

CA22112 – 2023–2027



European Network on Livestock Phenomics (EU-LI-PHE)

Luca Fontanesi

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**Funded by
the European Union**

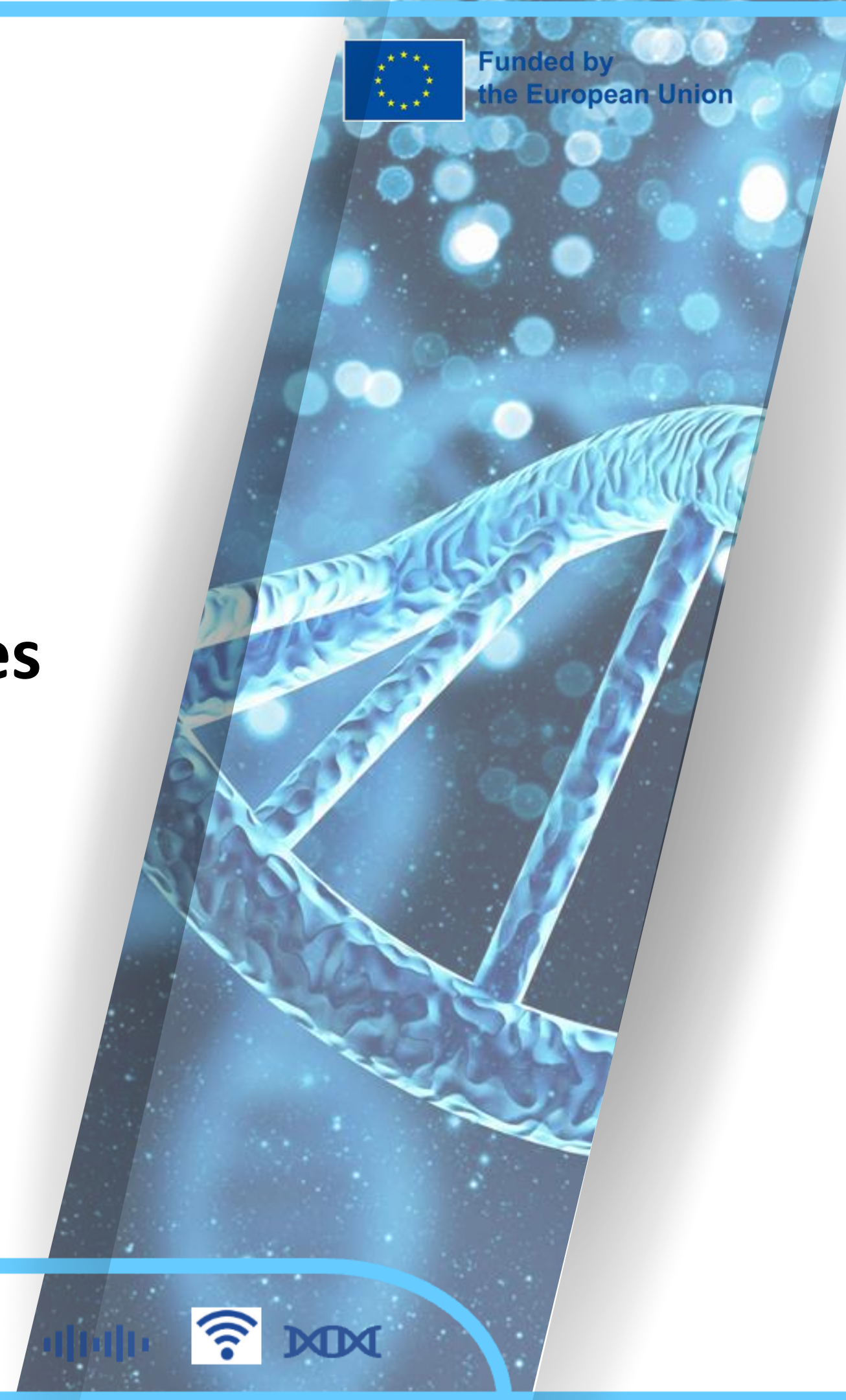
Luca Fontanesi

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Animal and Food Genomics Group
Department of Agricultural and Food Sciences
University of Bologna

Chair of EU-LI-PHE



Background concepts (I)

