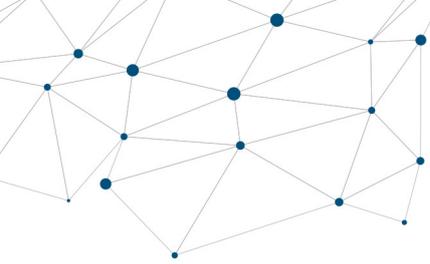




CeADAR

Membership Benefits 2022



"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"

About CeADAR

CeADAR was established in 2013 as Ireland's centre for Applied Artificial Intelligence (AI). We are a market-focused technology centre that drives the accelerated research, development, and deployment of AI and data analytics technology and innovation into businesses.

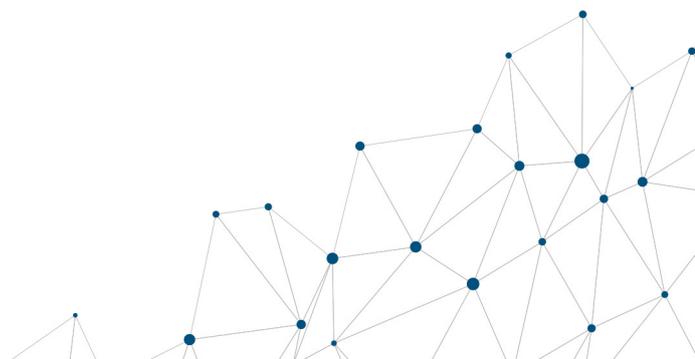
The Centre is the bridge between the worlds of applied research in AI and data analytics and their commercial deployment. We provide proof-of-concepts, market ready solutions, support to find funding and investment, ecosystem networking in Ireland and Europe, and access to our powerful in-house computing infrastructure. Our focus is on ensuring our members benefit from the adoption and use of AI in their markets and organisations.

CeADAR, headquartered in University College Dublin, is funded by Enterprise Ireland and IDA Ireland, and is a partnership with the Technological University Dublin.



Recognition

- Designated AI Digital Innovation Hub in Ireland (of 30 across the EU).
- European i-Spaces GOLD award from the Big Data Value Association in Brussels.
- Dunn & Bradstreet prize for Best Analytics Research Group Ireland at the DatSci Awards.
- 2019 NASA award for a multimodal data project to help population displaced by conflict.
- **Excellence in Business Awards** Overall winner for Outstanding Contribution to the Development and Implementation of AI Strategy to Businesses in Ireland 2022.



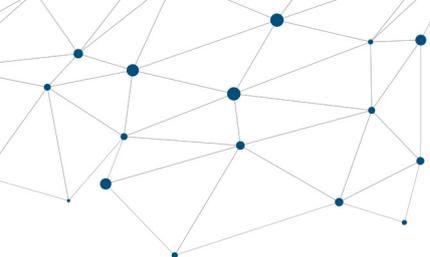


Our ecosystem

CeADAR has an extensive and vibrant ecosystem that supports collaboration, networking, sourcing and resourcing. Our network extends to over a 1000 companies across Ireland and internationally. These companies represent many industry sectors including finance, healthcare, manufacturing, retail, biotech and agriculture.

In addition, CeADAR has been designated, through competitive selection, as one of only 30 Innovation Hubs in Europe specialising in AI, and the only one in Ireland. This connection to cross-european AI technology centres allowing us to access and share assets, ideas and expertise. We have also been shortlisted as a European Digital Innovation Hub awaiting selection later this year.

