

EnTrust T4 Training Program

Next Generation of Trustworthy Agri-Data Management

February 24-27, 2025
Maynooth University, Ireland

Event Overview

This 5-day doctoral training program brought together leading experts in agricultural data management, digital transformation, research methodology, and business innovation. The T4 Training was designed specifically for doctoral candidates in the EnTrust program, focusing on developing the next generation of trustworthy agricultural data management specialists through comprehensive theoretical foundations and practical applications.





Funded by the European Union



Maynooth University
National University of Ireland Maynooth



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T4 Training Week

Data Governance Practices

Maynooth, February 24-28th, 2025

The ENTRUST T4 training event unites industry leaders, academic experts, and PhD students to share insights on advanced technologies, case studies, and policy frameworks, focusing on data governance to advance data-driven agriculture.

Speakers/Panellists

 Zenun Kastrati LNU	 Stuart Green Teagasc
 Nicola Mountford MU	 John McDonald MU
 Simon Hanratty MU	 Ville Sirviö NIIS/GaiaX
 Anil Turkmayali IDS	 Peter Mooney MU
 Ruth Buckley Cork City Council	 Markus Helfert MU/IVI
 Zohreh Pourzolfaghar MU	 Anita Mirjamdotter LNU
 Arianit Kurti LNU	 Katarina Stanoevska HSC
 Gemma Irvine MU/EDI	 Ciarán Quinn MU
 Carsten Sørensen CBS	 Chiara Garilli UNIPA
 Karen McGrath UCD	 Georgina Foley Enterprise Ireland
 John Hyland Teagasc	 Barry Smith NSAI

Entrust project T4 training week

24-28th of February 2025

Tuesday, 25 February 2025	Wednesday, 26 February 2025	Thursday, 27 February 2025
09:30 - 10:30 John Hume Boardroom - John Hume Building DC Presentations (abstract) and Q&A (3 DCs) 10:30 - 10:50 Feedback discussion Ville Sirviö, Ruth Buckley, Anil Turkmayali 10:50 - 11:00 Coffee Break 11:00 - 12:00 DC Presentations (abstract) and Q&A (2 DCs) 12:00 - 12:15 Feedback discussion Ville Sirviö, Ruth Buckley, Anil Turkmayali 12:15 - 12:45 Experiences on the linkages between open geospatial data, open source software, and data quality / Peter Mooney - MU 12:45 - 12:55 Q&A 12:55 - 13:55 Lunch break IVI Boardroom 13:55 - 14:25 Data Spaces in Agriculture: Enabling interoperability and Data Sovereignty through IDS Anil Turkmayali - IDS 14:25 - 14:35 Q&A 14:35 - 15:05 The Multisystem Future of Digital Public Infrastructure Ville Sirviö - NIIS/GaiaX 15:05 - 15:15 Q&A 15:15 - 15:40 Coffee Break 15:45 - 16:40 Cyber Security - Protecting your Data & More Ruth Buckley - Cork City Council 16:10 - 16:20 Q&A 16:20 - 17:00 Wrap up and closing 18:30 Social Dinner - Stone Haven	9:30 - 10:50 Hamilton Seminar (Room 317) - Eolas Building DSR Panel Session Markus Helfert (MU), Zohreh Pourzolfaghar (MU), Anita Mirjamdotter (LNU), Arianit Kurti (LNU), Katarina Stanoevska (HSC) 10:50 - 11:15 Coffee Break 11:15 - 12:15 DSR Workshop Session Markus Helfert (MU), Zohreh Pourzolfaghar (MU), Anita Mirjamdotter (LNU), Arianit Kurti (LNU), Katarina Stanoevska (HSC) 12:15 - 13:00 Ensuring equality, valuing and celebrating Diversity and promoting inclusion (EDI) in Research Gemma Irvine - MU 13:00 - 14:00 Lunch Break (Hamilton seminar) 14:00 - 15:15 Using End-Note: a hands-on practical experience Ciarán Quinn - MU 15:15 - 15:35 Coffee Break 15:35 - 17:00 Publishing in Top Journals Carsten Sørensen - CBS 18:30 Social Dinner - Stone Haven	09:30 - 10:00 John Hume Boardroom - John Hume Building IPRs in the Agri-Food Sector: Challenges and Opportunities / Chiara Garilli - UNIPA 10:00 - 10:10 Q&A 10:10 - 10:40 Bridging the gap: Understanding digital agricultural data from the farmer's perspective Karen McGrath - UCD 10:40 - 10:50 Q&A 10:50 - 11:10 Coffee Break 11:10 - 11:30 Commercialising Research Georgina Foley - Enterprise Ireland 11:30 - 11:40 Q&A 11:40 - 13:00 DCs workshop shark tank/dragon's den 13:00 - 14:00 Lunch Break (Phoenix hall) 14:00 - 14:30 Research Data Sharing and Valorisation: An Institutional Perspective / John Hyland - Teagasc 14:30 - 14:40 Q&A 14:40 - 15:10 EU Trained Data Framework - The role of Standardisation Barry Smith - NSAI 15:10 - 15:20 Q&A 15:20 - 15:40 Coffee Break 15:40 - 16:30 DCs workshop shark tank/dragon's den 16:30 - 17:00 Presentation on idea Panel discussion on the best idea 17:00 - 17:15 Training wrap-up

