



BUREAU VAN DIJK

A Moody's Analytics Company

Data Analytical Tools for FDI and Innovation Support Services

Brussels, December 4th 2019

| Gert Jan Mattens
Head of Government - Belgium

Welcome to the business of certainty

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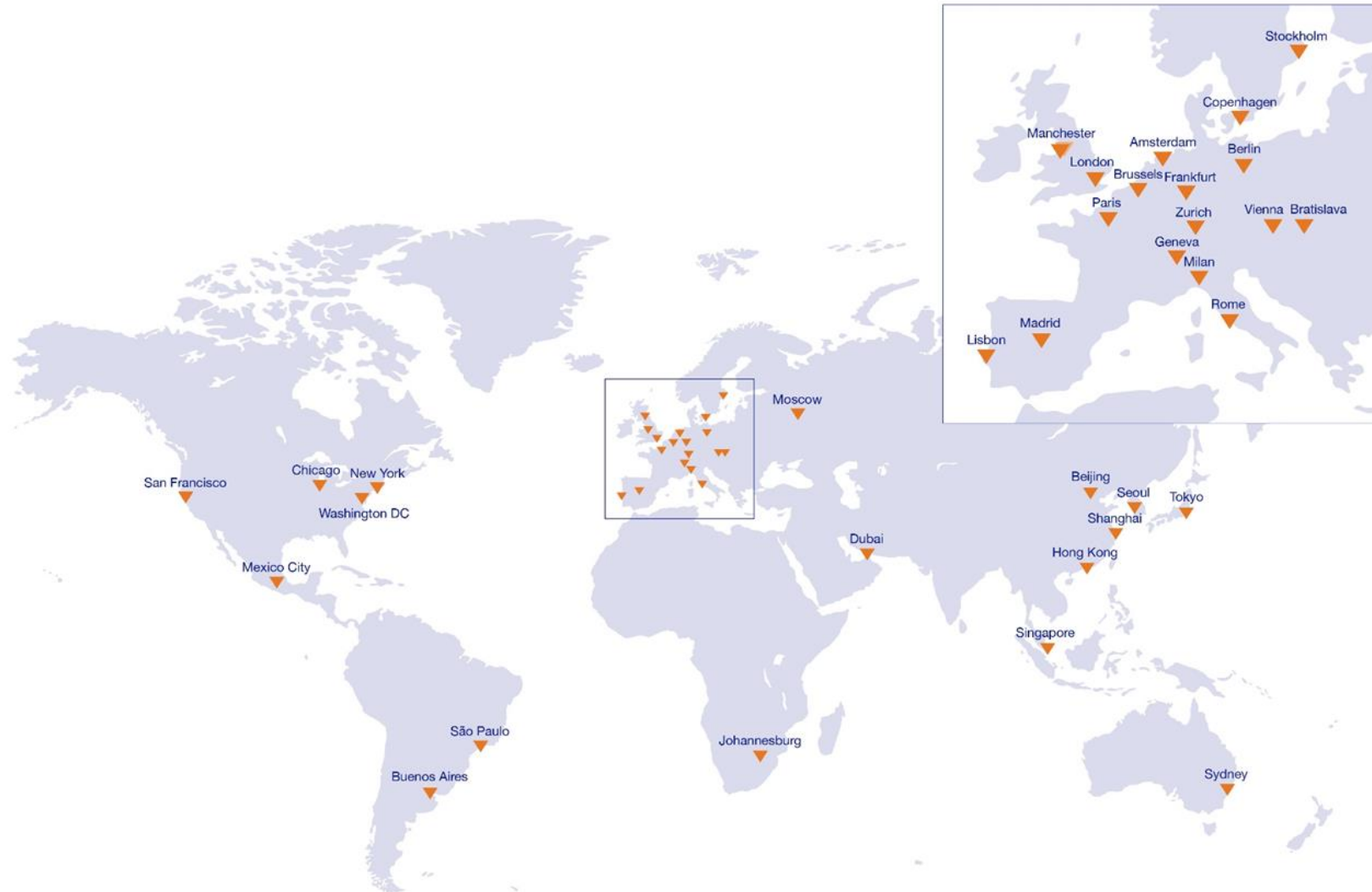
1. About Bureau van Dijk
2. Orbis
3. Orbis Intellectual Property
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About us
Bureau van Dijk

Introduction – Bureau van Dijk



We capture a wide variety of information

We capture data from regulatory and other sources

News	Industry research	M&A deals	PIEs	Industry codes	Directors and contacts	Royalty agreements	Marine vessels	Corporate actions
Company overviews	Original documents	LEI numbers	PEPs and sanctions	Agency ratings	Intellectual property	Patents	Stock data and earning estimates	
		Public tenders	Company financials	AML documents	Financial strength data	ESG Risk info		



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Orbis



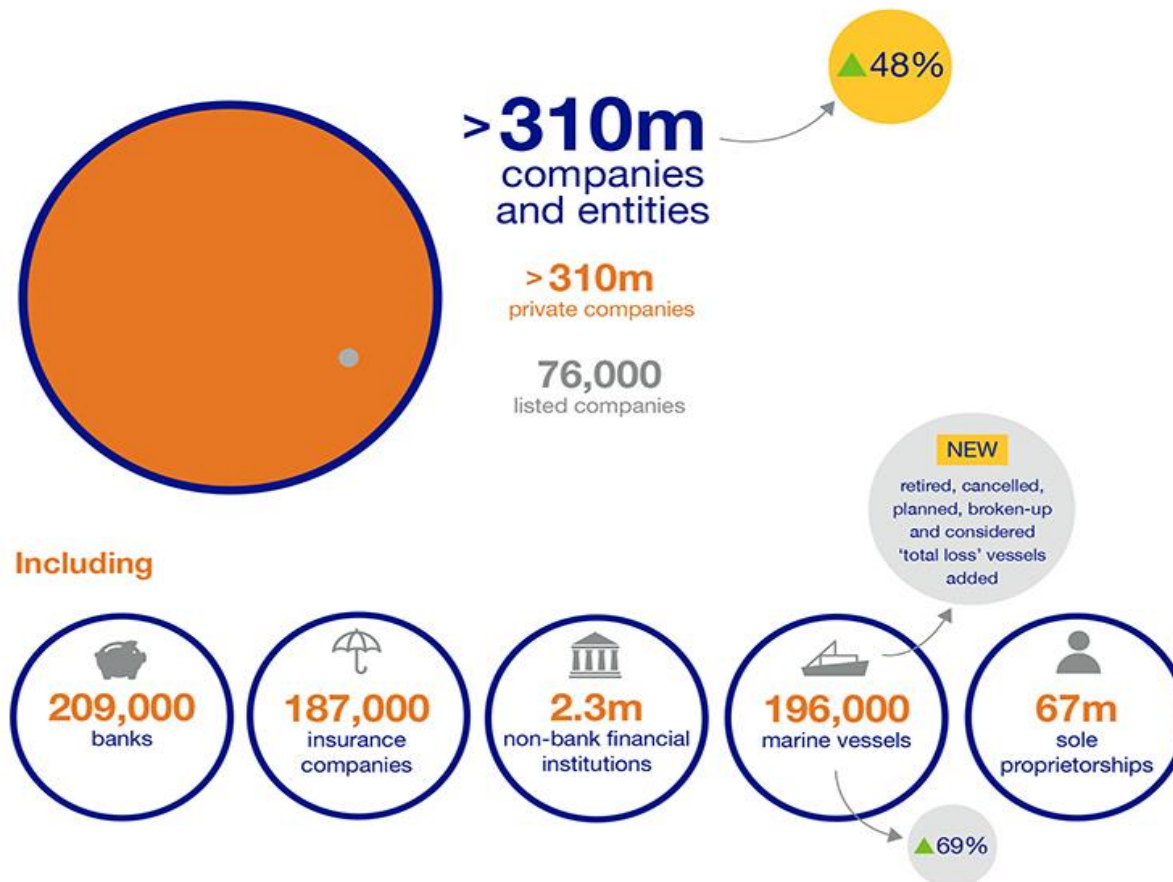
**The world's most powerful comparable
data resource on private companies**

