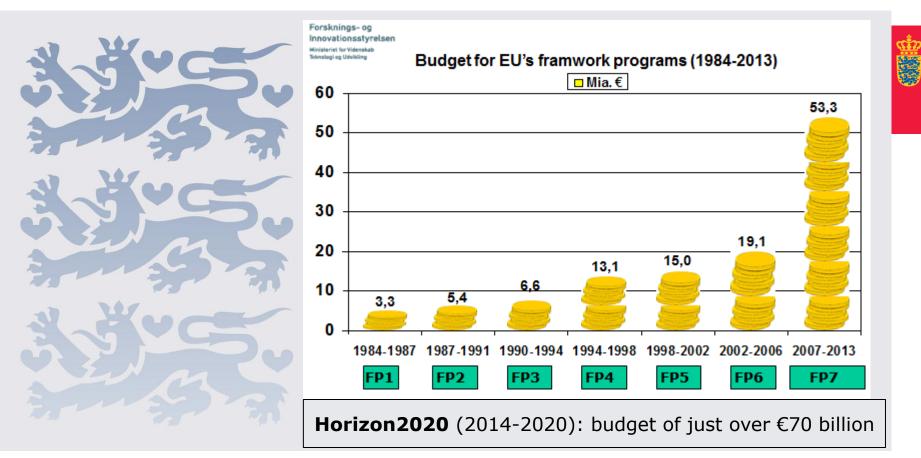
### **UDENRIGSMINISTERIET**

**EKSPORTRÅDET • THE TRADE COUNCIL** 



# EU funding guide: Why and how to apply in Horizon 2020

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# Why Horizon 2020?

- Response to the financial crisis: investments in future jobs and growth
- Address demographic development, climate, sustainability, welfare, growth
- Secure a basis for science and technology for the future, and the competitiveness of European businesses
- $\rightarrow$  More intelligent, sustainable and inclusive societies

Typical reply from researchers and companies:

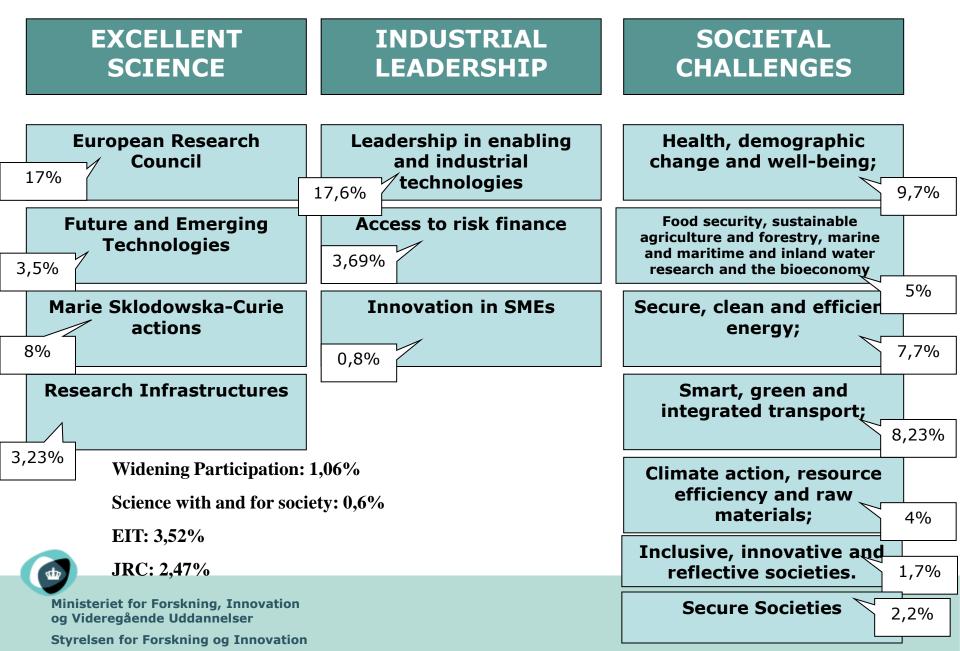
Before the project: Money

After the project: Network



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# Structure of Horizon 2020



### What is new?



- One programme covering three programmes EIT, CIP and FP7
- All forms of innovation, also social innovation. More focus on testing, demonstration and piloting
- Focus on grand societal challenges, e.g. bioeconomy, sustainable development and green energy
- Increased focus on transdisciplinarity
- Partnerships become central (linking national and EU programmes)



