

Innovating in the Era of Trustworthy AI

Experience from CeADAR (BDVA iSpace and DIH in AI)

IoT Week - 21 June 2022

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CeADAR Ireland's Centre for Applied AI

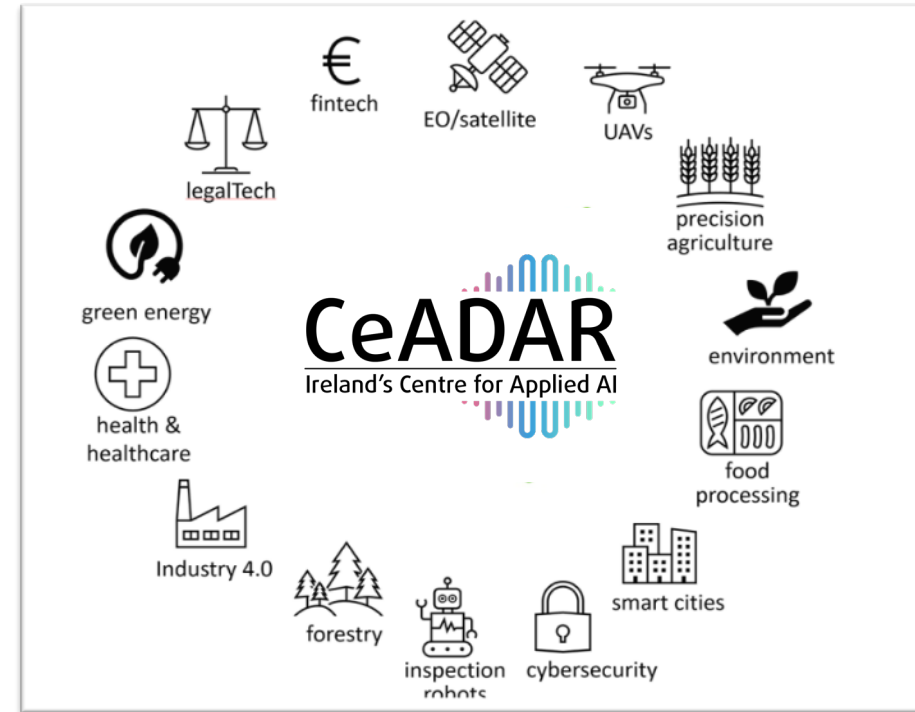
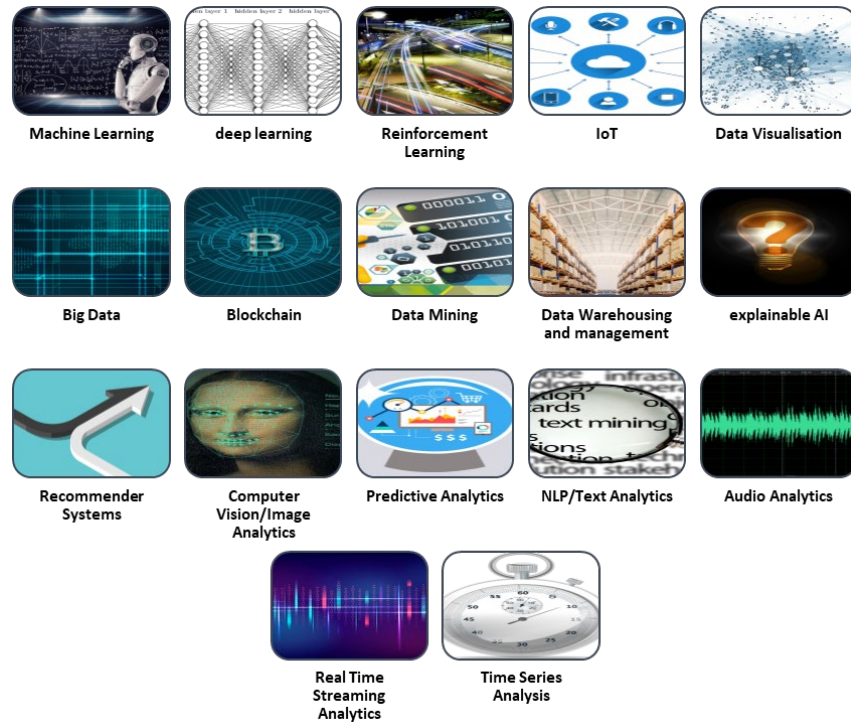
CeADAR is Ireland's Centre for Applied Artificial Intelligence