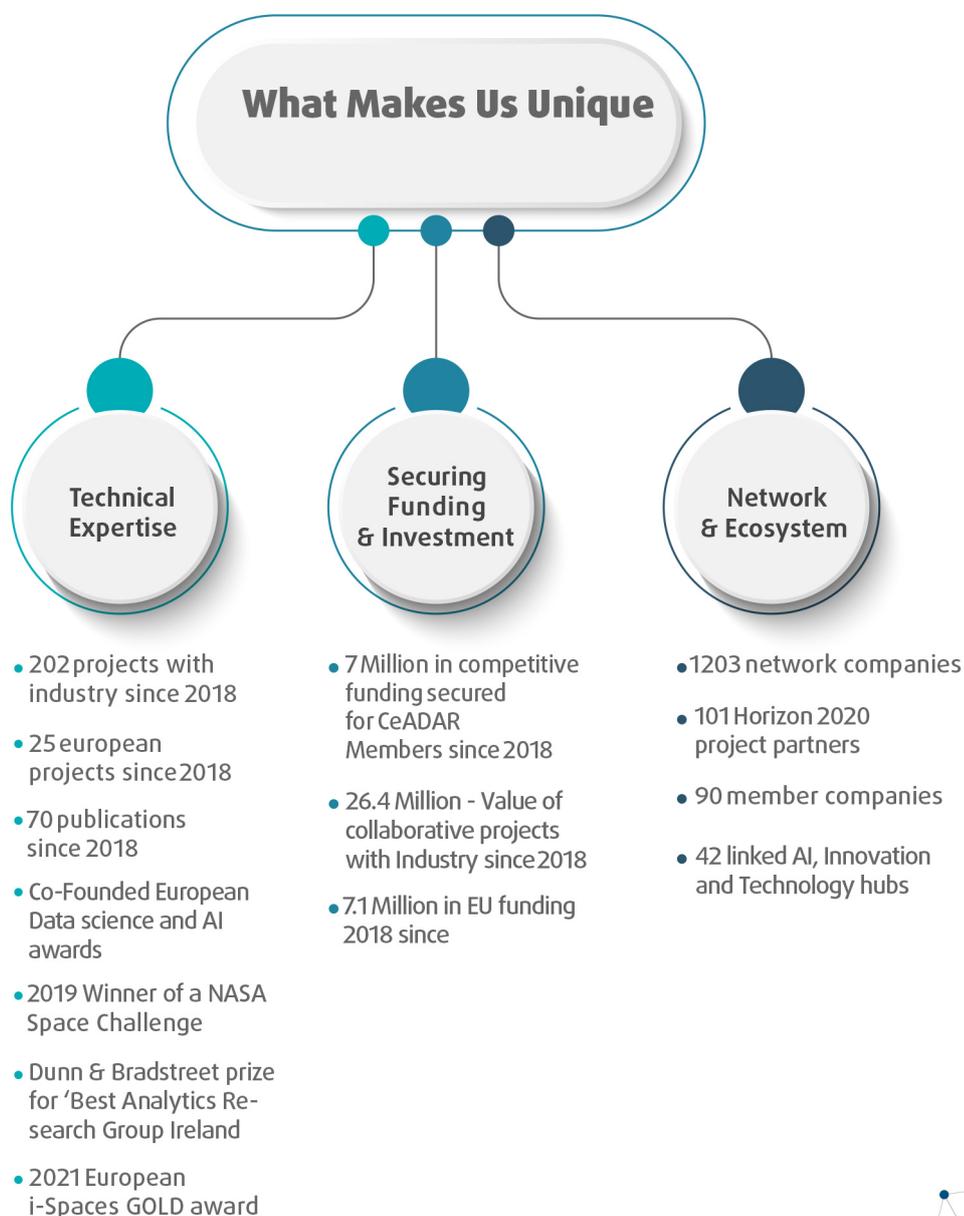


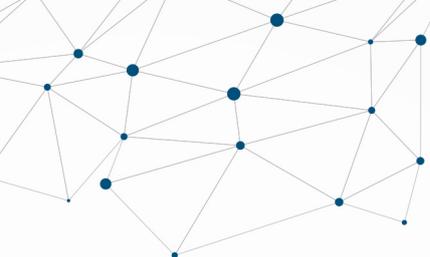


What makes us unique

CeADAR spans the space between research and the market perfectly positioning us to deliver the best in class AI technological solutions to our member organisations.

This, combined with our success in securing, and our knowledge of, the **funding opportunities** available in Ireland and Europe along with our **valuable network** and community gives CeADAR those unique credentials to make us the perfect AI partner for each of our members.

