



**EU-INDIA PARTNERSHIP  
ON INFORMATION  
AND COMMUNICATION  
TECHNOLOGY**



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# Foreword

The internet and digital Information and Communication Technologies (ICT) are transforming our world rapidly. Both the EU and India have set up their respective digital priority policies to harness the new services and networks so that they address global societal challenges, while supporting sustainable and inclusive growth.

Since 2001, India and the EU have been working closely together in the area of ICT, promoting modern information society. The 2018 EU strategy on India indicated ICT as one of the priority areas for cooperation. Since then, we have been linking up the EU Digital Single Market with Digital India, engaging on a wide range of issues such as ICT standardisation, market access, internet governance and research and innovation.

Under the project 'India-EU Cooperation on ICT-Related Standardisation, Policy and Legislation', we have made considerable progress in areas of mutual interest, including 5G; machine-to-machine communications; intelligent transport systems; software defined and virtualised networks, and security.

**Digital transformation offers a huge potential for socioeconomic development and is influencing areas as broad as health, education, finance, industry, transport, agriculture, governance, culture and entertainment. This transformation will be particularly relevant for both the EU and India as we focus on the post-COVID recovery to ensure resilient and digitally inclusive societies. Virtually all social and economic sectors will be affected by this crosscutting revolution.**

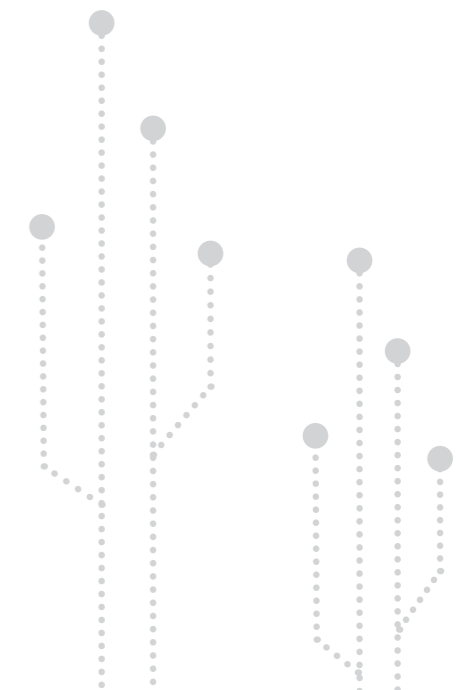
We need to find innovative solutions to promote the rollout of new technologies, while ensuring that individual rights and values are protected in a transparent and inclusive framework, based on our principles and values as democratic, open societies.

The future is digital. It is therefore all the more essential to nurture cooperation on the international stage. The EU and India face similar challenges, as two of the world's largest democracies. We can work together to promote a human-centric vision of the future shaped by new information and communication technologies, for the benefit of mankind.



**Ugo Astuto**

Ambassador of the European Union to India





# The European Union

## Key Facts\*

**Population: 446 million**

**Population density: 108.8 persons/km<sup>2</sup>**

**Land area: 4 million km<sup>2</sup>**

**GDP: €13.9 trillion**

**GDP per capita: €31,100**



The European flag features a circle of 12 gold stars on a blue background. They stand for the ideals of unity, solidarity and harmony among the peoples of Europe. The European flag symbolises both the European Union and, more broadly, the identity and unity of Europe.

- + The European Union (EU) is an economic and political union of 27 EU countries;
- + The EU has developed an internal single market through a standardised system of laws that apply in all Member States. EU policies aim to ensure the free movement of people, goods, services, and capital within the internal market;
- + The Member States delegate sovereignty to the EU institutions to represent the interests of the European Union as a whole. There are common policies for trade, agriculture, energy, environment, fisheries, competition, research, external relations and regional development;
- + The EU's main bodies are: the European Parliament, the Council of the European Union, the European Commission, and the European Court of Justice;
- + The guiding values of the EU include human dignity, freedom, democracy, equality, rule of law, and human rights;
- + The EU has delivered more than half a century of peace, stability and prosperity, helped raise living standards and launched a single European currency: the euro. More than 340 million EU citizens in 19 countries now use it as their currency and enjoy its benefits;
- + The EU is the largest trade bloc in the world, and the biggest exporter of manufactured goods and services and the biggest import market for over 100 countries;
- + The EU has a diverse and rich culture, with 24 official languages and over 60 indigenous regional or minority languages;
- + Collectively, the EU and its constituent countries are the world's leading donor of humanitarian aid;
- + In 2012, the EU was awarded the Nobel Peace Prize for advancing the causes of peace, reconciliation, democracy and human rights in Europe;
- + The motto of the EU is "united in diversity" which first came into use in 2000.

## Key Dates

**1950**

On 9th May 1950, French Foreign Minister Robert Schuman gave a speech which publicly proposed the establishment of a European Coal and Steel Community (ECSC).

**1951**

The ECSC is founded by six countries (Belgium, the Federal Republic of Germany, France, Italy, Luxembourg and the Netherlands).

**1957**

The six countries set up the European Economic Community (EEC), for wider cooperation. One of its core objectives is to develop a common market offering free movement of goods, services, capital and people. Border checks and customs duties would be gradually removed.

**1969**

At the Hague Summit, the EEC's political leaders decide to move further ahead with European integration.

**1973**

Denmark, Ireland and the United Kingdom join the European Communities, bringing their membership to nine.

**1981**

Greece joins the European Communities, bringing their membership to 10.

**1986**

Spain and Portugal join the European Communities, bringing their membership to 12.

