UNIVERSITÀ di VERONA

Dipartimento di BIOTECNOLOGIE

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EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

# “INTEGRAPE”

Chair: Mario Pezzotti

# COST: since 1971 proven track record in networking of researchers

Creating spaces where ideas and people can grow

Unlocking the full potential of research through networking

Enhancing the societal impact of research and promoting excellence

Policy

- Less research intensive countries
- Unrepresented gender
- Early career investigators

# COST Member Countries

## EU 28

## EU Candidates and Potential Candidates

Albania
Bosnia and Herzegovina
fYR Macedonia
Montenegro
Republic of Serbia
Turkey

## Other countries

Iceland
Norway
Switzerland

## COST Cooperating Member

Israel

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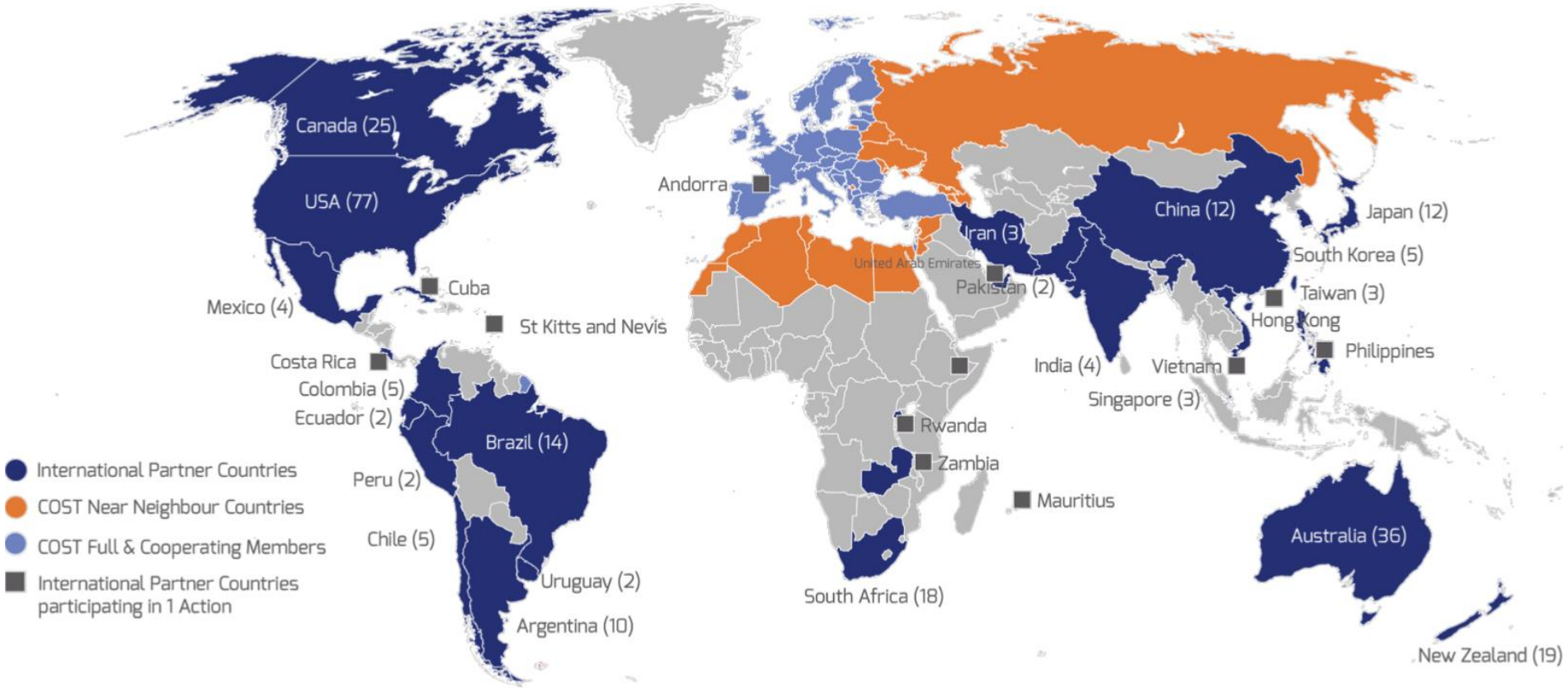
# NNC and IPC


