



**XII Summer School Netval**  
*10-11 settembre 2020*

*Studenti imprenditori: esperienze,  
formazione, promozione*

**Questel**



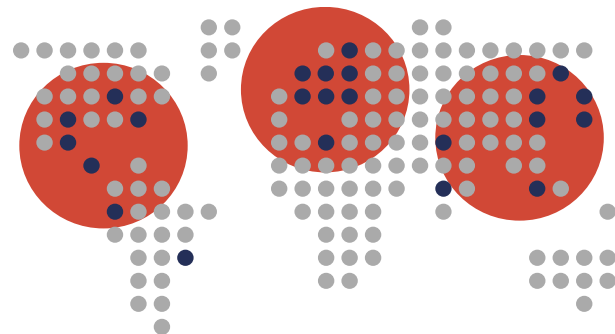
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## **Patent trends and focus on patents owned by the spin- offs monitored by Netval**

Audrey Dayon  
Tanya Praise Mangemba



Delivering  
intellectual property  
solutions across the  
innovation lifecycle



 **900**

**1M** users, **30** countries,  
**6K** clients, Since **1978**.

“Our mission is to **allow innovation to be developed in an efficient, secured and sustainable way**. The efforts of innovators must be rewarded!”

Charles Besson, CEO

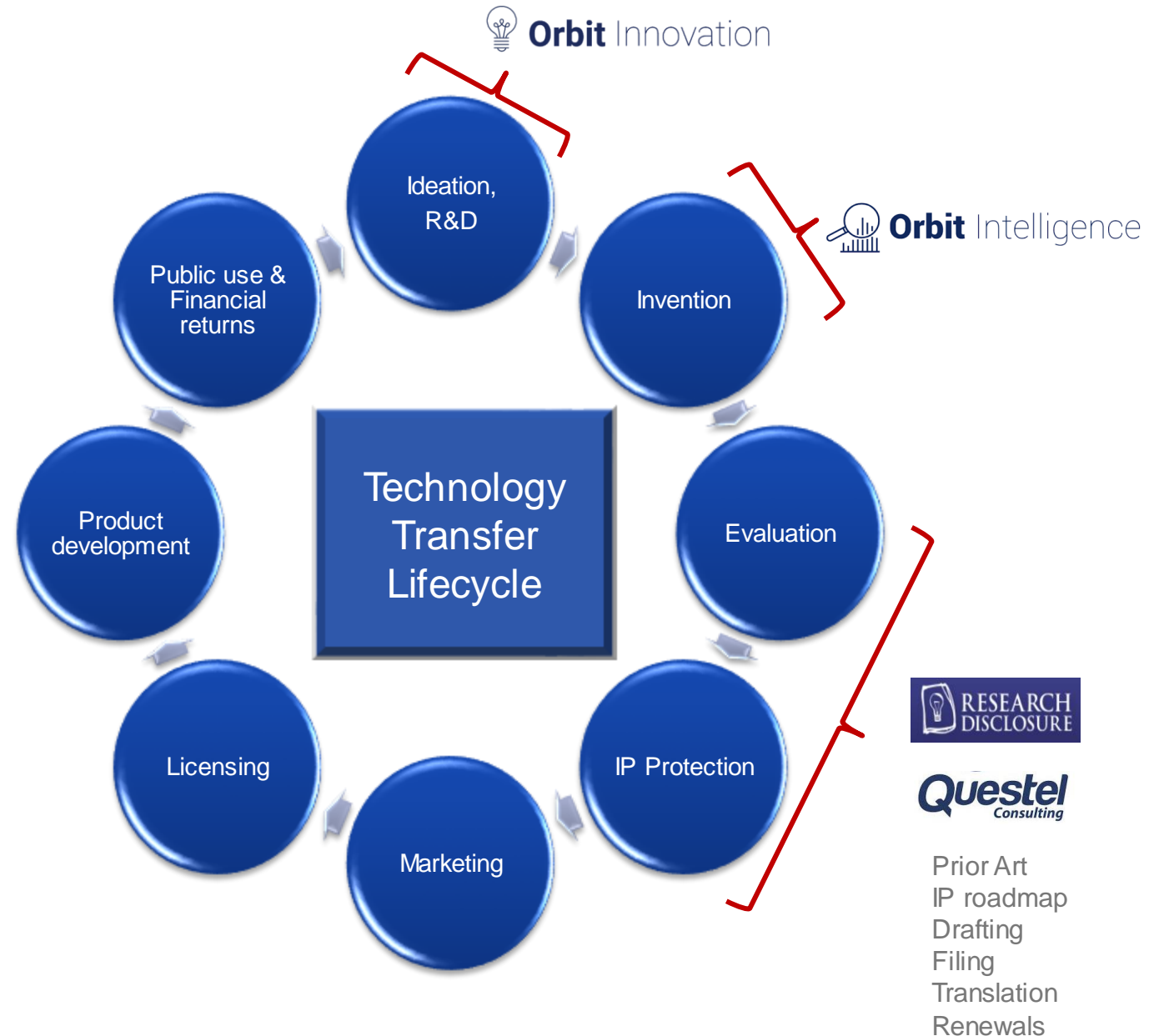


## IP & Student entrepreneurship:

IP rights help:

- prevent competitors from directly copying the idea,
- safeguard investment by entrepreneur in development & ideation,
- transform innovation potential and creativity into market value,
- maintain a competitive advantage,
- ensure that entrepreneurs get all the financial benefits from their ideas,
- convince financial institutions or larger corporations to invest in a business,
- position companies for acquisition in future,
- boost consumers confidence that products meet appropriate standards and quality.

IP software & services help entrepreneurs reach their goals in the most cost efficient way and allows them to minimise risk of litigation or loss of IP rights.



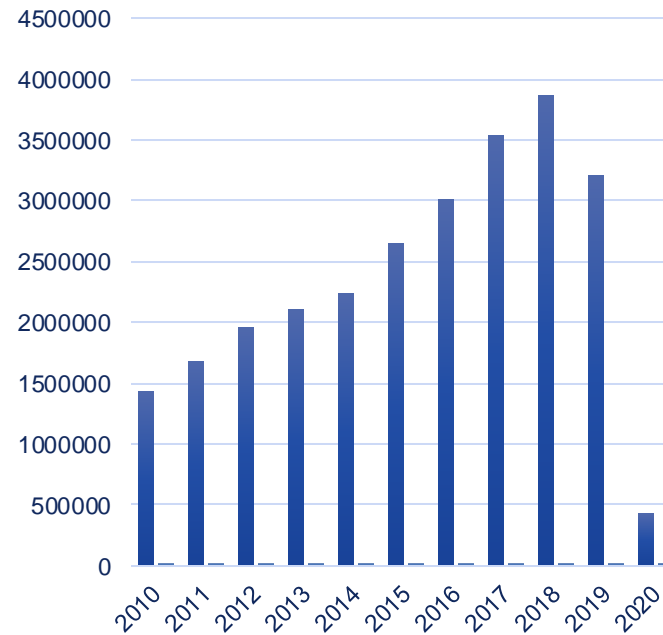
<http://www.econdev.iastate.edu/>

## **Patent & business trends in the last 10 years**

## Patent trends

- ✓ Demand for European patents has risen steadily since 2012.
- ✓ Among European countries with large volumes, the greatest increases in filings came from Sweden, the UK and Switzerland. Filings from Germany remained stable and **Italy** saw moderate growth, while France and the Netherlands saw decreases.
- ✓ Digital communication was the new top technology field at the EPO, reflecting the rapid development of 5G technologies.

