

European Union Research and Innovation cooperation opportunities



Kolkata | 12-14 September 2018





Why collaborate with the European Union?

- Because the EU is a world leader in Research and Innovation:
 - 24% of global expenditure on research generated by Europe
 - 32% of high impact publications
 - 32% of patent applications
 - Some of the best universities (25 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)	2017	0.69	2.03

Multilateral R&I funding programme "Horizon 2020": Open to the World





Horizon 2020 three priorities









Horizon 2020

- Funding opportunities published in multi-annual Work Programmes and Calls for Proposals on all three pillars
- Latest Work Programme 2019 published on 24 July 2018: see EU Participants Portal and the EU Delegation website
- ERC programme published on 7 September
- Focus in 2019 WP : Innovation/Startups
- Call open to Indian participants (university, institutes, SMES, NGOs and induvial scientists





Types of Action

Indians can participate in 'Horizon 2020' in:

- 1. Collaborative research: Health, Water, Bio-economy, Biotechnology, Nanotechnologies, Advanced materials, ICT, Energy, ICT etc.
- 2. Researchers Mobility: Marie Skłodowska-Curie Action: PhD, Post-Doc and short-term mobility of research and innovation staff;
- 3. European Research Council (ERC) grants support individual researchers of any nationality and age who wish to pursue their frontier research.





(1) Collaboration: participation & funding

- Create consortia with European partners (always **three minimum**) to find solutions to common global challenges (pillar 3) or create competiveness through Industrial Leadership (pillar 2).
- As an emerging economy, India is **not automatically funded by EU.**The following options are possible for Indian entities:
 - **Co-Funding Mechanism (CFM)** established with Indian Government (DST/DBT/MoES): funding successful Indian applicants in H2020 calls of national interest to India: see DST/DBT/MoES Websites.
 - Own Funding/participation in-kind
 - Under exceptional circumstances, EC will fund Indian participant.

New list of Co-Funded call by DST/DBT by end of October 2018



Example of Co-Funded Calls (Closed)

	Commission		
Theme	CALL NAME / TOPIC (click topic name to follow link)	Type of Action & Model	Deadline
BIO-ENERGY (SC3)	LC-SC3-RES-22-2018: Demonstration of cost effective advanced biofuel pathways in retrofitted existing industrial installations		05/04/2018 17:00 CET
HEALTH (SC1)	SC1-BHC-16-2018: Global Alliance for Chronic Diseases (GACD) - Scaling-up of evidence- based health interventions at population level for the prevention and management of hypertension and/or diabetes		18/04/2018 17:00 CET
HEALTH (SC1)	SC1-BHC-18-2018: Translational collaborative cancer research between Europe and the Community of Latin American and Caribbean States (CELAC)		18/04/2018 17:00 CET
HEALTH (SC1)	SC1-BHC-21-2018: Research on HIV, tuberculosis (TB) and/or hepatitis C (HCV) in patients with mono-, co-infections and/or comorbidities in the context of fostering collaboration with the Russian Federation		18/04/2018 17:00 CET
Biotechnology (NMBP)	CE-BIOTEC-04-2018: New biotechnologies for environmental remediation		25/04/2018 17:00 CET



Example of Open Call -2019

- Energy: renewables and smart grids
- Nanotechnology and advanced materials;
- Health (vaccines, chronic diseases, mental health);
- Bio-economy and Agri-food;
- ICT (5G, Cyber-Physical-Systems, Robotics);
- Climate Change/Environment: west management/water, Polar Sciences;
- Green transport : e-Vehicles.





