TOWARDS A ONE HEALTH SURVEILLANCE SYSTEM FOR INFLUENZA VIRUSES IN CUBA

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DN Montano Valle*[1], O Ley García[1], MI Percedo Abreu[1], B Delgado-Hernández[1], L Cunha Silva[2], J Berezowski[2,4], LP Carmo[2,3], S Dürr[2], P Alfonso Zamora[1]

[1] Epidemiology Group, National Center for Animal and Plant Health (CENSA), WOAH Collaborating Center for Disaster Risk Reduction in Animal Health, San José de las Lajas 32700, Mayabeque, Cuba. [2] Veterinary Public Health Institute, Vetsuisse Faculty, University of Bern, Bern, Switzerland. [3] Norwegian Veterinary Institute, Ås, Norway. [4] SRUC, Scotland's Rural College, United Kingdom.

BACKGROUND

❖ A *transdisciplinary process* for co-production of knowledge between stakeholders engaged in the current public and animal health surveillance systems for Influenza viruses, and actors from environmental agencies in Cuba, was carried out.

❖ The **aim** was to define the basic components and investigate aspects that must be considered in the design and implementation of *an integrated system for influenza viruses with pandemic or zoonotic potential, using a One Health approach.*

METHODS

❖ Thirty-six participants (epidemiologists, virologists, clinicians, microbiologists, physicians, veterinarians, academics) were invited to a workshop.

❖ A **Constellation Analysis (CA)** was designed, in order to represent and assess the current surveillance systems, and to identify key elements for the design and implementation of an improved system.