Canada (25)
USA (77)
Mexico (4)
Cuba
St Kitts and Nevis
Costa Rica
Colombia (5)
Ecuador (2)
Brazil (14)
Peru (2)
Chile (5)
Uruguay (2)
Argentina (10)
Andorra
United Arab Emirates
Iran (3)
Pakistan (2)
China (12)
Japan (12)
South Korea (5)
Taiwan (3)
Hong Kong
Philippines
India (4)
Vietnam
Singapore (3)
Rwanda
Zambia
Mauritius
South Africa (18)
Australia (36)
New Zealand (19)
International Partner Countries
COST Near Neighbour Countries
COST Full & Cooperating Members
International Partner Countries participating in 1 Action

# COST Actions

- **Bottom-up** science and technology networks **open** to researchers and stakeholders and all S&T disciplines
- About 250 running COST Actions
- COST Actions operates through a range of networking tools

TRAINING SCHOOLS

SHORT-TERM SCIENTIFIC MISSIONS and ITC CONFERENCE GRANTS

DISSEMINATION ACTIVITIES

CONFERENCES / WORKSHOPS

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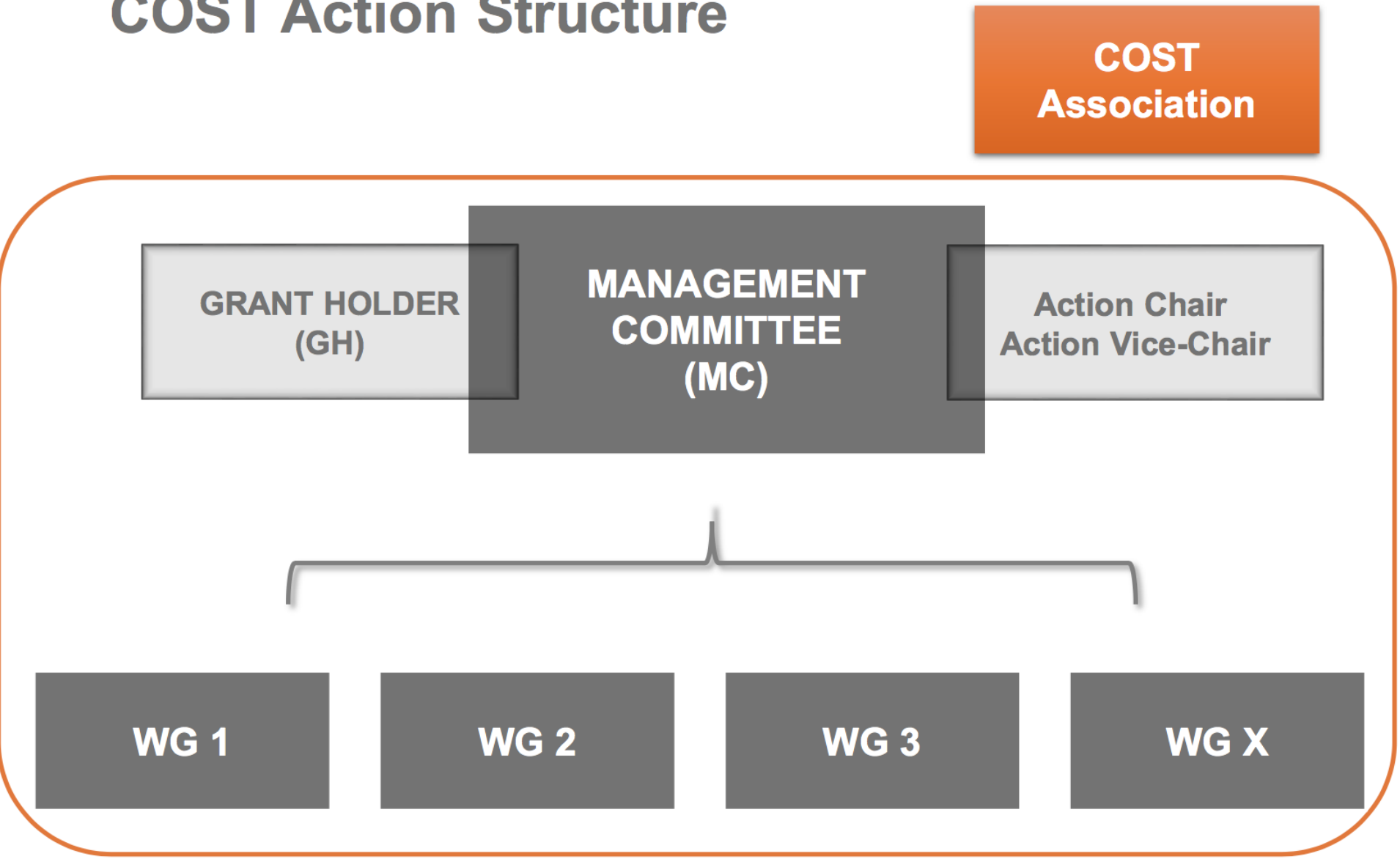
# Early Career Investigators (ECI) and Gender Balance

