Innovation Funding
for Welsh Automotive Sector

Webinar on 24th November 2021

Agenda

- Welcome and Introduction

  Richard Leonard, Future Mobility Manager, Welsh Automotive Forum

- **Horizon Europe and Funding Opportunities for the automotive sector**

  - Overview of Horizon Europe
  - Review of automotive-specific calls for proposals
  - How to form winning consortia

  Louise Mothersole, Horizon Europe UK National Contact Point, Innovate UK

- **Welsh Government support**

  Baudewijn Morgan, Head of Horizon Europe Unit, Welsh Government

  Dr Ann Sudder, Innovation Specialist, Welsh Government

- **How was it for us**

  Dr. Mircea Popescu, Chief Technology Officer, Motor Design Ltd

- **Q&A**

Horizon Europe for Automotive Sector

Louise Mothersole
Horizon Europe UK National Contact Point for Mobility
louise.mothersole@innovateuk.ukri.org

Horizon Europe National Contact Points (NCPs)

Team of country based, sector specific, advisors to support everyone to successfully participate in EU Framework Programmes

- Raising Awareness of the programme
- Finding the right Topic
- Identifying the best ways to find partners
- Navigating the portal
- Developing the proposal
- Answering questions
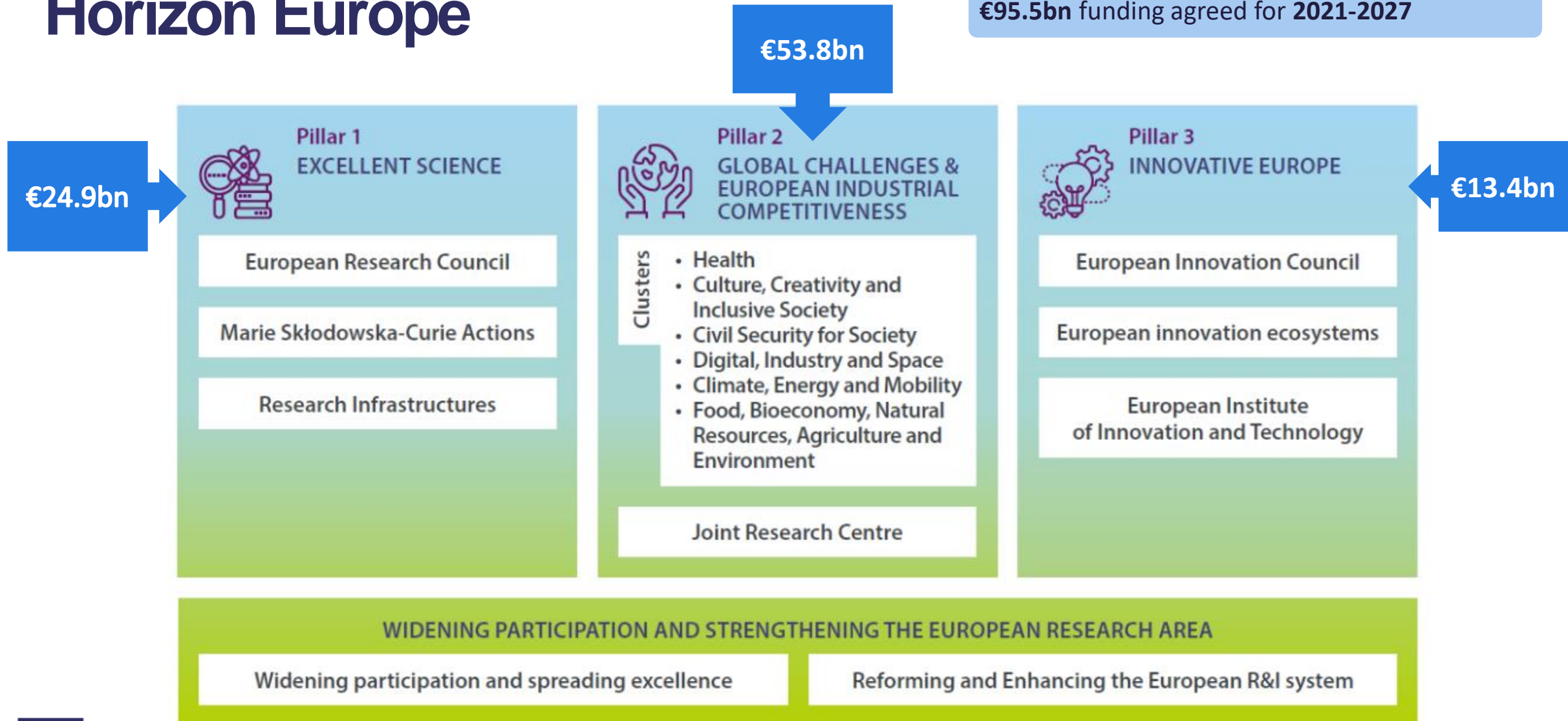
- Supporting you to succeed!

Full list of UK National Contact Points

NCPs for Europe and the rest of the world

HORIZON EUROPE'S NATIONAL CONTACT POINTS **CAN HELP YOU**

#HorizonEU

European Commission

UK Research and Innovation

Horizon Europe

€95.5bn funding agreed for 2021-2027

€53.8bn

€24.9bn

€13.4bn

Pillar 1
EXCELLENT SCIENCE

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre

Pillar 3
INNOVATIVE EUROPE

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system

UK Research and Innovation

Budget figures exclude UK and other Associate Country contributions

UK has agreed to Associate to Horizon Europe

- The most recent guidance issued by the European Commission on 4th October states that the UK's association to the programme is imminent. https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

- The General Annexes referred to in the above guidance states "For the purposes of the eligibility conditions, applicants established in Horizon 2020 Associated Countries or in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country" https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-13-general-annexes_horizon-2021-2022_en.pdf

- EC has published a Q&A on UK association that states "Thanks to the Associated Country status, UK participants will have the same rights as EU participants, with the very limited aforementioned exceptions. UK entities are eligible for funding at the same rates and under the same conditions. They can lead project consortia. They also count towards the minimum number of countries in calls for transnational projects." https://ec.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/documents/ec_rtd_uk-participation-in-horizon-europe.pdf

UK Research and Innovation

UK has agreed to Associate to Horizon Europe

- The most recent guidance issued by the European Commission on 4th October states that the UK's association to the programme is imminent. https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

- The General Annexes referred to in the above guidance states "For the purposes of the eligibility conditions, applicants established in Horizon 2020 Associated Countries or in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country" https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-13-general-annexes_horizon-2021-2022_en.pdf

- EC has published a Q&A on UK association that states "Thanks to the Associated Country status, UK participants will have the same rights as EU participants, with the very limited aforementioned exceptions. UK entities are eligible for funding at the same rates and under the same conditions. They can lead project consortia. They also count towards the minimum number of countries in calls for transnational projects." https://ec.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/documents/ec_rtd_uk-participation-in-horizon-europe.pdf

