

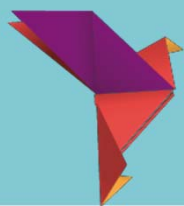


3rd EU-India Conference on Advanced Biofuels Business to Business meeting Opportunities Research & Innovation Cooperation 2 March 2020



Research and
Innovation

*Ms Tania Friederichs
Counsellor & Head
Research & Innovation
EU Delegation to India*



Policy Context



- EU Key Energy Targets 2030:
 - At least 40+ cut in Greenhouse emissions (1990 level)
 - At least 32 % share in renewable energy
 - At least 32.5% improvement in energy Efficiency
- And, targets to be increased by 2050 (50%) as part of Green Deal
- Advanced biofuels play an important role in the achievement of the targets
- To increase share of renewable energy: increased efforts on R&I: production, innovation etc..

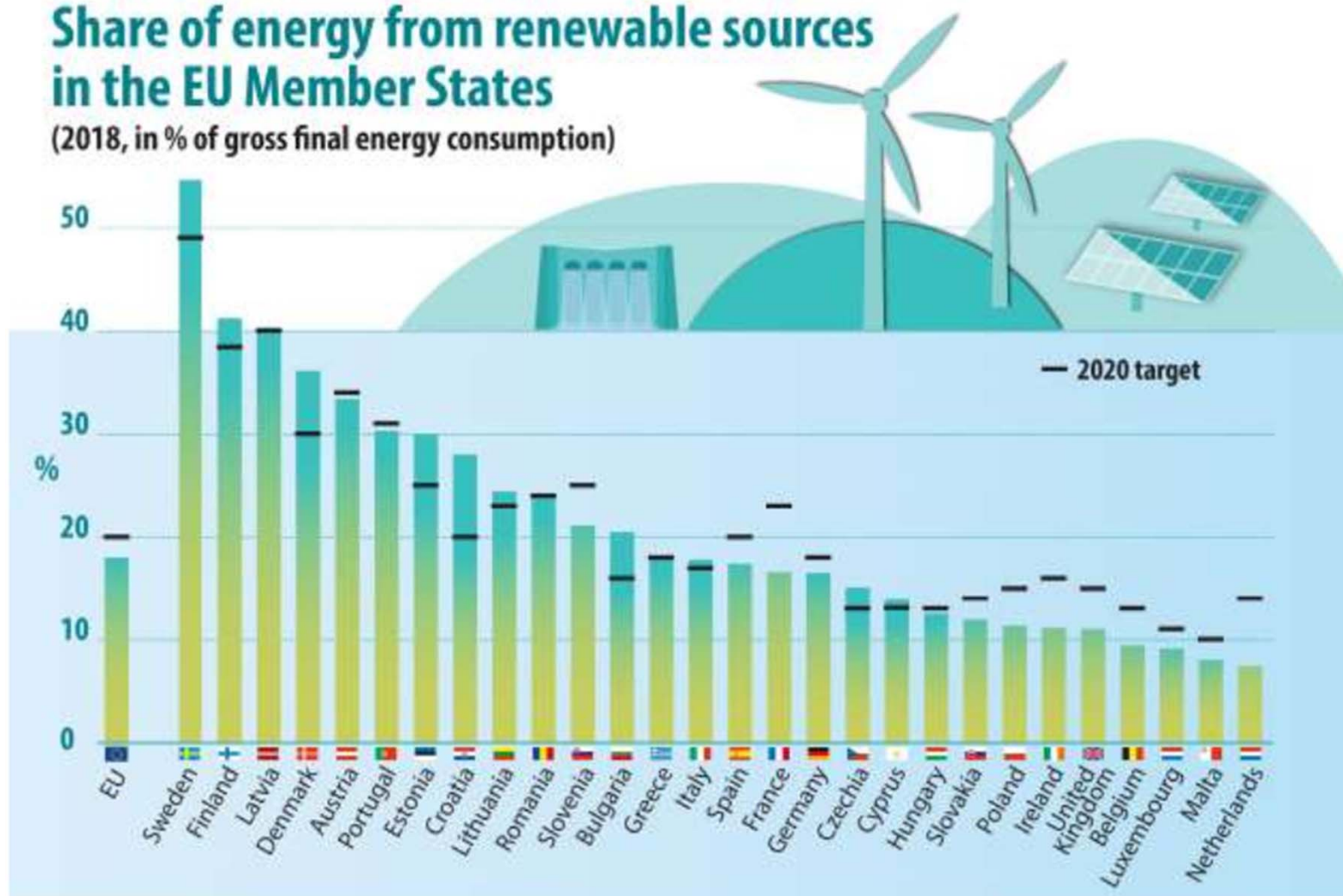


Share of renewable energy in the EU: 18%



Share of energy from renewable sources in the EU Member States

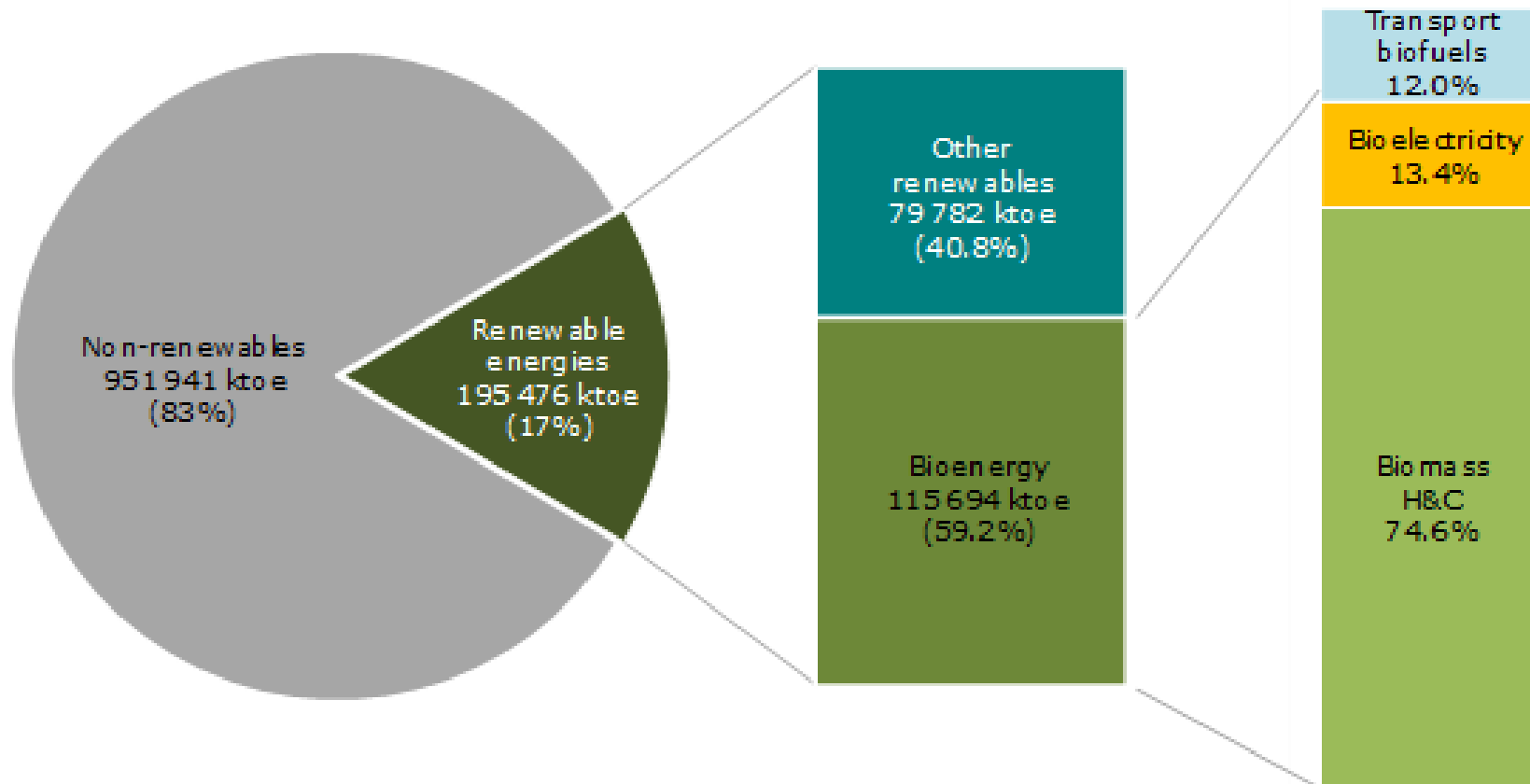
(2018, in % of gross final energy consumption)