Beyond the Office

Friday, 28 February 2025



8:30 Pickup point at Maynooth University
9:30 Arriving at Mountlucas windfarm
9:30 - 9:40 Break
9:40 - 11:00 Visiting windfarm and fishfarm
11:00 - 11:30 On the way to Tullamore Court Hotel
11:30 - 11:45 Refreshment
11:45 - 12:15 Presentation from BioMDJT
12:15 - 12:25 Q&A
12:25 - 12:55 Presentation from BioMDJT
12:55 - 13:15 Q&A
13:15 - 14:30 Work lunch
14:30 - 15:30 On the way to the Irish National Stud & Gardens
15:00 - 17:00 Visiting Irish National Stud & Gardens
17:00 - 18:00 On the way back to Maynooth
18:00 Back at Maynooth





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IVI INNOVATION VALUE INSTITUTE

T4 Training Agenda

24-28th of February 2025

Monday, 24 February 2025
9:00 - 9:30 John Hume Boardroom - John Hume Building Welcome and Coffee 9:30 - 10:10 Overview of the training week 10:10 - 10:40 The role of AI in smart farming and agriculture Zenun Kastrati - LNU 10:40 - 10:50 Q&A 10:50 - 11:20 Earth observation data for agri policies Stuart Green - Teagasc 11:20 - 11:30 Q&A 11:30 - 12:00 Coffee Break 12:00 - 12:40 DC Presentations (abstract) and Q&A (2 DCs) 12:40 - 13:00 Feedback discussion John McDonald, Nicola Mountford, Simon Hanratty 13:00 - 14:45 Lunch break - Pugin Hall 14:45 - 15:45 DC Presentations (abstract) and Q&A (3 DCs) 15:45 - 16:05 Feedback discussion John McDonald, Nicola Mountford, Simon Hanratty 16:05 - 17:00 DCs Meeting

Acknowledgement: EnTrust funded by the European Commission as our sponsor for the Doctoral Networks (MSCA-DN-101073381-

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Day 1: Overview and Context

Monday, February 24, 2025

Meeting Title: Overview and Context

Time: 09:00 - 17:00

Location: John Hume Building

Programme Schedule

09:00 - 09:30: Welcoming and Coffee

An opportunity for participants to network and prepare for the training week ahead.

09:30 - 09:35: Opening Remarks Welcome

Professor Joseph Coughlan, Professor of Accounting and Head of the School of Business at Maynooth University, delivered the opening remarks, providing an official welcome to all participants and setting the context for the T4 Training Program within the broader EnTrust initiative. With his extensive experience in doctoral supervision, having graduated 17 PhD students and examined PhDs at institutions across Ireland and the UK, Professor Coughlan brought a valuable perspective on the doctoral journey. His expertise in organisational relationship building and management control systems provided an ideal foundation for welcoming this international cohort of doctoral candidates focused on trustworthy agricultural data management.

09:35 - 10:10: Overview of the Training Week

Introduction to the four-day program structure, learning objectives, and expected outcomes. This session established the framework for understanding how each day's content builds toward comprehensive expertise in trustworthy agricultural data management.

