

The role of RIs in training the digital workforce

Session 14 | Great room 1 | 2.00-2.55PM



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The role of RIs in training the digital workforce

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Brisbane, Australia

December 04, 2024



About me ...

- University of Utah
 - Scientific Computing & Imaging (SCI) Institute
 - Kahlert School of Computing
- US Federal Government
 - National Science Foundation (NSF), Office of Advanced Cyberinfrastructure (OAC)
 - Office of Science and Technology Policy (OSTP)
- Research Infrastructure
 - Ocean Observatories Initiative (OOI)



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NATIONAL DATA PLATFORM

Bridging the Data Gaps for AI

nationaldatapatform.org

Focus of this Panel

- Explore the ***pivotal role RIs play*** in providing crucial data and research software ***to train a digitally adept workforce***, for their own needs and broader research communities.
- Highlight ***strategies for developing expertise*** in advanced technologies and the ***foundational computational skills*** necessary for effective utilization.
- Enhance their own operations but also ***empower researchers*** to harness cutting-edge tools for impactful discoveries.



RI's Role in Training the Digital Workforce:

- **... at RIs**
 - Training, upskilling/rescaling, professional development
 - Incentives, career paths, reward structures
- **... for RI**
 - Awareness and ability to use and benefit from RI
- **... by RI**
 - Engaging and training the next generation
 - Learning laboratories for hard problems: Science, Systems, Sociotechnical, @ Scale



Digital Workforce for the Future?



A digital workforce is an adaptable team of software robots that works together in cooperation with human employees to accomplish repeated processes.



The digital workforce refers to a combination of human employees and digital technologies, such as automation tools, artificial intelligence (AI), and robotics, working together to perform tasks, processes, and operations in an organization.