Thematic Area	Call Topic	Action	Model	Opening date	1st stage Deadline	2nd stage Deadline
Circular Economy:	CE-SC5-07-2019: Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes	IA Innovation action	two-stage	14-Nov-18	19-Feb-19	04-Sep-19
Circular Economy:	CE-NMBP-25-2019: Photocatalytic synthesis (RIA)	RIA Research and Innovation action	two-stage	16-Oct-18	22-Jan-19	03-Sep-19
Energy - renewable	LC-SC3-RES-29-2019: Converting Sunlight to storable chemical energy	RIA Research and Innovation action	single- stage	07 May 2019	27 Aug 2019	
Green Transport	LC-GV-03-2019: User centric charging infrastructure	IA Innovation action	single- stage	04-Dec-18	24-Apr-19	
Nano Tech	DT-NMBP-08-2019: Real-time nano- characterisation technologies (RIA)	RIA Research and Innovation action	two-stage	16-Oct-18	22-Jan-19	03-Sep-19
Energy- ICT	DT-ICT-11-2019: Big data solutions for energy		single- stage	16-Oct-18	02-Apr-19	
Health	SC1-BHC-13-2019: Mining big data for early detection of infectious disease threats driven by climate change and other factors	RIA Research and Innovation action	single- stage	26-Jul-18	16/04/201 9 17:00	
Health	SC1-DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment	RIA Research and Innovation action	single- stage	16-Oct-18	24/04/201 9 17:00	





(2) Career Funding for PhD and Post-Doc

Marie Skłodowska-Curie actions

- MSCA Individual Fellowships (Post-Doc)
 - Global Fellowships (For European to India Host Institute)
 - Standard European Fellowships (For Indian to European Host Institute)
 - Next call Opening: 11 April 2019 | Deadline: 11 September 2019
- PhD Fellowships funded by MSCA
 - Regular publication on Job on MSCA / EURAXESS website



Indicative summary of main calls from the 2019 budget¹

		Starting Grant	Consolidator Grant	Advanced Grant	Synergy Grant	Proof of Concept Grant	
	Call identifier	ERC-2019-StG	ERC-2019-CoG	ERC-2019-AdG	ERC-2019-SyG	ERC-2019-PoC	
	Call Opens	14/09/2018	24/10/2018	21/05/2019	14/09/2018	16/10/2018	
Sta	Call closes (cut-off dates for PoC)	17/10/2018	07/02/2019	29/08/2019	08/11/2018	22/01/2019 25/04/2019 19/09/2019	
-7 y	Budget million EUR (estimated number of grants)	580 (390)	602 (314)	391 (166)	400 (48)	25 (167)	
	Planned dates to inform applicants (after each step or cut-off date)	22/05/2019 28/08/2019	23/07/2019 18/12/2019	31/01/2020 17/04/2020	12/04/2019 30/08/2019 31/10/2019	02/05/2019 25/07/2019 18/12/2019	
	Indicative date for signature of grant agreements (by cut-off date for PoC)	05/01/2020	26/04/2020	25/08/2020	09/03/2020	09/09/2019 02/12/2019 26/04/2020	

¹These opening dates and cut-off dates are indicative. The Director of the European Research Council Executive Agency may open it up to one month prior to or after the envisaged opening date. The Director may delay the envisaged deadline by up to two months. The budget amounts for 2019 are subject to the availability of the appropriations provided for in the draft budget for 2019 after the adoption of the budget for 2019 by the budgetary authority or if the budget is not adopted as provided for in the system of provisional twelfths.



How to participate in Horizon 2020?

= OPEN COMPETITION + PEER REVIEW

Find a relevant call (annual work programme)

Find partners

Submit a proposal

Be selected & Get involved!





Sign up as an expert/reviewer



How to Find Partners?

- CORDIS: is the Research and Technological Development (RTD) platform of the EU, including several on-line databases and partner search
 - http://cordis.europa.eu/ OR https://cordis.europa.eu/ OR https://cordis.europa.eu/ partners/web/quest
- Ideal-ist is an international ICT (Information and Communication Technologies)
 - http://www.ideal-ist.eu/partner-search/pssearch
- Partner Search for Nanosciences and Nanotechnologies, Materials and New Production Technologies (NMP)
 - https://www.nmp-partnersearch.eu/index.php
- Fit for Health 2.0 Partner search
 - http://www.fitforhealth.eu/user?ReturnUrl=http%3a%2f%2fmm.fitforhealth.eu%2fcommon%2fcontactshome.asp
- Innovative Medicines Initiative (IMI) Partner Search Tool
 - https://cloud.imi.europa.eu/web/eimi-pst
- CaRE: Climate action, environment, resource efficiency and raw materials
 - http://partnersearch.ncps-care.eu/
- EEN (The European Enterprise Network) targets SMEs: http://een.ec.europa.eu/
 - The EEN helps small and medium-sized enterprises (SMEs) make the most of business opportunities in the EU and beyond. It covers 17 key sectors that can be relevant to LIFE. http://een.ec.europa.eu/tools/services/SearchCenter/Search/ProfileSimpleSearch

