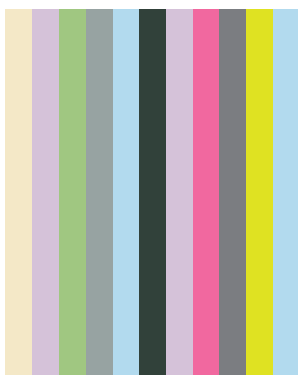


POLO TECNOLOGICO

REPORT 2010

An overview
POLO TECNOLOGICO DI NAVACCHIO



Report 2010
An overview
POLO TECNOLOGICO DI NAVACCHIO

3rd June, 2011

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BACKGROUND

This review of the features and performance of the companies of Polo Tecnologico di Navacchio (PTN), as detailed below, concerns the situation in 2010 and offers some comparisons with 2009 as well. The purpose of the report, which is based on such figures, is to offer an exhaustive picture of the actual conditions of the companies that have settled at PTN.

It is the seventh published report, intended to look into the companies that work at PTN; this year, the report was drawn up by the Istituto di Management of Scuola Superiore Sant'Anna, in particular by a workgroup coordinated by Andrea Piccaluga and composed of Francesca Lazzeri and Alessandra Patrono.

This report provides information about the companies that have settled and are incubated at PTN. Specifically, the incubated companies are start-up companies, which may use the facilities provided by the PTN incubator (training area, meeting rooms, auditorium, etc) as well as the wide range of services that PTN provides to support and assist such companies in the first three years of their life. In return for the incubator's services, such companies pay a fixed monthly fee for the duration of the incubation, with the fee increasing over the three year period. Over the last seven years, PTN has intensified such work, promoting the establishment of many innovative start-up companies, with increasingly significant results in terms of companies started up and in the adjustment and updating of its incubation services.

The settled companies are instead those that have outgrown their start-up phase and have settled at PTN, a facility that is well equipped to achieve ever-increasing economies of scale in the management of its services – structural and added-value ones – and aims at promoting cooperation and partnerships between PTN and the companies, as well as between its companies, and between its companies and the research centres.

The previous year's report did not make a distinction between the two groups: however, whenever appropriate, we thought it would be useful to show the differences between the two groups, in order to appreciate the effect that a longer stay at PTN and using its services has on the companies' performance.

In addition, the Incubation section deals in detail with the service started by PTN in 2003 in support of new, high-tech start-up companies.

The last section of the Report 2010 actually reviews the results achieved by PTN as an incubator (to assess its effectiveness based on the client companies' performance) and provides a comparative analysis between the start-up companies and the companies settled at PTN.

FIGURES

SUMMARY OF FIGURES ABOUT THE COMPANIES AT POLO TECNOLOGICO DI NAVACCHIO (PTN)

The figures used in this Report were collected through a special questionnaire (structured and semi-structured answers), which was delivered to the PTN companies in 2010. ⁽¹⁾

The questionnaire included questions about:

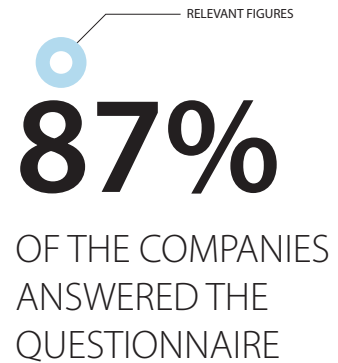
- company's ID details and general information;
- employees;
- turnover;
- partnerships between PTN companies or between companies, universities and research centres;
- source of innovation input and patents;
- forms of funding;
- training requirements.

1 - Note that different companies answered different questions of the questionnaire, so the sample may differ, depending on the reviewed section.

This diagram summarises the statistics for 2009 and 2010 about the number of interviewed PTN companies, the number of companies at PTN, the new companies (incubated and settled), and the companies' overall turnover and number of employees.

As of December 2010, 62 companies were at PTN, and 54 of them, i.e. 87%, answered the questionnaire, the rate of answers being slightly lower than the previous year's 92%.

The percentage of new companies incubated and settled at PTN over the years is also interesting. In 2009, 8 new companies joined PTN, with 7 new incubated companies, i.e. 50% of the total number of incubated companies as of 31.12.2009, and a new settled company, i.e. 2% of the total number of settled companies (not including incubated companies) as of 21.12.2009. In 2010, 4 new incubated companies settled at PTN, i.e. 25% of the total number of incubated companies as of 21.12.2010;



FIGURES ABOUT INTERVIEWED COMPANIES AT PTN

	2009	2010
Number of companies at PTN	63	62
New companies among them	8	5
Number of respondent companies	56	54
Overall turnover	81 mil. €	137.9 mil. €
Average turnover	1.4 mil. €	2.5 mil. €
Number of employees (total)	567	587
Number of employees (average)	9	9,5



RELEVANT FIGURES

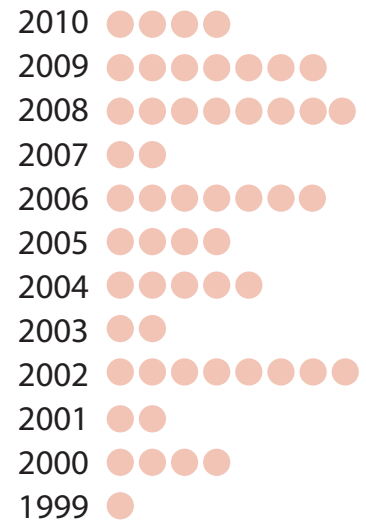
INCUBATED COMPANIES PREFER TO STAY AT PTN EVEN AT LATER STAGES OF THEIR LIFE

one new company settled in (i.e. 2.2% of the total number of settled companies as of 31.12.2010). This suggests that the PTN incubated companies, which have probably built more or less structured relations with the other companies over the years and which use the services available at PTN, prefer to stay at PTN even at later stages of their life. This emphasises one of the distinctive features of PTN, i.e. the chance to establish partnerships between the companies that work there, in a setting that tends to make it easier to find effective answers to the companies' requirements.

If we look at the last 5 years (2006-2010), based on the respondent companies only, 17 new companies settled at PTN, i.e. 33.3% of the total number of settled companies (not including incubated companies) as of 31.12.2010. From 1999 to 2005, 26 new companies settled at PTN, i.e. 66.7 of the total number of companies at PTN as of 31.12.2010.

The following diagram shows the total number of companies (settled and incubated) at PTN each year.

DISTRIBUTION OF COMPANIES (SETTLED AND INCUBATED) AT PTN EACH YEAR



RELEVANT FIGURES

62

COMPANIES
AT PTN

AREAS OF BUSINESS

In 2010, the most widely represented line of business at PTN was ICT, which has always featured heavily in all Italian incubators and parks and which is obviously typical of the local area (Pisa), with 26 companies, i.e. 42% of respondents. This is followed by the service sector, with 17 companies (27%),

which usually includes very varied companies, then the energy and environment sector, which, with 8 companies, i.e. 13% of the total, is maybe the most interesting and influential new area of employment in the last few years. The robotics industry is represented by 4 companies, telecommunication by 3, micro-electronics by 2, biomedicine by one, and research by one.

