



*Moving the European
XR tech industry forward*

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 **LUCIDWEB**



*Toolkit to raise awareness of investors about the potential
of XR technologies*

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 **Fraunhofer**
Heinrich Hertz Institute

stere@psia

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KEY FUNDING TAKEAWAYS

Total Funding in 2018 and Total Number of Deals

€ 233.26 million and 74 deals

Change in Total funding: -62.21% over 2017*

Change in Number of deals: -26.7% over 2017

Top Funding Rounds (Q1 2015 - Q2 2019)



mindmaze

ultrahaptics

VARJO



Top Investors (Q1 2015 - Q2 2019)

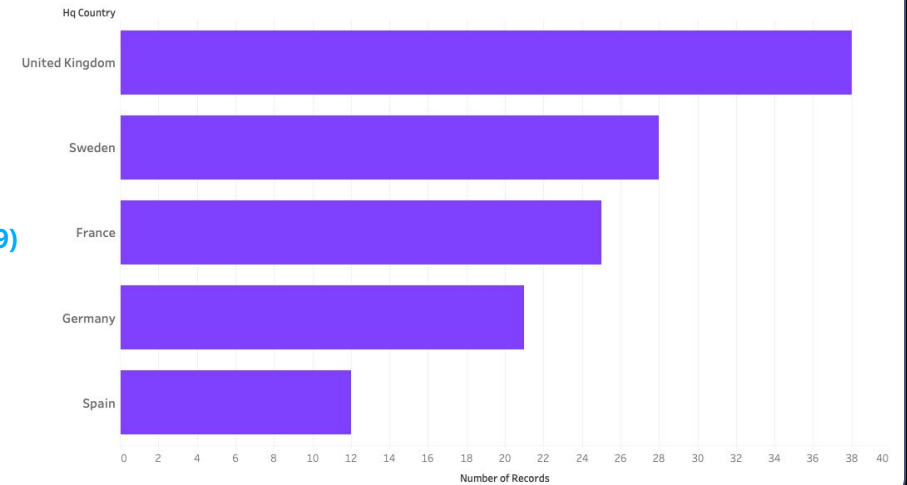


FIWARE

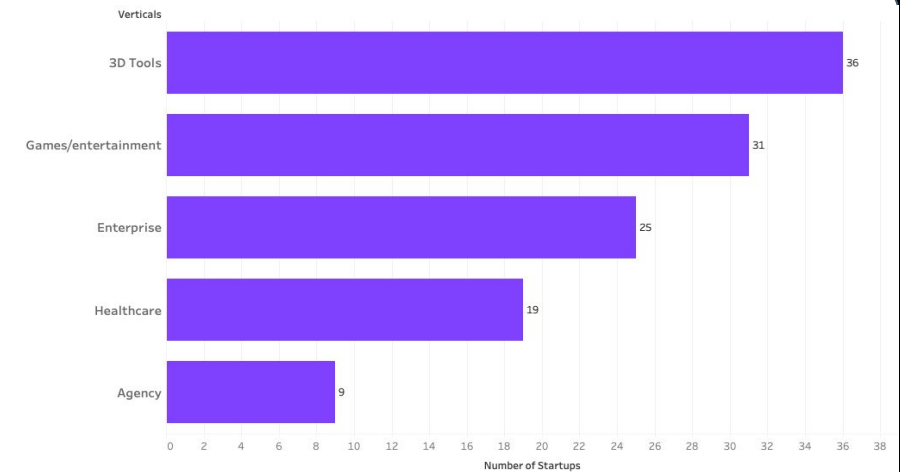
SSU
GAME VENTURES

boostVC

Top countries by number of deals (Q1 2015 - Q2 2019)



Top categories by number of deals (Q1 2015 - Q2 2019)



*Not including Improbable: -13.45% over 2017

KEY EXIT TAKEAWAYS

Total Exit Volume in 2018

€ 395.8 million

+4.22% over 2017

Top XR Exits (Q1 2015 - Q2 2019)



blippAR

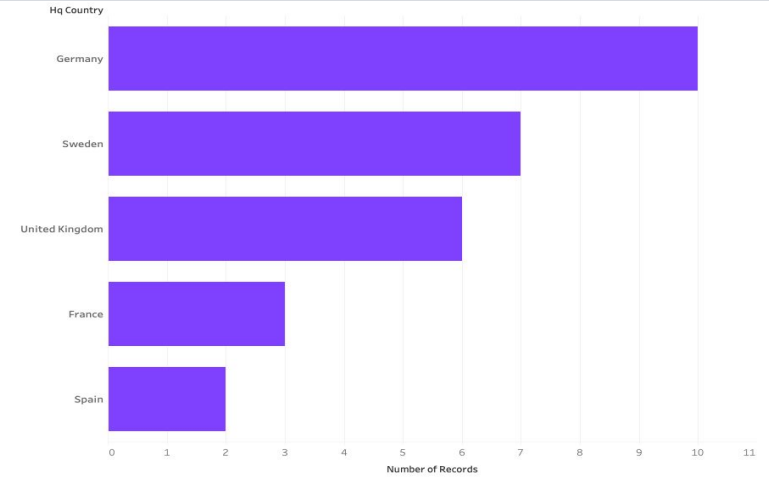


Top Acquirers (Q1 2015 - Q2 2019)

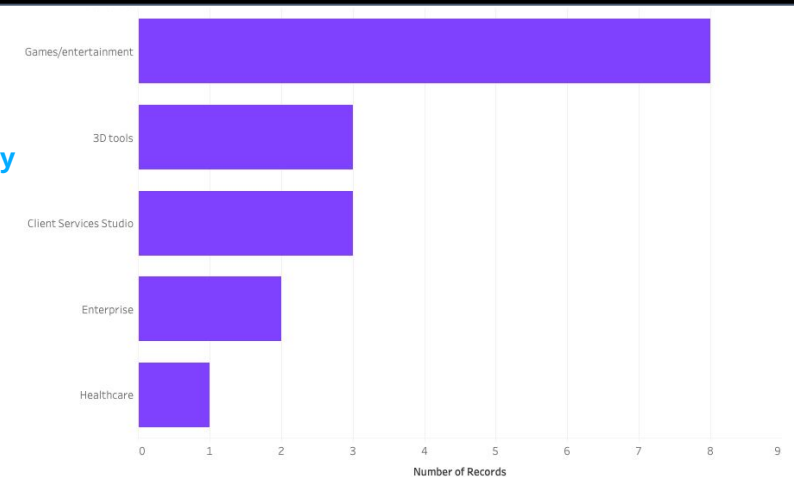
PEARLABYSS



Top countries by number of exits (Q1 2015 - Q2 2019)



Top categories by number of exits (Q1 2015 - Q2 2019)



VR/AR DATA OVERVIEW

DATA OVERVIEW

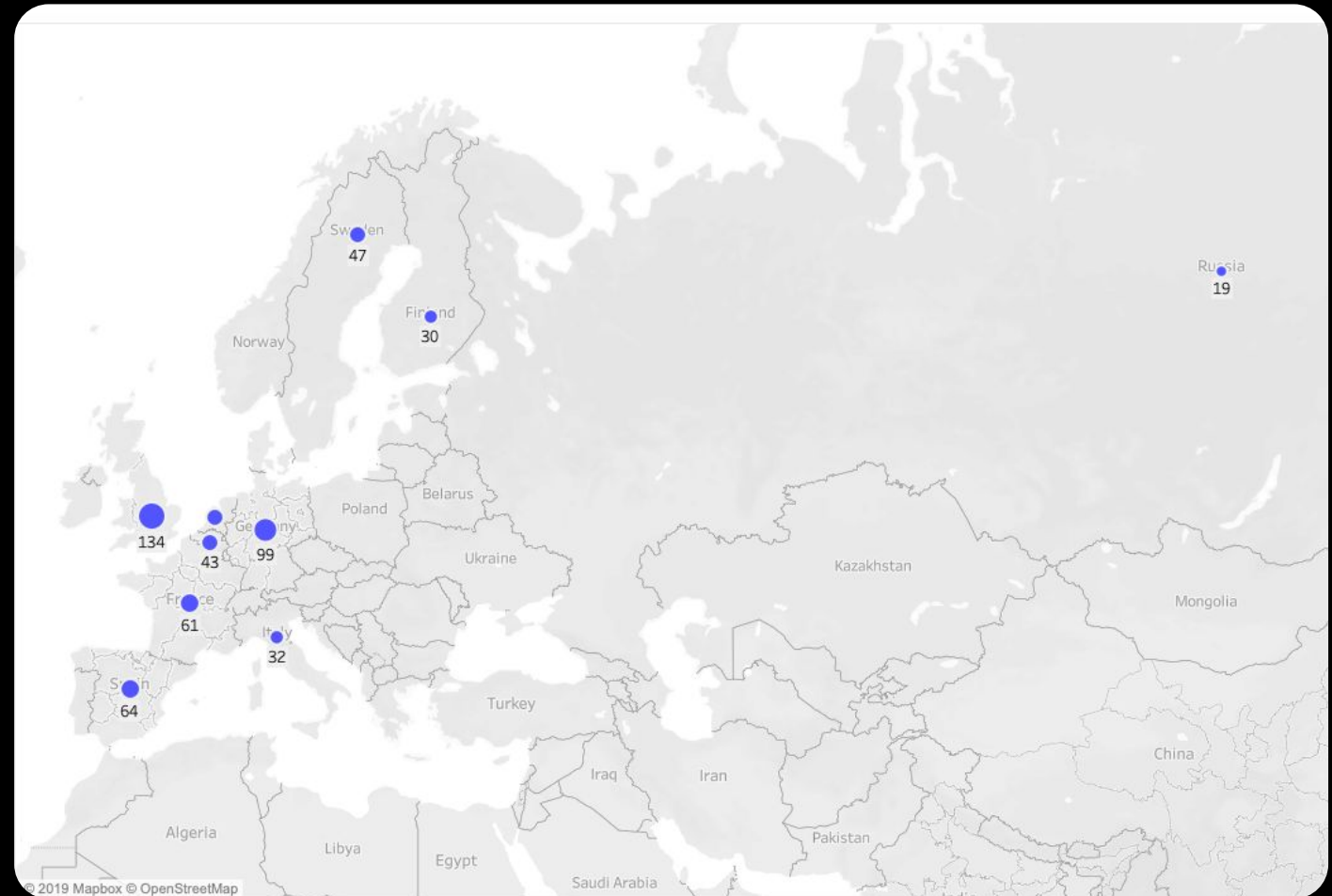
Summary of the data (Q1 2015 - Q2 2019)

Variable	Number of data points
Startups	748
Investors	451
Total investment rounds	357
Exits	39
Total € raised	€ 2 billion
IPOs	6
Acquisitions	10

DATA OVERVIEW

Geography of startups (Q1 2015 - Q2 2019)