Encourage ECIs* and underrepresented gender to engage in active participation and take-up leadership roles.

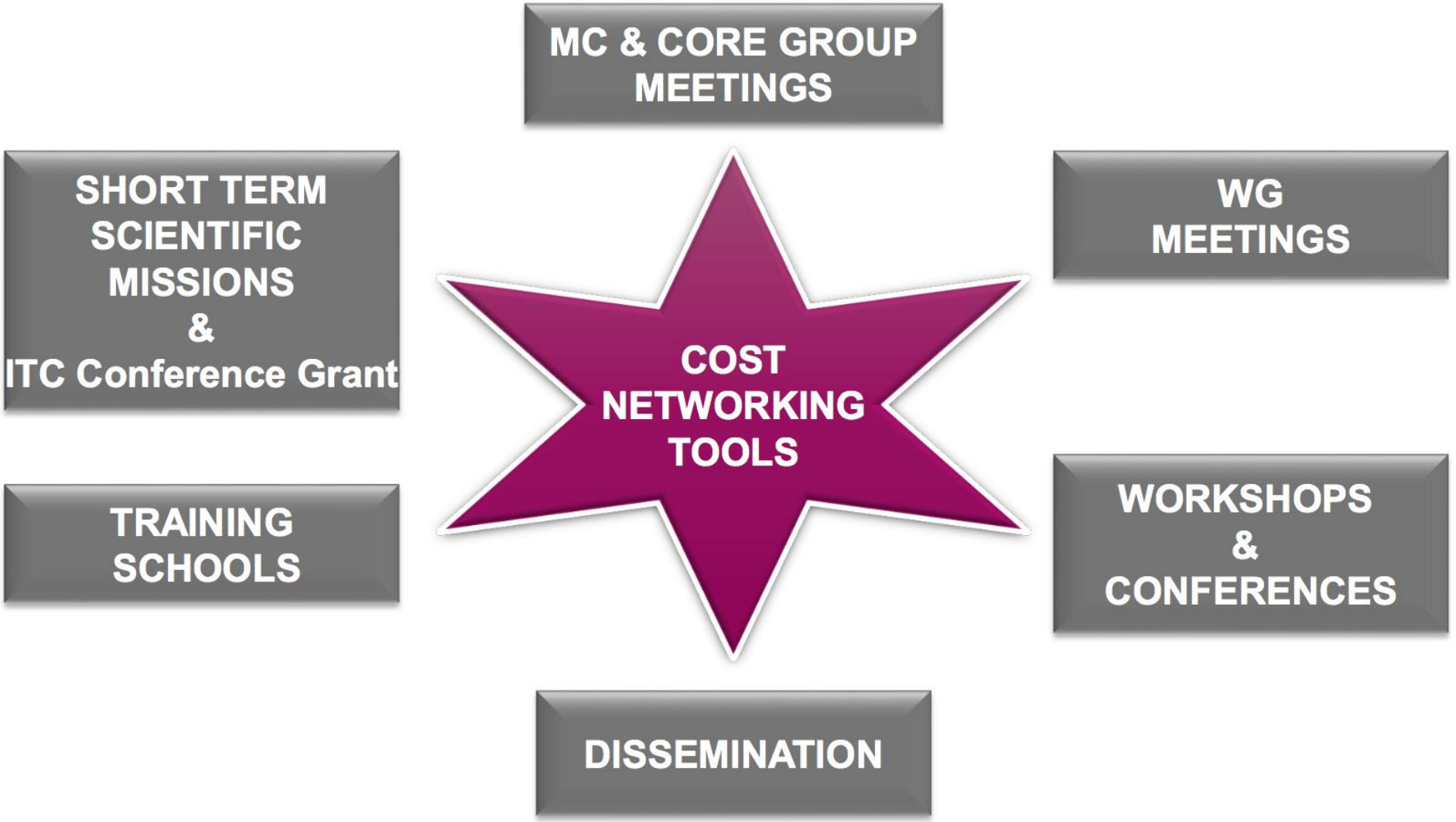
E.g. leadership roles in the Action (e.g. Grant Holder, WG Leader) and/or benefitting from COST networking tools, in particular STSMs, Training Schools and ITC Conference Grants.