**1991**

The Maastricht European Council adopts a Treaty on European Union. It lays the basis for a common foreign and security policy, closer cooperation on justice and home affairs and the creation of an economic and monetary union, including a single currency. The inter-governmental cooperation in these fields added to the existing Community system creates the European Union (EU). The EEC is renamed the 'European Community' (EC).

**1992**

The Treaty on European Union is signed at Maastricht. It enters into force on 1 November 1993.

**1993**

The Single Market is created.

**1995**

Austria, Finland and Sweden join the EU, bringing its membership to 15.

**1999**

The currencies of 11 EU countries are replaced by the euro. The single currency is launched on the money markets. From this point onwards, the European Central Bank (ECB) has responsibility for the EU's monetary policy, which is defined and implemented in euro.

**2002**

People in the euro area countries begin using euro notes and coins.

**2004**

Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia join the European Union.

**2007**

Bulgaria and Romania join the EU.

**2013**

Croatia joins the European Union as its 28th member state.

**2020**

The United Kingdom withdraws from the European Union.

\*Eurostat figures for EU27 (GDP and GDP per capita in current prices)

# Elements for an EU Strategy on India

The European Union and India upgraded their long-standing relationship to a strategic partnership in 2004, acknowledging their common goals and principles. Nowadays, in a challenging international environment, the EU and India share the same values of democracy, human rights, fundamental freedoms and support the rules-based global order.

Pursuant to this, in November 2018, the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy adopted a Joint Communication that sets out the EU's vision for a strategy to strengthen cooperation and the partnership with India. Through the strategy, the EU places an emphasis on reinforcing cooperation in foreign policy and developing security and defence cooperation with India, promoting effective multilateralism, and building on common values and objectives.

This Joint Communication replaces the last Commission Communication on India of 2004, recognising that India has emerged as the fastest-growing large economy and has acquired an important geopolitical role.

**The Strategy aims to strengthen the EU-India Strategic Partnership by focusing on sustainable modernisation and on common responses to global and regional issues, and will provide the policy framework for the EU's deeper and broader engagement with India over the coming years.**

## EU-India: Partners in Progress

### MODERNISATION

- + Investment in India's sustainable modernisation
- + New business opportunities
- + Enhanced connectivity and data protection
- + Sustainable urbanisation

### ENVIRONMENT, ENERGY AND CLIMATE CHANGE

- + Implementation of the Paris Agreement
- + Clean energy transition, energy efficiency and renewable energy
- + Addressing major environmental challenges
- + India-EU Water Partnership
- + Joint Declaration on Resource Efficiency

### TRADE & INVESTMENT

- + Balanced, ambitious and mutually beneficial agreements on trade and investment
- + Sound, transparent, non-discriminatory regulatory and business environment in India

### INNOVATION

- + More people-to-people exchanges, utilising societal diversity
- + Cooperation on education and skills, mutual recognition of qualifications, mobility of talent
- + Innovation initiatives

## Strengthening the Political Partnership

### REINFORCING COOPERATION ON FOREIGN POLICY

- + Coordinating on the most relevant foreign policy issues
- + Working for stability and security in the overlapping neighbourhoods
- + Engaging India more on sustainable connectivity both at strategic and operational levels

### DEVELOPING SECURITY AND DEFENCE COOPERATION

- + Fighting terrorism and radicalisation
- + Exchanging expertise on maritime and cyber security, non-proliferation / disarmament and hybrid threats
- + Military relations via personnel exchanges and trainings

### PROMOTING EFFECTIVE MULTILATERALISM

- + Promoting the rules-based global order and trading system
- + Improving coordination in the United Nations, World Trade Organization and G20
- + Working on strong, sustainable, balanced and inclusive global growth

### BUILDING ON COMMON VALUES AND OBJECTIVES

- + Promoting gender equality and women's empowerment, human rights and democracy, and the inclusion of young people
- + Coordinating on humanitarian and disaster relief operations
- + Delivering the UN Sustainable Development Goals and Agenda 2030

