How does the Digital Single Market support Artificial Intelligence

COCIR Annual General Assembly
"How to put Artificial Intelligence into daily Healthcare"
Brussels,12 April 2019

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**European Commission
DG CONNECT – Communications
Networks, Content and Technology**

European Commission

HORIZON 2020

Digital Single Market Strategy

*The European Commission has **placed digital at the core of its strategy**, by setting the Digital Single Market as **one of its 10 priorities***

*The aim is to **open up digital opportunities** for people and business and to make the EU's single market **fit for the digital age***

Digital Single Market /// Mid-Term Review

- ☑ 16 key initiatives
- ☑ 35 proposals
- ☑ Further actions on:
  - data economy
  - cybersecurity
  - online platforms
  & more

European Commission

One of the fields identified to deliver: "Digital transformation of health and care"

Artificial Intelligence - A priority for Europe

AI is helping us to solve some of the world's biggest challenges.

Like the steam engine or electricity in the past, AI is transforming our world, our society and our industry.

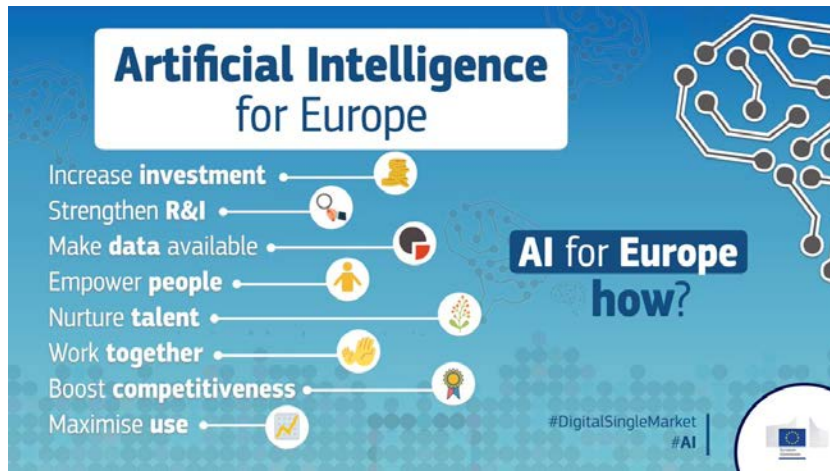…one of the most strategic technologies of the 21st century.

The stakes could not be higher. The way we approach AI will define the world we live in.

Communication Artificial Intelligence for Europe COM(2018) 137 final

Boost EU's technology and industrial capacity and AI uptake

Address AI's socioeconomic impact

Ensure an appropriate ethical and legal framework

The European Strategy on AI

![European Commission logo]

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The new EU initiative on AI

Publication of Ethics guidelines for trustworthy AI, 8 April 2019

First draft of the European AI ethics guidelines, 18 December 2018

Coordinated Plan on Artificial Intelligence, 7 December 2018

Commission Communication on Artificial Intelligence for Europe, 25 April 2018

Declaration of Cooperation on Artificial Intelligence for Europe, 10 April 2018

High level group of experts

Are your algorithms:

- Ensuring human agency & oversight
- Technically robust & safe
- Respecting Privacy and data governance
- Transparent
- Diverse, non-discriminatory & fair
- Protecting societal & environmental well-being
- Accountable

Seven essentials for ethical AI. Create AI humans can trust.

#AI #ArtificialIntelligence

7 key requirements to make AI trustworthy Published on 8 April 2019

The European AI Alliance
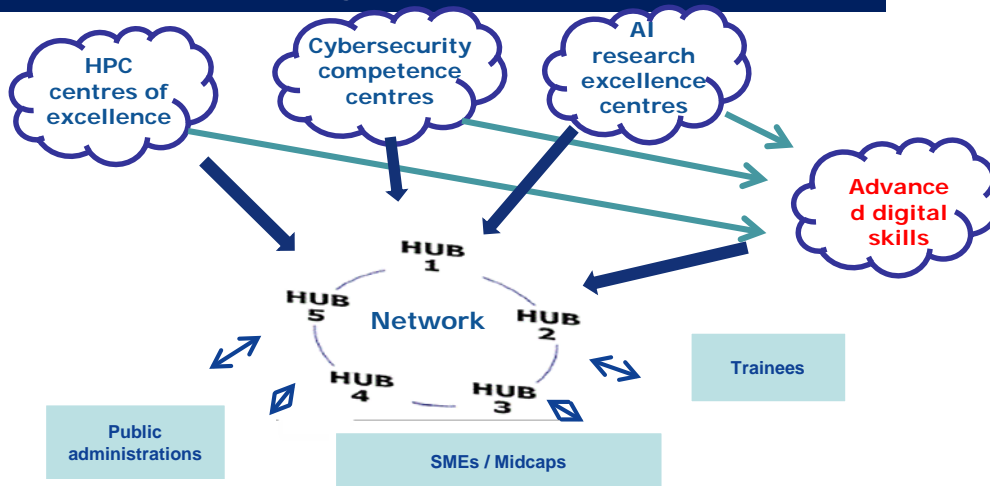
Joint reflection on the future of AI in Europe