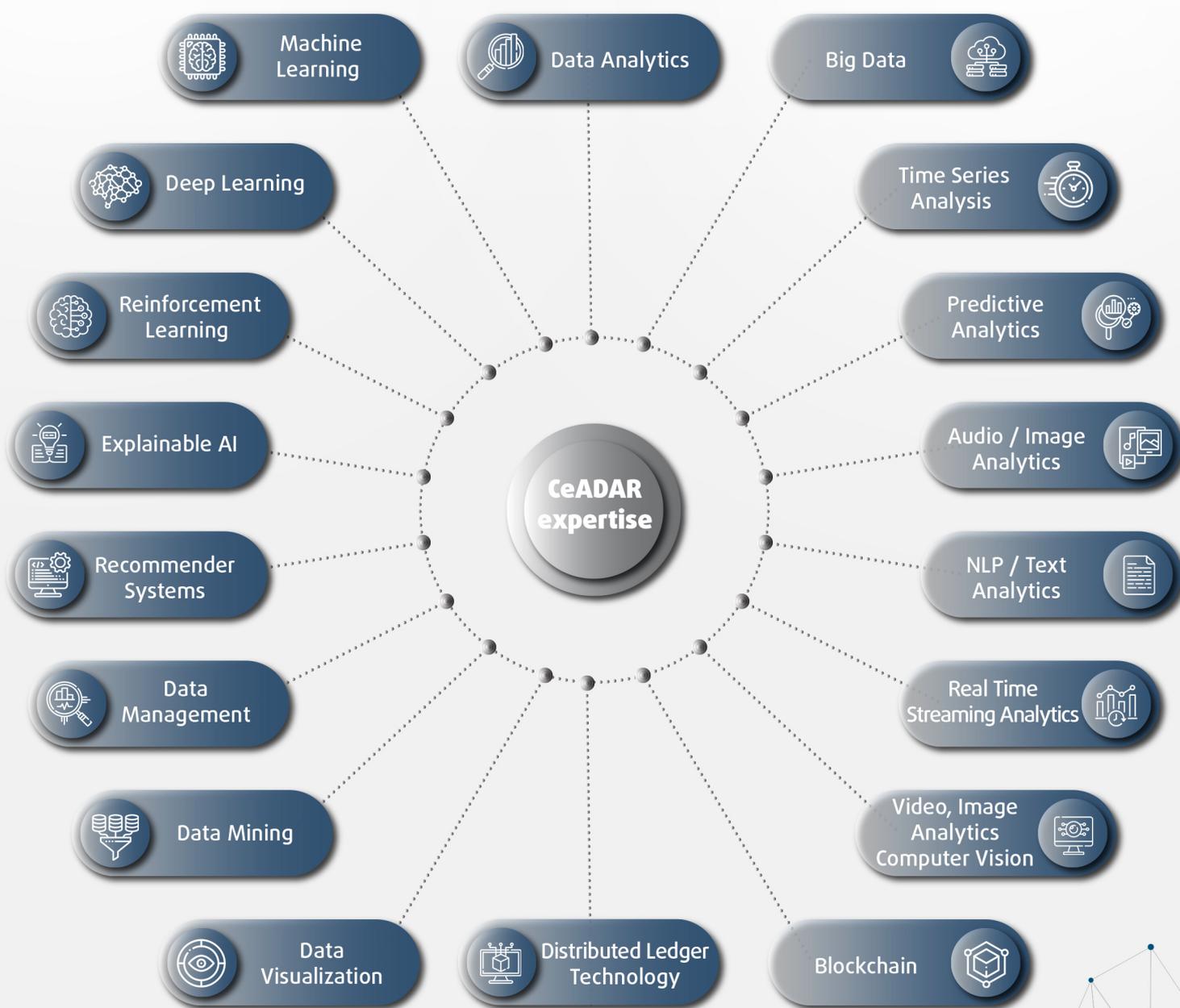




Our expertise

Artificial Intelligence is a broad subject area covering many specialised sub topics and is constantly evolving. CeADAR continually expands and augments it's technical knowledge through active projects and ongoing research.

CeADAR has deep expertise and experience in the following areas:





The value and benefits of CeADAR membership

Funding Advice

Tools & Resources

Technical Expertise

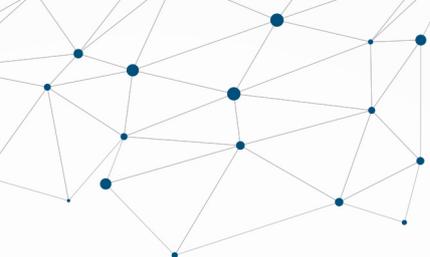
Partnership Building

Training & Upskilling

Networking & Events

Technical Infrastructure

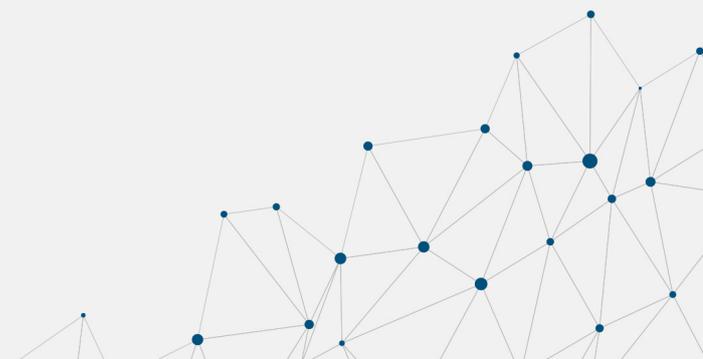
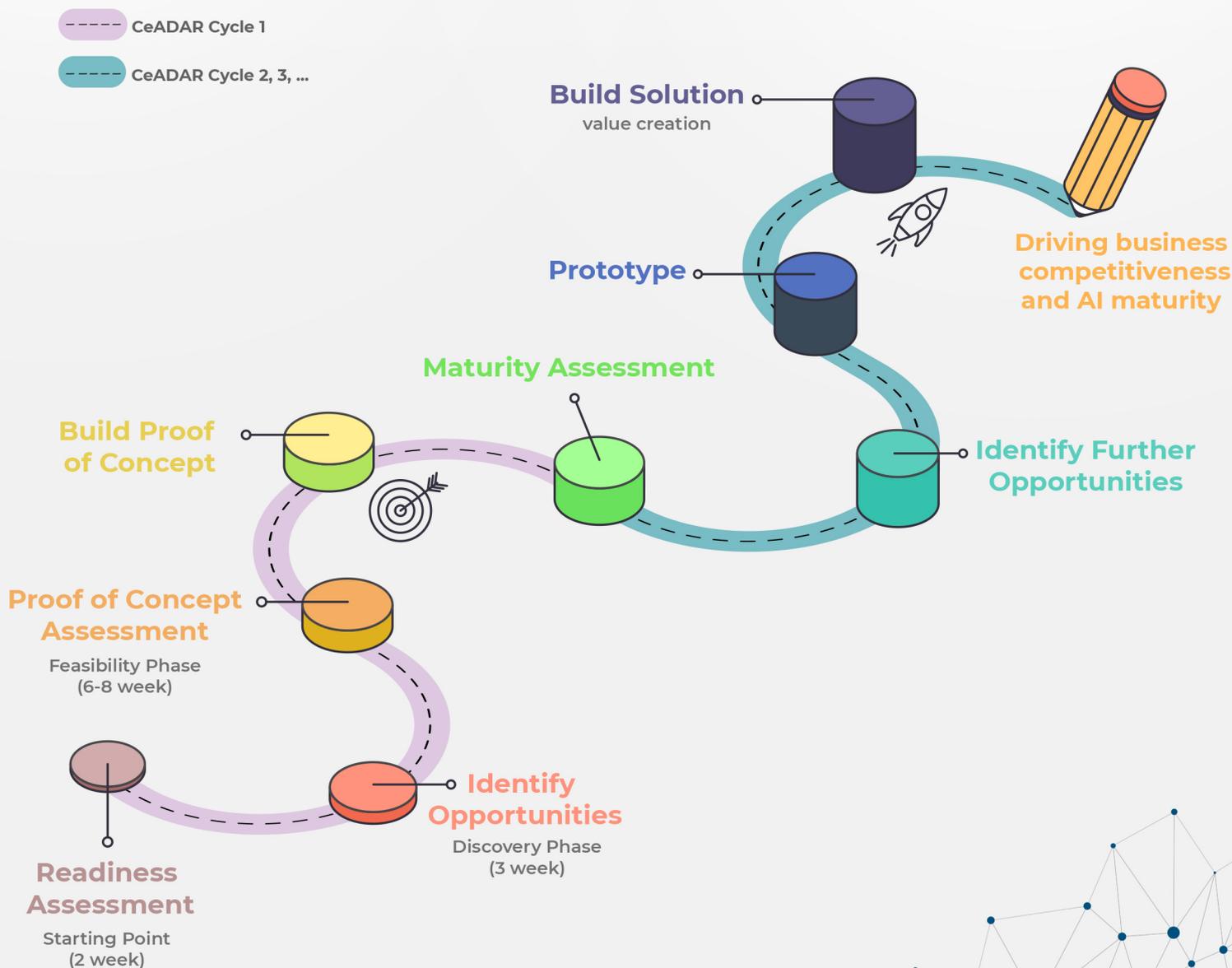
Research & Development

