Department for
Science, Innovation
& Technology

Working with Catapults

Guidance for government departments on how to contract and engage with Catapults

September 2023

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Introduction

In April 2021,the Department for Business, Energy and Industrial Strategy (BEIS), now the Department for Science Innovation and Technology (DSIT) published the 'Catapult Network Review: how the UK's Catapults can strengthen research and development capacity'. This outlined a set of recommendations intended to ensure the network continues to deliver vital support to UK innovation, sectors, and industry. This included a recommendation for BEIS (now DSIT) to provide best practice guidance on how government departments may contract and engage with Catapults.

This document therefore aims to assist government departments in better understanding what Catapults are and the benefits of working with them to deliver on government priorities. It also provides some detail on potential routes for teams who are considering contracting with Catapults.

This guidance is provided on an 'as is' basis and is not intended to cover all scenarios nor tailored to specific circumstances. It does not constitute legal or commercial advice and should not be relied on as such. Before working with a Catapult please seek your own advice if you are unsure.

Glossary

Contracting Authority

A body subject to the procurement rules in the Public Contract Regulations 2015, including State, regional or local authorities, bodies governed by public law or associations formed by one or more of the above.

Commercial Contract

A legally binding agreement between two or more parties to undertake certain obligations (for example an obligation on one party to deliver goods or services meeting a certain specification, and on the other party to pay promptly for those goods or services).

Direct Award

This involves selecting a supplier without competing for the requirement. This is used when there is no other alternative supplier to complete the work.

DSIT

The Department for Science, Innovation, and Technology. Formerly part of the Department for Business, Energy, and Industrial Strategy (BEIS).

Grant

A sum of money given to an organisation in anticipation of it being applied for an agreed purpose.

Innovate UK

Innovate UK is the UK's innovation agency. They inspire businesses to create value through innovation, driving productivity and economic growth for the UK.

Interoperability

The ability of computer systems or software to exchange and make use of information.

Judicial review

Where a judge reviews the lawfulness of a public body's decision or action.

Open RAN

Open RAN stands for open radio access network. This is a method for connecting smartphones and devices to the internet and other users through mobile networks.

Procurement

Procurement is the range of activities undertaken by organisations in obtaining goods and services.

Public Contract

A written agreement between one or more organisations and contracting authorities for economic gain. The contract would say what work would be performed and/or what products or services would be provided.

Public Contract Regulations 2015

The Regulations that set out the procurement rules and procedures that apply to contracting authorities whenever they buy goods, services or works.

Subsidy Control

A set of rules that regulate the provision of certain types of financial support to organisations, in particular support which gives certain organisations an advantage over others. The regime is set out in the Subsidy Control Act 2022, supported by guidance.

Tender

The bid that is submitted by a supplier with an offer to undertake a contract for goods, services or works.

What are Catapults?

Catapults are independent, not-for-profit organisations designed to support innovation through the provision of R&D infrastructure, specialist knowledge and expertise. They are a collective of world-leading technology and innovation centres established by Innovate UK (IUK).

As national assets grounded in regional ecosystems, Catapults have an important role to play in unleashing innovation, supporting the levelling up agenda, and driving regional economic growth. They bring expertise into innovation clusters, supporting business growth, skills, and international collaboration. Their presence in particular regions has delivered direct and indirect local benefits. They support the R&D ecosystem, collaborating with universities and businesses of all sizes. They also offer significant expertise and insight to government departments developing policies or programmes driving industrial and societal change through the implementation of innovation.

The Catapults' funding structure allows them to focus on more high-risk emerging technologies. The Catapults support government and businesses in transforming great ideas into valuable products and services.

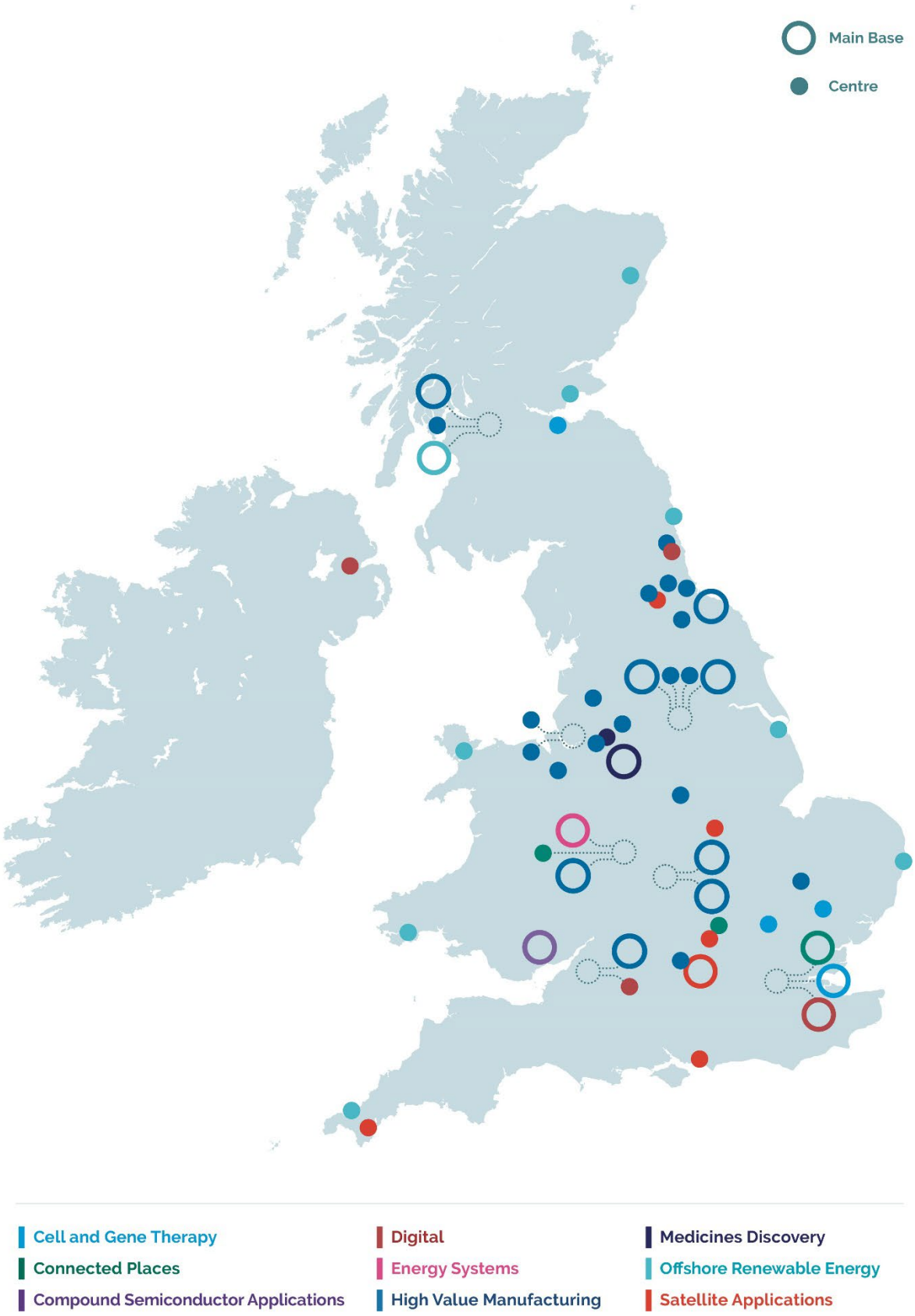
By bridging the gap between research and industry, the Catapults are helping tackle the biggest challenges that society and industries face today. Through their knowledge, infrastructure and collaborations, Catapults make today's industries more productive and create the markets of tomorrow.