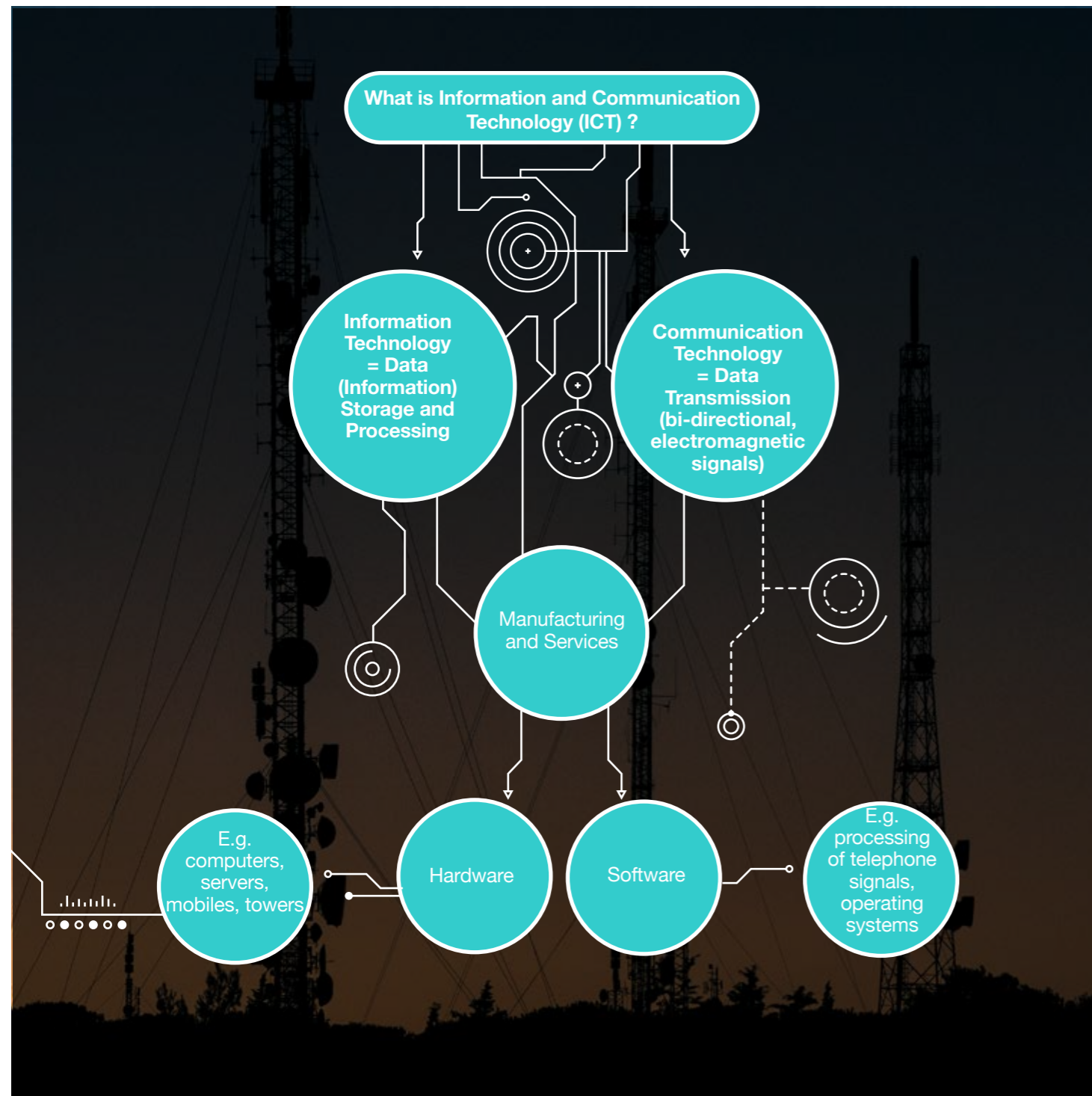


# Introduction

Information and Communication Technology (ICT) influences all areas of society, business and government. The development and widespread adoption of new ICT services and networks have powerful effects on economic and social development. India has developed a strong capacity in ICT, capturing a large and growing share of the world market for IT and related services. With its large pool of talented IT

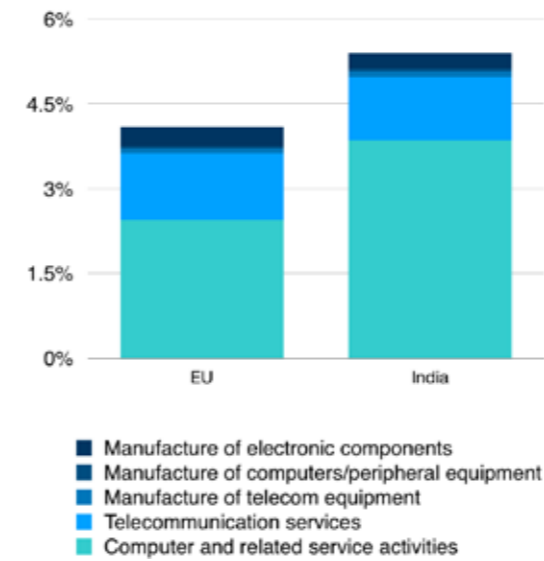
specialists and world class facilities for IT research and development, India is considered an important partner for Europe. Many ICT researchers and businesses on both sides are keen to strengthen links.

Since 2001, the European Union (EU) and India have been cooperating closely in the development of ICT which further supports a modern information society.