Full mobilisation of all stakeholders needed: industry, academia, civil society

Supported by high-level expert group on AI and an online platform

Goal: Making it the world-wide reference platform for thinking and reflecting on AI

Digital Innovation Hubs: Deployment and best use

Digital Innovation Hubs will diffuse digital capacities - high performance computing, artificial intelligence, cybersecurity and digital skills - across the economy enabling the digital transformation of the industry and public sector organisations

HPC centres of excellence

Cybersecurity competence centres

AI research excellence centres

Advanced digital skills

HUB 1

HUB 5

HUB 2

HUB 4

HUB 3

Network

Trainees

Public administrations

SMEs / Midcaps

Broad roll-out of digital advances

Artificial intelligence for health and care in Europe

- *Slow uptake - only 16% of healthcare facilities use AI tools*

- *Low confidence among practitioners*

- *Limited access to high quality data to train AI systems*

- *Regulatory issues*

- *High adoption costs*

Opportunities of artificial intelligence for health and care

- *Empower citizens to better manage their health*

- *Enable faster and more accurate diagnoses*

- *Support clinicians in taking informed decisions*

- *Allow for more precise treatments and personalised medicine*

- *Improve drug testing and clinical trials – improve patient safety*

- *Provide cost-effective solutions*

Digital Transformation of Health and Care

Give citizens **better access** to their **health data**, everywhere in the EU

Use **digital** services for citizen empowerment and person-centred care

Connect and **share** health data for research, faster diagnosis and better health outcomes

EC funding for AI-based research in health and care

- *Modelling and prediction of disease and in-silico clinical trials*

- *Decision Support Systems for diagnostics and treatments*

- *Intelligent health and care advice systems (choice of drugs, devices, procedures, interventions, diagnostics methods, etc.)*

- *AI-based solutions for independent living*

HORIZON 2020

Around **€2.6 billion**
over the duration of Horizon 2020
on AI-related areas
(robotics, big data, health, transport,
future and emerging technologies).

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DIGITAL IN THE NEXT MFF: OVERVIEW

Digital Europe:
Capacities & roll out

1. High Performance Computing
2. Artificial Intelligence
3. Cybersecurity
4. Advanced digital skills
5. Digital transformation and interoperability

Digital in Horizon Europe
R&D&I

1. Digital under "global challenges"
   - Digital and industry cluster
   - Digital in other clusters – security, health, mobility, energy, environment,..
2. Open Innovation
3. Research Infrastructure under Open Science

Connecting Europe Facility - Digital Connectivity

- 5G roll out
- BB 4EU, Connecting communities
- Synergies with Transport /Energy

Creative Europe
MEDIA

Invest EU
Research, innovation & digitisation

European Regional Development Fund / Cohesion Fund

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Investing in the future: **Digital Europe** Programme

Digital transformation & **Interoperability**
1.3 € billion

Advanced digital skills
0.7 € billion

Cybersecurity & **trust**
2 € billion

€ **9.2** billion in total

High performance computing
2.7 € billion

Artificial intelligence
2.5 € billion

#EUBudget
#DigitalEurope

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Investing in the future:
Digital Europe Programme

€**2.5 billion** for **Artificial intelligence**

Bring the power of the AI to **businesses & public administrations**

Strengthen **testing and experimentation** facilities across the EU

Facilitate safe **access** and **storage** of data and algorithms

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Conclusions

- *AI is an area of strategic importance for Europe*

- *AI-based solutions can speed up the digital transformation of health and care in Europe*

- *The Commission supports AI solutions for health in care through research, shared data infrastructure and legislative frameworks*

- *Multi-stakeholder approach*

THANK YOU!