TITANS OF TECH

European Tech Comes of Age

July 2018

GP. Bullhound

Dealmakers in Technology

CONTENTS

THE VIEW
From GP Bullhound

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The best tech companies know how to balance ambition and risk. This was the key lesson Pär-Jörgen Pärson, Partner at Northzone and one of the earliest investors in Spotify, told us about his experience supporting the growth of Europe's largest tech start-up.

With more billion-dollar tech companies than ever and the largest year of fund-raising on record, it is clear that Europe can rival the US and Asia as a hub for tech companies. But to turn billion-dollar tech companies into decacorns, and decacorns into tech titans, the European tech landscape is going to have to start embracing risk.

Last year, GP Bullhound introduced the concept of tech titans to Europe. These are young tech companies with a valuation of $50bn or more. We saw a number of fast-growth tech companies with the potential to reach this lofty figure, and wanted to set a new ambition level for the market.

The subsequent 12 months have shown positive signs that the journey towards Europe's first $50bn tech company is progressing rapidly, but taking that final step up to a valuation that truly competes with the world's largest tech companies requires a level of fearlessness and risk-taking that we are yet to see.

Beyond Spotify, we believe Zalando and Delivery Hero are well on the way to achieving titan status. Europe increasingly has the capital to scale businesses to this level, but founders now need to know when to make bold decisions, when to bet the house on long-term growth and when to expand globally. Spotify has shown it can be done, and more will follow.

Once again, GP Bullhound has analysed the ecosystem in Europe fuelling the growth of the continent's most successful tech companies, and the findings are encouraging. There are now 68 billion-dollar tech companies in Europe, a 2.3x increase since 2014.

These are serious businesses with serious valuations and revenue. The number of tech companies with a valuation of more than $5bn has increased by 75% since 2016, and the combined value of Europe's billion-dollar tech companies is actually growing faster than the US or Asia.

This growth is being accelerated by unprecedented levels of investment in terms of both the number and size of deals. 2017 was the year of the mega-round, with nine tech companies closing deals worth $200m or more[1]. Of the ten billion-dollar European tech companies that have raised the most equity since they were founded, seven of them closed deals last year. We are seeing Europe's most ambitious entrepreneurs attracting investment from some of the world's biggest tech funds and corporates, then looking for more and closing further rounds.

Within this frenzy of investment, the UK has maintained its position as the undisputed tech capital of Europe. The UK has added five new billion-dollar tech companies in the last 12 months, meaning it now has 25 of the continent's most successful tech companies.

Despite ongoing concerns around Brexit, it appears that the UK is still home to the highest concentration of ambitious entrepreneurs in Europe with successful business models that span a wide range of tech sectors. And with 102 tech start-ups fast approaching a billion-dollar valuation, it looks like the prospect for Brexit Britain is strong.

However, the UK is not the only country driving European tech success. Sweden has contributed significant value towards Europe's tech ecosystem – $54bn in total – particularly substantial given the size of this market.

Five years ago, GP Bullhound asked if Europe can regularly create billion-dollar tech companies. Looking across the European investment landscape five years later, its evolution in terms of ambitious entrepreneurs and investors, mega rounds and success stories is remarkable.

Our report clearly demonstrates that Europe has all the right ingredients to create a tech titan; with the right combination of ambition and risk, there is no reason Europe can't now realise its potential to create its first. It's time to reset the ambition level of Europe's tech companies to make this a reality.

GP Bullhound analysis as of report cut-off date. 1. Primary Equity rounds only

EUROPE'S BILLION-DOLLAR COMPANIES

The highest year of tech investment on record

GP.Bullhound

MAPPING EUROPE'S TECH LANDSCAPE

The Journey So Far

Thanks to rising tech investment activity that is generating larger deals, Europe's tech ecosystem now competes with the world's largest tech investment hubs. Investment is at an all time high, and Europe's tech ecosystem is growing at a faster rate than anywhere else in the world.

European tech companies have made astonishing progress in the last few years. Globally, Europe is the fastest-growing region for tech businesses, and the number of companies entering into the exclusive club of billion and multi-billion-dollar operators is growing rapidly.

Billion-dollar businesses are no longer as elusive as they once were. In 2014, Europe's tech ecosystem included 30 billion-dollar companies founded since 2000; in 2018, this figure has shot up to 68, amounting to a cumulative valuation of $236bn[1]. 13 new businesses worth a billion dollars or more have emerged in the past year alone[2]. These include robotics process automation software Blue Prism and end to end digital banking app Revolut.

Businesses that do achieve billion-dollar status aren't showing any signs of slowing down. In the last two years, the number of tech companies in Europe worth $5bn or more has almost doubled, from eight in our 2016 report to 14 in today.

The unprecedented growth within Europe's tech ecosystem is largely down to investor appetite - 2017 marks the highest year of tech investment on record for Europe's billion-dollar companies, with $20bn raised within Europe in 2017, increasing from $3bn in 2014.

The interest from investors is driving Europe's billion-dollar tech businesses into the next category along towards titan status: the decacorn. Since 2014, five 'decacorns' - companies worth $10bn or more - have emerged into Europe's tech scene: Yandex, Zalando, Supercell, MobilEye and Spotify. Of these, Spotify has emerged as the frontrunner to reach the $50bn mark, as its valuation grew 122% to $29bn in the last year alone.

Within Europe, five key markets are fuelling the growth of billion-dollar businesses: the UK, Sweden, Germany, Israel and Russia. Among these, the UK is leading the way, adding five billion-dollar tech companies to its club, more than any other European market, and has produced the highest number of billion-dollar companies in Europe since 2000.

Yet the US and Asia continue to dominate the production of new billion-dollar businesses, with the US generating almost half (48%) of the world's billion-dollar companies, Asia creating a third (36%) and Europe producing almost 1 in 5 (16%).

Over the next chapter, this report considers the new entrants to the club – and the key players within Europe's tech ecosystem that demonstrate the strength and velocity to reach 'titan' status within the next few years.

1. Equity funds raised refer to capital raised through primary equity offering. 2. As of the cut-off date (April 30th 2018) for this report.

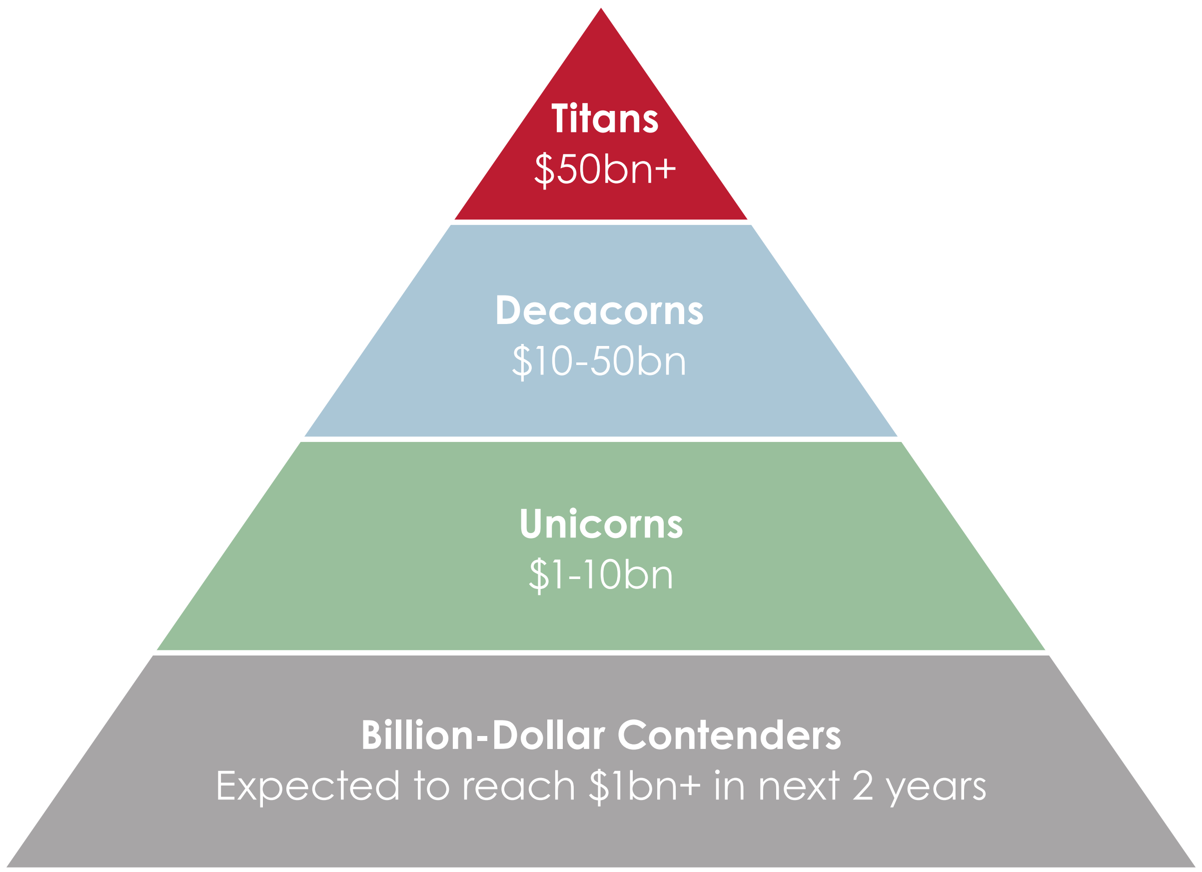
THE LINGO

Terminology For Our Report

» GP Bullhound classifies the companies featured in the Titans of Tech report into four key categories: Titans, Decacorns, Unicorns, and Billion-Dollar Contenders, based on their market valuation

» All companies featured in this report were founded in 2000 or later

Classification of companies by valuation



For full methodology, please see page 44 of this report.