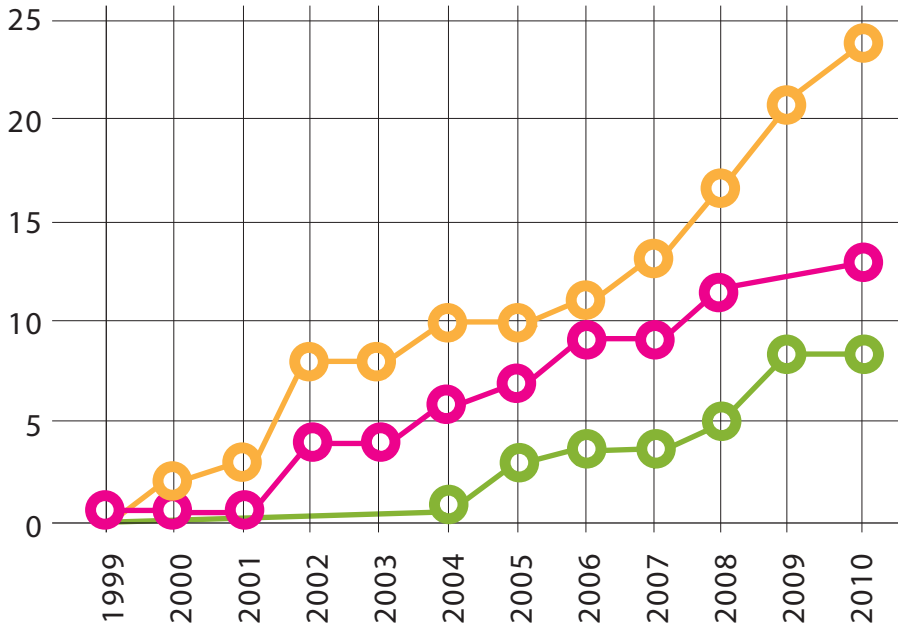
The diagram below lists the numbers of settled companies by line of business and clearly shows the role played by the ICT industry, which has been steeply growing, especially since 2007, in the general business scenario.

No. 26 in ICT	42%
No. 17 in services %	27%
No. 8 in energy and environment	13%
No. 4 in robotics	6.5%
No. 3 in TLC	4.8%
No. 2 in micro-electronics	3.2%
No. 1 in biomedicine	1.6%
No. 1 in research	1.6%

AREAS OF BUSINESS
OF THE PTN
RESPONDENT
COMPANIES



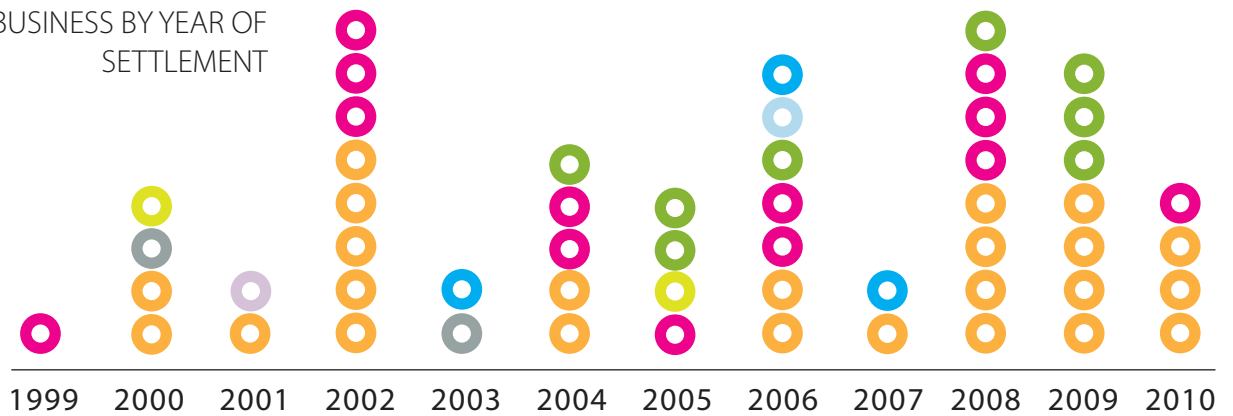
The other two relevant areas of business in the “portfolio” of PTN companies are services, and energy and environment, while the numbers of the other lines of business are basically steady.



SETTLED COMPANIES, CUMULATIVE VALUES FOR: ICT, SERVICES, ENERGY AND ENVIRONMENT

- ICT ●
- Services ●
- Energy and environment ●
- TLC ●
- Robotics ●
- Micro-electronics ●
- Biomedicine ●
- Research ●

RESPONDENTS AREA OF BUSINESS BY YEAR OF SETTLEMENT



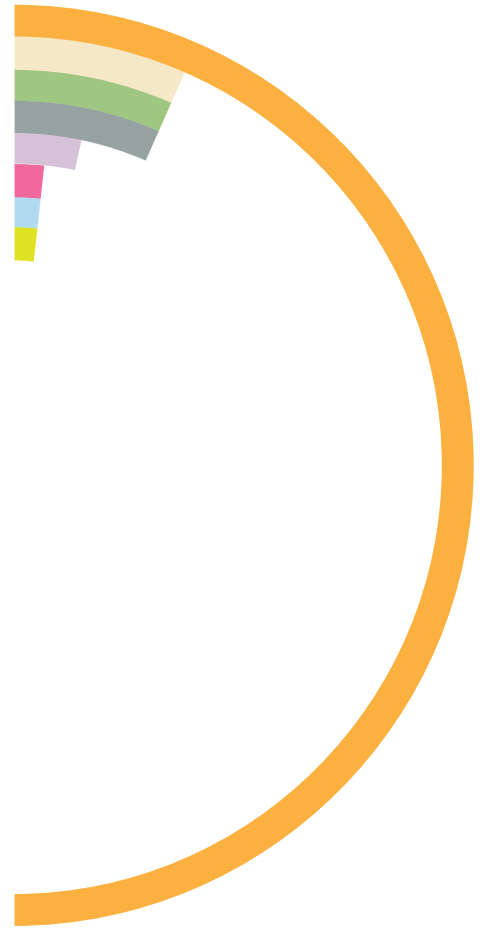
THE COMPANIES' LEGAL STATUS

In terms of legal status, most respondents were companies (not partnerships), i.e. 79.6% of the total, with 86% of them being limited companies.

This diagram summarises the percentages of the respondent companies' legal status.

SRL – Limited company	68.5%
SPA – Joint-Stock company	7.4%
Associations	7.4%
Sole-proprietor firms	7.4%
SNC – General Partnership	3.7%
APS – Public service company	1.8%
SCARL – Limited Cooperative	1.8%
AG	1.8%

LEGAL STATUS



EMPLOYEES

RELEVANT FIGURES

587
OCCUPATI

RELEVANT FIGURES

+9.8%

INCREASE IN
NUMBER OF
EMPLOYEES IN THE
PTN COMPANIES IN
2009 AND 2010

COMPANIES' EMPLOYEES

As mentioned, a total number of 555 employees worked for the respondent PTN companies in 2010; there are exactly 587⁽²⁾ in all of the 62 companies settled at PTN, equal to an average size of 9.5 employees per company, which is 4.4% up from the year before, when the total number of employees in the PTN companies was 567 units and the overall number of PTN companies was 63 (9 employees each on average).

If we take just the companies that were at PTN in both years to assess changes in the companies' employees, based on available information, such change turns out to be 9.8% based on 50 companies.

DATI RILEVANTI

+ TURNOVER

+ JOBS

In the surveyed period, the average size of the settled companies remained steady at 10.2 in both periods, based on all companies settled at PTN in both periods. The size of the incubated companies (usually smaller, as more recently incorporated) rose, instead, from 5.3 to 6.8 employees. Therefore, the above-mentioned rise in turnover occurred while the average number of employees was also rising.

The table below summarises the average size of all PTN companies, showing the difference between the average size of the PTN settled companies and the average size of the PTN incubated companies.

AVERAGE SIZE OF PTN COMPANIES

2009

2010

Average number of employees	9	9,5
Average number of employees (settled companies only)	10.2	10.2
Average number of employees (incubated companies only)	5.3	6.8

2 - One company claimed to have 60 employees in 2009 and 45 in 2010. The 60 employees of 2010 were the result of the addition of 30 employees working at PTN and 30 at its Milan's premises. The 45 employees of 2010 are just the employees working at PTN. The total number, if we add the employees working at the Milan's premises as well, is 92.