### Patent Applications



Questel Intellixir

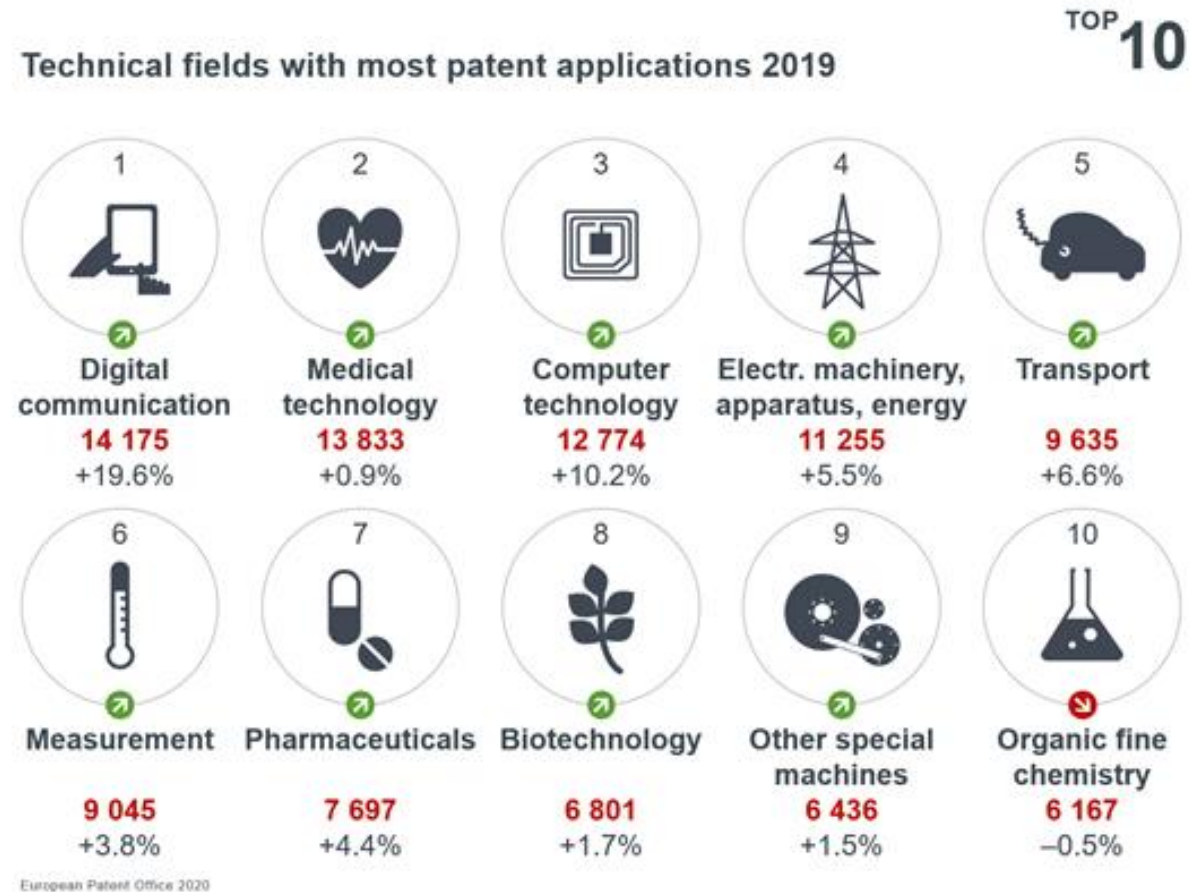
### Application countries

	2019	Change
1 United States	46 201	+5.5%
2 Germany	26 805	+0.5%
3 Japan	22 066	-2.3%
4 P.R. China	12 247	+29.2%
5 France	10 163	-2.9%
6 R. Korea	8 287	+14.1%
7 Switzerland	8 249	+3.6%
8 Netherlands	6 954	-2.6%
9 United Kingdom	6 156	+6.9%
10 Italy	4 456	+1.2%

European Patent Office 2020

## Technology changes

- ✓ Digital communication was the new top technology field at the EPO in 2019, reflecting the rapid development of 5G technologies.
- ✓ Medical technology had the second highest number of applications but a small increase from the previous year.
- ✓ Computer technology was the second most rapid growth, thanks no doubt to continued efforts in digital communication.

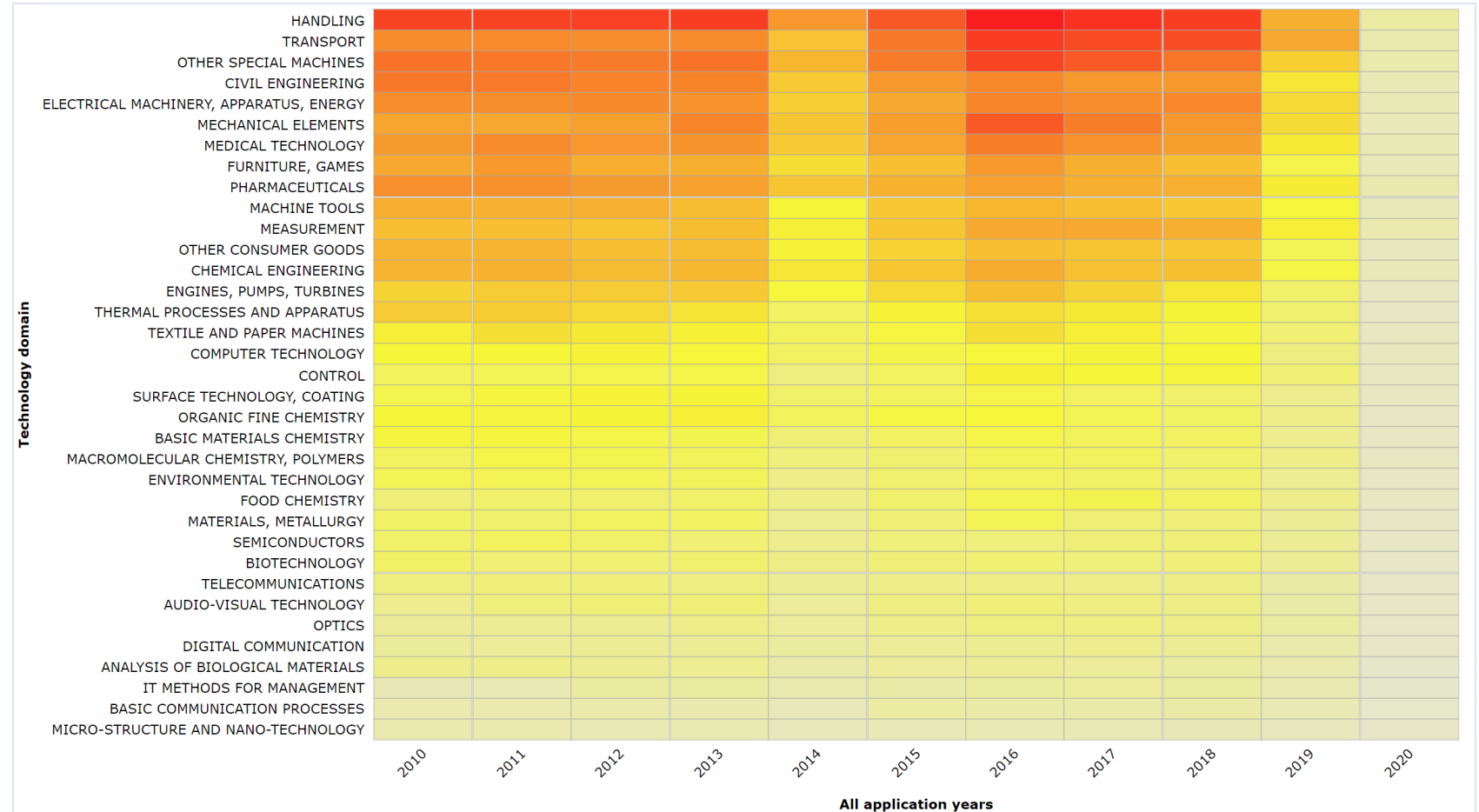


Text & images from EPO Patent Index 2019. Full report here: <https://www.epo.org/about-us/annual-reports-statistics/statistics/2019/key-patenting-trends.html>

