



The position of Albania as a non – EU country toward GNSS Education and Galileo Evolution.

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Master in Navigation and Related Applications

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GALILEO



Stated by the European Commission (EC) :

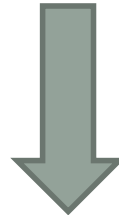
“ The Galileo programme is Europe's initiative for a state-of-the-art global satellite navigation system, providing a highly accurate, guaranteed global positioning service under civilian control. The fully deployed system will consist of 30 satellites and the associated ground infrastructure. Galileo will be inter-operable with GPS and GLONASS, the two other global satellite navigation systems.”

Key words of the statement are :

- ❖ Europe's initiative
- ❖ Highly accurate
- ❖ Guaranteed service
- ❖ Under Civilian control
- ❖ Independent and interoperable

Galileo (contd)

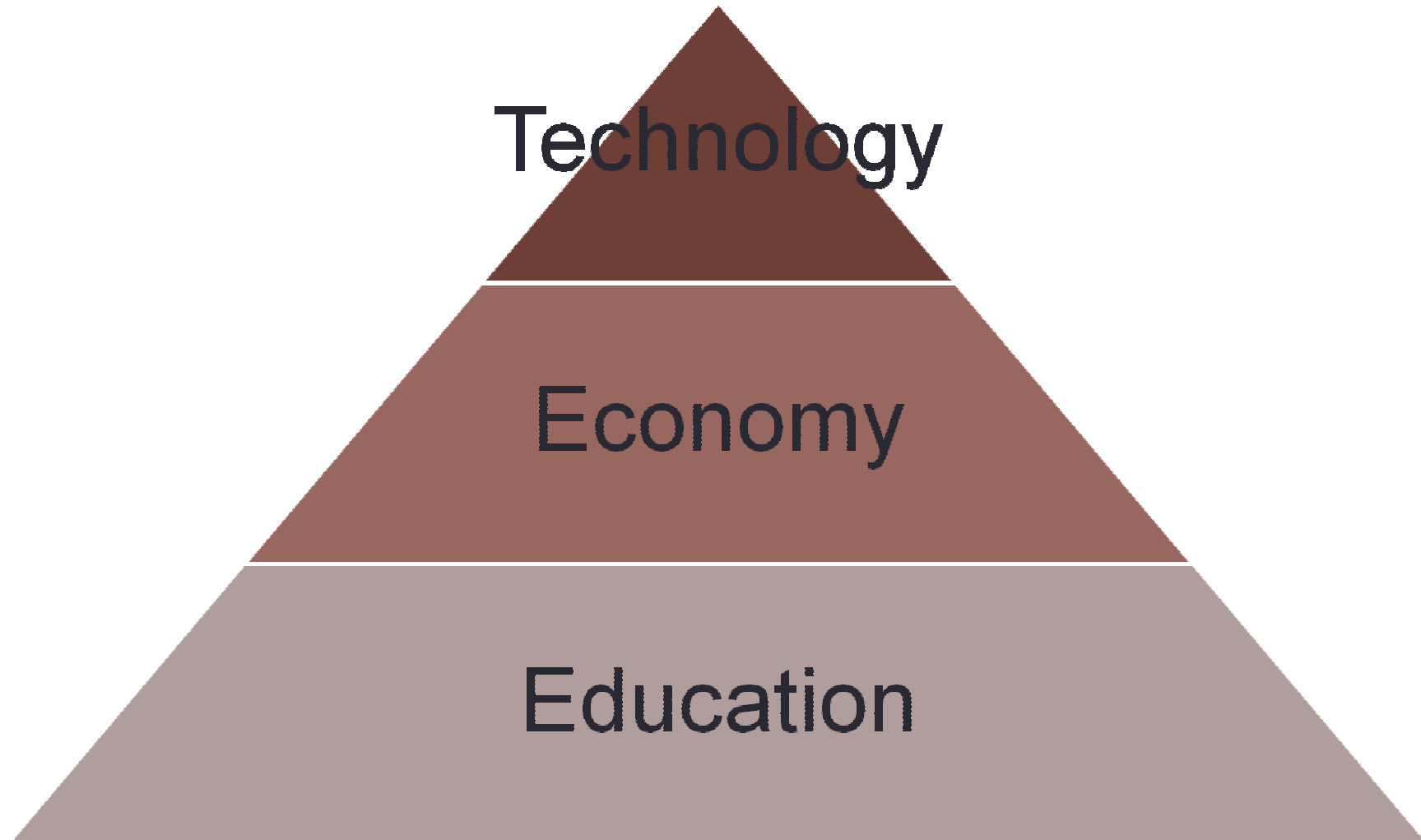
Why Galileo ???



Benefits

- Europe's independence in satellite navigation
- Very important for European economy (about 7% of the EU GDP in 2009)
- The **well-being of its citizens**.
- Studies show that Galileo **will deliver around €90 billion to the EU economy** over the first 20 years of operations, in the form of :
 - direct revenues for the space, receivers and applications industries
 - in the form of indirect revenues for society (more effective transport systems, more effective rescue operations etc.)

Galileo View



Galileo Education

➤ ERIG project spotlighted in November 2008 GNSS Education, Research and Innovation in Europe and around the world , where several main questions were raised based on the ***following prediction*** :

❑ "Going back to the 1990s, we have seen predictions of over **100,000 new jobs** being created in the European GNSS sector“.

BUT LEADING TO :

1. Where all these people doing all these new jobs are going to come from ?
2. Where are the academic programmes in GNSS studies that will prepare them for their new careers?

Galileo Education Initiatives

❖ G-TRAIN

✓ What is G-TRAIN ?

- **G-TRAIN is funded within the Seventh Framework Programme of the European Commission under grant agreement no. 248016.**
- **The aim of the G-TRAIN project is to set up a European framework for higher education in the field of Global Navigation Satellite Systems, addressing different educational initiatives and boosting networking activities among academia.**
- However, in Europe, the offer of education in satellite navigation is still limited.