The Panelists

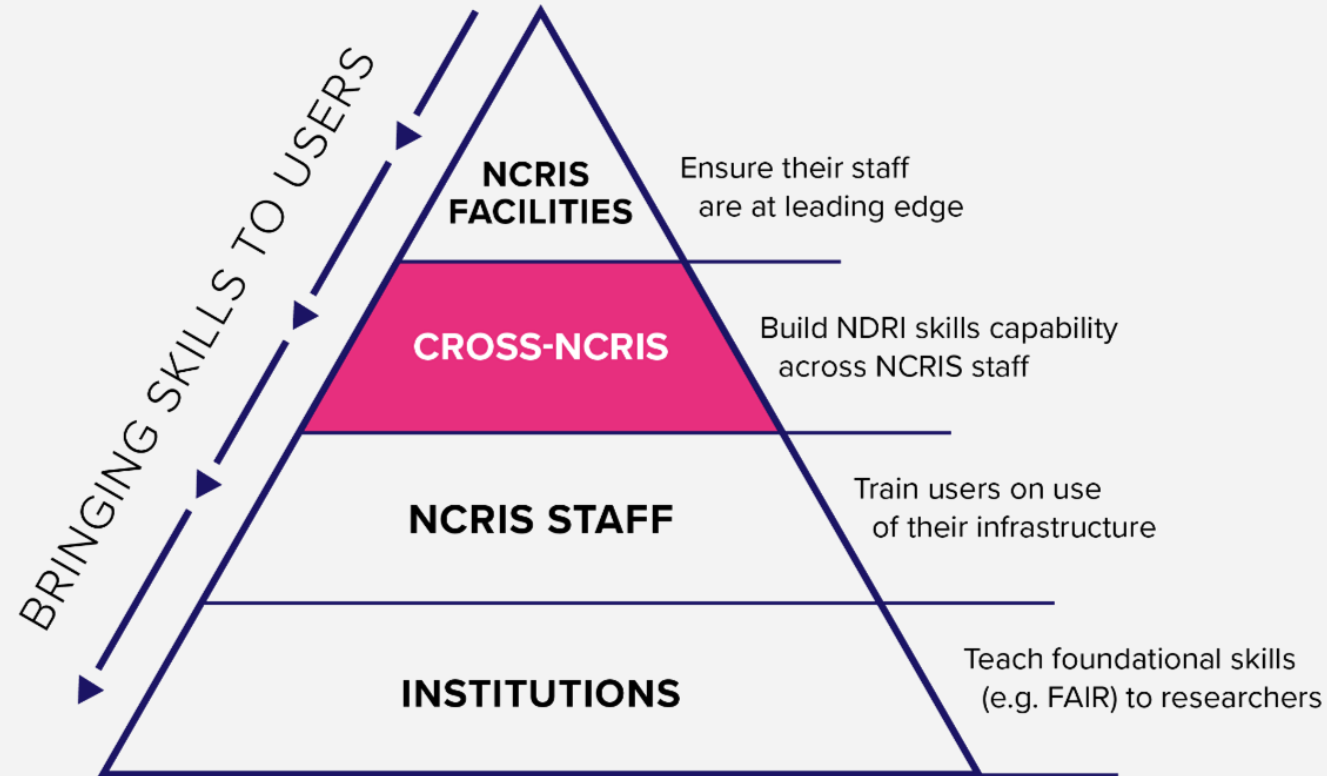


[Rosie Hicks](#) is the Chief Executive Officer of the Australian Research Data Commons (ARDC), enabled by NCRIS, to provide Australian researchers with competitive advantage through data. Rosie's career, spanning Japan, UK and Australia, includes every aspect of scientific instrumentation from product development and technical marketing to the management of multi-user facilities, working in environments that cross academic and industry domains to drive innovation and research translation.



BUILDING THE DIGITAL RESEARCH SKILLS OF THE NCRIS WORKFORCE

Bridging the **Gap** in Growing Users' Digital Research Skills



DIGITAL RESEARCH SKILLS MATRIX

JOB/ ROLES	Researchers	Data Scientist	Research Software Engineer	Inst Senior Research Manager	Data Infrastructure Manager	Data Manager	Data Librarian	Data Archivist	Data Custodian
LANDSCAPE SKILLS									
GOVERNANCE CAPABILITIES					DATA GOVERNANCE				
Policies	Working	Working	Working	Practitioner	Practitioner	Practitioner	Practitioner	Practitioner	Expert
Standards	Working	Working	Working	Practitioner	Practitioner	Practitioner	Practitioner	Practitioner	Expert
GOVERNANCE CAPABILITIES					INFRASTRUCTURE GOVERNANCE				
Policies	Working	Working	Working	Working	Expert	Working	Awareness	Awareness	Working
DIGITAL RESEARCH INFRASTRUCTURE MANAGEMENT									
Systems Development & Management	Awareness	Awareness	Working	Working	Expert	Working	Awareness	Awareness	Working
Storage Development & Management	Awareness	Awareness	Working	Working	Expert	Working	Awareness	Awareness	Working
Application Development & Management	Awareness	Awareness	Practitioner	Working	Expert	Working	Awareness	Awareness	Working
	Universities			Universities/ARDC	Universities/NCRIS/ARDC			ARDC	

“WELL-POSITIONED” ENTITIES

- Universities
- Universities/ARDC
- Universities/NCRIS/ARDC
- ARDC

COMPETENCY

- Awareness
- Working
- Practitioner
- Expert



INTERNATIONAL DATA WEEK

13-16 October 2025
Brisbane, Australia



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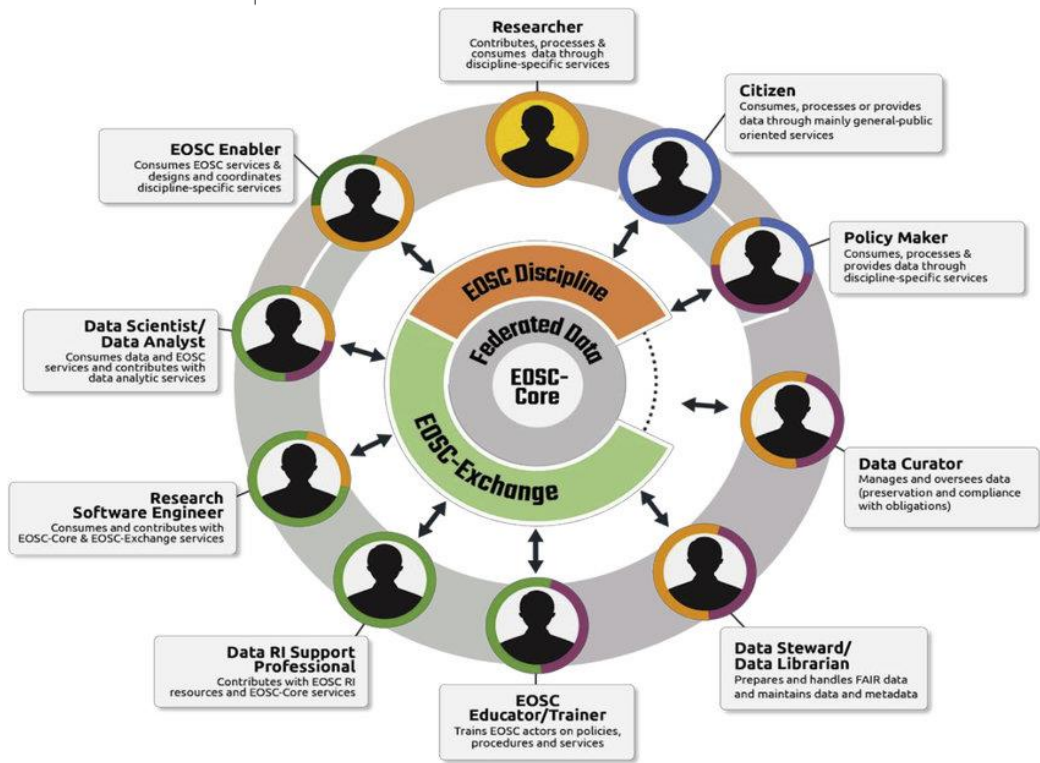
idw2025.org

