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ASSOCIATION OF FIBER OPTICS FROM ROMANIA

Future Internet specialists.
Where will we find or wait for them?

Cornel Barbut, AFOR, Vice-President

7th of April, Sofia, 2025

Future Internet specialists.
Where will we find or wait for them?

1. Investments in (new) technology = investments in training/learning
2. Where will we find or wait for them?
3. Future Adults internet specialits
4. Future Youth internet specialists
5. Skills required for future internet specialists
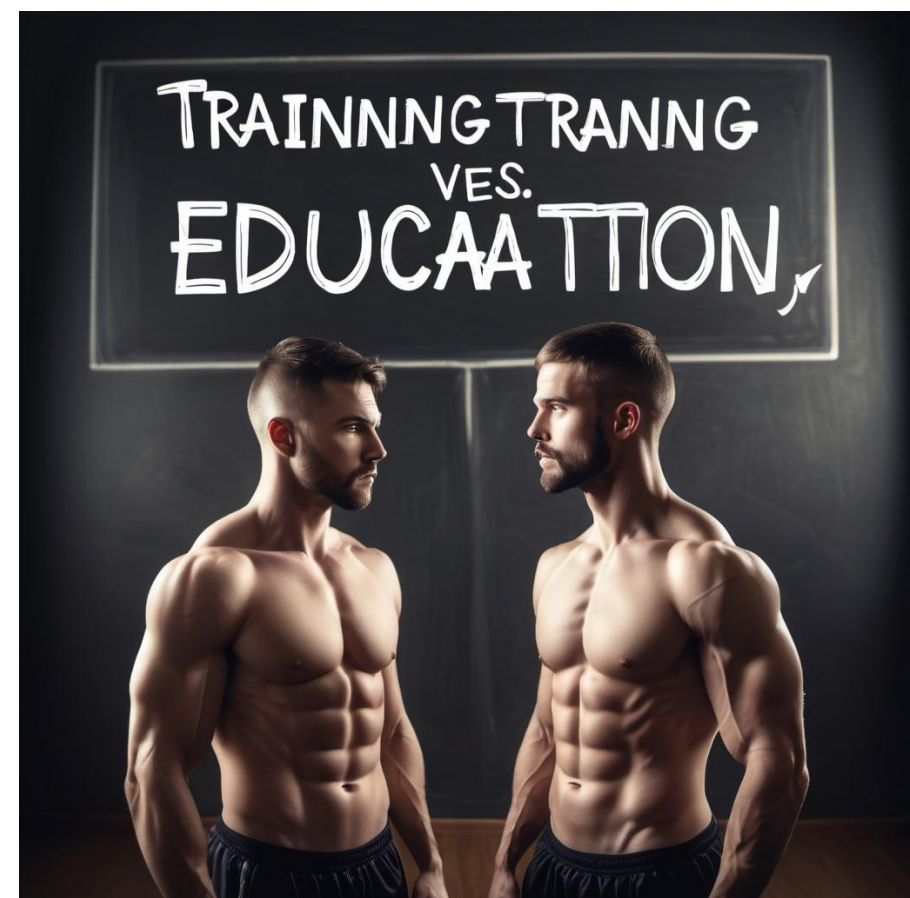6. Potential ways for preparing future internet specialists
7. Conclusions

Future Internet specialists

1. Investments in (new) technology = investments in training/learning

Future Internet = ?

Internet of THINGS

Internet of EVERYTHING

Next Generation Internet

AI

Smart Cities

Quantum Internet

X (new) Social Media

…………………

People ?

Investments include Trainings ?

When you buy new technology for your company do you invest also in people/trainings?

Do you invest in Trainings as in R&D or Innovation?

Do you invest in Education as CSR or for your employees' families?

Do you have in your company Mentors or Practice Tutor?

……..

2. Where will we find or wait for them?

HR – interviews – head-hunting

Waiting for them to come to our office

Running for them in Social Media

AI support

Schools/Universities

…………………

Where from can come to us the future internet specialists?