The very best of the UK's businesses, scientists, technical specialists, and engineers work side by side on late-stage research and development, helping industry get high potential ideas to market, fuelling business growth, and increasing productivity. Below is an example of how a Catapult's facilities are enabling businesses to test their products in real time.

Case Study: The Living Lab

With around 40% of the UK's greenhouse emissions coming from homes, the Energy Systems Catapult has developed a 'Living Lab' - a real-world test environment of 1000 digitally connected homes. The facility enables innovative businesses to rapidly design, market-test and launch their smart energy innovations in real conditions. It also provides a national capability to test and demonstrate new market arrangement, policies, and regulations with real consumers. Such collaborations could lead to better outcomes for consumers including warmer homes, lower energy bills and improve air quality.

There are 9 Catapult centres across the UK in over 56 locations, ensuring the benefits of the network are felt nationwide. Some case studies of the work Catapults have achieved can be viewed in Annex 1.



Catapult locations across the UK

(See an interactive map of the Catapults)

How they operate

Objectives

All Catapults have several high-level objectives:

- To work with industry, and regional, national and international partners, to commercialise innovation in a way that drives long-term benefit to the UK economy.
- To provide businesses with access to the appropriate mixture of expertise, facilities and equipment needed for them to invest in innovation where these are not readily available due to market failure or commercial risk.
- To work collaboratively together and with the wider R&D ecosystem to enable the development of innovative solutions to overcome key challenges; and
- To take an active role in removing industry-wide barriers to innovation and commercialisation where they exist.

Most Catapults operate within two broad categories:

- **Asset based Catapults** – where a large part of the offer to businesses is access to advanced equipment, the skilled technicians to operate them, and solve the problems businesses face today and the challenges industries are facing in the future. The main examples here are the High Value Manufacturing, Cell & Gene Therapy and Offshore Renewable Energy Catapults.
- **Service or systems focused Catapults** – which work with partners (e.g., companies and public bodies) to foster new markets and build new ecosystems to deliver them. Energy Systems, Digital, and Connected Places Catapults are the clearest examples of this type with the other Catapults on a continuum between these two types.

Catapult Funding

Catapults operate with three main types of funding, split between a core grant funded by DSIT and delivered through Innovate UK, collaborative R&D (CR&D) and commercial revenue.

- **Core Grant** - Catapults receive core funding from Innovate UK to deliver against an agreed Outputs and Outcomes proposal designed to address key challenges and barriers, develop technical abilities, run demonstration projects and conduct research advisory meetings with industry and researchers. The funding helps build capacity, provide state-of-the-art equipment, and improve business innovation and growth, which are not available on the open market due to market failure or commercial risk.
- **CR&D** - Catapults can win CR&D funding from the public sector by competing with businesses and research partners. It is aimed at conducting R&D that will provide businesses with access to future commercial opportunities. It also provides the Catapult with a platform to continue developing cutting-edge knowledge and capabilities with

future benefits for industry and their associated sectors. This can be done by bringing together small and medium-sized businesses (SMEs), blue-chip firms (companies that are reputable, financially stable, and have been in their industry for a long time), technical and management resources, partners in projects (UK and EU) and utilising their expertise.

- **Commercial** - Through industry R&D / commercial funding, Catapults can deliver income on commercial terms to meet a business need and commercialisation opportunity. Another way is by delivering direct services to the public sector. This can be done by providing access to their unique facilities and expertise, developing, and demonstrating at scale, reducing implementation risks, and making it easier for SMEs to access these.