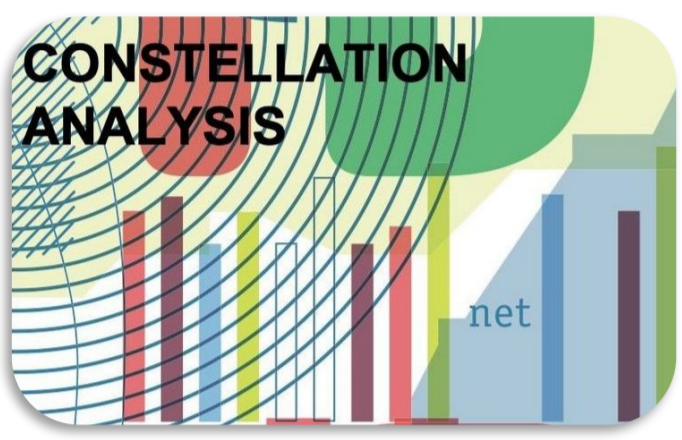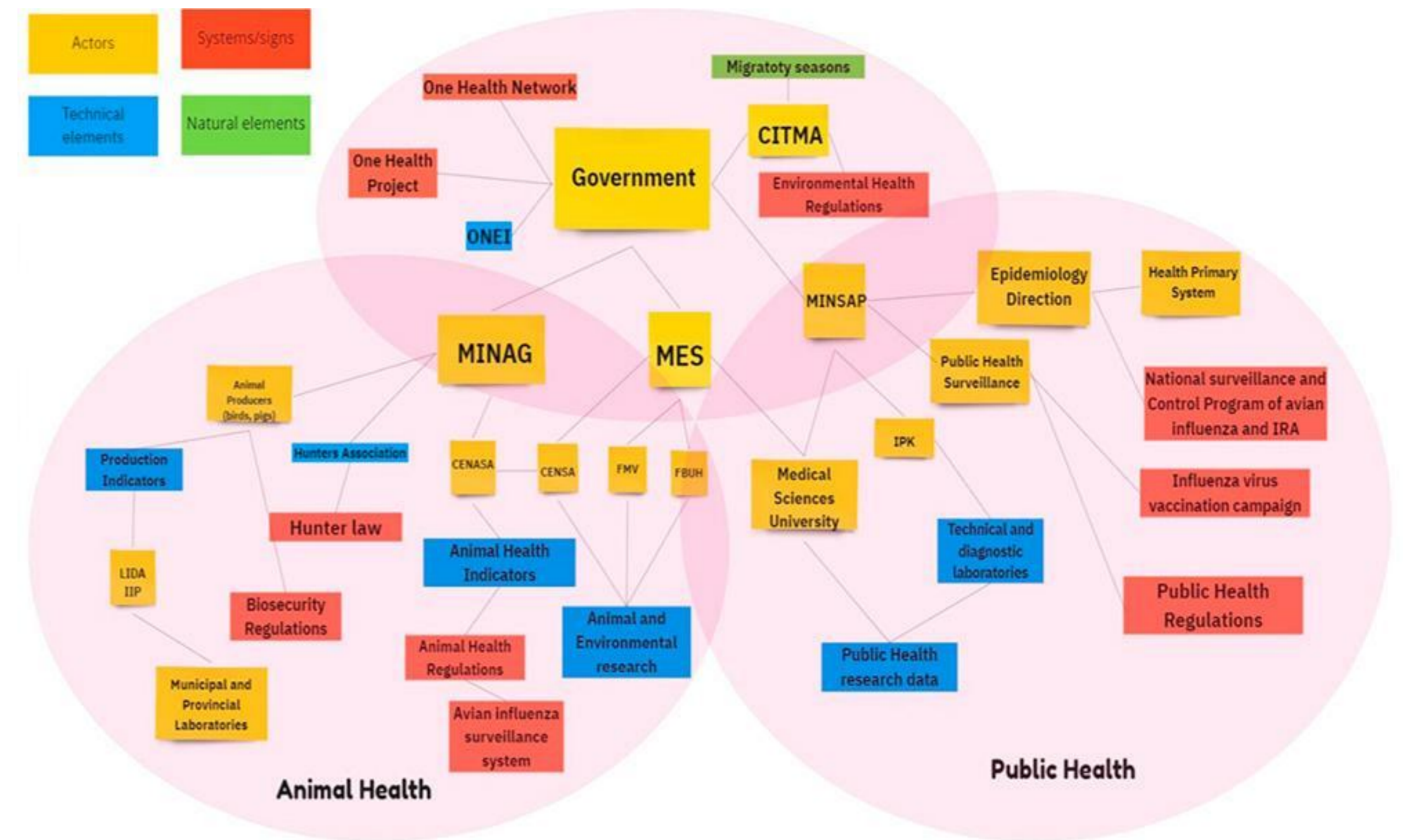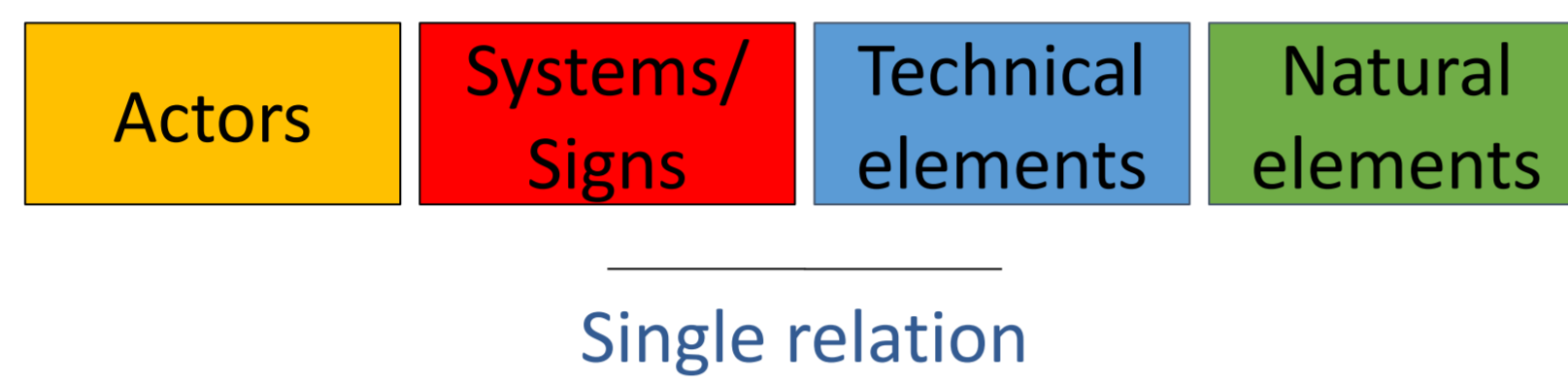❖ A **questionnaire** was used to promote discussion amongst the work session's groups.