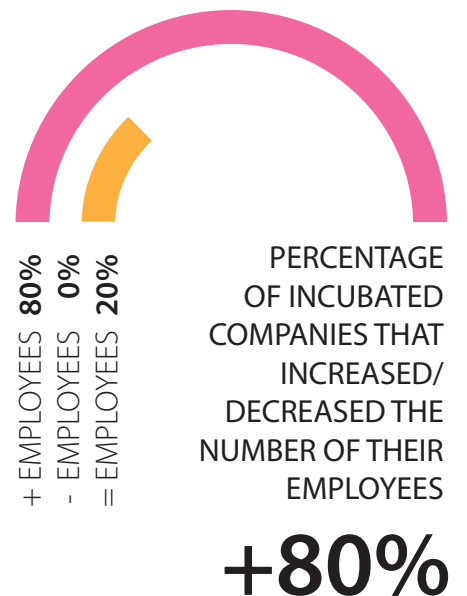
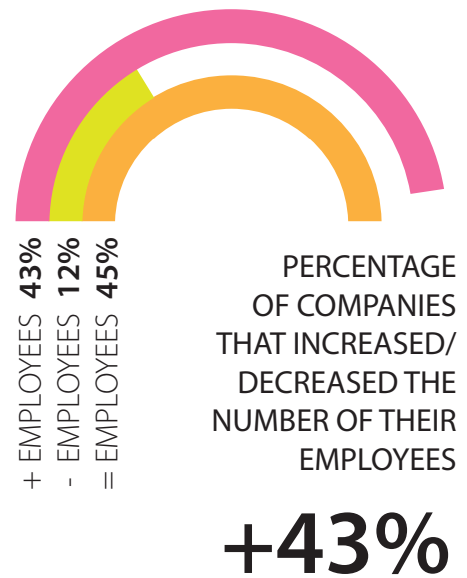
It is obviously interesting to look at the companies' size as well. The table below suggests, first and foremost, that about two thirds of the PTN companies have less than ten employees, about one quarter of them have between 11 and 30 employees, and nearly 10% of the companies have over 30 employees. Because Italian high-tech companies are usually fairly small, these are quite substantial companies, especially if we consider that the group of companies with over 30 employees rose from 4.7% to 9.2% of the total from 2009 to 2010. The table below shows the respondent companies' size.

DISTRIBUTION OF PTN COMPANIES BY SIZE

	2009	2010
Up to 10 employees	66.6%	65.4%
11 to 30 employees	31.6%	26.9%
Over 30 employees	4.7%	9.2%

In particular, as to changes in the number of employees in the PTN companies, 20 companies, i.e. 43% of respondents, increased the number of their employees, 6 companies (12%) decreased the number of their employees, and 21 companies (45%) kept the same number of employees. It is worth noticing, then, that over 40% of the companies increased the number of their employees in a business climate that was certainly not easy for the economy as a whole.

If we take the incubated PTN companies only, we see that 12 companies, i.e. 80% of the incubated companies, increased the number of their employees; 2 companies, i.e. 20%, did not change; no company reduced the number of its employees.



EMPLOYEES' QUALIFICATIONS AND JOB DESCRIPTIONS

As to the kind of staff working at PTN, the ratio of men to women did not change from last year. In 2010, the percentage of men was 71.3% (versus 28.7% women) compared with 69% and 31% the year before, respectively. As a matter of fact, as most companies work in high-tech businesses, and because more women now attend scientific-technological degree courses, an increase in the percentage of women working at PTN should be a goal to be pursued, not just by the companies but by the entire local economic system, maybe through

specific labour and family policies. As to the employees' average age, it rose by 2.7 years, from 32.7 in 2009 to 35.4 in 2010.

Regarding contracts, in 2010 46% of the employees had a permanent job (compared with 45.7% in 2009). The percentage of working partners is 16.2% of the total number of employees; 18.8% of them have a permanent job. In 2009 the percentage of working partners was 14% of the total number of employees, with 3.4% of them having a permanent job.



46%

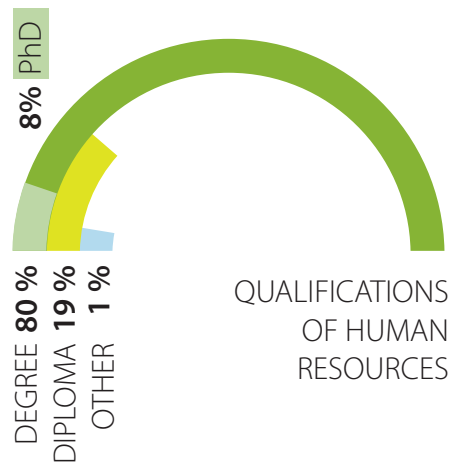
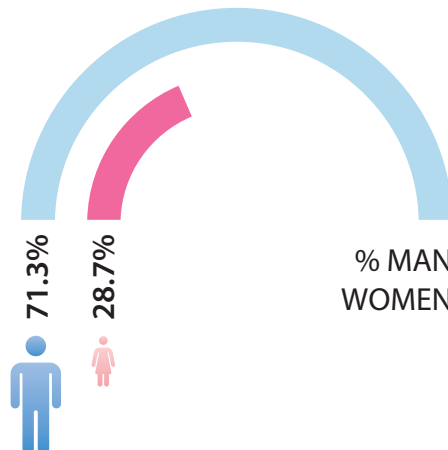
HAVE A PERMANENT JOB

Obviously, the PTN companies employ highly-skilled human resources. 80% of the employees have at least a degree (8% also have a PhD) and 19% have a diploma. Most graduates studied at the University of Pisa (which does not mean necessarily that they are from the province of Pisa or from Tuscany).



35.4

IS THE EMPLOYEES' AVERAGE AGE



RELEVANT FIGURES



90.5%

OF GRADUATES COME FROM THE UNIVERSITY OF PISA



PTN STAFF'S JOB DESCRIPTIONS

Now, let us look at the job descriptions and at any differences between 2009 and 2010.

In 2010, 23% of the employees were engaged in R&D jobs, and, if we add the technical staff (20%) and the design staff (17%) as well, then the percentage of employees involved in scientific-technological jobs is 60%. This figure instantly shows the type of staff working at PTN daily. In addition, the percentage of people involved in such jobs has slightly risen from 2009, when

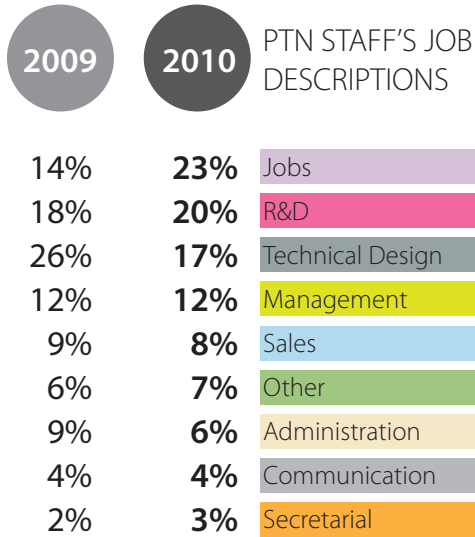
RELEVANT FIGURES



60%

WORK IN SCIENTIFIC JOBS

they were 58%. 12% of the staff work in management, approximately the same as in 2009. Sales (8%), communication (4%) and secretarial (3%) staff are also approximately the same as in 2009. Administrative staff have instead slightly decreased from 9% to 6%.



55.5% of the respondent companies stated they are planning to hire more staff in 2011 up to a total number of over 80 units and an average rise of 2.6 people. The technical area is the one in which the companies think they will invest most in terms of human resources; the most interesting professionals, as listed by the companies, are those working in R&D (preferred by 63.3% of the companies), which confirms what we said before about these companies being mainly prone to invest in highly-skilled, technical professionals (20%). In particular, they are expressly looking for software

developers. In 2009 the percentage of companies that planned to increase their size was 58.9%.

The table below shows the percentage of companies that plan to hire more staff by job description.