- ✓ comparable information
- ✓ holistic view of companies
- ✓ corporate ownership structures



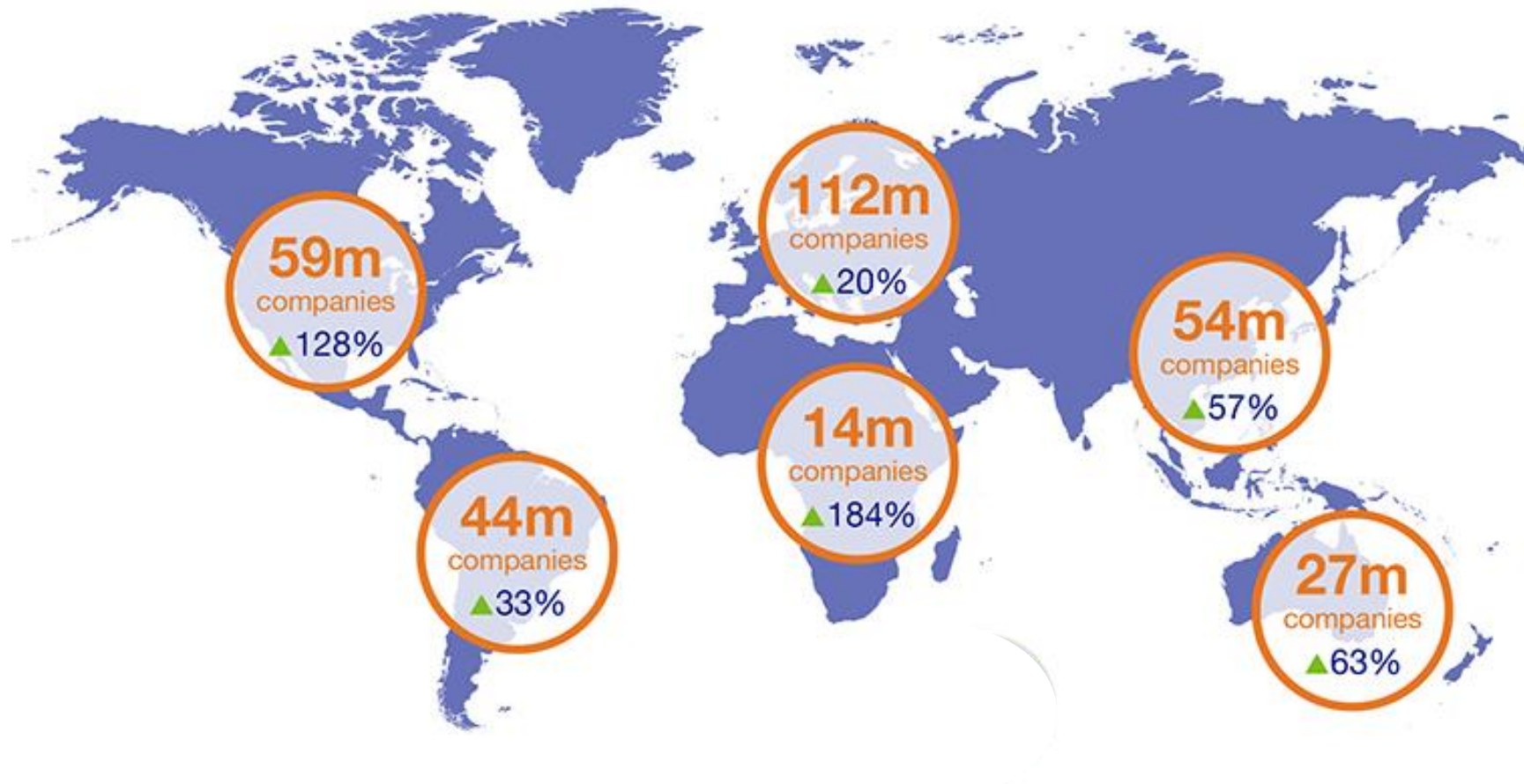
The resource for private company data

Orbis is a growing database of companies and other entities...



Geographic Coverage

... and it covers companies in *all* countries...



Trade Description- Innovation



? Help menu

? Gert-Jan Mattens ▾



Find a company

Start again

Save

Your search: 66,415 companies

Search step	Result for:	Step	Search
<input type="checkbox"/> 1. Status: Active companies, Unknown situation	>	255,119,577	255,119,577
<input checked="" type="checkbox"/> 2. Activity text search: Must have 'innovation' (in Brand names, Description and history, Size estimate, Full overview, History, Main activity, Main customers, Main distribution site, Main domestic country, Main foreign countries or regions, Main production site, Main sales representation sites, Membership of network, Primary business line, Primary national activity, Product and services, Secondary activity, Secondary business line, Strategic alliances, Strategy organization and policy, Trade description) Show less	>	74,536	66,415
Boolean search: 1 and 2	↺ ?	Total:	66,415



SMEs



? Help menu

? Gert-Jan Mattens ▾



Q Find a company

↺ Start again

📄 Save

Your search: 33,429 companies

Search step	Result for:	Step	Search
✕ <input checked="" type="checkbox"/> 1. Status: Active companies, Unknown situation	>	255,119,577	255,119,577
✕ <input checked="" type="checkbox"/> 2. Activity text search: Must have 'innovation' (in Brand names, Description and history, Size estimate, Full overview, Hi... Show more	>	74,536	66,415
✕ <input checked="" type="checkbox"/> 3. Size classification: Medium, Small	>	322,263,312	33,429
Boolean search: 1 and 2 and 3	↺ ?	Total:	33,429