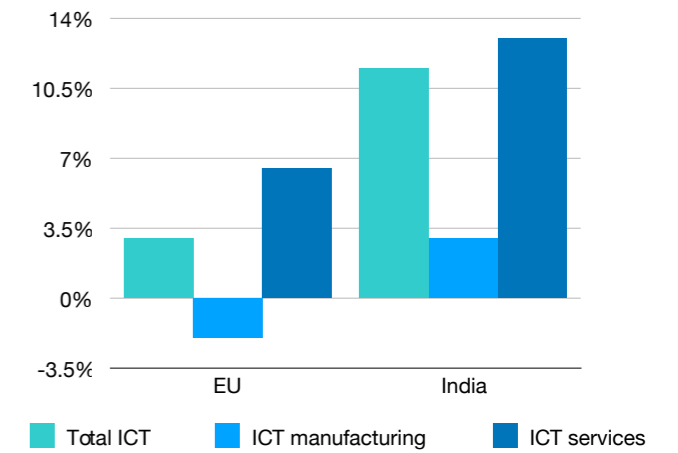
# ICT Sector Overview

## GDP Contribution



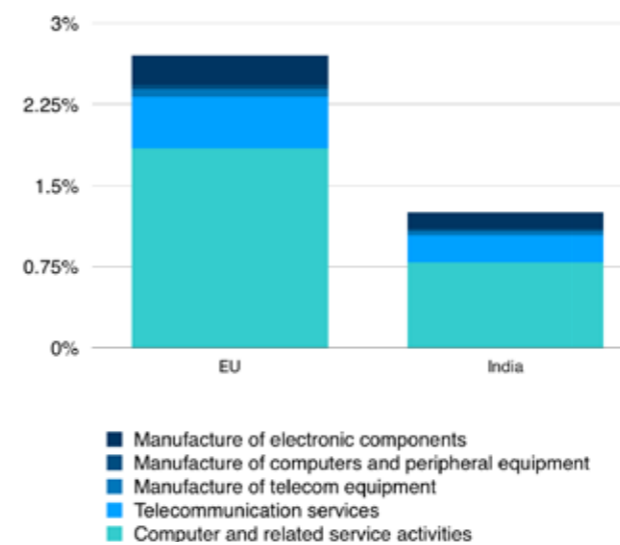
Source: European Commission, 2018

## Mean Growth Rate



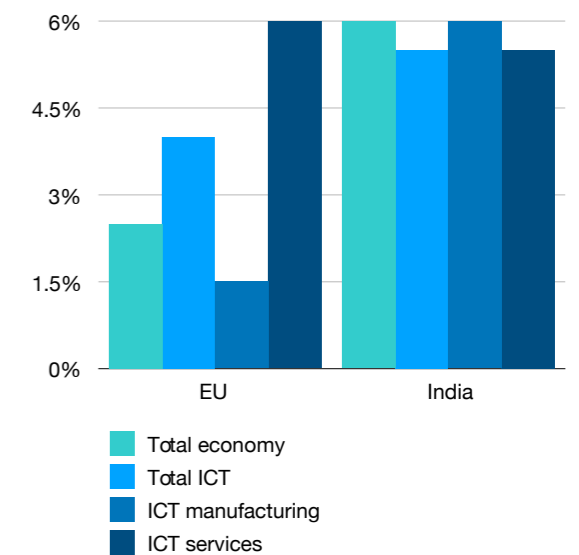
Source: European Commission, 2018

## Employment Share



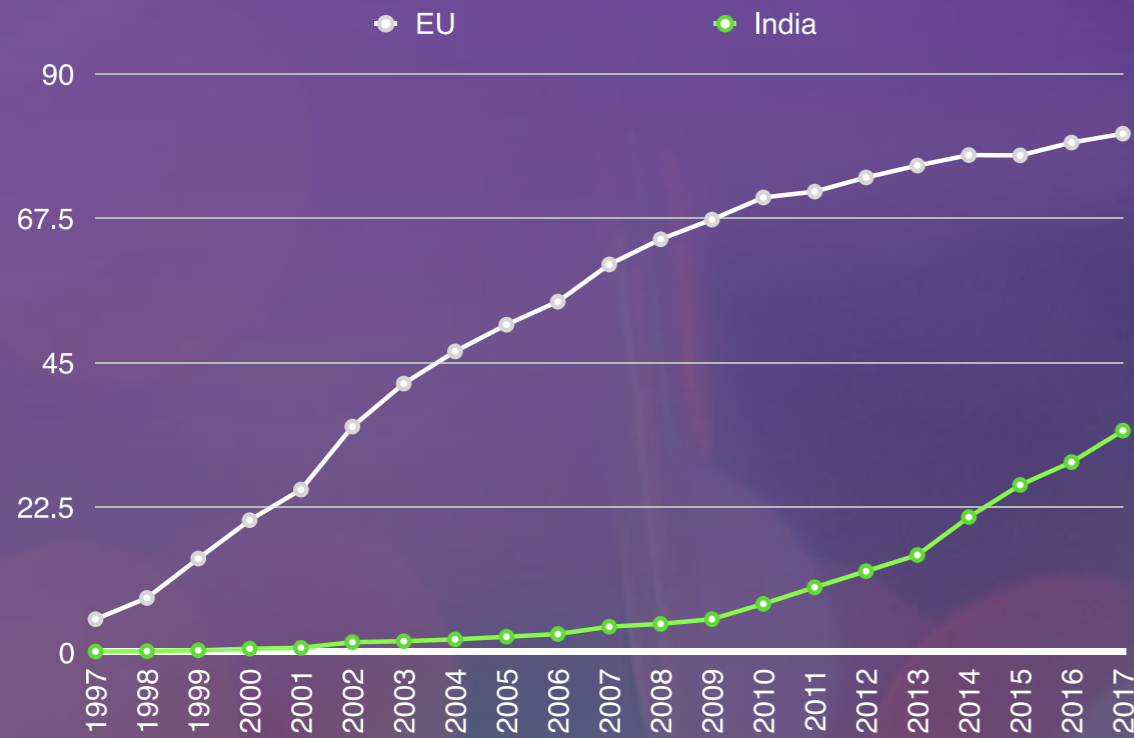
Source: European Commission, 2018

## Business Expenditure in R&D

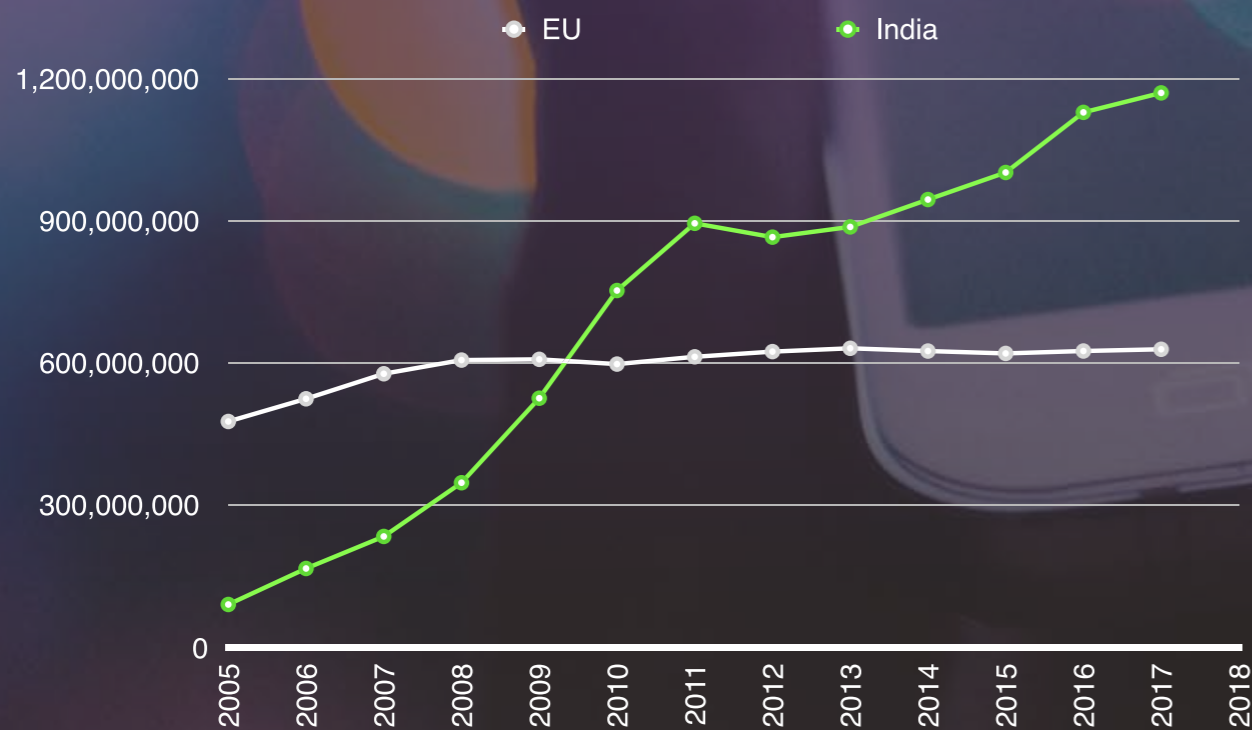


Source: European Commission, 2018