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# Simplification

- A single set of rules for all aspects of Horizon 2020
- Shorter 'time-to-grant' (5+3 months)
- Simplified cost models:
  - Research and Innovation Actions: 100 % of all project related costs plus 25 % of the indirect costs (overhead)

Innovation Actions - "Closer to market"/demonstration projects:

70 % of all project related direct costs <u>(non-profit</u> <u>entities up to 100%)</u> - plus 25 % of the indirect costs (overhead)



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# Key principles for Workprogrammes

- A challenge-based approach, allowing applicants to have considerable freedom to come up with innovative solutions
  - Substantially fewer topics nonprescriptive, broader topics each with a number of projects to be funded
- Cross-cutting issues embedded (e.g. social sciences, gender, INCO)



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# Instruments

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

Research & Innovation Actions Innovation Actions SME Instrument Pre-Commercial Procurement / Public Procurement of Innovative solutions Coordination and Support actions Prizes Cofund Actions- JPI & ERAnet (70 %)



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### COUNCIL DECISION ESTABLISHING THE SPECIFIC PROGRAMME IMPLEMENTING HORIZON 2020 - THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION (2014-2020)

### WORK PROGRAMME 2014 - 2015

13. Europe in a changing world - inclusive, innovative and reflective Societies

### INFORMAL DRAFT DISCUSSION DOCUMENT

### Important notice:

The present document is meant to facilitate the discussions towards the preparation of the work programme 2014 - 2015. It does not at this stage cover all relevant aspects and it does not prejudge the outcome of the on-going interinstitutional negotiations on Horizon 2020 or internal work on cross-cutting aspects. Hence, it remains subject to change. Information, such as indicative budgets per call/area, will be provided at later stage.

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HORIZON 2020 - WORK PROGRAMME 2014-2015 Europe in a changing world: inclusive, innovative and reflective societies

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### REFLECTIVE 7 - 2014: Advanced 3D modelling for accessing and understanding European cultural assets

<u>Specific challenge</u>: Nowadays, the documentation of cultural assets is inherently a multimedia process, with a need of digital representation of the shape, appearance and conservation condition of the object. The digital model shall become the representation (forever, for everybody, from everywhere) and should support not just the visual analysis, but also information integration/linking, shape-related analysis and enhanced study procedures. This will originate a revolution in the way we study, visualise, monitor and restore artworks.

This however requires improved 3D scanning, modelling and reconstruction technologies that go beyond visual depictions and provide the necessary semantic information for in-depth studies. Another challenge is that the generation of high quality 3D models is still very time-consuming and expensive, not least because the modelling is carried out for individual objects rather than for entire collections. Furthermore, the outcome of digital reconstructions is frequently provided in formats that are not interoperable, and therefore cannot be easily accessed and/or re-used.

Scope: The specific challenge will be addressed by the focused actions:

- a) Research on cost-effective technologies for advanced 3D modelling to enhance the understanding of cultural heritage. Research should focus on developing new methods and tools for automated 3D modelling and analysis of physical cultural resources and assets (e.g. cultural heritage sites, monuments, sculptures, archaeological sites...) beyond simple digital reconstruction. This can include consolidation of imperfect data, spatiotemporal reconstruction, modelling/simulation of material degradation, joint reconstruction and analysis within and across collections, inverse procedural modelling, semantic-aware representation, taking into account the wide range of capture devices and sources of measurement data. Work should facilitate the creation of high-fidelity models of objects with particularly challenging features as regards surface, transparency, dimensions etc. The resulting models should enable greater understanding of European tangible cultural assets by researchers and citizens as well as direct reuse for innovative and creative applications.
- b) Devise standard formats for the semantic-aware 3D modelling of Europe's cultural heritage for researchers and practitioners. Proposals should extend or develop standard formats of 3D semantic-aware objects with a view to improve their reusability and archiving. The proposed formats should enable easy exchange and use of 3D models that have been acquired or generated by a wide range of devices or software.

Expected impact: The impacts expected of proposals under these above activities are, respectively:

- Cost efficient tools and effective methods for the modelling and understanding of Europe's cultural heritage making use of the latest digitisation, analysis and visualisation technologies.
- Interoperable standard formats for semantic-aware 3D modelling, analysis, and representation of cultural heritage in order to allow easy reuse of such models.