High-schools/VET schools?

Secondary schools ?

Primary schools ?

Trainings versus Education

Adults versus Youngs

Age of future internet specialists?

Work contracts will be the same?

HR Recruitment = 1 – 6 months process
Education for new jobs = 5 years at least

We, adults, are waiting for youth to come to our open jobs?

Relationship in the companies between the generations

SCHOOL

UNIVERSITY

COMPANY

3. Future Adults internet specialists

Some examples from my experience in Fiber Optic Networks:

- ✓ Fiber Optic Courses
- ✓ Fiber Optic Infrastructure Courses
- ✓ Creativity in Business
- ✓ 5 days / 3 days / 1 day courses
- ✓ Workshops online/offline
- ✓ Competitions ? Do you grow in your skill?
- ✓ Standards – time for new standards
- ✓ Education (VET) – learning by teaching/mentoring/tutoring

4. Future Youth internet specialists

Some examples for preparing the future Internet specialists as Youth:

- ✓ HR Recruitment / Talent Search
- ✓ VET Education
- ✓ Youth Competitions / Olympic Games
- ✓ Professional Camps
- ✓ Practice / Internship
- ✓ Hackathons

4. Future Youth internet specialists
<u>Competitions for Internet for youth</u>

worldskills

2. Information Network Cabling

8. Mobile Applications Development

9. IT Software Solutions for Business

17. Web Technologies

23. Autonomous Mobile Robotics

39. IT Network Systems Administration

40. Graphic Design Technology

48. Industry 4.0

53. Cloud computing

54. Cyber Security

63. Robot Systems Integration

4. Future Youth internet specialists
Competitions for Internet for youth

Information Network Cabling Competition

Performance in Education

Learning Journey for Experts & Students

5. Skills required for future internet specialists

In 2030 the jobs will require 90% new skills

Which skills do you think will be required for future internet specialists?

WEF Future of Jobs Report 2025:

1.   **Analytical/Creative Thinking**
2.   **Resilience**
3.   **Flexibility**
4.   **Agility**
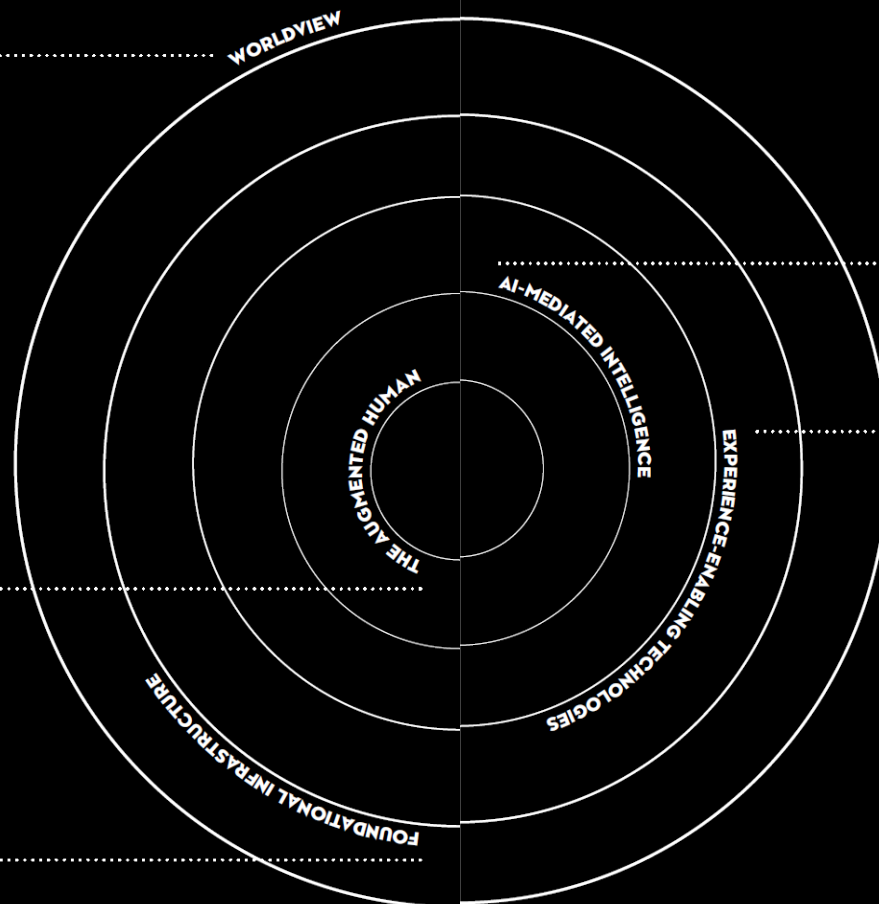5.   **Curiosity**
6.   **Lifelong learning**

