

The University of Toulouse

Kick Off Meeting - UNIVERSEH

14.12.2020



01

Toulouse

Some key facts

Toulouse - Some Key Facts



- World capital of aeronautics
- European capital of space industry
- Toulouse plays a key role in international space projects such as Galileo, Curiosity (Mars) or Philae ...
- 25% of population are students – Top 3 of best cities for studying
- European capital of Science (European label) in 2018

Other important facts:

Jean Tirole, laureate of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel in 2014

3 UNESCO World Heritage sites

Basic economic aggregates:

Economic growth: +2,9%/year in GDP per capita – in Europe's top 10 urban areas (of more than 1m people)

R&D investment: €5bn/year, 4,8% of GDP– in Europe's top 10 regions (2013)

Toulouse - European Capital of Space



- Satellite imagery (SPOT IMAGE),
- Meteorology (METEO France)
- Oceanography (MERCATOR OCEAN)



AIRBUS



**25% of
European
workforce**

**10,900 jobs
in 400
companies**

**French
National Space
Agency major
site**

**Design et
fabrication de
satellites:
10,000 m² of
clean rooms**

**OneWeb FAL
opened mid
2017 using
Airbus Group
manufacturing
capabilities**

**Exploration of
Mars,
International
Space Station,
Rosetta
mission...**



Toulouse – A large choice of partners and contractors



AERONAUTICS

SPACE

INTELLIGENT
TRANSPORTATION

HEALTH
COSMETICS

DIGITAL

AIRBUS

**Rockwell
Collins**

AR

THALES
AVIONICS

AIRFRANCE **KLM**
INDUSTRIES Engineering & Maintenance

SAFRAN
AEROSPACE · DEFENCE · SECURITY

ThalesAlenia
Space
A Thales / Finmeccanica Company

AIRBUS
DEFENCE & SPACE

HEXCEL

Telespazio
A Finmeccanica/Thales Company

OneWeb

**METEO
FRANCE**

Continental

SIEMENS
MOBILITY

ACTIA

NVO
EASY
MILE

HYPERLOOP
TRANSPORTATION TECHNOLOGIES

VECTOR

EVA
ELECTRIC VEHICLES AUTOMATED

RENAULT
Passion for life

Pierre Fabre

SANOFI

evotec

ab7
group
INVENT THE FUTURE

InvivoGen
Innovation within Reach

CYCLOPHARMA
LABORATOIRES

LUCASMEYER
COSMETICS

CLARIANT

Capgemini
CONSULTING · TECHNOLOGY · OUTSOURCING

OU
assystem

AON

altran
TECHNOLOGIES

CGI

T Systems

Toulouse – A French tech city



- 3000 IT companies / 200+ startups & 78 newly founded since 2014
- 38 000 IT jobs / 1298 startup jobs created since 2014
- 94 startups have raised 414 M€ since 2014 / 11 have raised 185 M€ in 2016
- 6 startups in Deloitte Technology Fast 500 2016 EMEA
- 20 public and private accelerators
- 163 R&D centers
- 20 000 highly qualified students