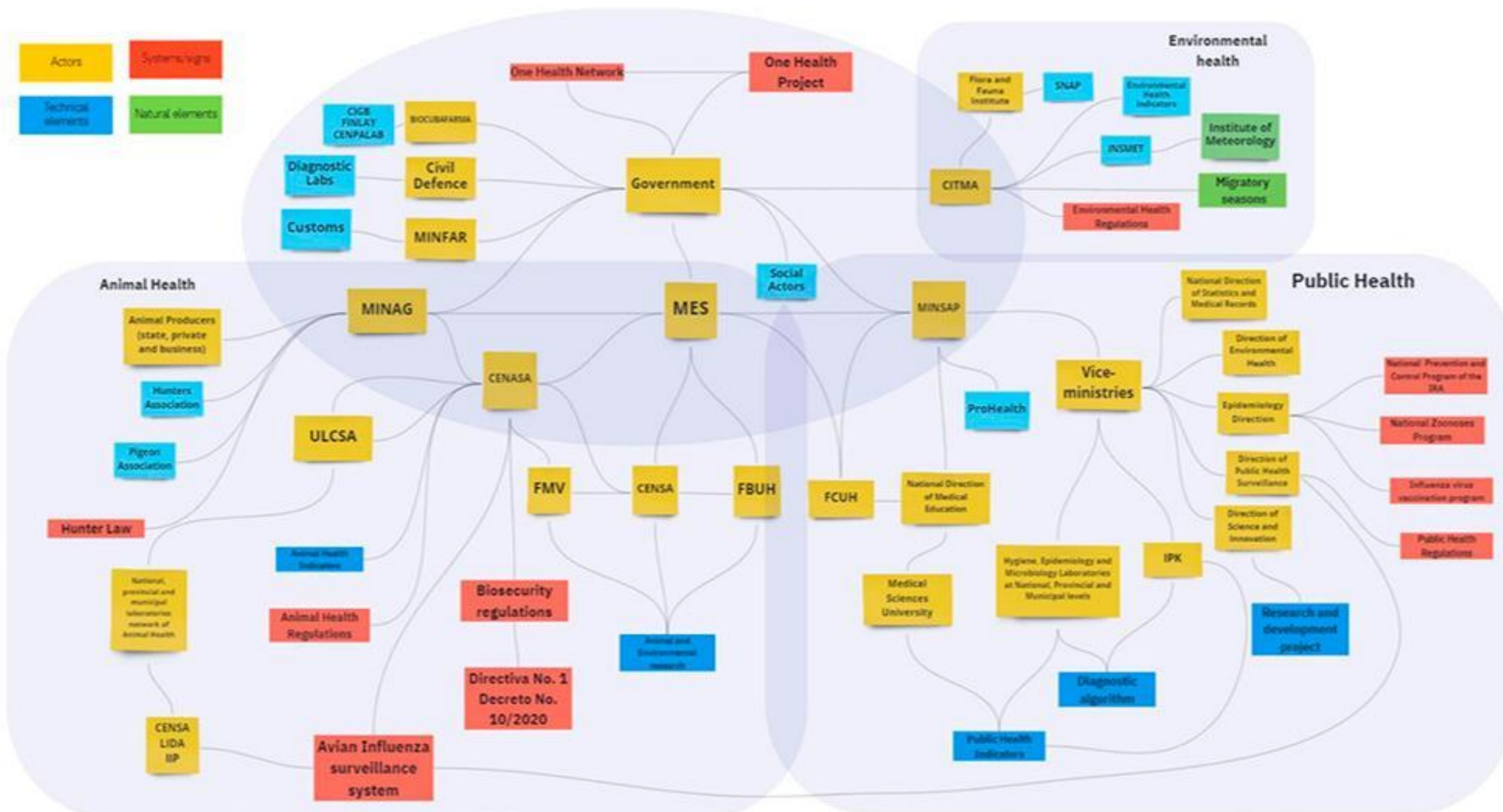Image: The Network for Transdisciplinary Research (td-net)