## Technology trends in Italy over the last 10 years

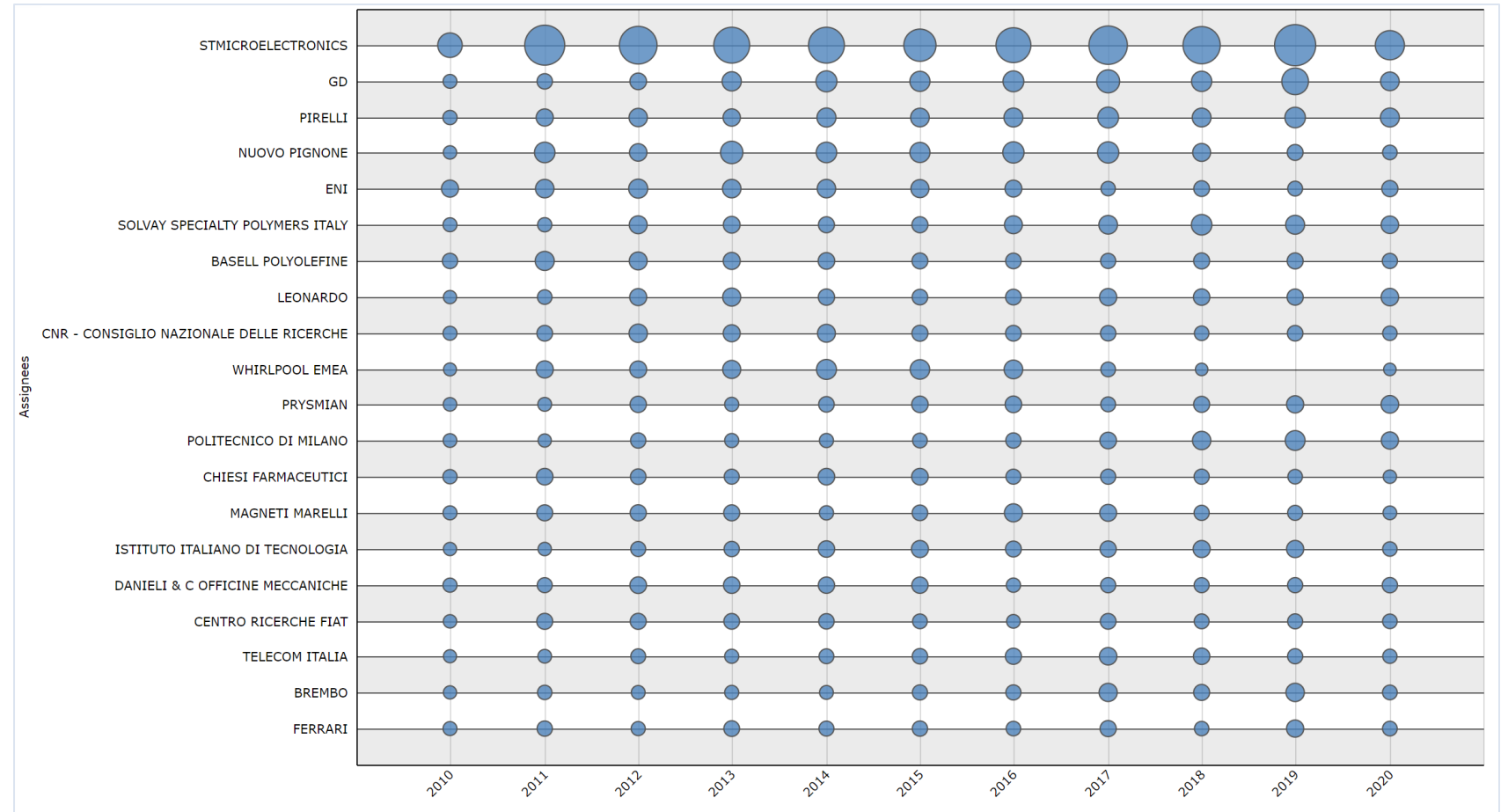
- ✓ A different trend is observed in Italy.
- ✓ Top domains remain Handling, Transport, Engineering

When deciding your domain of innovations, as an entrepreneur, it is important to choose the best domain for your countries of choice – *will you global or stay local?*



## Technology trends in Italy over the last 10 years

- ✓ Portfolio growth of top industrial players who make start-up acquisition or collaborations with others
- ✓ Innovation can happen between large companies or institutions & start-ups. Many companies expand their area of innovation today through acquisitions or partnerships.