Planned rise in staff by job description (percentages of companies that plan to hire more staff)

	2009	2010
R&S	75.7%	63.3%
Sales	45.4%	38.3%
Design	30.3%	33.3%
Technical	48.8%	20%
Secretarial	6%	10%
Communication	21.2%	6.6%
Administration	15.1%	6.6%
Technical – Production	-	6.6%
Other	12.1%	3.3%
Management	6%	-

RELEVANT FIGURES



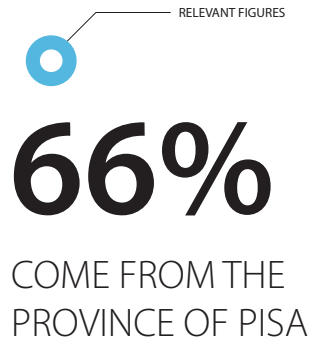
55.5%

OF THE COMPANIES
PLAN TO HIRE MORE
STAFF IN 2011

+80

UNITS

LA PREVISIONE DI CRESCITA
OCCUPAZIONALE NELLE DIVERSE
AREE FUNZIONALI
*(percentuali di imprese che prevedono
aumenti dell'organico)*



WHERE THE EMPLOYEES COME FROM AND LIVE

A review of the table below shows that, in 2010, 66% of the employees of the PTN companies came from the Province of Pisa; to be precise, as many as 30% of such employees came from the City of Pisa, 13% from Cascina and 23% from other areas in the Province of Pisa.

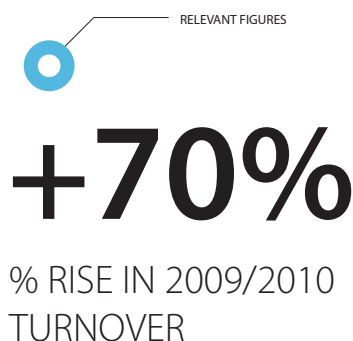
In addition, if we look into the group from Tuscany (other than the Province of Pisa), we see that 23% of the employees of the PTN companies are originally from Tuscany but do not come from the City of Pisa. Interestingly, the number of employees from Tuscany who are not native of Pisa has slightly increased from 2009 to 2010.

As to the other birthplaces, in 2009, 10% of the employees came from outside Tuscany, while in 2010 they accounted for 11%, meaning that the number of employees from other regions has slightly increased. In addition, a review of the places such employees come from showed a decrease in the number of employees from Cascina (-2%) and Pisa (-3%), while more employees come from other areas of the Province of Pisa (+3%), from outside the Province of Pisa (+1%), and from other regions (+1%).

WHERE THE EMPLOYEES OF THE PTN COMPANIES COME FROM

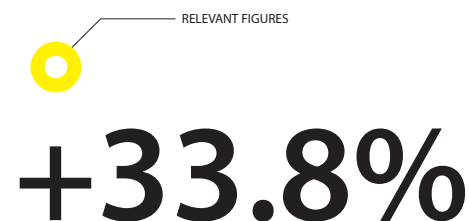


TURNOVER



IL FATTURATO REALIZZATO DALLE IMPRESE

Come anticipato nel capitolo iniziale, il valore del **fatturato complessivo** delle imprese rispondenti nel 2009 è stato pari a 81 milioni di Euro, mentre **nel 2010 è stato di 137,9 milioni³**. Il valore totale del fatturato medio nel 2009 è stato pari a 1,4 milioni di Euro, mentre nel 2010 è stato di 2,7 milioni. In realtà su questi dati incide notevolmente il fatturato di una sola grande impresa, senza la quale il fatturato medio delle imprese del PTN risulterebbe, nel 2010, pari a **660 mila Euro**, comunque in aumento rispetto ai 571 mila del 2009.

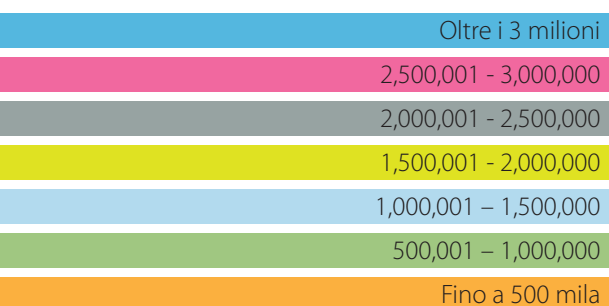


CRESCITA MEDIA

In generale, sono ovviamente le imprese più grandi che incidono molto sul fatturato complessivo e su quello medio delle imprese del PTN. In particolare, **sono 4, pari all'8% del totale, le imprese che fatturano più di 3 milioni di Euro; 13 quelle che fatturano tra i 500 mila e i 2 milioni di Euro, mentre ben 33 imprese fatturano meno di 500 mila**, situazione abbastanza tipica per imprese giovani.

Pur tuttavia, considerando le sole imprese per le quali si dispone del dato del fatturato in entrambi i periodi di riferimento ed escludendo il dato della grande impresa, la variazione del fatturato complessivo rispetto all'anno 2009 evidenzia una **crescita del 33,8%**.

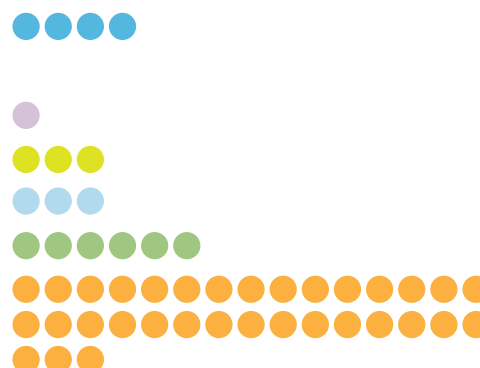
PTN COMPANIES' TURNOVER



2009

2010

NUMBER OF COMPANIES IN 2010



³ - In 2009, the companies' overall turnover (including one big company that experienced an exceptional rise) was 81 million, while the overall turnover without the big company was 32 million. In 2010, the companies' overall turnover, including the big company, was 137.9 million, while the overall turnover without the big company was 32.9 million. In 2009, the average turnover, including the big company, was 1.4 million, while the average overall turnover without the big company was 571 thousand euros. In 2010, the average turnover, including the big company, was 2.7 million euros, while the average overall turnover without the big company was approximately 660 thousand euros.

THE PTN COMPANIES'
RISE IN TURNOVER OVER
THE YEARS

137,978,480	2010
81,018,081	2009
56,051,728	2008
29,748,098	2007
23,169,798	2006



RELEVANT FIGURES

137,978,480
2010 TURNOVER

PARTNERSHIPS



276

INTRA-PTN AND OTHER PARTNERSHIPS



41 NEW PRODUCTS

35 NEW SERVICES

22 NEW PROCESSES

TOTAL RESULTS OF PARTNERSHIPS

Partnerships have come to be the propeller of the effectiveness of the purpose served by PTN and one of the main reasons the companies decide to settle there. Here, we will separately look into the figures of the partnerships between the PTN companies, partnerships between PTN and non-PTN companies, and partnerships between the PTN companies and the research centres.

INTRA-PTN PARTNERSHIPS

The percentage of companies that partnered with other PTN companies is 59.2% of the total. In particular, in 2010 there were 91 partnerships (11% up from 2009), with 19 involving the incubated companies. Out of the total number of partnerships, 69.2% were for supplies, 17.5% for R&D projects and 7.6% for other work (5.7% of the companies did not state what such partnerships were about).

Such intra-PTN partnerships resulted in:

- 22 new products,
- 21 new services,
- 5 new processes.

As to the level of satisfaction about such intra-PTN partnerships, the companies answered as follows:

- 43.7% very satisfied,
- 50% fairly satisfied,
- 3.1% fairly unsatisfied,
- 3.2% did not answer.

PARTNERSHIPS WITH OTHER COMPANIES

The percentage of companies that partnered with other, non-PTN companies is 62.9%. In 2010, there were 185 partnerships overall, with 65 involving the incubated companies. Out of the total number of partnerships, 68.1% were for orders received, 15.1% for joint R&D projects, 13.5% for orders placed, the remaining 3.2% for other work.

Such partnerships resulted in:

- 19 new products,
- 14 new services,
- 17 new processes.

As to the level of satisfaction about such partnerships, the companies answered as follows:

- 44.4% very satisfied,
- 50% fairly satisfied,
- 5.6% fairly unsatisfied.



