



invest in tuscanY

Invest in Pisa
Invest in Intelligence - ICT

Municipality of Pisa

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Le ali alle tue idee

- The area of **Pisa** in **Tuscany** offers companies in the ICT sector the opportunity to engage in a **unique environment**, which provides:
 - the ability to recruit highly qualified **skills**,
 - **partnership** opportunities with universities and research centres that are recognised world-wide,
 - support **services** and suitable **premises** to facilitate their establishment,
- in a **location**
 - competitive in terms of **costs**,
 - with easy **accessibility**, and
 - renowned for its **quality of life**.

- The area of **Pisa** in Tuscany, is an ideal **location** for **activities** in:
 - Research & Development, Design
 - Software Development
 - Technical Support
 - Customer Relationship Management
 - Shared Service Centre
 - Training
 - Data Centre

Invest in Pisa

Competences



Region Toscana



Le ali alle tue idee

Competences



- **Pisa** constitutes the heart of the **second basin of employment** in Tuscany, after Florence, with 180,000 active jobs to which one can add the 75,000 of the nearby area of Livorno
- The **quality profile** of the number of jobs is high, with 17% having a **high degree of study** in Tuscany (for 11% of the regional population)
- The Pisa University centre shows the highest regional concentration of graduates with degrees in scientific subjects, in particular with 60% of graduates in **Engineering & ICT**
- At the national level, this represents 2.2 % of graduates, but with 3.4 % of graduates in **Engineering**, 4.6 % in the **field of General Sciences** and 23% in the field of **Defence and Security**



Le all'alle tue idee

Competences



Sciences	Graduates - Pisa	% Pisa/Italy	% Tuscany/Italy
Total	6,762	2.2 %	6.0 %
Engineering	1,232	3.4 %	5.5 %
Scientific	379	4.6 %	7.7 %
Defence & Security	136	23.3 %	23.3 %
Chemical-Pharmaceutical	289	3.4 %	7.3 %
Medicine	883	2.8 %	8.0 %
Agrarian	192	3.3 %	7.6 %
Geo-Biological	389	2.8 %	7.3 %

Source: MIUR (2015 – data 2013)



Le ali alle tue idee

- Pisa enjoys a **university and research system** of excellence that is recognised worldwide - with prominent positions in various international rankings:
 - Academic Ranking of World Universities (ARWU, Shanghai Jiao Tong University), QS World University Rankings, Times Higher Education World University Rankings ...
- built around the **University of Pisa** (founded in 1343), the **Scuola Normale Superiore** (1810) and the **Scuola Superiore Sant'Anna** (1987), and important research centres among which are the centres of the **CNR** Research Area of Pisa and the CRT of **ENEL**
- in particular, in the fields of Mathematics, Engineering, Computer Science, Electronics and Robotics ...

Rankings (1)



- In the ranking of Shanghai Jiao Tong University, the **Academic Ranking of World Universities (2014)**
 - the **University of Pisa** ranks: between the 150th and 200th place in the world
 - between the 76th and 100th place in Mathematics (1st in Italy) and between the 101st and 150th place for Physics
 - the **Scuola Normale Superiore di Pisa** ranks: in the top 400 worldwide
 - between the 101st and 150th place for Mathematics and Physics
- In the **Times Higher Education** ranking World University Ranking (2014)
 - the **Scuola Normale Superiore Pisa** ranks: 63rd in the world, 1st in Italy
 - the **University of Pisa** ranks: 301st-350th in the world, 10th in Italy



Rankings (2)



- In the **QS** (Quacquarelli Symonds) ranking World University Ranking (2014)
 - the **University of Pisa** ranks: 245th in the world, the only Italian university classified as "QS Stars" (4 *)
 - Between the 100th and 150th place in:
 - Computer Science & Information Systems
 - Mathematics
 - Between the 150th and 200th in:
 - Statistics & Operational Research
 - Engineering – Electrical & Electronic
 - Between the 200th and 250th in:
 - Engineering & Technology...