UK Research and Innovation

International
Why ~~European~~ collaboration is important

- Another source of funding for innovative organisations
- Higher funding rates & the only innovation funding for some sectors
- Solve global grand challenges through collaborative R&I
- Collaborate with world leading organisations to enhance UK capabilities
- Access cutting edge technologies, infrastructure, talent & markets
- Influence standards, regulations and research policies
- Ensure that UK direction of travel doesn't diverge so much that we're 'going it alone'
- Collaborative relationships frequently become transactional ones - exports
- **Creating UK jobs, growth and stronger supply chains**

Increasing Importance

UK Research and Innovation

Cluster 5: Climate, Energy and Mobility

Addresses issues relevant to the twin green and digital transitions and the post-COVID 19 recovery, focussing on the transformation of our economy, industry and society with a view to achieving climate neutrality in Europe by 2050

Six Destinations
1. Climate sciences and responses
2. Cross-sectorial solutions for the climate transition
3. Sustainable, secure and competitive energy supply
4. Efficient, sustainable and inclusive energy use
5. Clean and competitive solutions for all transport modes
6. Safe, resilient transport and smart mobility services for passengers and goods

Number of topics, budgets and deadlines in Mobility destinations for 2022

Destination	Theme	Number of Topics	Budget	Opening Date	Submission Deadline
D5 - Clean and competitive solutions for all transport modes	Zero-emission road transport (2ZERO+1)	4	€105m	02 Dec 2021	26 Apr 2022
	Aviation	3	€45m	02 Dec 2021	26 Apr 2022
	Enabling climate neutral, clean, smart, and competitive waterborne transport (ZEWT+2)	6	€96m	02 Dec 2021	26 Apr 2022
	Impact of transport on environment and human health	1	€7m	02 Dec 2021	26 Apr 2022
D6 - Safe, Resilient Transport and Smart Mobility services for passengers and goods	Connected, Cooperative and Automated Mobility (CCAM)	5	€88m	14 Oct 2021	12 Jan 2022
	Multimodal and sustainable transport systems for passengers and goods	7	€91m	28 Apr 2022	06 Sept 2022
	Safety and resilience - per mode and across all transport modes	3	€34m	14 Oct 2021	12 Jan 2022

UK Research and Innovation

Funding rates and main types of Action

Research and Innovation Action (RIA)
- Typically, low(ish) Technology Readiness Level
- Consortium of at least three different legal entities from three different eligible countries (all UK legal entities are classed as eligible). At least one consortium member must be from a Member State (MS)
- All participants receive 100% of eligible direct costs plus 25% for indirect costs

Innovation Action (IA)
- Typically, high(er) Technology Readiness Level
- Consortium of at least three different legal entities from three different eligible countries. At least one must be from a MS
- All not-for-profit participants receive 100% of eligible direct costs plus 25% for indirect costs
- All for-profit participants receive 60% of eligible direct costs plus 25% for indirect costs for CCAM projects

Coordination and Support Action (CSA)
- As name suggests, for coordinating and supporting activities such as working groups, networking, regulation review, communications, organising EU conferences, etc
- Formally do not need a collaborative approach but often do to meet the scope. Must have at least one from a MS
- All participants receive 100% of eligible direct costs plus 25% for indirect costs

UK Research
and Innovation

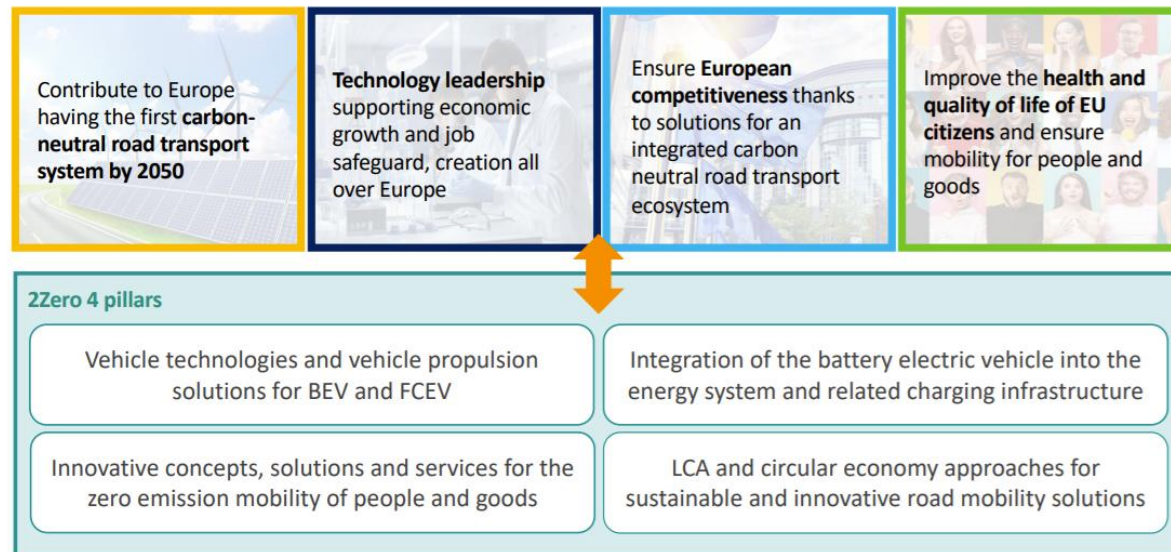# Horizon Europe Automotive Competitions 2022

Topics (competitions)	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded	Deadline
HORIZON-CL5-2022-D6-01-06: Predictive safety assessment framework and safer urban environment for vulnerable road users	RIA	13	4 to 4.33	3	12 January 2022
HORIZON-CL5-2022-D5-01-07: Prevent smog episodes in Europe: Air quality impact of engine-emitted volatile, semi volatile and secondary particles	RIA	7	2.5 to 3	3	26 April 2022
HORIZON-CL5-2022-D5-01-08: Modular multi-powertrain zero-emission systems for HDV (BEV and FCEV) for efficient and economic operation (2ZERO)	IA	58	15 to 20	3	26 April 2022
HORIZON-CL5-2022-D5-01-09: Nextgen EV components: High efficiency and low-cost electric motors for circularity and low use of rare resources (2ZERO)	RIA	20	3 to 6	4	26 April 2022
HORIZON-CL5-2022-D5-01-10: New generation of full electric urban and peri-urban Bus Rapid Transit systems to strengthen climate-friendly mass transport (2ZERO)	IA	25	20 to 25	1	26 April 2022
HORIZON-CL5-2022-D5-01-11: Stimulating Road Transport research and innovation dissemination and implementation in Europe and around the World	CSA	2	Around 2	1	26 April 2022

UK Research and Innovation

Towards Zero Emission Road Transport (2ZERO)

- A Co-Programmed Partnership - Members of the partnership develop the Strategic Research and Innovation Agenda (SRIA) which is used to create the Work Programme (calls for proposals)

- 2ZERO is managed by Lucie Beaumel who managed its predecessor the European Green Vehicle Initiative (EGVI). Lucie has been very welcoming of UK participation

- Membership of 2-ZERO gives you a voice in the future direction and is a showcase for your capabilities **Action: Send Lucie an email and ask how you can contribute to the work of the partnership.**

- The European Automotive Research Partners Association (EARPA) is a very active network holding frequent workshops and seminars – worth considering membership

What do they want to achieve?