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EU breakdown of the bioenergy contribution



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Why engage on R&I with EU?



Because the EU is a world leader in Research and Innovation:

- 20% of global expenditure on research generated by Europe
- 32% of high impact publications,
- 32% of patent applications
- Some of the best universities (32 in top 100)
- Some of the most innovative companies (1/4 of world's top 2000 R&D investors)

Indicator		India	EU28
R&D intensity (GERD as % of GDP)	2015	0.9	2.03

- The world's largest trading bloc
- And the largest multilateral R&I funding programme – Horizon 2020



How Engage on R&I with EU: 'Horizon 2020'



- EU funding programme for Research and Innovation for 2014-2020
- Open to the World: Science is universal/no borders/multilateral
- From Lab to Market: focus innovation
- Funding opportunities published in multi-annual **Work Programmes** and call for proposals: competitive basis
- Last Work Programme 2019-2020 published on 2 July 2019: see EU Participants Portal and the EU Delegation website
- But more calls expected in extra W/P 2020 (July 2020) on '**Green Deal**' (including renewable energy)
- Calls open to **Indian participation** (university, institutes, SMES, NGOs and individual scientists)



EU and India on R&I



- India – strategic partner of EU
- Share common values- rule based global order
- EU-India committed to COP21 – Paris Agreement
- EU and India founding members of 'Mission Innovation'
- R&I necessary to achieve sustainable development
- S&T Agreement with India since 2001: good track record; not yet on biofuels!
- EU-India Summit on 13 March 2020 → Roadmap 2025: more commitments on R&I expected.



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Who can participate in Horizon 2020 ?



- 27 EU **Member States** (MS)

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

United Kingdom (Since 1/2/2020 Third Country but in transition, full participant in H2020 until end of programme and projects).

- 16 **Countries Associated** to Horizon 2020 (AC)

Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Former Yugoslav Republic of Macedonia, Georgia, Iceland, Israel, Moldova, Montenegro, Norway, Serbia, Switzerland, Tunisia, Turkey, Ukraine.

- **Third countries:** more than 130 countries/India



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Participation versus Funding



- Not all countries are funded by 'Horizon 2020'
- Developing countries (Africa; S. Asia): funded
- Industrial countries and emerging economies → not funded
- India (emerging economy; BRIC):
 - Collaborative research: India not funded by Horizon 2020;
 - Hence, Co-Funding Mechanism (CFM) concluded with GoI (DST; DBT; MoES): in calls selected by India in H2020 Work programmes, successful Indian applicants will be funded (see next);
 - Mobility Grants (MCSA): support through European host Institute;
 - ERC grant: supported through European host Institute





Combined clean biofuel production and phytoremediation solutions from contaminated lands worldwide

SCOPE

- link phytoremediation strategies & clean liquid biofuel production
- optimize energy crops for different classes of known soil pollutants
- integrate in the conversion process to biofuels a strategy to extract pollutants in concentrated form
- optimize overall process in terms of cost and sustainability
- do pilot-scale, small trials for both clean biofuel production and phytoremediation
- establish international cooperation for a global challenge