## **Analysis of the patents owned by the accredited spin-offs monitored by Netval**

## Methodology

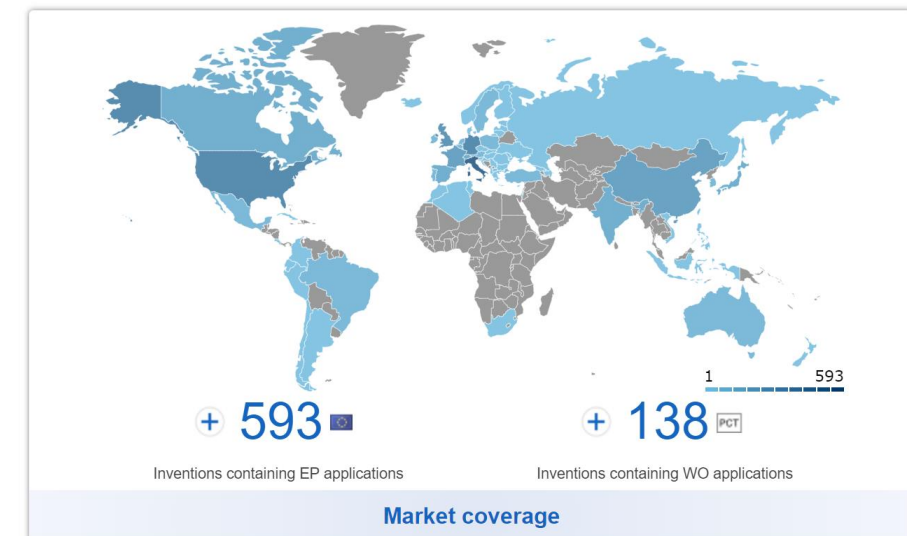
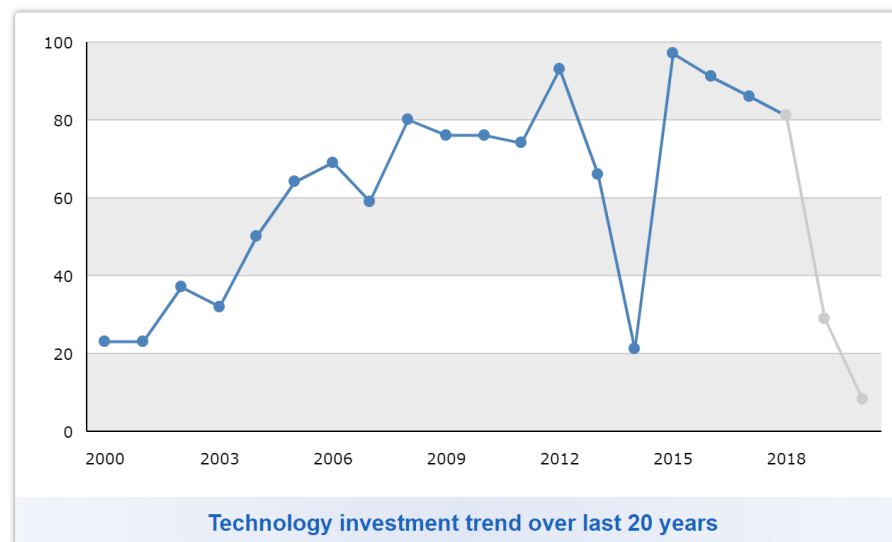
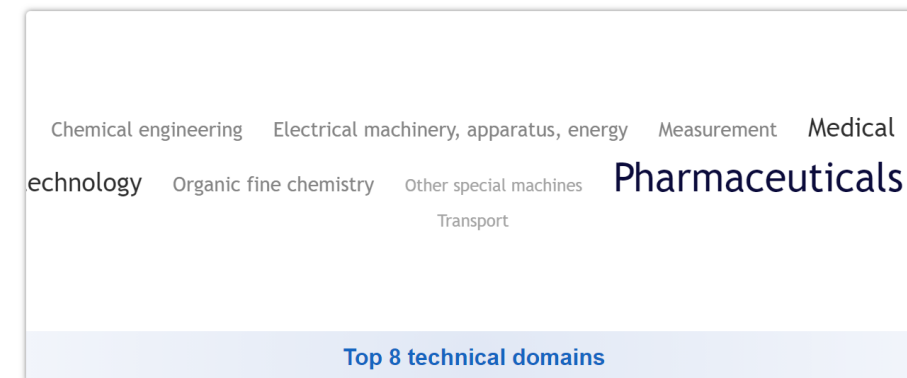
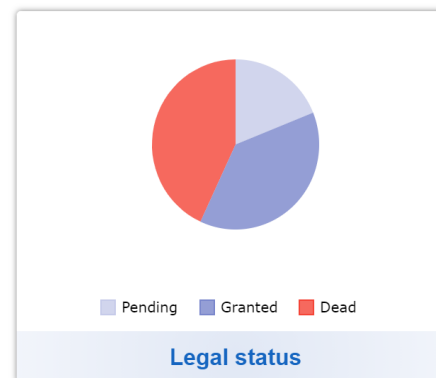
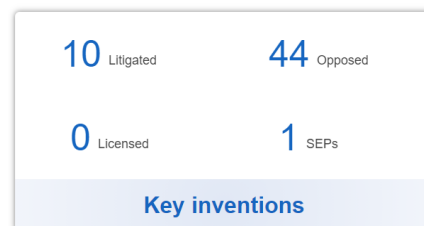
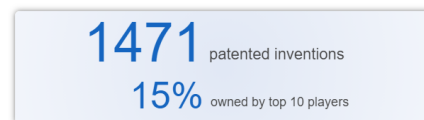
Analysis of data done in Orbit Intelligence:

1. Search of Netval accredited spin offs  
e.g. (POLIMECH or Ingenium)/PA/PAH
2. Combine search results with only those patents whose assignee's address is Italy:  
e.g. Step 1 and (COUNTRY/PAAD=IT)
3. Analyse results with a clean up of company names.

## Key Facts

The dashboard gives access to the key facts of the data such as:

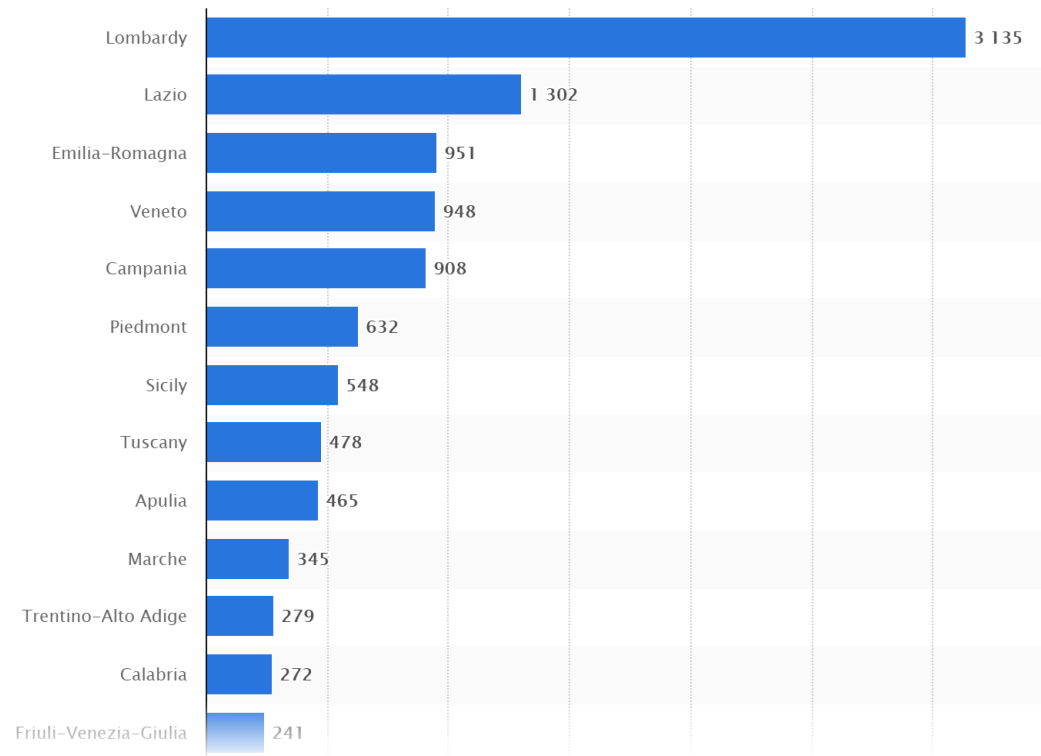
- Percentage owned by top players – *Innovation strategy*
- Litigations or Oppositions – *Competitiveness*
- Licensing – *valorisation opportunities*
- Legal status – *validity*
- Technology Investment
- Top applications
- Protected countries - *EP validations*