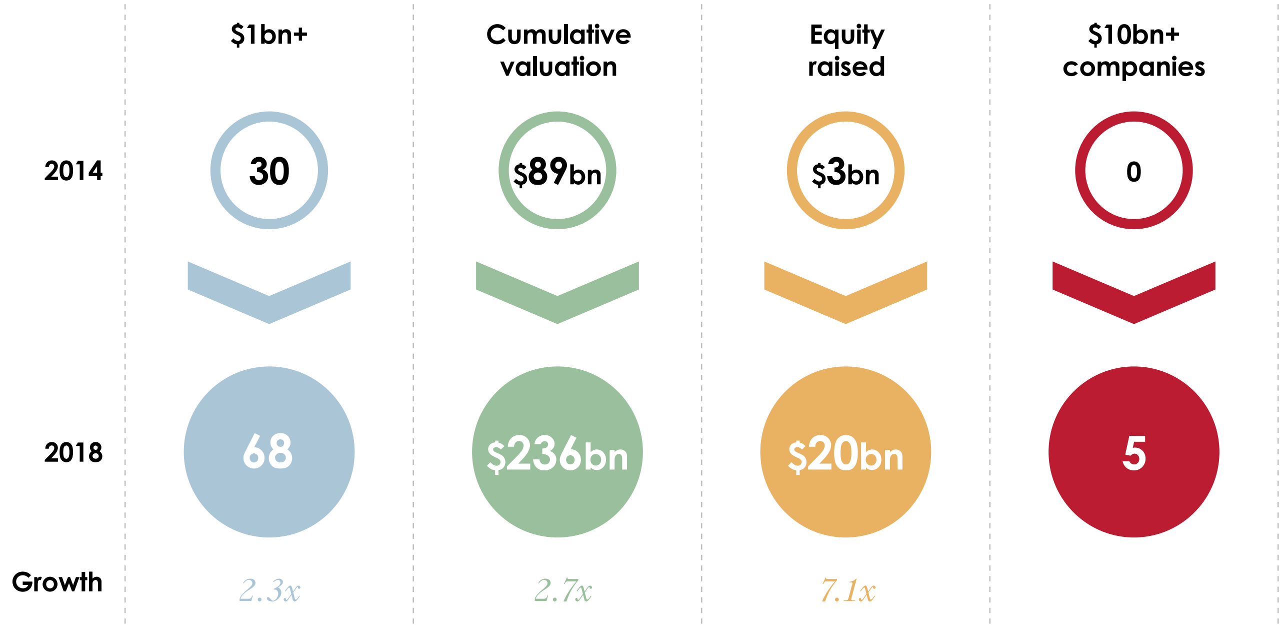
EUROPEAN TECH COMES OF AGE

The Maturing Tech Ecosystem

» The number of billion-dollar companies has more than doubled since 2014

» Total equity raised has increased more than six times, from $3bn in 2014 to $20bn in 2018

» Ecosystem now worth $236bn – almost three times the valuation in 2014

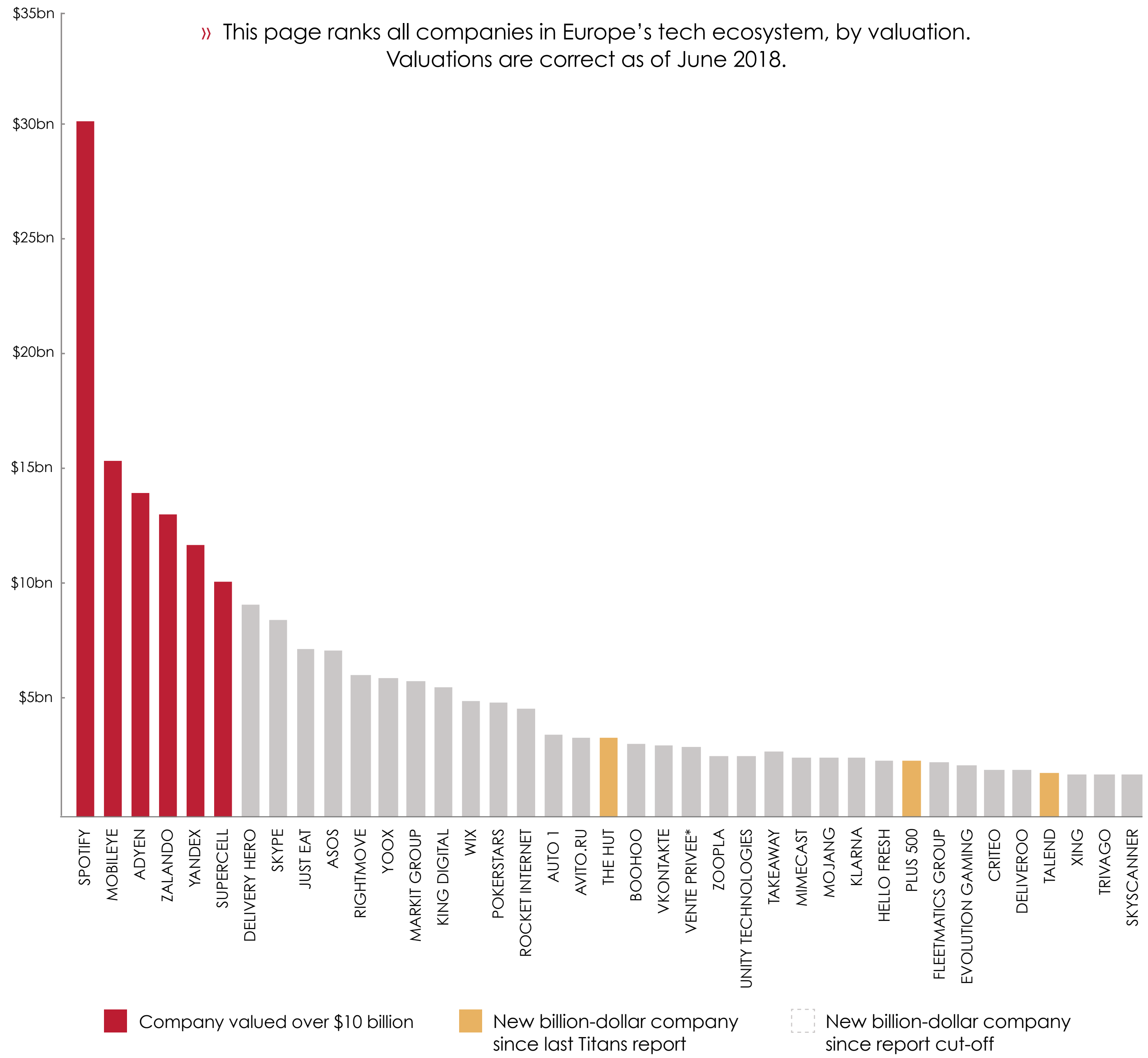


Sources: Capital IQ, Mergermarket, CrunchBase, press releases. Equity funds raised refer to capital raised through primary equity offering

EUROPE’S LEADING TECH COMPANIES

By Valuation

Ranked by company valuation ($bn)



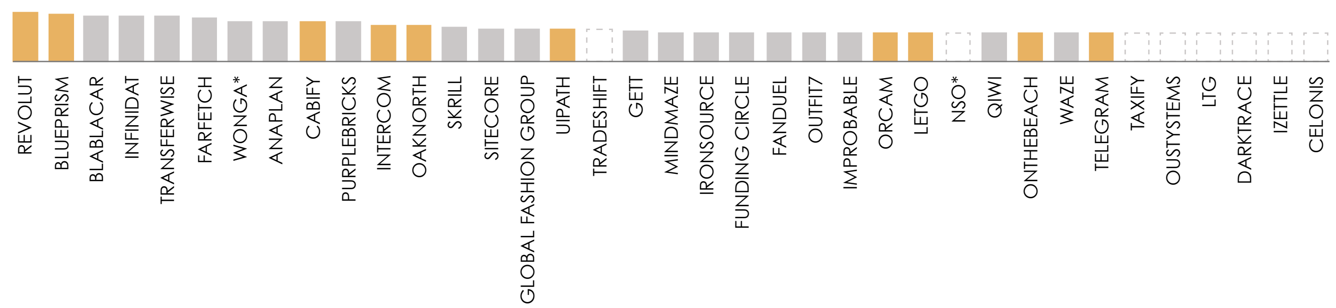
Sources: Capital IQ, Mergermarket, CrunchBase, press releases. Equity funds raised refer to capital raised through primary offering
Note: Valuation as at June 2018
* Rumoured valuation

There are **68 billion-dollar** companies as of the cut-off date for this report

Adyen’s IPO propelled the company to a **$13bn valuation** on 13th June 2018

7 new billion-dollar companies confirmed since cut-off: Taxify, Tradeshift, Outsystems, LTG, Darktrace, iZettle and Celonis

Spotify crossed the **$30bn mark**



Sources: Capital IQ, Mergermarket, CrunchBase, press releases. Equity funds raised refer to capital raised through primary offering
Note: Valuation as at June 2018
* Rumoured valuation

CHANGING OF THE GUARD
Europe's New Players

» There is a net increase of nine new companies since our last report

» Cashflow issues, profit slumps and job cuts have pushed out four former European unicorns since our last report

IN: 13

cabify, blueprism, INTERCOM, ORCAM, THE HUT, Plus500, talend, OakNorth Bank, Revolut, Telegram, letgo, UiPath, on the Beach.co.uk

