

A World
Leading SFI
Research
Centre



iCRAG

SFI RESEARCH CENTRE
IN APPLIED GEOSCIENCES

ICBA Webinar series

Emer Caslin, iCRAG Business Development Manager

7th March 2022

HOST INSTITUTION



University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath

PARTNER INSTITUTIONS



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



NUI Galway
OGE Gaillimh



University College Cork, Ireland
Coláiste na hOllscoile Corcaigh



Maynooth University
National University
of Ireland Maynooth



Geological Survey
Suirbhíreacht Gheolaíochta
Ireland | Éireann



iCRAG is the SFI Research Centre for Applied Geosciences — a team of researchers creating solutions for a sustainable society

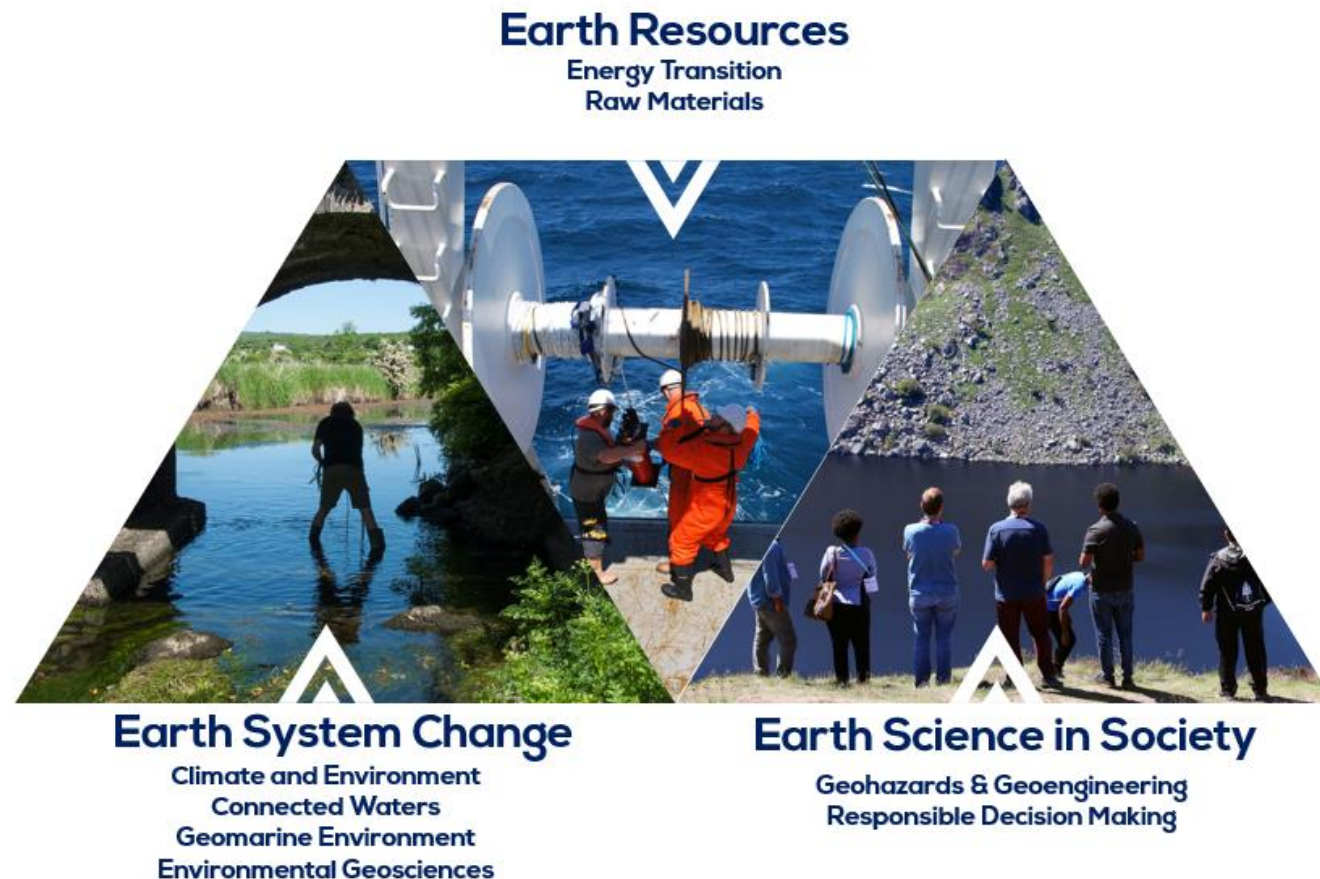
130 researchers across our eight partner institutions:

- University College Dublin
- Trinity College Dublin
- Dublin Institute for Advanced Studies
- NUI Galway
- University College Cork
- Maynooth University
- Dublin City University
- Teagasc



iCRAG Research Challenges

- Deliver integrated research on the Earth system
- Facilitate environmentally sustainable development of Earth resources
- Promote understanding of how people react to and manage our relationship with the Earth



The Earth Resources Challenge ahead

- ✓ To achieve the targets of COP26 and the UN Sustainable Development Goals (SDGs)
- ✓ Support the European Green Deal
- ✓ Project Ireland 2040
- ✓ Climate Action Plan



Environmental Justice
and the Just Transition



After EIT Raw Materials (2021)

Ireland 2040

Population

Irish population expected to increase by 750,000 to **5.6 million**



Housing

An absolute minimum of **500,000** houses needed to be built by 2040



iCRAG | Addressing The Earth Resources Challenge

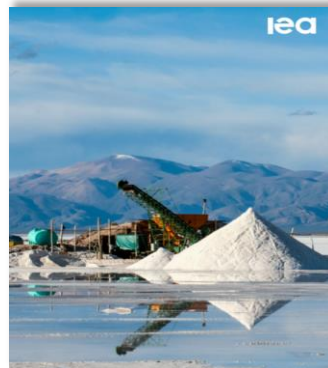


Energy Transition and Decarbonisation

- ✓ De-risking On and Offshore Wind energy
- ✓ Assessing Ireland's geothermal energy potential
- ✓ CCS and hydrogen storage

Raw Materials

- ✓ Securing a sustainable and efficient supply of mineral resources
- ✓ Raw materials to enable the energy transition
- ✓ Safe and sustainable geomaterials for Ireland's construction industry and transport infrastructure



Earth Science in Society

- ✓ Advancing sustainability of business and policy decision making
- ✓ Examining societal variability regarding just transition and climate action

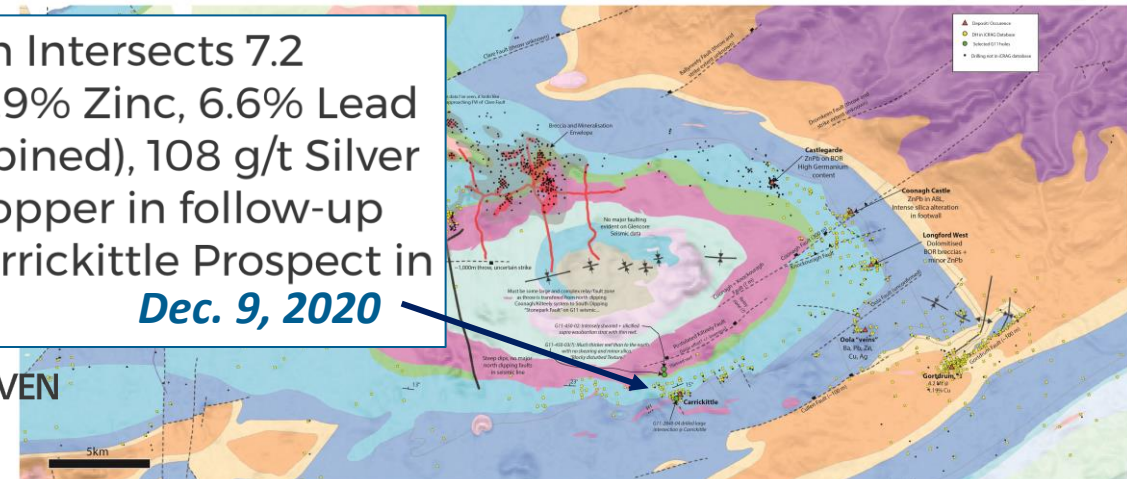
Raw Materials

- ✓ **Improved genetic models** of deposits and mineral districts through 4D tectonostratigraphic & geochemical research
- ✓ **Development & improvement of exploration tools** (Geochem, geophysics (seismics), machine learning)
- ✓ **Development of new geochemical/thermal vectoring methodologies**
- ✓ **People** – the professionals who will be the industry of the future