Contribute to Europe having the first **carbon-neutral road transport system by 2050**

Technology leadership supporting economic growth and job safeguard, creation all over Europe

Ensure **European competitiveness** thanks to solutions for an integrated carbon neutral road transport ecosystem

Improve the **health and quality of life of EU citizens** and ensure mobility for people and goods

UK Research and Innovation

2Zero 4 pillars

Vehicle technologies and vehicle propulsion solutions for BEV and FCEV

Integration of the battery electric vehicle into the energy system and related charging infrastructure

Innovative concepts, solutions and services for the zero emission mobility of people and goods

LCA and circular economy approaches for sustainable and innovative road mobility solutions

How to they plan to do this?

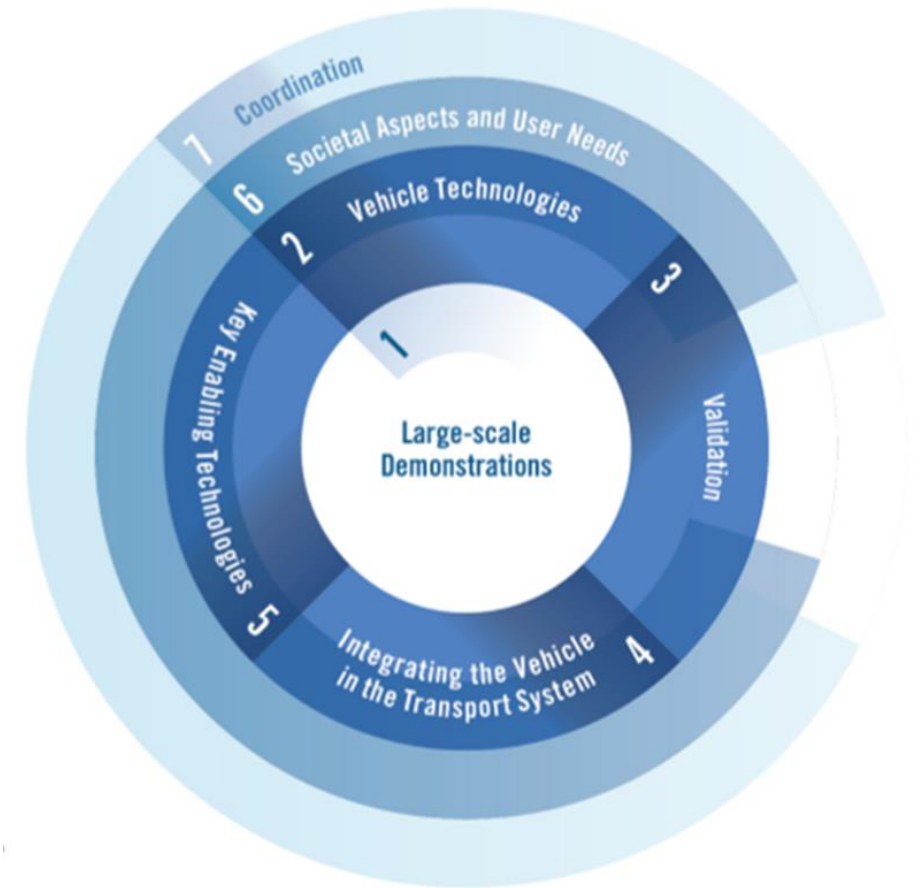# Horizon Europe Autonomous Vehicle Competitions 2022

Topics (competitions)	Type of Action	Budget	Expected EU contribution per project	Number of projects expected to be funded	Deadline for submission
HORIZON-CL5-2022-D6-01-01: European demonstrators for integrated shared automated mobility solutions for people and goods (CCAM Partnership)	IA	€50m	€20m to €25m	2	12 January 2022
HORIZON-CL5-2022-D6-01-02: Reliable occupant protection technologies and HMI solutions to ensure the safety of highly automated vehicles (CCAM Partnership)	RIA	€8m	€6m to €8m	1	12 January 2022
HORIZON-CL5-2022-D6-01-03: Human behavioural model to assess the performance of CCAM solutions compared to human driven vehicles (CCAM Partnership)	RIA	€8m	€7m to €8m	1	12 January 2022
HORIZON-CL5-2022-D6-01-04: Integrate CCAM services in fleet and traffic management systems (CCAM Partnership)	IA	€10m	€4m to €5m	2	12 January 2022
HORIZON-CL5-2022-D6-01-05: Artificial Intelligence (AI): Explainable and trustworthy concepts, techniques and models for CCAM (CCAM Partnership)	RIA	€12m	€5m to €6m	2	12 January 2022

UK Research and Innovation

Cooperative, Connected Automated Mobility (CCAM)

- A Co-Programmed Partnership - Members of the partnership develop the Strategic Research and Innovation Agenda (SRIA) which is then used by the EC to create the Work Programme (calls for proposals)

- CCAM is managed by Marzena Jougounoux who works closely with Xavier Aertsens who runs the European Road Transport Research Advisory Council (ERTRAC). ERTRAC was the organisation that initiated CCAM.

- Membership of CCAM gives you a voice in the future direction of the Work Programme and is a showcase for your capabilities. **Action: Send Marzena an email and ask how you can contribute to the work of the partnership.**

UK Research
and Innovation

Horizon Europe Smart Transport, Infrastructure and Logistics Competitions 2022

Topics (competitions)	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded	Deadline
HORIZON-CL5-2022-D6-02-01: Logistics networks integration and harmonisation through operational connectivity to optimise freight flows and drive logistics to climate neutrality	IA	15	7 to 8	2	6 September 2022
HORIZON-CL5-2022-D6-02-02: Urban logistics and planning: anticipating urban freight generation and demand including digitalisation of urban freight	IA	15	7 to 8	2	6 September 2022
HORIZON-CL5-2022-D6-02-03: Smart enforcement for resilient, sustainable and more efficient transport operations	RIA	8	Around 4	2	6 September 2022
HORIZON-CL5-2022-D6-02-04: Accelerating the deployment of new/shared mobility services for the next decade	IA	20	8 to 10	2	6 September 2022
HORIZON-CL5-2022-D6-02-05: Advanced multimodal network and traffic management for seamless door-to-door mobility of passengers and freight transport	RIA	15	4 to 5	3	6 September 2022
HORIZON-CL5-2022-D6-02-06: Smart and efficient ways to construct, maintain and decommission with zero emissions from transport infrastructure	IA	10	Around 5	2	6 September 2022
HORIZON-CL5-2022-D6-02-07: New concepts and approaches for resilient freight transport and logistics networks against disruptive events (including pandemics)	RIA	8	Around 4	2	6 September 2022