European

H2020 Participant Portal: http://ec.europa.eu/research/participants/portal/

 MSCA website: http://ec.europa.eu/mariecurieactions

European Research Council (ERC)
 http://erc.europa.eu

• **Erasmus** + http://ec.europa.eu/erasmus-plus

• **EU-DBT calls (Health and Biotechnology)**http://www.dbtindia.nic.in/wp-content/uploads/DBT-EU-calls-under-H2020-.pdf



- EURAXESS European Researchers Mobility Portal: https://euraxess.ec.europa.eu/worldwide/india
- Startup Europe India Network: https://startupeuropeindia.net/
- **EU Delegation to India**http://eeas.europa.eu/delegations/india/
- Contact: delegation-india-ri@eeas.europa.eu





EURAXESS - Researchers in motion





INFORMATION & ASSISTANCE

- **RELOCATION ASSISTANCE** IN 40 EUROPEAN COUNTRIES
- HANDS ON SUPPORT FOR MOBILE RESEARCHERS (VISA, ACCOMMODATION)

PARTNERING

• NEW **EURAXESS DATABASE**FOR RESEARCHERS,
ENTREPRENEURS, RESEARCH
ORGANISATIONS &
UNIVERSITIES AND BUSINESS

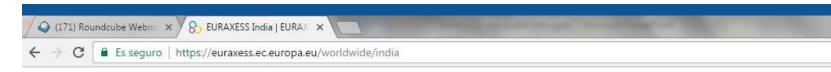
JOBS & FUNDING

- JOB PORTAL & FUNDING
 DATABASE WITH THOUSANDS
 OF OFFERS DAILY
- INITIATIVES FOR RESEARCHERS' RIGHTS AND REGULATIONS IN EUROPE



WORLDWIDE

- LINKING EUROPE TO THE WORLD
- ASEAN, LAC/BRAZIL, CHINA, JAPAN, NORTH AMERICA, SOUTH KOREA, AUSTRALIA/NEW ZEALAND ... AND INDIA





EURAXESS - Researchers in Motion

JOBS & FUNDING

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- in linkedin.euraxess.org
- **F** Euraxess Links India

Thank you

Dr. Samrat S. Kumar,
Country Representative







Belgium, gateway to Europe







Belgium and India jointly built **Asia's largest optical** telescope

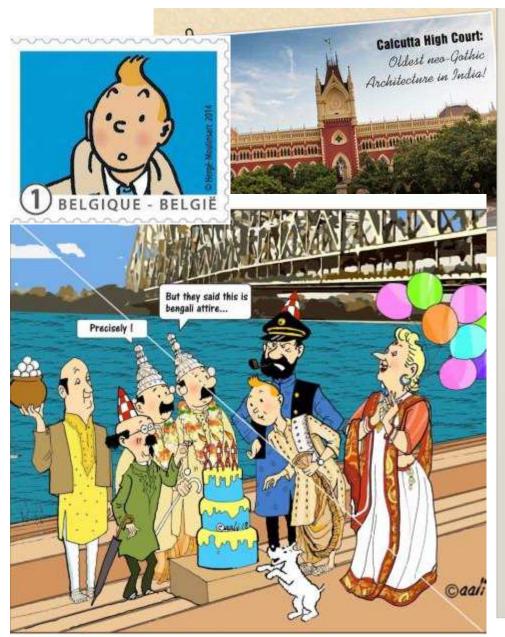


Department of Science and Technology (DST)