### Type of action:

For a) Research & Innovation Action (100% funding)

For b) Coordination and Support Action, up to EUR 2 Million



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### COUNCIL DECISION ESTABLISHING THE SPECIFIC PROGRAMME IMPLEMENTING HORIZON 2020 - THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION (2014-2020)

### WORK PROGRAMME 2014 - 2015

	••••••
14.	Secure societies – Protecting freedom and security of Europe and its citizens
•	

### INFORMAL DRAFT DISCUSSION DOCUMENT

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### Supply Chain Security

### BES 9 – 2015: Supply Chain Security topic 1: Development of an enhanced non-intrusive (stand-off) scanner

<u>Specific challenge:</u> Smugglers try to evade controls at borders by using their bodies as the conduit to conceal prohibited or restricted goods. These items will be narcotics, explosives, currency and weapons and could be ampoules containing chemical and biological threats. All could remain undetected by conventional technologies.

There is a need to develop body-scan technology able to discern those commodities sought by Customs, from benign materials carried by travellers. The device/system should have the capability to automatically identify the chemical composition of the main threat commodities. Such systems will improve efficiency of inspection of suspected individuals, improve security at the border and act as a deterrent to other potential smugglers.

<u>Scope:</u> There are two different scenarios that technology is required for. Although ideally a system would have a capability to be deployed to cover both operational situations, it is accepted that at this stage it may not be possible, due to the types of core technology used, so within this topic the requirements are shown separately to clarify challenge and so assist development in that proposals may be for either sub category or a combined solution.

### 1) Internally concealed commodities

Packages such as drugs, may be ingested, or inserted into body orifices. Ingested packages may be formed of compressed powder, or even liquid and may be from a few hundred grams up to over a kilo. Non-ingested items may be several hundred grams. Drugs, used in the example, are by nature organic, so it is difficult to distinguish them visually from other organic or food waste in the digestive system of the human body. Transmission x-ray is a useful tool, but it is an imaging technology which requires interpretation. There is a potential for error and packages may be missed.

There is a requirement to develop a body-scanner capable of identifying and alerting an operator to specific threats such as narcotics /explosives etc concealed inside the body. If the technology in the proposal utilises ionising radiation, it would have to comply with European limits of dose. It should also be noted that not all Member States permit use of ionising radiation for nonmedical purposes.

### 2) Externally concealed commodities.

Packages such as drugs can be concealed beneath clothing and even moulded to map the body contours, which can be compensated for by the wearing or larger clothing. A human can conceal up to 5 kilos in this manner, which can be remain undetected. Millimetre wave technology offers some potential for detection; however these are only anomaly detectors and cannot distinguish between threat and benign materials. Organic materials which have been on the body for a significant duration can become opaque to some technologies if they are close to the body temperature. The ideal novel solutions must be able to distinguish those materials of Customs interest from harmless items and alert the operator to this and this solution would typically be applied to a "non-divest" situation. It must be able to work in real-time, not to disrupt passenger

flow or movement of a crowd. Preferably the solution should be able to deal with more than one person within the field of view, or at least other people in the frame should not interfere with the performance of the primary target. Performance will have to be validated in a realistic scenario.

The technology should pose no risk to particular groups, or those with health issues (children, pregnant woman, pacemakers) Privacy of individuals must be respected.

The Commission considers that projects requesting a contribution from the EU of between €2m and €5m would allow this specific challenge to be addressed appropriately (similar to the FP7 Capability Projects described in the general introduction). Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This topic should look for an enhanced international cooperation, through a recommended participation of International Cooperation (INCO) partners, following current discussions and workshops with relevant international research partners, and in particular with US homeland security research entities.

Expected impact: The technology to be developed under (1) and (2) would be operated by Customs/Border control staff and is expected:

- to exceed the capability of current technologies being used by Customs administrations in some member states;
- to significantly improve security at the border;
- to constitute an effective tool against organised crime;
- to lead to increased crime prosecution capabilities;
- to lead to increased privacy and data protection.

The impact of the research should be benchmarked in terms of future deployment, as proportionate to the risks being assessed, and taking into account realistically the expected improvements in performance, functional needs, conditions of use, future maintenance costs, and impact on operating procedures, including training requirements for new skills.

Type of action: Research & Innovation Action 100% funding

### BES 10 - 2014: Supply Chain Security topic 2: Technologies for inspections of large volume freight

<u>Specific challenge:</u> Approximately 70% of all cargo is transported in intermodal shipping containers representing approximately 240 million container moves in any given year. As a major trans-shipment hub, the EU handles around a third of the container moves throughout the world. Container security associated with terrorist threats, illegal immigration, theft and smuggling is therefore an important factor in the overall EU border security.