OUT: 4

blippAR, mobli, ROVIO, SHAZAM

THE UK IS
Leading The Way

» The UK is the #1 for numbers and value

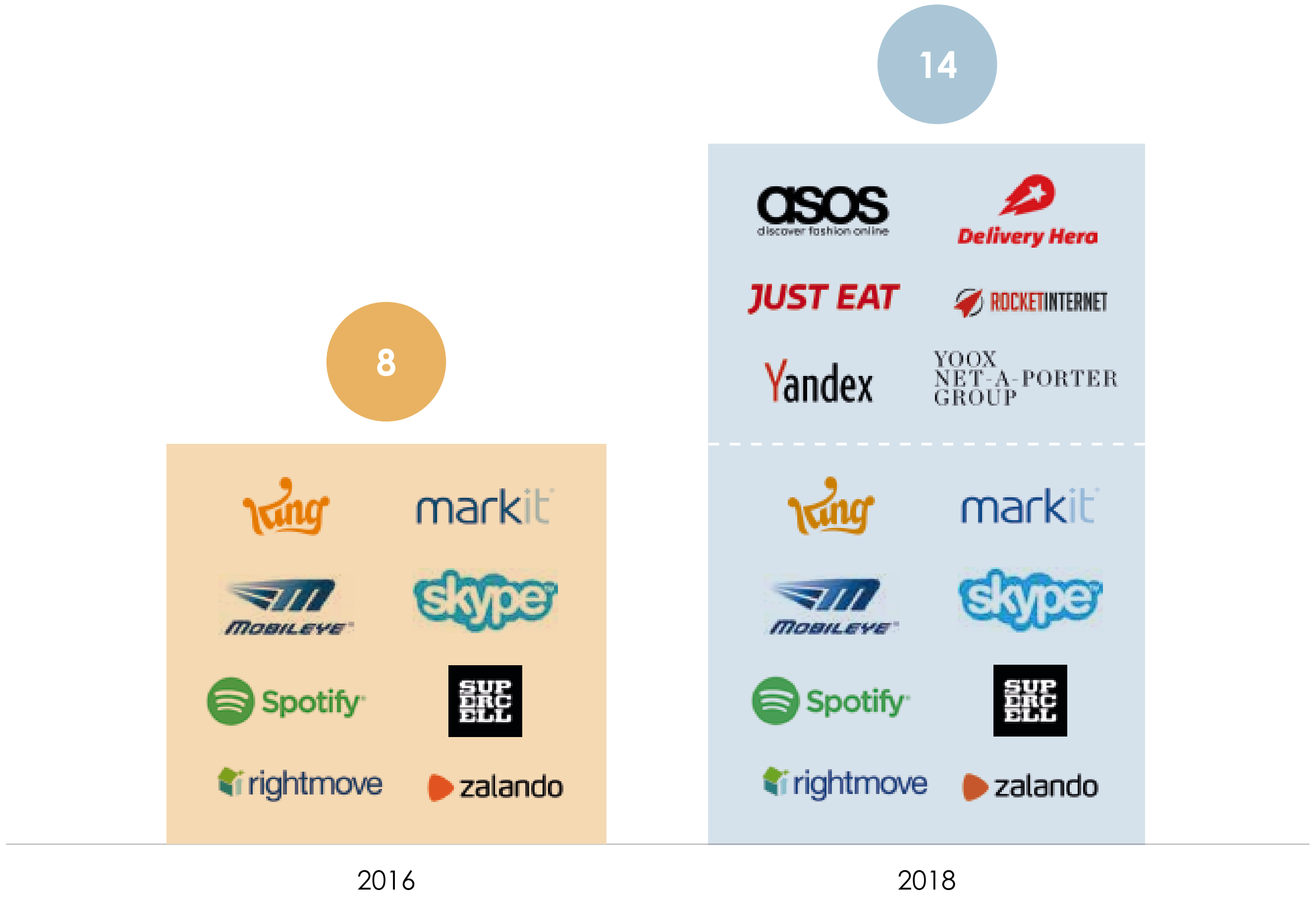
» Extended lead further in terms of number of billion-dollar companies

Top 3	JUST EAT, deliveroo, IMPROBABLE	Spotify, Skype, Avito	zalando, Delivery Hero, ROCKET INTERNET	Mobileye, waze, Gett	Yandex, VK, QIWI
# of billion $ companies	25	7	8	8	3
Cumulative Value	$60bn	$54bn	$36bn	$27bn	$15bn
Net evolution vs. previous year	+3	=	+1	+1	=

Source: Company data, Capital IQ, Mergermarket, press articles, GP Bullhound analysis. Note: Companies ranked by largest to smallest valuation

MULTI-BILLION DOLLAR UNICORNS
On The Rise

» 75% increase in $5bn+ companies in Europe in two years

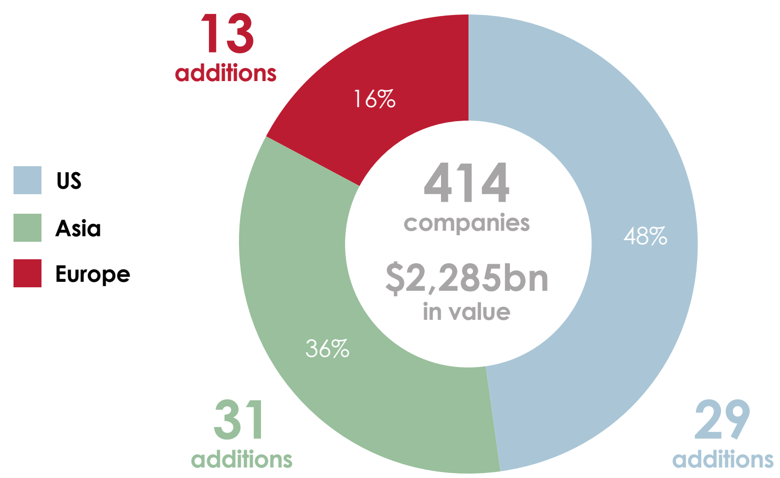


Source: Company data, Capital IQ, press articles

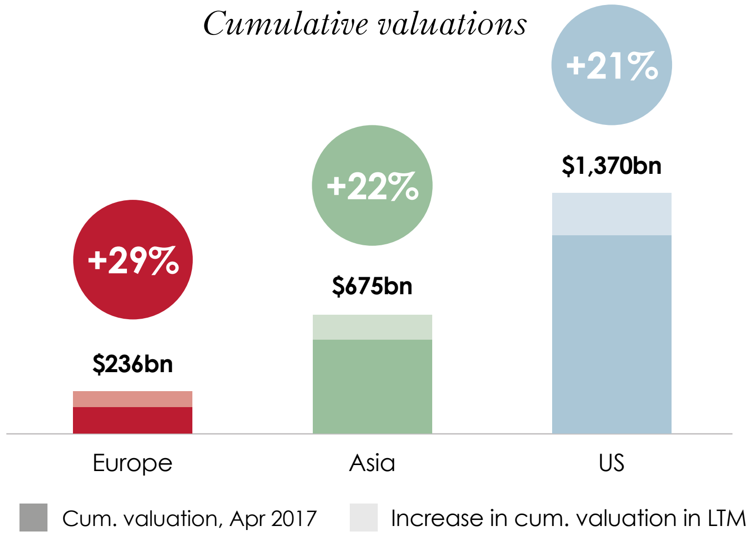
GLOBAL MARKETS WITHIN SIGHT
Catching Up With US And Asia

» US accounts for almost half of all billion-dollar companies
» However, the value of Europe's tech ecosystem is growing at a faster rate than US and Asia's tech ecosystems

Geographical split of billion-dollar companies



Cumulative valuations



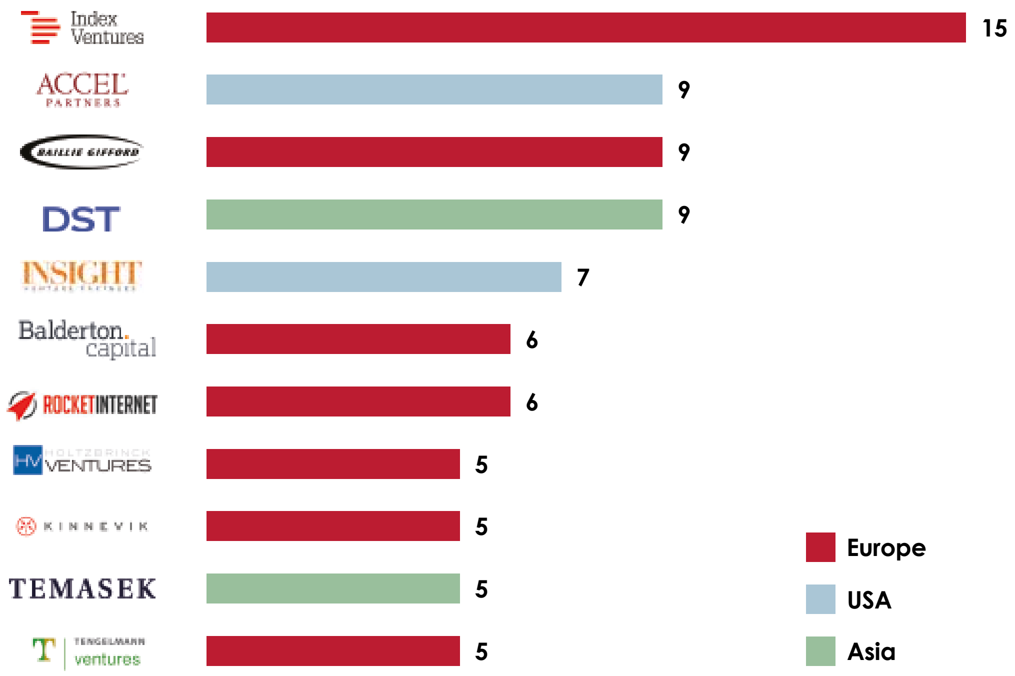
Source: Company data, Capital IQ, Mergermarket, CrunchBase, CB Insights, press articles, GP Bullhound analysis

GROWTH ENABLERS

Europe's Most Active VCs

» Investors in Europe have invested the most in the local ecosystem

Investors by number of European billion-dollar companies they invested in



Investors invested in three or four billion-dollar companies

83NORTH, ANDREESSEN HOROWITZ, ATOMICO, Baring Vostok Capital Partners, BESSEMER VENTURE PARTNERS, DAWN CAPITAL, GENERAL ATLANTIC, GLOBAL FOUNDERS CAPITAL, GP.Bullhound, Horizons Ventures, IVP, J.P.Morgan, KPCB, KREOS CAPITAL, LocalGlobe, Northzone, Seedcamp, SoftBank Capital, SEQUOIA, TMT, VITRUVIAN PARTNERS, UNO STOCK NEW HUNT UE (Unquote)

Source: Company data, Capital IQ, Mergermarket, press articles, GP Bullhound analysis. Note: Only takes in to account investors from private rounds; includes both past and current investments.

EUROPE'S TECH FACTORIES

A View By Country

» UK has generated more $bn companies than any other European country in the last year – adding five to its collection of 25

New billion-dollar companies in the last year

	blueprism, OakNorth Bank, Beach.co.uk, Revolut, THE HUT	cabify, letgo	ORCAM, Plus500	talend	INTERCOM	UiPath	Telegram
Cumulative Value	$8.7bn	$2.4bn	$2.2bn	$1.4bn	$1.3bn	$1.1bn	$1bn+*
# of billion $ companies	5	2	2	1	1	1	1

*Note: Valuation understood to be over $1bn as the company has disclosed fundraises are above $1bn

EXPERT VIEW

Waze

Uri Levine

Co-Founder, Waze, and Serial Entrepreneur

My inspiration for building Waze and most of my other startups is running into a problem or frustrating situation, realising that I'm not the only person who is suffering from it, and then I try to solve it for all of us. In the case of Waze, it started from a very simple question: are other people bothered by traffic jams as much as I am? It turns out the answer is yes, and Waze was a solution to this common issue.

My core philosophy is that one should fall in love with the problem rather than the solution, and solving problems is the common denominator for all the startups I am involved with. If it turns out the problem is shared by many, then it's the spark of a business idea.

FeeX recognizes a $600bn financial fees problem (that no-one knows they are paying them); Engie deals with the helplessness of going to the mechanic; FairFly deals with everyone overpaying airfares because of dynamic pricing; Zeek recognises that a third of gift cards are never used and that people need a way to get back the money they would otherwise lose; Refundit deals with VAT refunds, to solve the 90% of cases in which people fail to get their refund back.