### Internet Users: Percentage of Users

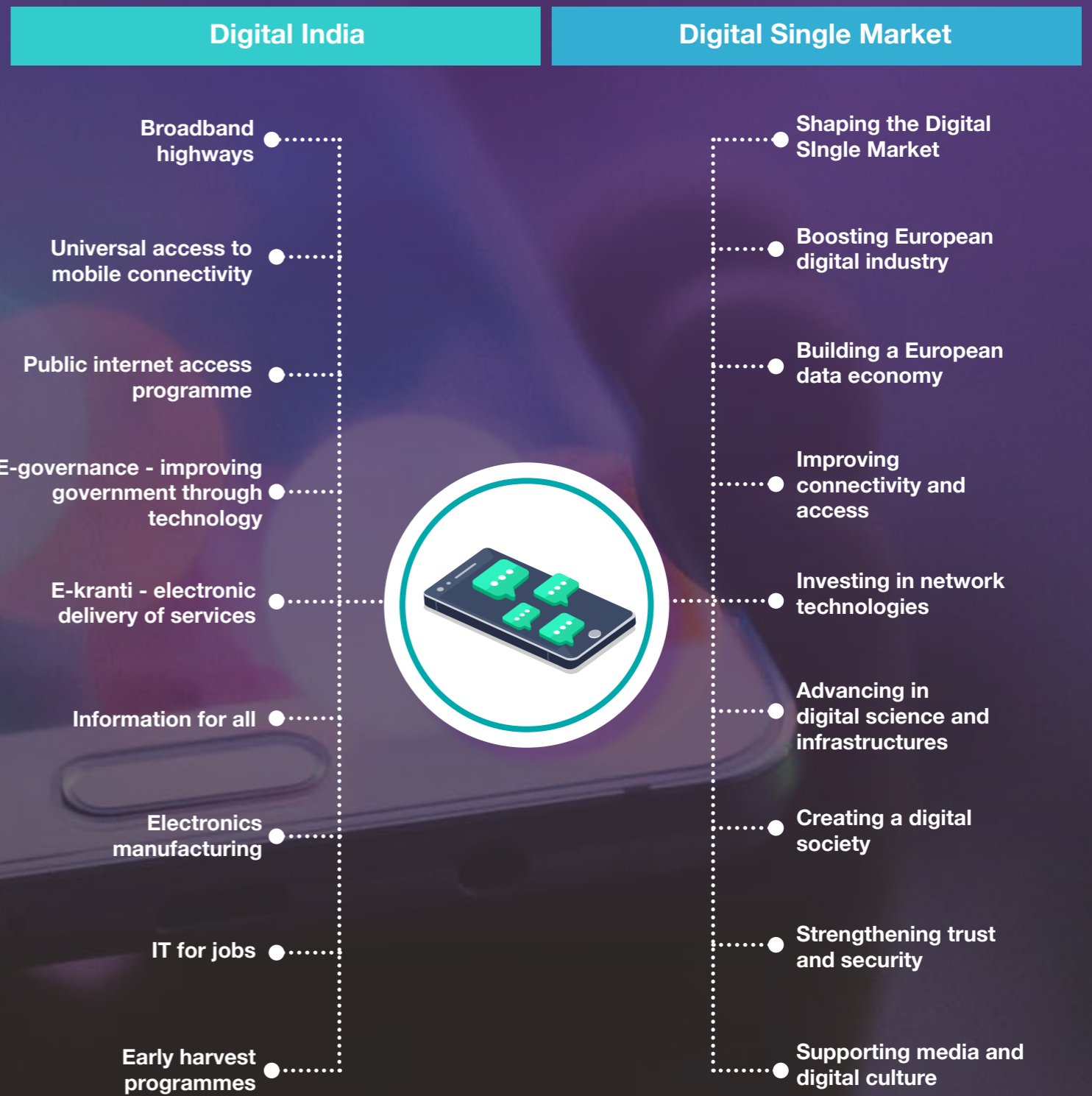


### Mobile Telephone Subscription



# Making Digital Economy a 'Priority'

The EU and India are committed to making digital economy a priority through their respective programmes: **Digital Single Market** and **Digital India**. The European Union and India share several common objectives under these programmes and a single vision: to enable change for the benefit of citizens and businesses.