What they do

This table details the 9 Catapults and the types of activities they undertake:

Catapult	**Date Created**	**What it does and how it does it**
High Value Manufacturing (a network of another seven centres)	October 2011	Provides access to state-of-the-art kit and technical expertise to help UK manufacturers de-risk and accelerate their technologies, make their supply chains more resilient and their workforces fit for the future. Areas of excellence range from 3D printing and forging to biomanufacturing and electrification. The results? Adoption of new technologies, materials and processes and improved productivity. They also partner with researchers and government to help turn research into reality and deliver national programmes and policy objectives. Head office in Birmingham with seven centres and more than 20 locations throughout the UK.
Cell and Gene Therapy	October 2012	Committed to the advancement of cell and gene therapies with a vision of a thriving industry delivering life changing advanced therapies to the world. Its aim is to create powerful collaborations which overcome challenges to the advancement of the sector. With over 400 experts covering all aspects of advanced therapies, it applies its unique capabilities and assets, collaborates with academia, industry, and healthcare providers to develop new technology and innovation.
Satellite Applications	December 2012	Boosts UK productivity by helping organisations harness the power of satellite-based services; realising their potential from space infrastructure and its applications. Based in Harwell, Oxfordshire, it also has specialist facilities in propulsion, drones, robotics and connectivity at Westcott in Buckinghamshire, in Earth Observation at Space Park Leicester, 11 Space Enterprise Labs around the country, and is supported by three regional Centres of Excellence. Through its work, it aims to support UK industry to capture a 10% share of the predicted £400bn global space market by 2030.

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Catapult	Date Created	What it does and how it does it
Offshore Renewable Energy	March 2013	The UK's leading innovation centre for offshore renewable energy, helping to reduce cost, supporting the growth of the industry, and creating UK benefit. It drives the development of commercially viable technologies applicable to offshore wind, wave and tidal power. Headquartered in Glasgow with the National Renewable Energy Centre in Blyth, Northumberland as the main operational facility, and further facilities in Aberdeen, Fife, Edinburgh, Grimsby, East Anglia, Cornwall, Pembrokeshire, Anglesey and Shandong Province, China.
Digital	June 2013	Accelerates the adoption of advanced digital technologies by industry in the UK. Through R&D, innovation & acceleration programmes and experimental facilities, it fosters the connection between advanced digital technology supply and demand, to de-risk and build confidence in the adoption and private investment into key enabling technologies such as: (1) Artificial Intelligence (2) Virtual & Augmented Reality (3) 5G/ 6G (4) Blockchain, (5) Internet of Things and (6) Quantum. It does so with a systems thinking approach - looking at how these technologies combine in core applications in the form of metaverse & digital twin platforms, digital and resilient supply chains, and the creation of open & interoperable digital infrastructure for the UK's energy, transport and defence sectors amongst others. Its work helps businesses to overcome technical and business barriers for the application and use cases of these technologies, supporting almost 2,500 startups in the past five years to develop healthier technology ecosystems for the future that can bring about a net benefit for the UK economy, society, and environment.
Energy Systems	April 2015	Accelerates the transformation of the UK's energy system towards Net Zero. Based in Birmingham, with around 250 experts across technical, commercial and policy backgrounds, it boosts clean tech innovators to capture the opportunities of the future, cleaner energy system. It does this by delivering 'whole systems' innovation for homes, non-domestic buildings, and sites, in local areas and across networks – areas where there is the greatest need for energy innovation.

Working with Catapults

Catapult	**Date Created**	**What it does and how it does it**
Medicines Discovery	April 2015	Their vision is to reshape drug discovery for patient benefit, by transforming great UK science into better treatments through partnership. They support drug discovery innovators by making world-class expertise, facilities, complex technologies, and advanced analytics accessible. Connecting the life sciences ecosystem, driving a global focus on barriers to innovation in areas of unmet patient and technological need. By industrialising new technologies to drive the adoption of new scientific tools and techniques, enabling successful medicines discovery.
Compound Semiconductor Applications	January 2018	Supports the development of compound semiconductor applications to help deliver long-term benefit to the UK economy. Expertise in Power Electronics, Radio Frequency, Photonics and Advanced Electronics Packaging helps accelerate developments in three areas: Net Zero & Electrification; Future Telecoms & Quantum; and Intelligent Sensing. Headquartered in Newport, South Wales.
Connected Places created by merger of Future cities and Transport Systems	April 2019	Focuses on impartial ‘innovation as a service’ for public bodies, businesses, and infrastructure providers to catalyse step-change improvements in the way people live, work and travel. Connecting businesses and public sector leaders to cutting-edge research to spark innovation and grow new markets. Running technology demonstrators and SME accelerators to scale new solutions that drive growth, spread prosperity, and reduce carbon emissions. Their main offices are in London and Milton Keynes (with additional locations in Leeds and Glasgow).

Why work with Catapults?

By helping to commercialise innovation, Catapults contribute to long-term economic growth in the UK. By collaborating and partnering, they provide businesses and other organisations support that may not otherwise be available due to market failures, commercial risks, or costly barriers.

Catapults have established over 5,000 academic collaborations, more than 18,000 industry collaborations and supported more than 11,000 SMEs to date.

Catapults work in challenge areas that are well aligned with and support the strategic priorities of government departments and other public sector bodies. As such, government departments can work with Catapults to benefit from their sector expertise and knowledge. This could include work on:

Levelling Up

With the government's Levelling Up White Paper mission to increase domestic public investment in R&D outside the Greater Southeast by at least 40% by 2030, Catapults can demonstrate their national impact with 56 sites across all UK nations with 74% of their core grant utilised outside of London & the Southeast.

Catapult centres across the UK have a track record of accelerating growth of clusters of innovative businesses, connecting those businesses to the local research base, and driving skills development for their local economies. In so doing, Catapults can work with Government to build national capability and drive local impact.