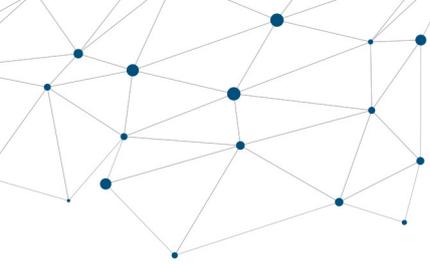


It's about the journey

CeADAR is committed to supporting each of our members through their AI and data journey from identifying their best starting point to realising their potential and ambitions.

Through a series of structured, well established, cycles CeADAR will both enable the identification of AI opportunities that hold real business value and support their investigation, feasibility and development, ultimately delivering business competitiveness as well as driving AI maturity in your organisation.





1 TECHNICAL SERVICES

CeADAR, through its expert technical team, delivers world class AI solutions to our members. We have four key service offerings which can be tailored and adapted.

AI Readiness

Through no charge consultations, and leveraging our assessment tools, we will identify your best starting point and deliver an AI roadmap for success.

Discovery Package

Through workshops and discussions we will review your organisational data and pin-point compelling business opportunities (use-cases) which will deliver competitive advantage using AI.

Feasibility Package

With a deep-dive review of the use-cases we will assess their business and technical feasibility and value. We will develop a demonstrator AI prototype.

AI Solution Build

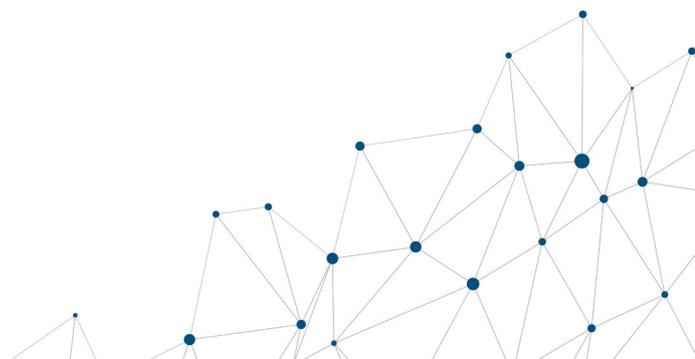
This includes the full scale design and build of the proven AI prototype to deploy into your operational environment along with relevant training and knowledge sharing.

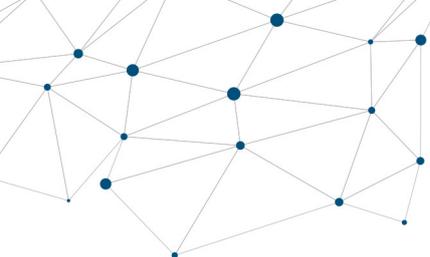
No charge **consultations**

Discounted **engagements**

Priority **access**

Technical **clinics**





2 FUNDING BUREAU

CeADAR has extensive knowledge of the funding opportunities available in Ireland and throughout Europe. We have a proven track record of supporting our members to successfully secure finance to aid the delivery of their AI projects.

Examples of funding instrument include the Enterprise Ireland Innovation Voucher, the Innovation Partnership Programme, Digitalisation Voucher and the Disruptive Technologies Innovation Fund.