Internet of Things



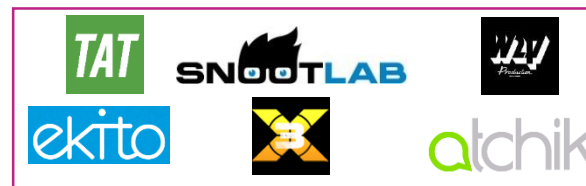
Autonomous Sensing & Systems



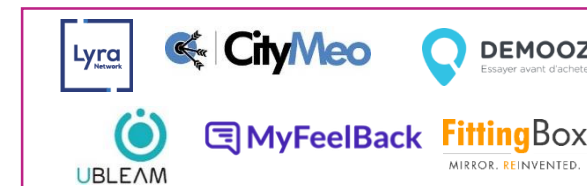
Healthtech / Medtech



Creative Industries



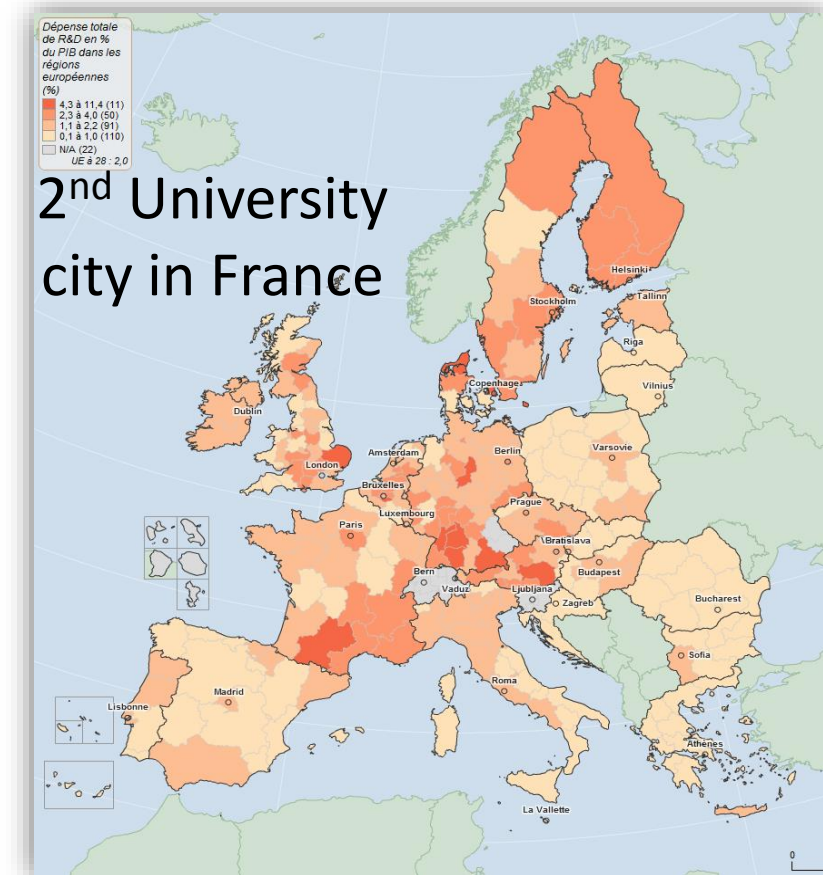
Retail



Toulouse – A top 10 R&D region in Europe



- Midi-Pyrénées / Occitania, 6th most R&D oriented region with expenses totaling 4.8% of GDP (cf. illustration)
- 1st French city for the annual arrival rate of highly educated workers (research and design executives: 6,17 for 1000 jobs; Paris 5,57 - Bordeaux 3,34; INSEE 2013)
- 1st French city in research intensity with 16.2 researchers for 1000 employees
- 1st French region for executives working in R&D: 40%





02

The University of Toulouse

A university system

University of Toulouse - A University system



University of Toulouse is a legal body gathering Higher Education and Research institutions



University of Toulouse - A University system



- University of Toulouse, founded in 1229, is one of the oldest in Europe
- 2nd largest University in France
- European University, LMD system (Bologna process) : Bachelor (L), Master (M), PhD (D)
- Large possibilities of majors: Law, Economy, Management - Humanity & Social Sciences – Arts, Literatures, Languages – Sciences & Technology, Sport - Health

Key facts and numbers :

- 145 Research labs au 15-11-2019
- More than 100 000 students (L 55% M 40% D 5%)
- 14 500 foreign students
- 32 500 degree awarded / year
- 1 500 frame agreements signed with 110 countries
- 1 000 permanent foreign researchers
- Fastly developing Master fully taught in English
- 15 doctoral schools
- 900 PhD thesis awarded each year
- 4 300 PhD candidate
- 8 000 researchers and faculty
- 7 000 staffs

University of Toulouse – A University system



23 higher education member institutions, 1 University Hospital ...



University of Toulouse – A University System

And 7 national research organizations

- National Center for Scientific Research
- National Institute for Agricultural Research
- National Institute of Health and Medical Research
- Research Institute for Development
- The Aerospace Research Center
- Space Studies Research Center
- Center of Meteorology



University of Toulouse – PhD & Doctoral school



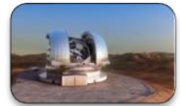
Science and Technology 7 notional research bodies



Biology, Health and Biotechnologies



Ecology, Veterinary, Agronomy,
Bioengineering



Geosciences, Astronomy
and Space Sciences



Mathematics, Informatics, Telecoms



Electrical, Electronics, Engineering



Systems



Physics, Chemistry and
Materials Sciences



Mechanics, Energetics, Civil
and Process Engineering



Aeronautics and Astronautics

Human and Social Sciences



Behavior, Language, Education,
Socialization and Cognition



Arts, Literature, Languages, Philosophy and
Communication



Time, Spaces, Societies, Culture

Economics and Law



Law and Political Sciences



Management Sciences



Toulouse School of Economics

University of Toulouse – Granted excellence programs



ANITI

Artificial and Natural Intelligence Toulouse Institute



- Toulouse supported by the French government to become a leading place for research and innovation related to AI (after a selective call, best ranking with Paris)
- Integrative Institute receiving 25M€ per year to challenge the future of transport/mobility, robots, and economic/social issues related to AI
- Attracting scholars from abroad
- Educating the best students for research and entrepreneurship in AI
- Becoming a central node in the network of AI Institutes in Europe

University of Toulouse – International excellence



Top 50 Shangai “Subjects”

Leading positions in Europe in central topics, as climate change, social sciences, mathematics ...