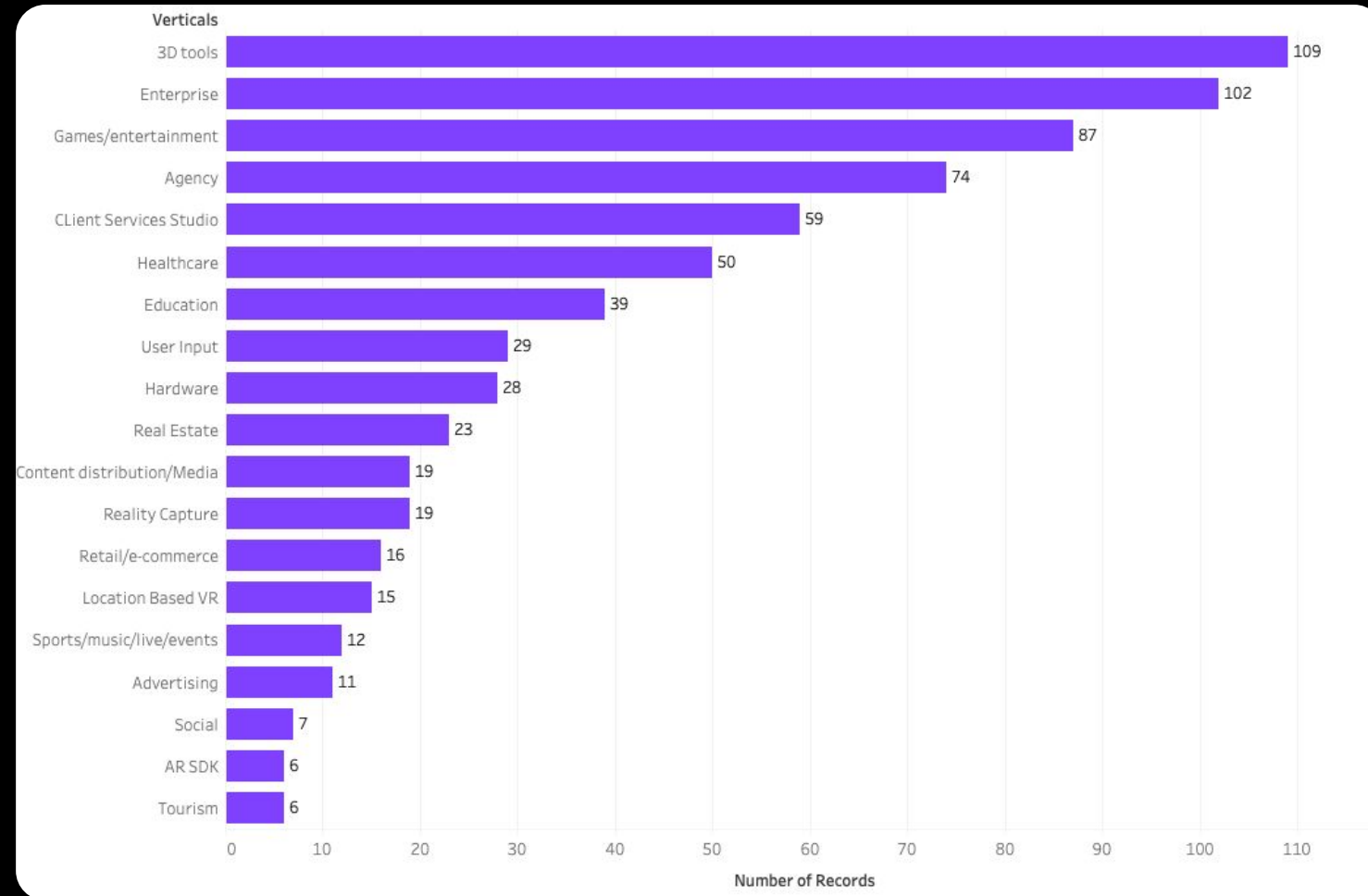
- The total number of EU startups that are part of this study is 748.
- The United Kingdom is the country with most startups at 134. The country is the home of Improbable - the company with the highest amount of in XR funding overall.
- Germany comes second with 99 startups. However the country does not rank high in terms of number of startups that received funding or in terms of average estimated valuation.
- The third country in terms of number of startups is Spain: 64 startups.



DATA OVERVIEW

Number of startups by vertical (Q1 2015 - Q2 2019)

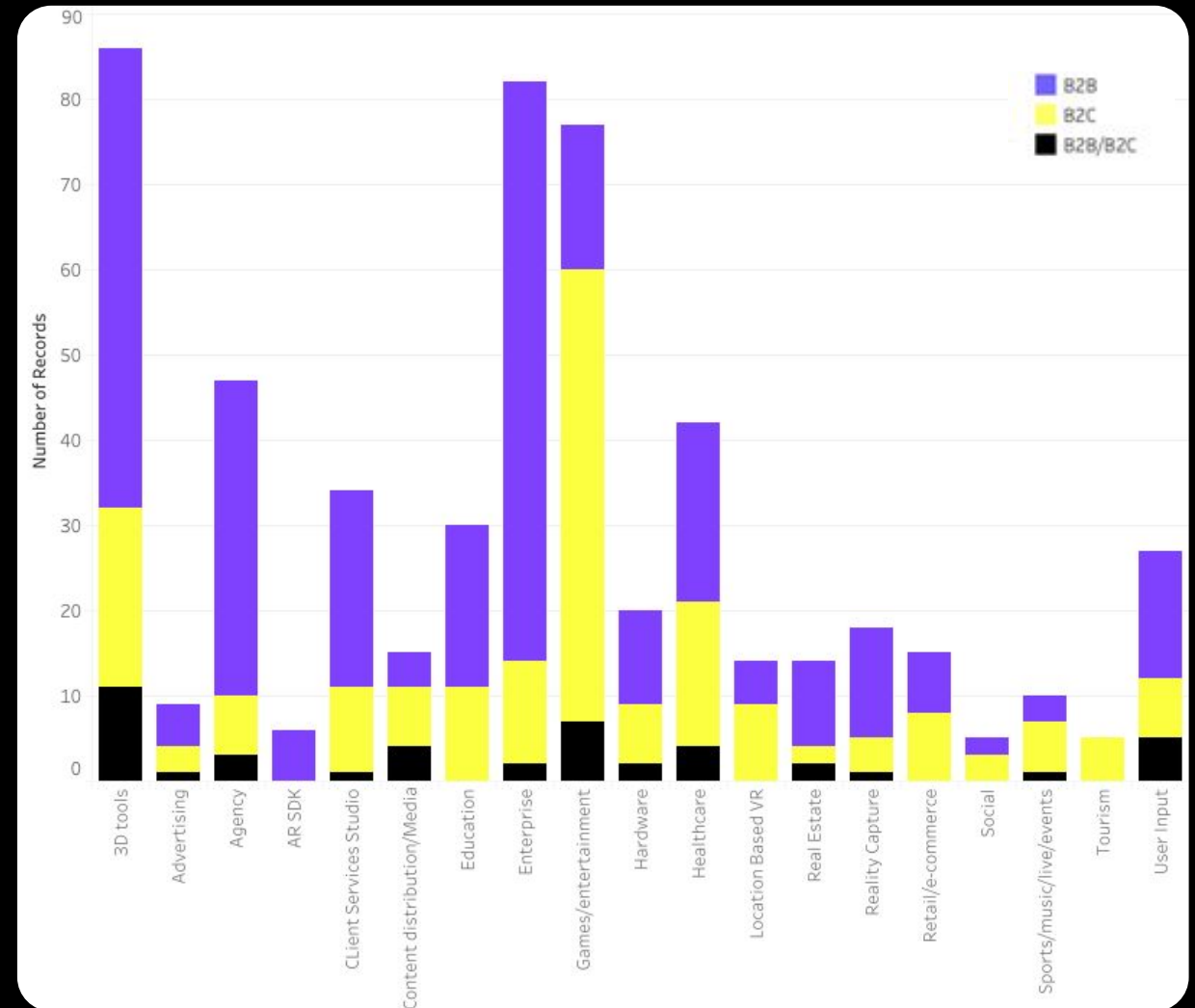
- Out of 748 startups the most popular vertical is 3D Tools with 109 startups.
- The next category is Enterprise with 102 startups.
- Games/entertainment comes in third with 87 startups.
- AR SDK, Tourism and Social are the verticals with the least number of startups. None of them reached more than 10 startups.
- As for AR SDK, it should be noted that many of the 3D Tools AR companies could include startups that also focus on offering an AR SDK.



DATA OVERVIEW

Number of startups by category (Q1 2015 - Q2 2019)

- The majority of the startups in XR are B2B. One of the interviewed investors (INV015) also agreed that “the main sources of monetization of the XR industry depends of course on the market, but the business focus have to be necessarily in the B2B”.
- Additionally, when asked about two interesting investments done recently 68.4% and 83.3% of the interviewed investors agreed it was a B2B XR startup.



VR/AR INVESTMENT ANALYSIS

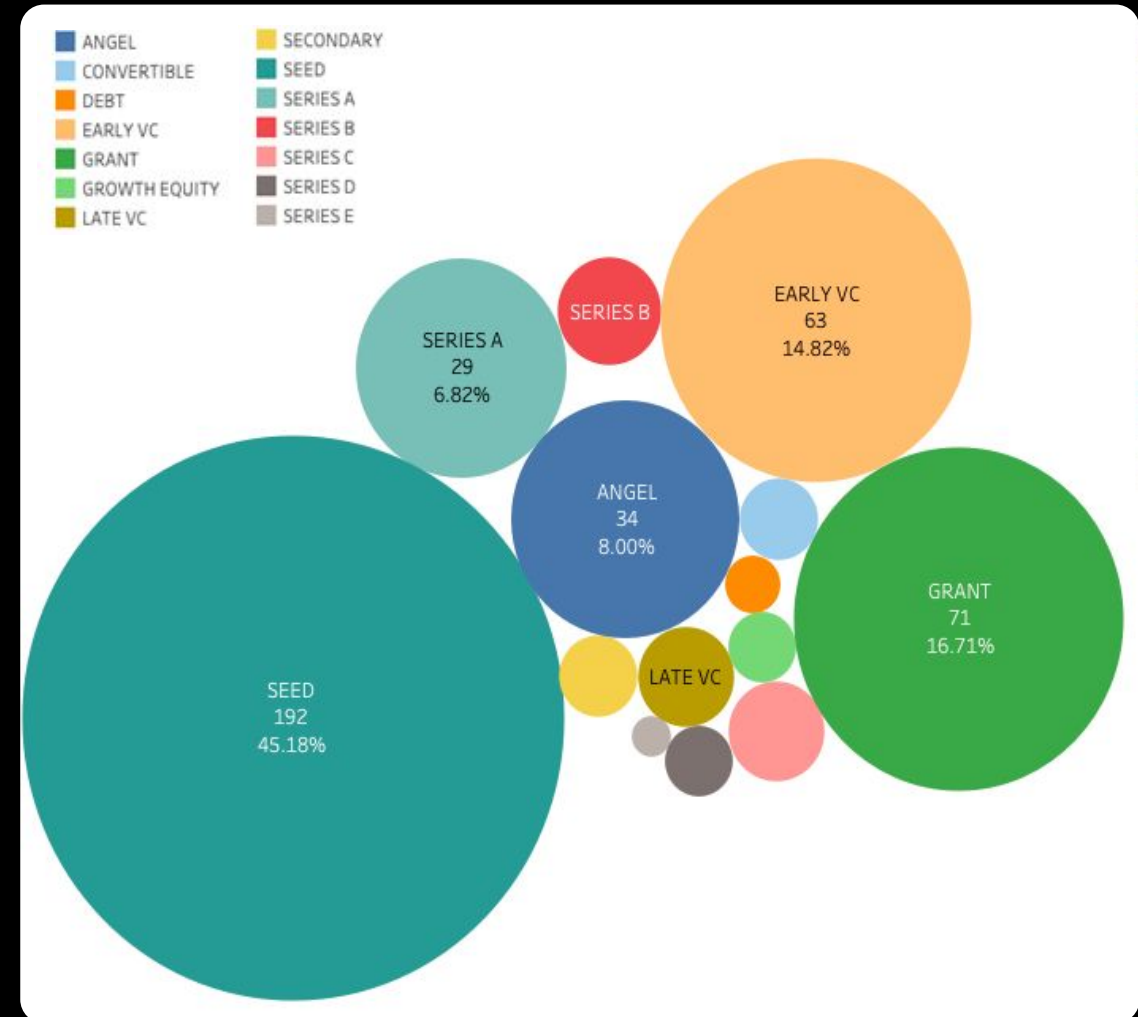
QUANTITATIVE ANALYSIS

Total investment rounds (Q1 2015 - Q2 2019)

- In total 357 investment rounds have been identified.
- In Europe, XR startups are most like to raise funds at Seed stage. However state support mainly from through grants is key for the industry.