*Early Career Investigators → up to 8 years from PhD degree

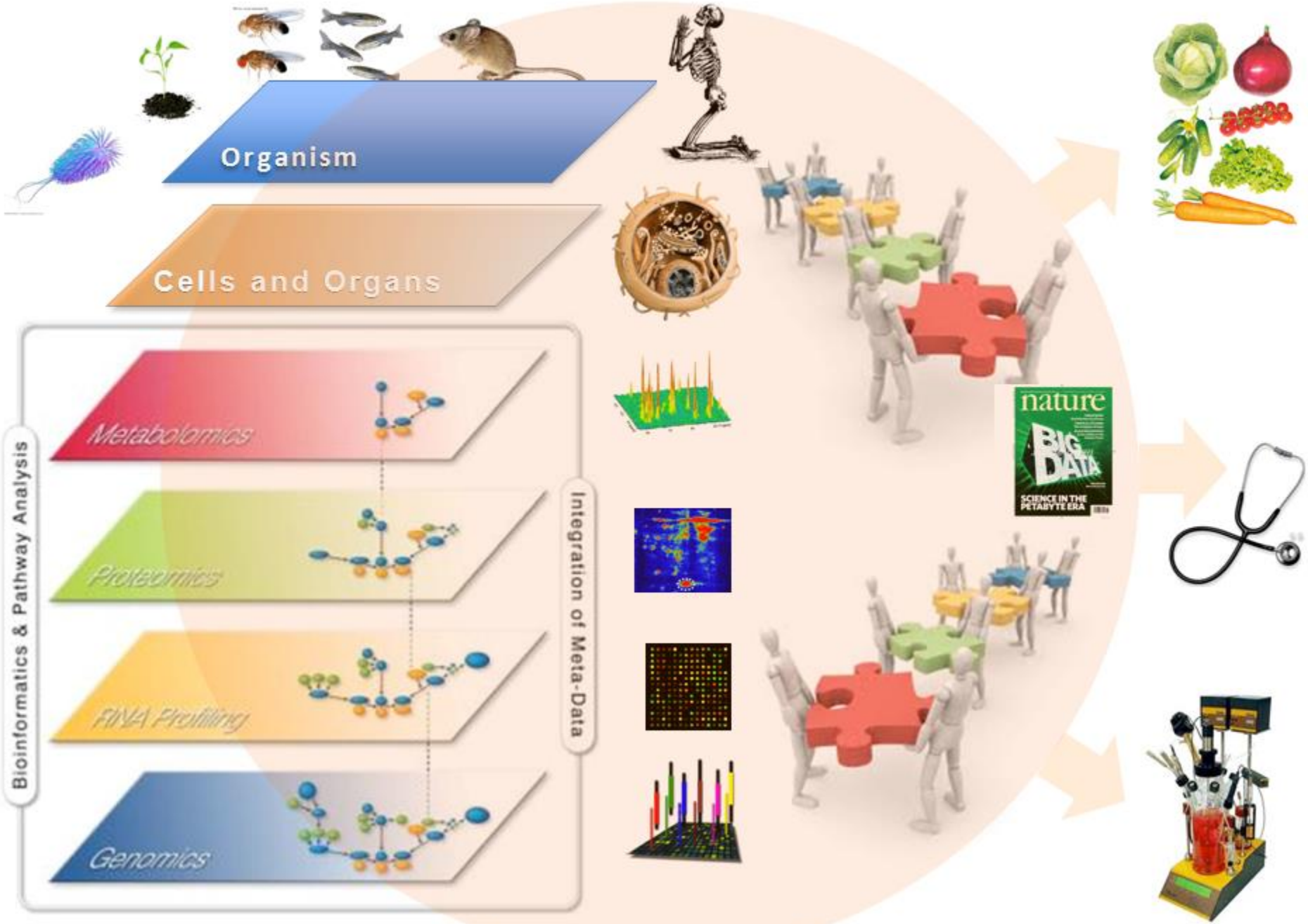
# COST Action Structure



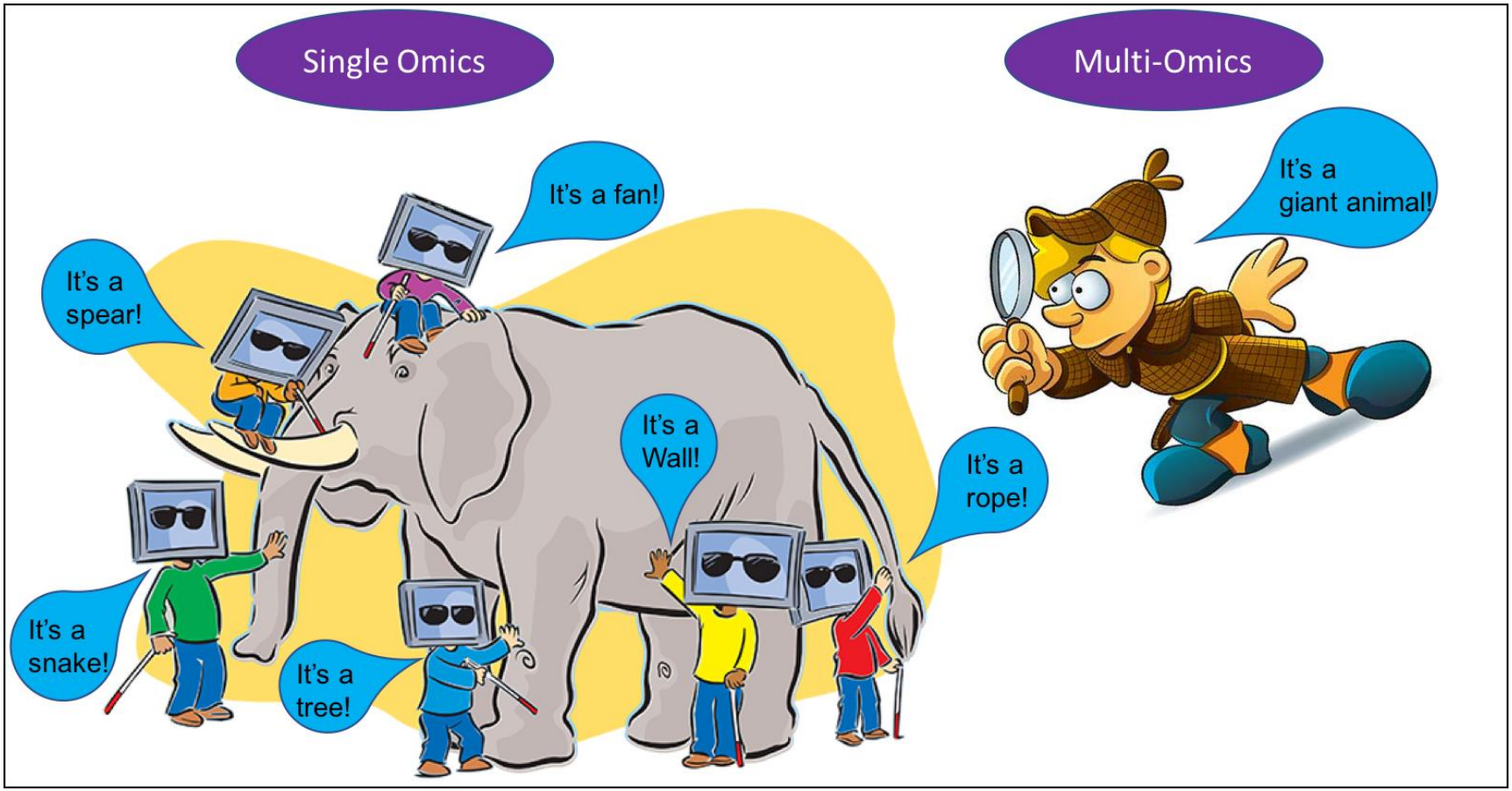
# COST Networking Tools



# Life Science data: Multi-omics, multi-technology, multi organism, multi dimensional



**Different -omics sciences describe many levels of biomolecular organization – but if used in isolation may give misleading inferences about the system !**



Grapevine research focuses on interactions between the genotype, phenotype and environment, and information must be integrated from heterogeneous datasets including ampelography, environmental biology, genetics, genomics, epigenomics, transcriptomics, proteomics and metabolomics.