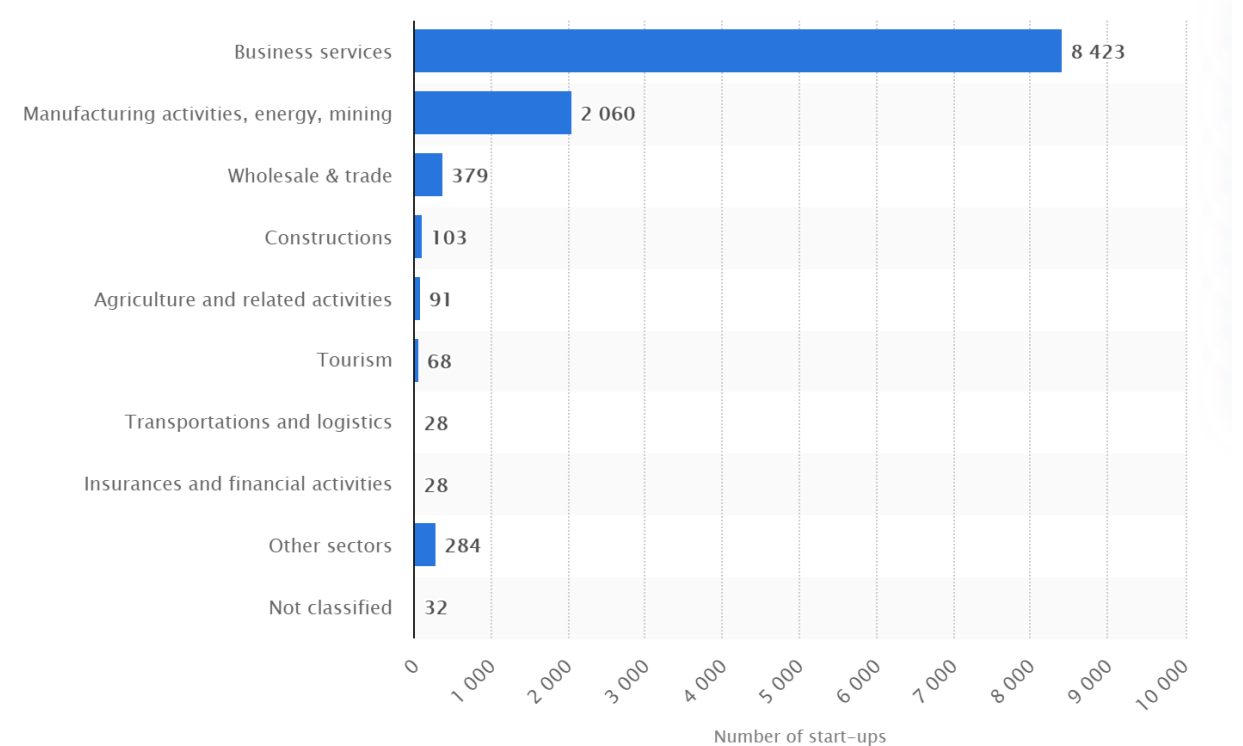
# Entrepreneurship in Italy

## Number of start-ups in Italy as of the 2nd quarter of 2020

### by location

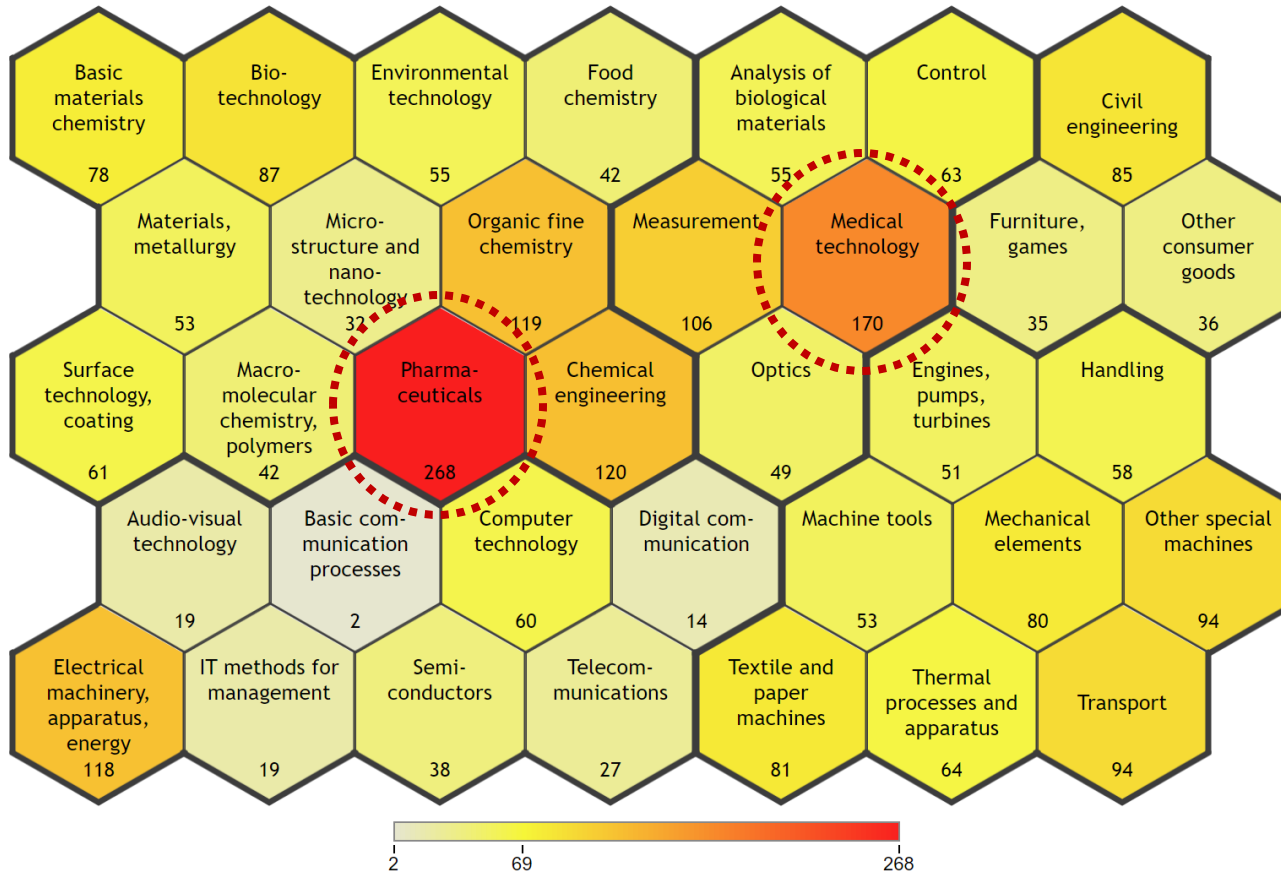


### by industry



Analysis done by an analysis body. We can see that a lot of innovation is done in various industries in Italy and across the entire country.