OBJECTIVE/MODALITIES

- Increase sustainable land available for dedicated biofuel production at large scale;
- contribute to MI IC 4
- Bring polluted land back to agriculture production and to low iLUC risk liquid biofuels from energy crops; contribute to several SDGs
- Technology Readiness Level (TRL): starting TRL 3-4 to reach TRL 4-5
- Type of Action: Research & Innovation Action (RIA)
- Indicative funding per project: EUR 2 to 4 million
- **Deadline: 21 April 2020 17:00:00 Brussels time**





International cooperation with Japan for Research and Innovation on advanced biofuels & alternative renewable fuels

SCOPE

- Involve Japanese organizations in the consortia for the development of disruptive catalytic technologies
- Novel catalysts and linked lab-scale components/systems
- Improved conversion efficiency, and specific marginal cost reduction
- low-cost bioenergy carriers, non-food/feed based advanced biofuels and alternative renewable fuels excluding H₂
- maximize GHG abatement



DBT –Co-Fund Bioenergy call (4/6)



LC-SC3-RES-25-2020

OBJECTIVES & MODALITIES

- Call targeting Japan but based on Open to the World, India can participate (and DBT will co-fund)
- Foster disruptive innovation for advanced biofuels and alternative fuels in transport & heating sector
- Contribute to MI4
- Technology Readiness Level (TRL): up to TRL 3
- Type of Action: Research & Innovation Action (RIA)
- Indicative funding per project: EUR 2 to 5 million
- **Deadline: 1 September 2020 17:00:00 Brussels time**



#H2020Energy

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International cooperation with Canada on advanced biofuels & bioenergy

SCOPE

Involve Canadian organizations in the consortia for the development of:

- the full supply chain of intermediate carriers, advanced biofuel, heat & power
 - sustainable biomass production & collection that facilitate bioenergy production and decrease feedstock supply costs
 - non-food/feed biomass including forestry, agricultural and their residues, organic fractions of municipal & industrial wastes
- thermo-, bio- & chemical biomass processing to advanced biofuels focusing on pre-treatment, conversion & reduction of the marginal cost



DBT –Co-Fund Bioenergy call (6/6)



LC-SC3-RES-36-2020

OBJECTIVES & MODALITIES

- Call targeting Canada but based on Open to the World, India can participate (and DBT will co-fund)
- Overcome cost barriers of feedstock supply or conversion of advanced biofuels and bio-refinery
- Progress state-of-the art; strengthen technology base; accelerate and increase viability of biofuels and bioenergy
- Contribute to MI IC 4
- Technology Readiness Level (TRL): from TRL 3 to TRL 5
- Type of Action: Research & Innovation Action (RIA)
- Indicative funding per project: EUR 3 to 5million
- **Deadline: 1 Sept. 2020 17:00:00 Brussels time**



#H2020Energy

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Collaborative Research: Consortium



- Mandatory: minimum **3 legal organisations** from three different EU Member States and/or Associated Countries;
- Additional legal organisations as many as project requirement (8, 10, 15 ...), from Europe and/or non-European countries (e.g. India);
- Participant from India: see co-funding notice (one/three or as required);
- Organisations/Entities: Academic (University/Institute; Industry/SME; NGOs)
- Multidisciplinary and cross-border participation encouraged;
- Gender balance important;
- **Project Coordinator**: consortium to decide who;
- If more than ONE Indian participant, nominate lead **scientific coordinator** from India.



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DBT Guidelines



- DBT Guidelines for Indian applicant is available at <http://dbtindia.gov.in/latest-announcement/opportunities-india-eu-co-funding-joint-proposals-under-horizon-2020-work>



DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE & TECHNOLOGY, GOVERNMENT OF INDIA



Opportunities for India-EU Co-Funding of Joint Proposals under Horizon 2020 : Work Programme 2019-20

Webnotice-CoFunding EU-IND 2019-20 DBT FINAL View (1.09 MB)

DBT Administrative & Financial Considerations Proforma View (293.88 KB)