You would be surprised by how many people don't consider who else cares about the problem they are trying to solve when building a startup. Sometimes I speak to entrepreneurs who identify an issue they personally want to solve, but when I ask them who else cares about it, they don't know. If you start with the solution first, you won't solve the problem.

Warren Buffett is alleged to have lived by the mantra 'Never invest in a business you cannot understand'. I spread my efforts across multiple industries. How come? Very simple. I understand a few things very well: users, their problems and how to build a team and a startup.

My approach to expansion is based less on which markets are the largest, and more on the following GTM strategy:

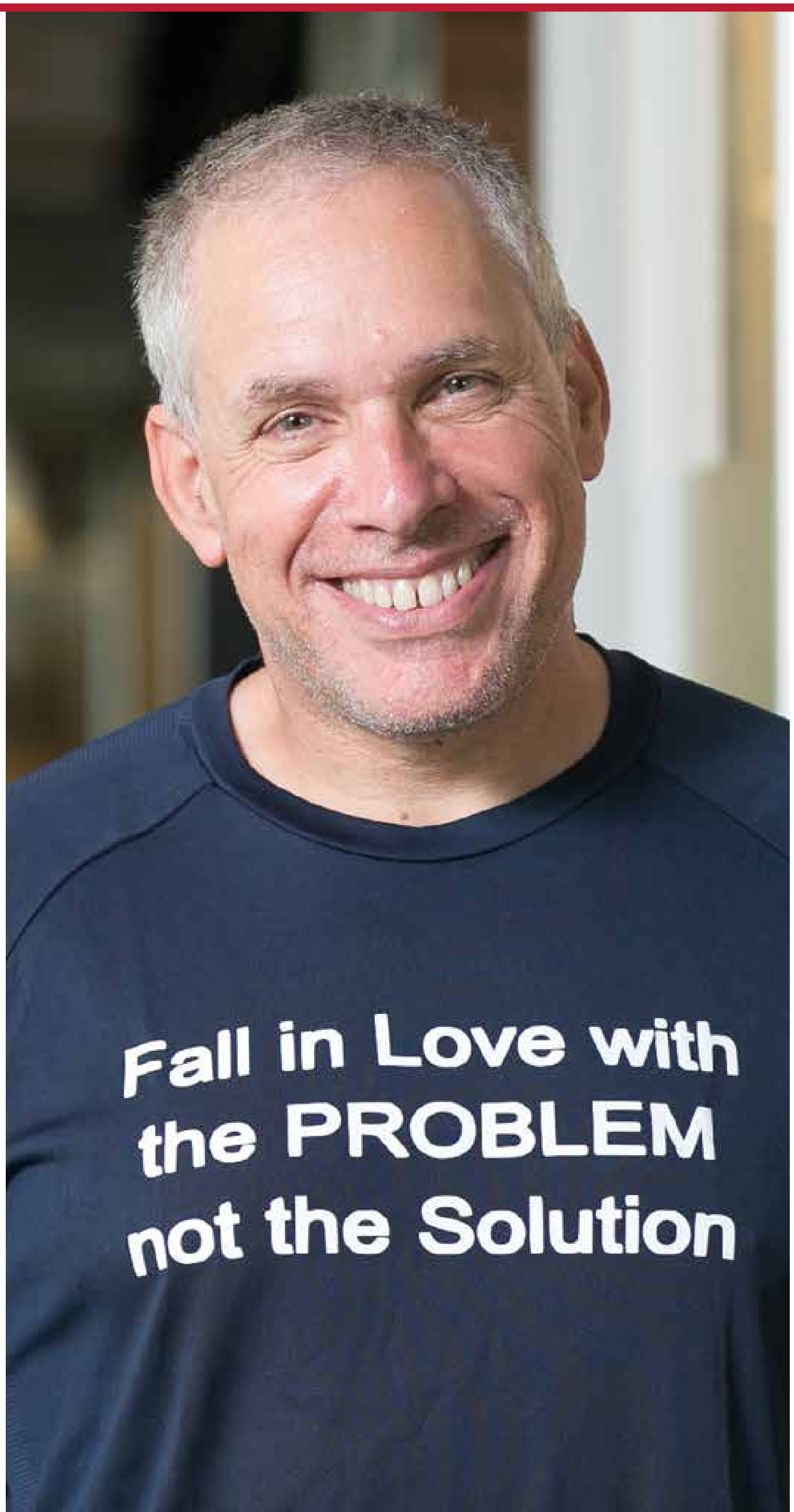
1. Start where it is easy to learn (i.e. your home town)
2. Next, go to the large market that is the easiest to win, usually because:
   a. There is a large Total Addressable Market for the problem and sufficient infrastructure for the solution
   b. There is less competition
   c. User acquisition is easy/inexpensive
   d. There are opportunities for partnerships

Israel is a small market, so when we launched Waze, we had our eye on international expansion from day one and launched into other markets in our second year.

I speak to many entrepreneurs about why certain startups did not work. There are two main reasons they give:

- No-one cares about what we are doing – in other words the problem is not significant enough
- The team was not right – a problem that is even more complex than it looks at first

Often, they'll tell me that 'so and so wasn't good enough', or the team had 'communication issues'. I would usually then ask, "when did you first know that the team wasn't right?" and everyone knows within the first month. But when I dig deeper, it turns out that the real problem was a CEO who couldn't make tough decisions early on. When I begin to engage a new team, I always look for a CEO who won't give up, and has the confidence to make hard decisions that will save the company from having serious problems later down the line.



Today, Israel has the best ecosystem for startups in the world – even better than in Silicon Valley – and it has come a long way in the last decade. We now not only have more people with the right skills to launch new businesses, but more experienced entrepreneurs who can guide the next generation of young people towards launching successful products and services. Israel has produced its first decacorn, Mobileye, but a decade from now, I believe we will produce our first titan.

Various factors have contributed to this strong ecosystem in Israel. Turnover among engineers is low relative to other markets, so it's easier to build and keep a consistent team. There is also a huge appetite for entrepreneurship – many people want to launch their own business.

We have compulsory military service that provides Israelis with real leadership experience, the ability to work in teams and solve difficult problems. There is an abundance of capital, both private and public, as well as tax reliefs that help produce an ecosystem that allows startups and founders to thrive.

The Israeli entrepreneurs I know demonstrate persistence through failure, particularly in the early stages of launching a business – they keep on trying until they get it right. To succeed, you need to have an open mindset that recognises that you will always have more to learn.

Final thoughts:

- Most startups fail early (the majority don't even launch), but the failure rate of those who raise a small amount of money (perhaps by raising money from family and friends) and look to successfully raise $2-3m (i.e. seed round) is about 85% - yes, only 15% of the companies that start successfully raise $2-3m at seed round.
- In my case, this 15% is actually 80%, so obviously I'm doing something right here, from starting from the problem to building the teams.

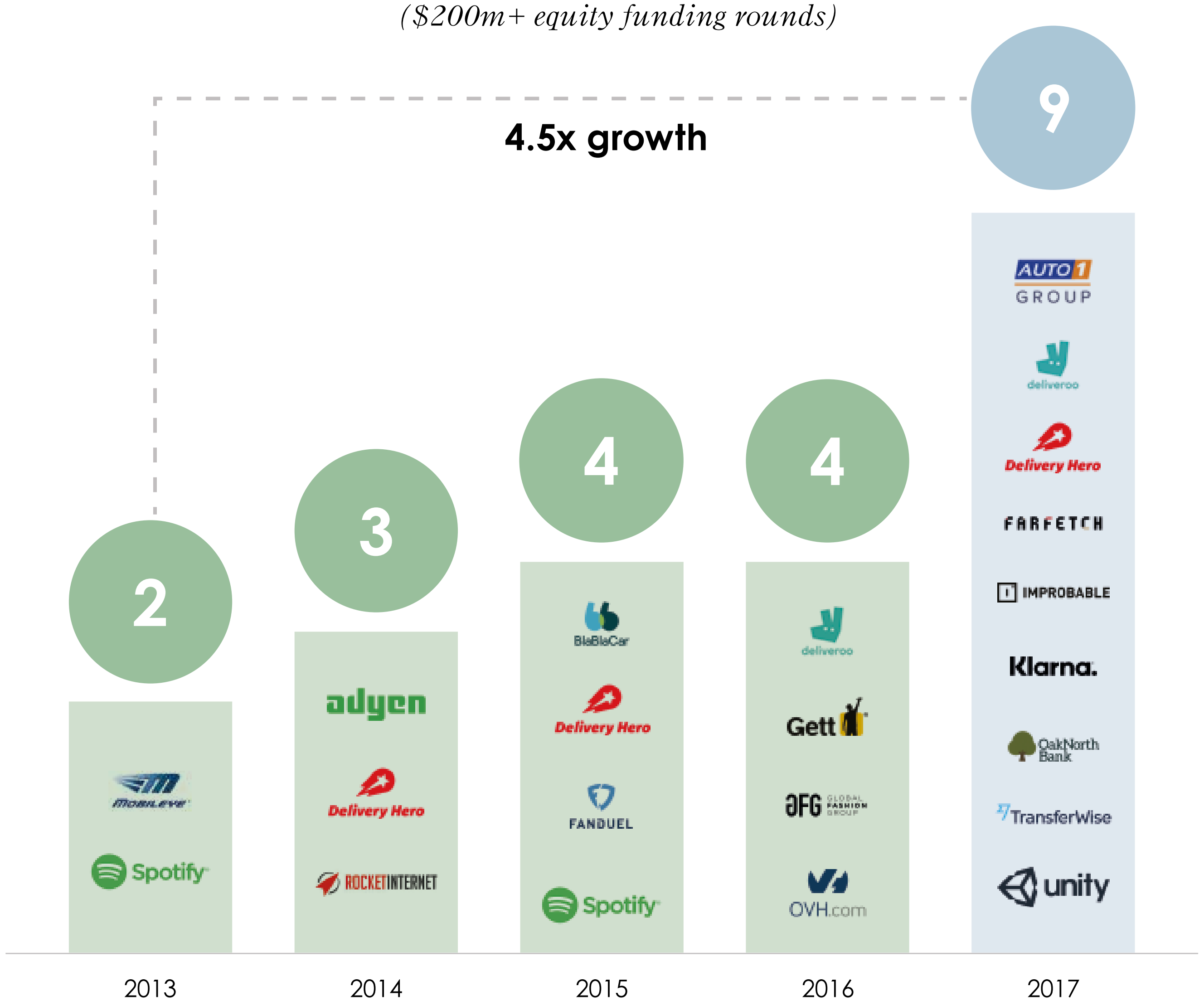
Fall in love with the PROBLEM not the solution. And ask yourself who cares about this problem.