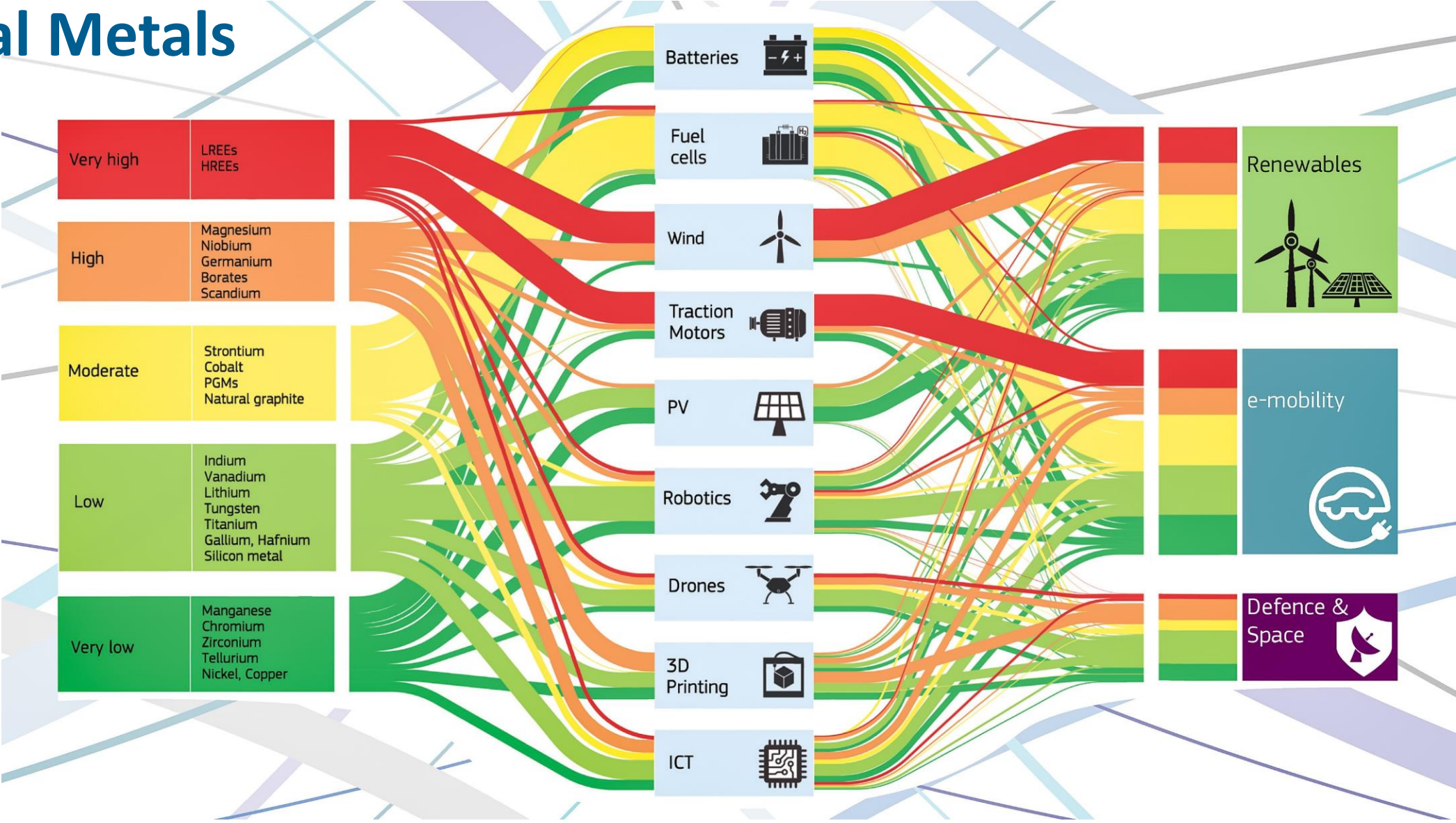
iCrag research aids directly in industry's discovery of new mineral deposits

Group Eleven Intersects 7.2 metres of 23.9% Zinc, 6.6% Lead (30.5% Combined), 108 g/t Silver and 0.12% Copper in follow-up drilling at Carrickittle Prospect in Ireland

Dec. 9, 2020



Critical Metals



(Critical Raw Materials for Strategic Technologies and Sectors in the EU: A Foresight Study, European Commission, 2020)

Helping Partners around the World Provide the Raw Materials Required for a Sustainable Future

METALS

- Irish Zn-Pb orefield
- Central African Copperbelt (Cu, Co, Ni, U)
- European Li deposits
- REE deposits - various
- Volcanogenic massive sulfides - various
- IOCG deposits - Scandinavia, Brazil

CONSTRUCTION/BUILDING MATERIALS

- Ireland



Location of a selection of iCRAG raw materials projects

Water

Minerals

Renewables

Environmental

Hazards

Climate

iCRAG - open for business

- ✓ **Championing collaborative research** – Single and multi-stakeholder projects, integrated earth science
- ✓ **Embedded research** – get direct impact in projects to match business timeframes
- ✓ **Our researchers are available for direct engagement**
- ✓ **Bespoke access to world-class facilities**
- ✓ **Training and Continued Professional Development Knowledge Exchange** – bringing academic, semi-state and industry bodies together in one forum

How to get in touch



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