- 5-WW (1-EU) Remote sensing
- 21-WW (4-EU) Oceanography
- 21-WW (1-EU) Economics
- 31-WW (5-EU) Earth Science
- 42-WW (10-EU) Mathematics
- 45-WW (10-EU) Atmospheric Science



03

The University of Toulouse

Members of the UNIVERSEH

University of Toulouse - Members of UNIVERSEH :



The University Toulouse - Jean Jaurès (UT2J)

- The University Toulouse - Jean Jaurès has a long-standing tradition of Humanities studies. UT2J offers degrees in a broad variety of disciplines, from undergraduate to doctorate level.
- With five departments and four on-site institutes, UT2J has a wide variety of disciplines to offer. In addition, it has many campuses all over the region
 - History, Arts and Archaeology
 - Foreign languages, Literatures and Civilizations
 - Literature, Philosophy and Music
 - Psychology
 - Mathematics and Informatics, Geography and Environment, Education Sciences, Sociology, Economics and Human Sciences



University of Toulouse - Members of UNIVERSEH :



The University Toulouse - Jean Jaurès (UT2J)

- More than 30,000 students
- 4,500 foreign students
- 140 nationalities
- 180 degrees
- 20 libraries
- More than 2000 faculty members
- 461 outgoing exchange students
- 458 incoming exchange students
- 436 Erasmus + agreements
- 122 international agreements (out of Erasmus + program)



University of Toulouse - Members of UNIVERSEH :



The University Toulouse III-Paul Sabatier (UT3)

- The name of the university pays homage to Paul Sabatier, a scientist born in Carcassonne in 1854. Nobel Prize winner in chemistry in 1912, Paul Sabatier was Dean of the Faculty of Sciences in Toulouse and a member of the Academy of Sciences.
- Officially born in 1969 from the merger of the faculties of medicine, pharmacy and science.
- The diversity of its laboratories and the quality of its training in science, health, sport, technology and engineering have ensured its scientific influence for more than 50 years and place it among the world's leading universities.
- 6 components :
 - Faculty of Dental Surgery
 - Purpan Faculty of Medicine
 - Rangueil Faculty of Medicine
 - Faculty of Sports and Human Movement Sciences
 - Faculty of Pharmaceutical Sciences
 - Faculty of Science and Engineering

University of Toulouse - Members of UNIVERSEH :



The University Toulouse III-Paul Sabatier (UT3)

- 4 institutes
 - IUT Paul Sabatier
 - IUT Tarbes
 - Midi Pyrenees Observatory
- 1 Engineering College UPSSITECH
- 68 research structures on its campus
- 35 000 students
 - 213 incoming exchange students (Erasmus + program)
 - 523 outgoing exchange students (Erasmus + program)
 - 74 outgoing exchange students (out of Erasmus + program)
- Continuing education
 - 8171 learners
- Apprenticeship program (2017-2018)
 - 29 degree apprenticeships
 - 430 apprentices
 - 648 trainees with a professional training contract

University of Toulouse - Members of UNIVERSEH :



The Toulouse National Polytechnic Institute (Toulouse INP)

- Created in 1969, the Toulouse National Polytechnic Institute (Toulouse INP) is a university federating 17 labs and 6 engineering schools (French Graduate Schools): ENSAT, ENSEEIHT, ENSIACET, ENIT, ENM and PURPAN.
- It offers master's degree and PhD programs with specializations in Energy, Climate, Digitalization, Materials, Agronomy, Agribusiness and Environment. 8 masters are fully taught in English.
- The engineering schools of Toulouse INP have a strong research activity focusing on issues with high societal and economic impact concerning various fields. Thanks to a proactive policy, the research activity is also important for companies, as demonstrated by the national ranking in terms of research partnerships between companies and engineering schools: Toulouse INP is ranked in the top 5 in France.
- Toulouse INP gets more than 500 partner companies and develop strong links with the business and corporate world. The close relation with the industry is indeed at the heart of our Education and Research.