Useful EU networking groups for Logistics, Urban Mobility, etc

- The Alliance for Logistics Innovation through Collaboration in Europe (ALICE) is the voice of the innovative logistics sector that is listened to by the EC
  - Membership is not expensive (<€5K), and the Secretary General Fernando Liesa is very welcoming of UK participation **Action: Send Fernando an email and ask how you can contribute to the work of ALICE.**
- ERTICO - develops, promotes and deploys intelligent mobility services by providing multi-stakeholder platform for action
- POLIS - the network of European cities and regions cooperating for innovative transport solutions
- CIVITAS - a network of cities for cities dedicated to cleaner, better transport in Europe and beyond

UK Research and Innovation

How to Apply

UK Research and Innovation

EU Funding and Tender Opportunities Portal

All Topics (competitions) are published on the EU's Funding and Tender Opportunities Portal

- Create a personal login (top right) then 'Register your organisation' (in 'How to participate') to get a Participant Identification Code (PIC)
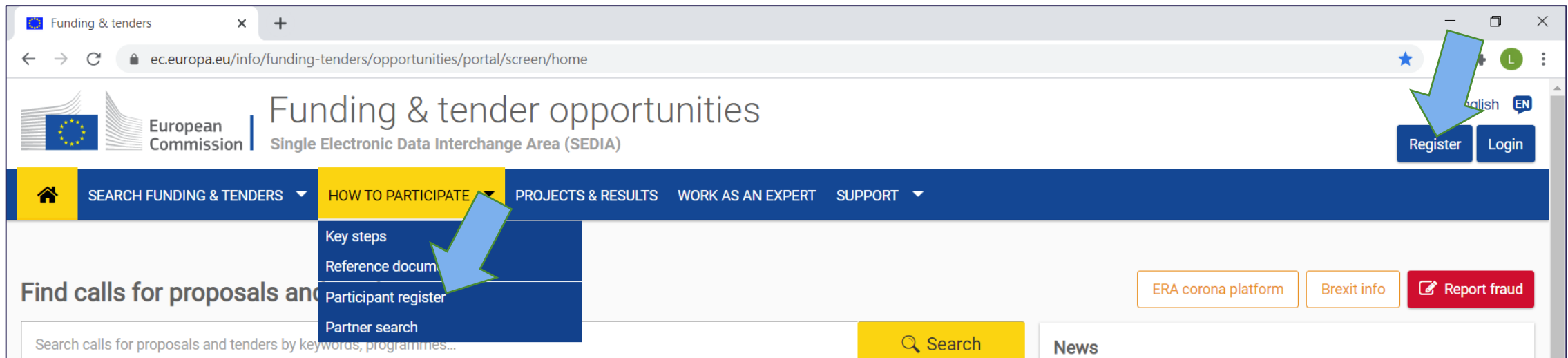
- Each Topic (competition) has its own webpage (in 'Search Funding & Tenders') with everything you need to know – read it all (expand the sections to see the More Info...)

How do I build a winning consortium?

(the most frequently asked question)

UK Research and Innovation

Formal consortium building mechanisms

Participant portal – Every topic once published will have a 'Partner Search' function where you can upload your profile and review others that have done so

Brokerage events – European Commission, Technology Platforms, Co-Programmed Partnerships, Enterprise Europe Network, UK's KTN, NCPs from around Europe, etc will virtual hold events with e.g., Meeting Mojo, B2B and other tools

Partner Search – under the How to participate tab on the EU funding and tenders portal where you can search for past projects and organisations

CORDIS – a more useful way of finding past projects and participants and allows you to contact them

Searching the formal consortium building mechanisms is a bit like looking for a needle in a haystack – they all look like needles so finding the ones for you can be difficult

UK Research and Innovation

The best ways to form winning teams

Being an *effective networker* is much more useful than submitting a profile into a portal and awaiting contacts. Don't wait to be invited to the party, ==push yourself forward==

- Use your existing professional networks – if you don't know who the sector leaders are in Europe then you should find out (e.g., use LinkedIn to connect to people from possible consortium partners)

- Consider joining CCAM, 2ZERO or ALICE and be an active participant in the online workshops and meetings

- Consider joining the European Automotive Research Partners Association (EARPA)

- Search CORDIS for previous Horizon 2020 projects that cover similar issues and ==contact the participants==. All projects must disseminate their results and often hold workshops, etc.

- If you join any networking organisation, ensure that you get your money's worth:
    - Be an *active* member – say 'hi' when you join the virtual room. Ask questions, support others' opinions, act as if you are already well known to all in the virtual room because you soon will be
    - Volunteer to draft working papers, take notes, send in useful information – be helpful
    - Speak up at workshops – ==demonstrate Thought Leadership==
    - Show that you would be a valuable partner for collaborative projects and that without you they won't win – you have the secret sauce that is necessary for their success

What constitutes a winning consortium?

One that can **deliver** the expected outcomes within the stated scope and budget (and give the evaluators confidence that they can)

Common to see universities, big business, small business, research and technologies organisations, consultancies, local authorities, national authorities all within the one consortium. There is no 'typical' or 'model' consortium structure/membership

Useful to include exploitation partners – someone who is going to take the outputs of the project and actually implement them (e.g. an automotive/aerospace/marine/rail/etc., industry) to show immediate impact

Useful to include the end user community, possibly as an advisory board or associate partners (not direct beneficiaries but costs e.g. travel can be included in 'other costs'), again to demonstrate route to implementation

UK Research
and Innovation

Eligibility criteria

There are several types of eligibility, and it does get confusing:

- Eligibility to be part of a consortium/project

- Eligibility to receive funding as part of a consortium/project

- Eligibility to be one of the minimum number of participants necessary in a consortium/project

UK Research
and Innovation

Eligibility criteria explained

Stated in the [General Annexes](#)

- **Any legal entity**, regardless of its place of establishment, including legal entities from non-associated third countries or **international organisations** (including international European research organisations) is eligible to participate (whether it is eligible for funding or not) *although exceptions may apply in specific topics so check the text*

- To be **eligible for funding**, applicants must be established in one of the eligible countries, i.e.:
  - Member States of the European Union, including their outermost regions;
  - Overseas Countries and Territories (OCTs) linked to the Member States
  - Eligible non-EU countries:
    - Countries associated to Horizon Europe
    - Low- and middle-income countries
  - Legal entities which are established in countries not listed above will be eligible for funding if provided for in the specific call conditions, or if their participation is considered essential for implementing the action by the granting authority

- **Consortium Composition**:
  - At least one independent legal entity established in a Member State; and
  - At least two other independent legal entities, each established in different Member States or Associated Countries

Associate Countries

- <u>The UK has agreed to Associate to Horizon Europe</u> – Association gives UK organisations access to funding under the programme on equivalent terms as organisations in EU countries

- Specific agreements vary but, in general, associate countries contribute additional funds to the Horizon Europe Budget in direct proportion of their GDP to that of the EU.
  - For example, UK's GDP is 16% of that of the EU, therefore UK will be contributing an additional 16% to the Horizon Europe budget

- Countries that associated to Horizon 2020, and are expected to associate to Horizon Europe:
  - Albania
  - Armenia
  - Bosnia and Herzegovina
  - Faroe Islands
  - Georgia
  - Iceland
  - Israel
  - Republic of North Macedonia
  - Republic of Moldova
  - Montenegro
  - Norway
  - Serbia
  - ~~Switzerland~~
  - Tunisia
  - Turkey
  - Ukraine