The data are currently dispersed and difficult to **Access**, hindering **meta-analysis** (the **Re-use** of grapevine data beyond the original experiments).

No institution working in the field of grapevine research has yet taken on the mission to improve data integration and I**nteroperability** at the global level, although the grapevine research community is continuously producing large datasets.

The concepts described will support stakeholders by developing innovative strategies to integrate grapevine data from existing resources and new experiments in a cost-effective manner, as well as making interoperable grapevine datasets and tools **Findable** in a secure and standardised format.

# Challenge of the CA 17111

Establish an open, international, and representative network that integrates data from existing resources in a cost-effective manner, as well as making interoperable grapevine dataset and tools available in a secure and standardized format

# Action Leadership Positions

| | |
|---|---|
| Action Chair | Prof Mario PEZZOTTI |
| Action Vice Chair | Dr Anne-Francoise ADAM-BLONDON |
| Grant Holder Scientific Representative | Prof Mario PEZZOTTI |
| Science Communication Manager | Prof Marina DERMASTIA |
| STSM Coordinator | Dr Ana Margarida FORTES |

| Country | MC Member |
|---|---|
| Albania | Dr Blerina VRENOZI |
| Austria | Dr Günter BRADER |
| Austria | Prof Astrid FORNECK |
| Bosnia and Herzegovina | Dr Ivana KOLEŠKA |
| Bosnia and Herzegovina | Mr Dino HASANAGIĆ |
| Bulgaria | Prof Atanas ATANASSOV |
| Bulgaria | Prof Ivan TSVETKOV |
| Croatia | Prof Karin KOVACEVIC GANIC |
| Croatia | Prof Mladen BRNCIC |
| Cyprus | Prof George MANGANARIS |
| Cyprus | Prof Vasileios FOTOPOULOS |
| Czech Republic | Dr Jiří SOCHOR |
| Czech Republic | Dr Klára KOSOVÁ |
| France | Dr Anne-Francoise ADAM-BLONDON |
| France | Dr Camille RUSTENHOLZ |
| Germany | Dr Daniela HOLTGRÄWE |
| Germany | Prof Reinhard TOEPFER |
| Greece | Dr Angelos KANELLIS |
| Greece | Dr Panagiotis KALAITZIS |
| Hungary | Dr Zóra Annamária NAGY |
| Hungary | Prof László KOCSIS |
| Israel | Dr Efraim LEWINSOHN |
| Israel | Prof Aaron FAIT |
| Italy | Prof Fulvio MATTIVI |
| Italy | Prof Michele MORGANTE |
| Moldova | Dr Gheorghe SAVIN |
| Poland | Prof Stanislaw WEIDNER |
| Portugal | Dr Ana Margarida FORTES |
| Portugal | Prof Pedro FEVEREIRO |
| Romania | Dr Carmen Florentina POPESCU |
| Romania | Prof Doru PAMFIL |
| Serbia | Dr Vuk MAKSIMOVIĆ |
| Serbia | Prof Dragan NIKOLIC |
| Slovenia | Dr Katja SUKLJE |
| Slovenia | Prof Marina DERMASTIA |
| Spain | Dr Gonzaga SANTESTEBAN |
| Spain | Dr Jerome GRIMPLET |
| Sweden | Prof Johan TRYGG |
| Switzerland | Dr Manuel GIL |
| Switzerland | Prof Markus RIENTH |
| Turkey | Prof Çetin CÖMERT |
| United Kingdom | Dr Julien LECOURT |
| United Kingdom | Dr Paul KERSEY |

# STSM, ITC Conference Grant, TS

## SHORT TERM SCIENTIFIC MISSIONS

- Exchange visits fostering collaboration, contributing to the scientific objectives of the Actions and allowing participant to learn new techniques, to have access to data/instruments/methods not available in their own institution.

NEW

## ITC Conference Grant

- PhD Student and ECI based in a participating ITC Countries to attend a conference and giving either an oral or poster presentation.