10:10 - 10:50: The Role of AI in Smart Farming and Agriculture, Exploring artificial intelligence applications in modern agricultural systems

Dr. Zenun Kastrati from Linnaeus University presented cutting-edge research on natural language processing, machine learning, and sentiment analysis applications in agricultural contexts. As an Associate Professor with expertise in applied areas of AI, Dr. Kastrati demonstrated how artificial intelligence technologies are transforming decision-making processes in smart farming systems, from crop monitoring to predictive analytics.

10:50 - 11:30: Earth Observation Data for Agri Policies, Leveraging Satellite and Remote Sensing Technologies for Agricultural Policy Development

Dr. Stuart Green, Senior Research Officer in the Department of Agribusiness and Spatial Analysis at Teagasc, shared his 25 years of expertise in remote sensing applications. With his extensive background in producing national-scale datasets from Earth Observation on land cover, land use, habitats, and forestry in Ireland, Dr. Green explored how EO data supports sustainable agriculture policies and decision-making frameworks.

11:30 - 12:00: Coffee Break**12:00 - 12:40: Individual Doctoral Candidates Presentations (Part 1)****12:40 - 13:00: Feedback Discussion on Doctoral Candidates' Presentations**

Interactive feedback session led by an expert panel bringing diverse perspectives to guide doctoral research development:

Professor John McDonald from Maynooth University Department of Computer Science contributes over two decades of expertise in computer vision, robotics, and AI, with particular focus on spatial perception and intelligence for autonomous systems. His research has resulted in over 100 publications and has been featured in major media outlets. As a member of the Hamilton Institute and Funded Investigator in Lero, he brought valuable insights into the technical foundations of agricultural data systems.

Dr. Nicola Mountford, Associate Professor and Director of the PhD programme at Maynooth University School of Business, offers expertise in healthcare organization and digital transformation. Her research focuses on organizational decision-making processes and she has led work packages in European projects on connected health technologies and doctoral education redesign. Her experience with interdisciplinary research and PhD program management provided essential guidance for doctoral candidates navigating complex research challenges.

Simon Hanratty from the Innovation Value Institute brought unique industry perspective as a PhD candidate studying workplace wellbeing technology while on career break from his role as CIO at Irish Life. With over thirty years of experience across IT, Strategy/Change, and Operations at managerial and executive level, Simon offered practical insights into bridging academic research with real-world implementation challenges.

14:45 - 15:45: Individual Doctoral Candidates Presentations (Part 2)**15:45 - 16:05: Feedback Discussion on Doctoral Candidates' Presentations**

Interactive feedback session led by an expert panel bringing diverse perspectives to guide doctoral research development:

Professor John McDonald contributed his extensive research background in spatial perception and autonomous systems, offering technical insights particularly valuable for data collection and processing methodologies in agricultural contexts.

Dr. Nicola Mountford provided guidance on organizational and business aspects of research, drawing from her expertise in decision-making processes and her experience leading European projects that bridge academic research with practical implementation.

Simon Hanratty offered industry perspective on technology adoption and digital transformation challenges, helping candidates understand how their research might translate into real-world agricultural applications.

16:05 - 16:10: Wrap-up and Participants' Feedback of the Day**16:10 – 17:00: Doctoral Candidates Meeting.**



Day 2: Data Governance and Technology

Tuesday, February 25, 2025

Meeting Title: Data Governance and Technology

Time: 09:30 - 17:00

Location: Eolas Building

Programme Schedule

09:30 - 10:30: Individual Doctoral Candidates Presentations (Part 3)

10:30 - 10:50: Feedback Discussion on Doctoral Candidates' Presentations

Expert feedback session with **Anil, Ville, and Ruth**, bringing industrial and academic perspectives from data spaces, digital infrastructure, and cybersecurity to guide research development.

10:50 - 11:20: Coffee Break

11:20 - 12:00: Individual Doctoral Candidates Presentations (Part 4)

12:05 - 12:15: Feedback Discussion on Doctoral Candidates' Presentations

Final expert feedback session for the doctoral presentations.

12:15 - 12:55: Experiences on the Linkages Between Open Geospatial Data, Open Source Software, and Data Quality: Bridging theoretical concepts with practical implementation

Dr. Peter Mooney, Associate Professor of Computer Science at Maynooth University, shared his extensive expertise in geospatial data quality and analytical methods. With over 60 peer-reviewed publications and 5,000+ citations, Dr. Mooney explored the critical relationships between open data initiatives, software development, and maintaining data integrity in crowdsourced and citizen science projects.