Le ali alle tue idee

Students & graduates (1)



- The **University of Pisa** has (2013/14):
- **50,363 members**, of which:
 - 574 are in Mathematics; 1,272 in Computer Science; 3,599 in Information Engineering; 2,042 in Engineering in Energy, Systems, Territory and Construction; 5,060 in Civil and Industrial Engineering
- **6,238 graduates**, 207 PhDs, 333 Master's degree graduates and 355 second-level Master's degree graduates
 - 102 in Mathematics
 - 102 in Computer Science,
 - 528 in Information Engineering
 - 258 in Engineering in Energy, Systems, Territory and Construction
 - 620 in Civil and Industrial Engineering



Le all alle tue idee

- **Degree - Engineering**
 - Computer Engineering
 - Embedded Computing Systems
 - Telecommunication Engineering
 - Electronic Engineering
 - Robotics and Automation Engineering
- **Degree – Mathematical, Physical and Natural Sciences**
 - Computer Science
 - Computer Science and Networking
 - Business Informatics
 - Humanistic Informatics
 - Mathematics
- **Master – 1st level**
 - Mobile Applications Development
 - Tourism & ICT
- **Master – 2nd level**
 - Big Data Analytics & Social Mining
 - Smart cities
- **Doctoral Programmes**
 - Mathematics
 - Information Engineering (Electronics & Telecommunications)

Students & graduates (2)



- The **Scuola Superiore Sant'Anna** (2013/14) has:
- 110 Tutors, 31 in disciplines related to ICT & Engineering
- 800 Students undergoing university and post-graduate studies
 - 282 Undergraduate students, 342 PhD students, 62 graduates per year
 - Undergraduate Programmes:
 - Industrial and Information Engineering: 65 students (21 graduates)
 - Post-graduate Programmes (only in English):
 - MD Computer Science & Networking: 47 (9) ;
 - MD Embedded Computing System: 16 (N/A);
 - GM Computer Science & Technology 10 (1)
 - PhD:
 - Emerging Digital Technologies: 35;
 - Biorobotics: 90 ; Innovative Technologies: 16



Le ali alle tue idee

Students & graduates (3)



- The **Scuola Normale Superiore** (2014/15) has:
- 504 Students
 - 278 Undergraduate students, 226 graduate students
 - Mathematics, Physics and Natural Sciences
- 52 Undergraduate students who gained their Bachelor's degree (2013/14)
 - 31 in the Sciences class
- 43 PhD students who gained their Doctorate (2013/14)
 - 15 in the Sciences class, with:
 - Mathematics
 - Financial Mathematics
 - Physics ...



Le ali alle tue idee

Invest in Pisa

Partnerships



Region Toscana



Le ali alle tue idee

- The area of Pisa has a **concentration** of **expertise** and **research networks** among the highest in Italy and in Europe
- **Public research** alone has more than 3,000 **researchers**
- **Collaborates** with the most important and prestigious companies in the world - including in ICT:
 - AMD, Google, IBM, Intel, Microsoft, Samsung, ST, Yahoo! ...
- It is also the source of many **start-up** companies with activity always strongly orientated to applied research, development and design of new processes, products and services
 - BioBeats, JOS Technology, Kiunsys, NetResults ...
- Has also attracted market leaders to develop R&D activities
 - Ask/InterActiveCorp, ENEL, Ericsson, Tiscali ...