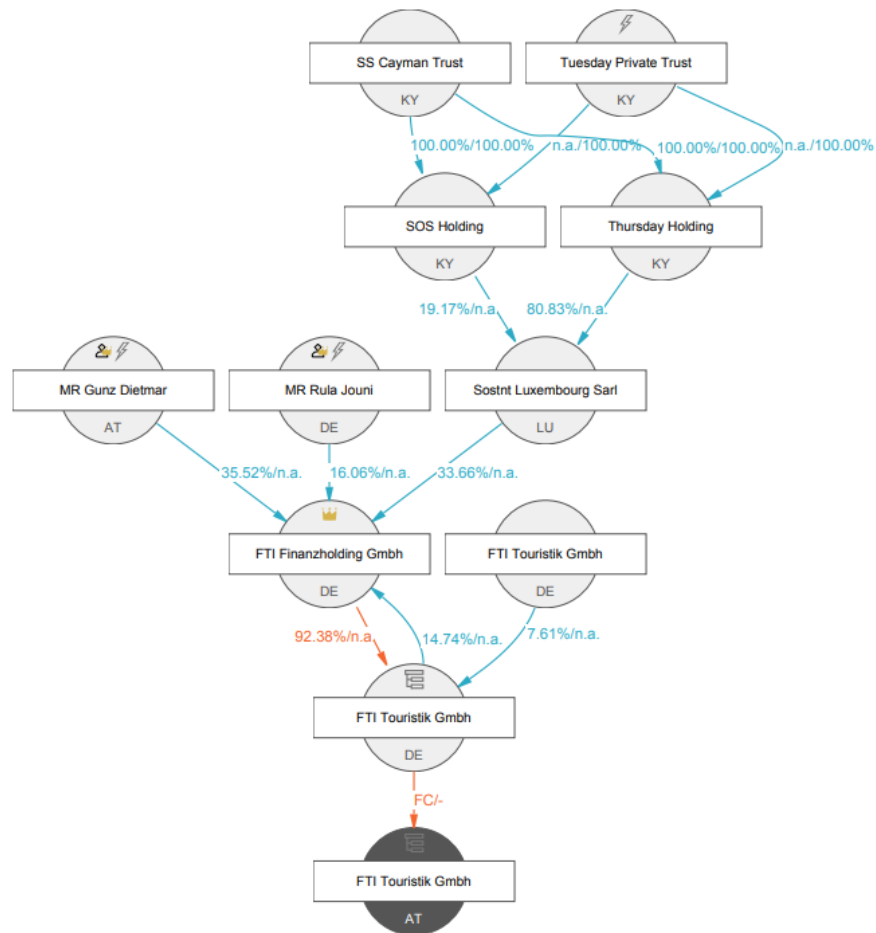


Company Lists

<input type="checkbox"/>	Company name Latin alphabet		NACE Rev. 2, core code (4 digits)	Last avail. year	▼ Operating revenue... th EUR Last...	Number of employees Last avail. yr	GUO - Name
✕ <input type="checkbox"/> 1.	WALMART INC.	 	4719	2018	447,776,166	2,200,000	WALTON FAMILY
✕ <input type="checkbox"/> 2.	EXXON MOBIL CORP	 	1920	2018	243,957,956	71,000	EXXON MOBIL CORP
✕ <input type="checkbox"/> 3.	APPLE INC.	 	2620	2018	229,435,846	132,000	APPLE INC.
✕ <input type="checkbox"/> 4.	AMAZON.COM, INC.	 	4761	2018	203,394,657	647,500	AMAZON.COM, INC.
✕ <input type="checkbox"/> 5.	GLENCORE PLC	 	0899	2018	190,954,561	158,000	GLENCORE PLC
✕ <input type="checkbox"/> 6.	MCKESSON CORPORATION	 	4645	2018	190,760,207	80,000	MCKESSON CORPORATION
✕ <input type="checkbox"/> 7.	JAPAN FINANCE ORGANIZATION FOR MUNICI...	 	6619	2017	181,663,306	90	LOCAL GOVERNMENTS
✕ <input type="checkbox"/> 8.	UNIPEC ASIA COMPANY LIMITED	 	4671	2018	171,445,852	45	CHINA-PEOPLE'S REP.
✕ <input type="checkbox"/> 9.	CVS HEALTH CORPORATION	 	4773	2018	169,937,906	295,000	CVS HEALTH CORPORATION
✕ <input type="checkbox"/> 10.	SINOPEC SALES CO., LTD.	 	4671	2018	156,612,996	165,000	CHINA-PEOPLE'S REP.
✕ <input type="checkbox"/> 11.	CHINA PETROCHEMICAL CORPORATION	 	1920	2018	156,164,546	120	CHINA-PEOPLE'S REP.
✕ <input type="checkbox"/> 12.	AT&T INC.	 	6190	2018	149,131,803	268,000	AT&T INC.
✕ <input type="checkbox"/> 13.	AMERISOURCEBERGEN CORP	 	4645	2018	145,075,668	21,000	AMERISOURCEBERGEN CORP
✕ <input type="checkbox"/> 14.	FORD MOTOR CO	 	2910	2018	140,033,117	199,000	FORD MOTOR CO
✕ <input type="checkbox"/> 15.	CHEVRON CORPORATION	 	1920	2018	138,661,065	48,600	CHEVRON CORPORATION