12:55 - 13:55: Lunch Break

13:55 - 14:35: Data Spaces in Agriculture: Enabling Interoperability and Data Sovereignty through IDS International Data Spaces framework for agricultural applications

Anil Turkmayali, Senior Project Manager at the International Data Spaces Association, presented how IDS standards enable secure, sovereign data sharing in agricultural contexts. With his extensive experience in legal interoperability and personal data protection, Anil will demonstrated practical applications of data spaces in agriculture through real-world European projects.

14:35 - 15:15: The Multilayered Future of Digital Public Infrastructure Building foundations for sustainable digital transformation

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Ville Sirviö, who leads the Nordic Institute for Interoperability Solutions and oversees X-Road® development with hundreds of millions of users worldwide, explored how digital public infrastructure creates the foundation for trustworthy data ecosystems. His experience with Gaia-X European Association for Data and Cloud provides unique insights into European data space development.

15:15 - 15:40: Coffee Break

15:40 - 16:20: Cyber Security – Protecting Your Data & More, Essential Security Frameworks for Agricultural Data Systems

Ruth Buckley, CIO of Cork City Council and Chair of LGI-Core, presented cybersecurity best practices specifically relevant to agricultural data management. With over 30 years in ICT and extensive experience in digital transformation projects, Ruth addressed the unique security challenges facing agricultural data systems and practical approaches to risk mitigation.

16:20 - 17:00: Wrap-Up and Closing

Synthesis of key insights from the day's technology-focused sessions and preparation for the methodology-focused content of Day 3.

18:30: Social Dinner

Networking opportunity for all participants to continue discussions in an informal setting



Day 3: Methodology and Research Tools

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Wednesday, February 26, 2025

Meeting Title: Methodology and Research Tools

Time: 09:30 - 17:00

Location: John Hume Building

Programme Schedule

09:30 - 10:50: Design Science Research (DRS) Panel Session - Exploration of Design Science Methodology in Agricultural Data Research.

This extensive panel brought together leading experts in design science research methodology: **Professor Markus Helfert** (Maynooth University), **Dr. Zohreh Pourzolfaghar** (Maynooth University), **Professor Anita Mirijamdotter** (Linnaeus University), **Professor Arianit Kurti** (Linnaeus University), and **Professor Katarina Stanoevska** (University of St. Gallen), **Dr Claudia Roessing** (IVI).

Professor Helfert, Director of the Innovation Value Institute and expert in Digital Service Innovation, led discussions on applying design science to digital transformation challenges. Professor Mirijamdotter brought her expertise in comparing Systems Thinking, Design Thinking and DSR methodologies. Professor Kurti provided clear scenarios of how DSR can be applied in different domains. Professor Stanoevska described what DSR is and its importance. Dr Roessing contributed towards communication in design science.

10:50 - 11:15: Coffee Break

11:15 - 12:15: Doctoral Candidates Workshop - Design Science Research Interactive workshop where doctoral candidates apply design science research principles to their specific research challenges, guided by the expert panel. This hands-on session enables practical application of theoretical concepts discussed in the panel session.

12:15 - 13:00: Ensuring Equality, Valuing and Celebrating Diversity and Promoting Inclusion (EDI) in Research, Building inclusive research practices in agricultural data science

Dr. Gemma Irvine, Vice-President for Equality & Diversity at Maynooth University, presented essential frameworks for conducting inclusive research. With her extensive background leading national gender equality initiatives and experience with international research programs, Dr. Irvine addressed how to integrate EDI principles throughout the research lifecycle, from methodology design to dissemination.

13:00 - 14:00: Lunch Break

14:00 - 15:15: Using EndNote: A Hands-on Practical Experience, a Reference management for doctoral research

Ciarán Quinn, Research Support Librarian at Maynooth University, provided comprehensive training on EndNote software for academic research. With his extensive experience supporting doctoral students across research methodology, systematic reviews, and academic publishing, Ciarán demonstrated practical techniques for organising literature, managing citations, and integrating references into academic writing.