There are several instances of local authorities and devolved administration governments investing in Catapult facilities to enable local capability and impact, including from the Department of the Economy in Northern Ireland into Digital Catapult facilities in Belfast, the Welsh Government into the Compound Semiconductor Applications Catapult in Newport, and the Scottish Government into the National Manufacturing Institute for Scotland (part of the High Value Manufacturing Catapult).

Additional Levelling Up Catapult case studies can be found on the Catapult's website.

Net Zero

Catapults make a significant contribution to achieving the government's target of bringing all greenhouse gas emissions to Net Zero by 2050 and have the technology and expertise to work with government on supporting this goal. They do this on three levels:

- Driving transformative technology, such as developing next generation offshore renewable capability.

- Developing system wide tools, models, and test beds, to enable industry and the economy to make the most efficient shift to Net Zero.
- Minimising Catapults own carbon footprint and demonstrating industry leading practice.

For example, the Energy Systems Catapult set up their Living Lab which offers a quick, safe, and affordable real-world test environment to de-risk and scale innovations by running trials directly with consumers in their homes. In addition, the Offshore Renewable Energy Catapult through their offshore wind innovation challenge which led to the development of the prototype ACT blade[1], shown to generate 9% more energy which could reduce energy costs by 6.7%.

Additional Net Zero Catapult case studies can be found on the Catapults' website.

Increasing private investment

Catapults can support the government's aims to boost private sector investment across the whole of the UK.

Catapults have already directed over £2.5 billion of private and public sector investment into innovative industrial research. Catapults 'new deal' focuses on improving their impact and promoting them more effectively as UK innovation system assets and maximising their contribution in driving up private sector investment. This offers a range of opportunities for government departments to work with Catapults to drive greater impact, demonstrate value for money and collaborate across the UK.

The Connected Places Catapult in Northern Ireland supported the Belfast City Region Deal by working with the councils and industry partners in the area to create a strategic case for funding; the deal consisted of £350m of public investment and £150m of private investment.

The Connected Places Catapult's long-term collaboration with the Department for Transport (DfT) is a great example of government working productively with Catapults.

Case Study: DfT and Connected Places Catapult

Since DFT's initial collaboration with the Connected Places Catapult in 2013, over 100 projects have been delivered to address the government's mission of making the UK a world leader in mobility, and a global Science Superpower. Through a long-standing collaborative relationship, Connected Places Catapult and DfT co-design projects to enable markets and work together to address emerging innovation opportunities for UK industry. DfT benefits from Connected Places Catapult's unique government-funded capabilities by influencing the development of near-market solutions to better support strategic priorities. As a trusted neutral convener, the Catapult brings together stakeholders from across the transport system to join up DfT policy teams with UK businesses at the cutting edge of transport innovation.

[1] A tensioned textile-covered wind turbine blade with a shape that can be actively changed to control loads.

Catapults can also help with specific research, delivery, and management of projects. With 9 Catapults across numerous different sectors, there's probably a Catapult suitable to help with most projects, whether working with government or industry. The below case study highlights how BEIS (now the Department for Energy Security and Net Zero (DESNZ)) worked with the Offshore Renewable Energy Catapult in supporting their development of floating wind technologies. Annex 1 contains further case studies on how government departments have worked with Catapults.

Case Study: Floating Offshore Wind (FOW) Centre of Excellence

DESNZ (previously BEIS) joined the Offshore Renewable Energy Catapult's FOW Centre of Excellence. DESNZ is providing the Centre with £2 million over 4 years (FY21/22-FY25/25), strengthening the Centre's mission to further accelerate innovation in the UK's floating wind sector. This puts the UK in a prime position to capitalise on a growing export market as other countries look to use this technology. The direct award contract was obtained by then BEIS preparing a business case and receiving all the appropriate approvals. The team had to demonstrate how OREC were the only institution that could undertake the work through extensive market research.

Key Principles when working with Catapults

There are several ways that a Government Department and other public sector bodies can commission work from a Catapult. Here are a few generally applicable principles:

- Catapults can act where they are uniquely placed to carry out work, rather than activities which the market can deliver.
- Catapults may participate in any competitive procurement or R&D call for which they are eligible.
- In competitive procurements, Catapults must not use their core grant to subsidise delivery costs. They must rely on their ability to justify full cost through their unique capabilities.
- Catapults' core grant can only be used to deliver activities that contribute to the outputs and outcomes proposals agreed with Innovate UK.
- The following principles apply in both competitive and non-competitive scenarios:
    - In general, Catapults should always be fully funded for the work they undertake on behalf of Government stakeholders. Catapults are regularly audited on funding but may seek advice through Innovate UK, who can provide information on appropriate direct and indirect elements of costs.
    - Work of a commercial nature, where the assets created under the contract (e.g. IP, or demonstration hardware) become the property of the funding body, would generally include a margin on top of full cost recovery.

- Work of a grant nature can be undertaken on a cost-recovery-only basis, where it is aligned with the Catapult outputs and outcomes proposal and contributes to the Catapult Objectives.

Routes to working with Catapults

There are two primary ways in which Government departments can work with Catapults; through the procurement of a contract for goods, services or works, or through grant funding. In addition, there are sometimes arrangements where Catapults work collaboratively with public authorities which may not be governed by the procurement rules.

The key difference is that a contract for goods/services/works will legally bind the Catapult to provide those goods/services/works to the Department in accordance with the specification set out in the contract. The Department will generally own any resulting intellectual property rights (IPR). By contrast, a grant provides funding for a specified purpose but leaves the recipient free to choose how it pursues that purpose. The Department would usually claw back funding if the recipient does not pursue the purpose for which the grant is given. Generally, the recipient will own the resulting IPR, sometimes subject to obligations to disseminate or otherwise make available the results. Further details on intellectual property can be found on page 24.