Dealroom's classification:

- **Angel:** When an angel investor made the investment.
- **Early VC:** When the round type is not mentioned and the amount is between 2 & 20 €Million.
- **Grant:** Government grant, Incubator grant or University Grant.
- **Growth Equity:** Investment made by the private equity firms (round >20 €Million).
- **Seed:** 0-2 €Million Deals. When the round happened 0-2 years of the foundation.

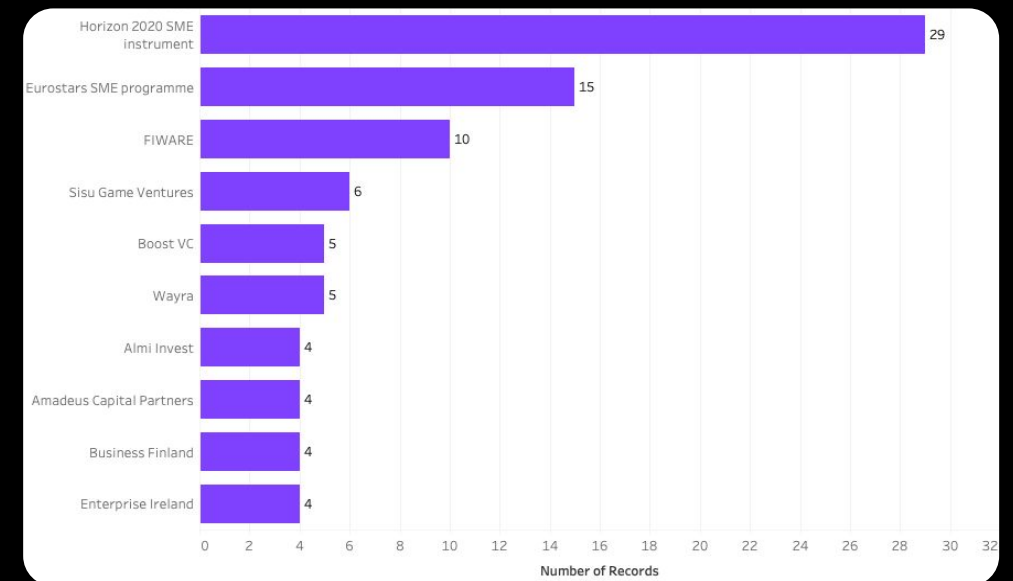


QUANTITATIVE ANALYSIS

Top 10 investors by number of transactions (Q1 2015 - Q2 2019)

- Two European initiatives rank first and second as top investors: Horizon 2020 and the Eurostar SME program.
- The Eurostar SME program is a European Joint Programme dedicated to stimulating R&D performing SMEs, follows Horizon 2020 with 15 deals less. A startup worthy to mention in which they invested is Labster.
- Sisu Games Ventures follows with 6 investments. Important investments to highlight are Varjo and in Vizor.

Location	Investor
EU	Horizon 2020 SME instrument
	Eurostars SME programme
	FIWARE
Finland	Sisu Game Ventures
	Business Finland
United States	Boost VC
United Kingdom	Wayra
Sweden	Almi Invest
UK	Amadeus Capital Partners
Ireland	Enterprise Ireland



QUANTITATIVE ANALYSIS

Geography of startups that received funding (Q1 2015 - Q2 2019)

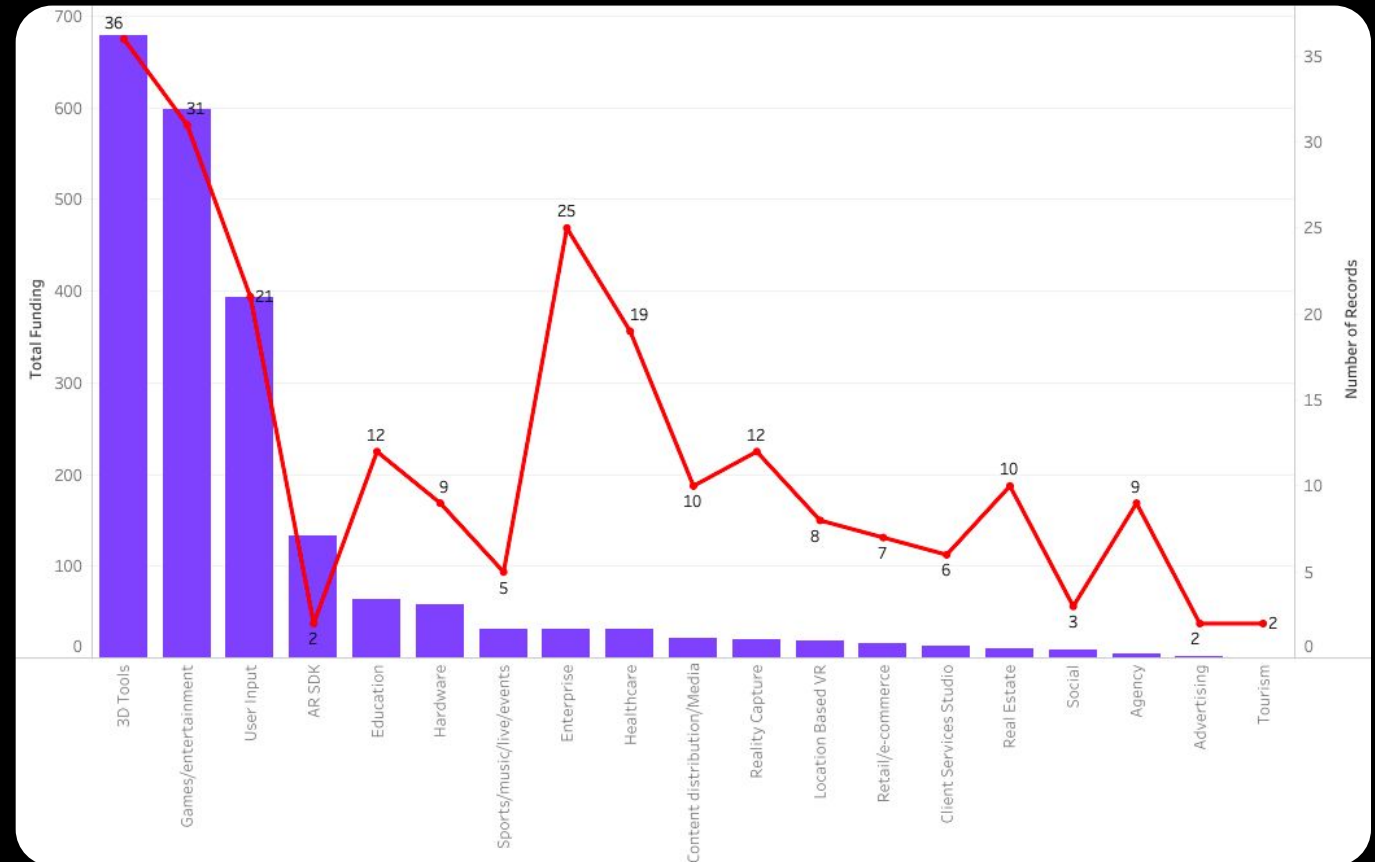
- The total number of startups that received funding is 232.
- The United Kingdom and Sweden rank number 1 and 2 respectively. Many important XR startups are based there: Improbable (UK), Ultrahaptics (UK), Starbreeze (SE) and Tobii Technology (SE). All of them recently secured large amounts of funding.
- Although a high number of startups are based in Germany (99), those companies were relatively less successful in securing funding.



QUANTITATIVE ANALYSIS

Top verticals in terms of funding (Q1 2015 - Q2 2019)

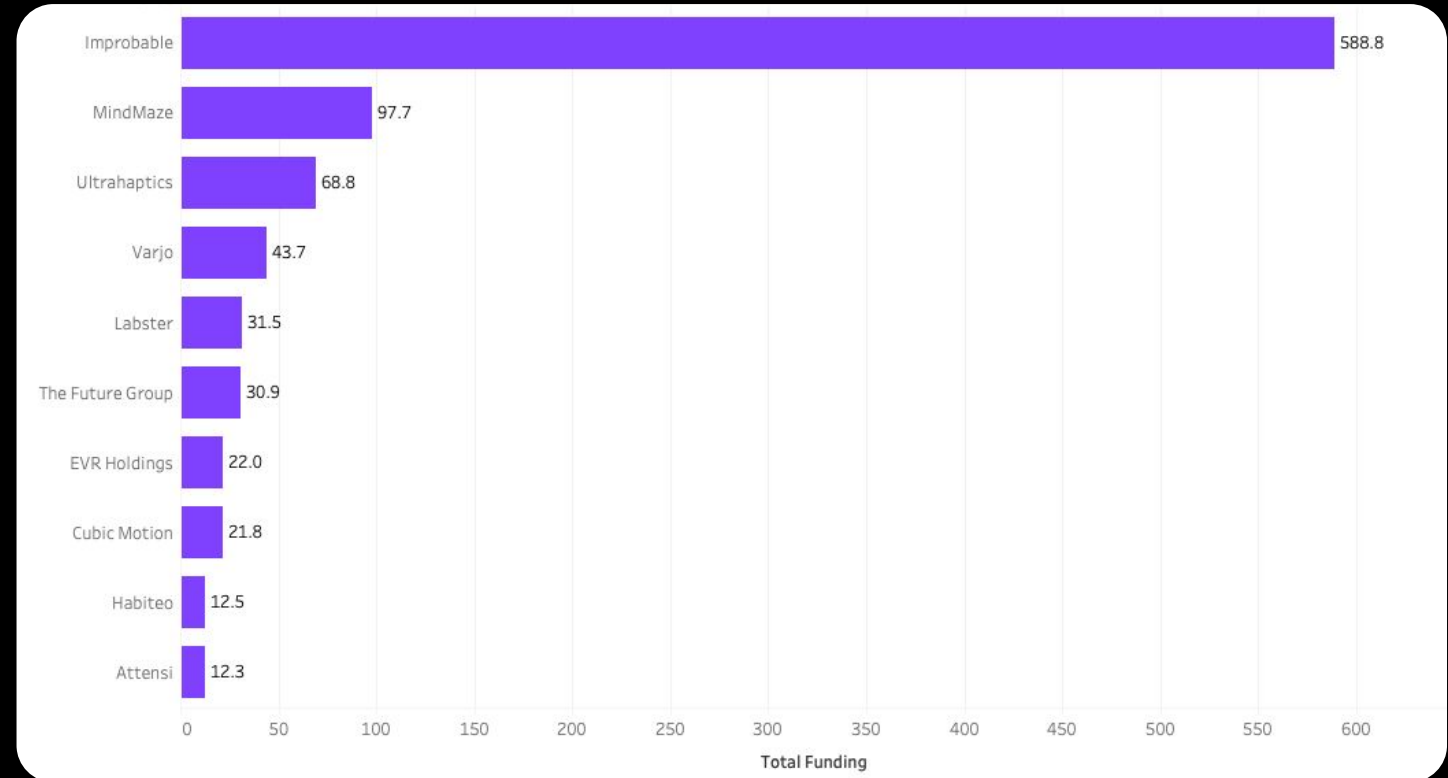
- Among the verticals that rank high in terms of funding is “3D Tools” and ‘User input’. However the data is biased due to the large funding received by Improbable and Mindmaze.
- The verticals “Enterprise”, “Healthcare” and “Content distribution/media”, comparatively show a low amount in total funding compared to the number of records.
- As for ‘Agency’ it is important to note that these businesses are less relevant for investors. An assumption that can be made is that the 9 transactions were linked to a company that originally had a product focus. In this way, they attracted funding, but due to market challenges they pivoted to a service oriented business.