Project Partners

1. Politecnico di Torino
2. École Nationale de l'Aviation Civil
3. Universitaet der Bundeswehr Muenchen
4. Institut Supérieur de l'Aéronautique et de l'Espace
5. Istituto Superiore Mario Boella

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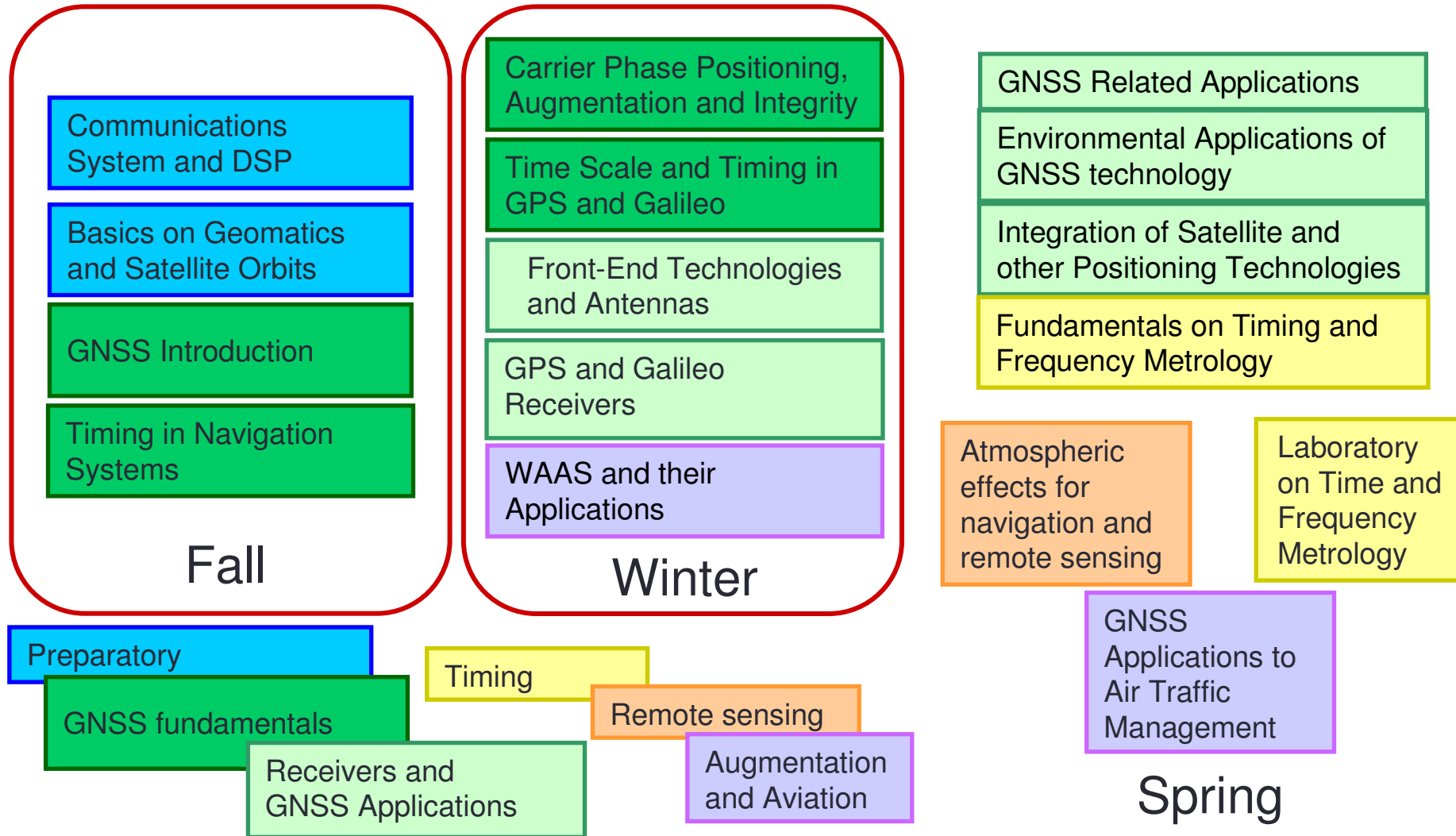
- II Level Master on Navigation and Related Applications
 - ❑ Now in its 8° edition being held in Polytechnic University of Turin
 - ❑ Joint Initiative of :



- ❑ Support of local firms and institutions in terms of both scholarships granted to the students and of seminars delivered to students :