1. Phenotyping is increasingly being recognised as a limiting factor in all applications of livestock genetics and genomics
2. Phenotyping is fundamental to routine and daily management of livestock populations in order to optimise reproduction strategies, disease control and welfare of the animals



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We need:

- new phenotypes
- new ways to measure phenotypes
- new ways to use phenotypes



Background concepts (II)

- Phenomics is emerging as a major new technical discipline in biology.
- **Phenomics can be defined as the ensemble of methodologies and technologies for the acquisition, analysis and exploitation of high-dimensional phenotypic data on an organism-wide scale.**



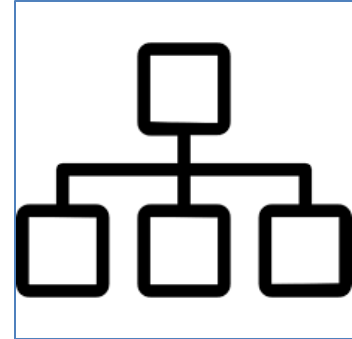
Action challenge

Foster the development, integration, organisation and practical implementation of technologies, tools, methods, approaches, models, expertise and resources useful to scan and interpret the **animal phenome** to paving the way for **novel scientific knowledge** and **applications** in the **livestock production sectors**.

Animal phenome

The physical and molecular traits of an animal.



