



Impact of Science

14-15 June 2018, Ottawa

**Drawing Room, 13.45-15.00**

## **Global Challenges/Issues**

*Jean Lebel (Chair)*

*Rob Annan*

*David Phipps*

# Global Challenges/Issues

Jean Lebel

*President, International Development  
Research Centre (IDRC), Canada*

# Global Challenges/Issues

Rob Annan

*Vice-President Public Affairs and Communications,  
Genome Canada*

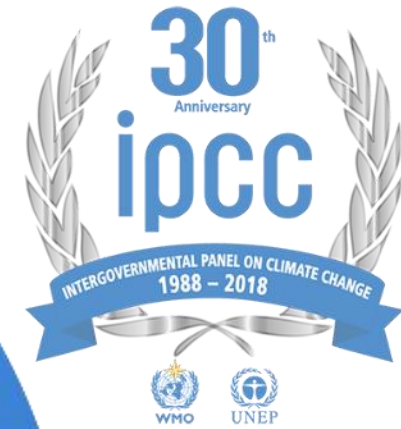
# Linking Canada to Global Challenges

AESIS Impact of Science  
Ottawa, ON – June 14, 2018  
Rob Annan, PhD

Vice-President Public Affairs & Communications  
@robannan



GenomeCanada



**World Health  
Organization**



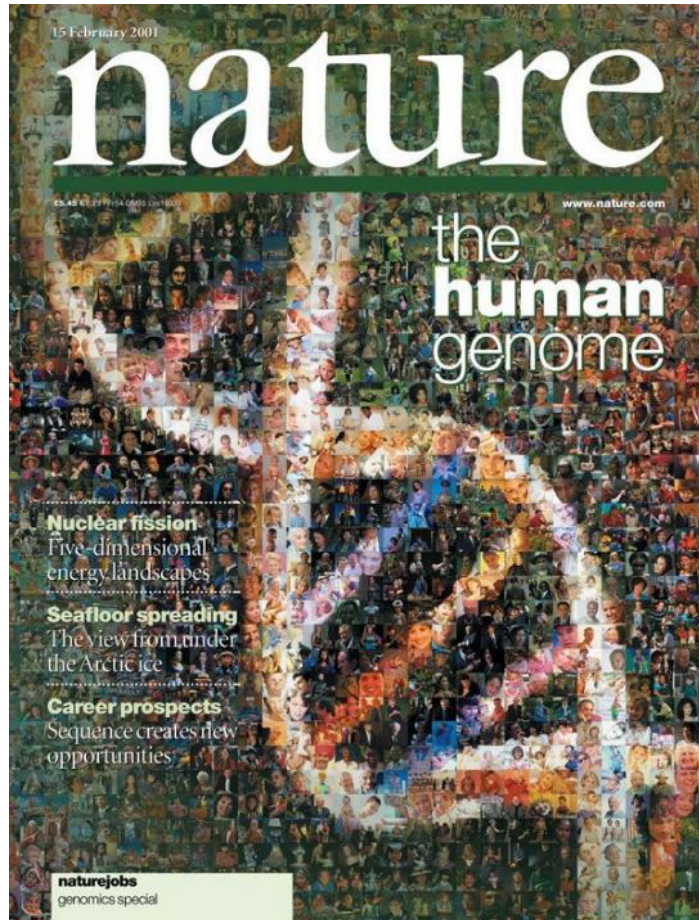
United Nations  
Educational, Scientific and  
Cultural Organization