Galileo II Level Master



Other Initiatives



in cooperation with



prize awarding partner



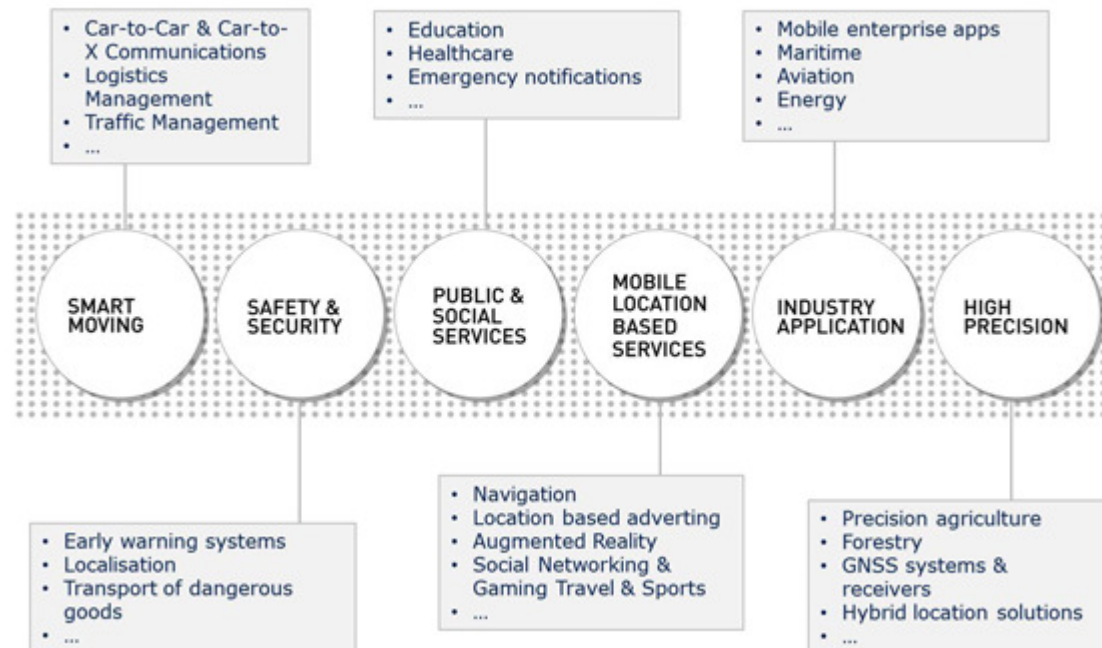
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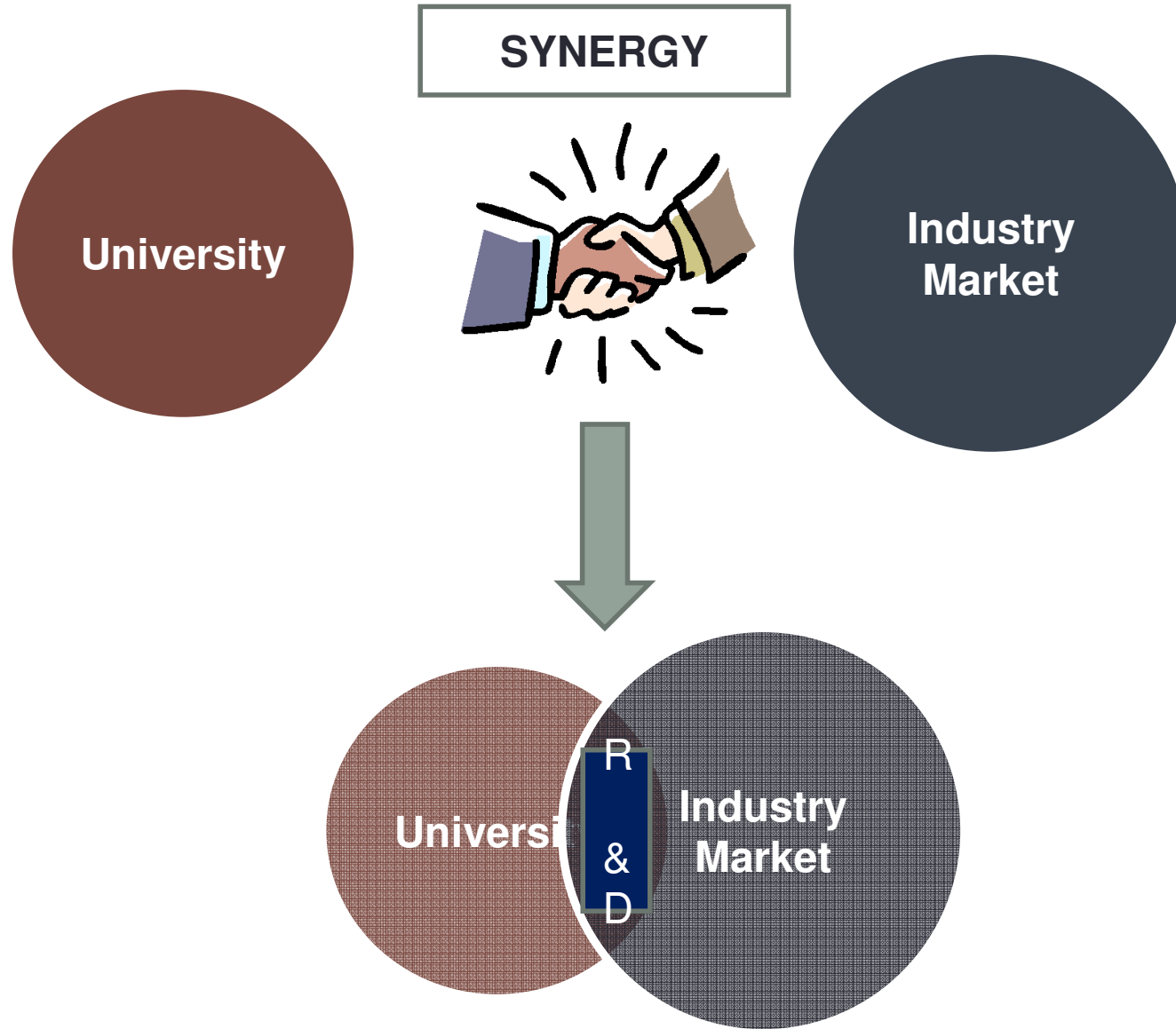
Application Fields