THE YEAR OF *The Mega Round*

» Rounds of $200 million or more have increased steadily in Europe since 2013

» Mega rounds will be crucial to helping Europe's leading tech companies generate sufficient growth to reach titan status

Number of European mega rounds ($200m+ equity funding rounds)



Source: Capital IQ, CrunchBase, Pitchbook. Data represents primary equity funding rounds of $200m+

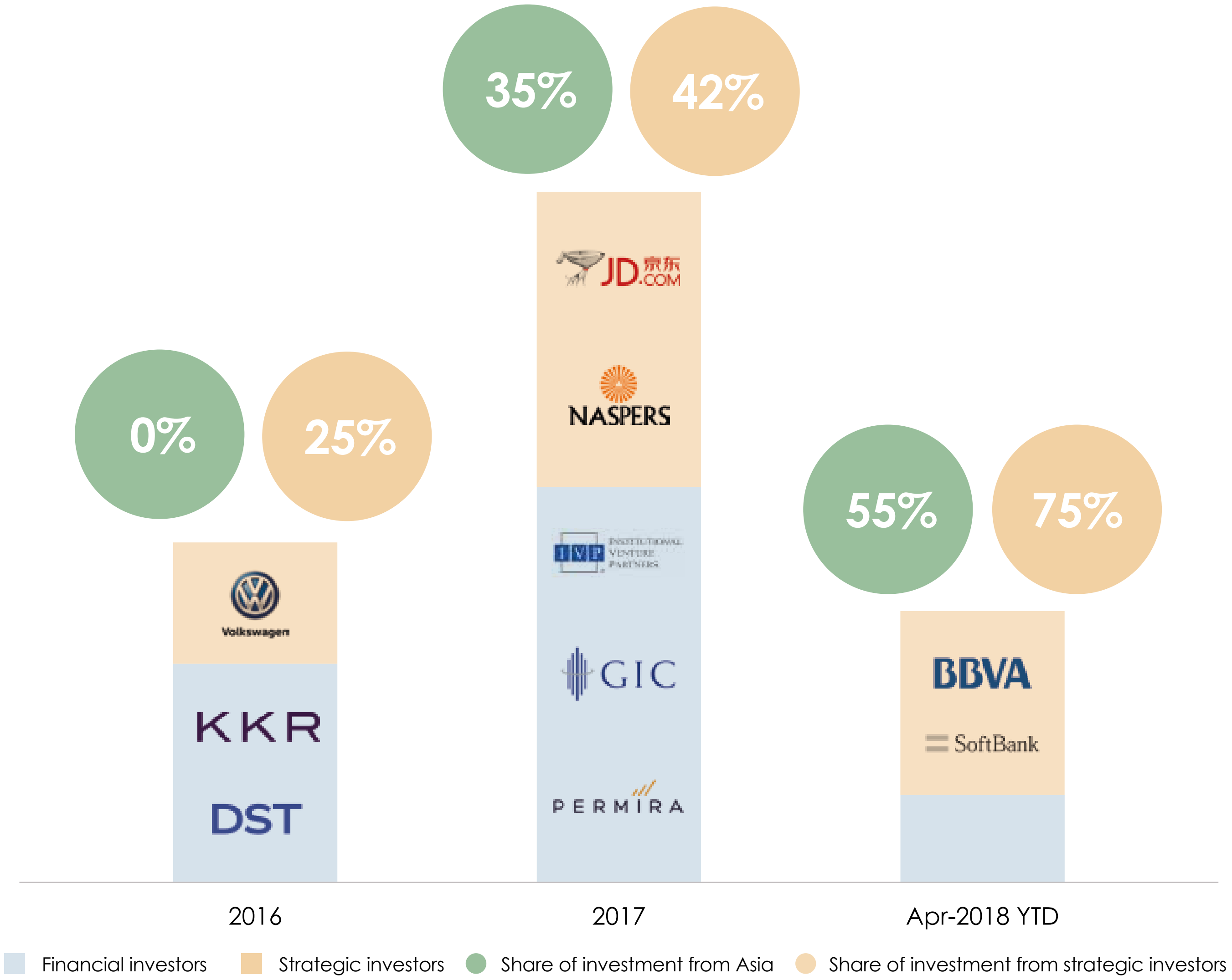
CORPORATES *Take European Tech Investment To New Heights*

» Strategic investors are increasingly leading mega rounds

» Corporates hope Europe's most promising companies will deliver the growth required to allow their parent companies to stay competitive

» Asian investors account for 55% of mega rounds investments in Europe to date in 2018, an increase from 35% last year

Capital inflow in mega rounds ($200m+) from financial investors vs strategic investors



Sources: CapitalQ, CrunchBase, Mergermarket. Note: Rounds' amounts attributed to the lead investor for each category

EXPERT VIEW

Northzone

Pär-Jörgen Pärson

Partner, Northzone and Board Member of Spotify

Since it was first established in 2008, Spotify has repeatedly proven its ability to innovate and disrupt. From its series A round to its recent IPO, co-founders Daniel Ek and Martin Lorentzon have shown that constant innovation and a willingness to embrace risk is the name of the game for today's global success stories.

I stood alongside Daniel and Martin, leading their Series A round and served on the company board for nine years, witnessing the incredible dynamic of this exceptional partnership that has really supercharged Spotify's growth.

Daniel and Martin embraced a highly ambitious approach to building the company from day one: they took gamechanging risks early on that other companies wouldn't. Throughout the company's history, Daniel and Martin have been given the remit to risk the entire company. The two of them have had to be willing to fold and walk away from the biggest music labels, knowing that if one of the labels pulled their content, it would lead to the death of the company – but it's a risk that has paid off.

Spotify was always at the mercy of the labels. Yet all these years later, it has disrupted this balance: Spotify has now accumulated so much data on the type of music people like, and when they like to hear it that its Discover Weekly chart is now more powerful than any label will ever be.

Instead of competing directly with music retailers for very limited market share, Daniel set out the Spotify platform as a strategic solution to the market's problems. Spotify's technology provided clear solutions to piracy issues that were dogging the industry, and also set out to counter Apple's dominance of the industry.

Too often, European companies put Silicon Valley on a pedestal – and look to create carbon copies of the Valley's most successful products. However, the best tech companies take inspiration from Silicon Valley, not dictation. The Spotify team took inspiration from the likes of Apple's iTunes and Facebook and reiterated and reiterated the product until they simply had a better version than anything else that was out there. This approach, coupled with Spotify's innovative technology, led the company to break through in a saturated, highly competitive sector.

As a board member, my role was one of strategic guidance. I encouraged both Daniel and Martin to tackle key weaknesses head on from the very beginning – and tackling weaknesses included repeatedly questioning the Spotify model. This obsessive product development is reflected in the various versions of the core platform Spotify has developed since the business launched – more than five in just ten years.

Moving to mobile was a milestone decision for the company: it showed they had the necessary self-confidence to make costly changes and risk the success of the business in the short-term in order to perfect the model in the long term.

In my twenty years in venture capital, I've seen many European startups struggle to scale to the US. Yet the Spotify team was able to take the leap forward with success, as they were able to bring in US investors ahead of the company's entry into the market.

Over the years, Daniel's strategic approach has been highly complemented by Martin's focus on simplicity, and keeping the company grounded. Together, they built a unique vision for the company, which has driven Spotify to be the streaming giant it is today, and allowed it to reshape the entire music industry.

As an early investor in Spotify, it has been an honour to witness the company's growth, and I have learnt how far business leaders and founders must go to shape their own success. Daniel and Martin always knew they would need to rely on investment capital to build the company initially, and then provide liquidity, but the extent of their achievements was reflected in their move to the public market. it is clear evidence of the company's global status, and proof the two Swedish entrepreneurs have built the technology giant they set out to develop.

THE MARCH TOWARDS
Europe's First Titan

GP.Bullhound

THE RISE OF
Europe's First Titans

The world's six tech titans remain significantly ahead of Europe's billion-dollar businesses – and several key factors unite them. All demonstrate the risk-taking mentality required to generate big wins, and all are growing at an incredible rate that shows no sign of slowing down. Capital is king for titan businesses – and megarounds have been a critical element in driving growth.

Analyse the ingredients for success of the world's six tech titans, and two key factors immediately come to the fore: an ability to attract huge investments, and significant velocity that ensures they maintain the necessary momentum to continue growing.

The stats clearly illustrate why Asia and the US remain so far ahead. Since 2000, the titans have raised a total of $57bn in equity[1], in comparison to $20bn by the 69 billion-dollar companies in Europe[2]. A huge delta remains between the titans and the very best European tech companies.

An ability to attract huge capital investments is common to all tech titans. On average, the tech titans have raised almost five times the amount of capital as the biggest and best companies in Europe – including Spotify, which has benefited from unprecedented growth over the last year. On average, the tech titans have raised funds worth $7.3bn to reach a $50bn valuation, versus only $1.6bn among Europe's top billion-dollar companies, with China's ride-sharing startup Didi Chuxing raising a gargantuan $15.7bn before reaching a $50bn valuation and Ant Financial recently raising $14 billion in the world's largest-ever single fundraising.

Without an increase in mega rounds Europe will never catch up with its American and Asian competitors. However, our report indicates that megarounds are increasing in Europe, with 9 tech companies raising megarounds in 2017.

The investment landscape is changing. While traditional venture capital firms continue to provide the majority of funding, a growing proportion is coming from strategic investors who are making big bets on technology to remain competitive. These include companies such as Volkswagen, BBVA, Naspers and Softbank, all on the lookout for new firms that will drive significant value for their parent companies later down the line.

Our report finds that 42% of mega round fundings in 2017 and 75% to date this year has come from strategic investors, rather than financial investors, compared with only 25% in 2016.

An increasing amount of funding into tech firms is coming from Asia.

In 2017, Asian investments accounted for 35% of megaround funding and over half (55%) of megaround funding to date in 2018.

With megarounds increasing, velocity increasing and the venture capital pie diversifying as strategic investors step up their interest in early ventures, the outlook for Europe's billion-dollar companies is a positive one. As Spotify's immense and rapid growth attests, the opportunities are there for Europe's tech companies to become the continent's first titan.

1. Excludes fund raising generated by Ant Financial post report cut off. 2. Only includes equity fundraises.

EUROPE'S EMERGING TITANS

Who Are They?