QUANTITATIVE ANALYSIS

Top startups with the highest funding (Q1 2015 and Q2 2019)

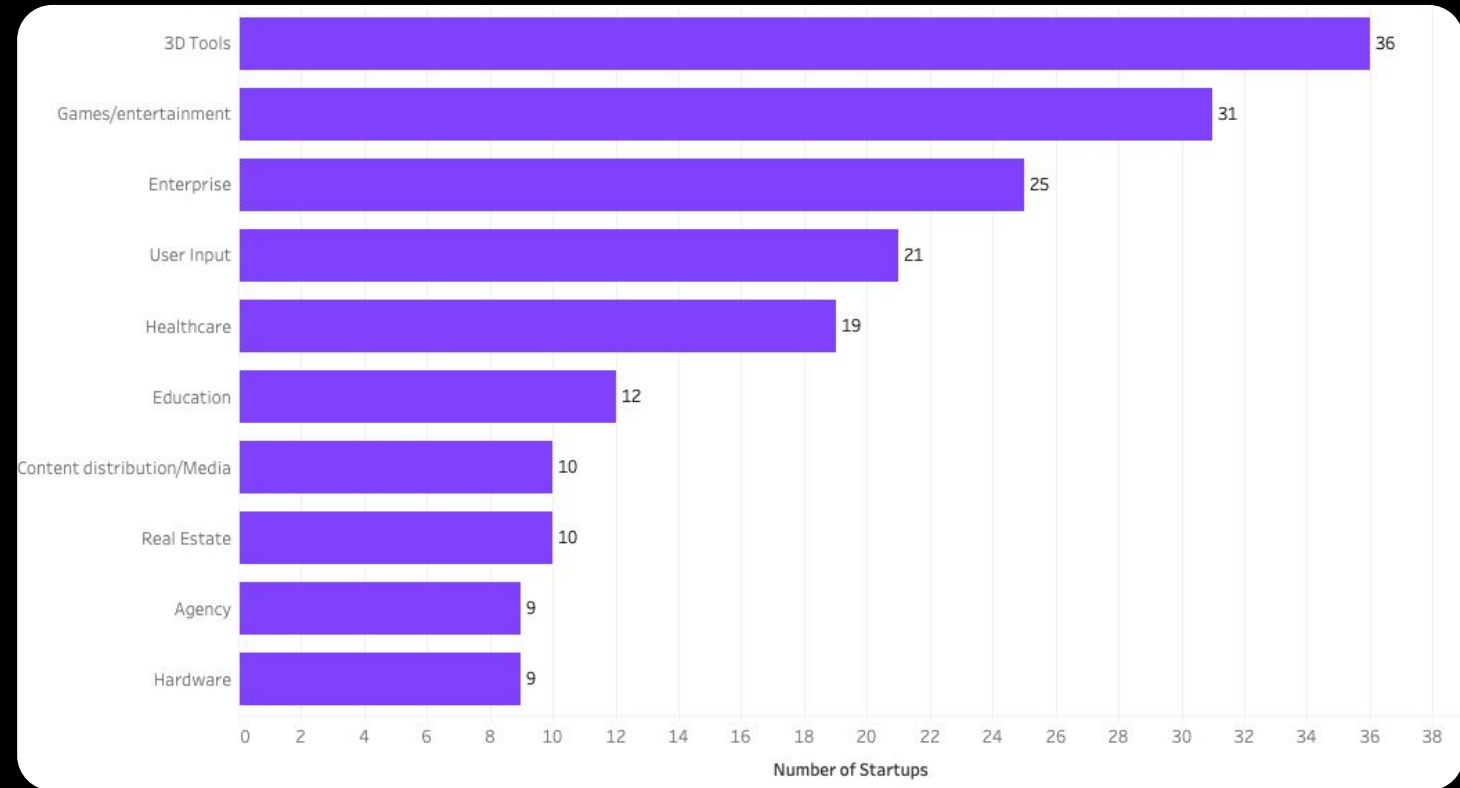
- Improbable, the UK based startup, had the largest total funding amount, with a staggering €588.8 million in total.
- The Swiss user input startup MindMaze comes in second with €97.7 million.
- The UK user input startup Ultrahaptics follows with a total funding close to €68.8 million in the given period.



QUANTITATIVE ANALYSIS

Top verticals by number of investment rounds:

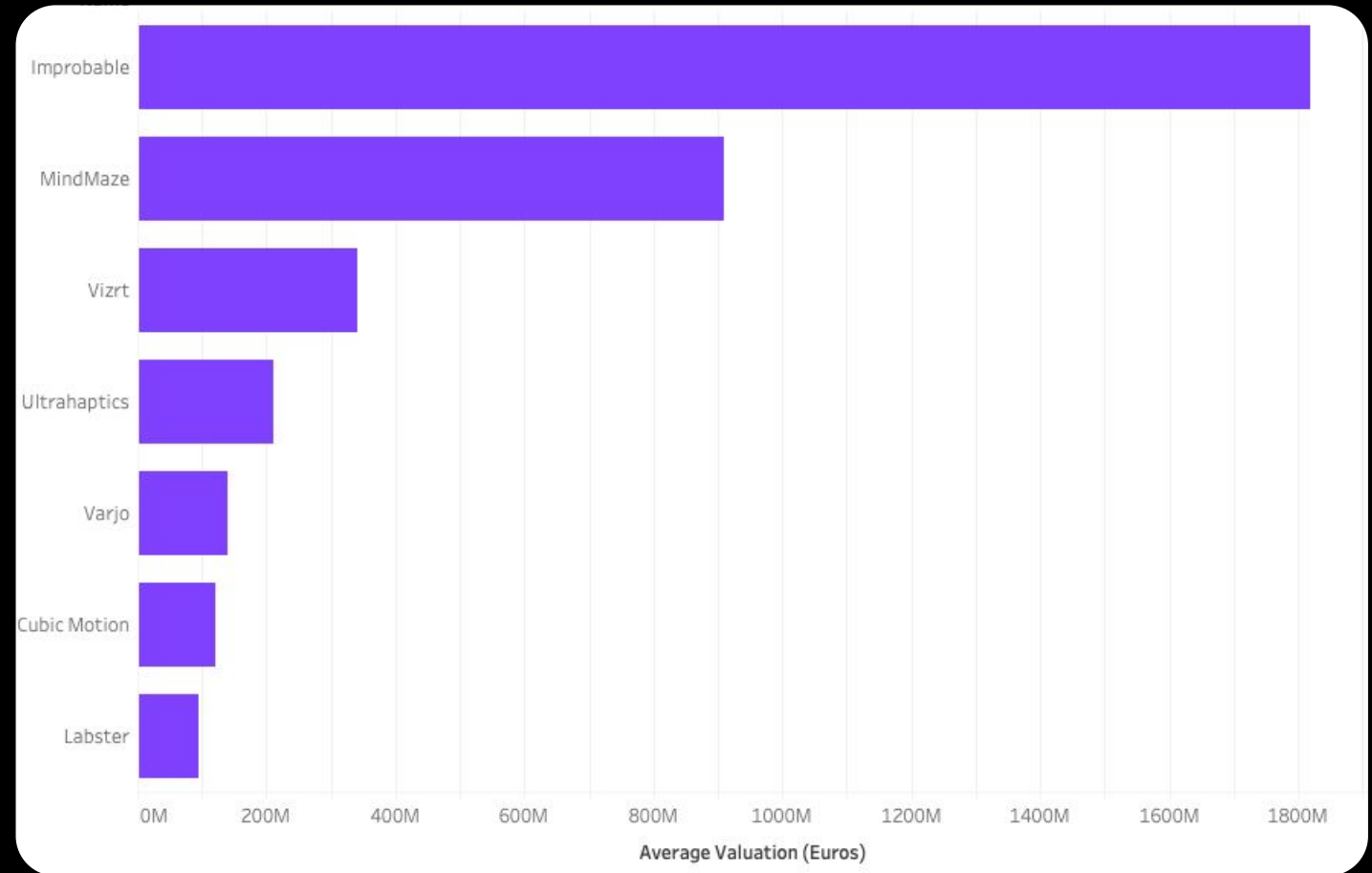
- 3D Tools category is the vertical that reached the highest number of rounds.
- Even though Games/entertainment is the third most popular category in number of startups and Enterprise is second position, when it comes to number of funding rounds games/entertainment has more funding rounds than Enterprise ensuring itself a second position with almost 32 number of deals.
- The vertical Agency, that was the fourth one for number of startups overall, received relatively less funding - 9 deals - as these companies are mostly service oriented businesses and therefore less interesting to investors.