Proposal & application support

New funding alerts and notices

Funding advice clinics

3 PARTNERSHIPS

We deliver two partnership services that support organisations build and accelerate their AI capacity and capability. We bring together consortia to bid for awards and we work in partnership with incubator companies to take them to the next stage.

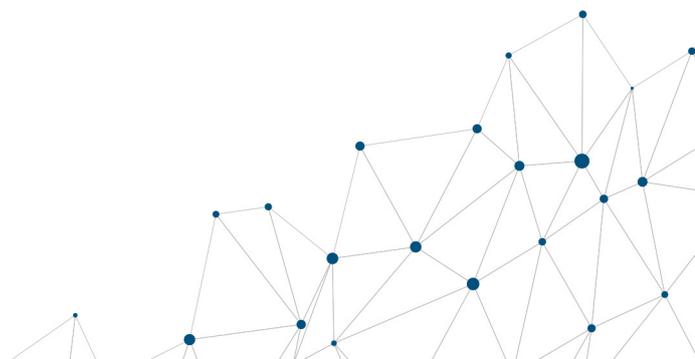
Consortia

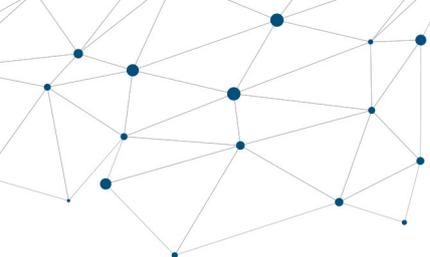
Through our extensive ecosystem we can identify and establish the right partners that will support the delivery of a member AI project.

Incubators

We work with start-up organisations, as their AI technical partner, to enable the delivery of their business plan.

Partner sourcing





4 LIGHTHOUSE PROJECTS

CeADAR remains at the forefront of market-ready research that enables members adopt and benefit from the possibilities of cutting edge AI technology.

The Lighthouse projects have three goals:

Create awareness of recently-possible AI and machine learning techniques.

Develop meaningful AI solutions in collaboration with our membership.

Build member AI skills and capabilities through webinars, project engagement, presentations and state-of-the-art reports.

Project selection & collaboration

Skills & capabilities building

Early licencing

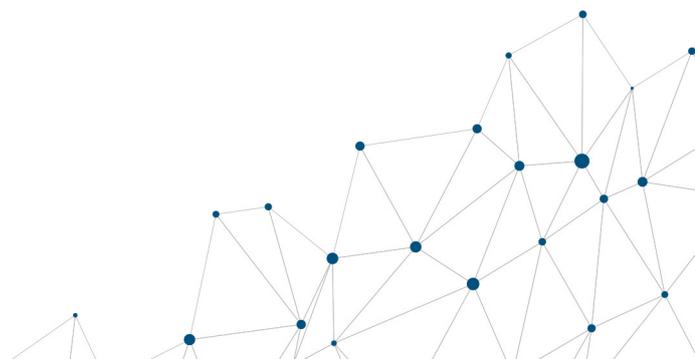
5 LEON - SUPERCOMPUTER

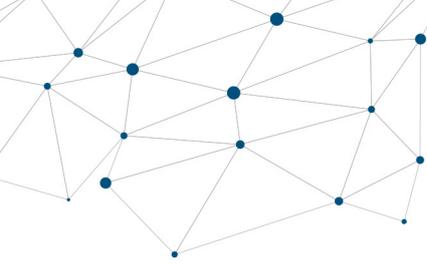
Leon is a new high-performance computer equipped with several nodes interconnected via state of the art cluster management software.

Each of the nodes integrates Intel Xeon Gold CPUs, 768GB to 1.5TB of RAM and the latest NVIDIA A100 GPUs. The system has the latest scale out network-attached storage platform.

Leon HPC is an enabling technology for applying cutting-edge AI technologies and is available to all members to allow them test or trial their solutions and prototypes.

Exclusive access





6 DEMONSTRATORS

Members have access to over fifty demonstrators or prototypes developed exclusively by CeADAR in collaboration with our members. These prototypes (available to licence, adapt and implement) successfully address a business challenge using a novel AI approach examples:

XPlainIT is about opening the “black box” decision making of machine learning algorithms so that decisions are transparent and understandable.

AI for Malware Detection shows how machine learning can be used to address malware detection – the most prevalent cyberthreat.

Evaluation licences

State of the art reports

7 EVALUATION TOOLS

CeADAR has currently available two useful evaluation tools that will enable our members to understand their best starting point as they plan to begin, or accelerate, their AI journey.