» Five multi-billion-dollar European companies are frontrunners to become Europe's first tech titans

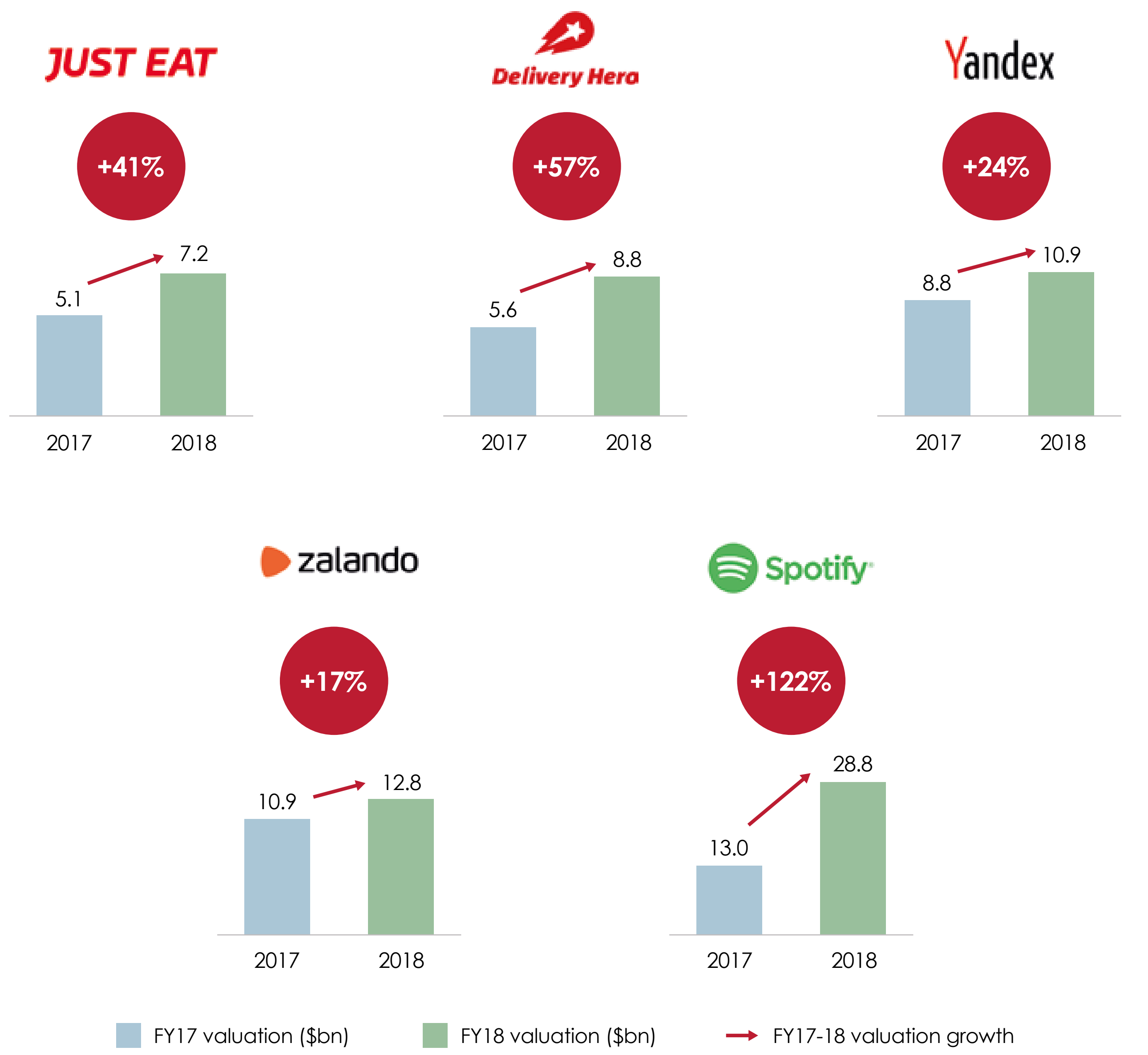
	Spotify	zalando	Yandex	Delivery Hero	JUST EAT
Origin					
Founded	2006 Daniel Ek and Martin Lorentzon[1]	2008 Robert Gentz, David Schneider	2000[1] Arkady Volozh, Ilya Segalovich, Elena Kolmanovskaya	2011 CEO Niklas Östberg	2001 By five Danish entrepreneurs[2]
Raised (to date)[7]	\$2.3bn	\$1bn	\$1bn	\$2.9bn	\$1bn
Valued at	\$28.8bn	\$12.8bn	\$10.9bn	\$8.8bn	\$7.2bn
Facts	36% As of 2017, Spotify accounted for 36 percent of streaming music subscribers worldwide[3] **Most weekly streamed track on Spotify: Better Now by Post Malone[1]**	€4.5bn Generated €4.5bn revenue in 2017[4] €44.12 Share price of €44.12 as of December 2017[4]	90% More than 90% of Internet users in Russia living in cities with populations of 700,000 or more use Yandex services[5] **18 offices worldwide, has been listed on the NASDAQ since 2011[1]** Russia's largest network for data storage and processing[1]	MISSION To provide an inspirational, personalised, and simple way of ordering food[6] **Brands under the Delivery Hero umbrella include Yemeksepeti, E-Food, Talabat, Pedidosya, Yogiyo, foodora and foodpanda[6]**	400m 400 million orders and counting[7] **Acquired Hungryhouse in January 2018**

Sources: CapIQ, Mergermarket, Press Articles, Annual Reports, CrunchBase, press articles, as at April 2018. 1. Yandex website. 2. Jesper Buch, Laurens Groenendijk, Marc Wesselink, Martijn Rozendaal, Per Meldgaard. 3. Statista. 4. Zalando annual report. 5. Mediascope, March 2017, 12-64 y. o., desktop and mobile device. 6. Delivery Hero website. 7. Funding includes primary equity raises and disclosed debt issuances. Excludes secondary transactions and ESOP related transactions

THE RACE IS ON

Is Europe Catching Up?

» Spotify grew at a monumental rate between 2017 and 2018 – reaching a valuation of almost \$30bn

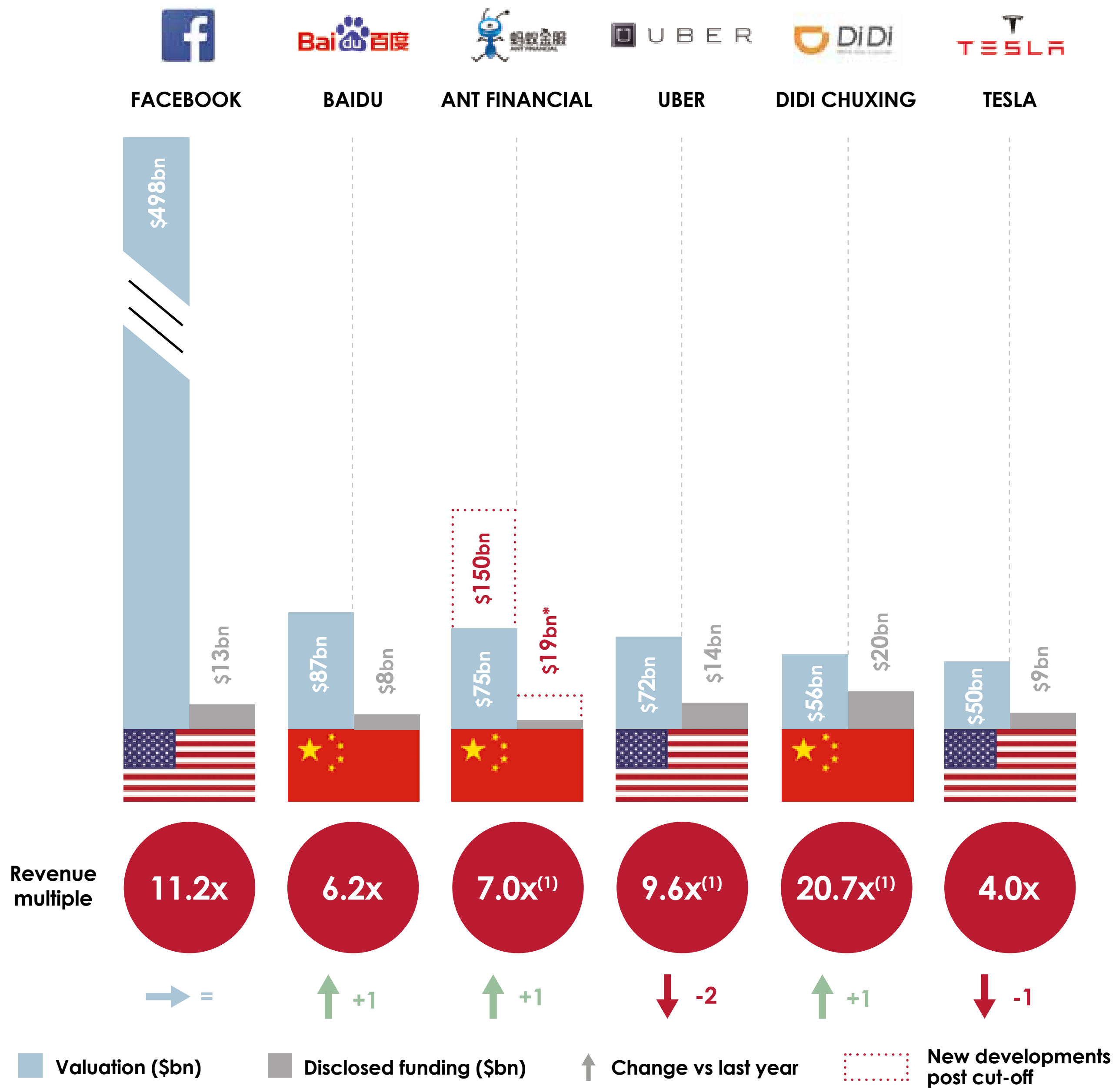


Sources: CapIQ, Mergermarket, Press Articles, Annual Reports. Valuations as at 2017 and 2018 Titans of Tech reports' cut off dates.

CHASING THE LEADING PACK

Who Are The World's Tech Titans?

» Asia's titans are growing from strength to strength, while the US is struggling



Source: Company data, Capital IQ, Mergermarket, press articles, as of April 2018. Revenue multiples are Equity / LTM Revenues as of report cut-off date when the company is listed. Limited financing data available for Baidu. Last known equity value to latest disclosed revenues for private companies. (1) Based on 2016 revenue estimates/rumour revenues. Funding includes primary equity raises and disclosed debt issuances. Excludes secondary transactions and ESOP related transactions. Analyst estimates for Ant's valuation. *Ant Financial disclosed funding as of 14/06/18, Funding pre cut off was $5bn.