QUANTITATIVE ANALYSIS

Top startups by Average Valuation (Q1 2015 and Q2 2019)

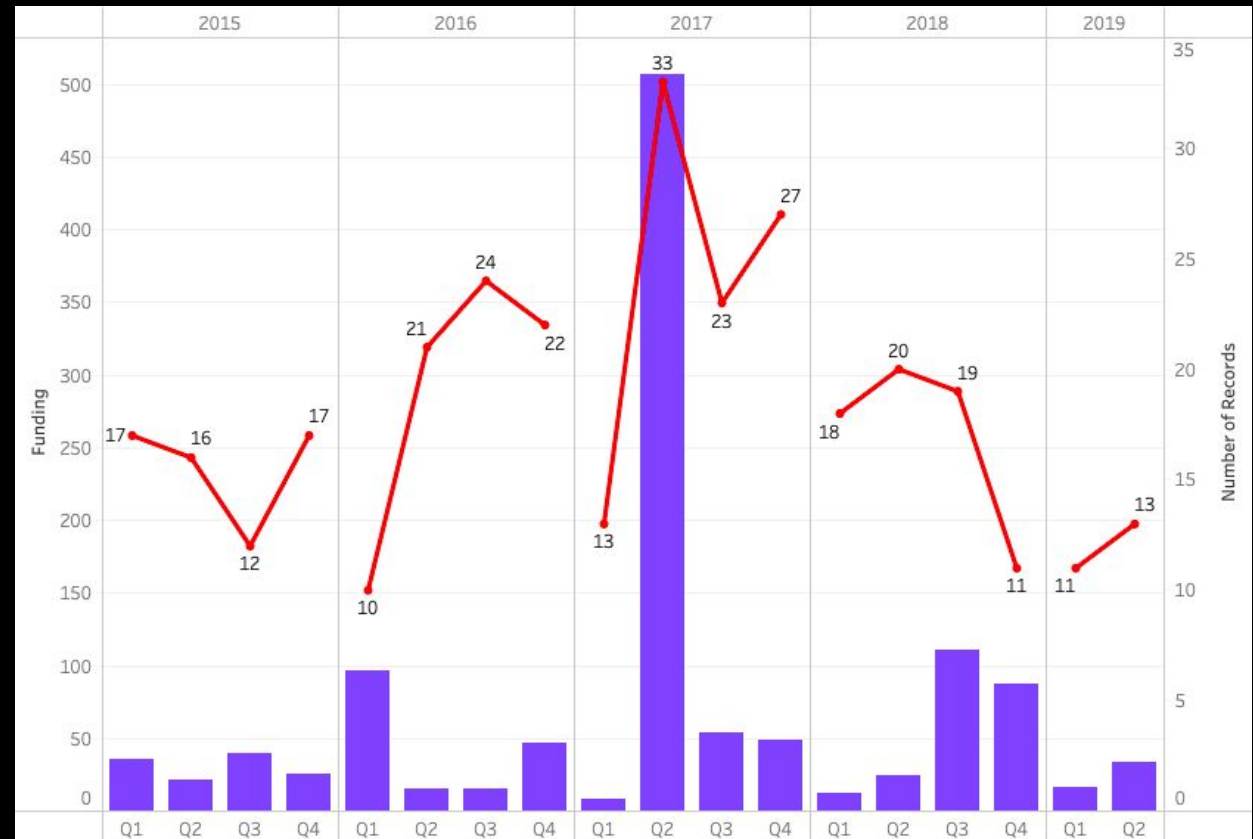
- Improbable is the leading startup when it comes to average valuation i.e. €1.8 billion.
- The Swiss startup MindMaze follows Improbable with a €900 million average valuation with a total funding of close to €100 million.
- The third company is Vizrt with an average valuation of less than €400 million.



QUANTITATIVE ANALYSIS

Funding by quarters (Q1 2015 and Q2 2019)

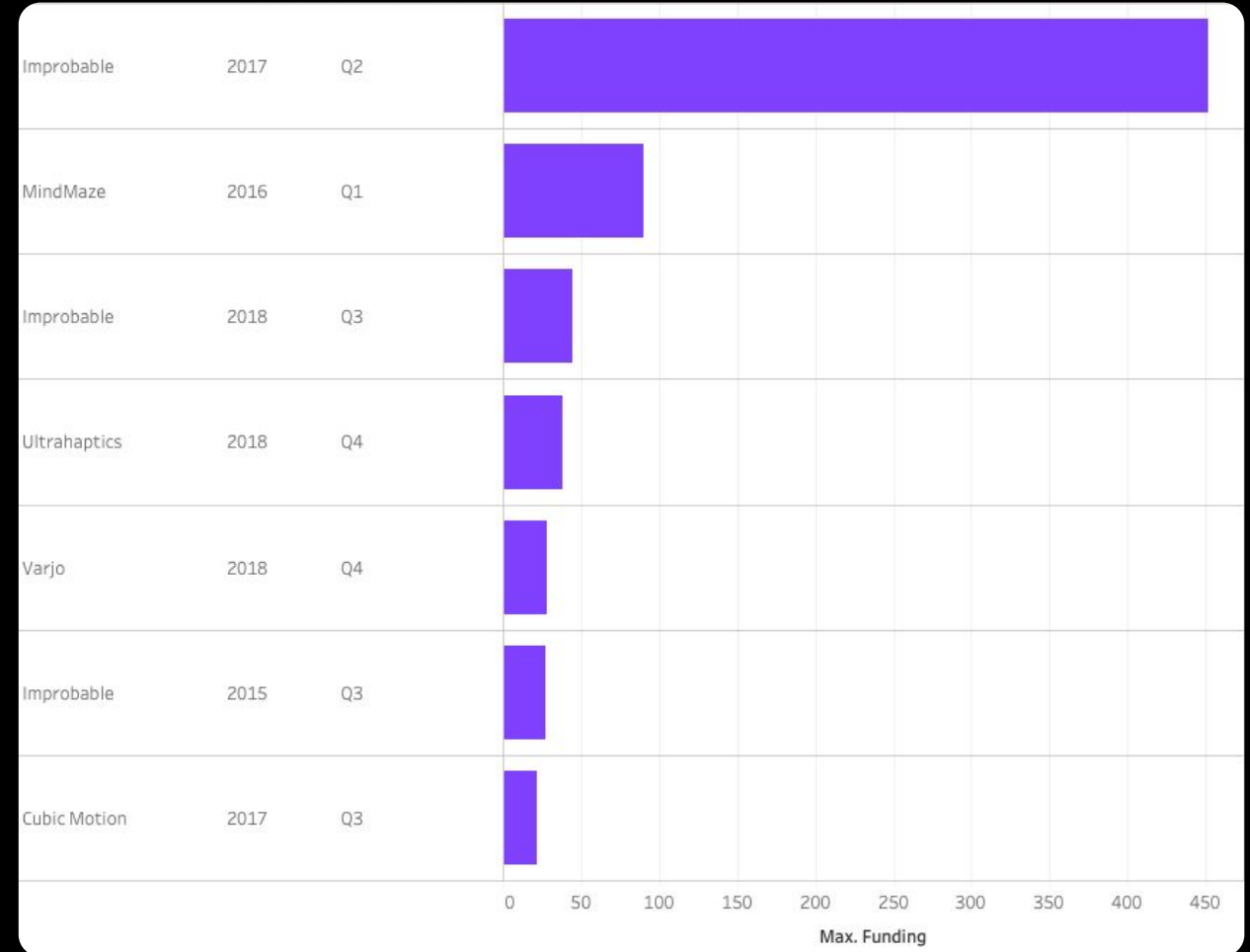
- Because of the record-breaking round of funding by the UK based company Improbable in Q2 2017, this quarter takes the lead with a total of €500 million. It is remarkable that this quarter also leads in terms of number of deals i.e. 33.
- Q1 2017 on the other hand, knows the lowest amount in funding at €20 million. Nonetheless, this quarter recorded 13 deals which is not the lowest amount of deals compared to the other quarters.
- The lowest number of deals took place in Q1 2016 with 10 deals in total, however the overall funding amount was relatively high i.e €100 million.



QUANTITATIVE ANALYSIS

Top 10 funding rounds (Q1 2015 and Q2 2019)

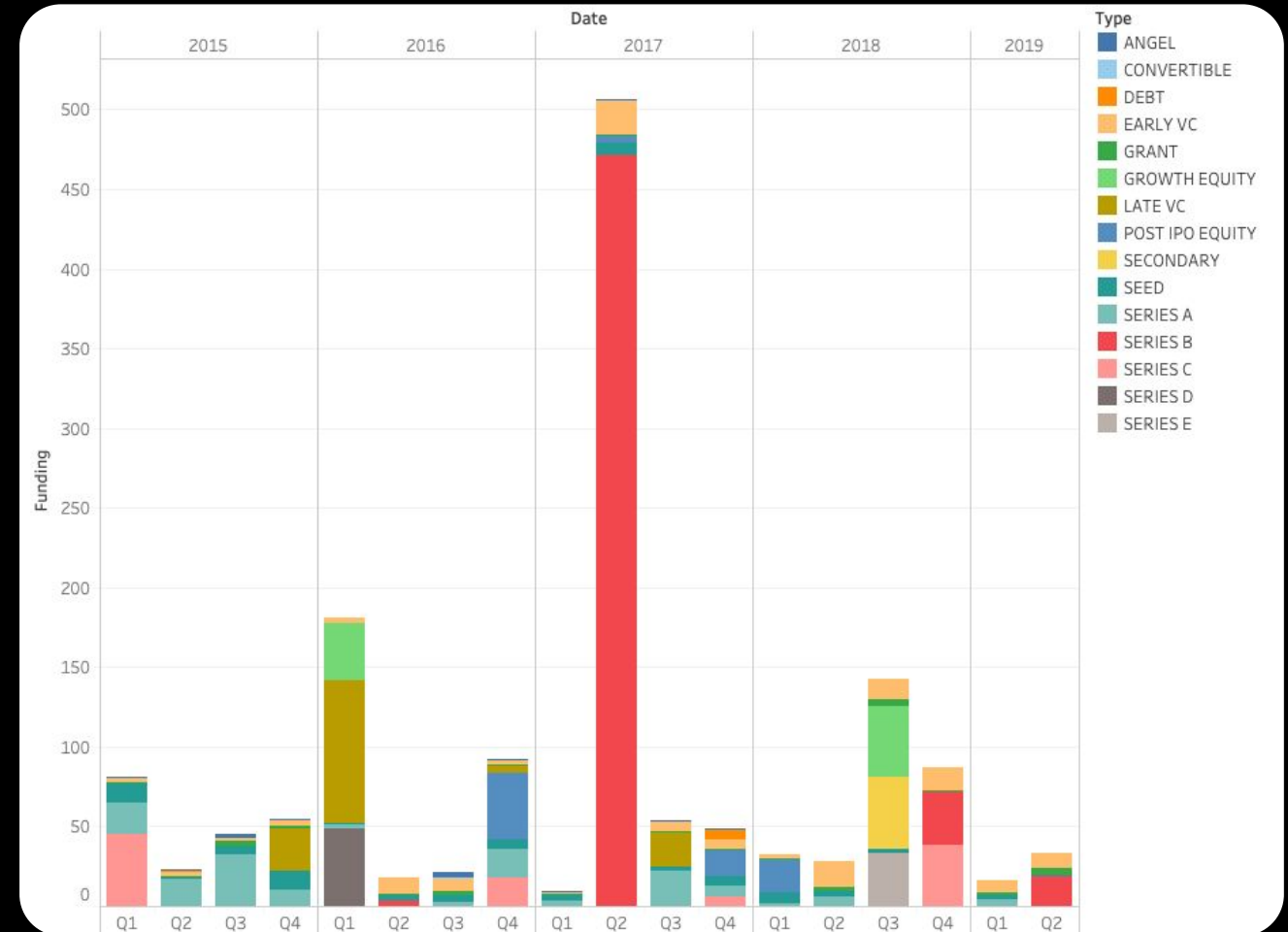
- Improbable has received the largest funding since Q1 2015. In Q2 2017 the company raised a staggering €450 million. Additionally, the company raised €45 million in Q3 2018.
- MindMaze, the Swiss Company raised €90 million in Q1 2016.



QUANTITATIVE ANALYSIS

Funding by stage (Q1 2015 and Q2 2019)

- The highest amount in funding was by “Series B” investors in Q2 2017 for an amount equal to €471.3 million.
- The huge Improbable investment round made in Q2 2017 is a Series B, which makes it all the more notable as investments of that size are usually made at a much later stage.



