



## OH-EpiCap tool

Evaluation tool for One Health  
epidemiological surveillance capacities  
and capabilities  
(MATRIX WP4)

Viviane Hénaux (ANSES) – Joaquín Prada (UoS)  
*OHEJP WP4 Dissemination Webinar on Surveillance and Risk  
Assessment (online)*

*28/03/2023*



## “One Health” surveillance

- **One Health** = Collaborations across institutes / disciplines from different sectors to coordinate and implement hazard surveillance
- Organization of national surveillance systems mostly silo-oriented
  - Inter-sectoral initiatives depend on objective and context
- Need for evaluating strengths and weaknesses of multi-sectoral surveillance systems
  - Opportunities for further integration

MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.jp.eu/jip-matrix/>

# OH-EpiCap

## Generic tool

- To support discussions among stakeholders with the aim of developing and reinforcing multi-sectoral collaborations
- To characterise and monitor **epidemiological surveillance capacities and capabilities** which contribute directly to OHS, for a specific hazard at country level
  - Recommendations for improvement

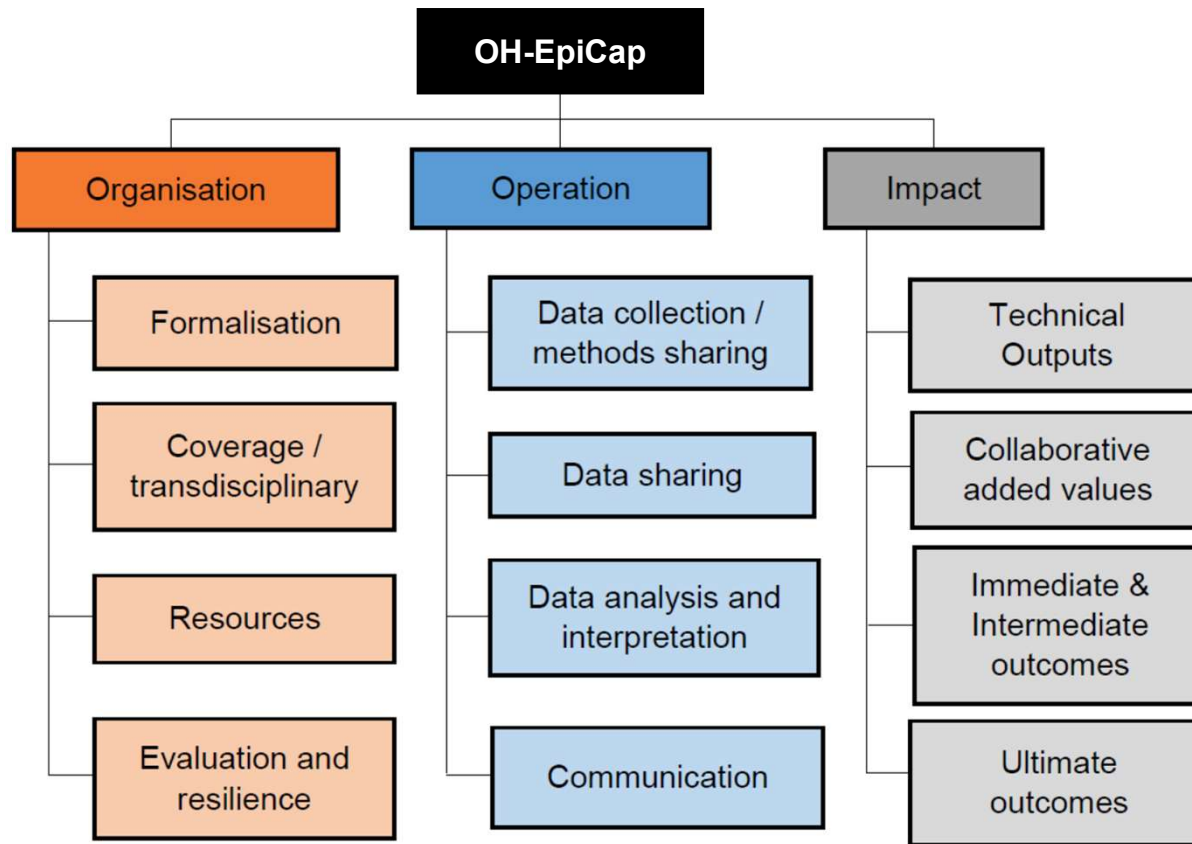


MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>

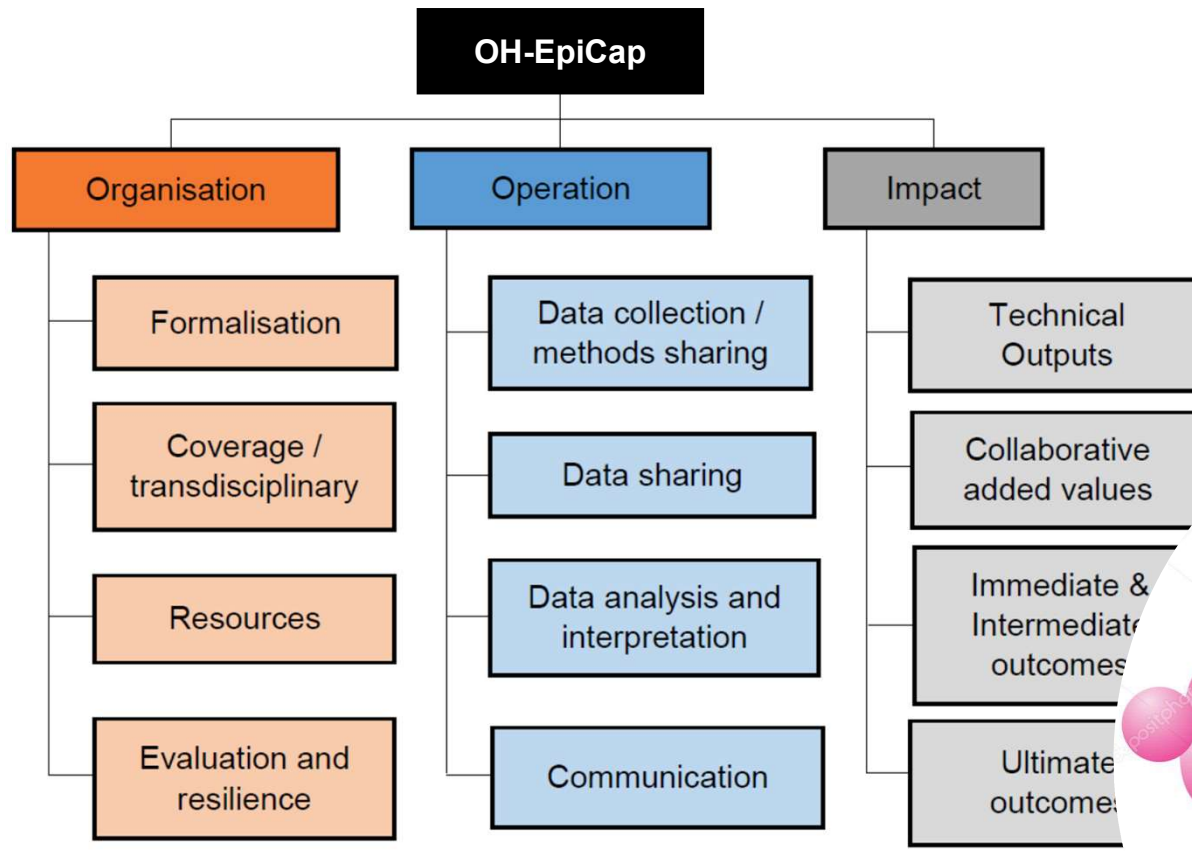


MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>



- 48 indicators
- Semi-quantitative scale (4 levels + NA)

MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp-matrix.eu/jip-matrix/>



# Implementing a OH-EpiCap Evaluation



- **Identify a panel of surveillance representatives**
  - Sectors
  - Institutes
  - Disciplines
  - ...

~ 8 participants
- Evaluation of **any hazard but only one hazard** at a time !
  - Scope of the system evaluated decided by the panel
- Jointly complete the OH-EpiCap questionnaire in a (facilitated) workshop



MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

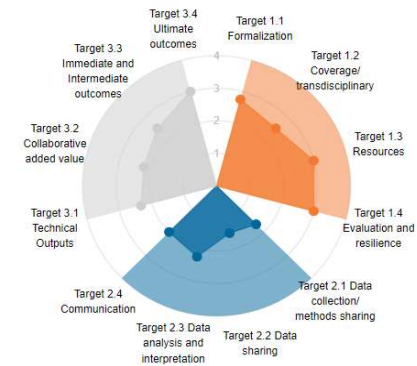
<https://onehealth.ejp.eu/jip-matrix/>



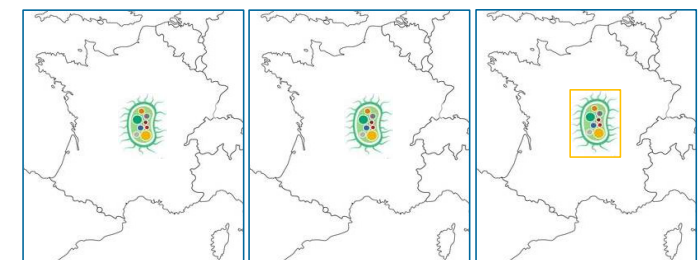
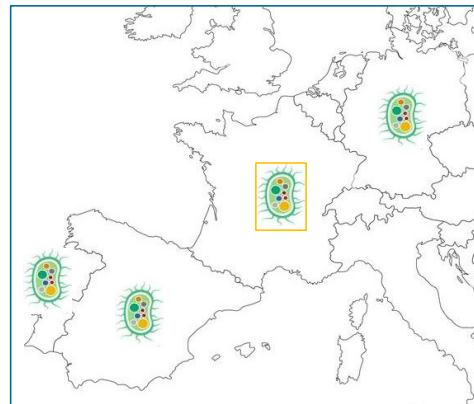
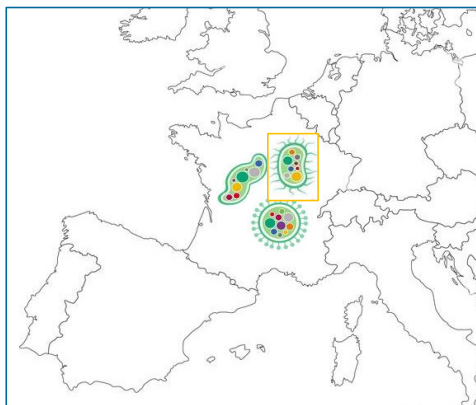
# Expected outcomes



- Share thoughts on **what works and what doesn't work**
- Diagnosis of strengths and weaknesses
- **downloadable report**



- **Benchmarking** (study case vs. reference set)



MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>





## Expected impacts

- Identify **concrete and direct actions** to reinforce collaborative activities at all steps of surveillance
- Reinforce **trust** between stakeholders from across the system
- Build **good foundation** for a professional network for further collaboration

MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealththejp.eu/jip-matrix/>



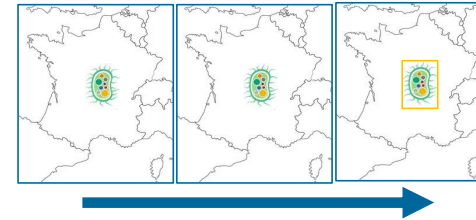




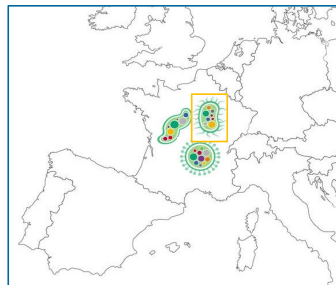
# Who can use the OH-EpiCap tool?



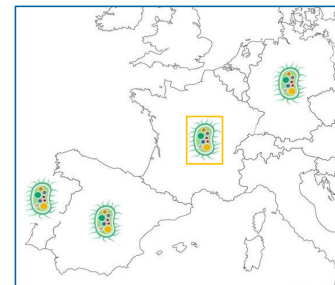
- Multi-sectoral surveillance system representatives  
(internal evaluation)



- Government / national agencies



- International agencies



MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

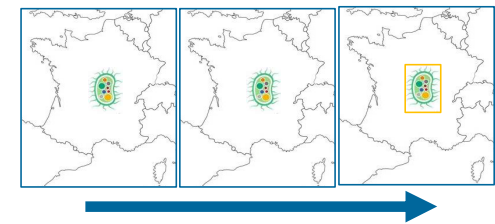
<https://onehealththejp.eu/jip-matrix/>



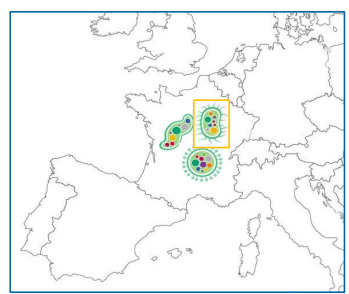
# Who can use the OH-EpiCap tool?



