



European Union | European Regional Development Fund

Artificial Intelligence in Health

Online Discussion

Thursday 16 July 2020 | Online

Artificial Intelligence in Health

Agenda and Introduction

Arnault Morisson Thematic Expert in Research and Innovation

Interreg Europe



Research

and innovation

European Union | European Regional Development Fund

Agenda



Introduction (10:30-11:50)

- Agenda and technical details
- Who's who
- Covid-19 and Artificial Intelligence in Health
- Presentation of the peer review held in December

Interregional learning from the peer review recommendations (11:50-11:20)

- Charlotte Trap-Kinberg
- Raniero Pittini
- Sven Parkel

Structured discussion (11:20-11:55)

- Regional Perspectives
- Covid-19 impacts
- European initiatives

Conclusions (11:55-12:00)



Who's Who?

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Roundtable introduction

Covid-19 and Artificial Intelligence in Health

Research and innovation

OECD Report - using artificial intelligence to help combat COVID-19

Al in health is at the centre of COVID-19 responses:

- understanding the virus and accelerating medical research on drugs and treatments,
- detecting and diagnosing the virus, and predicting its evolution,
- assisting in preventing or slowing the virus' spread through surveillance and contact tracing,
- responding to the health crisis through personalised information and learning,
- monitoring the recovery and improving early warning tools.
- To help facilitate the use of AI throughout the crisis, policymakers should encourage the sharing of medical, molecular, and scientific datasets and models on collaborative platforms to help AI researchers build effective tools for the medical community, and should ensure that researchers have access to the necessary computing capacity.
- To realise the full promise of AI to combat COVID-19, policymakers must ensure that AI systems are trustworthy and aligned with the OECD AI Principles: they should respect human rights and privacy; be transparent, explainable, robust, secure and safe; and actors involved in their development and use should remain accountable.

Covid-19 and Artificial Intelligence in Health

Research and innovation

OECD Report - using artificial intelligence to help combat COVID-19

Open data projects and distributed computing to find Al-driven solutions to the pandemic, e.g. <i>drug and vaccine development</i>	Detection	Early warning Detecting anomalies and digital "smoke signals", e.g. <i>BlueDot</i>	Diagnosis Pattern recognition using medical imagery and symptom data, e.g. <i>CT scans</i>	
	Prevention	Prediction Calculating a person's probability of infection, e.g. <i>EpiRisk</i>	Surveillance To monitor and track contagion in real time, e.g. <i>contact tracing</i>	Information Personalised news and content moderation to fight misinformation, e.g. via social networks
	Response	Delivery Drones for materials' transport; robots for high- exposure tasks at hospitals, e.g. <i>CRUZR robot</i>	Service automation Deploying triaging virtual assistants and chatbots, e.g. Canada's COVID-19 chatbot	
	Recovery	Monitor Track economic recovery through satellite, GPS and social media data, e.g. <i>WeBank</i>		

Figure 1. Examples of AI applications at different stages of the COVID-19 crisis

Accelerating research



Peer Review

- For managing authorities and local and regional policymakers.
- Two days onsite face-to-face exchanges with experts (peers) from other regions on concrete policy challenges.
- We organised a peer review in Region SUD on 17-18 December 2019 on 'integrating the priority artificial intelligence in health into Region's SUD Smart Specialisation Strategy (S3)'.
- You can access the peer review report <u>here</u>







Interregional learning from the peer review recommendations



Peers

- Charlotte Trap-Kinberg, Project Manager, Innovation and New Technologies (AI) Capital Region of Denmark, Centre of Regional Development, Denmark (MEDTECH4EUROPE)
- Raniero Pittini, Head of Swiss Medtech Center (SMTC) Switzerland Innovation Park Biel/Bienne, Espace Mittelland (CH02), Switzerland (DIGITAL REGIONS)
- Sven Parkel, General Manager Tartu Biotechnology Park, Estonia

Policy Challenges

The Regional Council of Region SUD-Provence-Alpes-Côte-d'Azur had the following policy challenges:

- Improved insertion of 'Artificial Intelligence in the health sector' in our smart specialisation strategy:
- Better policymaking and improved targeting of structural funds (mainly ERDF) on AI related issues in the health sector.

The peer review was structured around four thematic blocks: (1) Revising S3 to Integrate AI in Health, (2) Financing AI in Health, (3) Digitalisation Strategies - AI in Health, (4) International Dimension and Value Chain.



(1) Revising S3 to Integrate the Priority 'AI in Health'

- Involve users (i.e. hospitals) awareness raising: spread AI knowledge through conferences, events..., accompany SMEs in adapting AI for their business models.
- Promote mission-oriented or challenge-based approach to solve very practical challenges – actors collaborating together to solve health-related challenge.
- Define issues for data quality, access, ownership, security, infrastructure, regulation, ...
 - $\circ\;$ create a task force to identify obstacles and solutions
 - $\circ~$ consider data sandbox / data lake approaches
 - $\circ~$ show political support, targeted lobbying towards key organisations
 - $\circ~$ build on regional open data initiatives (Data Sud platform)
 - $\circ~$ map who owns the data, who has access to data, and who can share the data.
- Follow the UN development goals (SDGs): map and match relevant thematic objectives to include ethical considerations for example.



(2) Financing AI in health

- Make use of remnants of current ERDF funding programme (2014-2020) possibility to pilot test some early ideas/initiatives to help structure AI/health actions?
- Make use of ERDF funding (2021-2027) with co-financing need to understand how to promote collaboration between actors, especially large private companies with SMEs but also hospitals/SMEs
- Make use of European Green deal subtopics on AI under review...demonstrate positive environmental benefits (e.g. e-health, sustainable hospitals, ...)
- Make use of vouchers collaborative vouchers (such as Innosup01 approach for cross sectoral vouchers) – e.g. generally vouchers have less red tape, really positive feedback from Start-ups, SMEs, and private companies for collaborative innovation



(3) Digitalisation strategies – AI in Health

- Respond to data issues
 - know the legislation well on how to access and use the data
 - share the knowledge to private companies and end-users
 - there are bottlenecks and regulations (i.e. GDPR), try to limit as much as possible regulations
 - Standardisation
 - Cybersecurity issue, a strong cybersecurity partner is a strength for internationalisation
- Create the opportunities to promote the digitalisation of companies
 - It should not be a top-down approach
 - An emphasis on success stories to promote digitalisation take up
- Promote the adoption of AI in SMEs the importance of skills and infrastructures



(4) International dimension and value chain

- S3 Industrial Modernisation Platform in AI, MedTech... promote interregional collaboration and prepare ground for 5C type funding model.
- Collaborate with Digital Innovation Hubs (DIHs) collaborate on creating an interregional DIH.
- Clusters facilitating interregional collaboration for the benefit of SMEs, for instance with innovation vouchers and broader internationalisation actions.



Structured Discussion

Structured Discussion

Research and innovation

Regional Perspective

What are some initiatives to promote Artificial Intelligence in Health in your region?

COVID-19 Impacts

 How is COVID-19 accelerating the transition for Artificial Intelligence in Health in your region?

European Initiatives

 What European initiatives are emerging to support the sector? What are some opportunities and challenges?



Conclusions





- Follow-up online article
- Survey
- Online discussion on European Value Chains (EVCs) on Thursday 23 July 2020, 10:30-12:00 (CEST).



Thank you!