QUANTITATIVE ANALYSIS

Top rounds in key XR categories: 3D Tools

Name	Type	Date	Quarter	Month	Amount (million euros)
Improbable	GROWTH EQUITY	2018	Q3	July	45.0
	SECONDARY	2018	Q3	July	45.0
	SERIES A	2015	Q1	March	20.0
			Q3	July	27.0
	SERIES B	2017	Q2	May	451.8
The Future Group	EARLY VC	2018	Q2	April	5.0
	SERIES A	2015	Q2	April	7.7
	SERIES C	2016	Q4	November	18.2
VIVIDLY App	CONVERTIBLE	2017	Q2	June	
	EARLY VC	2015	Q2	April	1.8
			Q3	August	1.8
	SERIES A	2016	Q4	November	6.6
Artomatix	EARLY VC	2017	Q1	March	0.6
		2018	Q4	October	2.7
	GRANT	2016	Q3	July	1.5
		2018	Q3	August	1.1
	SEED	2015	Q2	June	
Gravity Sketch	GRANT	2015	Q3	September	3.5
		2017	Q3	July	
		2018	Q4	October	0.1
	SEED	2018	Q1	February	1.5
SLAMcore	EARLY VC	2017	Q3	July	
		2018	Q3	September	4.5
	SEED	2017	Q2	May	

Name	Type	Date	Quarter	Month	Amount (million euros)
MyDidimo	GRANT	2019	Q2	April	1.8
	SEED	2016	Q2	June	
		2017	Q2	April	
			Q4	December	0.6
Moodelizer	EARLY VC	2016	Q1	March	2.2
Vizor.io	SEED	2015	Q4	November	
		2017	Q2	April	2.1
Univrse	SEED	2016	Q3	August	0.6
			Q4	October	0.8
VRdirect	SEED	2019	Q1	March	1.0
Vuframe	SEED	2015	Q1	January	1.0
Flexound Systems Oy	SEED	2017	Q1	January	0.9
HEGIAS	SERIES A	2019	Q1	January	0.9
Aspic Technologies	SEED	2017	Q1	January	0.6
VRtuoso	SEED	2019	Q1	February	0.6
Roomle	CONVERTIBLE	2017	Q4	December	0.5
YaDo-VR	SEED	2016	Q2	June	0.5
Bublar Group AB	EARLY VC	2016	Q4	November	0.5
Shin Software	ANGEL	2015	Q2	May	0.4
Opuscope	SEED	2017	Q2	June	0.4
Reality Zero One	SEED	2018	Q2	April	0.3
Frameless	SEED	2018	Q1	March	0.3
Finwe	EARLY VC	2017	Q3	September	0.2

QUANTITATIVE ANALYSIS

Top rounds in key XR categories: User Input

Name	Type	Date	Quarter	Month	Amount (million euros)
MindMaze	LATE VC	2016	Q1	February	90.00.00
	SEED	2015	Q1	March	8.10
Ultrahaptics	GRANT	2016	Q4	October	0.49
		2018	Q1	February	0.59
	SERIES A	2015	Q4	November	10.10
	SERIES B	2017	Q2	May	19.51
	SERIES C	2018	Q4	December	38.15.00
Manomotion	ANGEL	2016	Q3	August	1.53
	GRANT	2015	Q2	May	0.23
		2019	Q1	February	2.17

Name	Type	Date	Quarter	Month	Amount (million euros)
Antilatency	GRANT	2017	Q4	December	1.30
	SEED	2017	Q2	May	2.29
Gleechi	GRANT	2018	Q3	July	2.04
3DRudder	EARLY VC	2016	Q3	September	1.40
Cyberith	SEED	2015	Q1	March	1.39
Go Touch VR	SEED	2017	Q2	June	0.14
			Q4	December	1.24
Manus VR	SEED	2015	Q1	February	1.00
Emteq	ANGEL	2017	Q2	June	0.45
Sense Glove	CONVERTIBLE	2016	Q3	August	0.30
3DiVi Company	SEED	2016	Q2	April	0.06
Brighterwave	GRANT	2016	Q4	November	0.05

QUANTITATIVE ANALYSIS

Top rounds in key XR categories: Games/entertainment

Name	Type	Date	Quarter	Month	Amount (million euros)
Cubic Motion	LATE VC	2017	Q3	September	22.20
Resolution Games	SERIES A	2015	Q3	August	5.40
	SERIES B	2018	Q4	October	7.15
nDreams	EARLY VC	2015	Q1	January	2.52
			Q4	December	3.10
		2016	Q4	November	2.20
		2017	Q3	July	3.34
GATA ANIMACIÓN	GRANT	2016	Q3	August	1.00
	SERIES A	2017	Q4	November	5.26
WarDucks	SEED	2015	Q4	October	0.45
		2017	Q3	September	1.30
	SERIES A	2019	Q1	March	3.30
Sv>lfar Studios	SEED	2015	Q2	April	0.46
			Q4	November	4.29
XR Games	SEED	2018	Q1	January	2.34
Playsnak	SEED	2016	Q4	October	1.17
		2017	Q2	May	1.08
Fast Travel Games	SERIES A	2017	Q3	September	2.10
Srvive	SEED	2016	Q3	August	1.40

Name	Type	Date	Quarter	Month	Amount (million euros)
iGotcha	SEED	2015	Q1	February	0.32
			Q3	September	0.38
		2016	Q4	October	0.52
3rd Eye Studios Oy Ltd	SEED	2017	Q4	October	1.30
Luden.io	SEED	2016	Q4	October	1.30
Playstark	SERIES A	2018	Q1	January	0.52
Artech (Magic Experience)	SEED	2016	Q2	April	0.50
PlatformaVR	SEED	2018	Q3	August	0.50
Apocalypse Hunters	SEED	2016	Q1	February	0.20
			Q4	December	0.13
RiftCat	SEED	2015	Q1	January	0.15
			Q2	June	0.16
Hipfire Games	SEED	2018	Q3	July	0.11
		2019	Q1	February	0.16
Hatrabbit	EARLY VC	2017	Q3	August	0.23
Neat Corporation	EARLY VC	2018	Q1	March	0.14

QUANTITATIVE ANALYSIS

Top rounds in key XR categories: Education

Name	Type	Date	Quarter	Month	Amount (million euros)
Labster	EARLY VC	2016	Q2	April	3.33
	SERIES A	2017	Q3	September	9.00
	SERIES B	2019	Q2	April	19.30
Attensi	EARLY VC	2017	Q2	June	12.31
MEL Science	EARLY VC	2017	Q4	December	2.38
		2019	Q1	February	2.20
	SERIES A	2016	Q4	October	2.30
Devar	EARLY VC	2018	Q1	February	3.10
Warpin	EARLY VC	2017	Q2	April	1.50
Whitequest	ANGEL	2016	Q4	November	1.00
Remoria VR	SEED	2016	Q3	July	0.08
			Q4	December	1.10
Kensu	SEED	2017	Q4	October	1.03
VR-AR Education Inc.	ANGEL	2017	Q1	February	0.20
3DC.io	ANGEL	2016	Q3	August	0.10
Simlab IT	ANGEL	2017	Q4	November	0.05

QUANTITATIVE ANALYSIS

Top rounds in key XR categories: Hardware

Name	Type	Date	Quarter	Month	Amount (million euros)
Varjo	GRANT	2018	Q2	May	2.37
	SERIES A	2017	Q3	September	7.38
	SERIES B	2018	Q4	October	28.30.00
Fibrum	EARLY VC	2018	Q3	September	1.30
Remoria VR	SEED	2016	Q3	July	0.08
			Q4	December	1.10
MSE Omnifinity AB	GRANT	2018	Q2	June	0.05
Optea AB	GRANT	2019	Q2	June	0.05
Seemore spolka z ograniczona odpowiedzialnoscia	GRANT	2017	Q4	October	0.05
Trivisio	GRANT	2015	Q3	July	0.05

QUANTITATIVE ANALYSIS

Top rounds in key XR categories: Sports/music/live/event

Name	Type	Date	Quarter	Month	Amount (million euros)
MelodyVR	EARLY VC	2017	Q2	June	15.00
Beyond Sports	SEED	2018	Q2	June	4.40
Be Your Best	EARLY VC	2019	Q1	February	9.20
Remoria VR	SEED	2016	Q3	July	1.20
			Q4	December	11.40
SoccerDream	SEED	2017	Q4	October	8.20

NOTABLE XR FUNDING ROUNDS

Total Funding

€ 547.27 million



Name of the Company	Improbable
Location	London, UK
VR type	3D Tools
Founded in	2012
Employees	243
Total Funding	€ 547.27 million
Main investors	Andreessen Horowitz LocalGlobe, Conversion Capital, SoftBank, Horizons Ventures, Amadeus Capital Partners, David Rowan, Temasek, NetEase
Most recent funding round	€ 45.45 million (July 2018)

NOTABLE XR FUNDING ROUNDS



Total Funding

€ 98.61 million

Name of the Company	MindMaze
Location	Lausanne, Switzerland
VR type	User Input
Founded in	2012
Employees	584
Total Funding	€ 98.61 million
Main investors	Hinduja Group, Leonardo DiCaprio, Venture Kick
Most recent funding round	September 2017

NOTABLE XR FUNDING ROUNDS



Total Funding

€ 42 million

ultrahaptics 

Name of the Company	Ultrahaptics
Location	Bristol, UK
VR type	User Input
Founded in	2013
Employees	100
Total Funding	€ 78.89 million
Main investors	Woodford Investment Management, IP Group PLC, Dolby Family Ventures, Cornes, Horizon 2020 SME Instrument, Horizon 2020 FET (Future and Emerging Technologies), Mayfair Equity Partners, Hostplus.
Most recent funding round	€ 42 million (December 2018)

NOTABLE XR FUNDING ROUNDS

Total Funding

€ 38.01 million



Name of the Company	Varjo
Location	Helsingfors, Finland
VR type	Hardware
Founded in	2016
Employees	250
Total Funding	€ 38.01 million
Main investors	Presence Capital, EQT Ventures, Sisu Game Ventures, John Lindfors, Bragiel Brothers, Lifeline Ventures, The Venture Reality Fund (The VR Fund), Foobar Technologies, Business Finland, Horizon 2020 SME instrument, Atomico;Next47
Most recent funding round	€ 28.18 million (October 2018)