RELEVANT FIGURES

+5%

% INCREASE IN PARTNERSHIPS 2009/2010

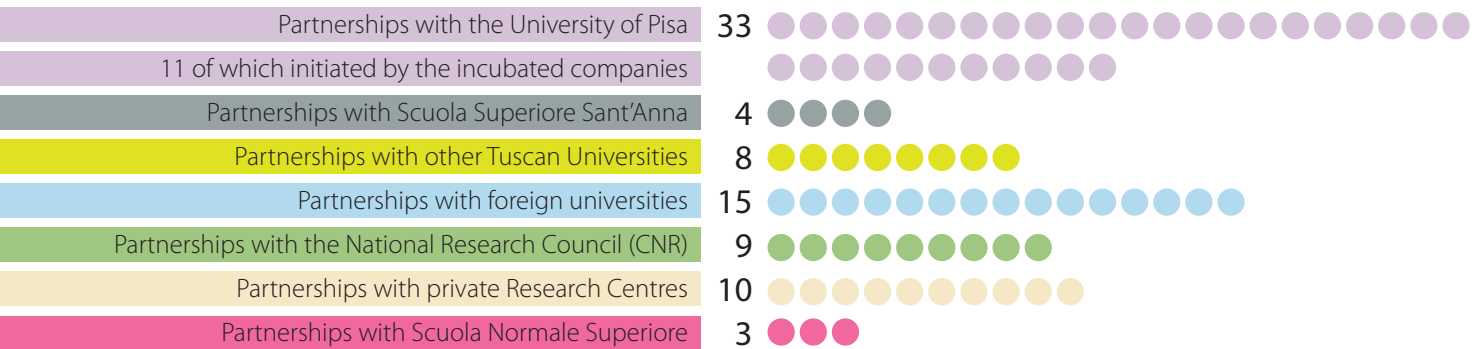
PARTNERSHIPS BETWEEN PTN COMPANIES AND RESEARCH CENTRES

In 2010, 44.4% of the PTN companies partnered with universities and research centres. In 2010, there were 82 partnerships (5% up from 2009)

In 2010 25% of cooperation requests are arrived from the University;

- in 29,1% only from companies;
- in 8,3% only from CR;
- in 8,3% from universities, companies and Cr at the same time;
- in 16,6% from universities and companies at the same time

PARTNERSHIPS BETWEEN PTN COMPANIES, UNIVERSITIES AND RESEARCH CENTRES



The level of satisfaction about such partnerships was generally good: very good for 45.8% of them, and fairly good for 18.5% of them.



RELEVANT FIGURES

82

PARTNERSHIPS BETWEEN UNIVERSITIES, RESEARCH CENTRES AND COMPANIES

This table shows that the PTN companies mainly entered into partnerships with the University of Pisa or with foreign universities: this figure is suggestive of the international character of PTN, which is however deeply rooted in its region. Importantly, 33.3% of partnerships with the University of Pisa were initiated by the PTN incubated companies.

The result of these partnerships was 7 new products developed in 2010.

INNOVATION



INNOVATION PROCESSES

In 2010, 25 PTN companies, i.e. 46.2% of the total, stated that innovation input (mainly) came from their own company. According to 12 companies, i.e. 22.2%, innovation input (mainly) came, instead, from their clients; 4 companies, i.e. 7.4% of the total, stated that the source of innovation in their area of business came from their own companies as well as from their clients. Finally, 13 companies, i.e. 24% of the total number of companies, stated they did not use any innovation input, either from their own company or from any other source.

In 2009, 41.1% of the total number of companies at PTN as of 31.12.2009 stated that their innovation input came from their own company, while 19.6% of the total number of companies at PTN as of December of the same year think that their innovation input came from their clients.

Just one company, i.e. 1.7% of the total number of companies, stated that their source of innovation was the Research Centres. Likewise, just one company, i.e. 1.7% of the total number of companies, stated that their source of innovation was the Research Centres, their own company and their clients.

RELEVANT FIGURES

46.2%

INNOVATION INPUT IS BORN WITHIN THE COMPANY

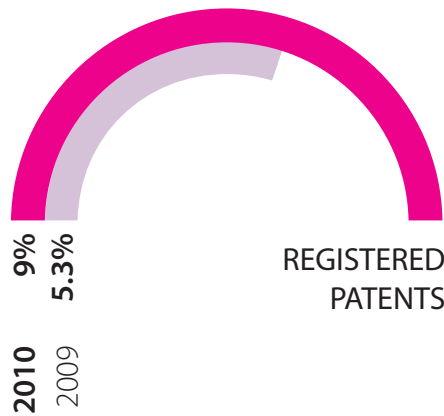
Finally, though, just 3 companies, i.e. 5.3% of the total, said that the sources of innovation in their line of business were their own company and their clients, taken together. Finally, 16 companies, i.e. 28.5% of the total number of companies at PTN as of December 2009, stated they received no innovation input at all.

Such figures suggest that, in the two years 2009-2010, the main sources of innovation for the PTM companies were mainly the inputs that came from their company alone or from their clients. Conversely, the sources of innovation from the Research Centres turned out to be fewer for the PTN companies, both in 2009 and in 2010.

PATENTS

PATENTING

As to the registration of new patents, 5 companies registered new patents in 2010, i.e. 9% of respondents. Overall, they registered 28 patents, which is quite a significant portfolio for these averagely small and young companies. In 2009, 3 companies registered new patents, i.e. 5.3%, for a total of 27 patents. So, the number of patenting companies slightly increased from 2009 to 2010 (a significant event), and the overall number of registered patents increased by just one unit.



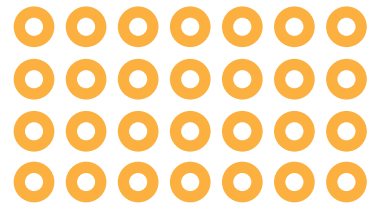
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COMPANIES REGISTERED NEW PATENTS



28

TOTAL NUMBER OF PATENTS



FUNDING

AMOUNT OF FUNDING REQUIRED BY THE PTN COMPANIES



ALLOCATION OF FUNDING BY THE PTN COMPANIES



SOURCES OF FUNDING

In 2010, 38.8% of the companies stated they benefited from different forms of funding. Namely:

- 4.7% of the companies benefited from Revolving Funds;
- 4.7% of the companies benefited from European Social Funds;
- 4.7% of the companies benefited from training vouchers;
- 4.7% of the companies benefited from European Funds for Regional Development (Por Creo);
- 9.5% of the companies benefited from funded projects;
- 14.2% of the companies benefited from Regional Funds;
- 61% of the companies benefited from ordinary credits.

Therefore, in keeping with the rest of national high-tech companies, banks are still the main source of funding.

64.81% of the PTN companies stated they are interested in benefiting from funding options.

In particular, the table below shows the amount of funding the companies state they need. It shows that the PTN companies point to a wide variety of financial requirements, ranging from about 43% of the companies needing a 'seed'-like form of funding (up to 200 thousand euros), 25 to 30% needing funds that are usually catered for by Business Angels or other funds (200 thousand to one million euros), up to 17% of the companies needing the funds that are typical of (and hopefully have the same potentials as) a Venture Capital (i.e. over one million euros).

If we look at the table that lists to what use the respondent companies would allocate such funds ⁽⁴⁾, we can see that most companies would allocate such funds to market development, R&D and buying goods and services. This is to do with expanding their markets, probably into international markets, which, as such, might involve substantial investments.

4 - In this section of the questionnaire, the companies could give multiple answers.

TRAINING

TRAINING REQUIREMENTS

55.5% of the respondent companies think they need specific training schemes for their employees. 51.6% of them think such requirement may be met by in-house training schemes, 16.2% by outsourced training schemes, and 32.2% by a combination of in-house and outsourced training schemes.

As for the subjects of such training schemes, the table below lists the different subjects of such training schemes and the percentage of companies that are interested in them.

The table suggests that the subjects of training schemes which interest the PTN companies are mainly technical/regulatory, and marketing and administration, while they are less interested in human resource management.

Multiple answers could be given in the questionnaire about staff recruitment and selection methods. The findings show that 9.2% of the companies use databanks, 11.1% use staff selection companies, 68.5% use direct contacts, and 12.9% use other selection channels.