- Multi-sectoral surveillance system representatives  
(internal evaluation)



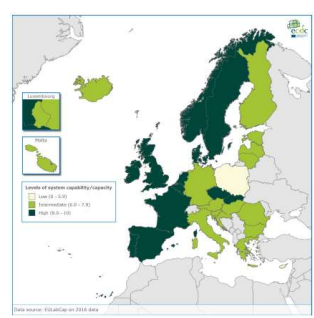
- Government / national agencies



- International agencies  
→ Complementary to...

EU-LabCap

OH-LabCap



*ECDC report on 2016 survey of laboratory capabilities and capacities*



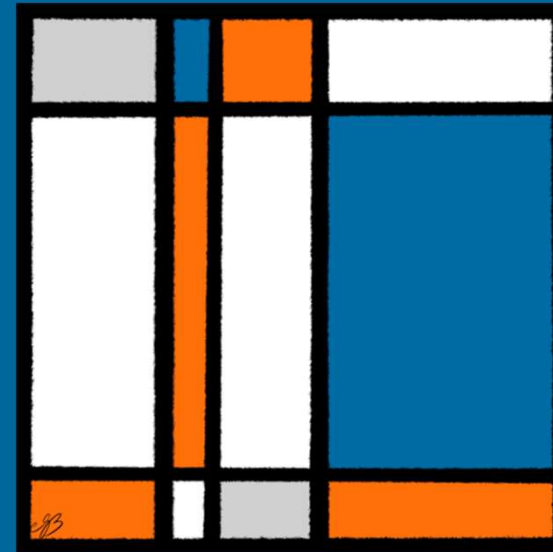
MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>

# Demo of the online application of the OH-EpiCap tool



@OneHealthEJP



/company/h2020-One-Health-EJP



OneHealthEJP.eu



STATENS  
SERUM  
INSTITUT

## Practical implementation of OH-EpiCap tool - Psittacosis in Denmark

Stine Kjær Lefevre, Cand.med.vet, Special Consultant in One Health.



## Practical implementation of OH-EpiCap tool - Psittacosis in Denmark



On sight meeting at Statens Serum Institut, 2022.

**Aim:** to characterise and evaluate the multi-sectorial surveillance capacities for psittacosis in Denmark.

Evaluation using the OH-EpiCap tool was a great snapshot of the capacities of the system, prior to intervention.

**Multi-sectorial working group** on psittacosis will be established in 2023, based on several MATRIX outputs.

Based on baseline knowledge of the system, from the OH-EpiCap evaluation, **another evaluation will be conducted** in 2023 to demonstrate and document progress made.

MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>

## Take-home messages

### OH-EpiCap tool

- **Monitoring / Evaluating** epidemiological capacities and capabilities for One health surveillance of any hazard, at national scale
- Identification of **places / opportunities** for improvement in **organization, operational implementation and impact** of multi-sectoral collaborations
- Interactive, generic, stand-alone, user-friendly tool  
<https://freddietafreeth.shinyapps.io/OH-EpiCap/>



MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealth.ejp.eu/jip-matrix/>



# Acknowledgements



- Original MATRIX WP4 team



Carlijn  
Bogaardt



Géraldine  
Cazeau



Lucie  
Collineau



Viviane  
Hénaux



Renaud  
Lailier



Joaquin  
Prada



Carole Sala



Henok  
Tegegne

- Additional support from Surrey  
Emma Taylor and Freddie Freeth
- Feel free to contact me for any further questions (and on how to use the tool):

Joaquin Prada: [j.prada@surrey.ac.uk](mailto:j.prada@surrey.ac.uk)

**Tool:** <https://freddietafreeth.shinyapps.io/OH-EpiCap/>

**Preprint:** <https://www.medrxiv.org/content/10.1101/2023.01.04.23284159v1.full-text>

**User guide:** [https://onehealthejp.eu/wp-content/uploads/2022/06/OHEJP\\_MATRIX\\_OH-EpiCap\\_user\\_guide\\_2022\\_06.pdf](https://onehealthejp.eu/wp-content/uploads/2022/06/OHEJP_MATRIX_OH-EpiCap_user_guide_2022_06.pdf)

MATRIX:  
connecting  
dimensions  
in One Health  
surveillance

Integrative activity

One Health  
Surveillance,  
Cross-disciplinary,  
Multi-sectorial,  
Foodborne  
pathogens,  
Emerging threats

<https://onehealthejp.eu/jip-matrix/>