HMRC provide further guidance on what is considered a grant.

Procurement - contracts for goods, services or works.

Departments may choose to buy specific goods, services or works from a Catapult, either through a competitive process or through a direct award, if the Catapult has a set of unique capabilities. A written contract will be agreed, which will legally bind the Catapult to provide goods or services to the Department in accordance with the specification set out in the contract. Before working with a Catapult, you should seek your own commercial and legal advice if you are unsure.

What is procurement?

Procurement is the range of activities undertaken by organisations in obtaining goods, services or works.

Where a department wishes to procure goods, services, or works from a Catapult, it will first need to determine whether it must complete its requirement, whether under the procurement rules or because of value for money or subsidy control considerations.

When public bodies are procuring goods, services or works, they are subject to specific procurement rules set out in the Public Contracts Regulations 2015. Procurement rules only apply when decisions are being made that would result in the award of a "public contract". A public contract is a written agreement between one or more organisations and contracting authorities for economic gain. A contract states what work would be performed and what products or services would be provided.

If the contract requires a supplier to provide a government department with any goods, services, or work (such as the construction of a building), this would be considered a "public contract". If the department is not receiving anything directly in return for the funding, then it would not be considered procurement and the Public Contract Regulations 2015 would not apply. Instead, it is likely to be a grant, as the Secretary of State does not get direct delivery.

The Public Contracts Regulations 2015

The Public Contracts Regulations apply when Departments award contracts for goods, services or works above a certain threshold, and generally require Departments to compete contracts according to specific procedures in the Regulations. That would include goods, services, or works they would like to buy from Catapults. There are some exemptions to standard procurement rules as outlined below:

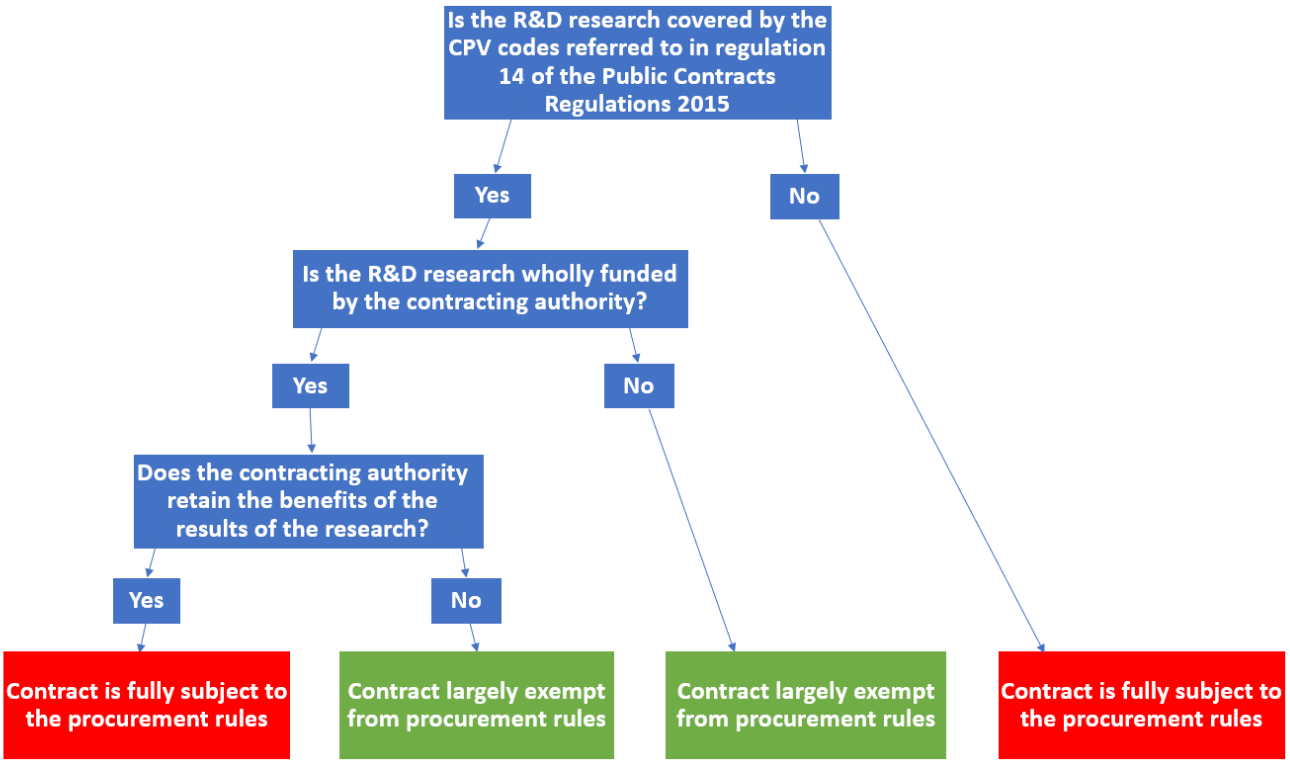
Regulation 12 of the Public Contracts Regulations 2015

Regulation 12 sets out exemptions for certain contracts between two public bodies, subject to fulfilment of certain exemptions. Given the funding and governance of Catapults, the exemption in Regulation 12 of the Regulations, often known as the Teckal exemption, will not generally apply.

Regulation 14 of the Public Contracts Regulations 2015 – R&D exemption

Of particular relevance when working with Catapults, there is an exemption from the need to follow procurement rules for research and development services. This is set out in Regulation 14 which applies to contracts for research and development services which are covered by specific common procurement vocabulary (CPV) codes (see Annex 2), provided:

- the Department does not retain all the benefits from the results of the research; OR
- the research funding has been partly provided by a private sector body.