Sponsoring Partners



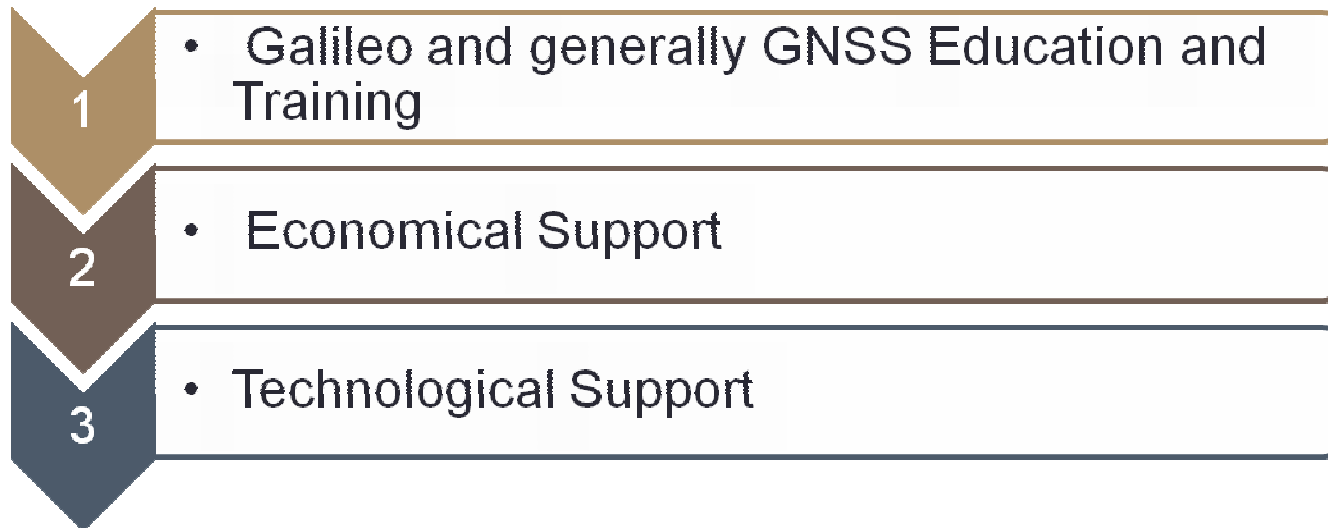
Galileo Education View



Non – EU Countries toward Galileo

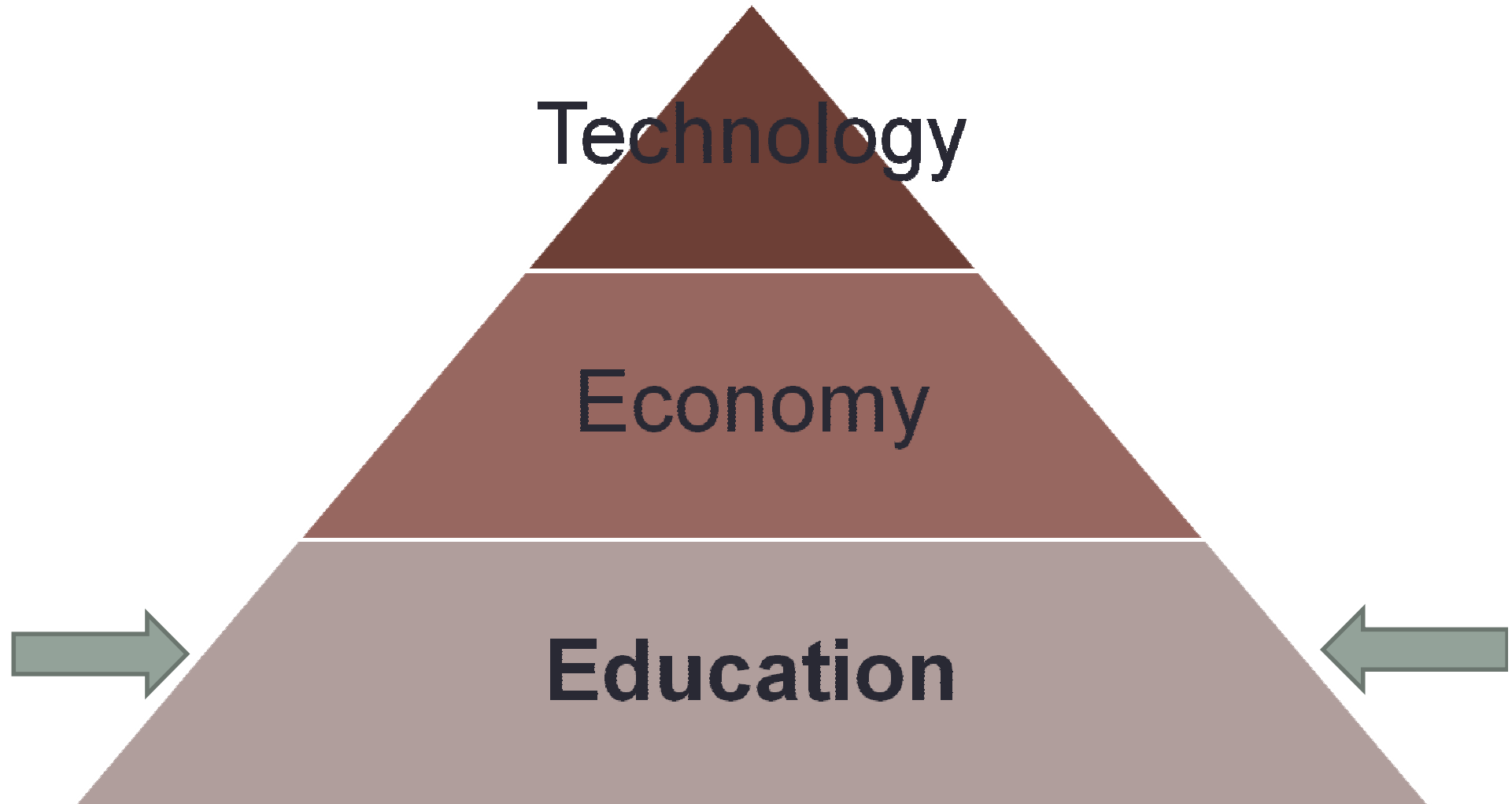
- The main questions that need an answer are :
- ❖ Are non – EU Countries **prepared** to embrace Galileo ?
 - ❖ Which are the criterions used to define the **ready state** ?

The main criterias we should take into consideration are :



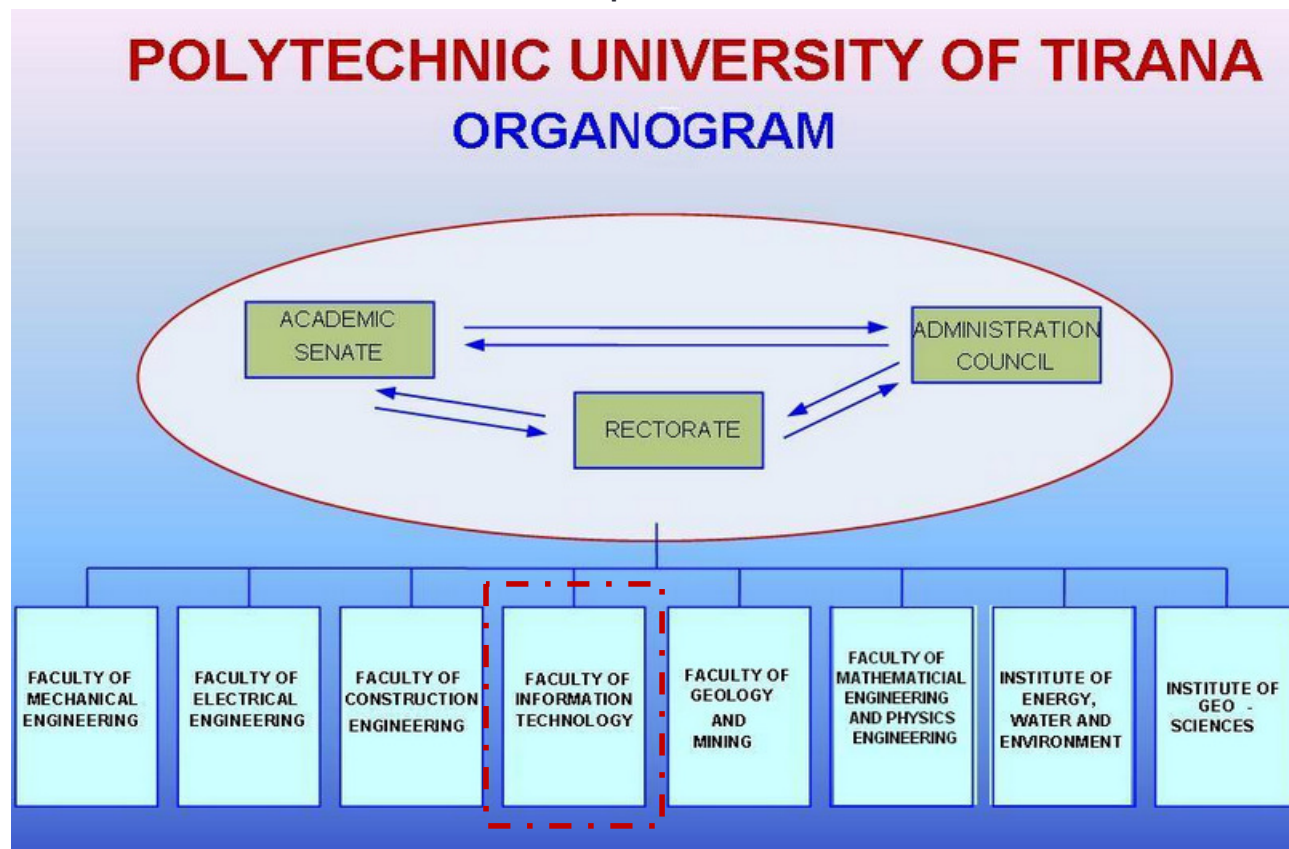
An Introduction to Albania





Polytechnic University of Tirana

- ❖ In 2007, as a result of the reform initiated by the Albanian government for the reformation of the scientific research in Albania, the structure of Polytechnic University of Tirana changed and currently it consists of six Faculties and one Institution of Research and Development.