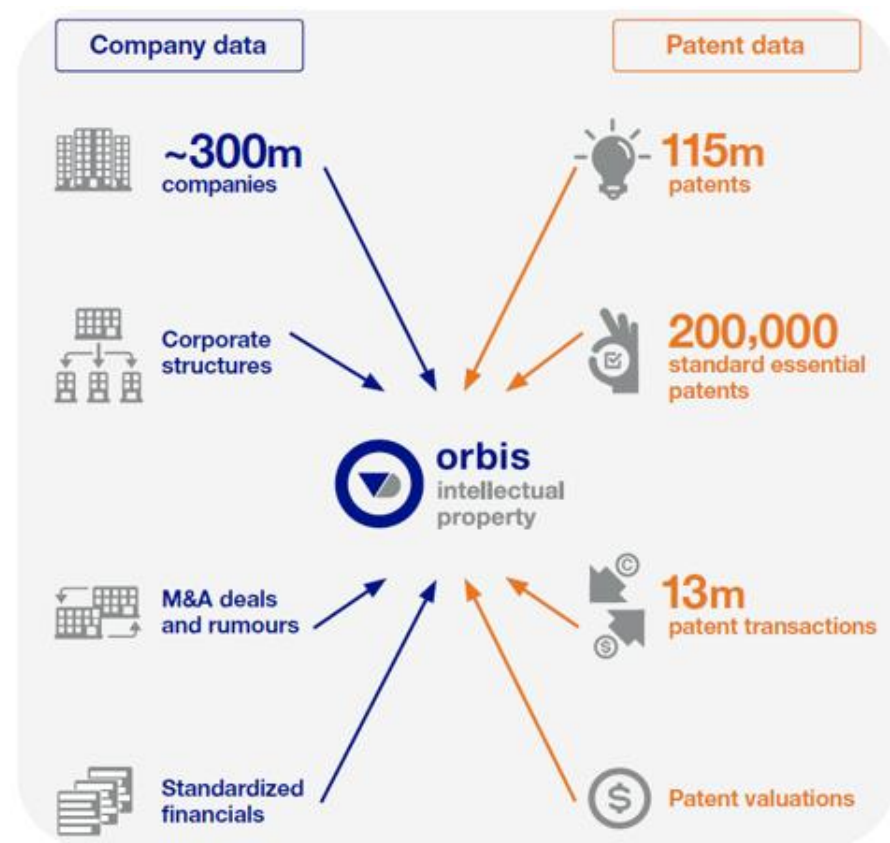
Shareholders & corporate group



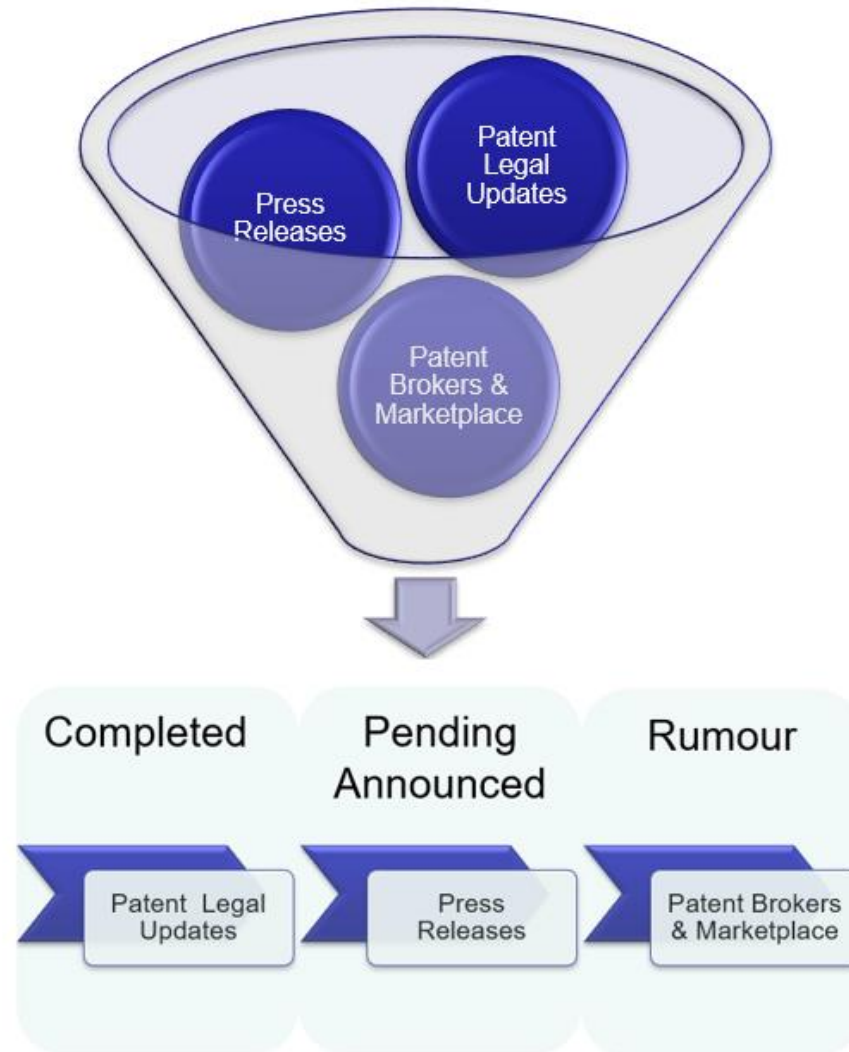
3

Orbis Intellectual Property

Combining company and patent information for intellectual property management and strategy



Patent Ownership Tracking



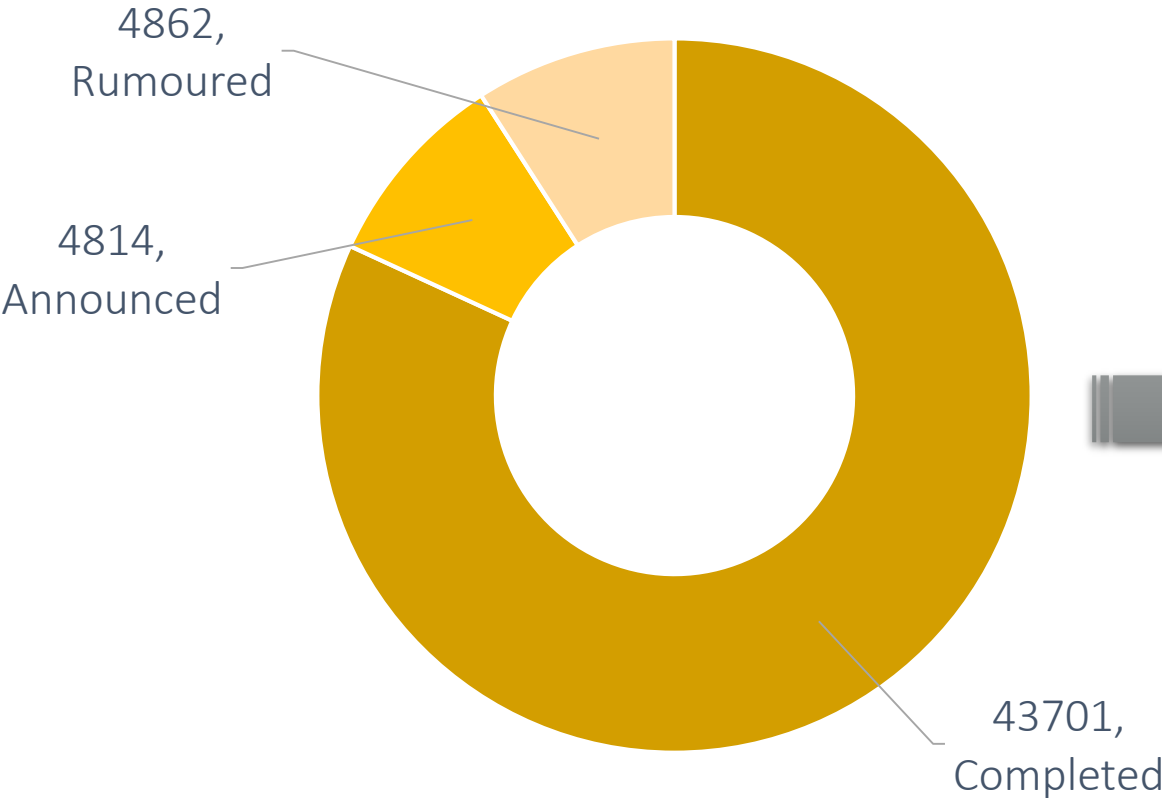
Orbis Intellectual Property: Transaction deal types

1. **Research & Innovation Partnership:** If any innovation institute or University transfers IP to another entity these transactions can be classified into this category
2. **Corporate Acquisition:** If the acquisition is between two practicing entities (any firm other than universities, banks, investment funds, law groups)
3. **Assignment as Collateral :** If the name of the acquirer involves an entity type as bank/ funding agency – the deals are then classified into this category
4. **Release of Collateral:** If the name of the vendor involves an entity type as bank/ funding agency – such deals are to be classified into this category
6. **M&A:** Patents were transferred as part of an M&A deal
7. **Intra-company:** Patent transfers between entities falling under the same GUO for tax/legal reasons
8. **Government:** Assets of interest to government will be acquired/reassigned to government agencies for security