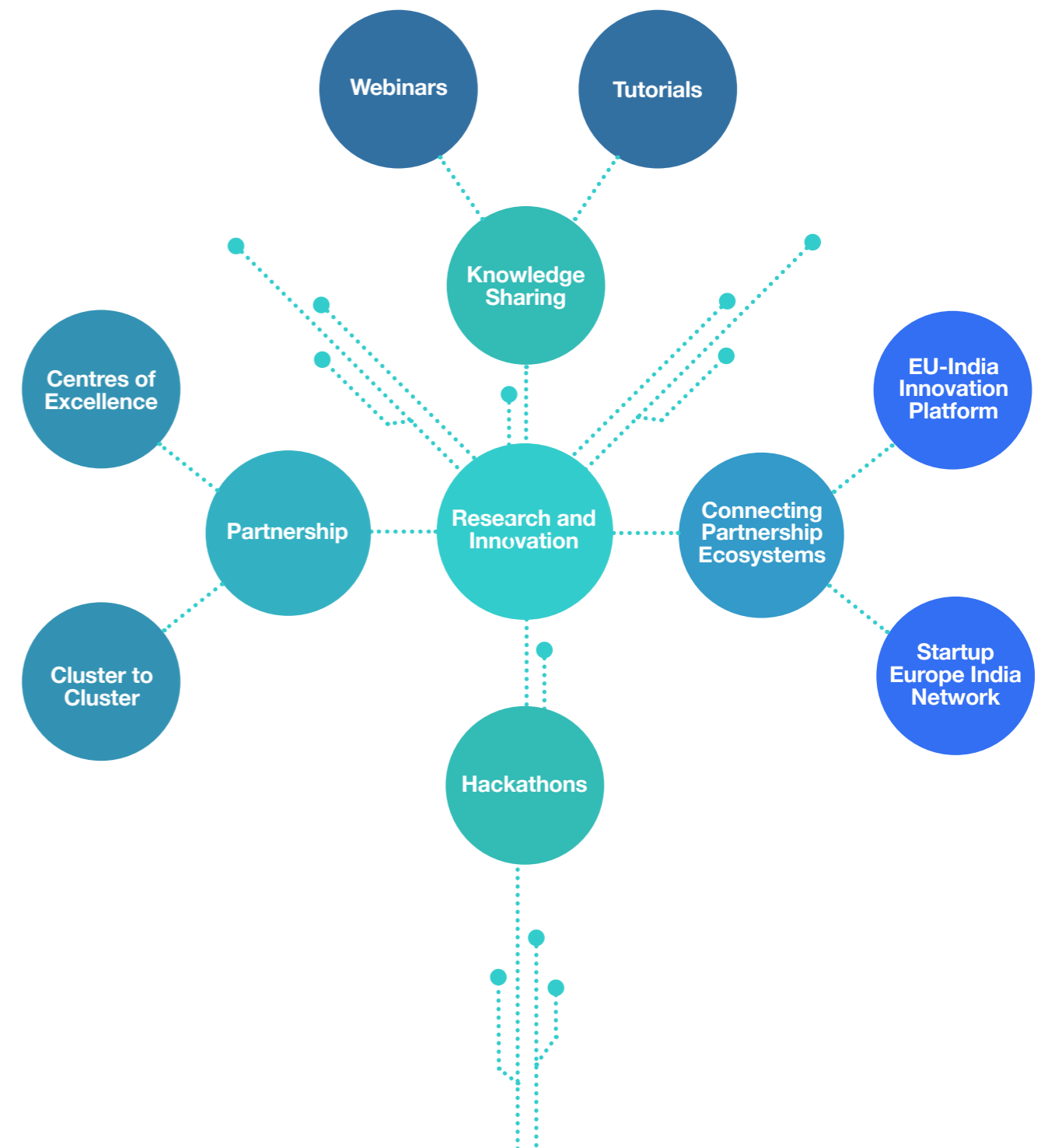
# EU-INDIA ICT COOPERATION



## Invent the Future

Information and Communication Technologies (ICT) are evolving at an ever faster pace, and this evolution is fuelled by substantial investment in research and development. These technologies have also enabled success of new business models based on innovative approaches, developed by small, agile and creative startup structures.

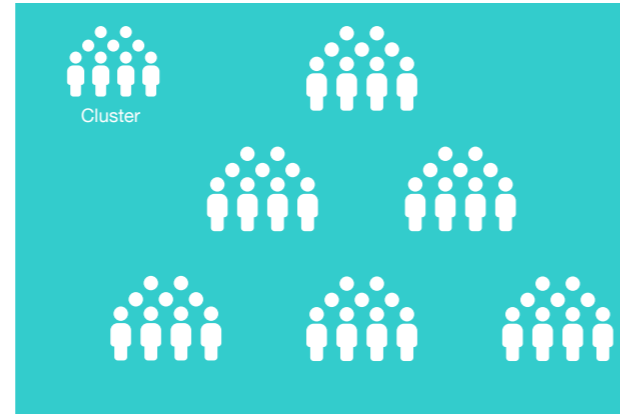
Cooperation between the EU and India on research and innovation is crucial to jointly tackle global challenges, and tap into business opportunities on both sides.