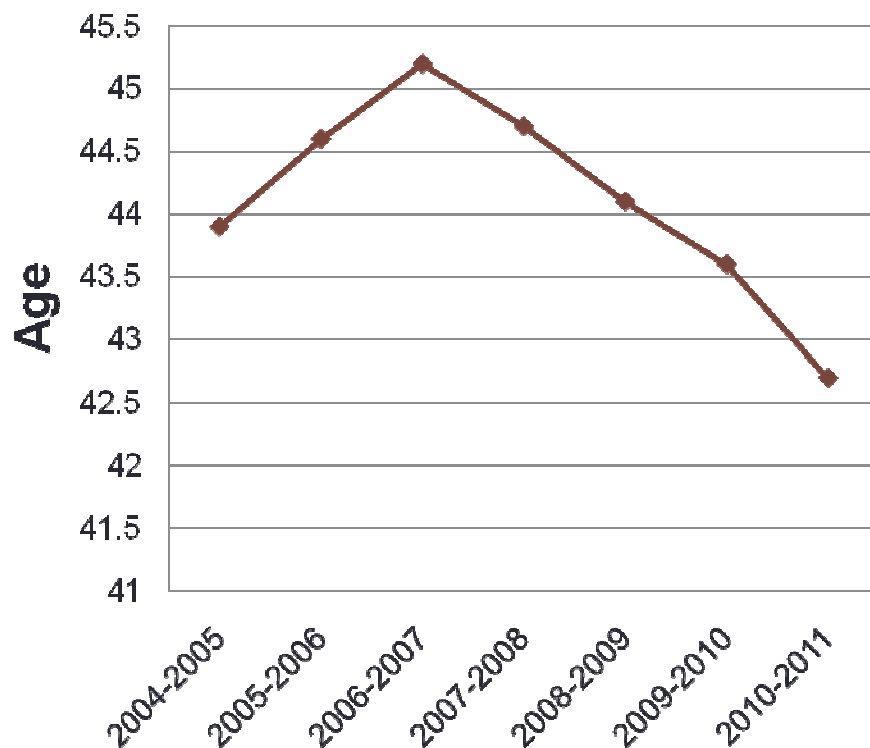


Statistics of PUT

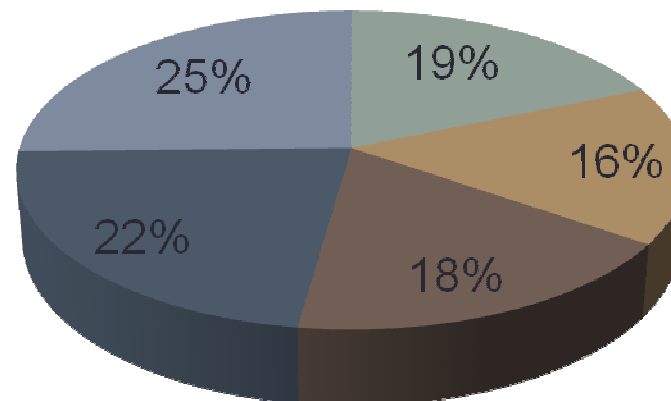


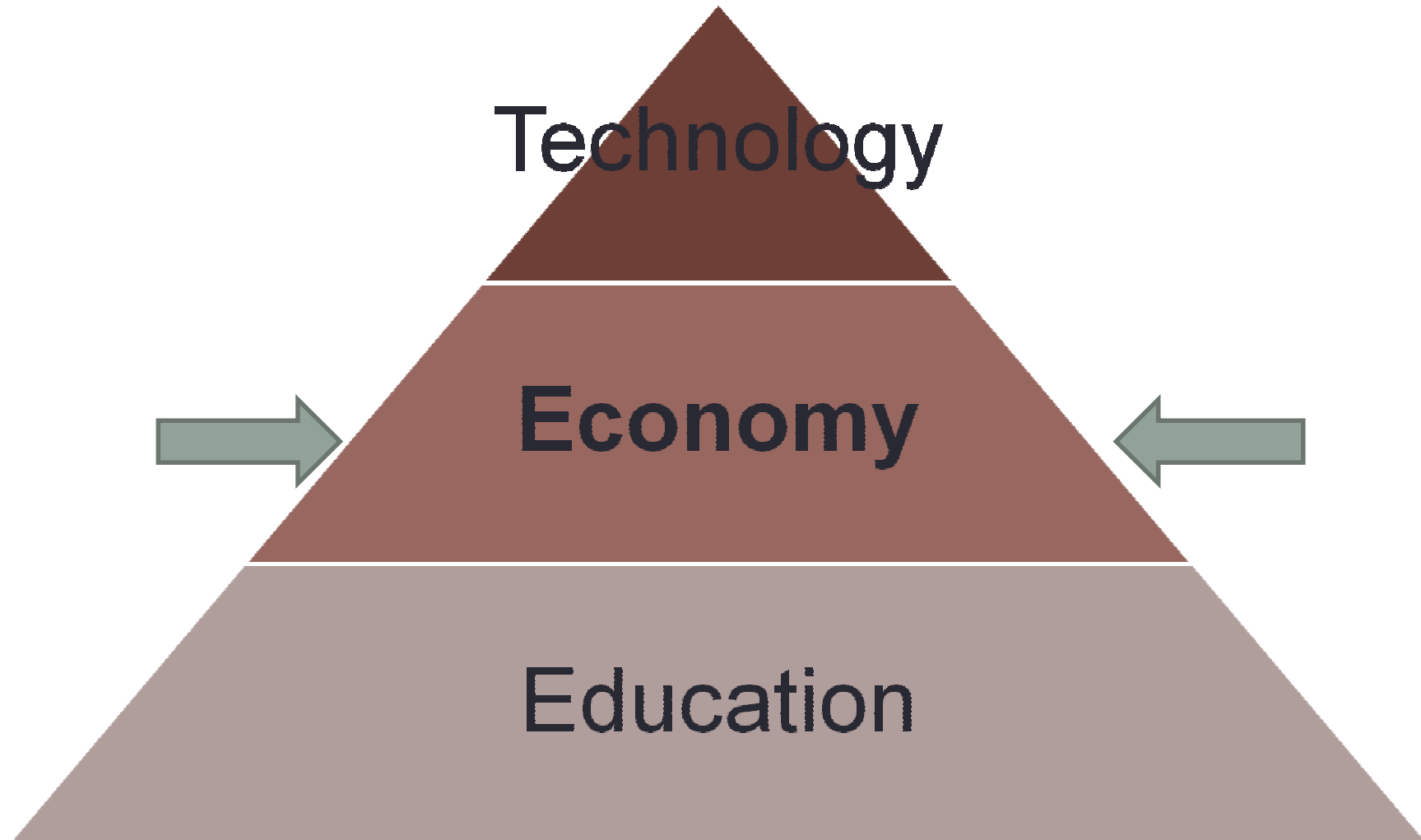
➤ Totally the PUT staff is composed of 344 professors, with an annual increase of 3 % from 2004- 2011.