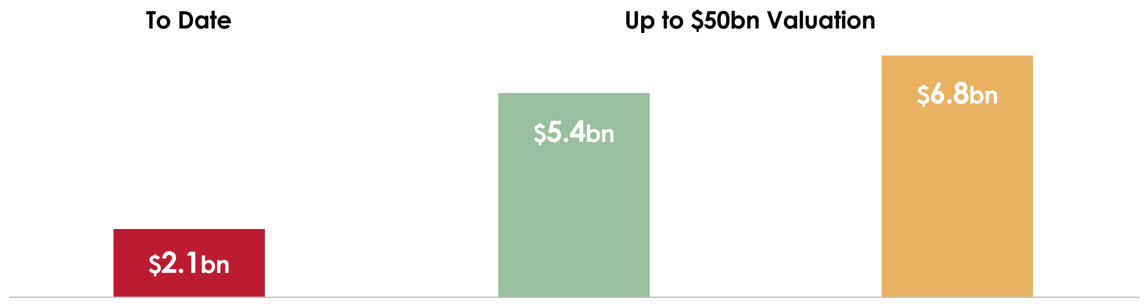
BUILDING A TITAN

What Does It Take?

» The titans have raised a significant amount of funding in order to achieve this status

EU champions $50bn club[1]	*US $50bn club*	*Asia $50bn club*
Delivery Hero	Facebook	Ant Financial
Spotify	Tesla	Baidu
zalando	Uber	DiDi

Average funding raised[2]



Average number of acquisitions[3]

Source: Capital IQ, CrunchBase, press articles, as at April 2018. 1. Data set includes the top independent European companies. 2. Funding includes primary equity raises and disclosed debt issuances. Excludes secondary transactions and ESOP-related transactions. 3. Up to $50bn valuation for Asia and US, to date for EU

EXPERT VIEW

Darktrace

Poppy Gustafsson

CEO EMEA

From day one, Darktrace set out to challenge the status quo, transform the cyber security industry and become a global leader. Previously, cyber security meant constructing a perimeter around a network and aiming to stop intruders – our use of artificial intelligence changed the rules of the game.

When you are looking to protect a city, you cannot simply build a wall, lock the doors and hope to keep people out – you have to spot the behaviours of someone being where they should not be. The same applies to our model of cyber security – we use machine learning to understand a network, examining in detail what it looks like and how it operates in order to uncover when the behaviour changes as a result of a threat.

This model was ground-breaking and our distinctive approach enabled us to expand rapidly – three months after we secured our first contract, we had launched in the US, and six months later we moved into Asia.

The execution of this growth trajectory was facilitated by the strength and breadth of expertise in our founding team. It consisted of three cohorts: first, the core mathematicians, who created the machine learning. Second, a group of ex-government cyber specialists, who had experience of protecting major national infrastructure, such as London during the Olympics. Finally, management and financial specialists added the operational experience of scaling a business.

Investors quickly took note of our growth potential. As the volume of connected devices increases – we even have our own smart fish-tank in the office now – risk rises and the need for organisations to manage cyber threats through systems like ours grows. However, we took great care to select partners who aligned closely with our goals, and investors from Samsung in Asia to KKR and Insight in Europe and the US offered vital insight and strategic support as we looked to capitalise on new markets and scale very rapidly.

Being based in the UK has also been key to our ability to adapt to different markets. Not only does London have an exceptional pool of international marketing and sales talent, its proximity to Europe means that tech companies looking to expand across the continent immediately need to provide a technology that can deploy across a diverse set of industries, cultures, and markets – this creates agile companies that are capable of scaling globally.

Similarly, the technical skills and academic expertise on offer in the UK have been critical to our success. In many senses, Darktrace is a mathematics company – it is largely composed of experts in machine learning, and you can see the rational approach of numerical problem-solving throughout the company.

Therefore, founding the business in Cambridge was the logical decision – specialist PhD graduates joined our teams directly from the university and the city remains where you will find the brains of the business. We are incredibly proud of this heritage and believe that this is an exceptional resource for the technology industry.

Nonetheless, the UK and Europe still have plenty to learn from other global tech hubs. First, they must aim higher. All too often, we see companies which are great innovators selling out too soon or focusing on only their home market – big successes require big visions, which require big ambitions.

To deliver on this, every scaling business must ruthlessly hold onto its founding culture and principles. The drive required to succeed in those early days must be retained through a rigorous hiring process that champions ambition, determination, and creativity. Scrabbling around as the first 25 people was very different to the 600 or so people we are today; yet, you want those fundamental values to be the bedrock of your culture.

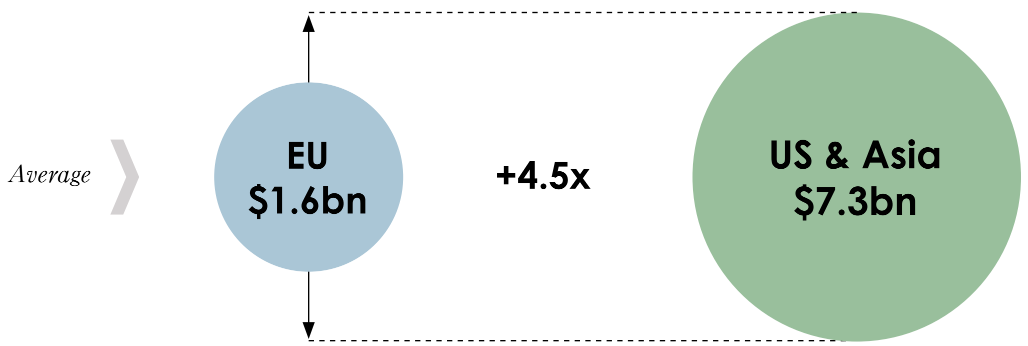
The key to Europe's future success will be our ability to remove limits to growth and constantly challenge the status quo. We were told we would never be able to hire enough cyber security specialists and artificial intelligence experts to scale – so we went and trained them in house instead.

Inspiration from successful entrepreneurs will be the biggest drive to creating larger successes in Europe, and will come through exceptional talent with unprecedented ambition challenging the status quo.

CLOSING THE GAP
Europe's Leaders Need More Capital

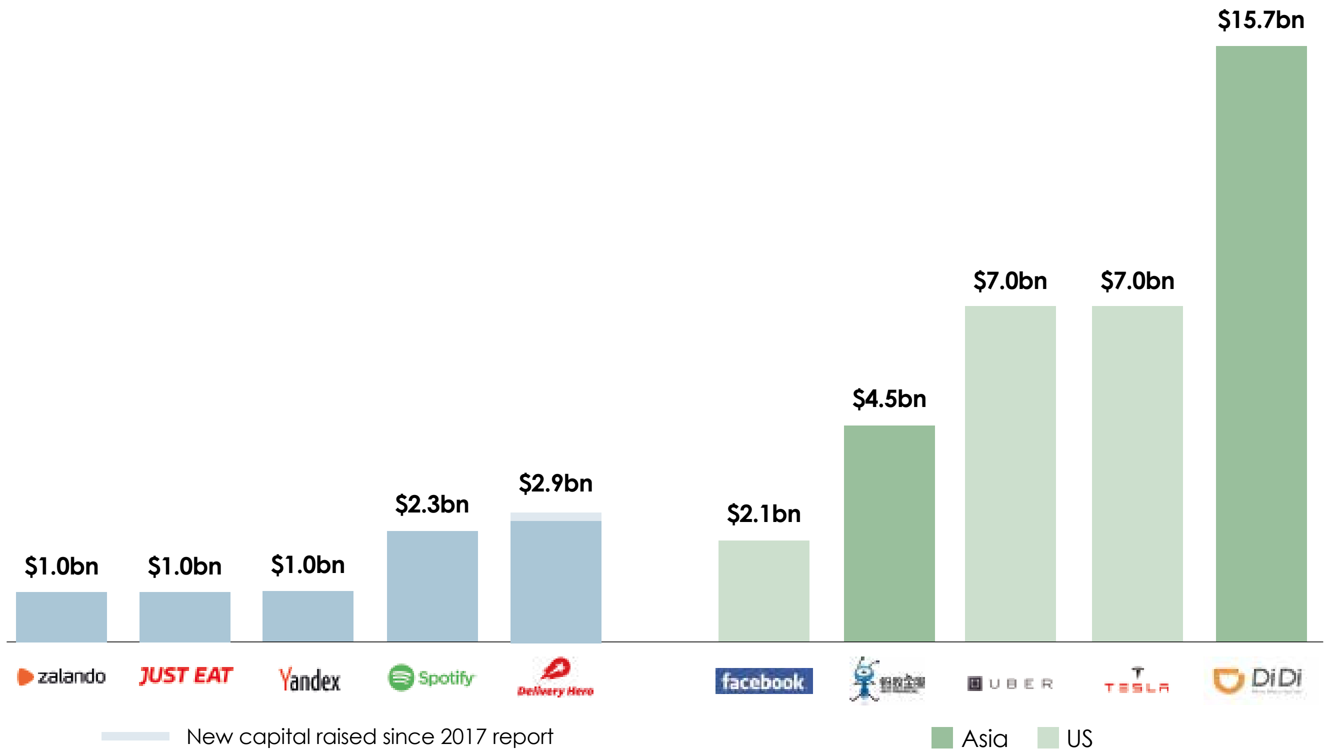
» Titans raised significantly more to reach $50bn valuation than Europe's leading tech companies have raised to date

Average funds raised



Funds raised by Europe's leaders[1,2]

Funds raised to reach $50 billion[1,3]