- The **university system** of Pisa is strongly developed in activities of **research**
- **University of Pisa**
 - 1,800 Researchers, 270 laboratories
- **Scuola Superiore S. Anna in Pisa**
 - 110 Professors and researchers, 251 research fellows and 147 research collaborators, 6 research institutes
- **Scuola Normale Superiore of Pisa**
 - 170+ Employees engaged in research activities, including 58 researchers, 12 research centres and laboratories

- The **University of Pisa** has:
- 1,800 researchers, 270 laboratories
- 40 laboratories dedicated to ICT, 2 Reference Departments
- EUR20m/year on research expenditure, 48% funded by companies
- **Department of Computer Science:**
 - 60 professors and researchers, 43 PhD students , 13 post-doctorates
- **Department of Information Engineering:**
 - 81 professors and researchers, 74 PhD students, 31 post-doctorates
- In the 7th European Framework Programme (FP7 - 2007-2013), the University participated in 56 European research projects:
 - 4 as Co-ordinator, 42 as partner, 10, as "third party"
- Had 40+ spin-offs in the last 10 years

- **Computer Science:**
 - Computational Intelligence and Machine Learning
 - Operations Research
 - Knowledge Discovery and Data Mining
 - Multimedia
 - Modelling, simulation and verification of Biological Systems
 - Advanced Algorithms and Applications
 - Numerical Analysis
 - Parallel Programming Models
- **Information Engineering:**
 - Computational Intelligence
 - Calculator Networks
 - Pervasive Computing & Networking
- **Electronics:**
 - Microelectronics
 - Microsystems and Sensors
 - Nanoelectronics
- **Telecommunications:**
 - Telecommunication Networks - photonic and wireless networks
 - Transmission Systems
 - Remote sensing and signal and image processing

University of Pisa - Partners



Le ali alle tue idee

- The **Scuola Superiore S. Anna** in **Pisa** has:
- 110 Professors and researchers, 251 research fellows and 147 research collaborators
- EUR14 million on research expenditure, 500+ active projects with a self-financing capacity equal to 95%
- 6 Research institutes, of which in ICT: the **TeCIP** centre (**Communication, Information and Perception Technologies**) - with 29 professors and researchers, 63 research fellows and 3 areas:
 - Communications, with the Integrated Research Centre for Photonic Networks and Technologies and **Ericsson** Research Branch Italy
 - Embedded Systems
 - Perceptual Robotics

- The **Scuola Normale Superiore** of Pisa has:
- 170+ Employees engaged in research activities (58 researchers)
- EUR2.5 million in research expenditure
- Research centres, of which in Mathematics:
 - **Ennio De Giorgi Mathematical Research Centre & Fibonacci Laboratory** (partnership with the CNRS, France)
- Research Groups, of which in Mathematics & Computer Science:
 - Complex Analysis and Analytical Geometry, Harmonic Analysis, Calculus of Variations and Geometric Measure Theory, Infinite Dimension Analysis, Diophantine Geometry, Algebraic Geometry, Quantitative Finance, Dynamical Systems

- The **CNR Research Area of Pisa** (National Research Council) has 1,100 employees and 13 research institutes, of which 4 are in the area of ICT & Electronics
- Institute of **Informatics and Telematics**
 - 47 Researchers and technologists, 12 associates, 46 research fellows ..
 - Ubiquitous Internet; Security, Reliability, and Privacy for the Internet of the Future; Algorithms and Computational Mathematics; Web Technologies for the Internet of the future, Taxonomies, Thesauri and Classification Systems
- Institute of **Computational Linguistics**
 - 20 Researchers and technologists, 5 associates, 14 research fellows ...
 - Automatic Processing of Text and Computational Philology; Natural Language Processing and Knowledge Extraction; Resources, Standards, and Infrastructure; Computational Models of Language Processing

- Institute of **Information Science and Technology "A. Faedo"**
 - 102 Researchers and technologists, 53 associates, 92 research fellows ...
 - Networking (Domotics, Internet Services Technology, Wireless Networks); Software (Formal Methods & Tools, Software Engineering & Dependable Computing, System & Software Evaluation); Knowledge (Human Interfaces in Information Systems, Networked Multimedia Information Systems, Knowledge Discovery & Data Mining); Visual & High Performance Computing (High Performance Computing, Signals & Images, Visual Computing Laboratory); Flight & Structural Mechanics
- **National Institute of Optics (INO)**
 - 17 Researchers and technologists in the Pisa headquarters
 - Optics, Photonics and Plasmas