University of Toulouse - Members of UNIVERSEH :



The Toulouse National Polytechnic Institute (Toulouse INP)

Faculty :

- 6 engineering schools
- 6600 students (including 500 PhD students)
- 23 % foreign students
- More than 100 different nationalities
- 1500 staff.

Research :

- 17 labs
- 670 teachers researchers
- 150 PhDs delivered each year, 45% foreign students



University of Toulouse - Members of UNIVERSEH :

The ISAE-SUPAERO Institute (Institut Supérieur de l'Aéronautique et de l'Espace)



- Founding member of the ISAE Group, ISAE-SUPAERO is a world leader in higher education for aerospace engineering.
 - For over one hundred years, SUPAERO has been educating students to have the most advanced scientific and engineering skills, helping the aeronautics and space industry to anticipate and adapt to the latest scientific, economic and social changes.
 - With its extensive range of over 33 degree and educational programs, backed by research-driven teaching and close collaboration with industry, ISAE-SUPAERO answers the constantly evolving needs of the aerospace sector.
 - The institute delivers a unique, complete range of top level science and engineering degree programs
 - Training highly qualified in aeronautics and space
 - Innovation-driven research to answer technological and industrial challenges
 - Renowned alumni in aerospace sector : Thomas Pesquet, Jean-François Clervoy, Henri Coanda, Pierre Satre, Roger Bataille, Charles Champion, Marcel Bidaud, Serge Dassault, Jacqueline Cohen-Bacrie,...
- In the current selection of European Space Agency (ESA) astronauts, 3 out of 6 are ISAE-SUPAERO graduates : Thomas Pesquet, Samantha Cristoforetti and Luca Parmitano



University of Toulouse - Members of UNIVERSEH :



The ISAE-SUPAERO Institute (Institut Supérieur de l'Aéronautique et de l'Espace)

- Research areas :
 - Advanced aerodynamics and propulsion
 - Behavior of materials and structural dynamics
 - Image sensors in radiation environments
 - Signal processing, antennas and optronics systems
 - Planetary exploration
 - Complex system engineering
 - Communication network optimization
 - Design and operation of aerospace vehicles
 - Neuro-ergonomics and human factors for flight security
- Over 1700 students
- 66 nationalities
- 40 % international students
- 1100 engineering students
- 400 students in Masters and Advanced Master's programs
- 225 doctoral students 32 % international students
- 15 Advanced Masters
- 6 Doctoral programs

University of Toulouse - Members of UNIVERSEH :



The ISAE-SUPAERO Institute (Institut Supérieur de l'Aéronautique et de l'Espace)

- Active participation in international networks, academic and industrial partnerships
 - PEGASUS: the European network of 25 aeronautics and space universities in aerospace engineering from 10 countries.
 - TIME - Top Industrial Managers for Europe - a network of 53 members from 20 countries
 - The Airbus Group University Partner Program (AGUPP): a strategic network that connects the Airbus Group partner universities around the world.
- 93 partner universities in 23 countries on four continents



University of Toulouse - Members of UNIVERSEH :

The Toulouse Business School TBS



- The school was founded in 1903 and stretches over 5 campuses in Toulouse, Paris, Barcelona, Casablanca, and London.
- The quality of the TBS management programs and the excellence of its faculty and research activities have been awarded the highest international accreditations (AACSB, AMBA and EQUIS), which are recognized by universities and companies across the globe.
- All TBS study programs include undergraduate programs (Bachelor Program), Master programs (Master in Management, Grande Ecole) and postgraduate programs (Executive MBA, Aerospace MBA, DBA) as well as a choice of Master in Science programs, such as Auditing, Banking, Finance, Sustainable Development, Logistics, Tourism, Law, Health, Aviation, Marketing, Entrepreneurship, HR, and much more. In addition, the TBS offers specific training programs in Business Management for executives.
- BS Business School is also the only business school with a comprehensive training program in the aerospace sector, with a highly specific Aerospace MBA, an exclusive SIRIUS Research Chair for law and management activities in the space sector and dual degrees with the National School of Civil Aviation (ENAC) for the Bachelor and Master in Management programs.

University of Toulouse - Members of UNIVERSEH :

The Toulouse Business School TBS



- 5,600 students > 25% of which are international
- more than 46,000 alumni across 63 chapters on 5 continents
- TBS also includes the Toulouse Business School Foundation , which funds research programs and helps promote social and cultural diversity. Since its creation in 2008, more than 200 scholarships have been distributed to TBS students.
- 10th ranking of Business Schools en France
- 4 campuses and over 200 partner universities worldwide
- 115 research-professors to boost your career



THANK YOU