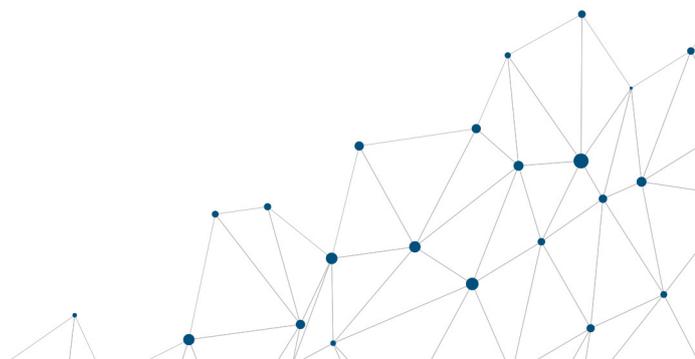
AI Maturity Assessment

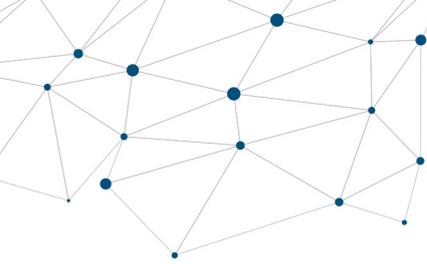
This wide ranging review for larger businesses, gives members a comprehensive view of their ‘As Is’ state and their future AI roadmap with key recommendations.

AI Readiness Tool

This concise survey will give next step recommendations for smaller organisations.

Exclusive access





8 TRAINING AND UPSKILLING

CeADAR has developed and delivered a number of training courses targeted at different levels of an organisation with the aim to educate, enable and elevate those attending. These are all available to our members along with the option to request bespoke tailored training.

Introductory Course in Data Analytics

Key areas explored include the analytical process, how data is created, stored, accessed and how the organization can gain insights from data analytics. (1 day)

Blockchain - An Introduction

This course offers delegates a comprehensive understanding of what blockchain is, how it works and how blockchain will affect industry as a whole. (1 day)

Hands on Data Analytics

This course will help delegates understand key concepts around data analytics and give hands-on experience and skills. Includes the concepts of data analysis, data warehouse design and data visualisation principles.

Introduction to State of the Art in Machine Learning

In this course, delegates will learn the most effective machine learning techniques, and gain practice implementing them. (2 Days)

AI Training for Executives

This course covers the ways in which AI technologies, when integrated across processes, products and services, could transform a business.

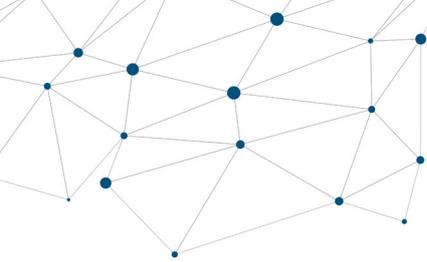
Tailored courses

We can develop courses to address any skills or capability gap within an organisation in the area of AI, machine learning and data analytics.

Priority access

Discounted fees





9 COMMUNICATION + ENGAGEMENT

CeADAR has a well established, meaningful and relevant engagement programme along with an ever expanding valuable set of resources and assets.

Newsletters

Issued quarterly the newsletter covers the latest news from the centre, recent projects, new member stories and activities, updates on funding and other timely information.

Webinars

These successful webinars cover cutting edge technical topics, break through projects and new approaches. CeADAR is also adding relevant business topics to the agenda.

Networking Events

CeADAR holds topical seminars, panel discussions and networking events throughout the year to bring our membership together to understand and progress AI and business challenges.

Resources

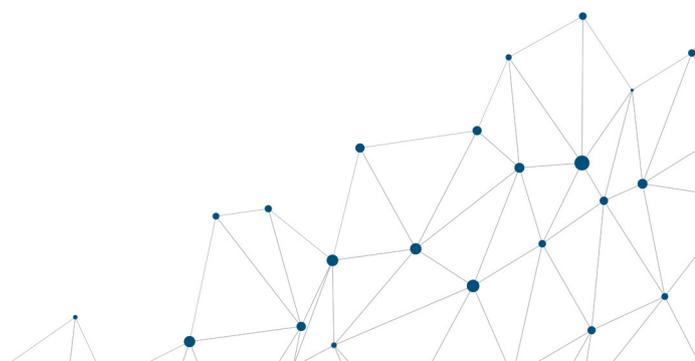
CeADAR has a growing library of resources and assets accessible by our members. These include presentations, white papers, case studies along with our demonstrator state-of-the-art reports.

Regular **communications**

Relevant **resources**

Networking **events**

Collaboration **workspaces**

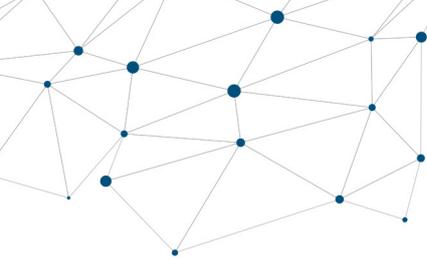




Member Success Stories

Small Steps & Giant Leaps

CeADAR collaborates on and delivers many member projects each year. These range from the identification of AI opportunities, project proposals and approaches, prototypes and technical recommendations, to deployment-ready solutions across multiple sectors including energy, manufacturing, healthcare, finance and fintech.



Applying AI to forecast Renewable Energy usage

Supported by the SEAI National Energy Research Development, CeADAR worked with SSE Airtricity to develop an AI tool, FREMI (Forecasting Renewable Energy with Machine Intelligence), using cutting-edge applied research in deep learning.

The tool uses relevant historical data combined with meteorological forecasts, plant availability, system demand and localised grid constraints to accurately predict wind energy production a day ahead.

