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How to improve the Epidemic Intelligence Practices in Public / Veterinary Health Agencies: the MOOD's way

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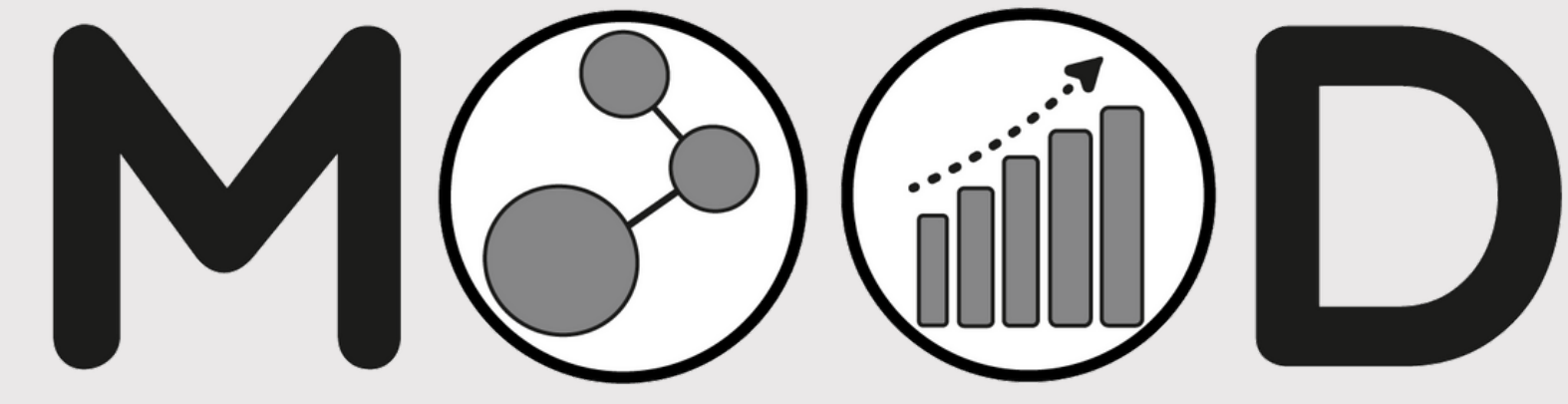
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How to improve the Epidemic Intelligence Practices in Public / Veterinary Health Agencies: the MOOD's way