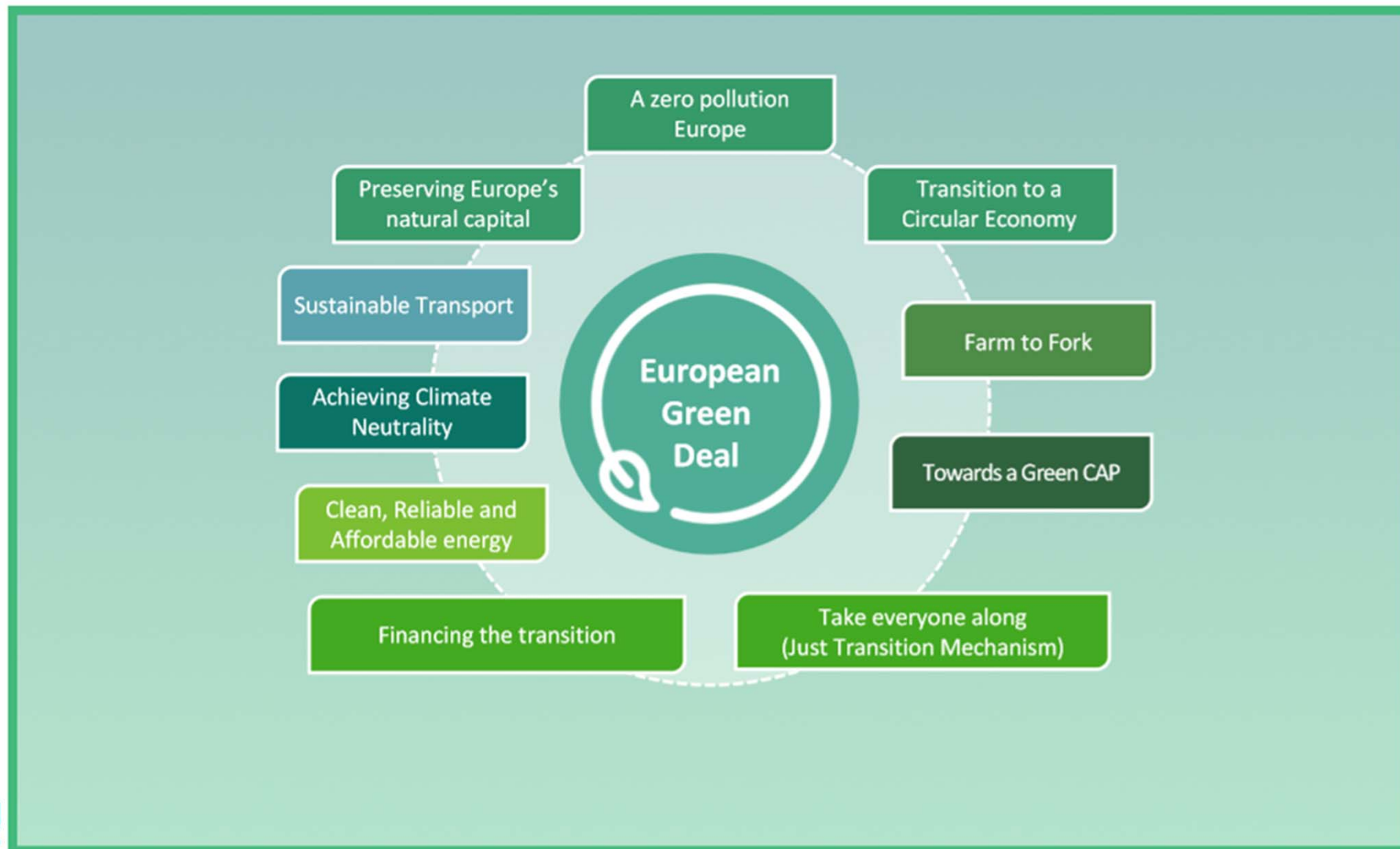


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European
Commission

Horizon Europe: what can be expected The European Green Deal





European Commission > EURAXESS > EURAXESS Worldwide > EURAXESS India

EURAXESS



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Thank you!

#InvestEUresearch

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/h2020>

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