Invest in Pisa

Economic Fabric

- The area of **Pisa** is an important **production centre** for the Tuscan economy, second only to Florence
- With a strong specialisation in the sector of **light vehicles** - with a world leader, Piaggio (3,000 employees) - and in **pharmaceuticals** - with Baxter, Guidotti (Menarini Group), Abiogen Pharma, Farmigea, Laboratori Baldacci ... ,
- Reference sites for large international groups such as Continental (auto parts, 1,000 employees - with an R&D centre) or Saint-Gobain (glass, 300+ employees)
- ... And in the city of Pisa, a significant concentration of activities in research, development, technical support ... linked to **Information and Communication technologies**

- Pisa, the top Tuscan Province for numerous companies in ICT, has seen the birth of and has attracted many **leading Italian and International companies** in the various **segments of ICT**
- Software:
 - Acta, Apparound, Aspen Technology, Insurance Online, ION Trading, List Group, PC System...
- Digital content & media:
 - Biobeats, Italiaoline, Tiscali - istella, Synthema...
- Electronics/Microelectronics:
 - AMS, Dialog Semiconductor, Ericsson, Maxim Integrated
- Consultancy services in Technology and Information Technology
 - Altran, Aruba, Exis, Extra, Sysdat.it , Tea Sistemi, Team Duemila, TD Group...

- Altran (technology consulting & outsourced research)
- Apparound (software - CPQ/Configure, price & quote)
- Aspen Technology (software for process industries)
- AMS/Austriamicrosystems (microelectronics - sensors)
- Dialog Semiconductor (microelectronics - semiconductors)
- Ericsson (Electronics - photonics)
- Italiaonline/Libero (digital media)
- ION Trading (software - fintech)
- Maxim Integrated (microelectronics - semiconductors)
- Unique Lights (electronics - LED)
- Vodafone (telecommunications)

- Aruba - Exentrica (computer services - security)
- Extra (computer services)
- Sysdat.it (consultancy, IT services and solutions)
- TD Group (computer services)
- Exis (computer services for Oil & Gas)
- Tea Sistemi (engineering & software for Oil & Gas)
- Insurance Online (software - fintech)
- List (software - fintech)
- PC System (enterprise management software)
- Synthema (computational linguistics)
- Tiscali (digital media - search engine "istella")
- Acta (software - industrial and nuclear security)
- BioBeats (digital media - e-health)
- Erre Quadro (software - IP)
- IngeniArs (software and electronics - space, telemedicine, vehicles, energy)
- Kiunsys (software and electronics - mobility/Smart City)
- NetResults (telecommunications - components/network equipment)
- Witech (telecommunications - wireless)
- QB Robotics (robotics - Natural Motion™ engines)
- Marwan Technology (optics - laser)
- PlasmaTech (optics - laser)
- JOS Technology (electrical systems)

ICT - Companies - References



Company	Sector/Activity	Origin
Altran	Technology Consulting & R&D outsourced	France
Apparound	CPQ Software (R&D -design)	Italy/USA
Aruba	IT services - dataservices (technical support)	Italy
Aspen Technology	Software for manufacturing	USA
AMS	Microelectronics (R&D - design & testing)	Austria
Dialog Semiconductor	Microelectronics (R&D)	Germany
Ericsson	Electronics (R&D)	Sweden
ION Trading	Fintech (R&D)	Germany
Italiaonline	Digital media	Italy/Egypt
List	Fintech (R&D)	Italy (Pisa)
Maxim Integrated	Microelectronics (R&D - design)	USA
Sysdat.it	Software (R&D)	Italy (Pisa)
TD Group	Enterprise Management Software (R&D)	Italy (Pisa)
Tiscali	Telecommunications - Digital media (R&D)	Italy
WiTech - Cloud4Wi	Telecommunications (R&D)	Italy/USA