This attitude is in keeping with the more high-tech companies, which often give priority to personal contacts (maybe personal contacts with their university professors that continue after their studies) when they have to recruit skilled staff.

TECHNICAL/REGULATORY	46.2%
ADMINISTRATION AND FINANCE	42.5%
MARKETING AND COMMUNICATION	40.7%
LANGUAGES	40.7%
IT	24%
BUSINESS MANAGEMENT	20.3%
INDUSTRIAL SAFETY	18.5%
RELATIONAL	14.8%
HUMAN RESOURCE MANAGEMENT	11.1%
OTHER	1.8%

PTN COMPANIES' PREFERRED TRAINING



INCUBATION

One of the purposes of the questionnaire was to gather information about the PTN companies' appreciation and perception of the PTN's work, purposes and initiatives. In this respect, the main features that the companies perceived in connection with their being at PTN were, in this order:

1. Visibility provided by being at PTN (17 answers);
2. Opportunities for integration with other companies' lines of business (17);
3. Option to save on service costs (16);
4. Functionality of structural services (canteen, crèche, guests' quarters, etc) (15);
5. Added value provided by the excellent organisational/functional image of the PTN system (15).



RELEVANT FIGURES

VISIBILITY
INTEGRATION
SAVINGS
SERVICES
IMAGE

THE ADVANTAGES
 THE COMPANIES RATE
 HIGHEST

One of the most outstanding services provided by PTN since 2003 has been a special service in support of high-tech start-up companies. The previous reports, as we said, did not review the results of incubation, since start-up companies were analysed along with all the PTN companies. This year, not least because of the availability of materials that enabled us to produce some statistics, this report contains a new section about PTN as an incubator in the attempt to assess its effectiveness on the recipient companies' performance.

The incubation service was created to support new innovative companies from their birth and into the first three years of their life. The companies selected to join the incubation service must mainly work in the areas of business in which the PTN companies work, so that they can start laying the grounds for cooperation and partnerships between them straightaway.



RELEVANT FIGURES

36

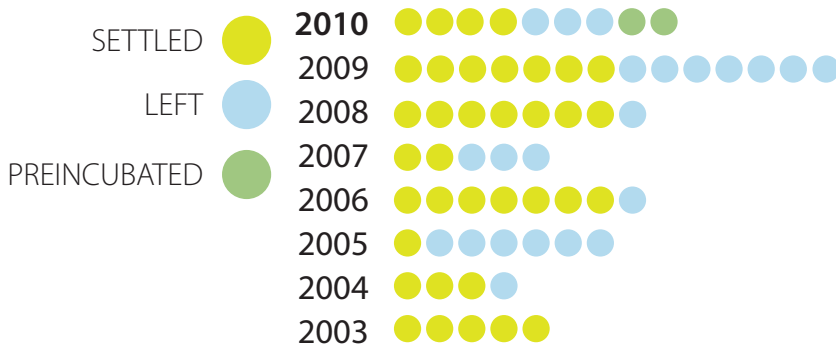
NEW BUSINESSES FROM 2003 TO 2010

THE PTN'S INCUBATION SERVICE

PTN provides a physical incubation service, its services tending to support the growth of the new companies. Over 7 years, from 2003 to 2010, the incubator supported the start-up of 36 new businesses, selected among 71 applicants. The diagram below shows the flow of start-up companies coming in/leaving the incubator between 2003 and 2010, while the second diagram shows the areas of business in which such companies work.

The incubation service provides businessmen with a process, from a definition of the business model and business plan (pre-incubation) to supporting the company in the first three years of its life. At PTN, the purpose of incubation is to maximise the company's growth, and advisory (a) and training schemes (b) are provided to achieve such result. Advice is provided either directly or through specialist partners, depending on the specific requirements of the company.

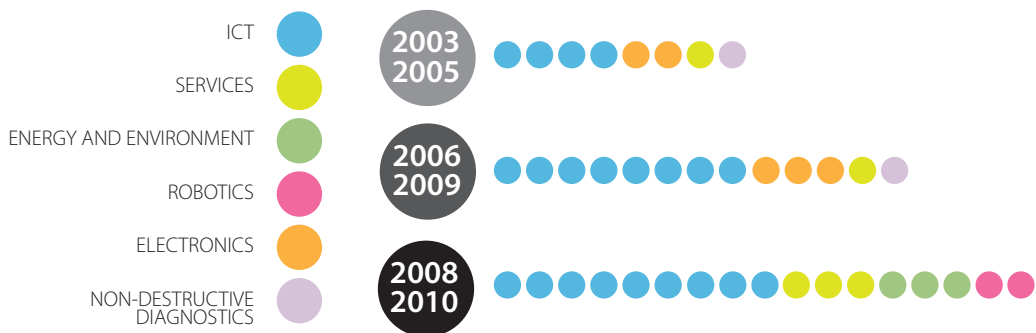
TREND OF SETTLEMENTS BETWEEN 2003 AND 2010



The main services are:

- Daily tutoring and quarterly monitoring;
- Business training;
- Legal, administrative, patenting advice;
- Marketing and sales;
- Communication and visibility;
- Networking;
- Monitoring of funding options.

NUMBER OF INCUBATED COMPANIES BY AREAS OF BUSINESS



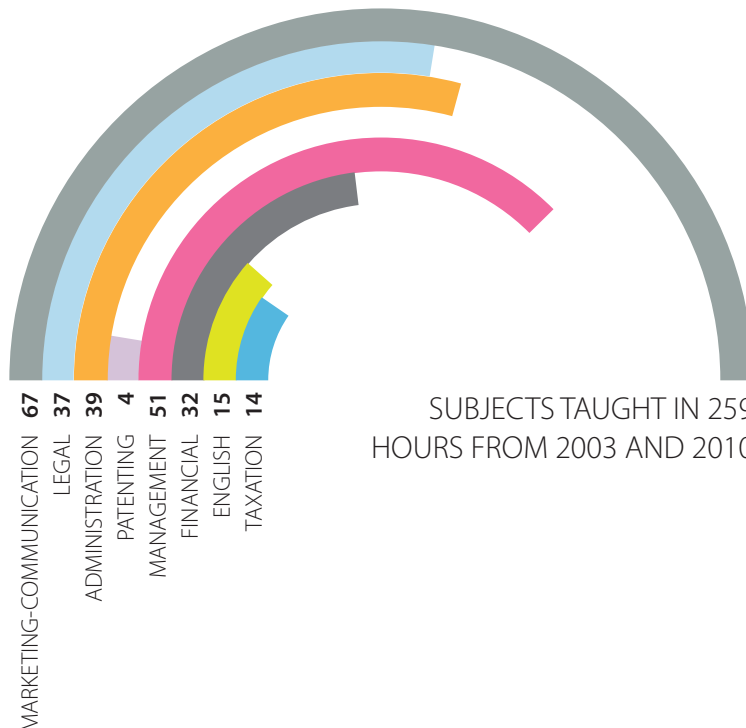


Training schemes aim at helping the business teams become more familiar with the corporate culture. Training schemes take inspiration from the specific requirements of the people who are going through the incubation phase. The teaching of subjects that are considered the most critical and deficient, such as marketing and communication, management and administration, has increased over the years. The diagram below lists the hours spent in business training by subject.

An interesting figure is that concerning the business mortality rate (from 2003 to 2010) based on the 21 'graduates', which was 4% (i.e. one company). The PTN's management model seems to suggest that a careful selection before joining the PTN – as 54% of the applicants for incubation were turned down – offers better chances to support companies that have more potential for success.

During 2010, PTN was acknowledged by the Regional authorities of Tuscany as an accredited incubator, for its structural features and performance indicators. For the period 2010/2013, the Regional authorities of Tuscany also support specific pre-incubation schemes aiming to make incubation facilities and services better known, in the attempt to boost chances of turning the achievements of scientific research into businesses.