## TRAINING SCHOOLS

- Provide intensive training on a subject that contributes to the aim of the Action (new or emerging subject)
- If applicable, offer familiarization with unique equipment or know-how in one of the laboratories of the Action

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## Working Group 1

### Data interoperability and definition of minimal contextual data standards

This Working Group will focus on contributing to community-wide standards for metadata along with guidelines for their proper use.

**WG1 Leader:** Reinhard TOEPFER

**WG1 Vice-Leader:** Camille Rustenholz

Find Out More

**Prof Reinhard TOEPFER**
Julius Kühn-Institute
Institute for Grapevine Breeding
Geilweilerhof
Germany
Siebeldingen

## Working Group 2

### Interoperability of infrastructures and web services

In this Working group we will develop a bioinformatics infrastructure to facilitate the discovery, acquisition, storage, processing and integration of diverse grapevine datasets, and this will be managed by distinct nodes.

**WG2 Leader:** Paul KERSEY

**WG2 Vice-Leader:** Daniela Haltgrawe

Find Out More

**Dr Paul KERSEY**
Royal Botanic Gardens, Kew
Richmond
Surrey
United Kingdom
Richmond

## Working Group 3

### Data analysis and best practices

Guidelines for best practice focusing on the promotion of standard protocols for omics data processing and analysis will be developed and recommended. These guidelines will help researchers to produce high-quality data and carry out informative analysis in the context of a standard framework, which will further contribute to data integration. Additionally, we will build a centralised framework for the standard annotation of grapevine genes. Such a framework will facilitate the integration of different omics data types by relying on standard formats and ontologies.

**WG3 Leader:** Johan TRYGG

**WG3 Vice-Leader:** Jerome Grimplet

Find Out More

**Prof Johan TRYGG**
Computational Life Science Cluster (CLiC)
Department of Chemistry
Umeå University
Linneaus vag 10
Umeå
Sweden

## Working Group 4

### Dissemination and user community assessment of guidelines and recommendations

A focus of this Working Group will be training and dissemination of the work done by the other WG possibly in joint activities with dissemination and training activities of other large agnostic initiatives. We will disseminate the recommendations made by other working Groups and train the grapevine community to follow these recommendations.

**WG4 Leader:** Prof Dragan NIKOLIC

**WG4 Vice-Leader:** Panagiotis Kalaitzis

Find Out More

**Prof Dragan NIKOLIĆ**
University of Belgrade
Faculty of Agriculture
Nemanjina 6
Serbia

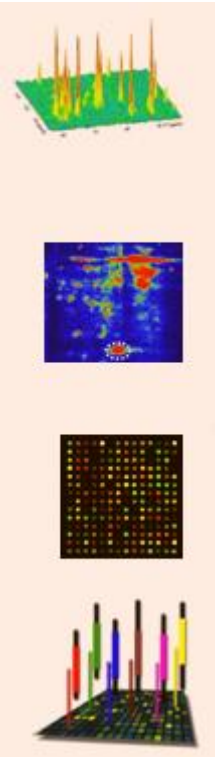
# Pilot Projects

**Genome data**
C. Rustenholtz

metadata for genome submission to ENA

**Omics data**
J. Grimplet

requirements for Omics submissions



**Phenotyping data**
E. Duchene

standardisation of the organs naming, development stages, Vitis ontology

# Working Groups

Composed of:

- MC Members, MC Substitutes, and MC Observers from NNC, IPC, Specific Organisations
- Any researcher from Participating COST Member Countries

Every MC Member is expected to join a Working Group and actively participate as Working Group Member.

WG Leaders should be MC Members.

**Inclusiveness Target Countries (ITC)**

Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, fYR Macedonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Turkey

# Action Grant Periods

For each Grant Period (GP) you will have a Work and Budget Plan and Grant Agreement.

**Overview of the GPs for Actions in OC-2017-1**

**Start of the Action = 1st MC meeting date**

- GP 1: 1 Oct to Dec 2018 – 30 April 2019
- GP 2: 1 May 2019 – 30 April 2020
- GP 3: 1 May 2020 – 30 April 2021
- GP 4: 1 May 2021 – 30 April 2022
- GP 5: 1 May 2022 – **End of the Action (4 years after MC1 date)**

PLEASE JOIN THE CA 17111