Le ali alle tue idee

- Tuscany has the **F.O.R.T.I.S. "Technological District"**, which is an organisation of clusters in the ICT & Electronics sectors:
 - Photonics, Optoelectronics, Robotics, Telecommunications, ICT and Space
- It brings together **more than 700 companies** - representing 27,000 employees - and the University system and research
- The cluster is supported by the Regione Toscana

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Operating Costs



Region Toscana



Le ali alle tue idee

Costs



- **Pisa** is a competitive location in terms of **operating costs**
- The **cost of labour** in Tuscany is, in fact, lower than the Italian average (CNEL, data 2012)
 - it is the lowest of the 11 regions of central and northern Italy
 - the cost of labour in Lombardy and Lazio is 10% higher
- Office rental fees are also moderate
 - EUR120/sqm/year on average (108/156 – data: OCO Global, 2015)
 - against: EUR425/sqm/year in Rome and EUR475/sqm/year in Milan (Cushman & Wakefield, 2014)



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Labour - Cost



Region	Compensation of employees per unit of employment	Index 100 = Tuscany
Piedmont	41,005.1	108.2
Liguria	39,892.6	105.2
Lombardy	43,139.5	113.8
Trentino Alto Adige / South Tyrol	40,893.2	107.9
Veneto	39,335.3	103.7
Friuli-Venezia Giulia	40,790.5	107.6
Emilia-Romagna	39,585.5	104.4
Tuscany	37,914.8	100.0
Lazio	42,539.2	112.2

Source: CNEL (2015, data for 2012)



Le ali alle tue idee

- **Cittadella Galileana – Pisa** (available end 2015)
 - 15 offices of 30 sqm – EUR330/month
 - 6 offices of 150 sqm – EUR1,650/month
- **Polo di Attività Montacchiello – Pisa** (Forti Holding)
 - 5,000 sqm of offices under construction - with an "LEED" Gold standard (6 000 sqm of offices already occupied – 50+ companies, 1,000 employees)
- **Pont-Tech Incubator – Pontedera / CERFITT**, Research and Training Centre for Innovation and Technology Transfer
 - Incubator, Accelerator, Virtual Office
- **Polo Tecnologico del Navacchio Incubator**
 - 10 000+ sqm of spaces for businesses and start-ups
 - Incubator: 20 modules, over 1,200 square metres

Invest in Pisa

Accessibility

- **Pisa** has an excellent **transport** infrastructure which facilitates accessibility to the city
 - an **international airport** in proximity (less than 5 km from the centre of the city of Pisa),
The main airport in Tuscany and one of the top 10 in Italy
 - with daily air connections to London (5/day), Paris (2/day), Brussels Charleroi (1/day)... and Rome (3/day)
 - another international airport in Florence, 1h30 from Pisa
 - **railway links** with connections of less than:
3 hours from Rome and 3 1/2 hours from Milan (and 1 hour from Florence)
 - a **network of motorways** which provide easy access to other major Italian cities: Milan, Rome, Turin, Venice...

- **Flight connections**

- **"Galileo Galilei" airport of Pisa** , main airport in Tuscany is among the top 10 in Italy for passenger traffic (1.5 km from the city)
 - 4,683,811 passengers (2014 - an increase of 4.6 %)
 - **regular flights to main Italian and European cities**
 - London, Paris, Munich, Berlin, Amsterdam, Charleroi, Madrid, Barcelona, Valencia, Dublin, Istanbul ...
 - Rome, Cagliari, Palermo, Catania, Bari ...
 - **seasonal flights to New York (USA) and to many other European cities**
 - proximity to the city centre, railway link to Pisa station
- **"Amerigo Vespucci" airport of Florence** (85 km)
 - 2,251,994 passengers (2014)

- **Railway Network**

- main station in the centre of the city
- **direct** connections with other **Tuscan and Italy cities**
 - Florence (1h/ 1h15min), Livorno (15-20 min)...
 - Rome (2h30/2h50) , Genoa (1h45/2h15), Turin (4h/4h15)...
- connections through **high speed** train to Milan (3h10/3h20), Bologna, Venice, Rome, Naples ... - via Florence