1

**Cluster to Cluster:** The EU-India Cooperation Platform provides an enabling framework for EU researchers and innovators to create cluster to cluster partnerships with Indian counterparts in priority areas in ICT including future internet and digital electronic media.



3

**Webinars:** Monthly webinars where experts share their knowledge and experience in domains linked to new communication technologies.

2

**Centres of Excellence:** Facilitate cooperation and exchanges between Indian and European researchers who are developing innovations based on new technologies of communication.



4

**Tutorials:** Series of introductory talks to students and the startup community on new standards for Internet of Things and Machine-to-Machine communications.



5

**Startup Europe India Network:** One stop window which aims at reducing barriers and supports tech startups to scale, invest and collaborate across European and Indian digital markets.



7

**Hackathons:** Competitions open to Indian innovators challenging them to invent practical solutions based on new ICT standards.



6

**EU-India Innovation Platform:** An initiative to connect innovation and startup ecosystems (incubators and accelerators) between Europe and India.



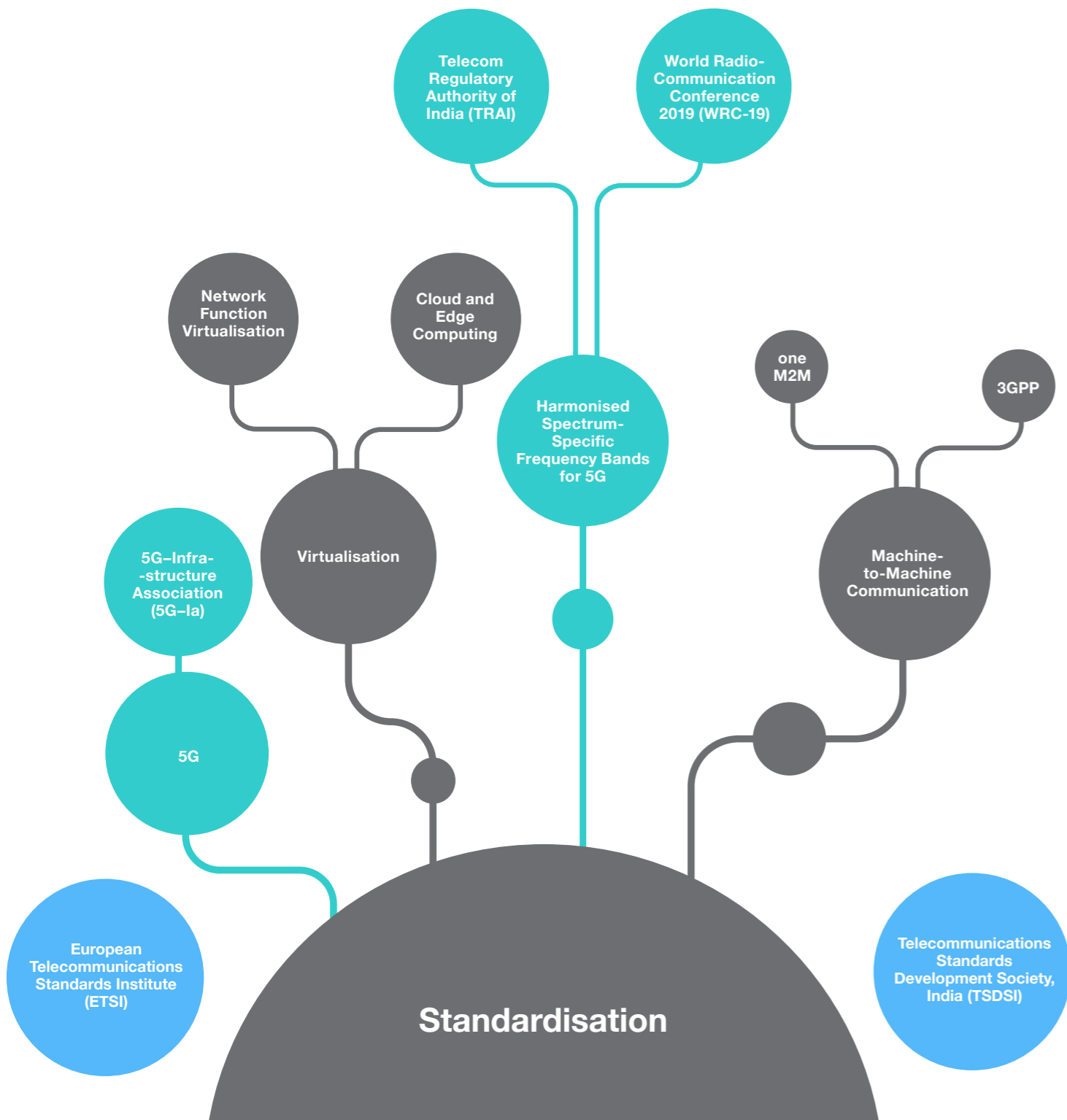
# Shape the Future

Future information and communication technologies, such as Machine-to-Machine Communication (M2M) or the fifth generation of mobile technology (5G), are widely expected to bring a quantum leap in the organisation, performance and delivery across sectors, in turn having a positive impact on the economy and society.

In order to reap the full benefit from these

disruptive technologies across sectoral and geographical areas, it is essential to ensure interoperability of technologies and systems. Thus standardisation is of key essence.