Actors | Systems/Signs | Technical elements | Natural elements

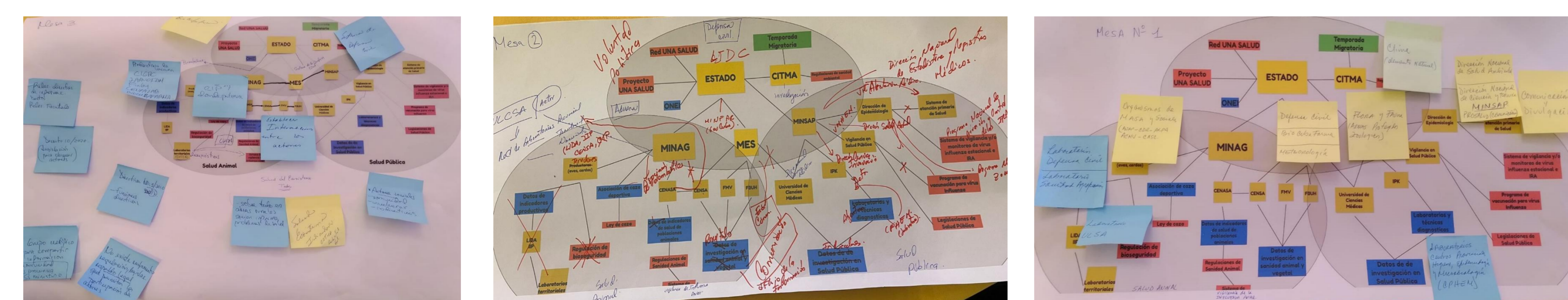Single relation

Main questions raised during group discussion:

❖ What elements are missing in the constellation?
❖ Is there a good flow of information within the system or is there omitted information?
❖ How are the relationships between the actors?
❖ What are the main species to be considered in the surveillance system?
❖ What elements of information (quantitative, qualitative) should be shared among all institutions to ensure that the surveillance system works optimally?
❖ How often should the information be shared among institutions?
❖ Do you consider the CA a good tool for this exercise or would you prefer another methodology or tool?

Constellation analysis designed by the project team

RESULTS

❖ Political will, ecosystem's health data, intersectoral collaboration, mechanisms for immediate sharing of information, and legal or regulatory frameworks are crucial in the achievement of organisational innovation, especially in resource and capacity-scarce environments.

❖ The CA requires limited training, is user-friendly and can be applied to diverse problems (not just health-related). CA favours the visualisation of involved elements and it does not require specific material to be implemented.
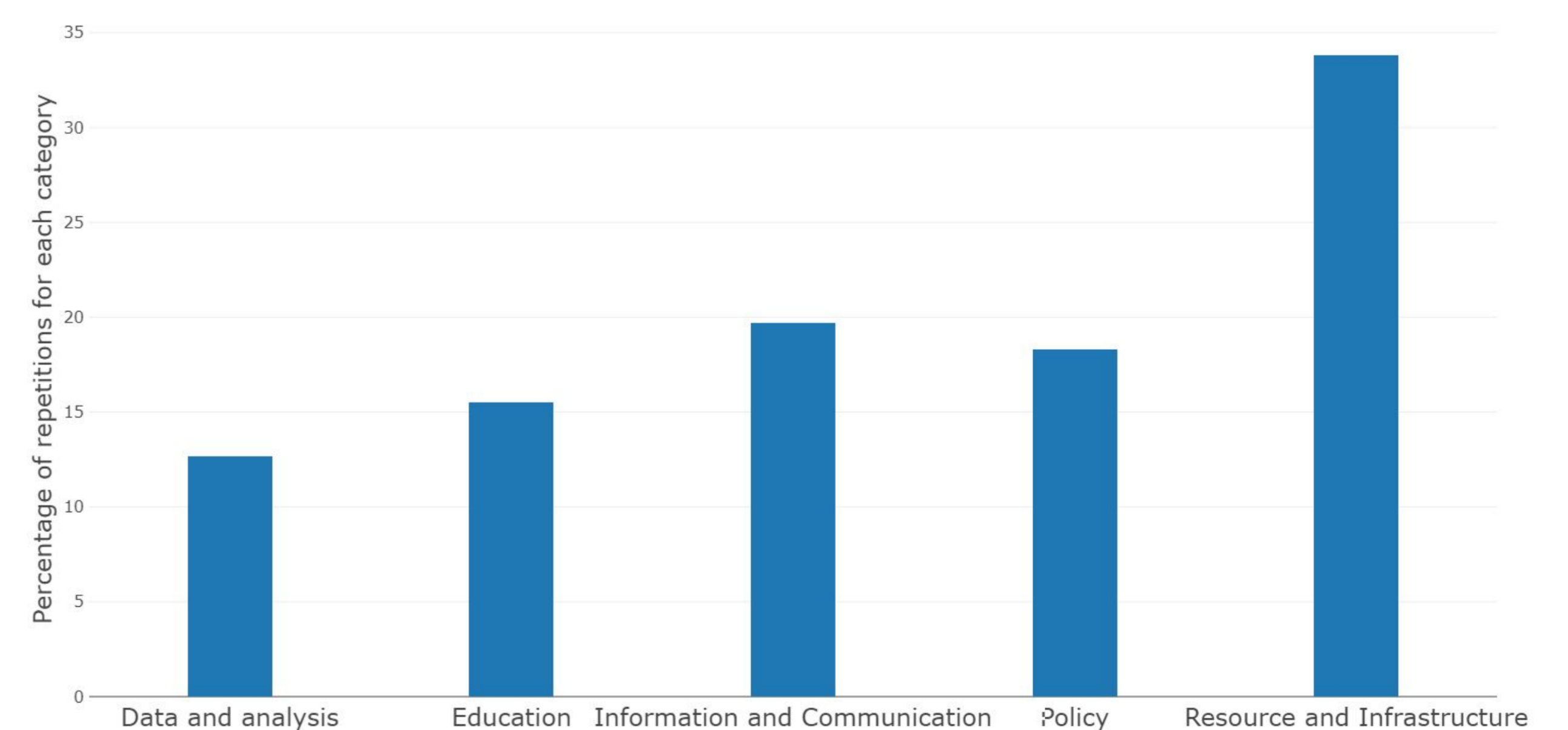