## WIPO Technology domains protected for spinoffs

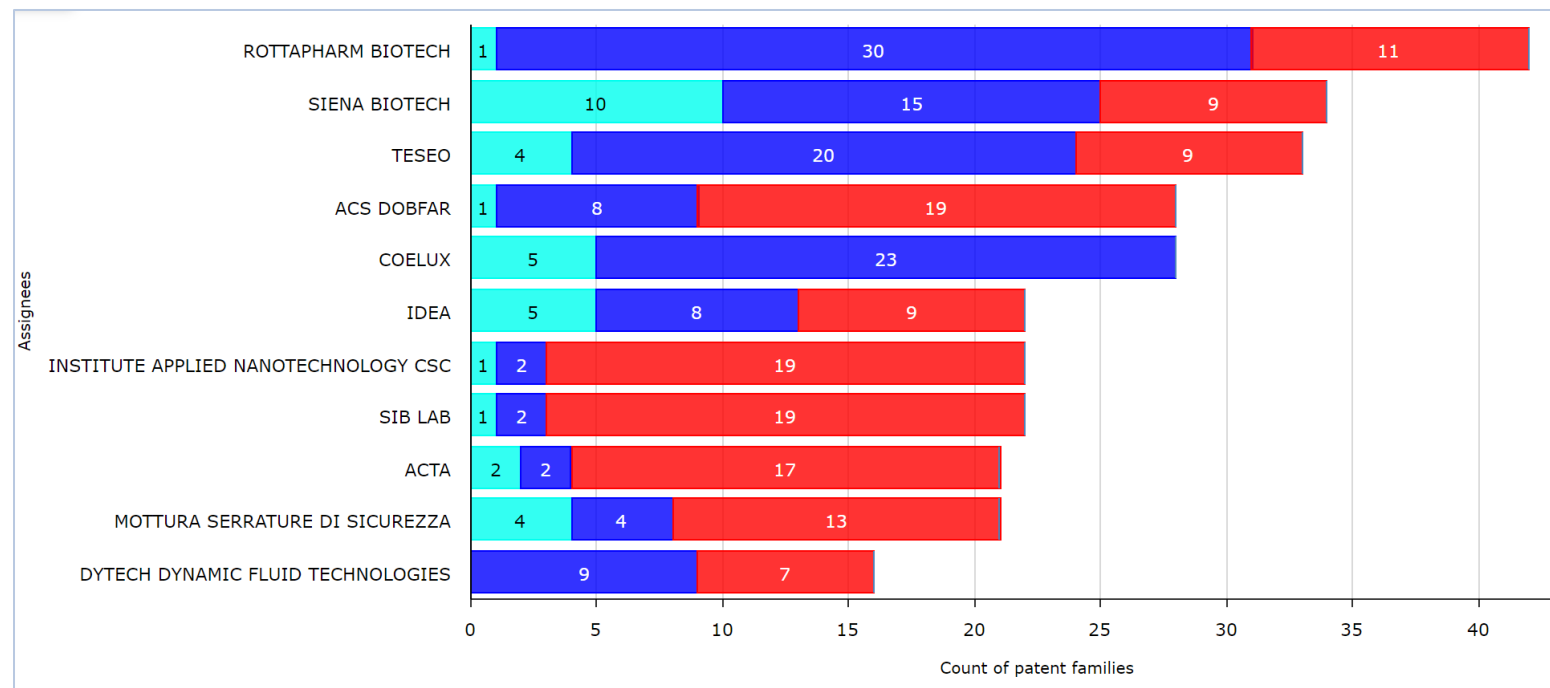


## Top assignees in top Technology domains

3a health care (3) | Abraxis bioscience (3) | **Acs dobfar** (17) | Adienne pharma & biotech (3) | American bioscience (3) | Biofordrug (3) | Biorigen (5) | Biouniversa (3) | Calabrian high tech (7) | Dental care innovation (5) | Era endoscopy (4) | **Foundation salvatore maugeri clinica del lavoro & della riabilitazione** (13) | Fresenius medical care (6) | **Hoffmann la roche** (20) | Holostem terapie avanzate (4) | Institute applied nanotechnology csc (14) | Lay line genomics (8) | Lorenz biotech (5) | Maugeri umberto orazio giuseppe (6) | Newman medical kft (4) | Pharmafilm (9) | Pharmeste (5) | Restech (4) | Rigenrand (4) | **Rottapharm biotech** (41) | Sib lab (14) | **Siena biotech** (31) | Sintea biotech (6) | Università politecnica delle marche (5) | Wyeth (7) |

## Top assignees | Quantitative

- When analysing top fillers, we can look at the count of patents filings
- Colouring graphs with legal status adds a new element of information. E.G Coelux has more active patents than Siena Biotech.



**Split by** [X]

**Color chart elements** [?]

Complete the form to color specific elements of the chart

My templates [Select or create a template.] [Save] [X]

Legal status	Pending	Pending	[Cyan]	[X]
Legal status	Granted	Granted	[Blue]	[X]
Legal state	Dead	Dead	[Red]	[X]

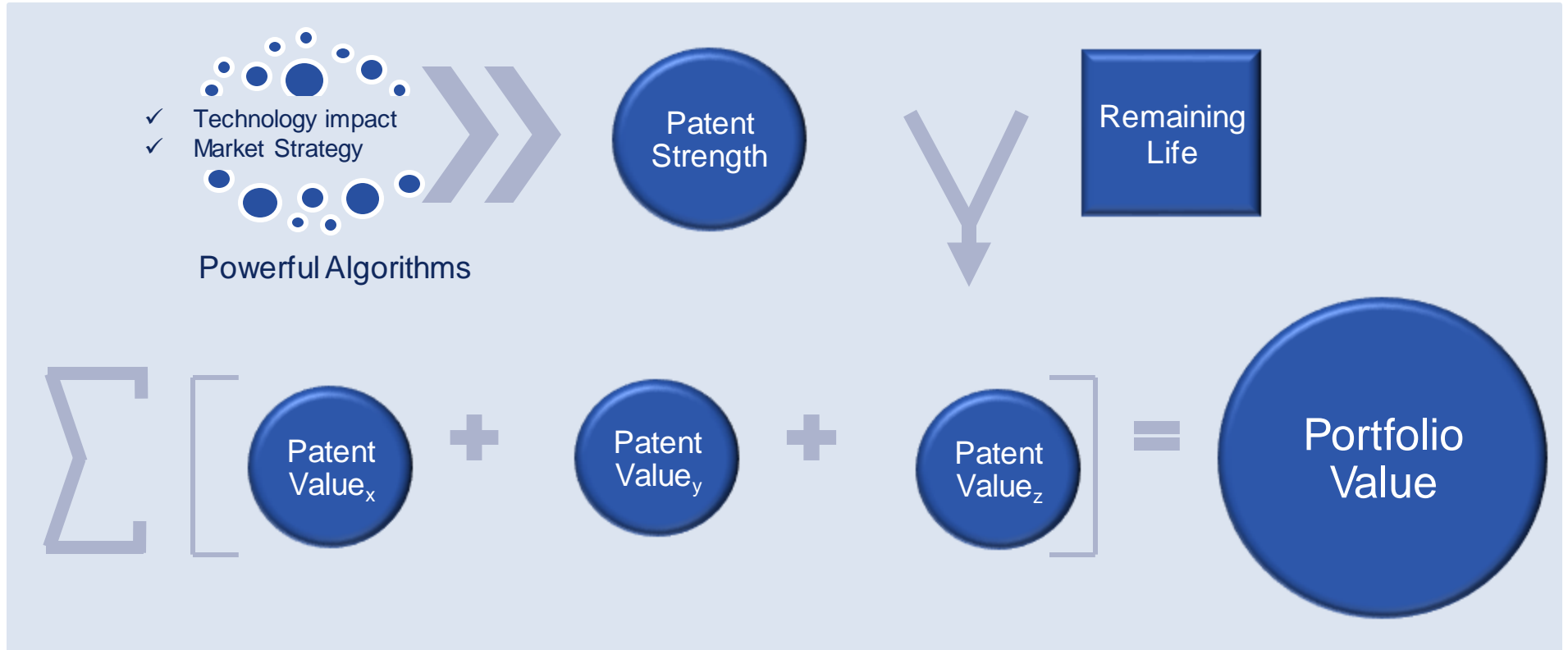
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# Top assignees | Qualitative

Assignees	All patent families	Alive	Age	Opposed	All fwd cit.	Originality	Patent strength	Patent value	Portfolio value
ROTTAPHARM BIOTEC	42	31	12	1	215	0.77	2.89	1.82	54.67
SIENA BIOTECH	34	25	9.2	2	642	0.76	2.88	1.01	23.23
TESEO	33	24	12	1	118	0.82	1.76	1.52	34.94
ACS DOBFAR	28	9	17.7	1	153	0.74	2.07	1.17	10.55
COELUX	28	28	3.8	2	266	0.91	3.43	4.18	116.9
IDEA	22	13	11.3	0	208	0.7	1.6	1.04	13.5
INSTITUTE APPLIED N.	22	3	8.7	0	48	0.88	0.73	0.57	1.72
SIB LAB	22	3	8.7	0	48	0.88	0.73	0.57	1.72
ACTA	21	4	11.5	0	180	0.85	1.37	1.3	5.21
MOTTURA SERRATUR	21	8	14.9	2	139	0.47	1.97	0.16	1.25
DYTECH DYNAMIC FLU	16	9	12	0	125	0.82	2.01	0.8	7.23

For a more effective benchmark of partners or competitors, a qualitative analysis is better. In this case, evaluation metrics are use together with the quatitative data.