The greatest volume (and risk) of illegal/illicit/mis-declared goods into the EU, as of interest to Customs, include, but are not limited to: illicit narcotics (heroin, cocaine, etc.) explosives, tobacco products, chemicals. Intelligence together with scanning is useful in narrowing suspicious consignments, but ultimately a physical examination of the load is required. This is

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Shortcuts

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### Food, Fitness & Pharma

Food, Fitness & Pharma > Obesity towards 2020

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Download report of the Danish consultation process:

Report of the

Process

Danish Consultation

Report of the Danish process

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### Obesity research towards 2020 - The Danish perspectives

The prevalence of obesity is high and increasing in Europe and worldwide. The scale of the challenge posed by the obesity epidemic calls for collaboration across borders, disciplines, and institutions. A Danish consultation process has identified key research challenges, opportunities and priorities for the future Danish and European research.

### Purpose of the Danish consultation process

To combat the increasing challenge of obesity, a Danish consultation process was initiated in the spring 2011. The purpose of the consultation process was to identify key research challenges, opportunities and priorities for Denmark and Europe in the field of obesity research in this decade, by mobilizing the strong Danish research initiatives and groups in the field of obesity and related research areas.

xplore and illustrate how the challenge of obesity arch approaches in close collaboration between investment in obesity research will pave the way The consultation process addressed the full on, diagnostics and treatment in the field of



Download one page summary of the Danish consultation process

### The European process

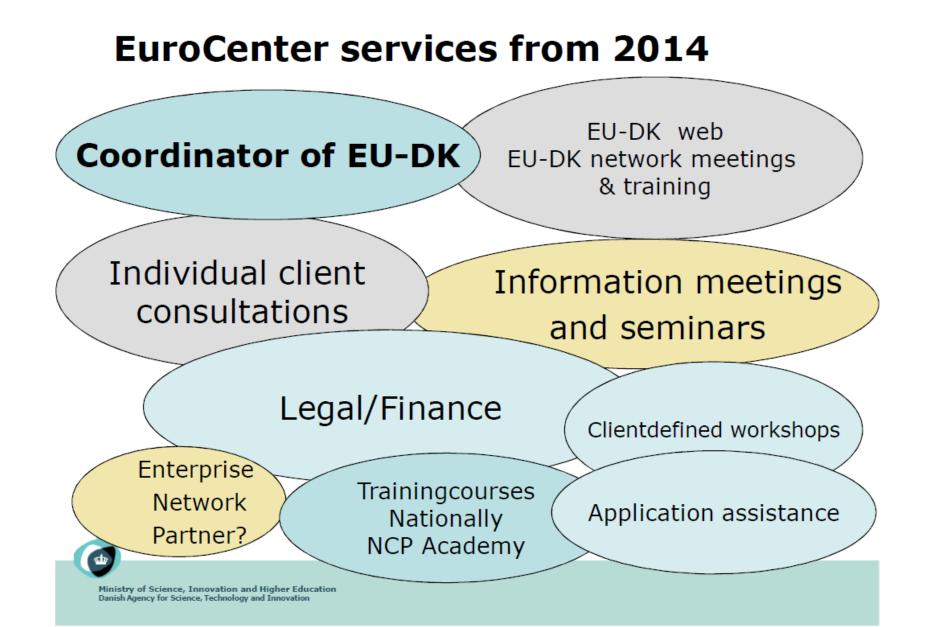
Download the German Strategy Paper for tackling obesity in HORIZON 2020

EASO conference "From biology to society - what message can obesity research deliver to policy makers?" -See Program and presentations



### ion process

resulted in two documents - a report with a broad puts from leading researchers in multiple that sums up the process and the main priorities. n the right column of this page.





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FP 7

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Projektdurchführung

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Die unternehmerische Universität

### Internationale Forschungsförderung (EU-Büro)

Fördermöglichkeiten: Sie sind eine Fundgrube für Wissenschaftler und Wissenschaftlerinnen jeder Disziplin. Das EU-Büro informiert, berät und unterstützt Wissenschaftler und Wissenschaftlerinnen bei der Einwerbung dieser Drittmittel.

#### Serviceleistungen des EU-Büros

Beratung

Sie haben eine Projektidee, aber noch keinen "Geldgeber"? Gerne beraten wir Sie individuell zu europäischen und internationalen Fördermitteln. Zudem begleiten wir Sie in der Antragsphase (z.B. Aufstellung des Konsortiums, Ausarbeitung des Antrags) und beraten Sie bei strategischen Fragen.