Average age of PUT 's Academic Staff



- Professors
- Associate Professors
- Doctors
- Pedagogues
- Assistents





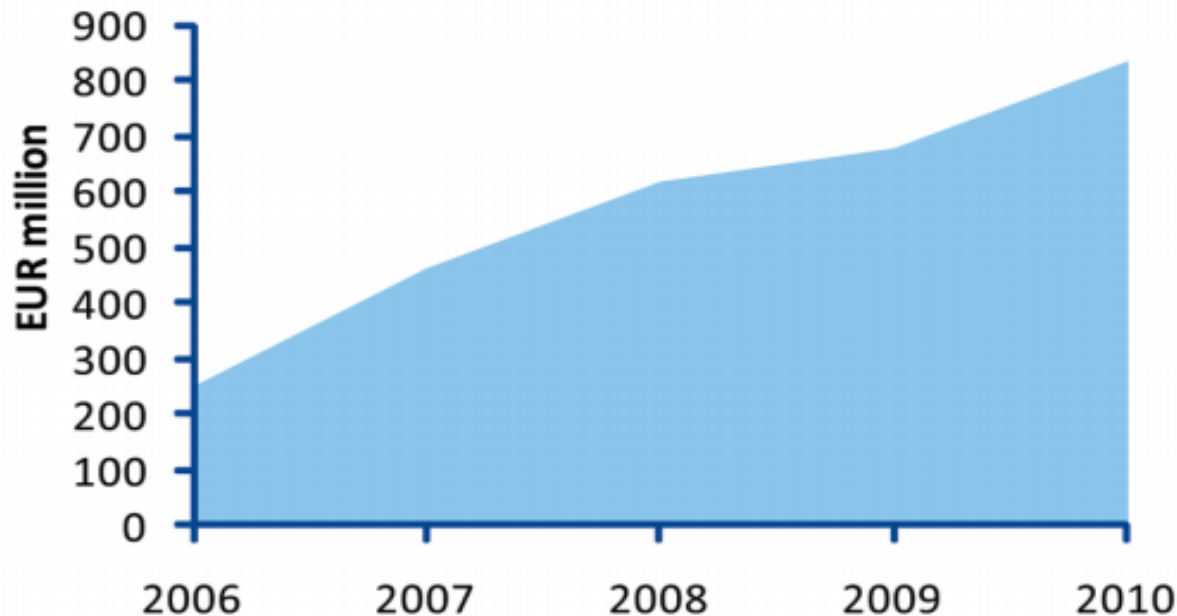
Macroeconomic Trends

	2006	2007	2008	2009	2010
GDP at market prices (ALL billion)	896	980	1,086	1,125	1,180
Real GDP growth (%)	5.4	5.9	7.7	3.3	3.7
Consumer price inflation (average in %)	2.4	2.9	3.4	2.3	3.5
Exports of goods fob (USD million)	793	1,076	1,356	1,048	1,548
Imports of goods fob (USD million)	(2,916)	(3,978)	(4,908)	(4,264)	(4,305)
Current-account balance (USD million)	(671)	(1,212)	(2,048)	(1,845)	(1,404)
Foreign-exchange reserves excl gold (USD million)	1,769	2,104	2,320	2,314	2,470

	2006	2007	2008	2009	2010	Mar-11
in ALL million						
Total revenue	229,444	251,555	291,238	299,502	324,719	77,534
Total expenditure	258,816	285,674	351,492	379,863	362,752	89,311
Deficit	(29,372)	(34,119)	(60,254)	(80,361)	(38,033)	(11,777)