- Countries considering association include Canada, Japan, Australia and others

UK Research and Innovation

International Participation

Some topics state international participation is **essential**, e.g. "In addition to the conditions described in General Annex B, the consortium must include at least three legal entities from three different African countries"

Some topics state international collaboration is **advised**, e.g. "In order to achieve the expected outcomes, international cooperation is advised, in particular with projects or partners from the US, Japan, Canada, South Korea, Singapore, Australia"

Some topics state **limitations** on international collaboration, e.g. "participation to the call is limited to legal entities established in Member States, associated countries, OECD countries, African Union Countries, and MERCOSUR, CARIFORUM, and Andean Community"

Most countries around the world have Horizon Europe National Contact Points – find their details here and there is a full list of participating countries published too

The gender dimension

Eligibility: Gender Equality Plan (applicable from 2022 onwards)
Participants that are public bodies, research organisations or higher education institutions established in a Member State or Associated Country must have a gender equality plan in place, fulfilling mandatory process-related requirements

Award Criteria: Integration of the gender dimension
Addressing the gender dimension in research and innovation content entails taking into account sex and gender in the whole research & innovation process

Ranking Criteria (for tied scores): Gender balance
Third criteria - Gender balance among personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities, and who are included in the researchers table in the proposal

UK Research and Innovation

The Proposal

UKRI UK Research and Innovation

The Proposal

All proposals are submitted electronically via the Topic (competition) webpage on the Funding and Tenders Portal

- Part A – administrative information completed online
- Part B – technical proposal template downloaded from the Portal, completed and then uploaded as PDF
    - Section 1 – Excellence
    - Section 2 – Impact
    - Section 3 – Implementation

Research and Innovation Action (RIA) and Innovation Actions (IA)

- Part B - Technical proposal is maximum 45 pages Template

Coordination and Support Action (CSA)

- Part B - Technical proposal is maximum 30 pages Template

} Usually, but check as some IA topics say 'up to 70 pages' and some RIA topics say 'up to 60 pages'

UK Research and Innovation

Proposal Evaluation

- Carried out by independent experts – you and your colleagues should register as potential evaluators. You won't be allowed to evaluate your own competition but if called upon elsewhere it will give valuable insight.

- Maximum score of 15 points available, 5 for each of section:

  - Excellence

  - Impact

  - Quality and efficiency of the proposal

- Evaluation forms have now been published:

  - RIA/IA Standard Evaluation Form

  - CSA Standard Evaluation Form

- Standard slide deck briefing for all evaluators has been published so you can see what they are instructed to do

UK Research and Innovation

Additional useful information

- EU Science and Innovation have developed some very useful webinars:
  - Cluster 5 Information Days
  - How to prepare a successful proposal and scientific excellence is key
  - Dissemination & Exploitation in Horizon Europe

- Check out the Reference Documents – if there is any conflicting information this is the officially recognised correct source.

- The General Annexes that apply to all topics have been published

- The best helpdesk ever is the free to use IPR Helpdesk. They have templates, guides and proforma such as Teaming Agreements, MOUs, NDA templates, how to write an exploitation and dissemination plan, etc

UK Research and Innovation

Note some differences from 'standard' Horizon Europe

Innovation Action (IA)
- All not-for-profit participants receive 100% of eligible direct costs plus 25% of that for indirect costs
- All for-profit participants receive 70% (**60% if co-programmed partnerships**) of eligible direct costs plus 25% of that for indirect costs

Length of Proposal
- For some Innovation Actions – "The page limit of the application is 70 pages"
- For some Research and Innovation Actions – "The page limit of the application is 60 pages"

Check the Work Programme and General Annexes as published in the Reference Documents

UK Research and Innovation

Some definitions

- **Work Programme** – combined calls for proposals for the whole thing (excluding Institutionalised partnerships who do their own)
- **Cluster** – a major problem space. There are six in total. Cluster 5 is Climate, Energy and Mobility
- **Destination** – a way of breaking down the Cluster to manageable chunks with a common theme, e.g., decarbonisation of transport
- **Topic** – a specific call for proposals with its own scope, budget, etc. Often (but not always) more than one project will be funded.
- **The Portal** – the EU Funding & Tender Opportunities portal where all information needed to participate can be found
- **PIC** – Participant Identification Code – a unique identifier for each participating legal entity
- **LEAR** – Legal Entity Appointed Representative – a single person at the top for each organisation, often Chief Finance Officer or similar (buck stops with them)
- **Coordinator** – The lead participant for a proposal and project who brings the team together, submits the proposal and manages delivery of the project

UK Research and Innovation

Support services – regional support

Northern Ireland
- NICP (Northern Ireland Contact Point) Network: provides regional advice and support to potential NI Horizon Europe applicants by way of assistance with identifying areas of relevance within the competitive calls, help with application completion, identifying collaborative partners for applications, organising events & workshops, and engaging with National Contact Points

Scotland
- Richard Buxbaum **regional contact point** for Horizon Europe in Scotland based in Scotland Europa (Scottish Enterprise). Can provide expertise, advice and help coordinate access to a range of tailored support depending on needs

Wales
- **Horizon Europe Unit**: dedicated team supporting Welsh organisations to access Horizon Europe opportunities. Based within the Welsh European Funding Office (WEFO), Welsh Government.
- **Horizon Europe Unit - SCoRE Cymru Scheme:** provides financial support, travel and expertise (bid writing) for Welsh organisations looking to access European research and innovation programmes like Horizon Europe. Further information is available by **emailing the Horizon Europe Unit**

UK Research and Innovation

UK Research and Innovation

Thank you

UKRI

UK Research and Innovation

Questions?

louise.mothersole@innovateuk.ukri.org

Agenda

- Welcome and Introduction

  Richard Leonard, Future Mobility Manager, Welsh Automotive Forum

- **Horizon Europe and Funding Opportunities for the automotive sector**
  - Overview of Horizon Europe
  - Review of automotive-specific calls for proposals
  - How to form winning consortia

  Louise Mothersole, Horizon Europe UK National Contact Point, Innovate UK

- **Welsh Government support**

  Baudewijn Morgan, Head of Horizon Europe Unit, Welsh Government

  Dr Ann Sudder, Innovation Specialist, Welsh Government

- **How was it for us**

  Dr. Mircea Popescu, Chief Technology Officer, Motor Design Ltd

- **Q&A**

Baudewijn Morgan

Pennaeth Uned Horizon Ewrop	Head of Horizon Europe Unit
Swyddfa Cyllid Ewropeaidd Cymru	Welsh European Funding Office
Llywodraeth Cymru	Welsh Government

Horizon Europe Unit, Welsh Government

The Welsh Government Horizon Europe Unit was established in 2013, at the beginning of the last framework programme Horizon 2020.

A team of six of split between offices in north and south Wales.