**Genome**Canada

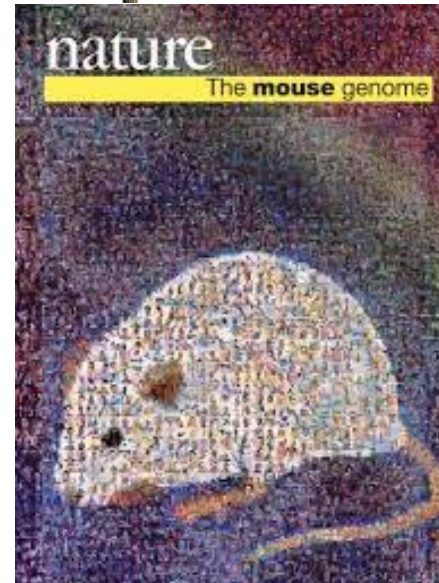
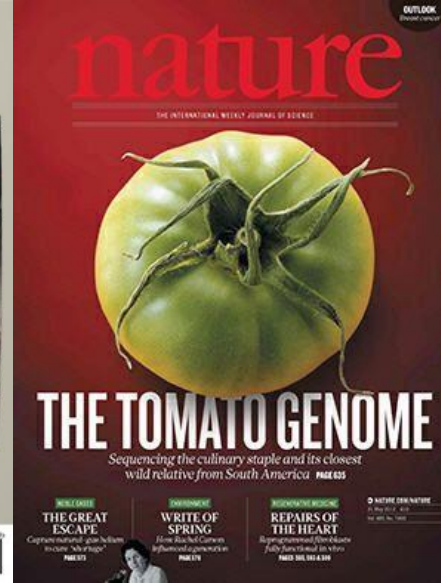


# Genomics is international



- 20 sequencing centres
- 6 countries
- 13 years
- >3 billion base pairs
- \$3 billion to complete







- Created in 2000
- Partnership with provinces via six Genome Centres
- \$3.6B invested in Canadian genomics research
- 12 major international genomics initiatives underway
- >50 international funding partners
- ~400 research projects supported
- ~250 Canadian and international industry partners



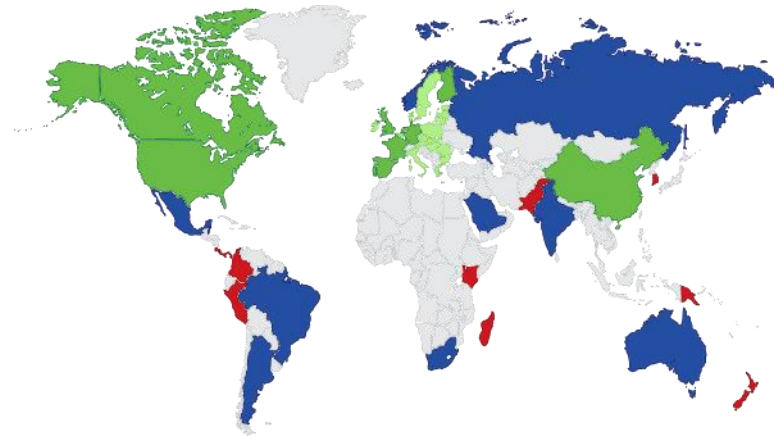
**GenomeCanada**



# international BARCODE OF LIFE



- Paul Hebert and other researchers at University of Guelph published the concept in a paper in 2003
- Sequencing conserved genes to identify species – like a supermarket scanner
- Catalogue and monitor species
- iBOL launched in 2010
- Hosted in Canada, with nodes in 26 countries





# Global Alliance for Genomics & Health

- GA4GH creates frameworks and standards for the responsible, voluntary, and secure sharing of genomic and health-related data
- 500 institutional partners in 71 countries with secretariat hosted in Toronto
- Seeks to activate the right to share in scientific advancement and its benefits as outlined in the Universal Declaration of Human Rights
- Accomplishes this through ‘Driver Projects’ – real-world data initiatives that integrate and shape GA4GH frameworks and standards
- This includes Canadian Distributed Infrastructure for Genomics (CanDIG) - a fully distributed platform that allows national-scale, privacy-maintaining analyses of locally-controlled data sets.