NOTABLE XR FUNDING ROUNDS

Total Funding

€ 24 million



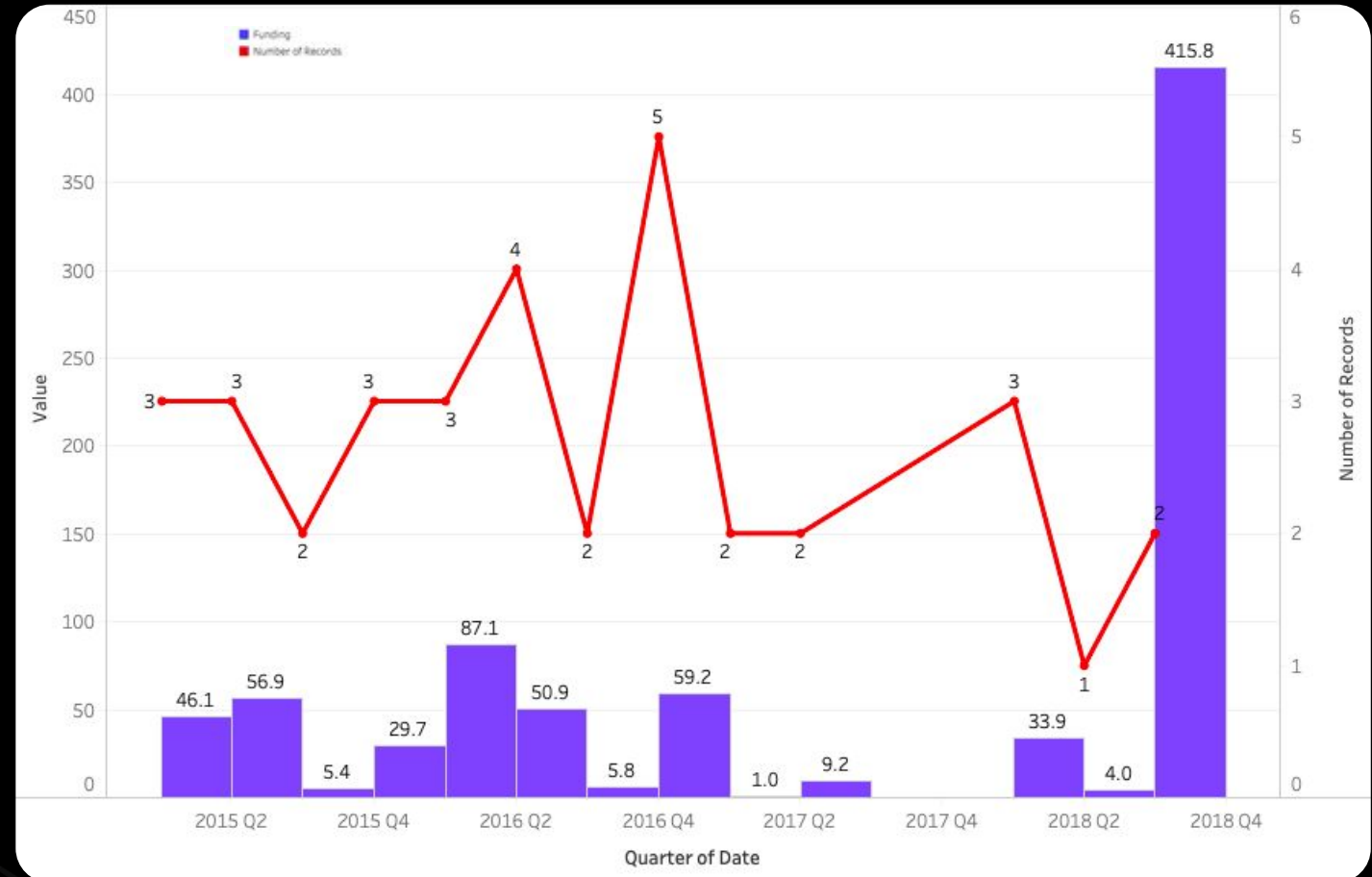
Name of the Company	Cubic Motion
Location	Manchester, UK
VR type	Games/entertainment
Founded in	2009
Employees	50
Total Funding	€ 24 million
Main investors	NorthEdge Capital
Most recent funding round	€ 21.8 million (September 2017)

VR/AR EXIT ANALYSIS

EXIT ANALYSIS

Exit by quarter (Q1 2015 and Q2 2019)

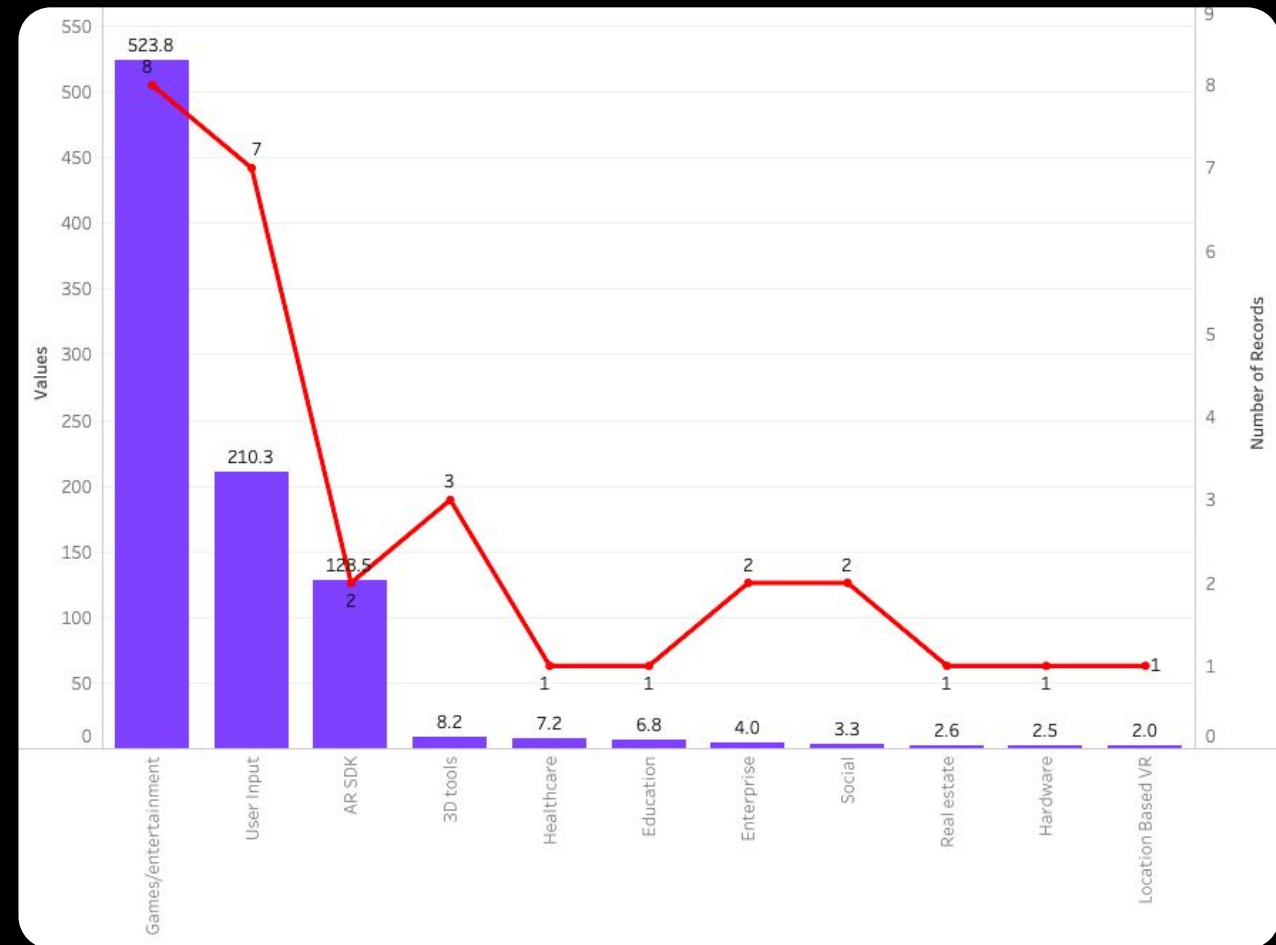
- Before Q3 2018 exist values were fairly constant with exits values not greater than €100 million.
- Q3 2018 saw the greater exit in terms of value. This is due to CCP games €386.36 million acquisition by Pearl Abyss.
- 2016 saw the exit of 14 startups, while in 2017 there were only 8.



EXIT ANALYSIS

Exit by category (Q1 2015 and Q2 2019)

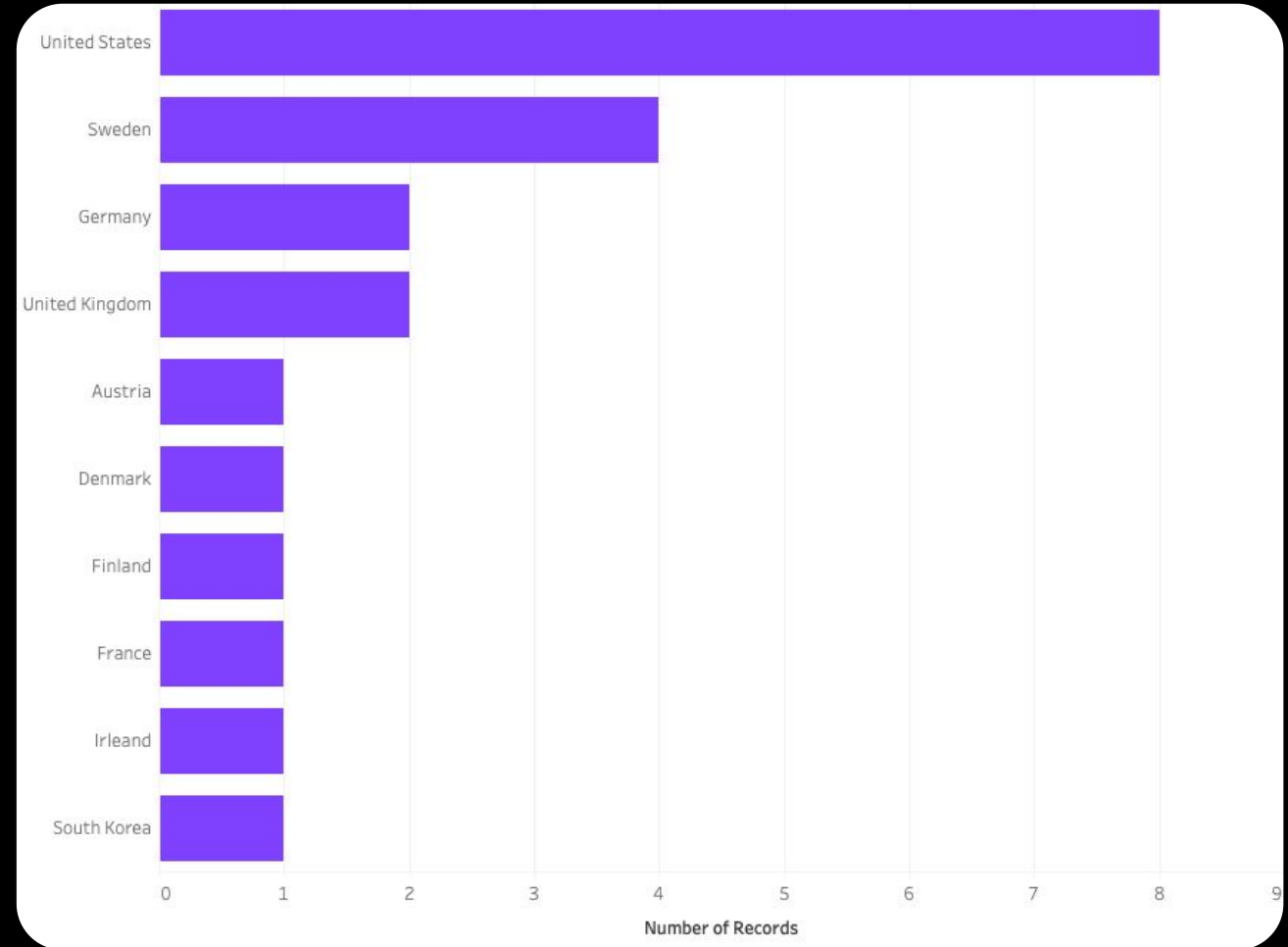
- Games/entertainment ranks first largely due to acquisition of CCP Games. This category is also the one with the highest number of exits: 8.
- User input is the second vertical in terms of exits value: in this category Obvious Engineering and Tobii Technology are found.
- 3D Tools has a low disclosed exit value, then again the number of recorded acquisitions is relatively high.