> **Baudewijn Morgan; Vanessa Davies; Gareth Llewellyn; Kenn Palmer; Lynette Hough; Siobhan McMurdo**

A dedicated team supporting Welsh involvement in Horizon Europe. Offering advice and guidance; directing you to specialist support; contacts to other organisations and the Horizon network; development of targeted information sessions and events.

We are located within WEFO and we also work on European Regional Funds.

Joined-up support: **greater than the sum of its parts.** We collaborative and have good working relationships with the UK National Contact Points, Universities' European Liaison teams, and training and development experts in all sectors.

SCoRE Cymru Fund
(**S**upporting **Co**llaborative **R**esearch and innovation in **E**urope)

£0.7m invested

€10.1m Of R&I funding to Wales

A Welsh Government grant scheme supporting Wales-based organisations to access Horizon Europe.

£100k per year

Open:

- Travel (identify and building consortia). Up to £1,000, up to 100% grant
- Expertise (bid writing, developing of evidence...), up to £10,000, up to 75% of costs

Calls:

- 100% grant; budget and eligibility set by individual call.

CYFLWYNIAD

Hoffech chi fod yn unigolyn medrus a chyflawni pethau mawr? Byddwn yn rhannu sut allwn fod yn bartner i chi a lleihau eich risg.

INTRODUCTION

You want to go big and box clever? We'll share how we can be your partner and reduce your risk.

Tîm Arloesedd SMART

- Arbenigwyr profiadol yn y diwydiant

- Degawdau o arbenigedd arloesedd, Ymchwil a Datblygu ac Eiddo Deallusol

- Rhwydweithiau gwybodaeth helaeth

- Rydym yma i'ch cynorthwyo ar eich taith arloesedd

Introducing the SMART Innovation team

- Industrially experienced professionals

- Decades of innovation, R&D and IP expertise

- Extensive knowledge networks

- Here to help you on your innovation journey

CREU: SMART | MAKE IT: SMART

Busnes | Business
Cymru | Wales

Cymorth a chyngor ar arloesedd, a chyfeirio at gyllid arloesedd.

- Cyngor a chyfarwyddyd technegol

- Cymorth a mentora proffesiynol

- Cymorth i geisio cyllid Ymchwil a Datblygu

- Gwasanaeth cynghori ar Eiddo Deallusol

- Gwiriadau cynhyrchedd, dyluniad a arloesedd digidol

- Rhwydweithiau gwybodaeth

- Cyfeirio at ragor o gymorth

Support and advice on innovation, and signposting to innovation funding.

- Technical advice and guidance

- Professional support and mentoring

- Help with R&D funding and incentives

- Intellectual Property advisory service

- Productivity, design & digital innovation health checks

- Knowledge networks

- Signposting to further support

Arloesedd SMART

...i gynorthwyo'ch busnes:

- Cynhyrchu cynhyrchedd a natur gystadleuol

- Gwella ansawdd ac effeithiolrwydd

- Gwarchod eiddo deallusol a manteisio arno

- Cyflwyno cynhyrchion, prosesau a gwasanaethau newydd i'r farchnad a mynd i farchnadoedd newydd

- Magu cysylltiadau ag academyddion

SMART Innovation

...to help your business:

- Increase productivity and competitiveness

- Improve quality and efficiency

- Protect and exploit intellectual property

- Bring new products, processes and services to market and access new ones

- Build links with academia

Busnes | Business Cymru | Wales

Y RHAGLEN SMART | THE SMART PROGRAMME

PROSIECTAU SMART LEDLED CYMRU

SMART PROJECTS IN WALES
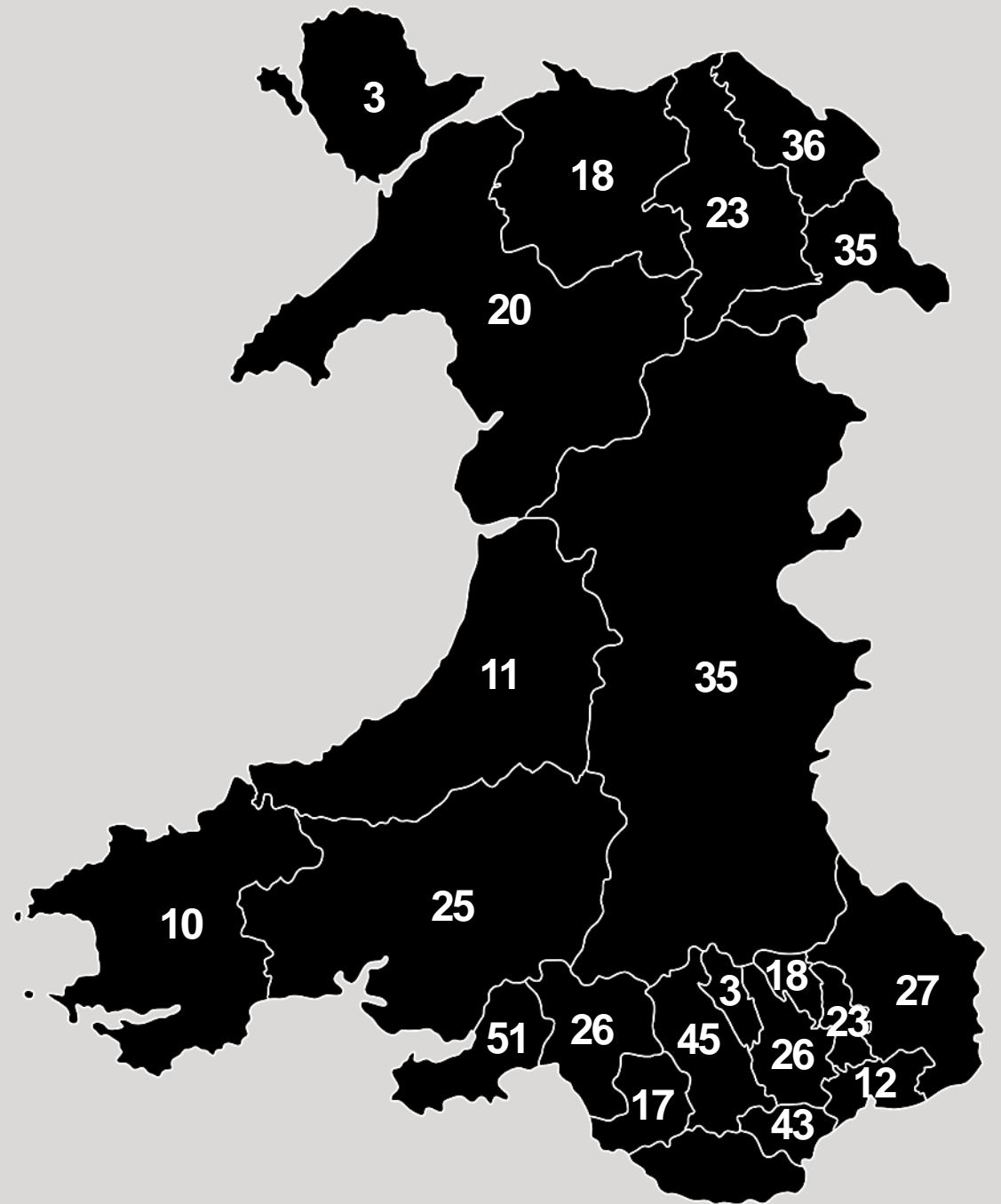
Sut allwn ni gynorthwyo i gyflawni syniadau:

- Rhaglenni a ariennir gan yr UE

- Cyllid hyd at 2023

- Rhwydwaith o arbenigwyr

- Cyflenwi lleol

- ...y mae cannoedd o fusnesau Cymru wedi elwa ohoni

How we help catapult ideas into reality:

- EU funded programme

- Financial backing until 2023

- A network of specialists

- Local delivery

- ...which has benefitted hundreds of Welsh businesses

Busnes | Business
Cymru | Wales

Mae Cymru yn wynebu nifer o heriau nawr ac yn y dyfodol, ac rydym yn ymroddedig i'w cynorthwyo i fynd i'r afael â nhw.