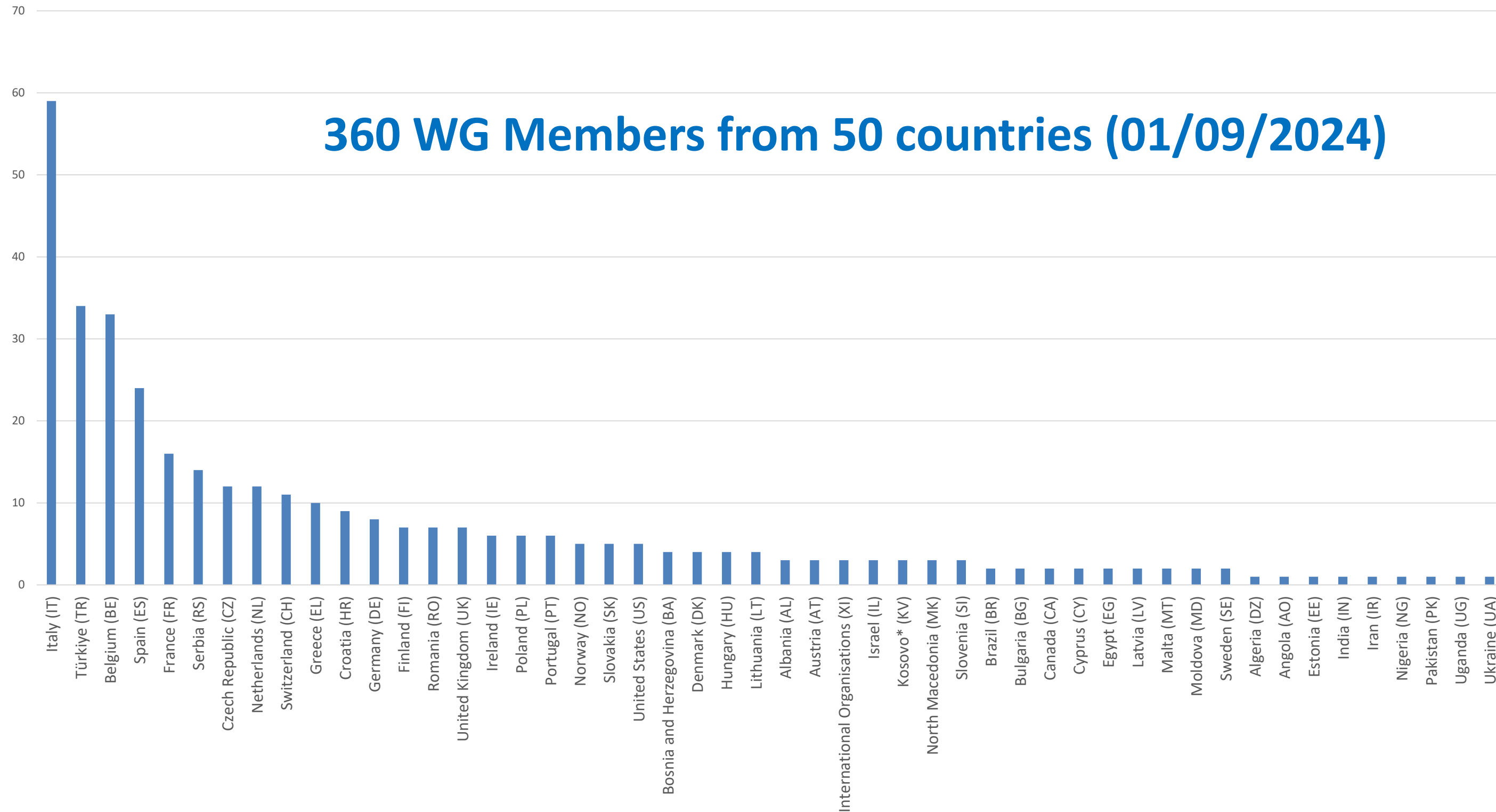


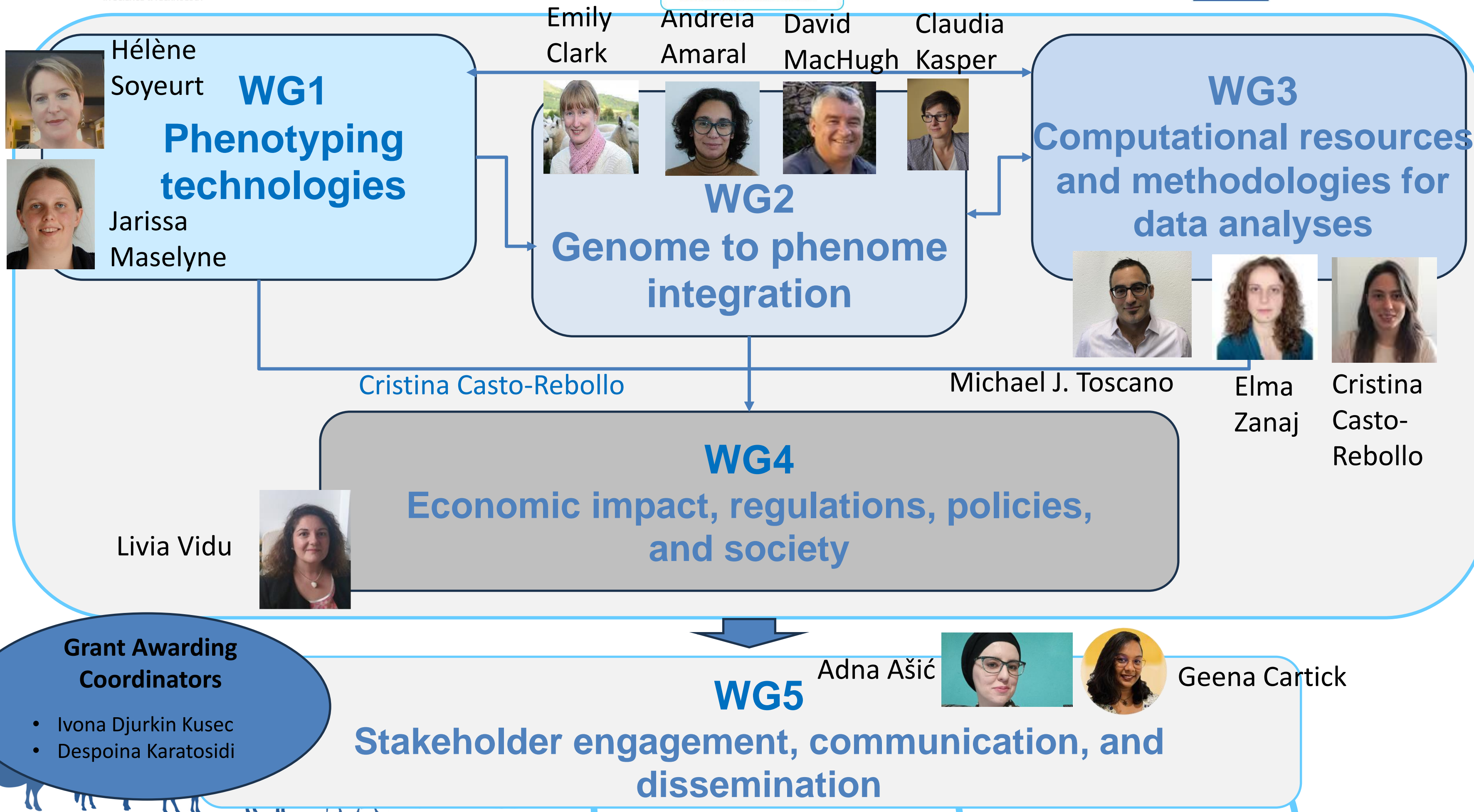
Structure

- Chair: Prof. Luca Fontanesi
- Vice Chair: Prof. Tomas Norton
- **63** Management Committee members from **35** countries
- **360** Working Group members from **50** countries
 - 202 males + 158 females**
 - 136 from ITC**
 - 186 are YRI**