MOnitoring **O**utbreaks for **D**isease surveillance in a data science context

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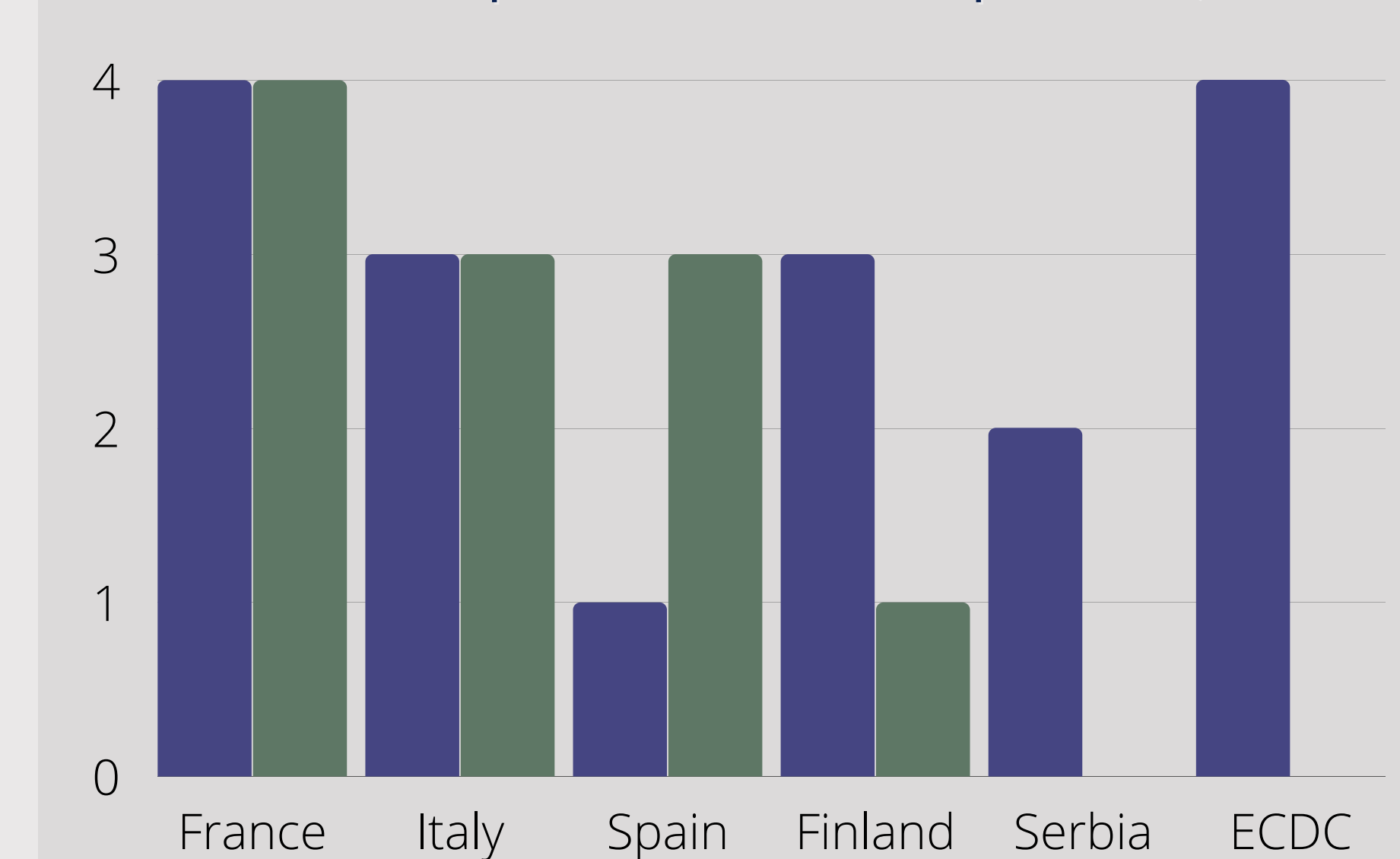
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Purpose