Regulation 14 R&D exemption flow chart

In addition to the exemptions set out above, there are also routes for a government department (or other types of Contracting Authority) to award a contract without running a competition:

Regulation 32 of the Public Contracts Regulations 2015

Regulation 32 sets out the grounds under which a contract may be directly awarded to one supplier. Its use is restricted to certain exceptional grounds such as where there is no reasonable alternative or substitute to complete the work due to technical reasons or because of certain exclusive rights (such as IP rights) that are required. If you are considering pursuing this route, then you will need to liaise with your commercial and legal representatives and ensure you have a robust justification in place.

Commercial contracts

Competitively procured

Where it is obliged to compete, a Catapult would be amongst other suppliers or contractors submitting a bid to supply a product or service to government. It must be treated equally and cannot be given any unfair advantages. Further information on public procurement policy can be found on the government spending website. The below provides an example of the High Value Manufacturing Catapult (HVMC) winning a competitive contract funded by the Department for Education (DfE) to address skills gaps in emerging technologies. This case study outlines a pilot which builds on work described in the case study on page 29, which was a directly awarded grant.

Case Study: Emerging Skills Pilot

Several businesses have failed to adopt emerging technologies, which may explain the UK's well-documented decline in productivity. Employers struggle to analyse, forecast and communicate their skills needs to exploit these technologies. This can lead to qualification and curricula that are ‘backward looking’. In September 2021, DfE funded the High Value Manufacturing Catapult to deliver a second pilot, building on the initial grant funded project. This second project was awarded via a competitively procured contract. The project focused on electrification technologies needed to support the UK’s commitment to reach Net Zero by 2050 and explored how the UK can better foresight emerging skills needs, create new courses to meet those needs and then mainstream those skills in the skills sector and in industry. An assessment of the marketplace after the start of pilot one’s delivery showed there was scope to compete the contract. The procurement competition was conducted over four months and an initial business case was approved by the Investment gateway. A 4-week period of open competition was provided for potential suppliers to bid for the contract. The bids were than evaluated and moderated before a final business case was submitted and approved. As the HVMC scored the highest during the tendering process, they were awarded the contract.

Direct awards

A direct award involves selecting a supplier without competing for the requirement and is only possible where the Public Contracts Regulations do not require a competitive procurement (usually in reliance on one of the exemptions or exclusions set out above on pages 19-20).

You may consider a direct award for the purposes of conducting research, informing policy, or delivering a project. If you choose to do this, you will need to liaise with your commercial and legal representatives and ensure you have a robust business case which clearly sets out why the Catapult is uniquely suitable to carry out the work. The following case study is a direct award between then BEIS and the Energy Systems Catapult for a project which aims to support stakeholders and the government to achieve Net Zero ambitions.

Case Study: The Energy Innovation Research Office

In partnership with DESNZ, formerly BEIS, the Energy Systems Catapult will deliver a series of research, modelling, and analysis projects across key energy innovation themes such as Direct Air Capture (DACs). This work aims to support government and other energy innovation stakeholders to understand the impact of the government's current Net Zero Innovation Portfolio. It will also help in better understanding what technologies and approaches government may want to prioritise in the future in support of reaching Net Zero by 2050. With the Catapult having delivered a previous £1m modelling and analysis programme with then BEIS, then BEIS recommended to recontract with them due to the previous successes and their unique technical capabilities. A business case was written which considered a range of contracting approaches which were reviewed by commercial and financial colleagues. This led to a direct award being offered as it being the best value for money option and the Catapult having the correct level of expertise for the projects.

Grant Funding

A grant is a sum of money given to an organisation where it will be used for a particular purpose rather than for a good or service to be received in return. If government gives grant money to a Catapult to develop a product, this would not be procurement as the money does not provide a good, service or work for the benefit of the authority.

The Public Contracts Regulations don't apply to grant funding. However, it is important when awarding grant funding that Departments consider the subsidy control rules. Depending on how the grants are structured, they may amount to subsidies and additional consideration will be required.

It is strongly recommended that government grant making organisations use the Cabinet Office's Model Grant Funding Agreement (MGFA) hosted on the grants Centre for Excellence (CoE) website. This has legal clearance and is fully compliant with the minimum requirements. On occasion it has also been possible for authorities to agree a grant framework agreement with Catapults to avoid having to sign separate grant agreements for related projects that can only be scoped at a later point.

- The Department for Transport and Connected Places Catapult case study on page 15 of this guidance describes the successful relationship between DfT and Connected Places Catapult (CPC) where they co-design projects to enable markets and work together to address emerging innovation opportunities for UK industry. This relationship is governed by a 5-year Grant Framework Agreement under which DfT set out an indicative award amount (agreed on an annual basis) and then individual grant funded projects are scoped out over the course of a year and awarded using a template set out in a schedule to the Framework. This gives the Catapult an indication of the intended funding over the course of a year whilst also giving DfT flexibility to award individual projects on an as-needed basis and without a firm commitment to provide a particular level of funding. DfT and CPC have developed a uniqueness test to protect the collaboration from inappropriate project work, which should be competed to the market.

Case studies which involve a grant awarded to Catapults can be found in Annex 1. There are different types of grants which are explained below.

Non-competitive – directly awarded

In some circumstances, a grant may be awarded without competition - in such instances, strong justification must be provided in the business case and approved at the appropriate level in the organisation. This is used when there is no reasonable alternative or substitute to complete the work for technical reasons. DSIT (previously The Department for Culture, Media and Sport (DCMS)) are working with the Digital Catapult by awarding them a non-competitive grant for the delivery of the “SONIC Labs” outlined below.