The impact of the tool enables energy traders to comply with the market rules, reducing the significant cost imposed by the balancing rules resulting in an overall more competitive, economical and reliable service.

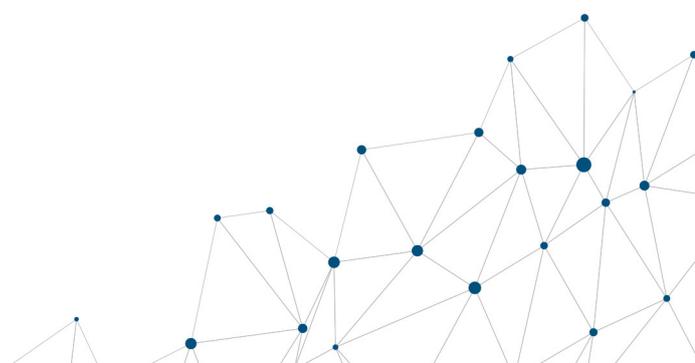
| Energy | Environment |

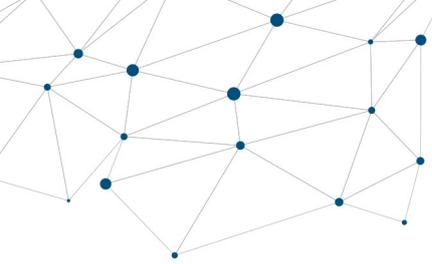
Leveraging AI and drone data to map and monitor threatened habitats

CeADAR are currently working alongside ProvEye to develop an AI solution that both maps and monitors threatened habitats, using drone imagery, satellite data and machine learning.

This project aims to prove the power of novel Machine Learning-based models for mapping several protected habitats in Ireland. Monitoring of habitats using conventional feet on the ground is very expensive and time-consuming and the traditional techniques in remote sensing cannot efficiently handle the volume of earth observation data now available.

| Environmental | Agriculture |





Maintenance issue identification and optimisation using AI

CeADAR, in conjunction with one of the world's leading consulting and engineering companies operating across Energy and the Built Environment, developed a new predictive analytics capability which allows for the detection and optimization of maintenance issues, through highly sensed pumps & valves in subsea oil & gas pipelines.

This new capability led to the direct reduction in inspection, intervention and maintenance costs for their clients and for the local office to be awarded global Centre of Excellence for the group in analytics and AI.

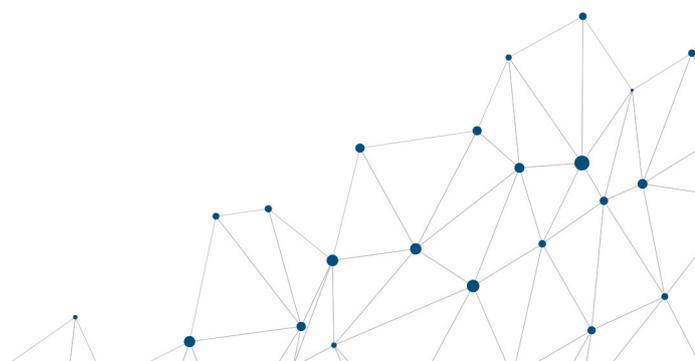
| Manufacturing | Operations |

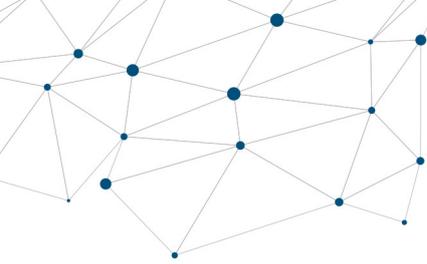
Using AI to carry out land surveys

CeADAR worked with an Irish commercial semi-state to develop machine learning approaches and models that take in multiple data sources such as ground surveys, LIDAR, satellite, weather and environmental data to successfully predict forestry inventories (such as quality and quantity of harvestable timber products).

The objective of introducing AI technology was to improve the accuracy of the harvest yield, reduce the reliance on costly ground survey information and basic statistical modelling, and decrease the effort and time involved.

| Environmental | Agriculture |





Using Machine Learning to accelerate food innovation

CeADAR is working in collaboration, along with Dawn Farms and Creme Global, on an exciting project, called PERCEPTION which aims to predict how a product is perceived by the consumer before it is even made.

The project will develop an AI platform that will rapidly predict human response to new food products, combining taste, health benefits and food waste reduction. It will digitalise the human senses relating to the flavour, odour, appearance and mouthfeel of food products.

The project aims to reduce the product development cycle by at least 50%, reduce the use of energy, water and food waste through accelerated processes, and contribute towards changing consumer preference towards healthier foods by creating great tasting functional food products.