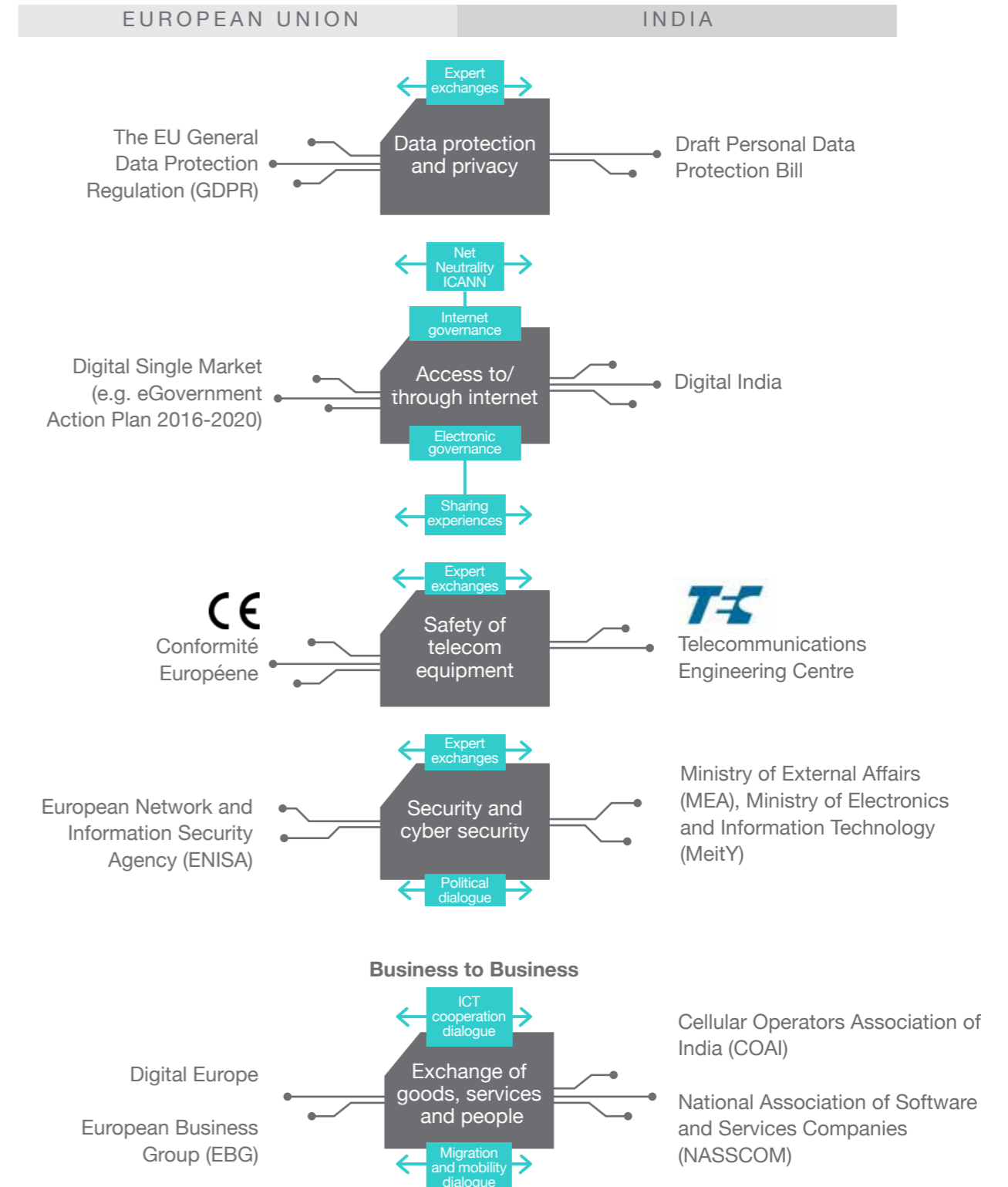
The EU and India share the view that international standards are crucial to improve the ease of doing business in an era of global supply chain. They will also enhance customer experience and allow innovations based on the seamless exchange of data across sectors.



# Frame the Future

Recent headlines on cyber-attacks, leaks or misuse of personal data by the internet, social media, service providers, and on differential access to the internet have highlighted the need for a framework to protect citizens and society.

The EU and India are following similar paths, and both are committed to an open, free, secure, stable, peaceful and accessible cyberspace enabling economic growth and innovation. Both sides benefit from active expert exchanges and political and regulatory dialogue on these topical issues.





## Success Stories

1. Since November 2016, the 'EU-India Cooperation on ICT-related Standardisation, Policy and Legislation' has been supporting the Indian telecom standards body, Telecommunications Standards Development Society, India (TSDSI). The project has facilitated TSDSI cooperation with the European Telecommunications Standardisation Institute (ETSI). Concrete areas of cooperation (during the last three years) include 5G, Future Networks and Machine-to-Machine communications.

In April 2019, the Telecommunications Engineering Centre (TEC), an Indian government body under the Department of Telecommunications (DoT) approved a policy for the adoption of standards of TSDSI. The first process for adoption relates to the transposition of oneM2M standards into National Standards. oneM2M is a recognised global standard for the Internet of Things, thereby providing a standardised interface to manage and interact with applications.

2. The European Union is funding the India-EU ICT Standardisation Collaboration Project which nurtures innovation, through the organisation of hackathons around India. One of the winners of the second hackathon at IIIT Hyderabad was a young student from Bengaluru, who had also competed in the first hackathon. In addition to winning the prize, he ended up taking a research position, and is now teaching theory on oneM2M standards and supervising lab sessions to students at IIIT Hyderabad.





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