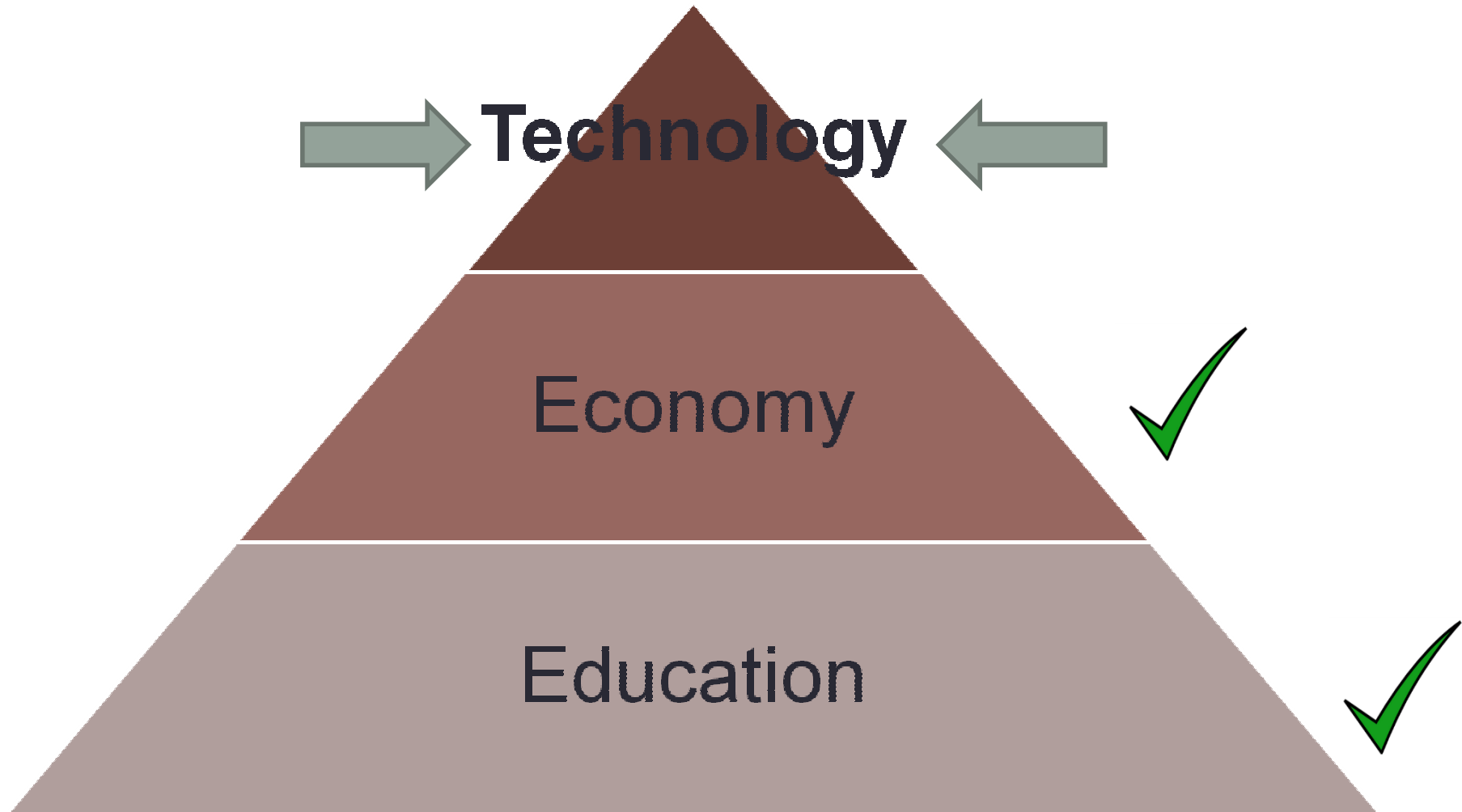
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Foreign direct investment, 2006 - 2010



Source : Bank of Albania

- Despite the global economic crisis, foreign direct investments (FDI) in Albania **increased by 23 percent** during 2010 compared to 2009 reaching a level of EUR 837 million and more than **double** the FDI level in 2006.
- FDI in Albania has mostly been attracted by the various **privatization** initiatives of the Government in sectors such as **banking, energy, and telecommunications**.



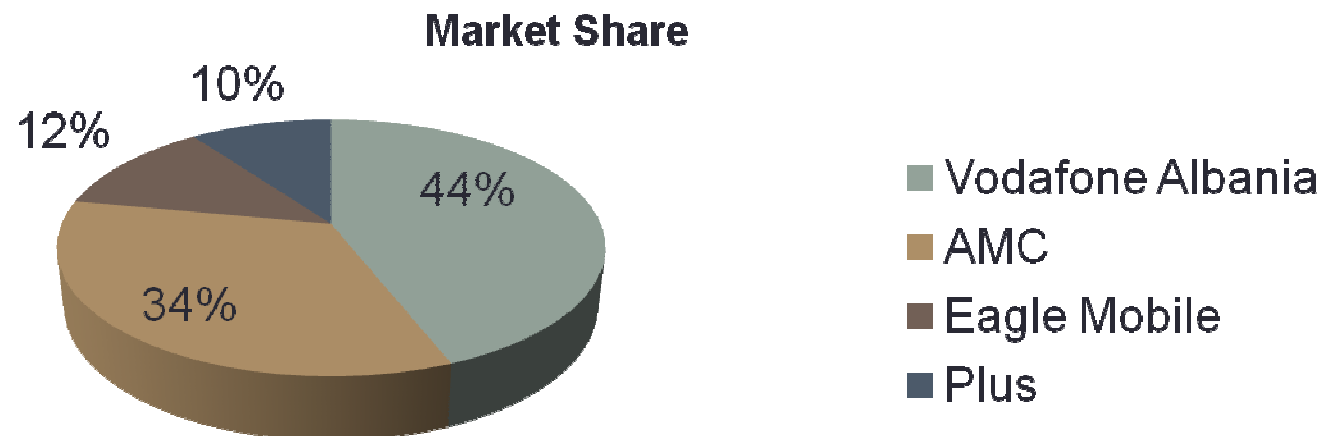
Technology Investments in Albania in the past years

➤ TV Broadcasting

- **Digitalb and Tring TV** are Albanian Digital Satellite and Terrestrial TV platform based in Tirana , operative in HD format from July 2008.

➤ Mobile Telephony

- In the end of 2011, the nr of mobile telephony users reached 4.5 million having a penetration index of 140 % due to an annual increase of 9 %.

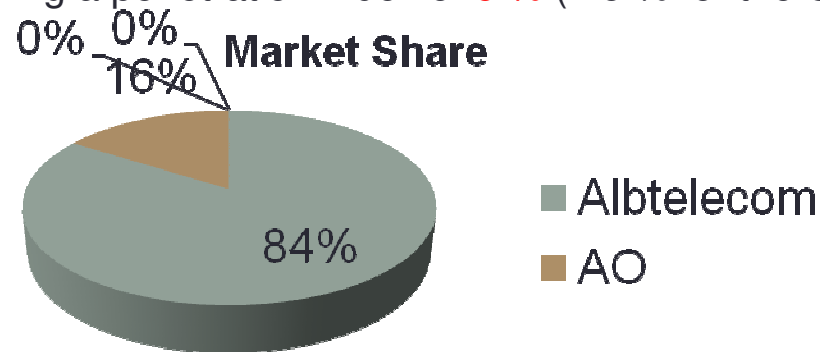


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❖ Fixed Telephony and Internet

❑ Fixed Telephony

In the contrary , the Nr of users in the Fixed Telephony **has not** changed in a significant way as for the Mobile user , having a penetration index of **5 %** (45 % for the UN countries)



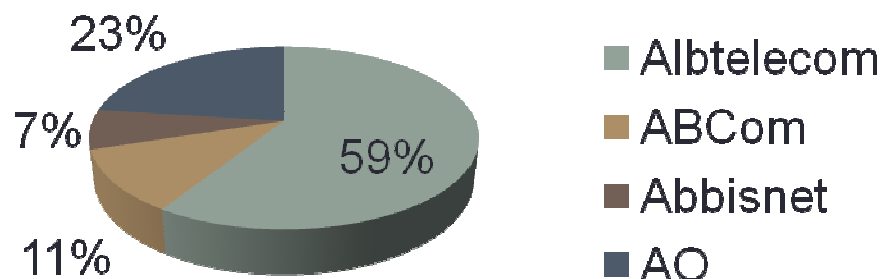
❑ Internet

In the past years some qualitative changes have been noticed in the provision of broadband Internet access due to :