DST









বেলজিয়াম - শুধু প্রযুক্তির নয় আমরা টিনটিনের ও ভূমি।





The Czech Academy of Sciences

Т







CZECHINVEST

Investment and Business Development Agency



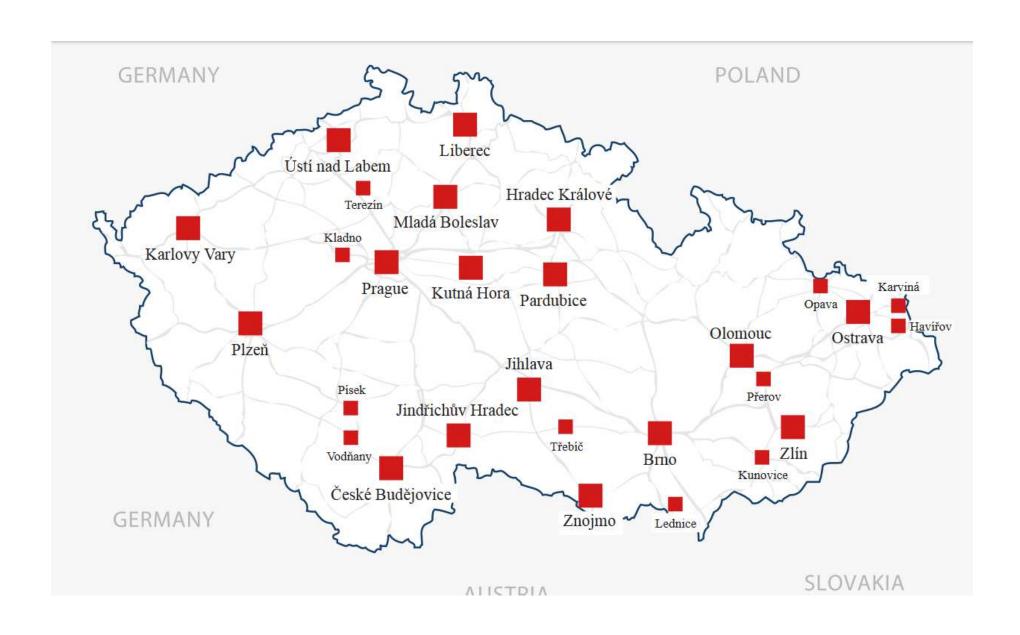
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Agency
of the Czech Republic

MINISTRY OF EDUCATION
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www.studyin.cz













Palacký University Olomouc



UNIVERSITY OF CHEMISTRY AND TECHNOLOGY PRAGUE

WORK PLAN FOR SUPPORT OF INDIAN - CZECH JOINT PROJECTS FOR THE YEARS 2019 – 2022

signed on 7th of September 2018

- Information and communication technologies;
- Natural sciences and biotechnology;
- New materials and nanotechnology;
- Medical sciences (including pharmaceutical sciences) and food safety;
- Research of climate change, environment and energy.





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DENMARK



Sune Kaur-Pedersen
Counsellor, Innovation & Research
Embassy of Denmark





Innovation centre denmark: a three-pronged approach



- ICDK is the key partner and matchmaker for Danish companies, universities, other HEIs and other Public and Private institutions looking to access India as a knowledge hub and a market.
- ICDK assists companies, universities and higher education institutions in the planning and execution of delegation visits, workshops, matchmaking as well as in concluding agreements

Services for companies

- Matchmaking
- Guidance on Industry experts and dedicated consultants to enable expansion or setup in India
- Guidance on India specific industry research
- Guidance on incubator and startup environments, venture capitalists, Angel Investors etc.
- Ministry guidance in setting up business outside Denmark

Services for universities / Higher Education Institutions

- Matchmaking
- Guidance on India's top research environments and researchers
- Guidance on India specific basic and applied research
- Guidance in collaborating with the Indian research and innovation communities
- Guidance in research funding in Denmark, EU and India



DENMARK



Links to Innovation Centre Denmark http://icdk.um.dk/

Embassy of Denmark http://indien.um.dk/

Links to the funding guide:

- http://ufm.dk/publikationer/2016/ny -guide-til-stotte-muligheder-fordansk-indisk-forskningssamarbejde
- http://icdk.um.dk/en/reports/

ICDK Analysis No. 7, December 2016



Commission





FRANCE CNRS



Our network and tools

FRANCE

- Two French Research Institutes in India:
 - IFP (French Institute of Pondicherry): since 1955 in Indology, Social Sciences and Ecology
 - CSH (Centre for social sciences and Humanities Delhi): since 1980 in economics, political sciences, sociology
- The CEFIPRA, Indo French ST&I bilateral agency







DST, March Nov 2015

DBT, March Nov 2015

IISER, Pune, Nov 2015



FRANCE

CEFIPRA

or IFCPAR

Centre Franco-Indien de Promotion de la Recherche Avancée

Mandate

- Supporting collaborative research [avg duration of projects: 3yrs; Avg funding: 1,1 cr INR (max 1.45 cr INR)]
- Organizing seminars and workshops on relevant themes
- Encouraging PPPs and co-funded programmes

Towards building a strong and sustainable IND/FR cooperation ecosystem in S&T&I



Student mobility

FRANCE

→ Master and Bachelor

Charpak Programme - Research Internship Program
For students' internship at a French laboratory, managed by



→ Scholarships for short doctoral stay in France

- Raman-Charpak Scholarships (stay from 2 to 6 months)
 - (managed by CEFIPRA)



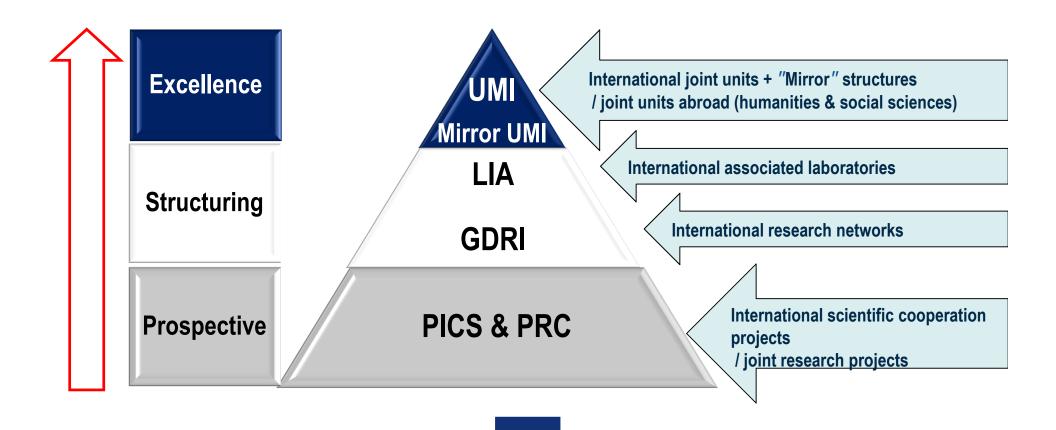
- Eiffel Scholarships programme, managed by Campus France.
 Applications are filled in by the French establishment
 - Master's branch: funds master's courses lasting between 12 and 36 months;
 - PhD branch: offers funding for PhD students to spend 10 months in France, through joint supervision or dual enrollment





The CNRS plays a key role in global structuration & has developed a range of cooperative tools functioning on a competitive basis

FRANCE CNRS





FRANCE

Contact and further information

- http://www.frenchscienceindia.org/
- www.cefipra.org/
- www.inde.campusfrance.org/
- srini.kaveri@cnrs.fr





Land of Ideas



- ➤ Leading science nation with long history of science 399 Institutions of Higher Education and 80 Nobel Prizes
- Close interlinking of large-scale research facilities with worldwide partners
- Well-qualified scientists, researchers, technicians and laboratory staff
- Highly efficient & highly differentiated science and research system
- > Equipment easily available to research centres
- Increasing level of internationalization Strategic Partnership with India
- **➤** Many scholarship and funding opportunities