The Panelists



Fotis Psomopoulos is a Senior Researcher at the Institute of Applied Biosciences (INAB), at the Centre for Research and Technology Hellas (CERTH), in Greece. He is active in training efforts and initiatives, is on the ELIXIR Training Platform Executive Committee, is co-author of the Greek National Plan for Open Science and coordinates the European Virtual Institute for Research Software Excellence (EVERSE) project.

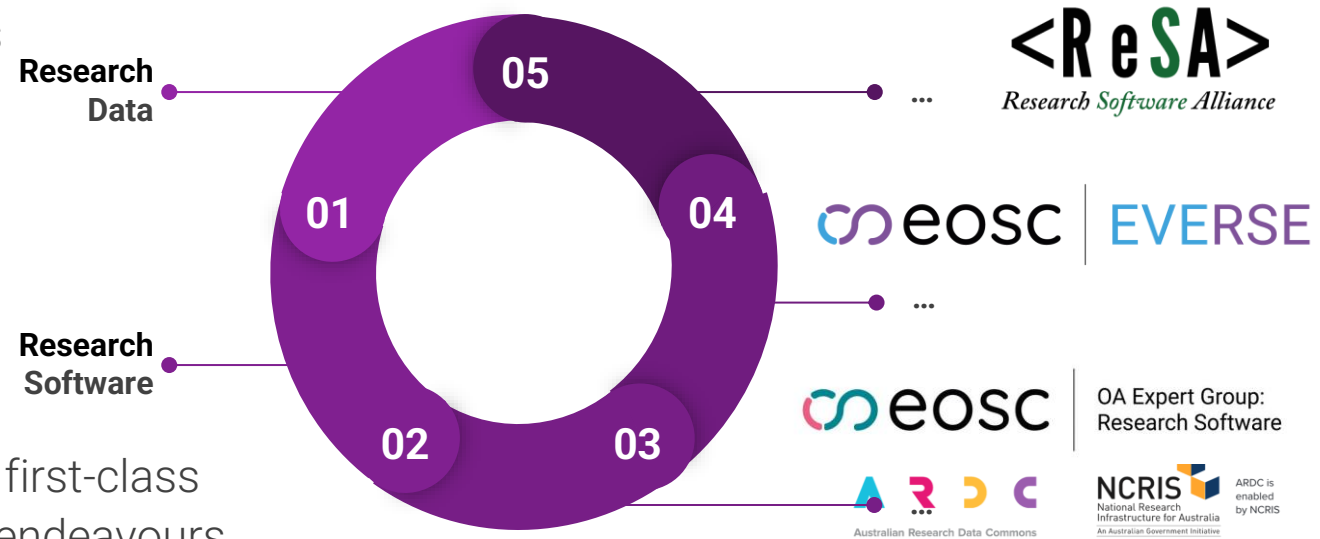




ELIXIR Training Platform structure

Actors in the EOSC ecosystem and related skills needs

Barker, M., et al. (2021). "Digital Skills for FAIR and Open Science: Report from the EOSC Executive Board Skills and Training Working Group"



Research Software as a first-class citizen for the scientific endeavours

The Panelists



Dan Stanzione is Executive Director of the Texas Advanced Computing Center (TACC), one of the leading advanced academic computing centers in the world. He also holds the position of Associate Vice President for Research at The University of Texas at Austin. Stanzione serves as the principal investigator (PI) for the U.S. National Science Foundation (NSF) Leadership Class Computing Facility (LCCF), which started construction in July 2024 and is expected to begin operations in 2026. The LCCF will deploy Horizon, which will be the largest academic supercomputer dedicated to open science research in the NSF portfolio.



The Panelists



Rosie Hicks is the Chief Executive Officer of the Australian Research Data Commons (ARDC).



Fotis Psomopoulos is a Senior Researcher at the Institute of Applied Biosciences (INAB), at the Centre for Research and Technology Hellas (CERTH), in Greece.



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The role of RIs in training the digital workforce: Questions

- What what are the key skillsets needed by the RI digital workforce? What are the gaps that you see?
 - What is the role of academic institutions? How can they provide the translational skills needs?
- What are effective mechanisms for attracting, recruiting, developing, rewarding and retaining your workforce?
- How prepare for/react to (disruptive) innovations and rapidly evolving technologies, such as AI?