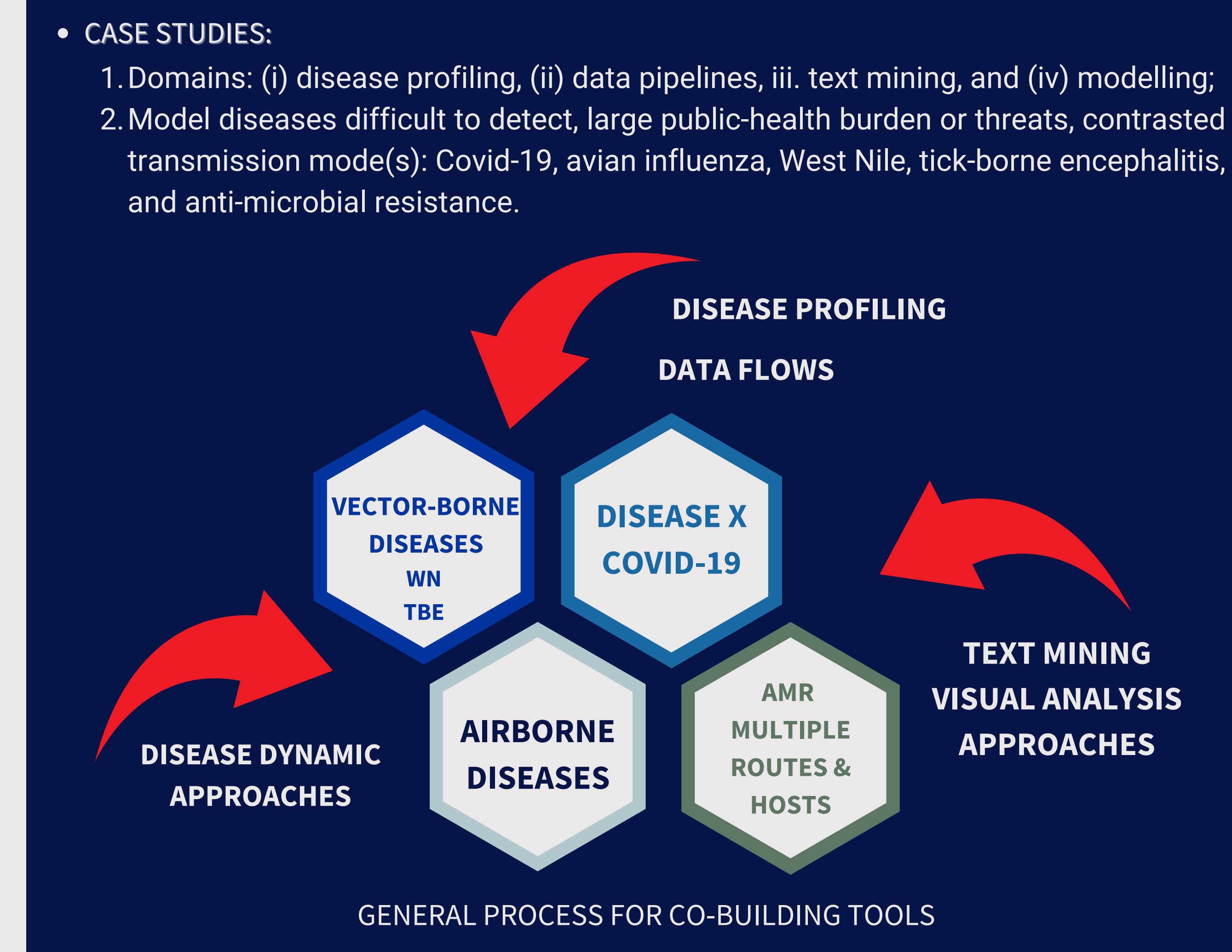
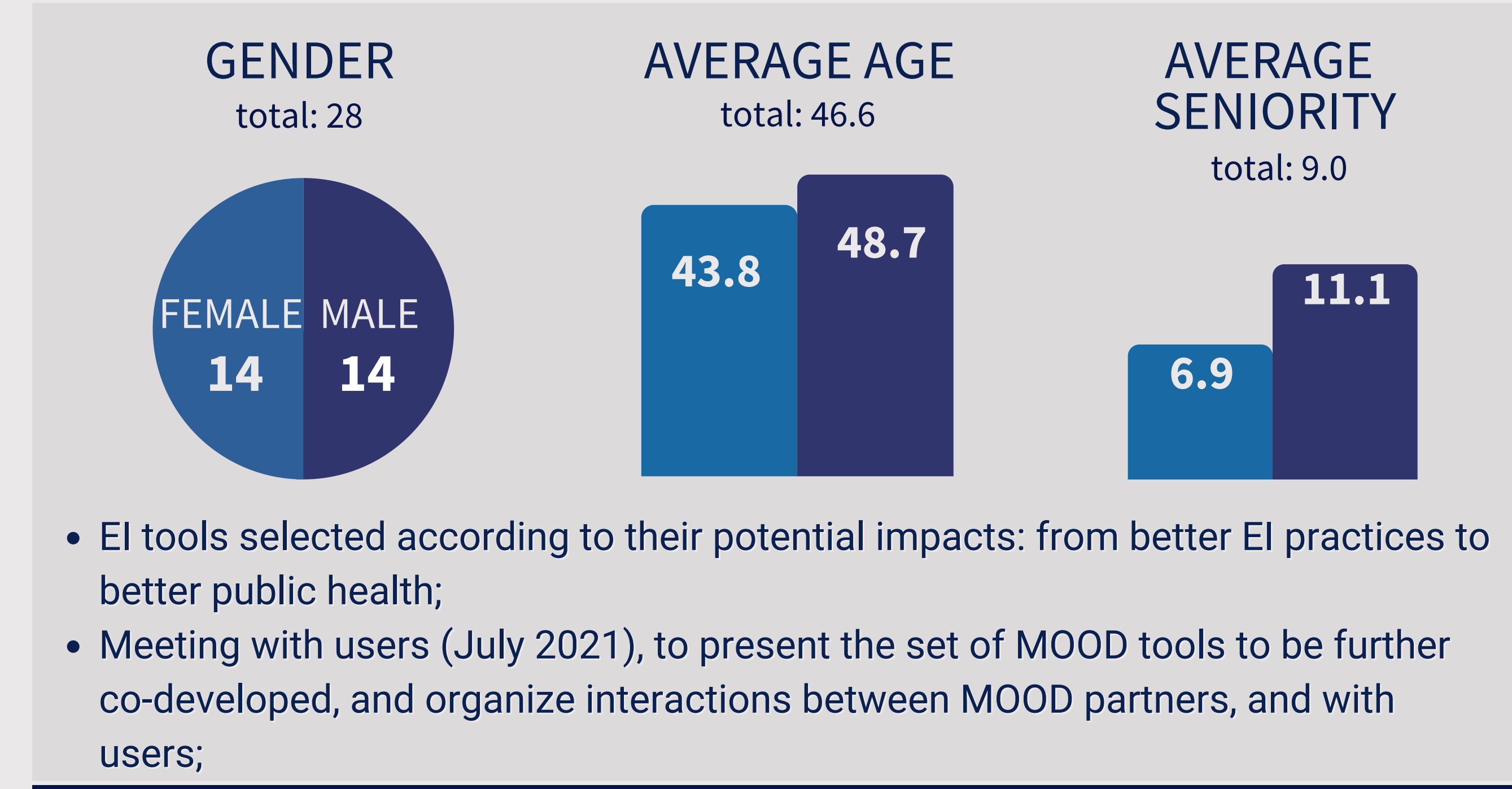
- The MOOD (MOonitoring Outbreak events for Disease surveillance in a data science context);
- Co-develop innovative **epidemic intelligence** (EI) tools together with **human and veterinary public health agencies** to improve the prevention, early detection, and monitoring of zoonotic emerging infectious diseases.