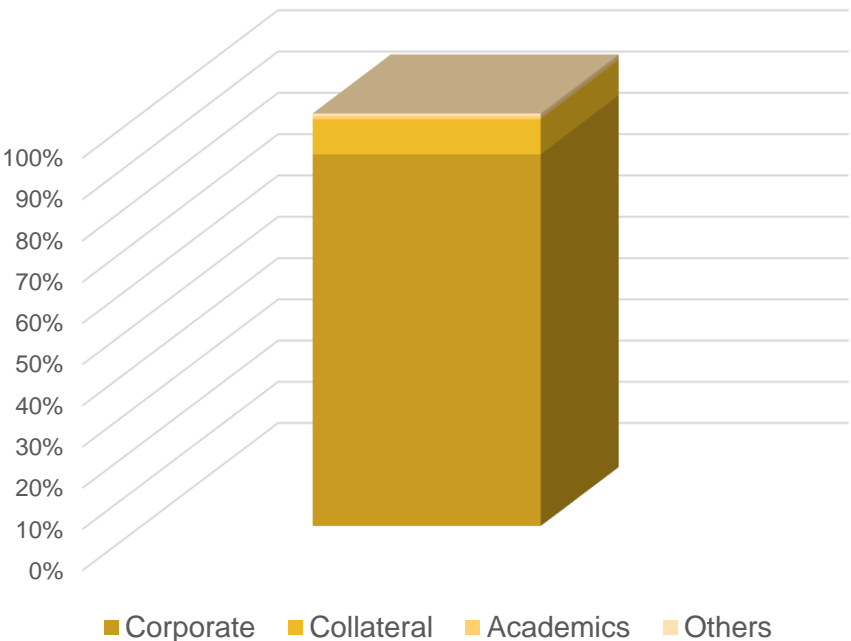


Detailed transactions market overview

Number of other patents holders in the company's technology area



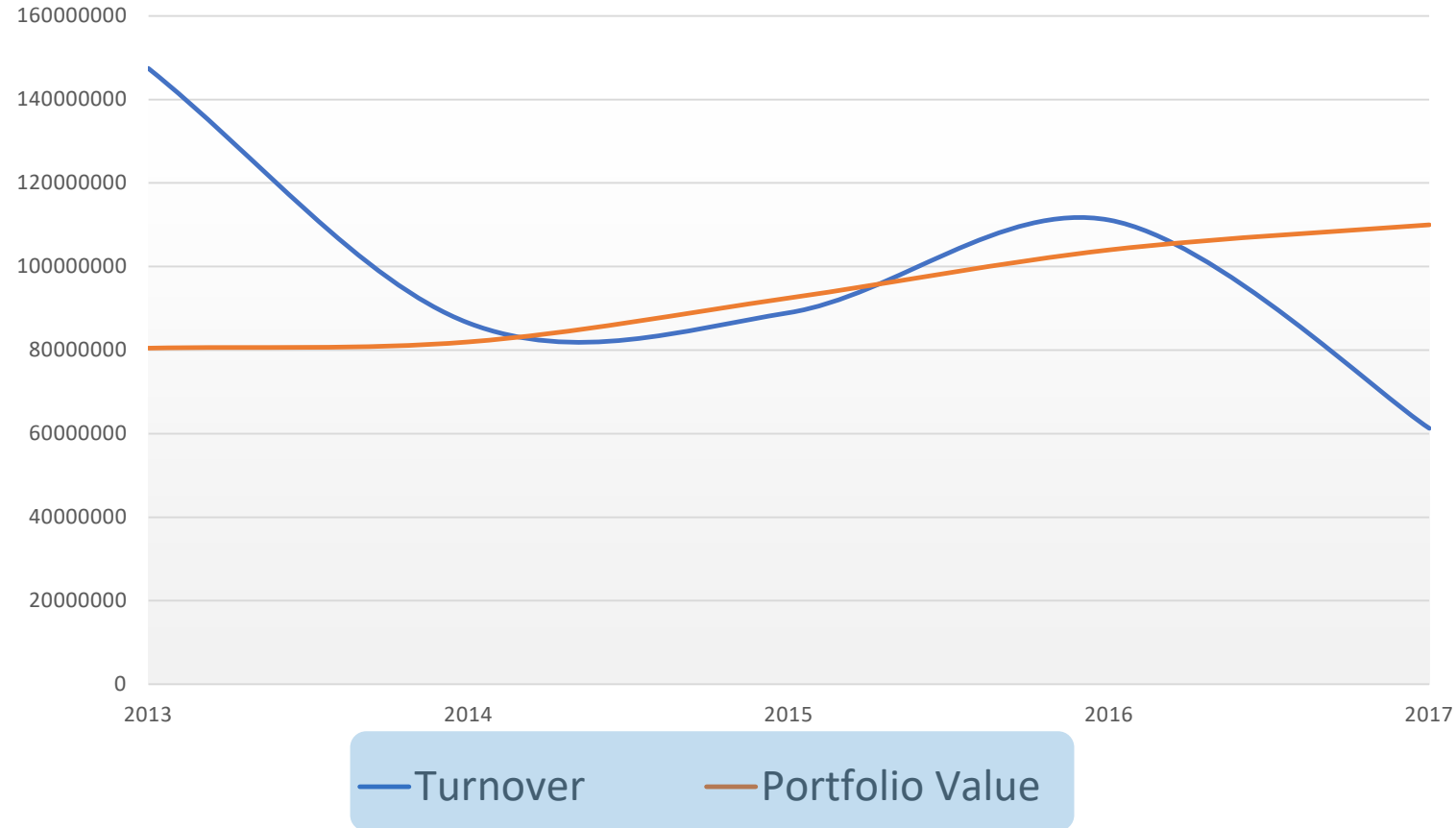
Transaction distribution



Note- Audio and video equipment manufacturing. Source: Bureau van Dijk's Orbis Intellectual Property and analysis.