## Patent Metrics simplified



**Technology impact:** answers questiond on how important a patent is in its Technology domain based on forward citations received. The calculation takes into account the age of patents, who makes the citations and type of domain.

**Market Strategy:** answers the question of: does this company or entrepreneur make the best decisions on which countries to protect? This considers the GDP of each country with active patents or where patents used to be granted.

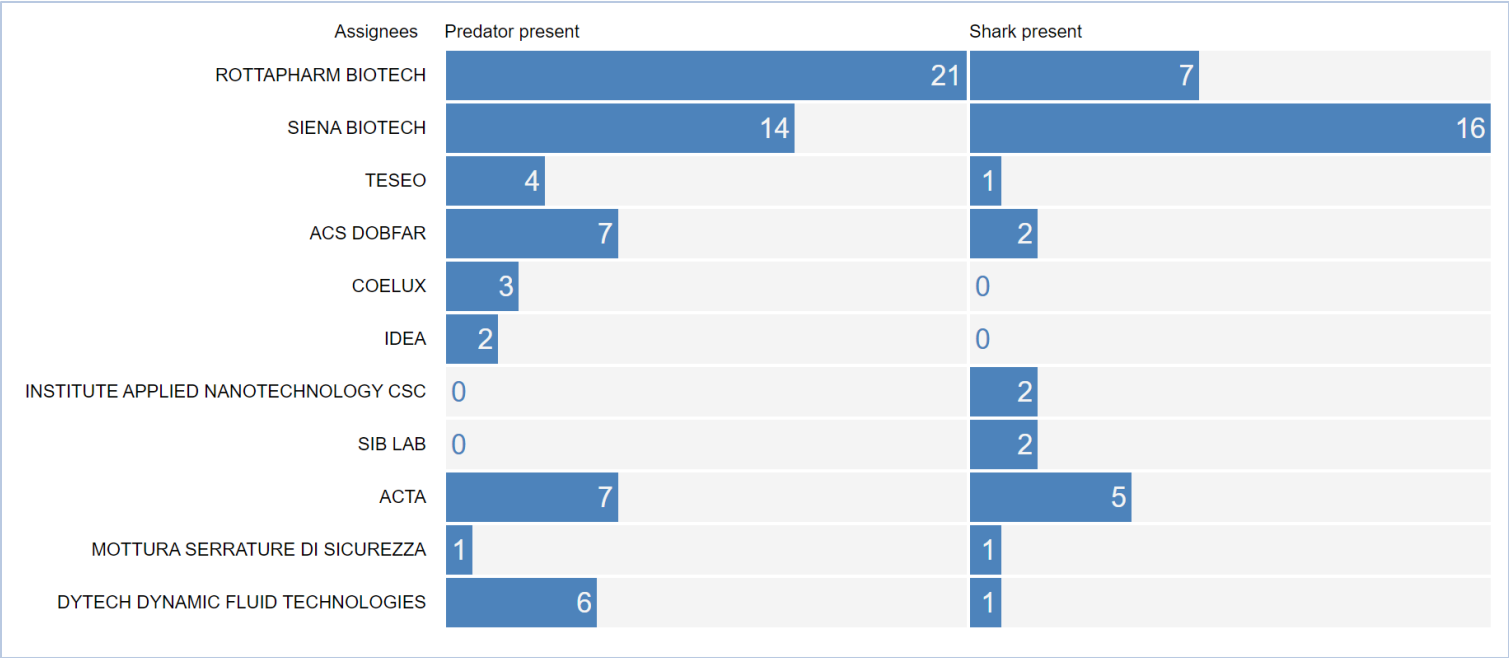
**Patent strength:** based on the combination od Technology impact & Market strategy. It can effectively distinguish the quality of patents. It is available for all inventions, alive or dead.

**Patent value:** based on Patent strength taking into account the remaining life of the patents. It answers questions on how valuable are the inventions today. Can they still be monetised?





# Threats or Potential inventions



Shark/Predator presence:

Number of families in an assignee's portfolio in relation to whom over 15% (predator) or 30% (shark) of the forward citations (minimum of three) are from a single entity that is not the same as the assignee

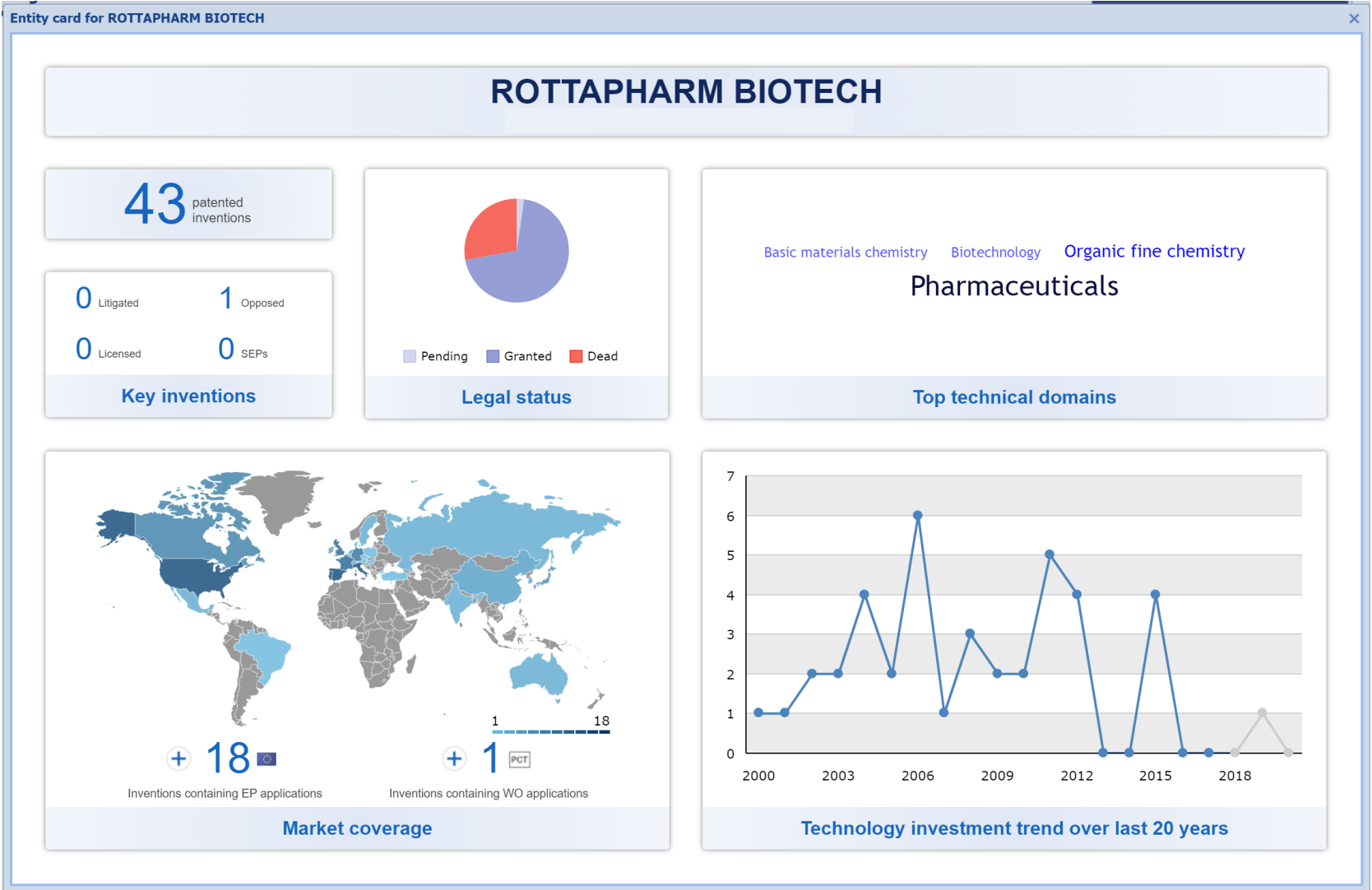
*This metric can highlight:*  
**Threats:** companies who cite your inventions a lot may be trolls or infringing on your invention or,  
**Potential:** companies who cite your inventions a lot may be interested in obtaining a license for it or partner with you.