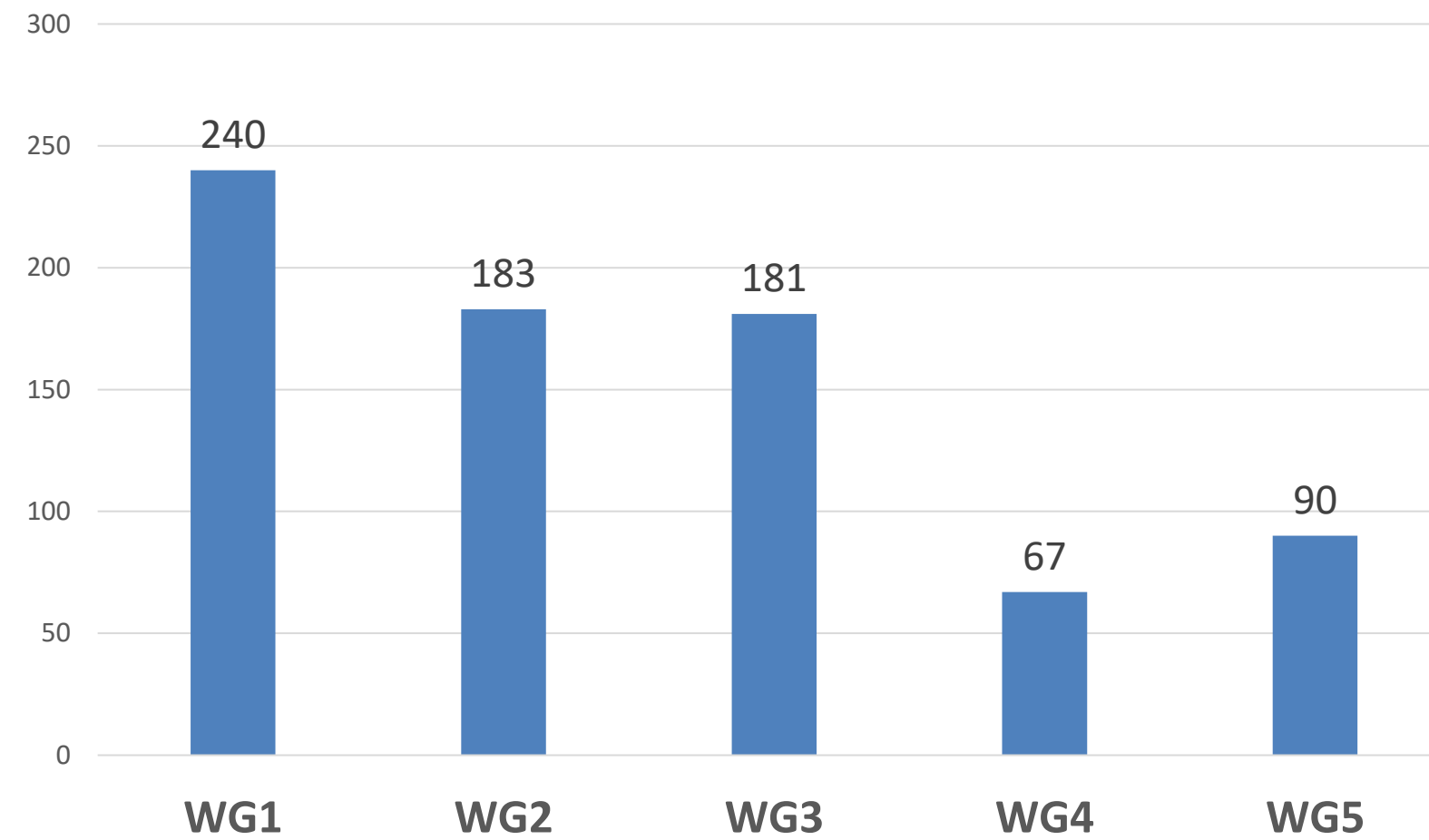


360 WG Members from 50 countries (01/09/2024)



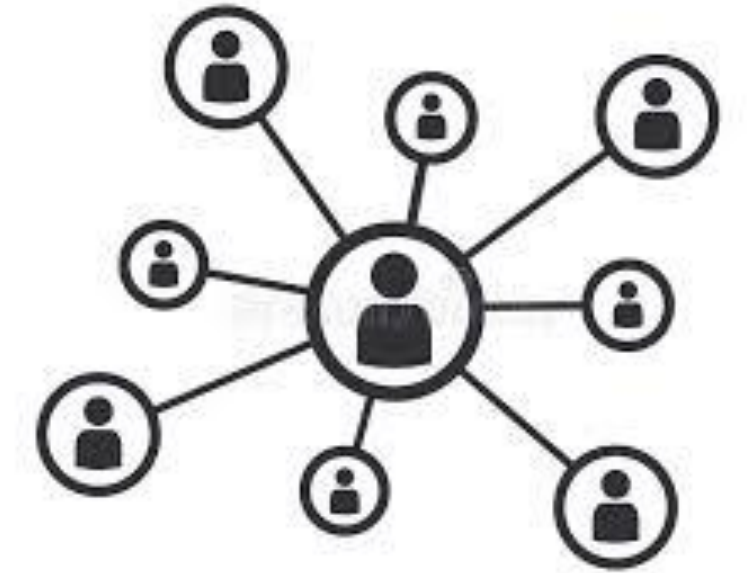


Number of Members divided by WG (01/09/2024)



EU-LI-PHE Networking tools

- Meetings, Workshops
- Grants to attend third party conferences
- Training schools (WG1-WG4)
- Short Term Scientific Missions (STSMs)
- Virtual mobility grants
- Dissemination activities (social media)



Meetings, workshops
conferences,
and conference grants



Training
schools



Short-term
scientific missions



Dissemination
activities



Virtual networking
grants

- Job placement/announcement service
- Midterm stakeholder meeting
- Support service from the Enterprise Europe Network (EEN)
- Demonstration activities





Short Term Scientific Missions (STSMs)



The screenshot shows the top navigation bar of the COST website with links for COST Actions, Funding, COST Academy, and About. It also includes search, e-COST, and menu icons. The main banner features the text "Grants available with the European Network on Livestock Phenomics" over a purple background with a network diagram. Below the banner is a breadcrumb trail: Home > Events > Grants available with the European Network on Livestock Phenomics.