With PTN launching specific marketing campaigns to make the incubator better known, 72 meetings with potential businessmen were held in the second half of 2010, which resulted in 11 draft business plans and 7 extensive business plans. Such marketing campaigns were mainly held at the local National Research Council, at Laboratorio NEST of Scuola Normale Superiore and at the University of Pisa. Once selected, these businesses or research groups were led through a process to assess the criticalities and opportunities inherent in their business ideas, and business plans were eventually produced.



RELEVANT FIGURES

+36%

2010 RISE IN
TURNOVER

SOME FIGURES ABOUT THE INCUBATED COMPANIES

The overall turnover, based on the sum of the turnover of each company that was at the incubator each year, shows a favourable growth trend. Turnover increased steeply from 2007 to 2008, as a result of the expansion of the incubation facility, which could then accommodate a higher number of companies.

Despite the impact of the international crisis, the trend for the last three years shows a substantial growth, rising from an average turnover of 220 thousand euros per company in 2008 to 386 thousand euros in 2009, and to 428 thousand euros in 2010.

RELEVANT FIGURES

428,414

AVERAGE TURNOVER PER
INCUBATED COMPANY

A steady rise can actually be noticed in the number of incubated companies between 2003 and 2010 at PTN, up to the point of having as many as 14 incubated companies in 2009 and 16 incubated companies in 2010. Interestingly, the aggregate turnover keeps growing: 1,985,820 euros in 2008 (+104% growth rate), 5,019,453 in 2009 (+152% growth rate) and 6,854,633 euros in 2010 (+36% growth rate).

TURNOVER OF PTN INCUBATED
COMPANIES BETWEEN 2003 AND 2010

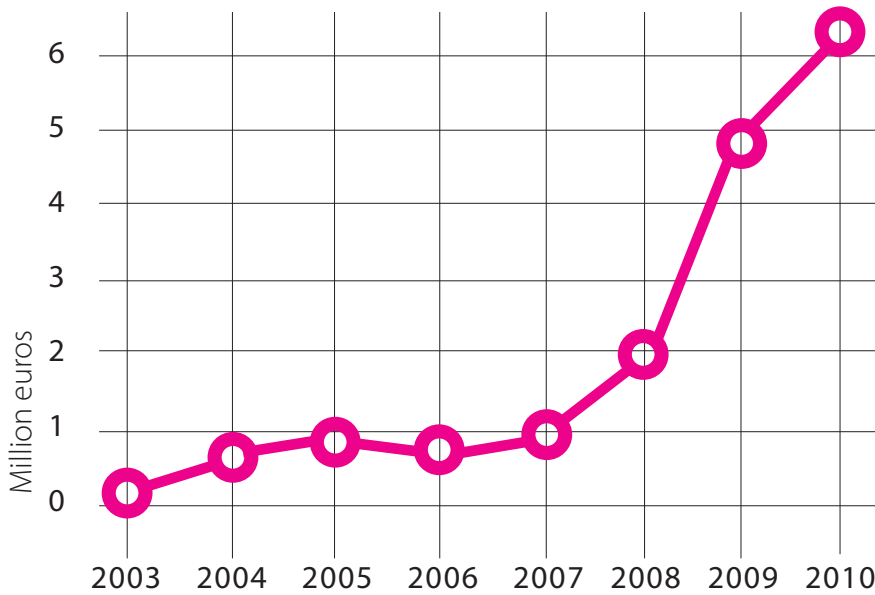
YEAR	No. of incubated companies	Aggregate turnover (euros)	Turnover growth rate	Average turnover (euros)
2003	4	154,500	-	38,625
2004	7	605,248	+292%	86,464
2005	6	812,602	+34%	135,434
2006	6	725,945	-11%	120,991
2007	6	971,510	+34%	161,918
2008	9	1,985,820	+104%	220,647
2009	14	5,019,453	+152%	386,111
2010	16	6,854,633	+36%	428,414

It is precisely concerning the aggregate turnover that it is interesting to notice, in the diagram below, that the value of the aggregate turnover of the companies incubated at PTN from 2003 to 2010 is fairly consistent in the period 2003 to 2006 (with a slight drop in 2006), then it goes up again and steeply rises from 2007 to 2010.

Employment trend means the number of people working in whatever position in the incubated companies (from working partners to full-time employees, temporary staff, contract workers, interns, etc.).

Such figures suggest that, while for the period 2003 to 2006 the employment trend was quite varied, with the highest number of employees in 2005 (37 employees), in 2007 this trend started to consistently rise, with the highest number of employees in 2010 (109 employees overall).

AGGREGATE TURNOVER OF PTN INCUBATED COMPANIES BETWEEN 2003 AND 2010





RELEVANT FIGURES

6.8

AVERAGE NUMBER
OF EMPLOYEES PER
COMPANY IN 2010

The highest average numbers of employees per company are those of 2005, 2008, 2009 and 2010: the total number of employees abruptly increased from 60 to 74 from 2008 to 2009, although the average number of employees per company slightly decreased from 6.7 to 5.7. Likewise, despite a steep increase in the total number of employees from 74 to 109 from 2009 to 2010, the average number of employees per company slightly increased from 5.3 in 2009 to 6.8 in 2010.

Anno	Total number of employees	Average number addetti of employees per company
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EMPLOYMENT TREND IN PTN
INCUBATED COMPANIES FROM
2003 TO 2010

2003	13	3,3
2004	29	4,1
2005	37	6,2
2006	20	3,3
2007	30	5,0
2008	60	6,7
2009	74	5,3
2010	109	6,8



CONCLUSIONS



RELEVANT FIGURES

COMPANIES IN A PTN WORK IN FAVOURABLE CONDITIONS



RELEVANT FIGURES

PTN COMPANIES ARE A SHOWCASE OF TUSCAN HIGH-TECH STANDARDS

FINAL CONSIDERATIONS: A COMPARISON BETWEEN THE PTN COMPANIES AND THE OTHER TUSCANY-BASED HIGH-TECH COMPANIES

For a more extensive overview of the PTN companies' figures described earlier in this report, a short description of the state of the high-tech industry in Tuscany, in other words, the scenario in which such companies have to work, may be helpful.

In this respect, l'Osservatorio sulle Imprese High-Tech della Toscana recently provided a picture of 1,173 high-tech companies (5). Before such companies could be qualified as high-tech companies, they had to go through a structured CATI questionnaire over the telephone. In addition, one of the aspects which allowed these companies to qualify as high-tech companies was their being settled at a scientific or technological centre, as this aspect is believed to be positively correlated with the companies' ability to work in conditions that are favourable to the research and development of innovative, technologically more advanced solutions.

Moreover, the main 'structural' features of the high-tech industry are very well in keeping with those of the PTN companies. Actually, according to the Osservatorio, most of the Tuscan high-tech companies are extremely small: 76% of the sample have less than 10 employees and only 6% have more than 50, with most of the companies working in ICT, the technological domain of 46.4% of such companies.

It can, therefore, be assumed that the PTN companies are a 'special showcase' of Tuscany's high-tech industry, and a comparison with the overall figures recorded all over the region suggest a few considerations.

The most obvious result of the survey conducted by the Osservatorio was the confirmation that the region is home to a group of high-tech companies which are very dynamic in their business and which, despite most of them being small and very small companies, have withstood the impact of the crisis that has hit the economy in the last two years



RELEVANT FIGURES

+33.4%

PTN COMPANIES' GROWTH VERSUS THE REGION'S AVERAGE 8.8%

The interviewed high-tech companies actually proved to be able to increase the number of their employees by 2.3% in 2009 and grow by a further 2.7% in 2010. A comparison with the PTN companies' figures (based, for comparability with the Osservatorio's figures, on those companies that provided information about their employees in 2009 and 2010) shows a definitely more substantial rise in the last year, i.e. 10.0%. This result is heavily affected by the growth of 3 companies (two working in energy and one working in robotics), which are also some of the biggest companies settled at PTN, which alone accounted for 70% of the overall increase.