Case Study: SONIC Labs

DCMS has fostered a close collaboration with the Digital Catapult through delivery of the Smart ‘radio access network’ (RAN) Open Network Interoperability Centre ("SONIC Labs"). Then DCMS provided the Digital Catapult with a grant of £15M for 3 years to establish SONIC for the financial years of 2021/22, 2022/23 and 2023/24. SONIC Labs supports DCMS’s 5G Supply Chain Diversification Strategy, which seeks to build a more competitive, dynamic, and diverse telecoms equipment supply chain. It ensures that the ecosystem around Open RAN develops in a way that is beneficial to the UK overall, addressing UK specific strategic issues and maximising the role of UK based organisations within it. This allows the UK government and Regulators to set better policy, by gaining a direct understanding of the technological readiness, maturity, and challenges around Open RAN as the technology develops. Following significant research, the Digital Catapult were the only provider DCMS identified that could offer the type of service which would address the failure in the market they sought to address. This led them to award the direct non-competitive grant.

Competitive

Grants may be awarded following a competition or application process. In this case, a set of pre-published criteria is used to assess applications. The grants are then awarded based on the results. Below is an example of a competitively won grant:

- ATI (Aerospace Technology Institute)

  The ATI awards grants designed to accelerate innovation in the UK via its partnership with the department and Innovate UK. Projects submitted for the grants must align with the UK aerospace technology strategy ‘Accelerating Ambition’, which focuses on the following priority areas: vehicles; propulsion and power; systems; and aerostructures.

Powers to fund

Section 5 of the Science and Technology Act 1965

Section 5 of the Science and Technology Act 1965 provides powers for the funding of scientific research by the Secretary of State (SoS). This provides a route for government departments and devolved equivalents to access funding but does not affect the application of Public Contract Regulations 2015.

If the planned spend results in the award of a public contract as defined, then you will still need to follow procurement rules. For example, if buying equipment for the National Physical Laboratory relying on the spending powers under Section 5 of the 1965 Act, that would usually be a procurement covered by the Public Contracts Regulations 2015. However, if a grant were paid to a company (e.g. a Catapult) to enable it to hire temporary staff to complete a research project through the same route, that would not be considered procurement under the 2015 Regulations.

Intellectual property (IP)

If you are considering working with Catapults, it may be helpful to know who owns the intellectual property rights (IPR) developed as part of the project (normally known as ‘Foreground IP Rights’ or contributed in order to enable the research (normally known as ‘Background IP Rights’). That depends on the type of work being undertaken and who is funding:

Core funded work:

- If the work is 100% Catapult funded, then the IP is 100% owned and managed by the Catapult.
- It is the Catapult's responsibility to ensure that IP generated is distributed and made available in a manner that furthers their objectives and delivers the intended outcomes.
- The Catapult is free to use, license, share and dispose of any IP within Subsidy Control rules.

Collaborative work:

- If funding is divided between partners, then the IP ownership is agreed between parties to reflect the differing contributions of the collaborator. For example, funding input, know-how, equipment, ideas, etc. This should be negotiated and agreed on before commencing a partnership OR
- Collaborators can assign ownership to a single collaborator, who then licences that IP on a ‘need-and-use’ basis.

Contracted work:

- The customer generally retains any IPR developed or created in connection with the provision of Services or Goods.

In each case, it is important to ensure that any existing background IPR that are contributed by the parties are recorded and appropriately protected.

Annexes

Annex 1 – Catapult Case Studies by Funding Type

Grants

Medicines Discovery Catapult - Case Study: LUNAC Therapies

Grant funded

LUNAC therapies, a drug spin-off from the University of Leeds, in partnership with the university and the Medicines Discovery Catapult secured £5.79m of grant funding to develop an innovative anticoagulant treatment (a treatment that helps prevent blood clots) that will better meet patients' needs. The funds were raised through series A investment (the first significant round of venture funding a start-up receives) and Innovate UK's Biomedical Catalyst fund, with the Catapult playing an important role in supporting LUNAC with business and investment planning. Innovate UK received applications for the grant competition and after the deadline, applications that met the competitions eligibility criteria and scope were sent for assessment which were then scored by independent assessors. The assessors are experts from across business and academia and are allocated based on the skills and expertise in the area relevant to the project. The Biomedical Catalyst fund awards multiple grants within each funding round and with this project, the Medicines Discovery Catapult with the other collaborators named in the project application was considered suitable for a grant.

Connected Places Catapult - Case Study: The Department for Transport and Connected Places Catapult

Grant funded – Grant framework agreement

Since the Department for Transport's (DfT) initial collaboration with the Connected Places Catapult in 2013, over 100 projects have been delivered to address the Government's mission of making the UK a world leader in mobility, and a global Science Superpower. Through a long-standing collaborative relationship, Connected Places Catapult and DfT co-design projects to enable markets and work together to address emerging innovation opportunities for UK industry. DfT benefits from Connected Places Catapult's unique government-funded capabilities by influencing the development of near-market solutions to better support strategic priorities. As a trusted neutral convener, the Catapult brings together stakeholders from across the transport system to join up DfT policy teams with UK businesses at the cutting edge of transport innovation.