Methods and materials

- European Commission (EC) research and innovation grant, Horizon 2020, € 14 million, focused on EI;
- 25 partners from 13 countries, including ISID (USA) - ProMed animator, and human and veterinary public-health agencies from Finland, France, Italy, Serbia, and Spain;
- Initial program affected by the Covid-19 pandemic, and EC's request to support the European Center for Disease Prevention and Control (ECDC), governments, and public-health agencies (MOOD users);
- In parallel, comprehensive interviews with EI officers to assess EI practices and needs with respect to encountered problems;



COMPREHENSIVE INTERVIEWS IMPLEMENTED TO ASSESS EI ACTIVITIES AND USER NEEDS



Preliminary results

- Production or assessment of datasets for ECDC or national agencies;
- Assessment of Covid-19 scenarios for governments;
- Data pipelines to feed models, or address surveillance issues (e.g. space-time scales)
- Text mining for disease detection / perception;
- Disease modelling (much on Covid-19 up to now): spread risk, travels, new variants, lockdown impact, exit strategies.




Conclusions

MOOD innovation process based on codeveloping EI tools with users. The interdisciplinary dialogue between MOOD partners and with users is challenging but crucially important for mutual understanding.

Case studies - crossing model diseases with the main types of problems met by users, allow: 1) fine tuning EI tools; 2) Accompanying the innovation process; 3) Defining indicators for impact assessment;

Training programs, as well as tool maintenance, long-term availability, and sustainability, are essential for a successful innovation process.

More information:

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