#### Newsletter

Im monatlich erscheinenden Newsletter des TUM ForTe informieren wir Sie über die aktuellen Ausschreibungen und Fördermöglichkeiten an der TUM sowie über nationale, europäische und internationale Forschungsprogramme. Der Newsletter enthält außerdem Wissenwertes zu Stipendien, aber auch Veranstaltungen, die an der TUM oder anderswo angeboten werden. Wollen Sie unseren Newsletter abonnieren? Dann melden Sie sich bitte per E-Mail unter forte@zv.tum.de an.

Information

Wir organisieren regelmäßig an der TUM Informationsveranstaltungen zu aktuellen Ausschreibungen und Förderprogrammen. Darüber hinaus haben wir für Sie die grundlegenden Informationen zu den Forschungsförderungsprogrammen auf einen Blick zusammengefasst. Außerdem finden Sie hier Anleitungen und Ausfüllhilfen für die Antragsstellung.

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EU-Förderprogramme

Forschungsverbünde

Internationale Kooperation

EU-Verbindungsbüro in Brüssel



Forschungsförderung

EU-Projekte

### EU-Förderprogramme

Die Einwerbung von europäischen Fördergeldern gewinnt zunehmend an Bedeutung. Gründe hierfür liegen einerseits in den begrenzten regionalen und nationalen Fördermitteln; zum anderen eröffnen höhere Fördersummen der EU-Programme (z.B.

im 6. und 7. Forschungsrahmenprogramm) eine attraktive Alternative bzw. Ergänzung zu den regionalen und nationalen Geldern.

Die Fördertöpfe der Europäischen Union bieten zweifelsohne einen großen Spielraum für Forschungs- und Entwicklungsvorhaben (F&E) sowie für Demonstrationsprojekte. Doch aller Anfang ist schwer - ein Berg zunächst undurchschaubarer Informationen schreckt viele potenzielle Antragsteller von Vornherein ab.

Sprechen Sie mit uns, wenn Sie an EU-Fördermöglichkeiten interessiert sind

Wir verschaffen Ihnen den nötigen "Durchblick" für eine erfolgreiche Beteiligung an entsprechenden EU-Programmen. Bei Fragen rund um die EU-Forschungsförderung und weiteren EU-Fördermöglichkeiten stehen wir Ihnen gerne zur Seite.

### Unsere Leistungen umfassen ein breites Spektrum:

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Wir suchen einen EU-Projekt-Manager (m/w)

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BayFOR News August 2013 erschienen!



### BayFOR-Jahresbericht 2012 erschienen!



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Styrelsen for Forskning og Innovation

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### National incentive for participation in FP7



### EUopSTART

- Funding for Danish companies and research institutions
- For preparation of FP7 proposals: up to 150.000 DKK/20.000 euro
- For <u>negotiation of grant agreements</u>:up to 65.000 DKK/8.666 euro
- 50% co-financing
- Covering salaries, travels and external assistance
- Total budget 2012: 11 mio. DKK/ 1,5 mio.euro

Continue in Horizon 2020?? - Decision: Act on National Budget 2014

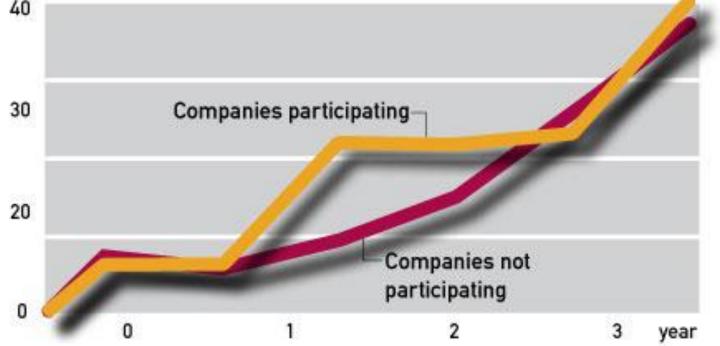


Ministry of Science, Innovation and Higher Education Danish Agency for Science, Technology and Innovation

### Eurostars – a R&D programme for small businesses

Eurostars is an international R&D programme run by 31 European countries and the European Commission. Research-intensive small and medium-sized companies with up to 250 employees can apply when they enter into cross-national research consortia along with universities, knowledge institutions and large companies. The small company must account for more than 50 per cent of the research in the project. Small and medium-sized companies can have up to 50 per cent of the project costs covered.

Participating in international programmes has an impact on export Growth in exports (per cent)



Export growth of participants in international programmes compared to similar Danish companies not participating. Source: DAMVAD 2011



http://ec.europa.eu/research/horizon2020/index\_en.cfm

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