The AI-mediated framework

- Narratives, cultural norms and values, ethics, and governance.

WORLDVIEW

AI-MEDIATED INTELLIGENCE

THE AUGMENTED HUMAN

EXPERIENCE-ENABLING TECHNOLOGIES

FOUNDATIONAL INFRASTRUCTURE

- Liquid identity, multiple representations, participatory.

- Scalable systems enabling everything in the inner layers.

- Includes interoperable platforms, quantum computing, and digital economies.

AI systems personalising and adapting interactions.

- **Key enablers:** Contextual data and Agentic AI.

Tools bridging digital and physical worlds.

- **Examples:** Immersive interfaces (XR), smart ecosystems, Physical AI.

Copenhagen Institute for Future Studies

Exploring the futures of Technologies, 2025

WEF Future of Jobs Report 2025:

Technologies driving business transformation:
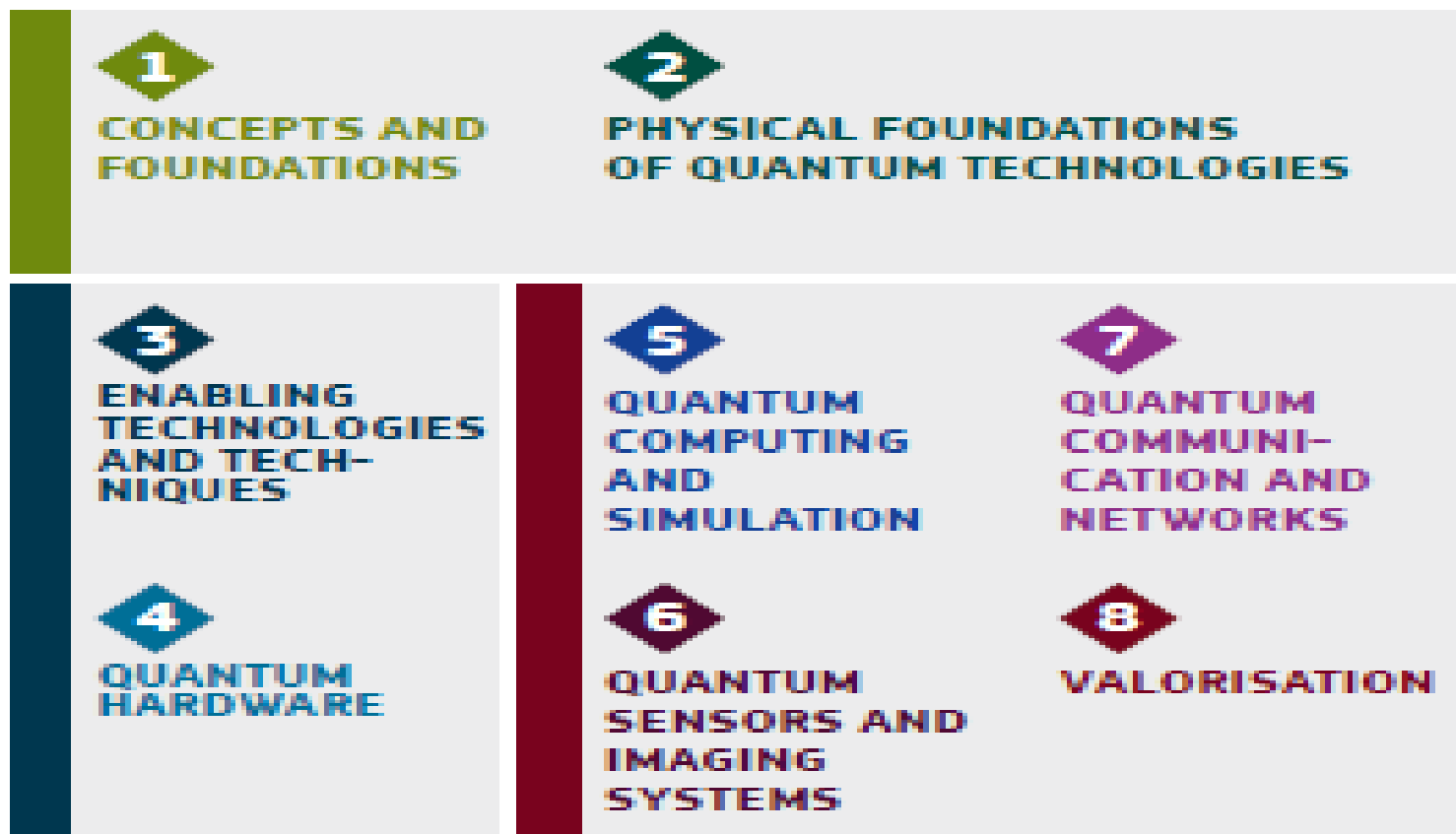
AI and information processing technology: 86%