 March 25, 2024 00:00 - October 31, 2024 23:55 



**EU-LI-PHE
CA22112**



WG	Deliverable no.	Deliverable name	Delivery date - semester=sem	Deliverable no.	Month
1	D1.1	A document/report with a list of phenotyping technologies/approaches that can be used in livestock phenomics	2 nd sem, year 1	1	12
1	D1.2	A document/report with (a) proposal(s) to establish standardization rules and/or systems in livestock phenomics	2 nd sem, year 2	6	24
1	D1.3	A document or report with a list or map of R&D infrastructures in different countries	2 nd sem, year 1	2	12
2	D2.1	A document/report including information of initiatives and projects focused on genome to phenome integration in livestock species. This list is updated regularly every year.	Every year, updated regularly	3	12
2	D2.2	A document/report with (a) proposal(s) to establish genome annotation systems with phenome data and information	2 nd sem, year 2	8	24
2	D.2.3	A review on the current and potential applications by integrating genome and phenome information	1 st sem, year 3	10	30
3	D3.1	A document/review including an overview of computational models and methods needed to explore/exploit livestock phenomics	1 st sem, year 2	5	18
3	D3.2	A document/report including proposals to establish standardized databases and computational procedures useful for livestock phenomics	1 st sem, year 3	9	30
3	D3.3	A document/report with information of the existing cyberinfrastructures and computational capabilities available and those needed over the next decades, useful for livestock phenomics	2 nd sem, year 3	11	36
4	D4.1	A report or a review on the expected impacts and applications of livestock phenomics	1 st sem, year 4	14	42
4	D4.2	A review of the regulatory framework including the major issues of concerns in livestock phenomics	1 st sem, year 4	15	42
4	D4.3	A survey structure and a report obtained using the analysed and evaluated data and opinions on livestock phenomics	2 nd sem, year 3	12	36
1, 2, 3, 5	D1.4, D2.4, D3.4, D5.4	A white paper focused on research gaps and priorities in livestock phenomics	2 nd sem, year 4	16	48
5 (1, 2, 3, 4)	D5.1, D5.6	A special themed issue/section of a scientific journal for submission of Action manuscripts and reviews	2 nd sem, year 3 (and every year)	13	36
5	D5.2	A periodic newsletter	Every year	na	-
5	D5.3	A report or document that summarizes the outputs, activities, results and discussions from the stakeholder conference/demonstrations	2 nd sem, year 2	7	24
5	D5.5	An Action website containing scientific and dissemination reports, teaching and training documents, the annual newsletters, announcements and list of scientific articles focused on livestock phenomics and related fields. This list is updated every year.	Every year, updated regularly	4	12
5	D5.7	A book on livestock phenomics that will include basic and advanced chapters to benefit both experts and non-specialists	2 nd sem, year 4	17	48





**ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA**

**DEPARTMENT
OF AGRICULTURAL
AND FOOD SCIENCES**



WG1 Training School: 18-21 June 2024

Phenotyping technologies in animals

ILVO

Flanders Research Institute for
Agriculture, Fisheries and Food

ILVO (Merelbeke, Belgium)

 **SAVE THE DATE!** 

 **TRAINING SCHOOL: PHENOTYPING TECHNOLOGIES**

Organized by the COST Action CA22112 European Network on Livestock Phenomics, EU-LI-PHE

 **June 18-21, 2024**

 **ILVO, Merelbeke Belgium**

 **Applications will open on April 8, 2024!**





EU-LI-PHE Young Researchers and Innovators Meeting – Florence, 5-6 Sept. 2024

Final program

Venue:

University of Florence Buildings

Day 1: 5th of Sept. 2024

[Room 004, Plesso C9, Via Sandro Pertini 16, Firenze \(Italy\)](#)

14.00-14.10: Welcome and introduction * (Luca Fontanesi and YRI Committee Leaders)

14.10-14.30: Quick round table *

14.25-15.00: *Lecture on EU funding opportunities – and Q&A * (Luca Fontanesi)*

15.00-15.30: *How to develop leadership and communication skills in COST Actions – and Q&A * (Adna Asic)*

15.30-16.00: Coffee break

16.00-17.45: Group Activities

Group 1: EU-LI-PHE newsletters (Discussion leader: Patricia Ask-Gullstrand)

Group 2: EU-LI-PHE Webinars (Discussion leader: Agostina Zubiri Gaitán)

Group 3: EU-LI-PHE job announcement design (Discussion leader: Iulia Blaj)

17.45-18.00: Final Report of Day 1 – detailed definition of Day 2 program

20.00-22.30: Dinner Together

Day 2: 6th of Sept. 2024

[Room 1.03, Plesso D4, Via delle Pandette 32, Firenze \(Italy\)](#)

09.00-10.30: Group Activity - WG1 deliverables preparation

10.30-11.00: Coffee break

11.00-12.30: Group Activities

Preliminary structure of the book on livestock phenomics

Discussion on Topics of Day 1

12.30-13.00: Final report of the meeting & closure



HOW TO JOIN



Apply to become a member of the Working Groups:

www.cost.eu/actions/CA22112/

SCAN TO JOIN US



Lets Keep in Touch:



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luca.fontanesi@unibo.it

tomas.norton@kuleuven.be

SCAN TO FOLLOW US



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