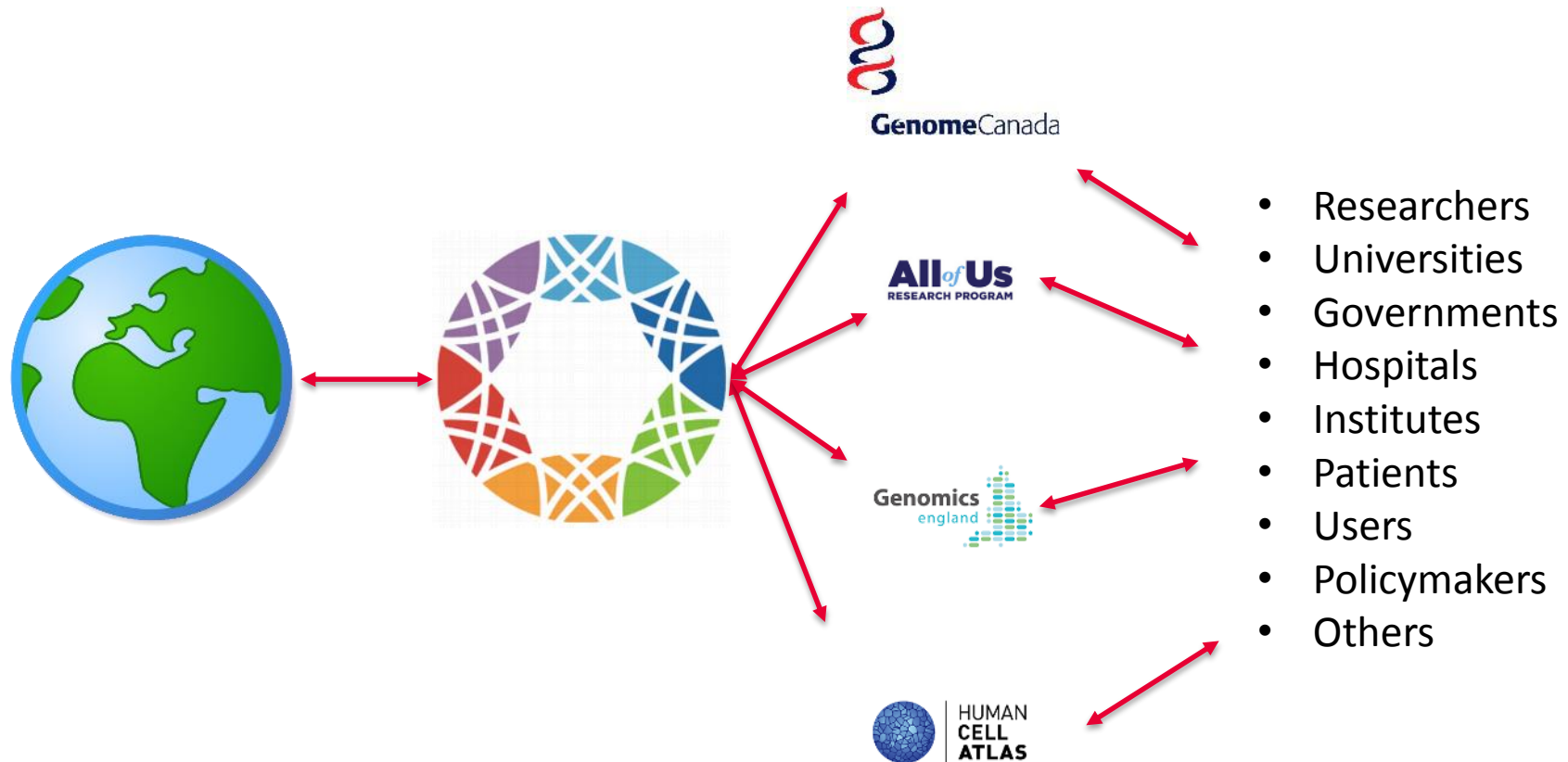




- International initiative to generate, integrate and share data and information about plant genetic information
- Community-driven, headquartered in Canada
- Catalogue and describe genetic diversity of the world's crops
- 68 partners in 31 countries
- Coordinating projects that are sequencing specimens in national seed banks around the world
- Identify traits to help mitigate and adapt to climate change



# A coordinated, two-way approach





**Genome**Canada

GLOBAL CHALLENGES • GENOMIC SOLUTIONS

DÉFIS MONDIAUX • SOLUTIONS GÉNOMIQUES

# Global Challenges/Issues

David Phipps

*Executive Director Research and Innovation Services, York University,  
and Network Director, Research Impact Canada*