Updated Constellation Analysis - Original CA with all added inputs collected during the morning session

Updated constellation analysis from each group

Mentioned elements needed to better the current CA:

◆**Policy:** political will, regulatory framework
◆**Information and communication:** active flow communication, information feedback, traceability of information, availability of information by sector
◆**Education:** sensitization of the actors, one health approach into educational plans, trained human resources
◆**Resource and infrastructure:** intersectoral work, optimization of resources and inputs, to have computer tools, serological and virological monitoring, improve biosecurity and diagnostic laboratories, strengthen surveillance systems
◆**Data and analysis:** perform hazard characterization, define the species and population behavior, analysis sectoral and constellations, reports of respiratory symptoms species, comprehensively analyze the results, climatological and epidemiological variables

Barplot of the aspects mentioned for the development and implementation of the integrated surveillance system

CONCLUSIONS

❖ The use of a participatory approach led the involved parties to highlight the importance of communication between sectors, and the need to implement actions that foster successful collaborations.

❖ The strengths and weaknesses of the Cuban influenza surveillance system were identified. These will be particularly relevant for the design and implementation of an Integrated Surveillance System for Influenza.

❖ The use of the CA was successful, and has the potential to help in further developing the design of an integrated surveillance system, and/or be used for other topics.

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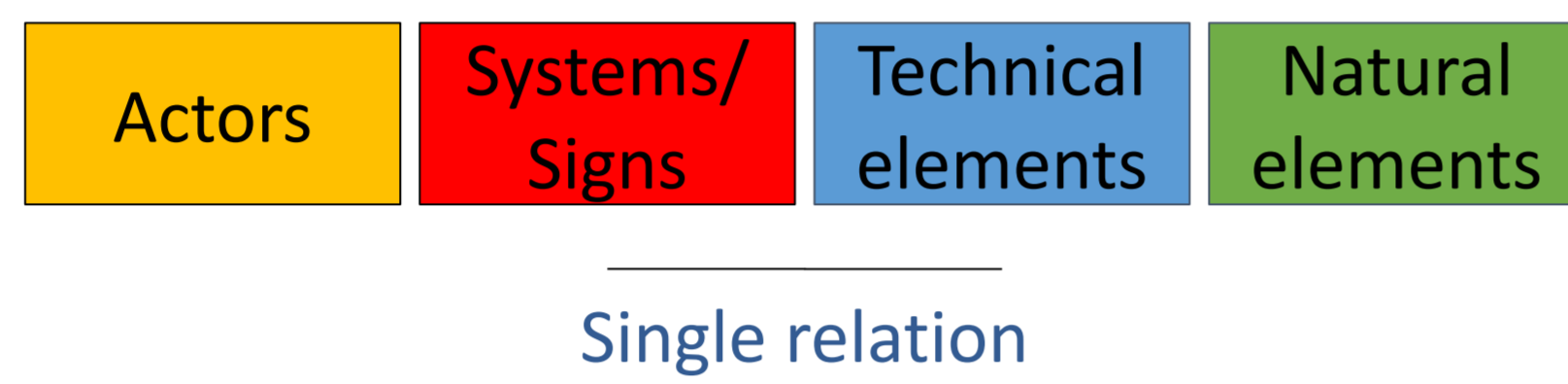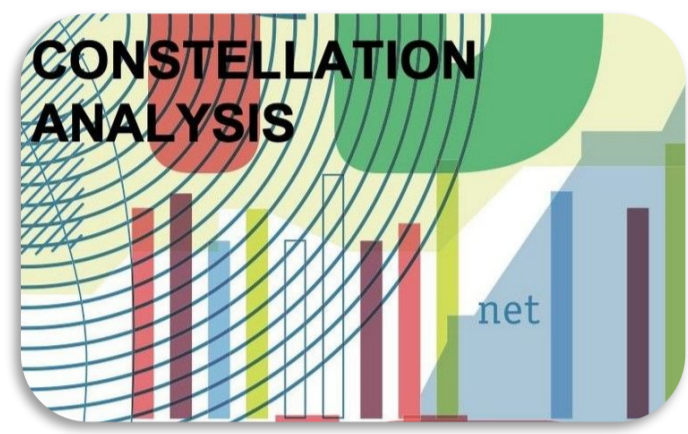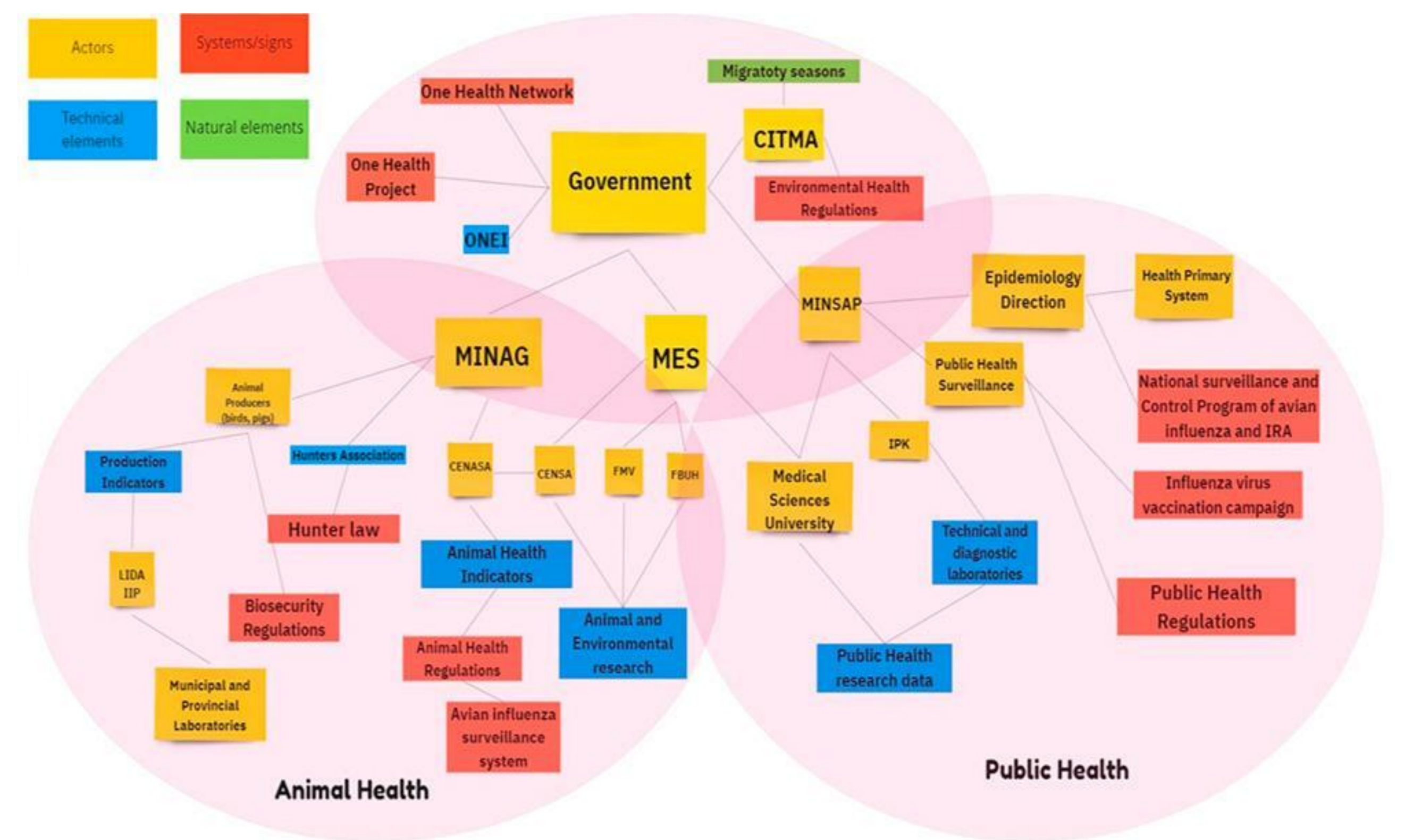❖ A **questionnaire** was used to promote discussion amongst the work session's groups.