- **Motorway Network**

- **North-South** motorways:
 - A12-E80 Genoa-Pisa-Livorno + Civitavecchia-Rome
 - A15-E33 La-Spezia-Parma + A1-E35 Parma-Milan
- **East-West** motorway :
 - A11-E76 – Pisa-Florence

Accessibility - Flights



From Pisa	Flight Duration	Frequency
London (G+H+S)	2H15	5+/day
Paris (B+O)	1H40	2/day
Brussels-Charleroi	1H50	1+/day
Madrid	2H25	1/day
Amsterdam	1H55	3/week
Frankfurt (H)	1H40	3/week
Malta	1H15	2/week
Istanbul	2H40	4/week
Rome	1H00	3+/day
Bari	1H25	1+/day

Source: Pisa Airport (Winter 2014-15)

From Florence	Flight Duration	Frequency
London (G+C)	2h20	3/day
Paris (CDG+O)	1h40	6/day
Brussels	2h00	1/day
Munich	1h15	3/day
Amsterdam	2h15	2/day
Frankfurt	1h40	3/day
Zurich	1h20	3+/day
Geneva	1h15	1-/day
Rome	0h50	3/day
Catania	1h30	1/day

Source: Florence Airport (Winter 2014-15)



Le ali alle tue idee

Accessibility - Terrestrial (rail/road)



City	Hours of travel	Frequency
Florence	1h00/1h15	50/day
Rome FB/IC	2h30/3h30	8/day
Rome R+AV	2h30/3h20	25+ /day
Milan IC	4h00/4h10	8/day
Milan R+AV	3h10/3h20	20+ /day
Turin FB/IC	3h50/4h15	2/day
Genoa FB/IC	1h45/2h30	14/day
Bologna R+AV	2h05/2h20	20+ /day
Venice	3h10/3h40	18/day
Naples R+AV	3h40/4h20	18/day

Source: Trenitalia (2015)

City	Distance (km)	Hours
Milan	285	3h10
Rome	345	3h55
Florence	100	1h30
Turin	335	3h45
Venice	350	3h55
Bologna	185	2h25
Genoa	165	2h25
Trento	395	4h00
Naples	550	5h30
Bari	785	7h30

Source: Mappy (2015)



Le ali alle tue idee

Invest in Pisa

Quality of life



Region Toscana



Le ali alle tue idee

- **Pisa** can boast of a **quality of life** that is renowned worldwide, which allows companies to attract and retain key skills for business
- Possesses an extraordinary historical, cultural, artistic, and architectural **urban heritage** and a great diversity of **landscapes**, sea and land ... which make it one of the top tourist destinations in Italy and Europe
- Benefits from a preserved **environment** and a high quality of air
- Pisa ultimately presents an attractive **cost of living** with **rental** fees that are significantly lower than those of Milan or Rome
 - In Tuscany, EUR628 on average, as opposed to EUR838 in Milan and EUR875 in Rome

Invest in Pisa

Support Services



Region Toscana



Le ali alle tue idee

- The **Municipality of Pisa** - in collaboration with **Regione Toscana** and its agency **Toscana Promozione** - offers free information, contacts and assistance for the establishment and development of new companies in the region
 - **information** on the region, sector, infrastructure, operating costs ...
 - **contact** with qualified service providers (lawyers, accountants etc.), universities and research centres
 - **assistance** in the search for offices/co-working spaces ... , incentives for R&D, recruitment of qualified personnel ...

- Besides Galileo Galilei...
 - Enrico Fermi, Nobel Prize in Physics (1938)
 - CEP (Pisan Electronic Calculator), first Italian electronic calculator (1957-1961)
 - 1st Degree programme in Computer Science in Italy (1969)
 - Enrico Bombieri, Fields Medal (1974)
 - Carlo Rubbia, Nobel Prize in Physics (1984)
 - Ennio de Giorgi, Wolf Prize (1990)
 - Guido Tonelli, Fundamental Physics Prize (2012)...

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