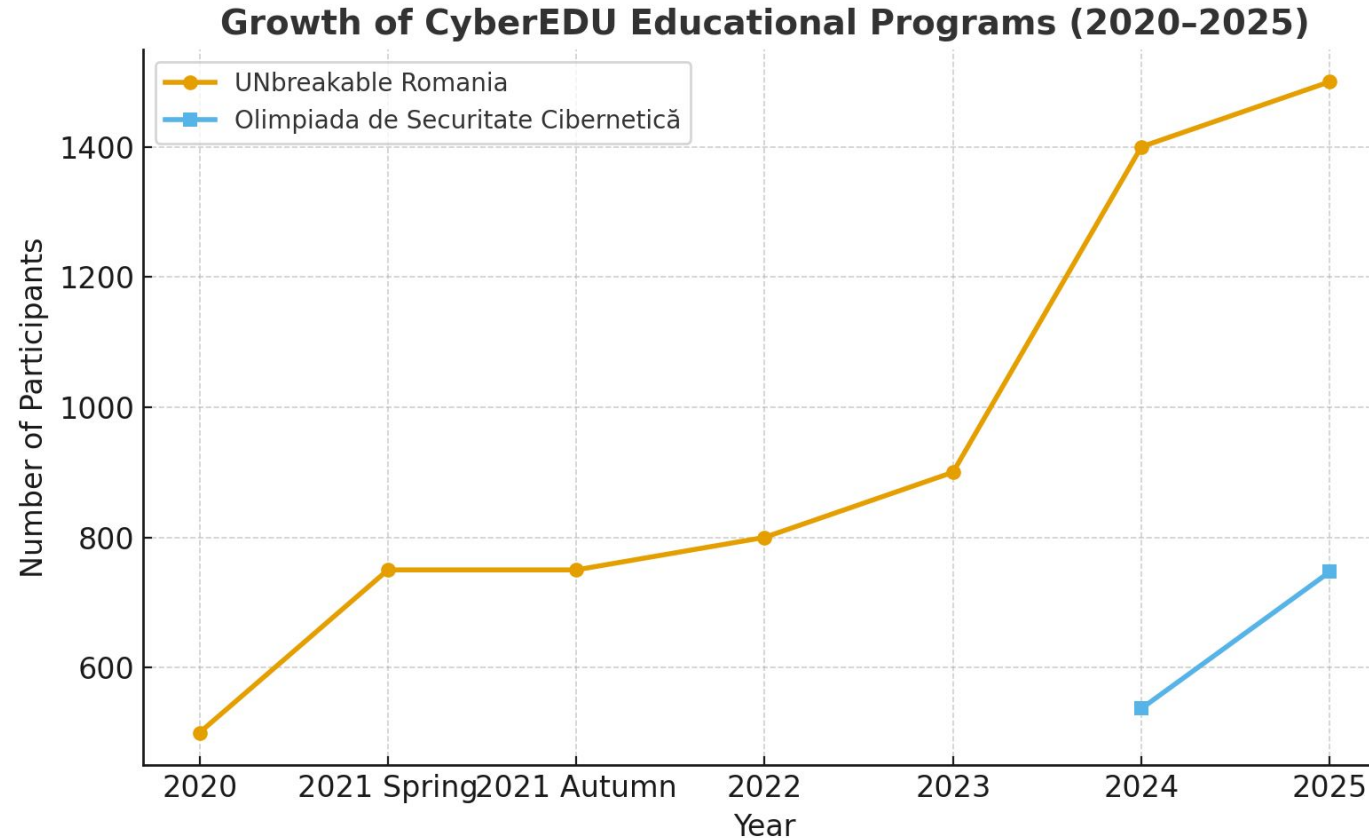
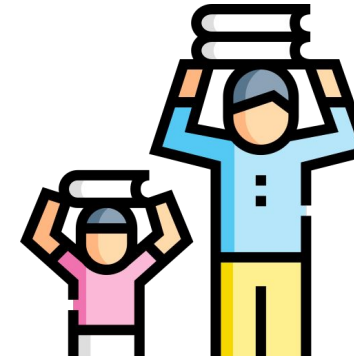# Trends shaping the future of upskilling

Gamification

Cross-sector

Hardware & Software

Lifelong learning

AI integration

Conclusion

Education goes beyond memorizing information - it's about cultivating strategic thinking and problem-solving skills.

Thank you for your attention!

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