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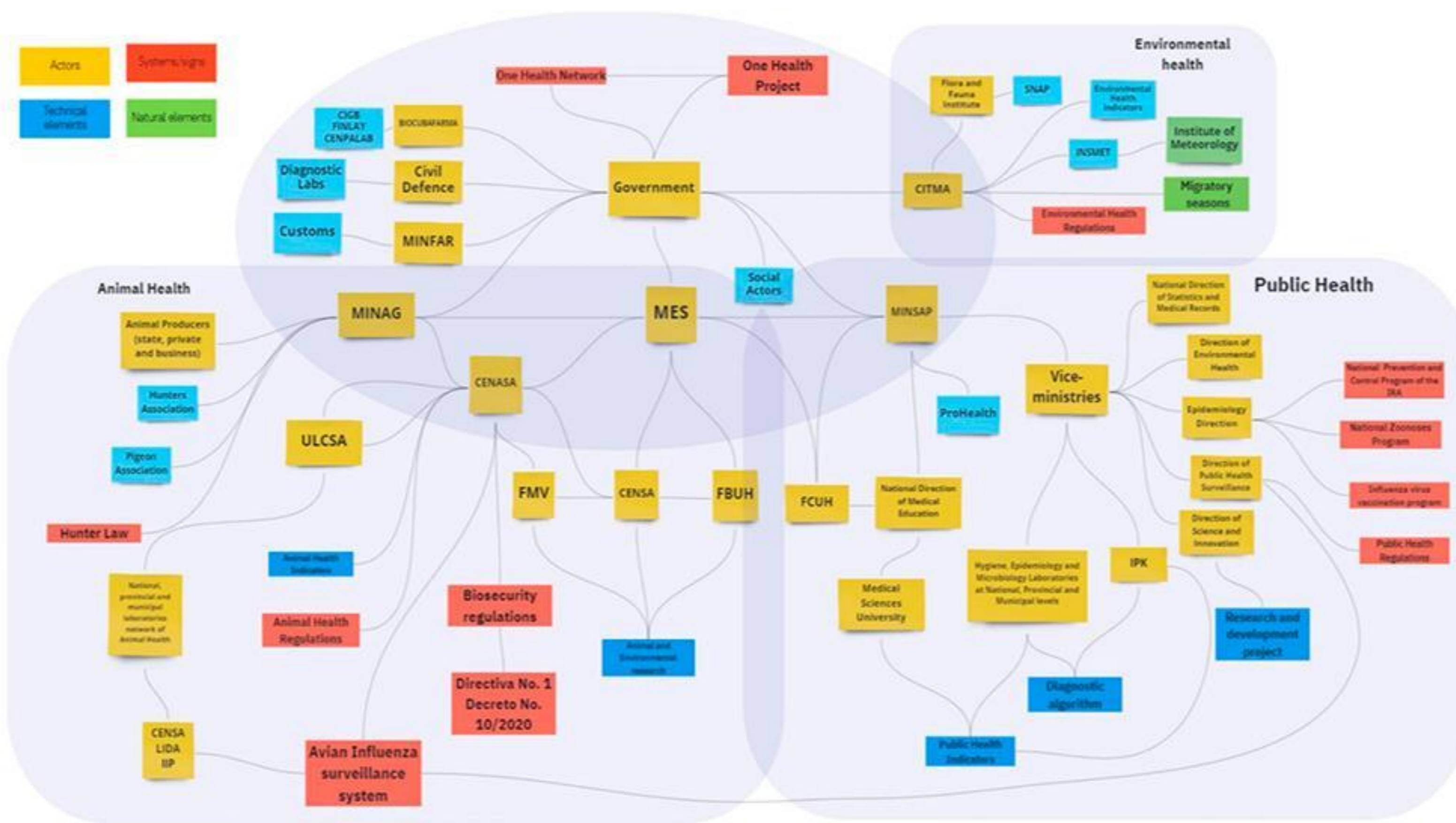❖ Do you consider the CA a good tool for this exercise or would you prefer another methodology or tool?