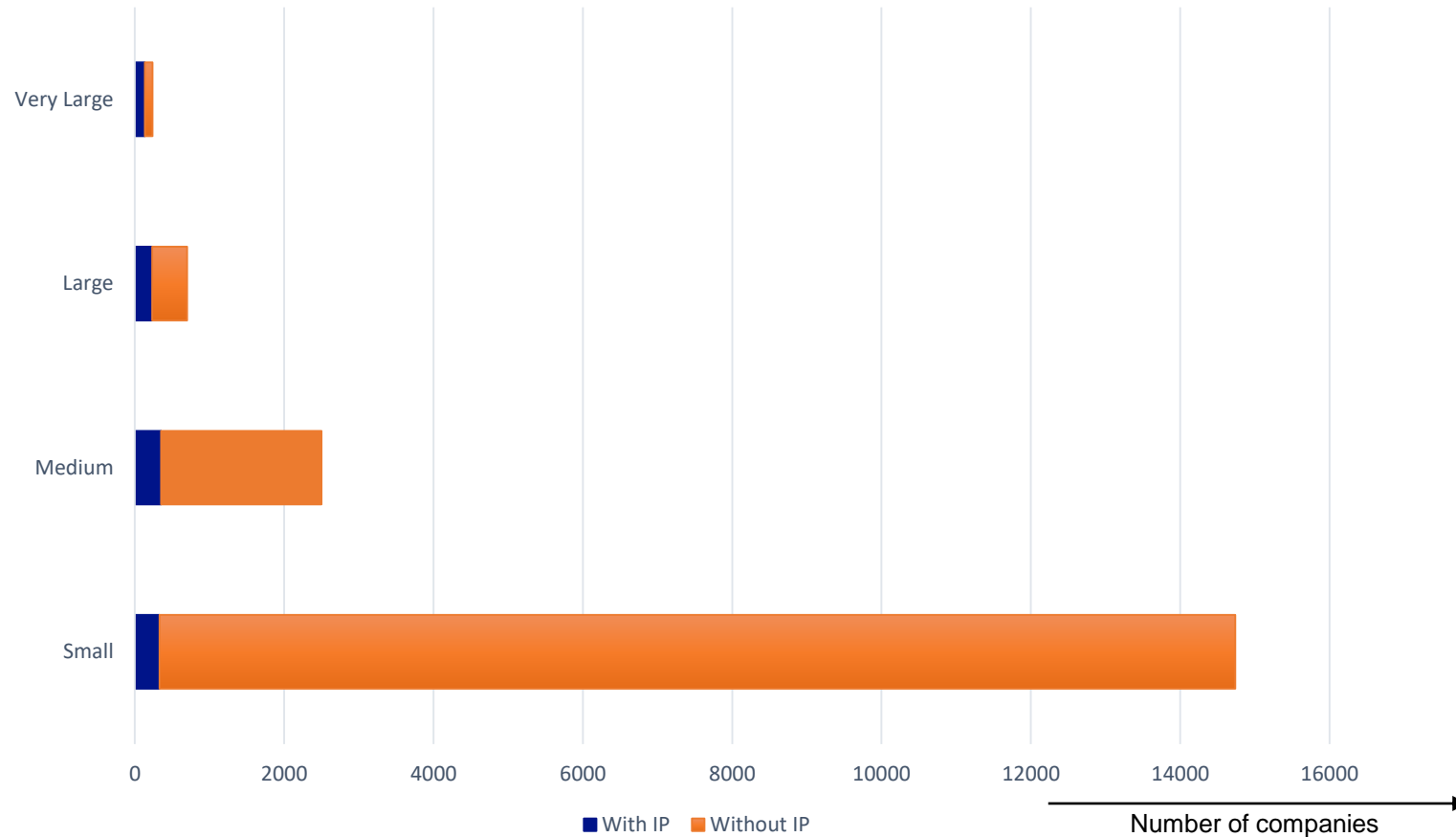
Identify entities at risk (Bankruptcy)



Identify the true value of the IP within your portfolio and its relevance to the business.



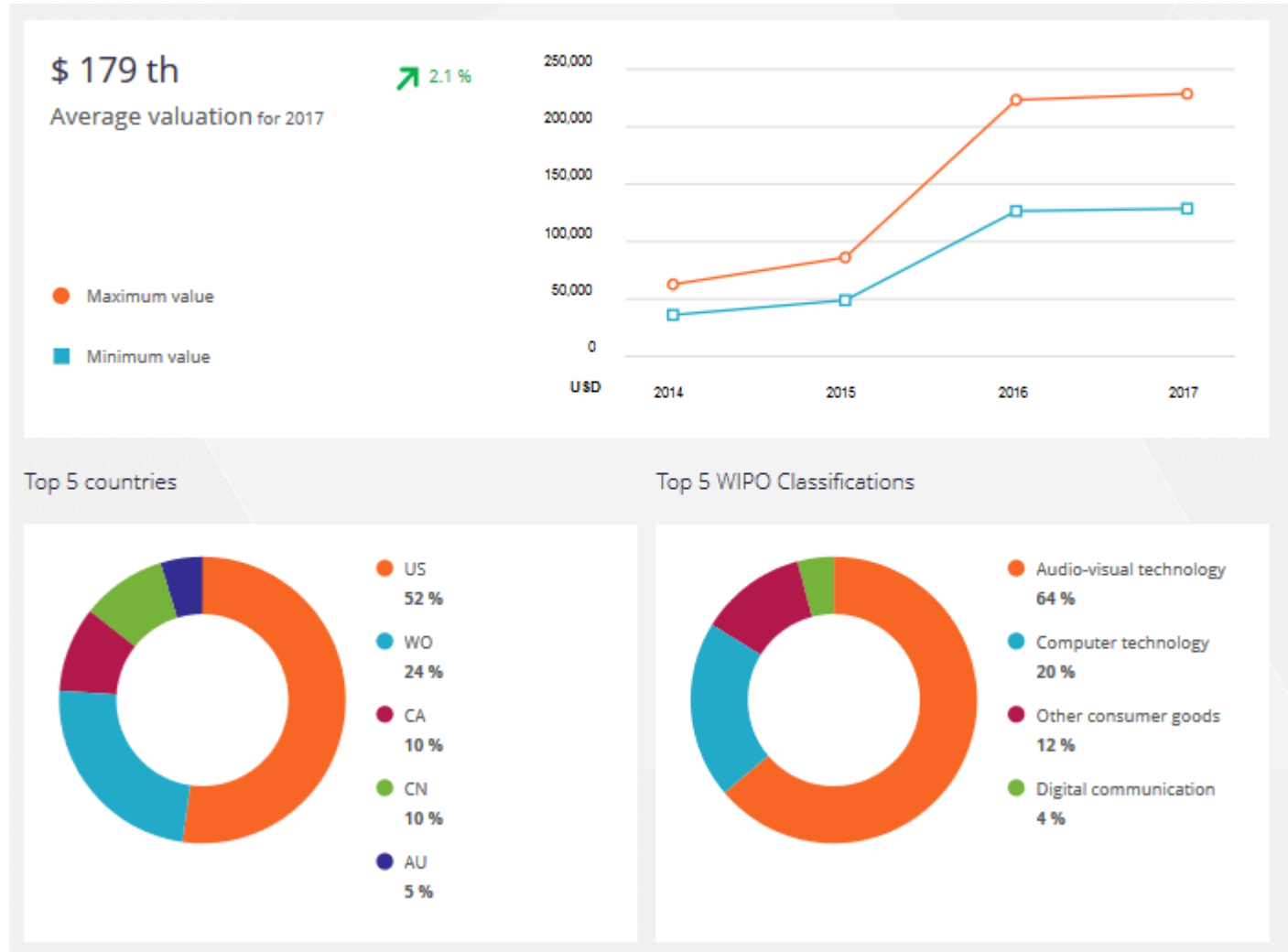
Understand the given Technology Space



Using Industry sector/ business activity codes to identify how crowded the space is and to understand how much of the IP has been explored within the space.