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INTERNATIONAL YEAR OF Quantum Science and Technology

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5. Skills required for future internet specialists
Skills for Quantum Technologies

European Competence Framework for QT

QUANTUM FLAGSHIP

1 CONCEPTS AND FOUNDATIONS

2 PHYSICAL FOUNDATIONS OF QUANTUM TECHNOLOGIES

3 ENABLING TECHNOLOGIES AND TECHNIQUES

4 QUANTUM HARDWARE

5 QUANTUM COMPUTING AND SIMULATION

6 QUANTUM SENSORS AND IMAGING SYSTEMS

7 QUANTUM COMMUNICATION AND NETWORKS

8 VALORISATION

WEF Future of Jobs Report 2025:

Technologies driving business transformation:

Quantum and encryption: 12%

5. Skills required for future internet specialists

Skills Development in Europe

EAAL - European Agenda for Adult Learning 2021 – 2030: **10% in 2020**

NEAAL 2030 – New European Agenda for Adult Learning 2030: **60% in 2030**

The Reskilling Revolution by World Economic Forum

(transforming education, skills and learning) – Education 4.0

Open Education/Open Internet/Open Access/

VET Education

VET Campus

Centers of (Vocational) Excellences

6. Potential ways for preparing future internet specialists

YOUTH:
Students >18
VET schools >15
ADULTS:
Employees
New/Future Employees
Jobless
SENIORS

- Learning / Micro-Learning
  - AI framework status – Knowledge/Speaking abut/ Implementation/Learning
- Open Education/Open Internet/Open Access/
  - VET Education
  - VET Campus
- Centers of Excellences

Trainings

Practice

Apprenticeship

Education

Coaching

Mental Training

Creativity Workshops

Team Buildings

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7. Conclusions

All present internet specialists are invited to think and involve in preparation of future specialists.
Where to find them?
How to prepare them?
What skills do they need?

Some proposals for your fast consideration:
➢ Fiber Optic / Internet Competition in Bulgaria & Balkans in VET schools
➢ In 2026 first European Competition on Information Network Cabling for youth <25 years
➢ Center of Excellence in Fiber Optic Technology/Photonics in Bucharest – need for partners
➢ Involve yourself in Learning, Education and Training for future jobs in your companies

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