# Growing Canada's institutional capacity for global collaboration

David Phipps, Executive Director  
Research & Innovation Services, York University  
Network Director, Research Impact Canada  
[@researchimpact](#)



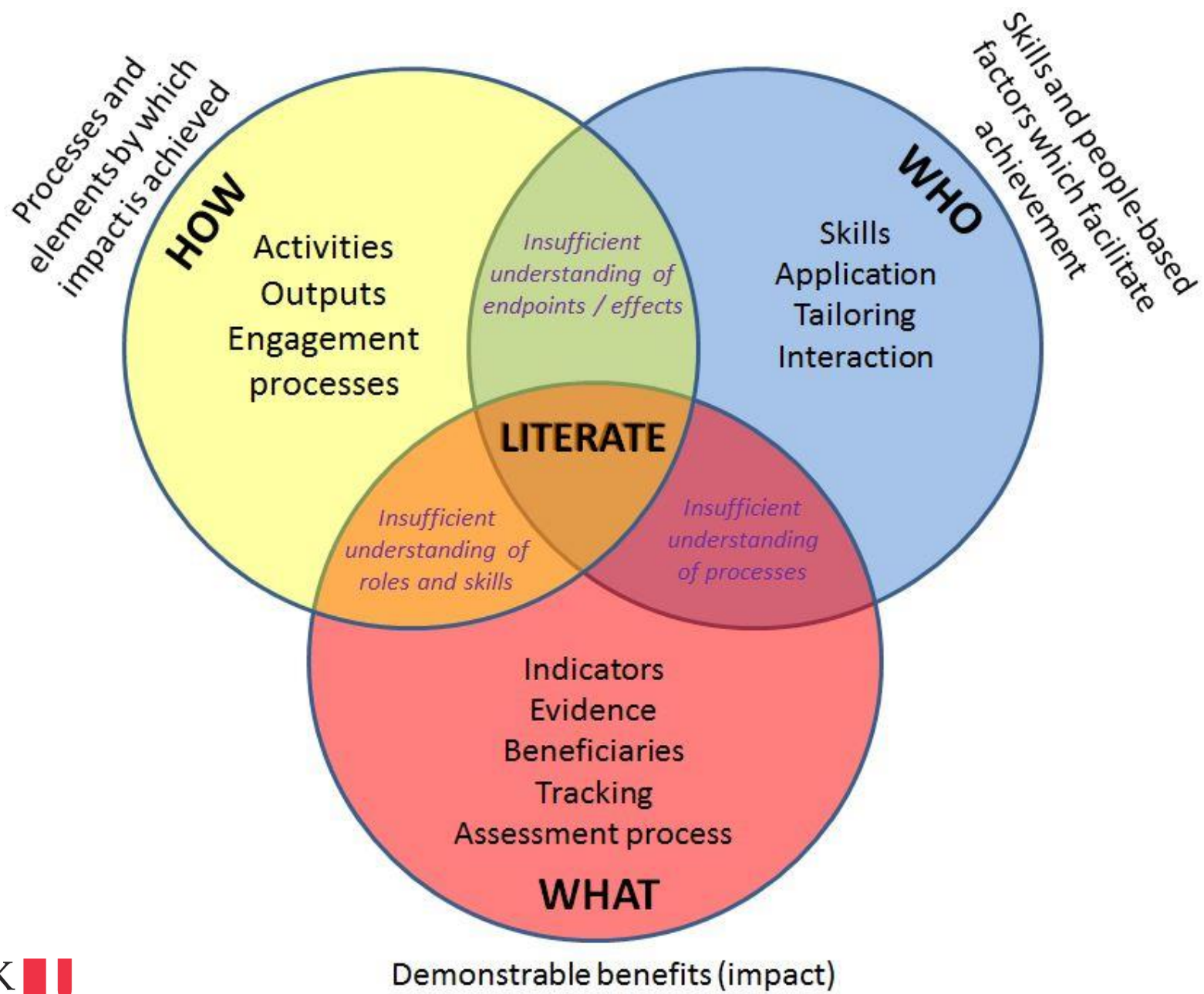


RESEARCHER ↔ PARTNER

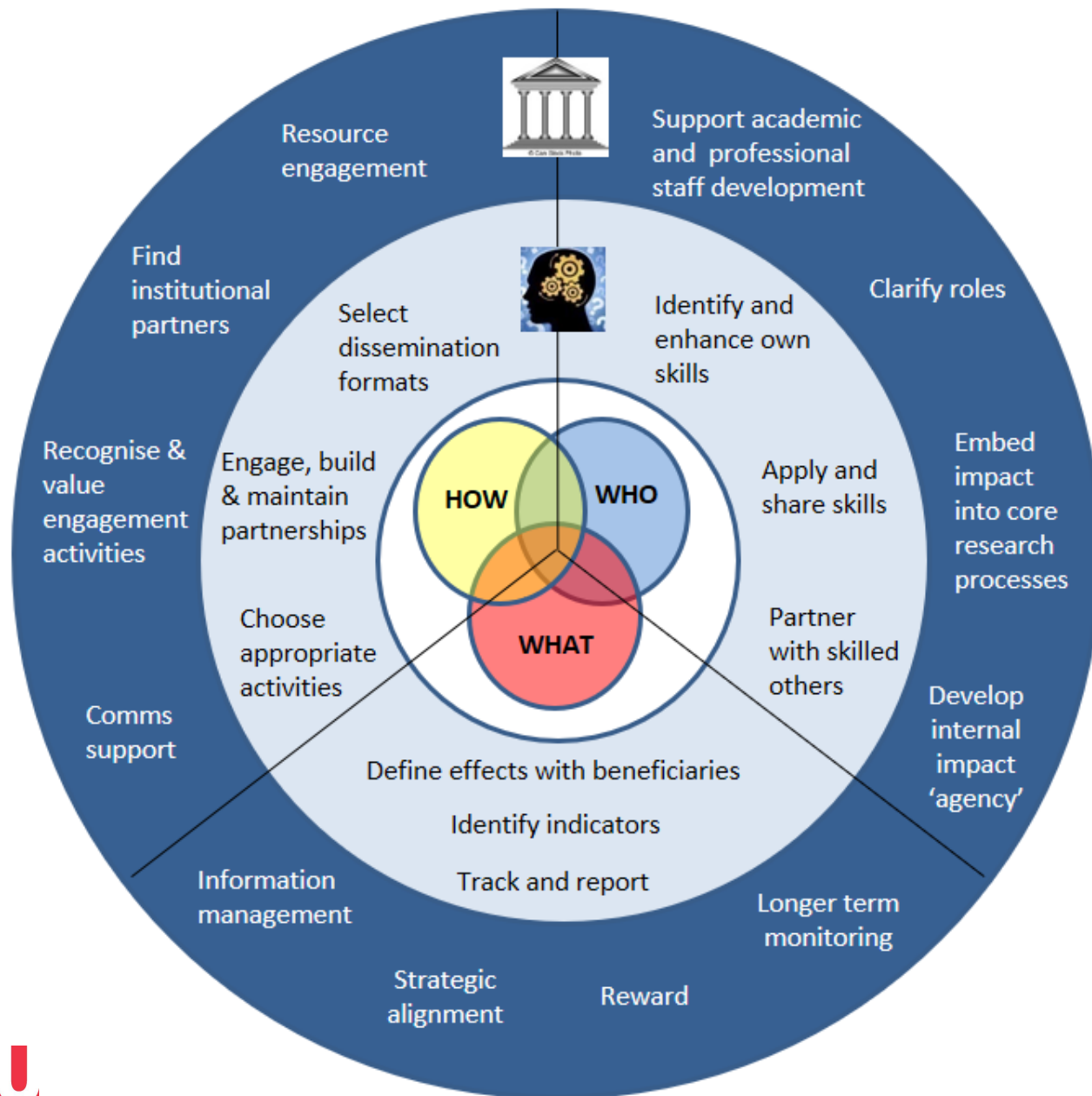
- Public policies
- Global connections
- Funding: research, operations