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15:15 - 15:35: Coffee Break

15:35 - 16:58: Publishing in Top Journals, Strategic approaches to high-impact academic publishing

Professor Carsten Sørensen from Copenhagen Business School shared his extensive publishing experience, including publications in MIS Quarterly, Information Systems Research, and Journal of Information Technology. With his multi-decade experience in digital transformation research and extensive consulting background with major technology companies, Professor Sørensen provided practical guidance on identifying appropriate journals, crafting compelling research narratives, and navigating the peer review process.

16:58 – 17:00: Wrap-Up and Closing

Day 4: Business, Policy, and Commercialisation

Thursday, February 27, 2025

Meeting Title: Business, Policy, and Commercialisation

Time: 09:30 - 17:15

Location: John Hume Building

Programme Schedule

09:30 - 10:10: IPRs in the Agri-Food Sector: Challenges and Opportunities, Intellectual property rights framework for agricultural innovation

Professor Chiara Garilli from the University of Palermo presented her expertise in commercial law, competition law, and intellectual property rights as they apply to agricultural and food sector innovations. As a Full Professor with extensive research in corporate governance and IP law, Professor Garilli addressed the unique challenges of protecting agricultural data innovations while fostering collaborative research environments.

10:10 - 10:50: Bridging the Gap: Understanding Digital Agricultural Data from the Farmers Perspective,

Dr. Karen McGrath from University College Dublin presented her research on agricultural digitalisation from the farmers' perspective. With her background in Agricultural Extension and Innovation and expertise in participatory methods like co-design and design thinking, Dr. McGrath explored how understanding farmer needs and perspectives is essential for developing socially acceptable and practically relevant digital agricultural tools.

10:50 - 11:10: Coffee Break

11:10 - 11:40: Commercialising Research, Translating agricultural data research into market-ready solutions

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Georgina Foley from Enterprise Ireland shared her 20+ years of commercial experience in the pharmaceutical, food, and renewable energy sectors. As Senior Commercialisation Specialist, Georgina presented practical frameworks for transforming research outcomes into high-potential startups and achieving economic impact from national research investment, with particular focus on the role of digitalisation in addressing global challenges.

11:40 - 13:00: Doctoral Candidates Workshop - Shark Tank / Dragon's Den *Part 1: Pitch development and presentation skills*

An interactive workshop where doctoral candidates develop and present business cases for their research applications. This innovative format encourages entrepreneurial thinking and practical application of research outcomes while developing essential presentation and communication skills.

13:00 - 14:00: Lunch Break

14:00 - 14:40: Research Data Sharing and Valorisation: An Institutional Perspective *Maximizing the value of agricultural research data*

John Hyland, Data Value Platform Manager at Teagasc, presented institutional approaches to data sharing and value creation. With his multidisciplinary background spanning applied physics, environmental economics, and climate change research, John demonstrated how robust open data principles can be implemented systematically to maximize research value for researchers, policymakers, and agricultural stakeholders.

14:40 - 15:20: EU Trusted Data Framework – The Role of Standardisation *European regulatory landscape for trustworthy data systems*

Barry Smith from the National Standards Authority of Ireland presented current European initiatives in data governance and cybersecurity standards. With his expertise in ICT standardisation at national, European, and international levels, Barry addressed how the EU Cyber Resilience Act and EU Trusted Data Framework create new requirements and opportunities for agricultural data systems.

15:20 - 15:40: Coffee Break

15:40 - 16:30: Doctoral Candidates Workshop - Shark Tank / Dragon's Den *Part 2: Final presentations and evaluation*

Continuation of the entrepreneurial workshop where candidates present refined business propositions and receive feedback from expert evaluators.

16:30 - 17:00: Presentation on Ideas and Panel Discussion on the Best Idea Final presentations of the most promising commercialisation concepts, followed by expert panel evaluation and discussion of potential development pathways.

17:00 - 17:15: Wrap-up and Closing Synthesis of the four-day training program, key takeaways, and next steps for doctoral candidates in their research journey.

Day 5: Networking

Friday, February 28, 2025

Meeting Title: Beyond the Office

Time: 08:30 - 18:00

Programme Schedule

Visiting Mount Lucas Windfarm and Fish Farm

Presentation on Duckweed (Lemnaceae), the superheroes of the circular economy, from Prof Marcel Jansen (UCC)

Presentation on Aquaculture at Mount Lucas: Past, Present and Future from Dr Emer O'Neill (TUS)

Team building visit to the Irish National Stud & Gardens.



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