Established in **2013** and funded by **Enterprise Ireland** and the **IDA**

“Our mission is to create value, build capability & deliver sustainable competitive advantage to companies through the application and adoption of artificial intelligence, machine learning and data analytics”



CeADAR Expertise in AI



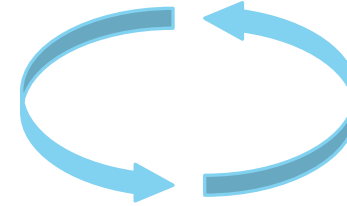
Delivered 85 collaborative projects with industry partners in the past 3 years

CeADAR is the bridge between research and commercial application

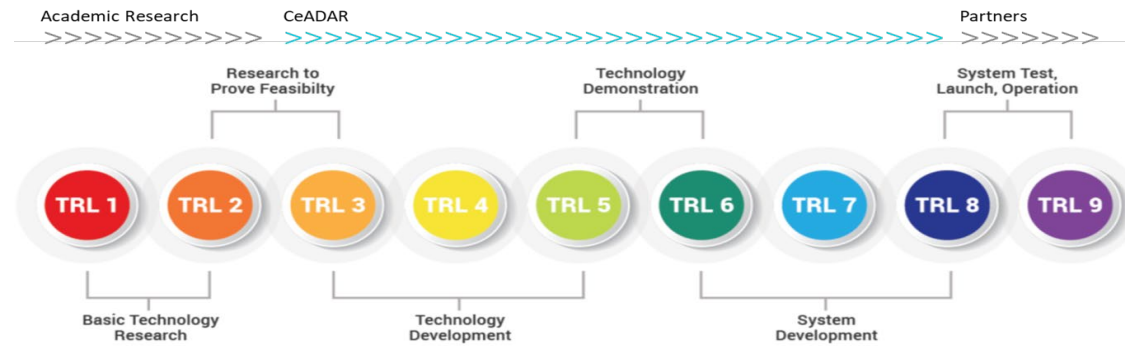
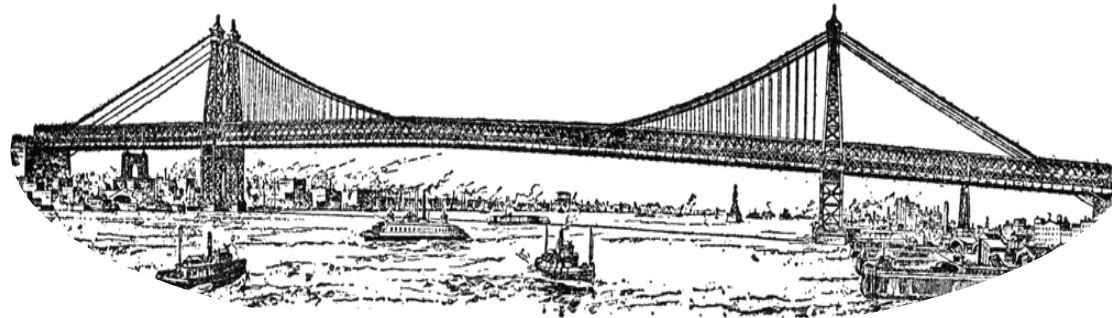
- Basic research
- Curiosity-driven
- Academic excellence
- Extended time scales



- Application development & proof of concept
- Business-value driven
- Market pull/needs-driven
- Expedited time scales



Product development & commercialisation



CeADAR supports a multisectoral partnership

85+ Member Companies

- 66% Start-Ups & SMEs
- 32% Multinationals (operating in Ireland)
- 2% Public Sector