Tuscany's high-tech companies' turnover figures confirm that these companies could successfully respond to the unfavourable economic-financial situation of 2008-2009: variation in their average turnover in 2010 versus 2009 was 8.8%, and forecasts for 2011 look even better, with an estimated 12.3% rise. In addition, an extensive review of such results by company's size showed that it is mainly the small and very small companies that experience favourable,

substantial variations in their turnover: a trend that is the opposite of the one shown by other economic areas of the region, in which it is the more structured companies that prove to be better at reaping positive revenues over time. In particular, the class of micro-companies, such as most companies at the Polo are, reported a 13% increase from 2009.

Based on information provided by the PTN companies, excluding the big company we mentioned before, variation in the turnover of those companies that provided their turnover figures for both years was 33.4%, which is therefore much higher than the average variation of Tuscany's high-tech companies (8.8%), both as a whole and within the group of companies the size of which is most compatible with that of the PTN 'population'.



RELEVANT FIGURES

PTN COMPANIES ARE VERY PRONE TO COOPERATION

In terms of innovative work, a comparison with the regional figures must take into account the fact that the PTN companies specialise in services, especially ICT services, which, as everybody knows, do not involve patents. Having said that, we can appreciate the difference between the average value of the companies that filed at least one regional patent, which is 13.6% (and drops to 12.3% for micro-companies), and that of the PTN companies, which is instead approximately 9% of the total number.

A proneness to cooperate with public research centres is a very obvious feature of the PTN companies: actually, as many as 44.4% PTN companies stated they had relations with such institutes. Region-wide, the survey found that the companies that cooperate with (regional and non regional) research centres account for 36.2% of the total, and 64.8% of them have relations with institutes based in the region. The PTN companies being located so close to numerous research centres undoubtedly helps them relate with each other, as much as the presence of a large group of spin-off companies is an important tool for liaising with the local universities and research centres, both directly, by continuing their

relations with the institutes they come from, and indirectly, whenever they promote partnerships in joint projects with other non-spin-off companies of PTN and universities, thus playing a key role as a 'bridge' between the business world and the research world.

Then, province-wide, the figures provided by the Osservatorio point to the role played by Pisa as one of the provinces where the number of companies specialising in high-tech businesses is 10% higher than the average national figure, which obviously has favourable repercussions on the PTN companies as well and also contributes to their favourable dynamics, in terms of new companies, especially incubated companies, being at PTN year on year. Also, Pisa stands out for being home to a high number of companies specialising in high-tech services, a number which is much higher than the national average figure (the rate of specialisation in these lines of business is 33% higher than the average national figure), and this too is reflected in the PTN increasingly looking like a facility which mainly hosts service providers.



RELEVANT FIGURES

THE PTN'S MODEL REWARDS THE COMPANIES IN TERMS OF REVENUE

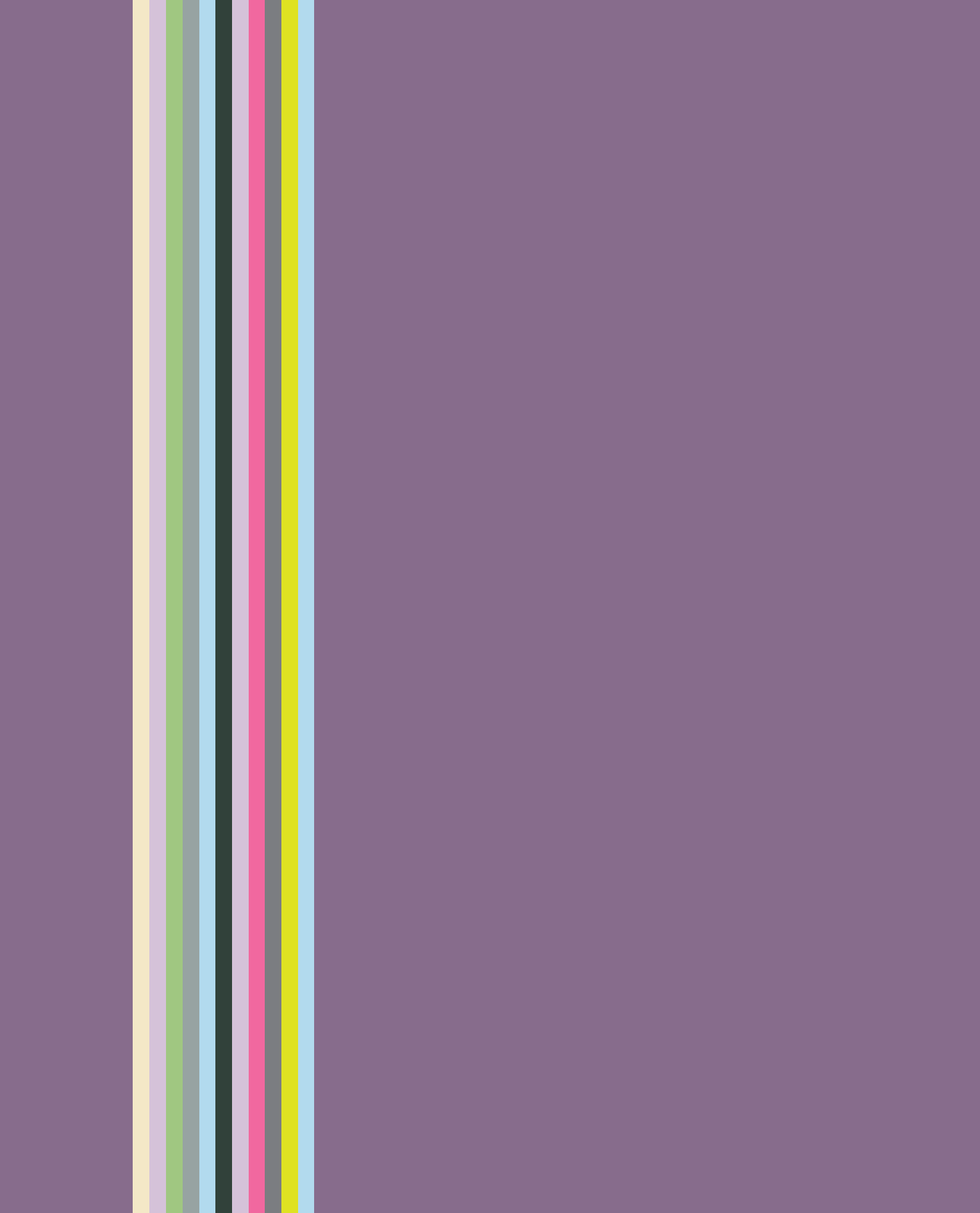
The favourable performance of the regional high-tech industry matches, therefore, or is actually amplified by a review of the PTN figures. The PTN's organisational model, which promotes integration, 'operational' partnerships in projects aiming to develop new products, as well as the ease with which the PTN companies reach their research partners, seems to reward the settled companies, especially in terms of revenue.

The figures provided by the Osservatorio also showed that there is some leeway for the high-tech companies' further, potential development: the industry's structural weakness seems to lie somewhat in the companies' achieving a 'medium-large size', i.e. with more than 50 employees. In other words, these companies are extremely viable and able to adapt to the market conditions, but they have problems getting organised or choose not to get organised, and somehow do not take the 'risks' that it takes to 'grow up'.

However, such size factor becomes decisive for the companies' ability to work on the international markets: a factor that cannot be viewed as negligible for these companies, for which the international scenario may be a spur to relentlessly

pursue innovation and a source of opportunities to expand their markets for themselves as well as for the allied industries. As well as a development factor that deserves to be carefully considered by those who are working to establish Tuscany as an area of technological 'excellence'. Turnover from exports accounted for 11.9% for the high-tech companies of the Osservatorio; openness to international markets is basically the privilege of medium-large companies (with over 50 employees), which are the only ones to produce an overall average turnover of 15% from foreign trade.

So, for the PTN companies, rising to this challenge means making the most of their stay at this facility, using it to boost their innovation, growth and partnership opportunities, as well as a tool to open up to the international market. The growth dynamics we have described so far seem to be an excellent basis for these companies to be able, if they want to and with appropriate support, to make such a definite improvement.



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