# Threats or Potential inventions

## Rottapharm example

Entity card:

In a snapshot, we can see the main composition of the portfolio of a player.



# Threats or Potential inventions | Rottapharm example

## Cyclic amine derivatives as ep4 receptor antagonists

### Abstract

There is described a novel group of cyclic amine derivative compounds, having an EP4 receptor antagonistic activity and specifically pharmaceutical compounds which are useful for the treatment or alleviation of Prostaglandin E mediated diseases. The present invention therefore relates to novel compounds which are selective antagonists of the EP4 subtype of PGE2 receptors with analgesic and antiinflammatory activity, processes for their preparation, pharmaceutical compositions containing them and their use as medicaments, inter alia for the treatment or alleviation of Prostaglandin E mediated diseases such as acute and chronic pain, osteoarthritis, inflammation-associated disorder as arthritis, rheumatoid arthritis, cancer, migraine and endometriosis

### Evaluation Metrics

Patent value: 5,75

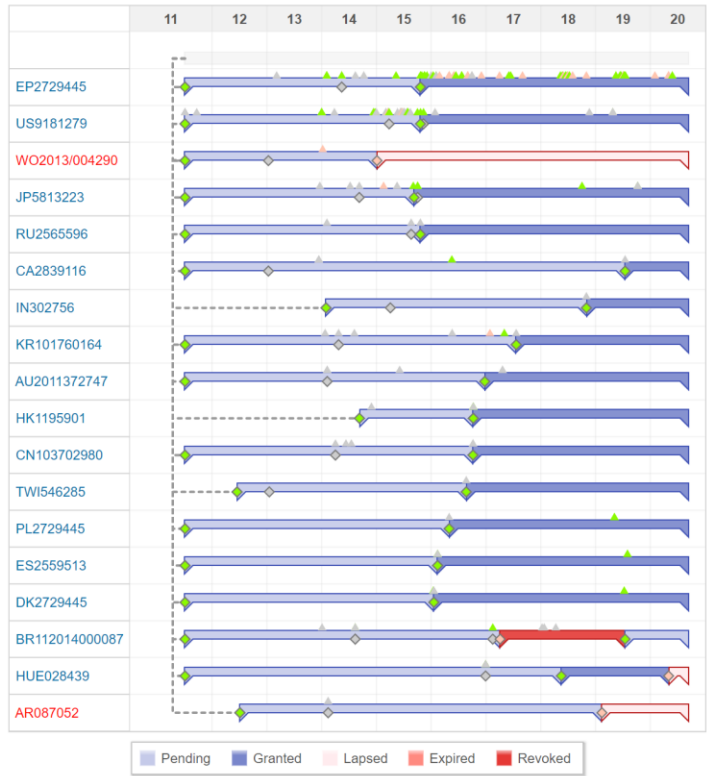
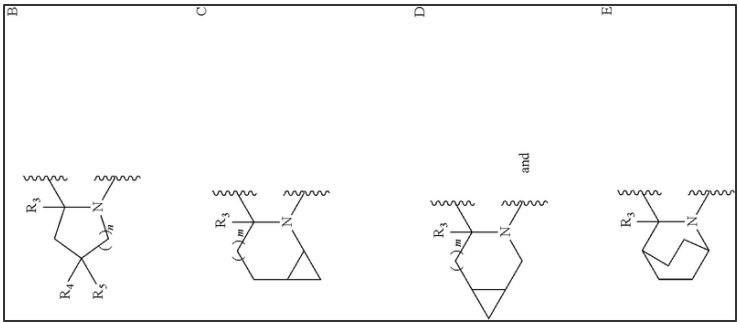
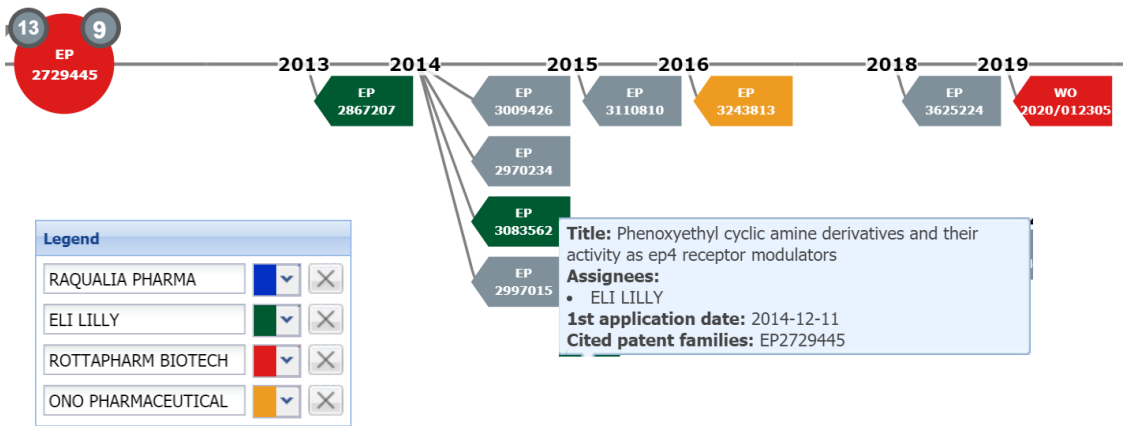
Patent strength:5,79

### Protected countries

Granted: AU, BE, CA, CH, CN, DE, DK, EP, ES, FR, GB, HK, HU, IE, IN, IT, JP, KR, NL, PL, RU, SE, TR, TW, US

Pending: BR

### Forward citations



**Company identified as potential/threat:**  
**Eli Lilly**

## Conclusion

- ✓ As an entrepreneur, you CANNOT ignore IP rights
- ✓ IP rights can help:
  - protect your inventions
  - obtain partnership, collaboration or financing
  - gain client or market confidence
- ✓ IP search & Analysis can help:
  - prevent litigations & lawsuits
  - avoid time loss in invention process
  - With ideation or white space mapping
  - gain market intelligence
  - find partners or acquisition opportunities

Orbit IPBI solutions foster  
IP stakeholders in all their  
IP activities

**Thank you for  
your interest!**