1000+ Associate Members

- Communications
- Events
- Partnerships



CeADAR as European Digital Innovation Hub (E-DIH) in AI



CeADAR is the European Digital Innovation Hub
(E-DIH) in AI in Ireland

CeADAR's contribution towards achieving TrustworthyAI

CeADAR contributing to National AI Strategy & AI Act

- Irish Government Public Consultation on the Development of a National Strategy on Artificial Intelligence
- Top Team on Standards for AI, led by the National Standards Authority of Ireland (NSAI).
- Irish Government Call for views in response to the European Commission Proposal for a Regulatory Framework on Artificial Intelligence (AI Act)
- BDVA/DAIRO Position Paper as Response to the European Commission's proposal for AI Regulation (AI Act)

CeADAR contributing to OECD - GPAI



“aims to bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities”

“by following the OECD Principles and Recommendations on Artificial Intelligence”

Values-based principles

- Inclusive growth, sustainable development and well-being >
- Human-centred values and fairness >
- Transparency and explainability >
- Robustness, security and safety >
- Accountability >

Recommendations for policy makers

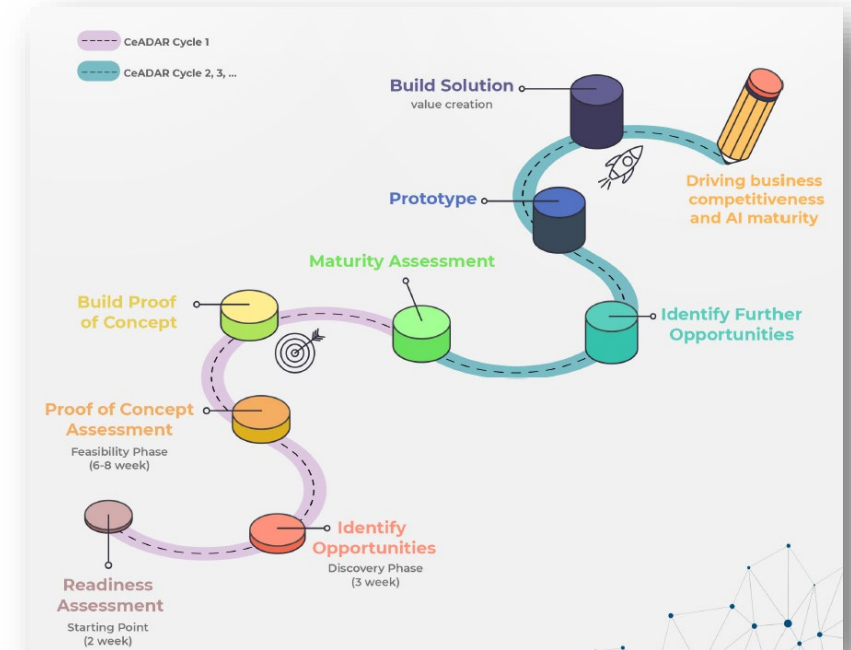
- Investing in AI R&D >
- Fostering a digital ecosystem for AI >
- Providing an enabling policy environment for AI >
- Building human capacity and preparing for labour market transition >
- International co-operation for trustworthy AI >

CeADAR's Director
Dr. Edward McDonnell
Member of the GPAI Committee



Best Practices for Trustworthy AI in CeADAR

- Trustworthy AI **LightHouse** & **Demonstrator** Projects in CeADAR
 - Demonstrator: Explainable Machine Learning for Text Data
 - Demonstrator: XPlainIT - Explainable AI for Deep models
 - Demonstrator: DataGen: Flexible Tool for Synthetic Data Generation
 - LightHouse Project: Privacy Preserving Machine Learning
- **Follow early TAI Principles** by OECD, EC HLEG in Trustworthy AI, AI Act, Standards, GDPR
- **Provide Guidance** on Trustworthy AI for SMEs (workshops, trainings) – Innovation Manager!
- **Data Sharing Security and Flexibility** (synthetic data, engineer in house)
- **Data Quality** Assessment and Explanation
- **Explainable AI** for Transparency
- **AI Models Robustness** (Adversarial Training, Safety Nets)
- **Build Trust** through our **Engagement Roadmap** and **AI Maturity Assessment**
- **Not one-size fits all: aim for balance between innovation and regulation!**



Thanks

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