- Institutional policies/plans
- Services
- Infrastructure
- Student funding

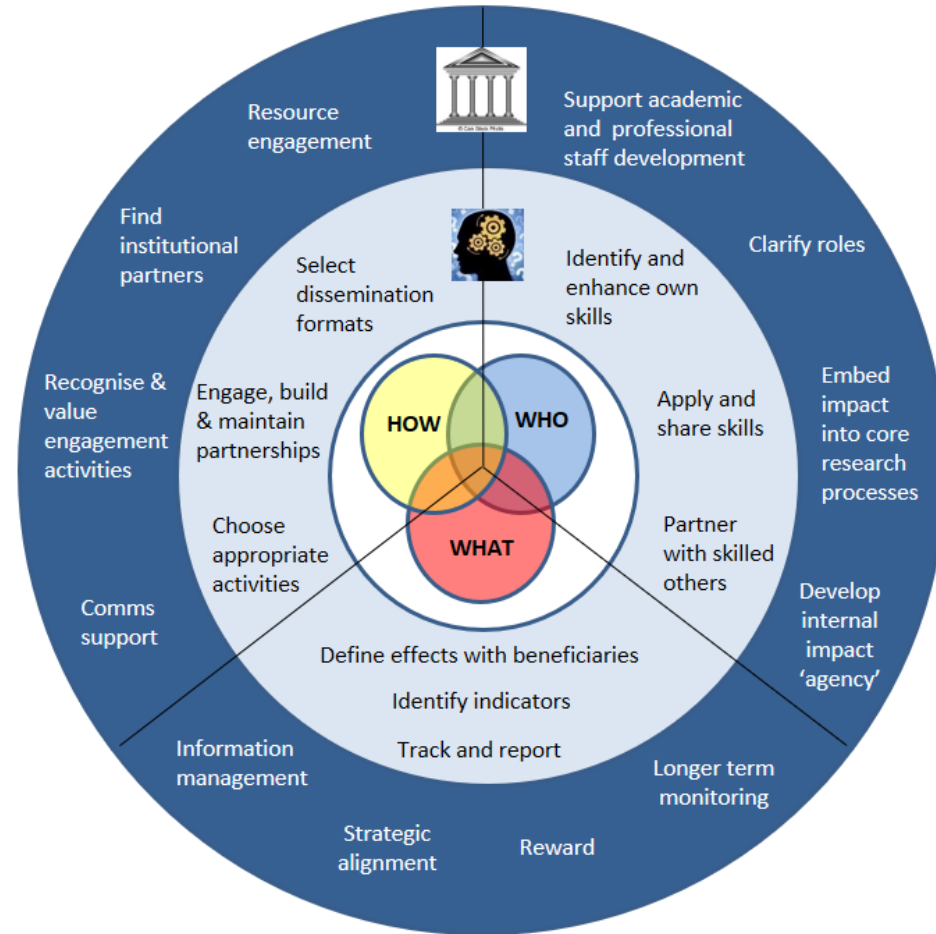
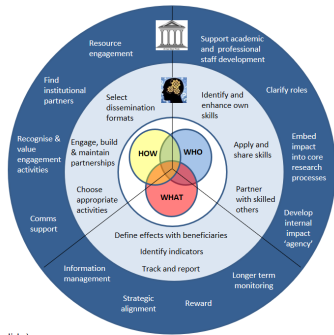
- Collaborations (local to global)
- Students
- Dissemination
- End user/partner perspective



# Research Impact Literacy



# Institutional Research Impact Literacy







## For partnered research, institutions need to help researchers:

- Build trust
- Develop capacity
- Understand the social, economic, political contexts of partners
- Co-construct knowledge
- Build culture



Focus on institutional practices

Respond to unique contexts

Common: engagement (students, teaching/learning, research), dissemination, events, grant support (research office)

Qualities: reciprocity, meaningful partner, trust, sharing, multiplier effect, central coordination (central and local delivery)

**It's Your Turn!**