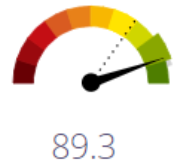


Identify What's Valuable



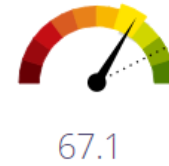
Qualitative benchmarking of entities

Technical quality



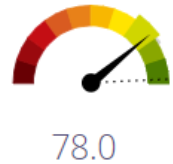
	<u>Company</u>	<u>Peer group</u>
2017	89.3	69.9
2016	89.4	69.9
2015	89.1	69.7
2014	88.4	69.6
2013	86.6	69.5
2012	83.4	69.2
2011	83.2	68.9

IP efficiency



	<u>Company</u>	<u>Peer group</u>
2017	67.1	84.9
2016	68.4	85.3
2015	61.5	85.9
2014	57.5	86.4
2013	58.3	86.9
2012	59.2	87.3
2011	67.2	88.3

Market attractiveness



	<u>Company</u>	<u>Peer group</u>
2017	78.0	97.9
2016	66.0	95.3
2015	63.3	94.6
2014	64.4	96.4
2013	69.8	97.9
2012	70.3	97.8
2011	53.9	89.2

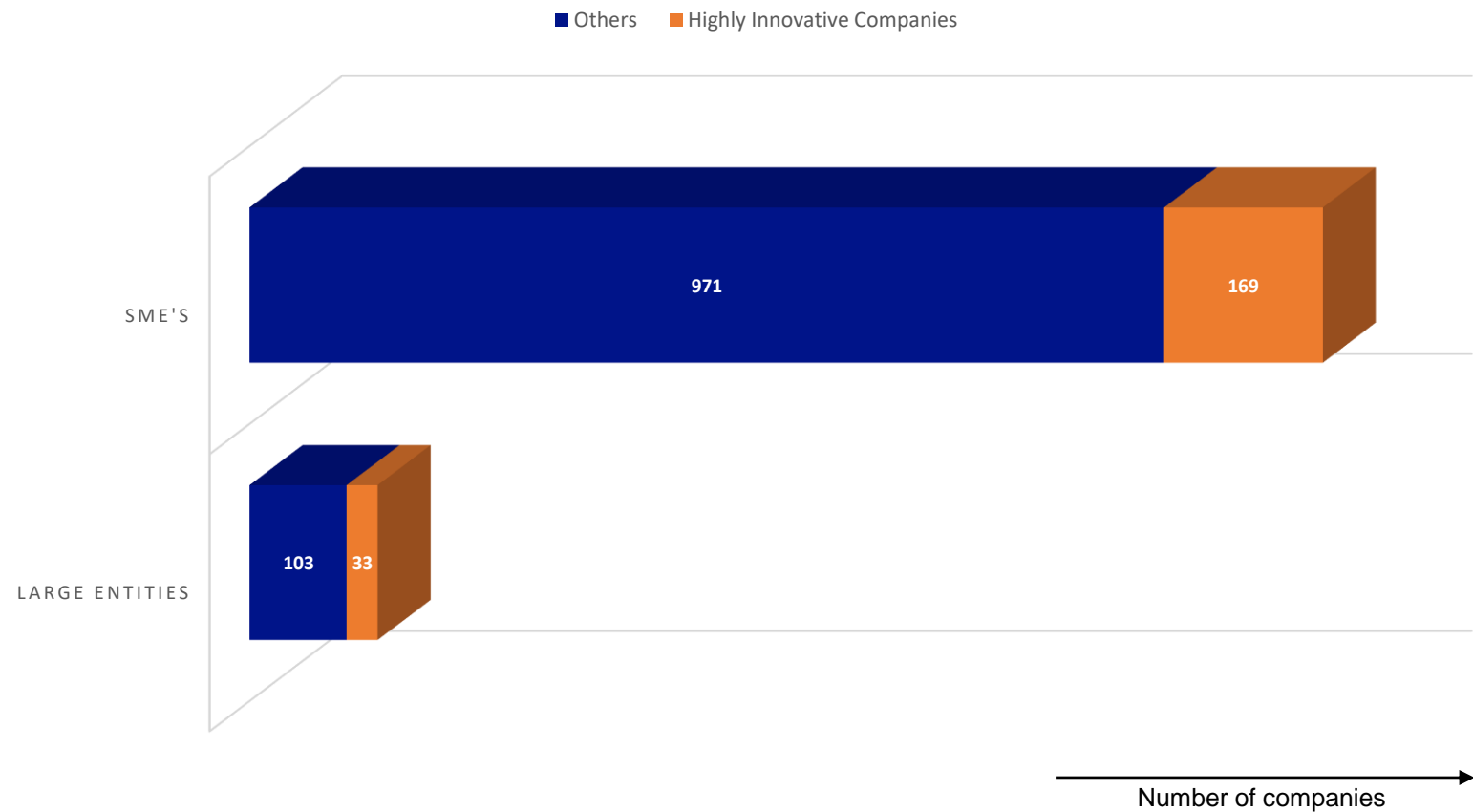
Market coverage



	<u>Company</u>	<u>Peer group</u>
2017	100.0	42.5
2016	100.0	43.0
2015	100.0	43.4
2014	100.0	42.8
2013	100.0	43.0
2012	100.0	42.2
2011	100.0	41.9



Identify highly innovative SME's



Uncover start-ups or successful, highly innovative SME's.



Trends by Market



Technology directions

- What markets are interested in what technologies?
- Patents are filed 18 months – so can be quite outdated.
- Looking at acquisitions can allow for faster analysis re/ direction

Max Planck Institute of Innovation

- Acquisitions across geographies for top technologies transacted in 2017

WIPO Class	Germany
Transport	2305
Mechanical elements	979
Electrical machinery, apparatus, energy	932
Civil engineering	536
Measurement	535
Machine tools	517
Computer technology	469
Other special machines	445
Engines, pumps, turbines	427
Basic communication processes	389

WIPO Class	Australia
Computer technology	1146
Medical technology	1058
Pharmaceuticals	715
Biotechnology	507
Organic fine chemistry	495
IT methods for management	421
Civil engineering	368
Digital communication	314
Measurement	259
Audio-visual technology	224



Case study

World Bank

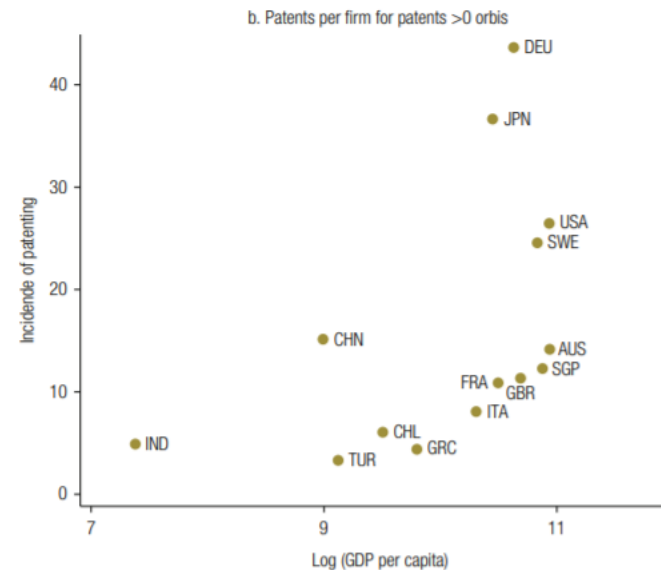
- Innovation within Developing Nations vs Developed Nations

Report:

<http://documents.worldbank.org/curated/en/844101510122107327/pdf/120137-PUB-ADDBOX-405295B-PUBLIC-PUDATE-10-3-17.pdf>

These new data, either by themselves or matched with, for instance the Bureau van Dijk (BvD) Orbis firm data, provide a richer characterization of innovation activities and enable researchers to explore the importance of management practices in the innovation process. This work indicates that many developing country firms lack the management practices required to support robust innovation systems.