- Datgarboneiddio

- Newid hinsawdd

- Eiddo deallusol

- Diwydiant 4.0

Wales faces a number of challenges now and in the future, and we're committed to helping to tackle them.

- Decarbonisation

- Climate change

- Intellectual property

- Industry 4.0

Busnes | Business
Cymru | Wales

Agenda

- Welcome and Introduction

  Richard Leonard, Future Mobility Manager, Welsh Automotive Forum

- **Horizon Europe and Funding Opportunities for the automotive sector**
  - Overview of Horizon Europe
  - Review of automotive-specific calls for proposals
  - How to form winning consortia

  Louise Mothersole, Horizon Europe UK National Contact Point, Innovate UK

- **Welsh Government support**

  Baudewijn Morgan, Head of Horizon Europe Unit, Welsh Government

  Dr Ann Sudder, Innovation Specialist, Welsh Government

- **How was it for us**

  Dr. Mircea Popescu, Chief Technology Officer, Motor Design Ltd

- **Q&A**

HORIZON 2020 – EGVI ReFreeDrive Project

Dr. Mircea Popescu

24-11-2021

About Motor Design Ltd
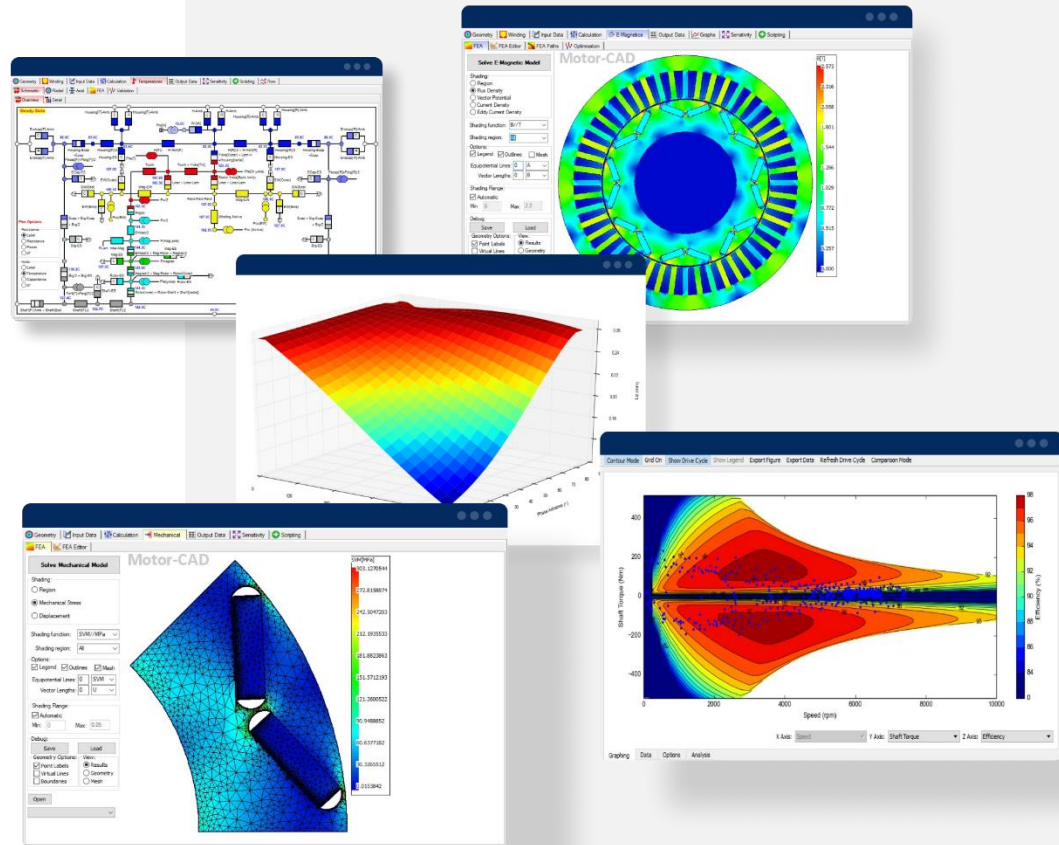
- Software developers: Ansys Motor-CAD
  - Developers of Ansys Motor-CAD – world-leading tool for the design and analysis of electric motors.
  - High level of customer support and engineering know-how.
  - Developed with expert electric machine designers.

- Consultancy
  - Design, analysis & training.
  - Led by motor design experts with significant industry and academic experience.

- Research
  - Involved in collaborative government/EU-funded research projects.
  - Collaborate with Universities worldwide to develop electric machine modelling techniques and create validation data.

     www.motor-design.com
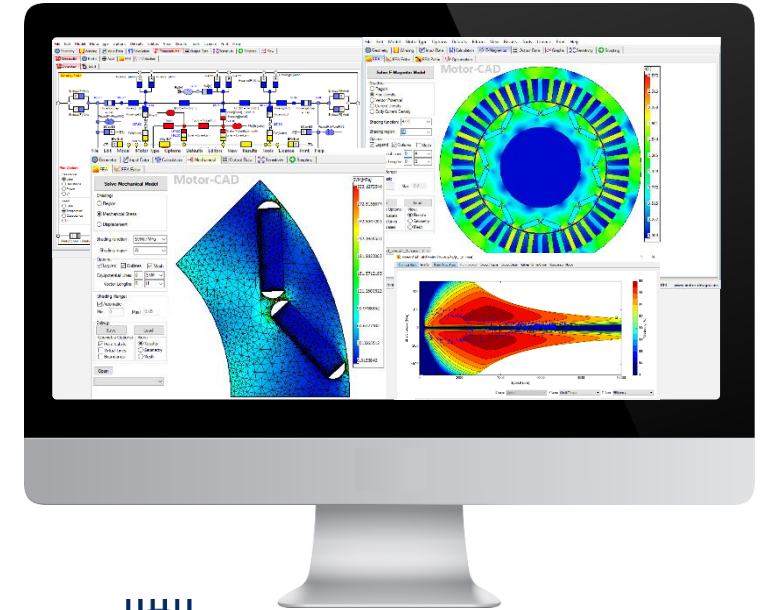
About Motor Design Ltd

Worldwide Customers

Customers in **33 countries** and over **470 companies** worldwide.