German research organisations

- Max Planck Society (MPG)
- Fraunhofer-Gesellschaft (FhG)
- Helmholtz Association of German Research Centres (HGF)
- Gottfried Wilhelm Leibniz Science Foundation (WGL)
- Universities & Academies
- Federal and Länder Institutions carrying out R&D
- Business Enterprises

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Scholarship & Funding Sources

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- German Academic Exchange Service (DAAD)
- Alexander von Humboldt Foundation (AvH)
- Universities
- German Foundation for Peace Research (DSF)
- German Foundation for the Environment (DBU)
- Foundation of German Humanities Institutes Abroad (DGIA)
- German Federation of Industrial Research Associations AiF
- Indo-German Science & Technology Centre (IGSTC)

Contact & Further Information:

www.dfg.de www.daad.de www.avh.de www.study-in.de www.hochschulkompass.de www.research-in-germany.org



HUNGARY

Research & mobility



- Geochemistry
- Physics and Materials Science
- Materials and Environmental Chemistry
- Enzymology
- Organic Chemistry
- Solid State Physics and Optics
- Nanocomposites Research
- Veterinary Science
- Soil Science and Agrochemistry
- Biophysics



























- Over 550 study programs in English, German, and other languages
- 66 universities and colleges

STIPENDIUM Hungaricum

BILATERAL Scholarship Programmes

Postgraduate or postdoctoral research



HUNGARY

Active cooperation

agINFRA.eu: Science Gateway & big data aggregator for CIARD RING (FP7 project) → Indian Statistical Institute Inst. of Coputer Science and Control → Amity Szent Istvan Univ. → Mumbay Univ. Eötvös Lóránd Univ. → Calcutta, Madaras, Thapar, Jadavpur Debrecen University → Ayurveda Centres University of Pecs → KIIT Univ. Bhubaneswar Budapest Univ. of Techn. and Economy → IIT Delhi

Szeged University \longrightarrow Management Development

Institute Gurgaon



HUNGARY

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Counsellor, Science & Technology Embassy of Hungary

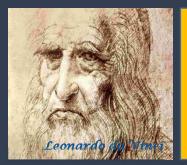
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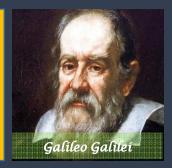


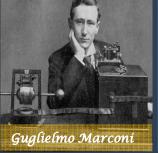


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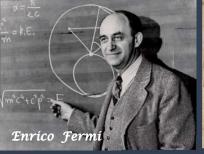




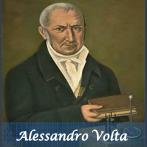


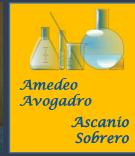




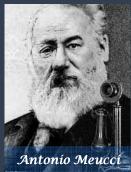


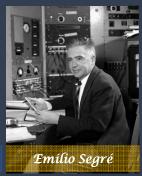


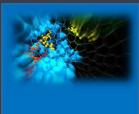




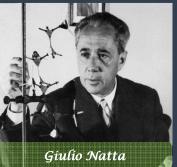








Salvador Luria Camillo Golgi





Non si può insegnare niente; si può solo far sì che uno le cose le trovi in se stesso

Galileo Galilei

You cannot teach people anything; you can only help them discover it within themselves



























Scientific Attaché – Embassy of Italy in New Delhi



Massimo Spadoni

Embassy of Italy in New Delhi Scientific Attaché

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www.indoitalianresearch.org



The Swedish research system - overview

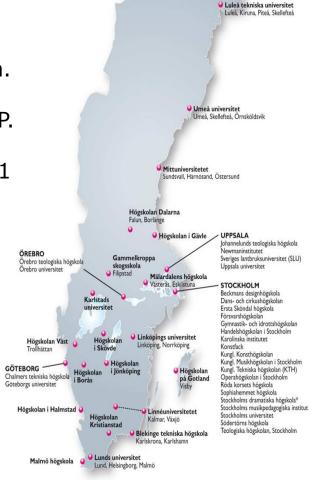
Sweden is among the nations worldwide that devote the most money to research relative to its population.