The firm-level data from BvD Orbis enable us to disaggregate patenting activity into incidence (share of firms that patent) and intensity (patents per patenting firm). Although the Orbis data may not be collected in a fully uniform way across countries, figure 2.5 suggests some rough stylized facts.



Data attributes used:

- Company data
 - Number of employees
 - R&D Investment
 - Intangible Value
 - Turnover
 - Number of Patents Filed
- Valuation data at firm level

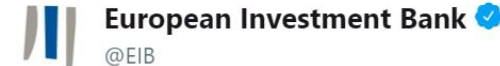
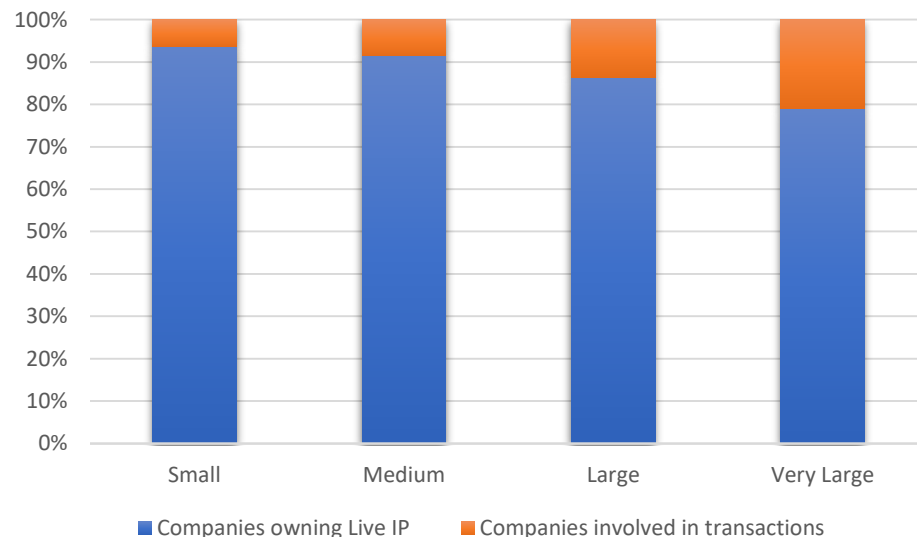


Case study 2

- SME vs large companies
 - Map change in behaviour → e.g. UK patent office promote patent / innovation with SME
- Due diligence work around patent applicants

European Investment Bank

- Identify 3000 SME's for Innovation Funding in 2017
- Identify the industry segments that need to be supported for effective utilisation of IP



Follow

The EIB Group signed more than €78 billion in financing in 2017. #Innovation is at the heart of competitiveness and we managed to increase lending in this area to a total close to €14 billion #EIB2017

EIB Group results 2017




4


Orbis Crossborder Investment


Orbis Crossborder Investment


Orbis Crossborder Investment (OCI) tracks both forms of equity cross-border investment (Greenfield FDI projects and Mergers & Acquisitions).


 **orbis**
crossborder investment


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 Search


 Results

 Report

 Tools

 Alerts

 Exports

 My Orbis

Projects Find a project – Enter a company name or a Project ID number X

Start againSave

Your search


Search step	
X	<input checked="" type="checkbox"/> 1. Status: Announced, Completed - assumed, Completed - confirmed
X	<input checked="" type="checkbox"/> 2. Destination market: Portugal (PT)


Boolean search: 1 and 2 Refresh


389 projects >


315 M&A Deals >


519 Companies with projects or deals >



519 Companies
with projects or deals


310 Companies
with projects


363 Companies
with deals


156 Companies
with projects but without deals


209 Companies
with deals but without projects


154 Companies
with projects and deals



Greenfield R&D FDI projects of interest in 2019

Nov 2019



Schaeffler Savaria Kft's invests in €38,7M in research and development centre in Hungary
"The plant will be co-located with a research and development centre. The company plans to invest around HUF 23.5 billion, with HUF 5 billion of funding from the local government, creating around 150 new positions. The plant will span around 15,000 square meters and the R&D centre will span around 3,000 square meters."

Nov 2019



MGI Tech opens an innovation, research and development centre in Riga
"Based on Latvia's existing biotechnology foundation, MGI is confident to form a life science innovation platform centered on 'gene technology' in Europe using its leading products and technology. This will help build a complete technical service support system and product supply chain to efficiently meet the needs of customers and build deep experience in the European market."

Nov 20119



Precision for Medicine has expanded a research and development centre in Berlin
"For the first time ever, the two most meaningful methods in immunology—epigenetics and flow cytometry—have been combined under one roof to provide our customers with a previously unattainable combination of technologies, truly advancing the science of immune monitoring and cell profiling. We are thrilled to be opening this new state-of-the-art facility, enabling Precision to provide our unique combination of expertise, capabilities, and scalability to the European biopharma industry."

Source: Orbis Crossborder Investment



Rumours – R&D + Innovation

Nov 2019



BMW plans to relocate its research and development centre in South Korea

"We will invest in a new location for our R&D Center with more space and create additional jobs. It will be operational in around a year's time," said Peter, adding that the expanded facility will include extended test facilities for product development, tests and validation activities. We recognize Korea as one of the world's powerhouses of high-end technology. It represents innovative thinking, technological progress and tremendous openness to new developments."

Oct 2019



Naval Group may open a research and development centre in Australia

"Naval Group Pacific will rely on a long term partnership culture and leverage the dynamic R&D policy of its parent company to solve some of the local defence industry's most critical challenges."

Sep 2019



Hanshow and Ahold Delhaize plan to open an innovation, r&d centre in Europe

"The digital applications we will develop through this partnership will enhance the customer experience in our stores and allow us to operate more efficiently. Hanshow offers best in class in-store applications and know-how, and we have been very pleased with their contribution to the mobile phone scan and pay service."

Source: Orbis Crossborder Investment



Using FDI data

Product Intelligence

- FDI trends into you own location
- Location strengths and weaknesses
- Monitoring outbound investment

Market Intelligence

- Understanding what is happening in the market (both sector and market)
- Grasping the industry dynamic (is there really potential in the market?)

Competitor Intelligence

- Know who your real competitors are
- Understanding where else the prospect has invested in the region

Investor Intelligence (Lead generation)

- Identifying potential investors
- Understanding their market-entry strategies
- Qualifying and contacting potential investors
- Cross-referencing with company information



5

Summary

Summary

- Global FDI  by 13% in 2018*
- R&D Greenfield FDI projects grew in the European Union  by 19% in 2018**
- Predictions for FDI in 2020 show fragile growth, **BUT** the escalating tensions related to trade, tariffs, policy uncertainty is negatively impacting investor confidence. 
- Company patent filing, patent transaction monitoring, together with tracking new investments in R&D is an efficient way to identify which SMEs are innovating and expanding internationally.
- **AND REMEMBER.....DATA IS KNOWLEDGE, AND....**

*According to UNCTAD's World Investment Report 2019

** According to Orbis Crossborder Investment



Summary





BUREAU VAN DIJK

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