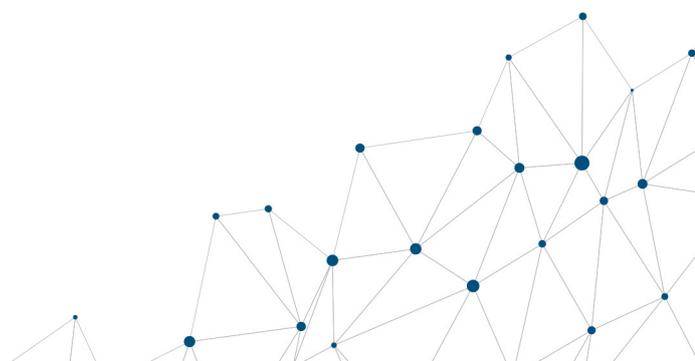
| [Manufacturing](#) | [Food](#) |

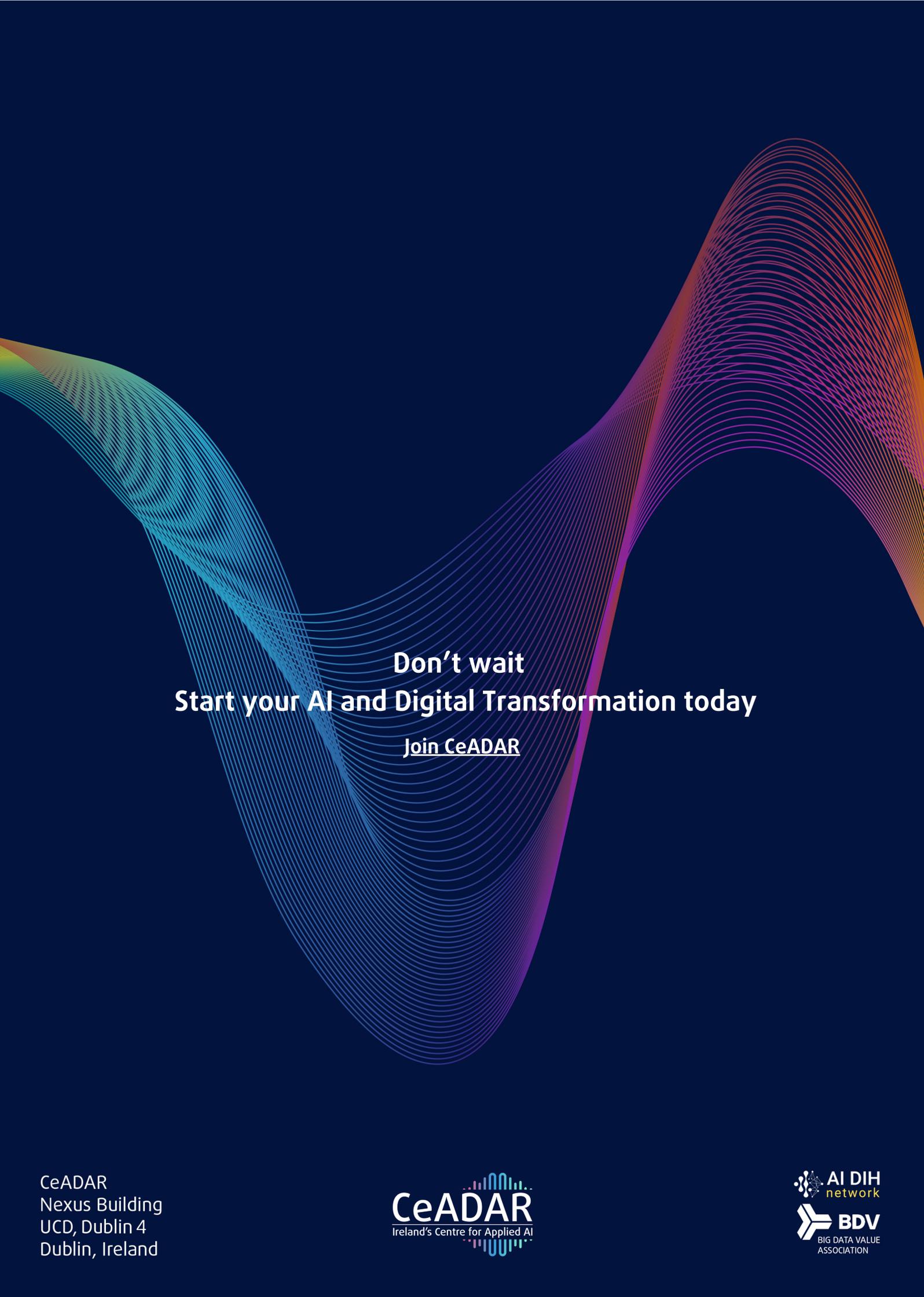
AI Technology used to identify and monitor stem cells

CeADAR is working with Valitacell on the innovative "DeepStain" project. The team is currently developing a solution that will monitor and identify the quality of stem cells during the manufacturing process using AI technology. This aims to replace or reduce the reliance on slow and difficult laboratory work.

This work is extremely exciting as stem cells have the potential to treat many conditions including cancer, arthritis, and Crohn's disease. However progress in this area has been limited to date as the cells themselves can be hard to manufacture because the monitoring of stem cell quality involves a lot of slow and difficult laboratory work. Watch this space!

| [Healthcare](#) | [Biotechnology](#) |





Don't wait
Start your AI and Digital Transformation today
Join CeADAR

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Ireland's Centre for Applied AI

 **AI DIH**
network
 **BDV**
BIG DATA VALUE
ASSOCIATION