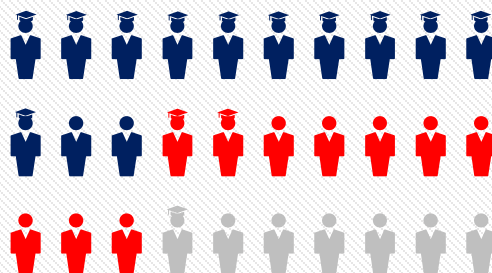**MDL Headquarters**
Wrexham, UK

MDL Asia
Shanghai, China

MDL USA
Ohio, USA

Customers across 6 industry sectors
Automotive, aerospace, rail, renewables, industrial & appliances.

43% of the team are **design engineers**

30% of the team are **software developers**

47% of the team **have a PhD**

Developing Motor-CAD software since **1998**

MDL has OEM software partnership with **Ansys**

www.motor-design.com

ReFreeDrive

- Topic:
  - Avoid the use of rare earth magnets through the development of a next generation of electric drivetrains, ensuring the industrial feasibility for mass production while focusing on the low cost of the manufacturing technologies

- Duration:
  - Sept. 2017 – March 2021
  - Initial 3 years duration was extended by 6 months due to global external factors

- Amount:
  - EUR 6,000,000

- Partners
  - 11 SMEs, 1 University, 1 OEM

- Countries:
  - UK (3), Italy (6), Spain (1), France (1), Germany (1), Belgium (1)

www.motor-design.com

ReFreeDrive

- Research and develop new electric drives based on free of rare earth technologies
- Induction machines (IM) and synchronous reluctance machines (SynRel or PMa SynRel).
- In-vehicle validation for two use cases (75kW, medium power range, and 200kW high power range)

www.motor-design.com

ReFreeDrive
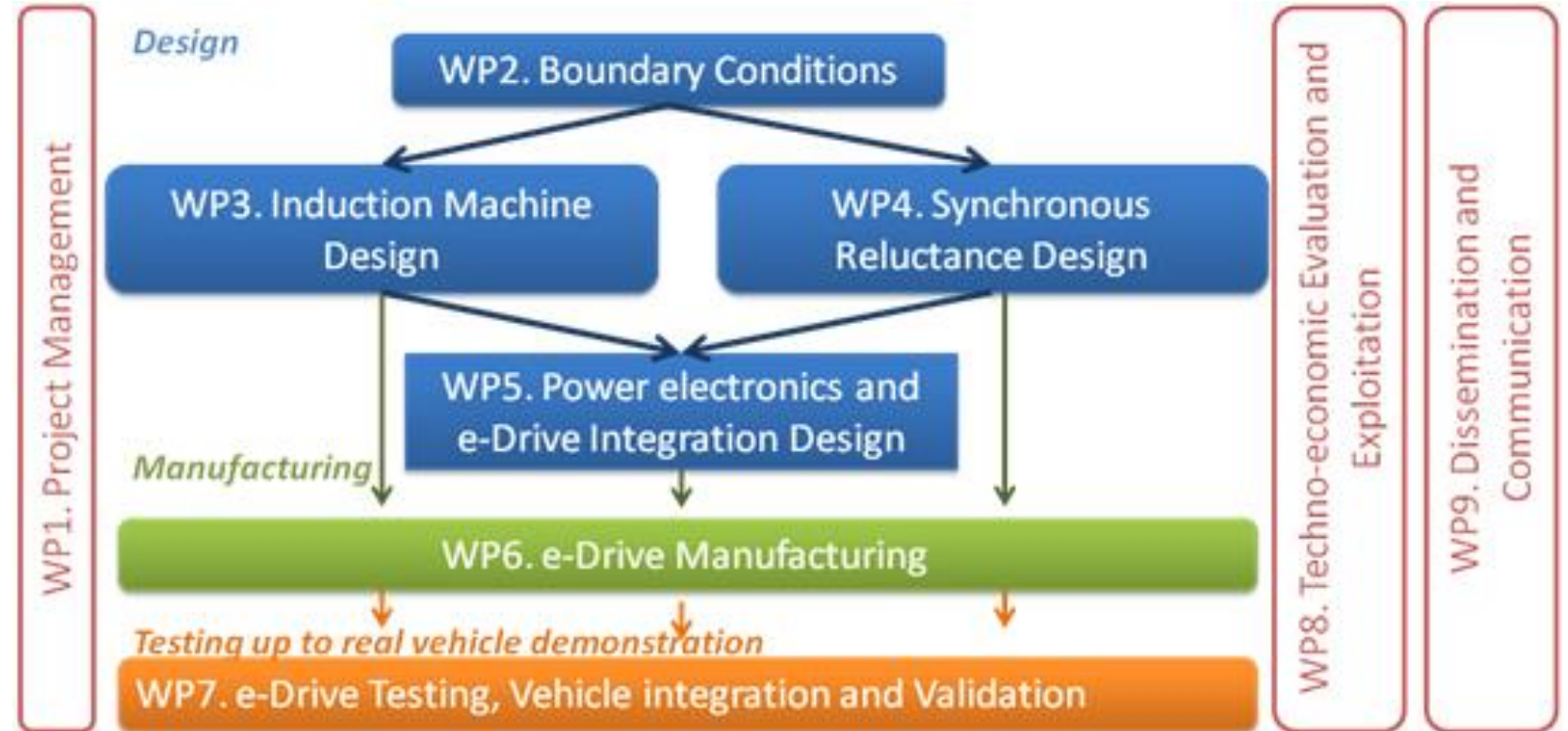
Partners:
- Cidaut (Spain)
- European Copper Institute (UK)
- Motor Design Ltd (UK)
- University of Aquila (Italy)
- IFP Energies Nouvelles (France)
- Centro Sviluppo Materiali (Italy)
- Tecnomatic SPA (Italy)
- MAVEL SRL (Italy)
- Breuckmann GmbH (Germany)
- Aurubis (Belgium)
- R13 Technologies (Italy)
- Prive SRL (Italy)
- Jaguar Land Rover (UK)

www.motor-design.com

ReFreeDrive

Remarks:

- Consortium creation took one year

- Agreeing on common topic and partners contribution

- Difficulties in hardware manufacturing and testing due to global factors

- Excellent EU – UK collaboration

- Same partners looking to apply for Horizon Europe program project

    www.motor-design.com

Motor Design Software by Motor Design Engineers

Agenda

- Welcome and Introduction

  Richard Leonard, Future Mobility Manager, Welsh Automotive Forum

- **Horizon Europe and Funding Opportunities for the automotive sector**

  - Overview of Horizon Europe
  - Review of automotive-specific calls for proposals
  - How to form winning consortia

  Louise Mothersole, Horizon Europe UK National Contact Point, Innovate UK

- **Welsh Government support**

  Baudewijn Morgan, Head of Horizon Europe Unit, Welsh Government

  Dr Ann Sudder, Innovation Specialist, Welsh Government

- **How was it for us**

  Dr. Mircea Popescu, Chief Technology Officer, Motor Design Ltd

- **Q&A**