EXIT ANALYSIS

Location of acquirer company (Q1 2015 and Q2 2019)

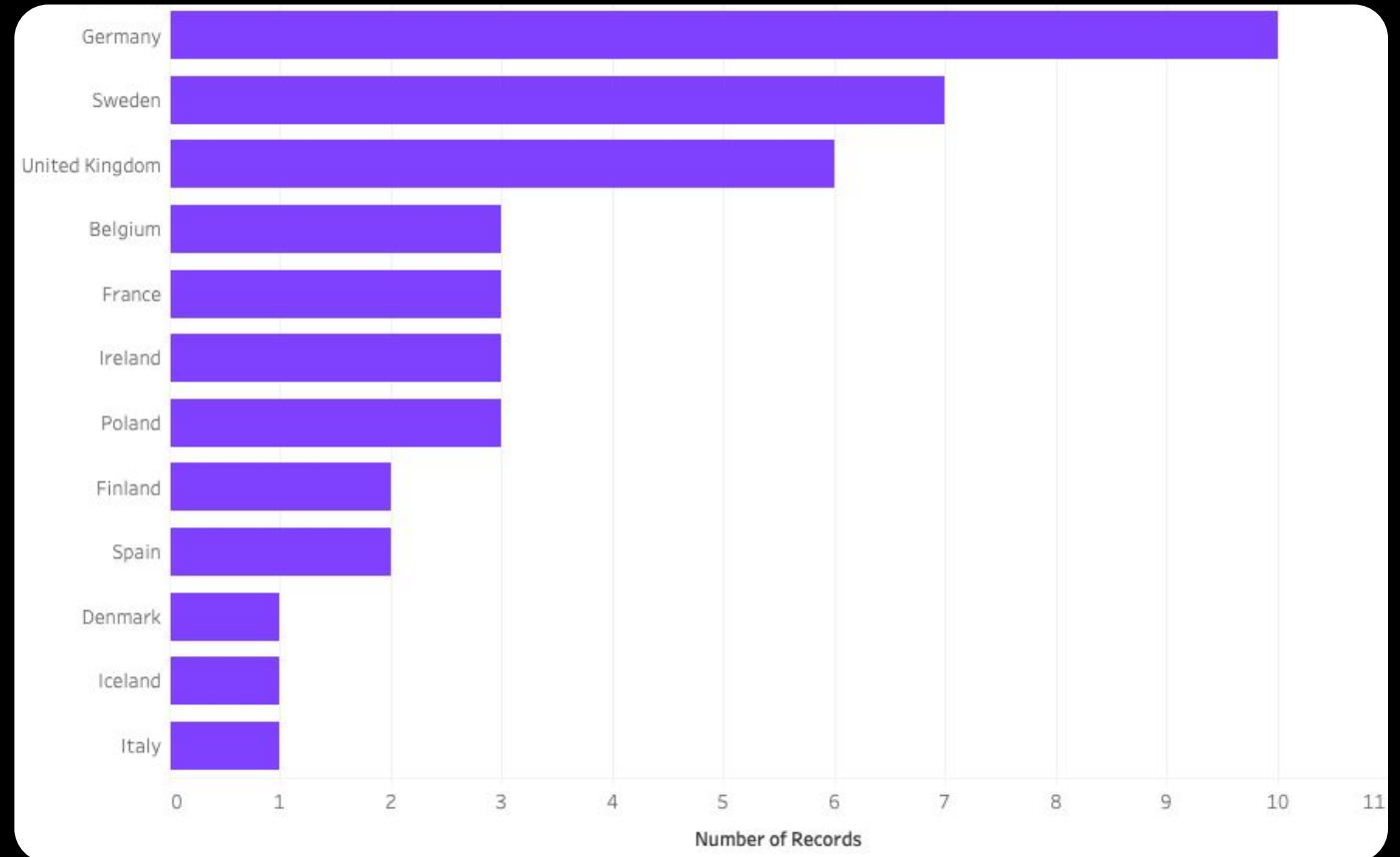
- Institutions based in the United States acquired the highest number of EU XR startups: 8. Top corporations such as Oculus, Apple and Google make up the roster of American tech giants buying innovative European companies.
- Institutions based in Sweden acquired 4 companies.
- Institutions in United Kingdom and Germany acquired two.



EXIT ANALYSIS

Location of acquired companies (Q1 2015 and Q2 2019)

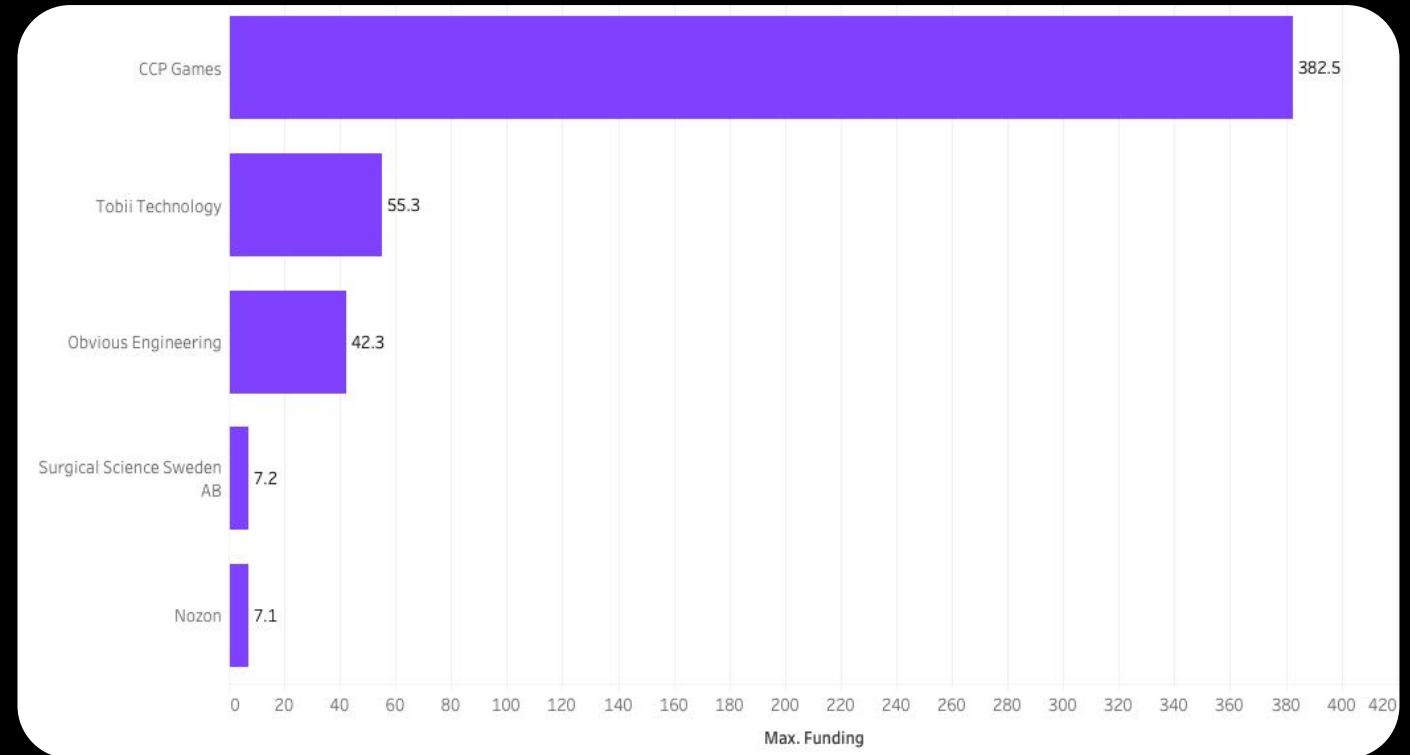
- Germany is home to the largest number of startups that exited at 10, while Sweden is closely behind with 7.
- United Kingdom closely follows Sweden with the disclosure of 6 companies, among which is interesting to recall Blippar and Obvious Engineering.
- Italy, Iceland and Denmark each saw only 1 exit since 2015. However, Iceland saw one of the most remarkable exit given the fact that CCP games had the HQ in this country



EXIT ANALYSIS

Largest disclosed exits (Q1 2015 and Q2 2019)

- In September 2018, CCP Games was acquired by Pearl Abyss for €382.5 million. Previous to the acquisition the company raised €64 million.
- Tobii Technology became a publicly traded company in April 2015. Tobii's IPO valued the company at €221.8 million. Tobii has raised a total of €150 million to date, including the one in December 2016 (post-IPO equity round).
- Blippar was acquired for an undisclosed amount by Candy Capital in January 2019, after they went into administration in December 2018. Before the administration, they were able to raise €123.64 million in four rounds, with a most recent one in September 2018.



NOTABLE XR EXIT ROUNDS



acquired by **PEARL ABYSS**

for 386.36 mln €

Name of the Company	CCP Games
Location	Reykjavik, Iceland
VR type	Games/entertainment
Founded in	1997
Employees	1472
Total Funding	€ 60.27 million
Main investors	New Enterprise Associates, Novator, Pearl Abyss
Acquisition value	Acquisition €386.36 million (September 2018)

NOTABLE XR EXIT ROUNDS



IPO (April 2015) amounted 55.3 mln €

Post-IPO (December 2016) amounted 48 mln

Name of the Company	Tobii Technology
Location	Danderyd, Sweden
VR type	User Input
Founded in	2001
Employees	462
Total Funding	€ 61.45 million
Main investors	Northzone, Amadeus Capital Partners, Intel Capital, Investor Growth Capital, AP6 (Sixth Swedish National Pension Fund)
Most recent funding round	Post IPO equity, € 49.5 million (December 2016)

NOTABLE XR EXIT ROUNDS



Acquired by Candy Ventures
in January 2019

Name of the Company	Blippar
Location	London, UK
VR type	AR SDK
Founded in	2011
Employees	300
Total Funding	€123.64 million
Main investors	Qualcomm Ventures, Barclays, Khazanah Nasional Berhad, Candy Ventures
Acquisition value	Acquisition (January 2019)

NOTABLE XR EXIT ROUNDS



IPO in 2000

Post-IPO in 2018

Name of the Company	Starbreeze Studio
Location	Sweden, Stockholm
VR type	Games/entertainment
Founded in	1998
Employees	402
Total Funding	€ 41.16 million
Main investors	SmileGate, Swedbank Robur, First AP Fund, Acer
Most recent funding round	Post IPO round: €28.58 million (January 2018)

NOTABLE XR EXIT ROUNDS



Acquired by



for 42.73 mln €

Name of the Company	Obvious engineering
Location	London, United Kingdom
VR type	User Input
Founded in	2013
Employees	2
Total Funding	€ 0.1 million
Main investors	Snap Inc., EC1 Capital, Kima Ventures, Antipodean Ventures
Acquisition value	Acquisition: €42.73 million (June 2016)



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