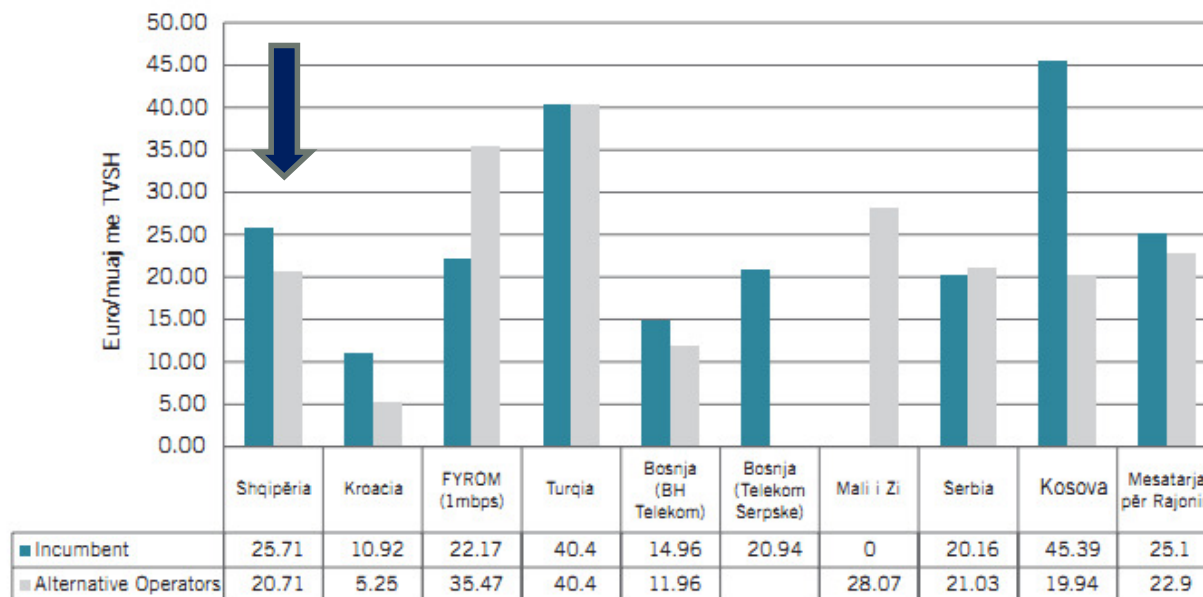
- ✓ **Increase** in speed of the ADSL broadband Internet access from 256 kbps to 20 Mbps.
- ✓ Connectivity with Global Internet has been **increased** from 6 Gbps in the end of 2009 to 14 Gbps in the end of 2010.
- ✓ The offer of combined package : Internet, Telephony and TV.

Internet Evolution in Albania

❖ Market Share of Internet Providers in Albania



❖ Fees Comparison for the basic 2 Mbps broadband Internet access in the Balkan Region



Investments in Aviation

Tirana International Airport (Nënë Tereza) is the only international airport in Albania.

➤ DEG Deutsche Investitions und Entwicklungsgesellschaft and the Albanian-American Enterprise Fund (AAEF) took over the airport for a 20-year concession period, which required an investment of €80m.

➤ In March 2007 Tirana International Airport celebrated the inauguration of its new state-of-the-art passenger terminal having a footprint of about 8,500m³ .



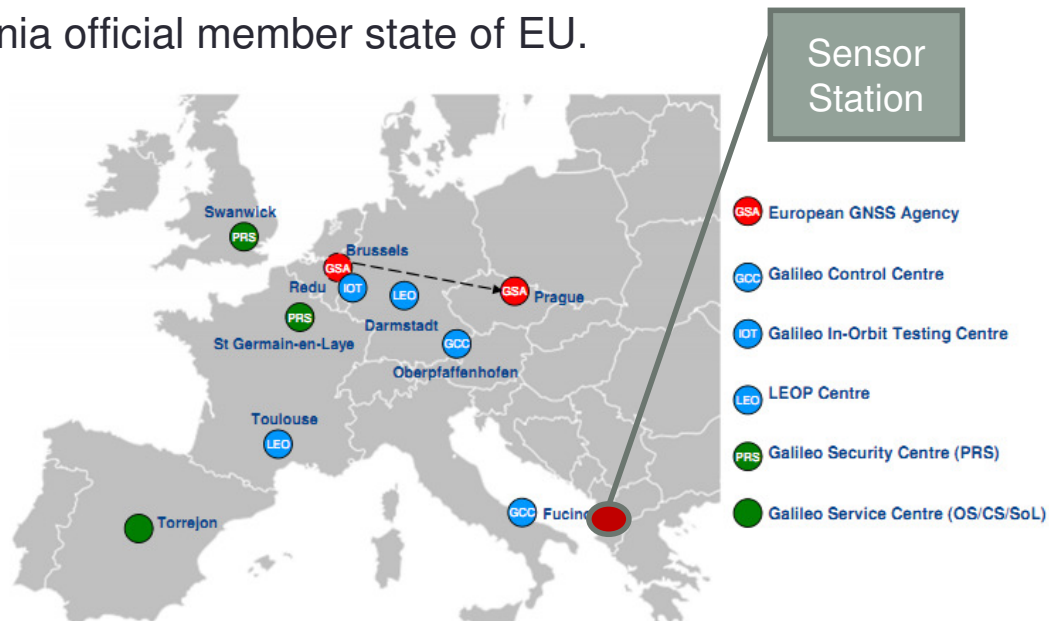
Future

Present

- ✓ 02.08.2000 - Memorandum of Understanding (MOU) agreed between Albania and ICAO.
- ✓ 04.04.2012 - Albania formally a member of NATO.

So the future goals are :

- ❖ Albania formally part of Galileo Project.
- ❖ Albania official member state of EU.



Conclusions

- II Level Specializing Master held by Polytechnic University of Turin , Master of Science in GNSS systems that from next year will be held in ENAC, France and other ESA and UNOOSA Educational Projects are a strong support to this cause BUT STRONGER cooperation with the Industry market is needed.
- The improvement of Albania (and other non-EU countries in Balkan) in Economy and Technology is remarkable.
- Integration in European Commission projects of Galileo will assure the fulfillment of the necessary Economical and Technological constraints imposed by the EU for the future integration of Albania in the ***Big European Family***.

QUESTIONS ???

THANK YOU FOR YOUR ATTENTION !