Digital Catapult - Case Study: SONIC Labs

Grant funded

DSIT (previously The Department for Culture, Media and Sport (DCMS)) has fostered a close collaboration with the Digital Catapult through delivery of the Smart 'radio access network'

(RAN) Open Network Interoperability Centre ("SONIC Labs"). DCMS provided the Digital Catapult with a grant of £15M for 3 years to establish SONIC for the financial years of 2021/22, 2022/23 and 2023/24. SONIC Labs supports DCMS's 5G Supply Chain Diversification Strategy, which seeks to build a more competitive, dynamic, and diverse telecoms equipment supply chain. It ensures that the ecosystem around Open RAN develops in a way that is beneficial to the UK overall, addressing UK specific strategic issues and maximising the role of UK based organisations within it. This allows the UK government and Regulator to set better policy, by gaining a direct understanding of the technological readiness, maturity, and challenges around Open RAN as the technology develops. Following significant research, the Digital Catapult were the only provider DCMS identified that could offer the type of service which would address the failure in the market they sought to address. This led them to award the direct non-competitive grant.

High Value Manufacturing Catapult - Case Study: Emerging Skills Pilot 1

Grant funded

Several businesses have failed to adopt emerging technologies, which may explain the UK's well-documented decline in productivity. Employers struggle to analyse, forecast and communicate their skills needs to exploit these technologies. This can lead to qualification and curricula that are ‘backward looking’. To meet this problem, in February 2021, the Department for Education (DfE) grant funded the High Value Manufacturing Catapult to deliver a pilot project that developed an approach to embedding cutting-edge skills in the workforce and enabling the adoption of innovation. The project focused on advanced manufacturing technologies, such as additive manufacturing, Artificial Intelligence and robotics. As developers of the ‘Skills Value Chain’, the HVMC were uniquely positioned to meet the DfE’s aim to implement a policy that could future proof the skills system. This was further supported by the HVMC’s long standing relationships with employers, research centres, and skills providers. A business case was written explaining how HVMC were best placed to reach DfE’s aims which led to approval of the direct award grant.

Multiple Catapults - Case Study: Enabling Conditions

Grant funded

Over 9 months, Innovate UK funded a £2 million Cross Catapult project with 8 out of 9 Catapults participating to strengthen the Catapult Network’s readiness and ability to maximise their contribution to delivering the Net Zero agenda.

The grant as a direct award was obtained by the Catapults preparing a business case which Innovate UK assessed. This demonstrated how the Catapults working together could strengthen Innovate UK’s proposed cross-Catapult collaboration programmes through more detailed scoping and refinement; engagement with key industrial, academic and Government stakeholders; economic analysis to prepare for Green Book Investment Case; and general evidence gathering to showcase the USP and value for money of Innovate UK’s proposed Cross Catapult Net Zero programmes.

Direct Awards

Energy Systems Catapult - Case Study: The Energy Innovation Research Office

Direct Award Contract

In partnership with DESNZ, formerly BEIS, the Energy Systems Catapult will deliver a series of research, modelling, and analysis projects across key energy innovation themes such as Direct Air Capture (DACs). This work aims to support government and other energy innovation stakeholders to understand the impact of then BEIS £1bn current Net Zero Innovation Portfolio. It will also help in better understanding what technologies and approaches government may want to prioritise in the future in support of reaching Net Zero by 2050. With the Catapult having delivered a previous £1m modelling and analysis programme with then BEIS, then BEIS recommended to recontract with them due to the previous successes and their unique technical capabilities. A business case was written which considered a range of contracting approaches which were reviewed by commercial and financial colleagues. This led to a direct award being offered as it being the best value for money option and the Catapult having the correct level of expertise for the projects.

Offshore Renewable Energy Catapult - Case Study: Floating Offshore Wind (FOW) Centre of Excellence

Direct Award Contract

DESNZ (previously BEIS) joined the Offshore Renewable Energy Catapult's FOW Centre of Excellence. DESNZ is providing the Centre with £2 million over 4 years (FY21/22-FY25/25), strengthening the Centre's mission to further accelerate innovation in the UK's floating wind sector. This puts the UK in a prime position to capitalise on a growing export market as other countries look to use this technology. The direct award contract was obtained by then BEIS preparing a business case and demonstrating how OREC were the only institution that could undertake the work through extensive market research.

Competitive Procurement

High Value Manufacturing Catapult - Case Study: Emerging Skills Pilot 2

Competitively procured contract

Following the skills development pilot granted to the HVMC via a Direct Award in February 2021 detailed above, later that year in September, the DfE also funded the HVMC to deliver a second pilot project via a competitively procured contract. The project focused on electrification technologies needed to support the UK's commitment to reach Net Zero by 2050 and explored how the UK can better foresight emerging skills needs, create new courses to meet those needs and then mainstream those skills in the skills sector and in industry. An assessment of the marketplace after the start of pilot one's delivery showed there was scope to compete the contract. The procurement competition was conducted over four months and an initial business case was approved by the Investment gateway. A 4-week period of open competition was provided for potential suppliers to bid for the contract. The bids were than evaluated and

moderated before a final business case was submitted and approved. As the HVMC scored the highest during the tendering process, they were awarded the contract.

Digital Catapult - Case Study: UK Telecoms Innovation Network

Competitively procured contract

Digital Catapult bid as the lead in a consortium with Cambridge Wireless, Bristol University and WM56 with other Catapults as delivery partners to DCMS for the UK Telecoms Innovation Network (UKTIN).

The UKTIN, aims to make the UK the easiest place in the world to access and take part in telecoms R&D. It will guide businesses and researchers looking to access funding or testing facilities in the UK and enable the best use of public and private investment in R&D, as well as ensuring that knowledge is effectively and efficiently shared across the telecoms industry.

Annex 2 – Categories of research contracts

73000000-2 Research and development services and related consultancy services.

73100000-3 Research and experimental development services.

73110000-6 Research services.

73111000-3 Research laboratory services.

73112000-0 Marine research services.

73120000-9 Experimental development services.

73420000-2 Pre-feasibility study & technological demonstration.

73300000-5 Design and execution of research and development.

73430000-5 Test and Evaluation.

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