Sweden's expenditures for R&D is total 3.42% of GDP.

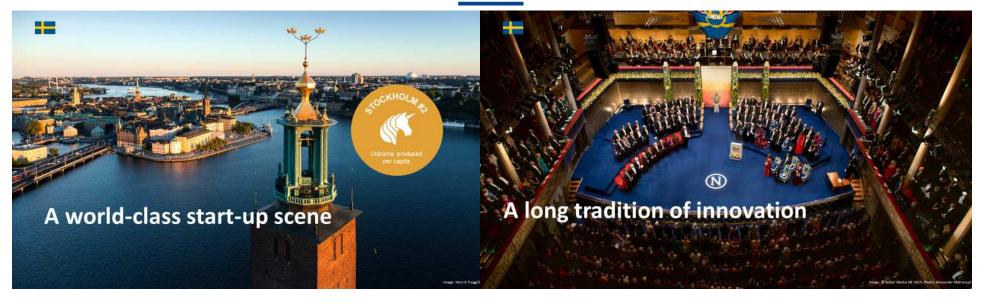
There are ~50 universities and university colleges, 31 of these are public.

Sweden has acquired a leading position in -

- Environmental technology
- Nanotechnology
- Waste management
- Biofuels
- Electric Vehicles













Swedish Research Council www.vr.se

FORTE www.forte.se

FORMAS www.formas.se

VINNOVA www.vinnova.se

Swedish Energy Agency www.swedishenergyagency.se

Swedish National Space Board www.snsb.se



















Joint Declaration on Sweden-India Innovation Partnership for a Sustainable Future



Areas for collaboration -

Smart cities and transportation including e-mobility Smart industry, digitalisation, start-ups and IPR issues New materials and advanced manufacturing Space and Aeronautics Circular and bio-based economy including biomaterials Health and life sciences including biomedical devices



Apply for funding

Leadership programmes -

SI Management Programme Asia SI Sustainability Forum Young Connectors of the Future – YCF

Applications will open in early 2019.

https://si.se/en/

Research funding -

Bilateral R&D programs in Computer science and Material science.

Applications will open in October 2018.

https://www.vr.se/

Participate in Sweden-India Nobel Quiz 2019





For further queries contact the following officials at the Embassy of Sweden, New Delhi

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Mini Nair

Office Manager, Science and Innovation mini.nair@gov.se



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UK Participation in EU R&I funding programmes

Joint report UK Government and the negotiators of the European Union (8 December 2017)

 "Following withdrawal from the Union, the UK will continue to participate in the Union programmes financed by the MFF 2014-2020 until their closure"

In the case of no-deal Brexit

 The UK Government maintains the Underwrite Guarantee and has announced a Post EU Exit Guarantee Extension to cover the entire current EU budget period until the end of 2020.

https://www.gov.uk/government/publications/ukparticipation-in-horizon-2020-uk-governmentoverview





India-UK Research and Innovation Partnership

£400 million joint UK-India R&I investment over 10 years, of that £300 million in partnership with UK Research and Innovation.

Joint programmes with Government of India (including DBT, DST, MoES, ICSSR, ICHR).

Newton-Bhabha Fund

UK Research and Innovation







India-UK Research and Innovation Funding Opportunities

Global Challenges Research Fund (£1.5 bn)

UK Research and Innovation international opportunities:

Stage 1 - First links

Stage 2 - A broader relationship

Stage 3 - Pilot studies

Stage 4 - Sustainable interactions

More information:

https://www.ukri.org/research/international/international-fundingopportunities/

UK Research and Innovation







Further Information and Contacts

Helen Dewberry, Senior Programme Manager, UKRI India helen.dewberry@ukri.org

UKRI India Together for Impact video https://www.youtube.com/watch?v=NkF7QmfTuQs

UK Research and Innovation India: www.ukri.org/india

Newton Fund: www.newtonfund.ac.uk

Twitter: @UKRI_India @UkinIndia