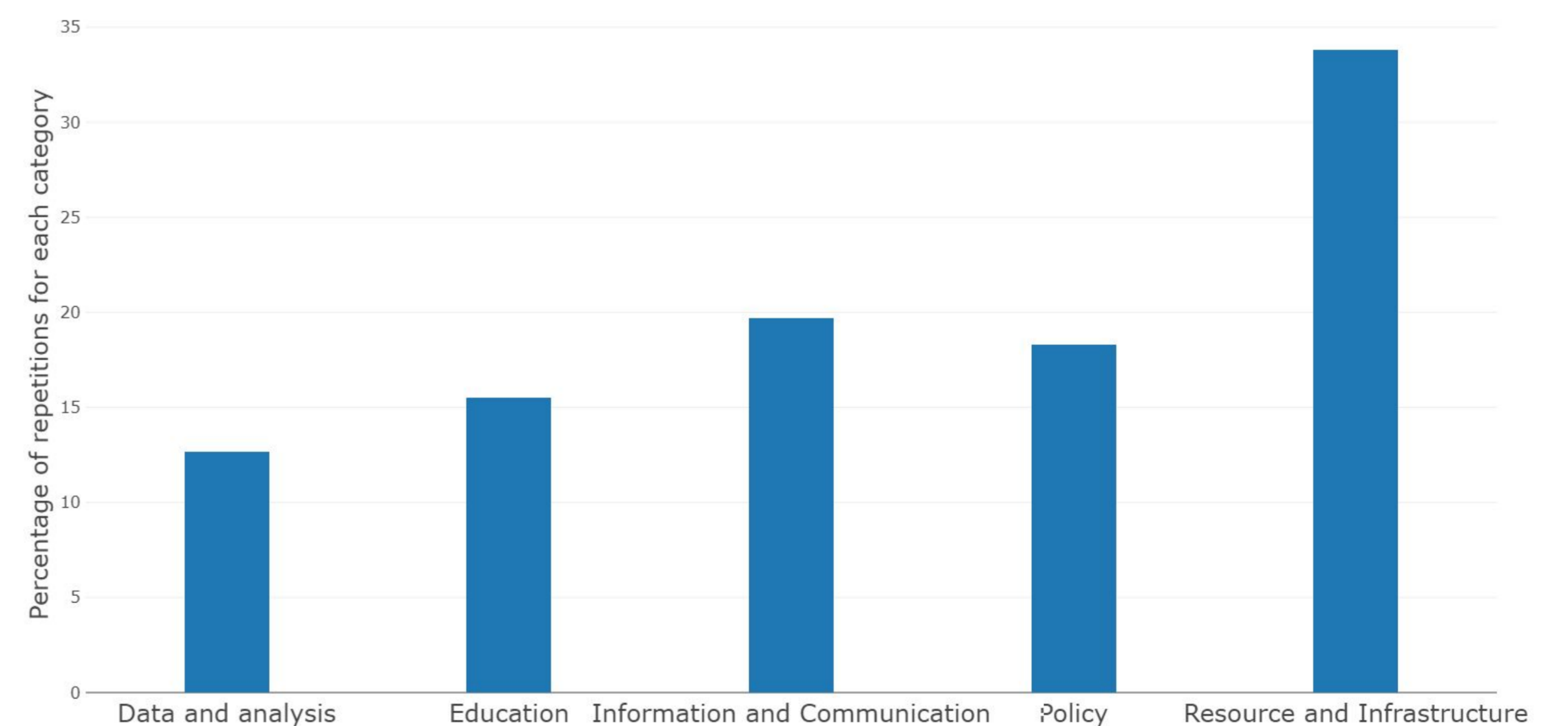Constellation analysis designed by the project team

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