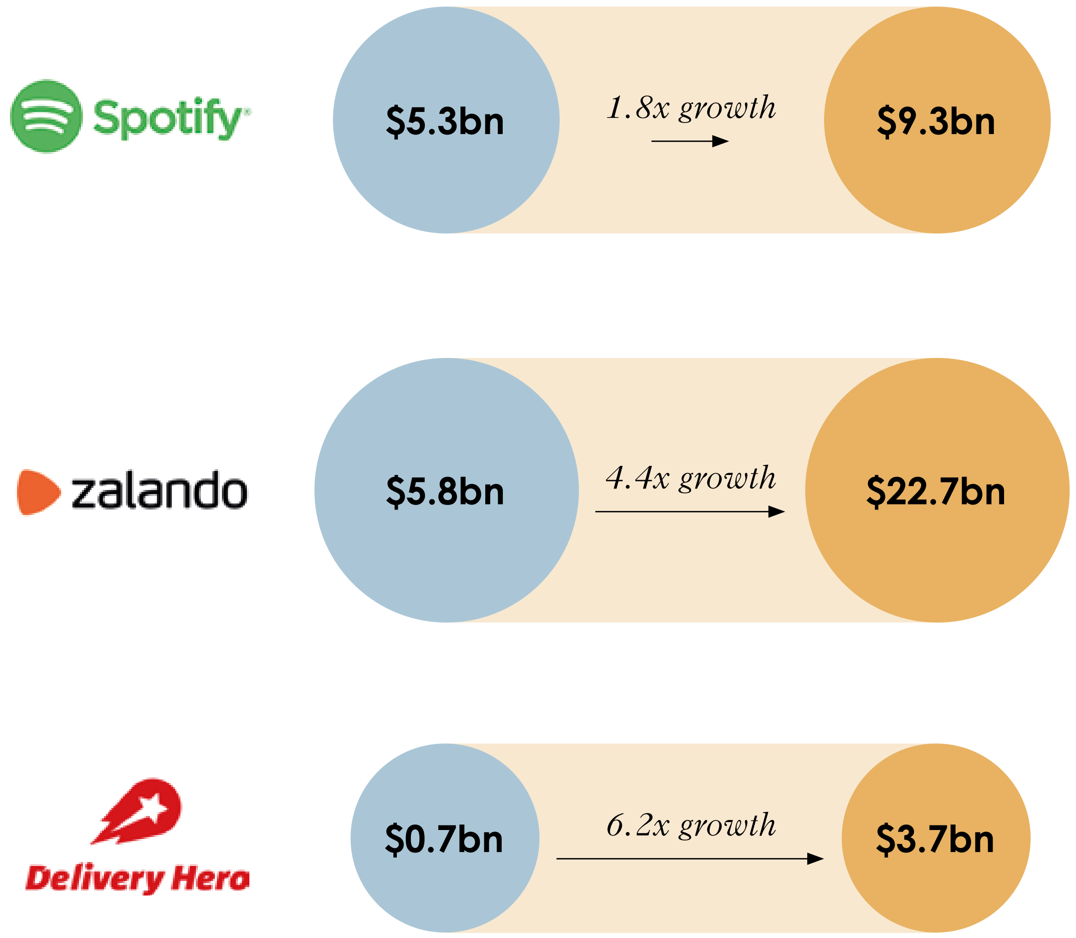
Source: Company data, Capital IQ, Mergermarket, press articles, GP Bullhound analysis as at April 2018. Notes: 1. Funding includes primary equity raises and disclosed debt issuances. Excludes secondary transactions and ESOP related transactions. 2. Data set includes the top 5 independent European companies. 3. Data set excludes Baidu (limited early funding data available).

EUROPE'S FIRST TITAN
Is On The Horizon

» Analysis below highlights the revenue growth needed to reach a $50 billion valuation assuming a constant multiple

LTM revenues to Apr-18

Target revenue for $50 billion valuation



Source: Company data, Capital IQ, press articles, GP Bullhound analysis as at April 2018. (1) Using implied EV as at cut-off / LTM revenues: Delivery Hero: 12.3x; Spotify: 5.3x; Zalando: 2.0x.

EXPERT VIEW

Blue Prism

Jason Kingdon

Chairman

I first met Blue Prism in 2007, when there were about nine people at the company. I was impressed by both of the founders, Alastair Bathgate and David Moss, and when they showed me the product, I was totally blown away.

The company had built the first version of a "digital worker" - what is now termed a "software robot", something that allows business users without IT skills, and without coding, to build process experts capable of automating tasks and processes within their organisation, making use of all IT applications and systems regardless of underlying technologies. In other words, the robotic process expert created through this technology also integrates all technologies.

Clients have always been absolute evangelists about the product. One of Blue Prism's early users, UK online retailer Shop Direct, used robots to reverse 2,000 overpaid accounts in one day instead of the couple of weeks it would have taken agents in one of their call centres to do it manually. The robots had been trained in less than half a day by a single business person. It was clear from this that Blue Prism was a major new technology – and the profound changes this technology introduces are still being discovered today. Robotic Process Automation (RPA), as it is also now known, to me, is Artificial Intelligence for business.

When I joined the company, it was loss making and it had a VC that was running out of patience. The main challenge was how to take such a powerful, category-defining and disruptive technology to market - and how to discover the patterns of work required to build these digital workers into teams to create something strategic for a business, rather than isolated automation tasks.

The value being created was under-appreciated by the company's backers, and would-be backers - funding the business while we developed this powerful product concept became another key challenge.

So we reverted to the company's support base to gain an understanding of how the product should be shaped and positioned to connect it with the audience it deserved. We created a business support group called the "operational agility forum" - somewhere that new business practices and skills in using a robotic workforce could be developed and honed.

I also introduced commercialisation and internalisation capabilities through colleagues from Searchspace, the big data/intelligent system company I co-founded in 1995, who had experience in bringing new products to market. We grew the business every year subsequently without raising finance – and then demand for the product really kicked in around 2012, and has continued to grow ever since.

To some degree we are still at the beginning of a very big journey. The technical press and market analysts have yet to really see what this technology is doing, and when they come fully on board, I believe it will explode into something very mainstream.

The investment landscape has changed over Blue Prism's lifetime too. The 2008 financial crash may have changed risk profiles, but on the whole UK venture funds were very slow, and most could not see the vision.

Our motivation for the IPO was that the company was growing organically without finance, but we could see a much larger market opportunity emerging. Academic business commentators were saying this technology produced the best investment returns of any technology they had studied, and that software robots were a technology alternative to outsourcing.

It turned out that the public market investors were much more receptive to our story vs. Venture Capital funds. We had raised just £1.6m from private investors before the IPO and the company was majority owned by staff by the time we went public. We raised around £20m at IPO, with around £10m of this in new money, which has made the whole financing of Blue Prism very efficient. Public investors are much more financially minded and much more focused on the strength of the business, and this worked in our favour.

As such, my advice to investors looking to capitalise on Europe's fast-growth tech businesses is to be more engaged with early stage concepts and generate a true passion for technology. Capitalisation is much lighter than in days-gone-by; much more technology is accessible and available. Without specialism in early stage, lots of opportunities will be missed because once businesses like Blue Prism break, they start breaking fast.

It's great to see world-leading technology coming from Manchester too: the home of the industrial revolution has spawned a new digital automation revolution. I hope that the success of Blue Prism can have a transformational impact on the region. It shows how Europe competes with Silicon Valley to push technology innovation and artificial intelligence forward.

TITANS OF TOMORROW

Introducing The Billion-Dollar Contenders

GP.Bullhound

EUROPE'S NEXT GENERATION

Meet Europe's Billion-Dollar Contenders

The following chapter considers the businesses that are nearing the billion-dollar threshold. We aim to highlight the companies that are demonstrating the greatest ambition and taking the largest risks, as well as the countries and sectors that are set to propel the most companies into the billion-dollar category

We analysed more than 400 companies within Europe's tech ecosystem to try to identify the companies that are most likely to become the billion-dollar companies of tomorrow.

Our analysis considered three important factors. The first criteria was scale: the amount of capital raised and the company's headcount. The second was velocity – growth in capital raised, headcount, and organic traffic. Finally, we looked at sentiment - we ran a survey among top European VCs to choose the companies they believe have the highest potential of reaching billion-dollar status.

The top 50 billion-dollar contenders have on average raised just over $100 million over the last 5 years, with capital raised growing 3.4x year-on-year. Headcount growth over the last two years per annum is more than 50% on average with just under 30% growth in organic traffic.

Since the cut-off date for performing the analysis, DarkTrace, iZettle and Tradeshift have already reached a billion-dollar valuation. Other strong contenders include GetYourGuide and Algolia.

We are seeing billion-dollar companies emerge from a relatively diverse range of sectors and geographies, however Enterprise SaaS, Fintech and Transportation in the UK, France, Israel and the Nordics appear to be the most represented.

All companies analysed comply with the following criteria:

- Tech companies only, with a bias towards Internet / Software (Cleantech and Biotech are excluded in our analysis)
- Headquartered in Europe
- Founded in 2000 or later
- Raised $20m+ or had an enterprise value of $400m+ from 2014 onwards
- Exceptions made for several fast-growing companies

Our formula to assess the contenders is data-driven:

- Scale (1/3): capital raised over last 5 years and headcount as at March 2018
- Velocity (1/3): growth in capital raised in 2017 vs. 2018 and growth in headcount between March 2016-18
- Sentiment (1/3): crowdsourced from the European VC community and the GP Bullhound team

EUROPE'S MOST PROMISING STARTUPS

Top 50 Billion-Dollar Contenders

» The GP Bullhound team analysed more than 400 European startups that have raised over $20m since 2014 to identify the top 50 companies with the most potential to become $1bn companies in the next 2 years

» All of these companies were assessed by GP Bullhound's team for Scale, Velocity and Sentiment from which we have generated a top 50 rank of the most promising European startups*

Source: Company data, Capital IQ, Mergermarket, press articles, linkedin, as of March 2018. *achieved a billion-dollar valuation since the cut-off date of our research

MAKING AN IMPACT

The Numbers Behind Their Growth

» Europe's top 50 contenders for reaching a billion-dollar valuation all demonstrate significant scale and velocity

» The numbers below illustrate the scale and velocity characterising the Europe's startups that have the most potential of becoming the next billion-dollar companies

Key statistics for Europe's Top 50 Contenders

Scale

- **$102m** average capital raised in L5Y
- **$51m** average capital raised in last 15 months
- **313** average headcount as at March 2018

Velocity

- **3.4x** average increase in capital raised
- **51%** average headcount CAGR '16-'18
- **29%** average organic traffic CAGR '16-'18

Source: Company data, Capital IQ, Mergermarket, press articles, linkedin, as of March 2018

THE NEXT WAVE OF EUROPEAN LEADERS

Meet The Top Ten $1bn+ Contenders

» From our ranking of Europe's top 50 contenders for reaching a billion-dollar valuation, the top ten European startups that have the potential to become $1bn companies in the next 2 years are highlighted below

» Darktrace and iZettle have both achieved unicorn status since the cut-off for this report

» For each metric, scores for all companies are rebased as a percentage of the leading company at that metric (100%)

		Scale	Velocity	Sentiment
DARKTRACE	100%	100%	48%	98%
iZettle	93%	100%	28%	100%
algolia	90%	78%	51%	92%
Get Your Guide	84%	95%	49%	63%
N26	83%	94%	84%	29%
monzo	83%	86%	93%	29%
collibra	83%	90%	41%	75%
TRUSTPILOT	82%	96%	28%	78%
Typeform	82%	67%	49%	86%
AppsFlyer	82%	89%	38%	75%

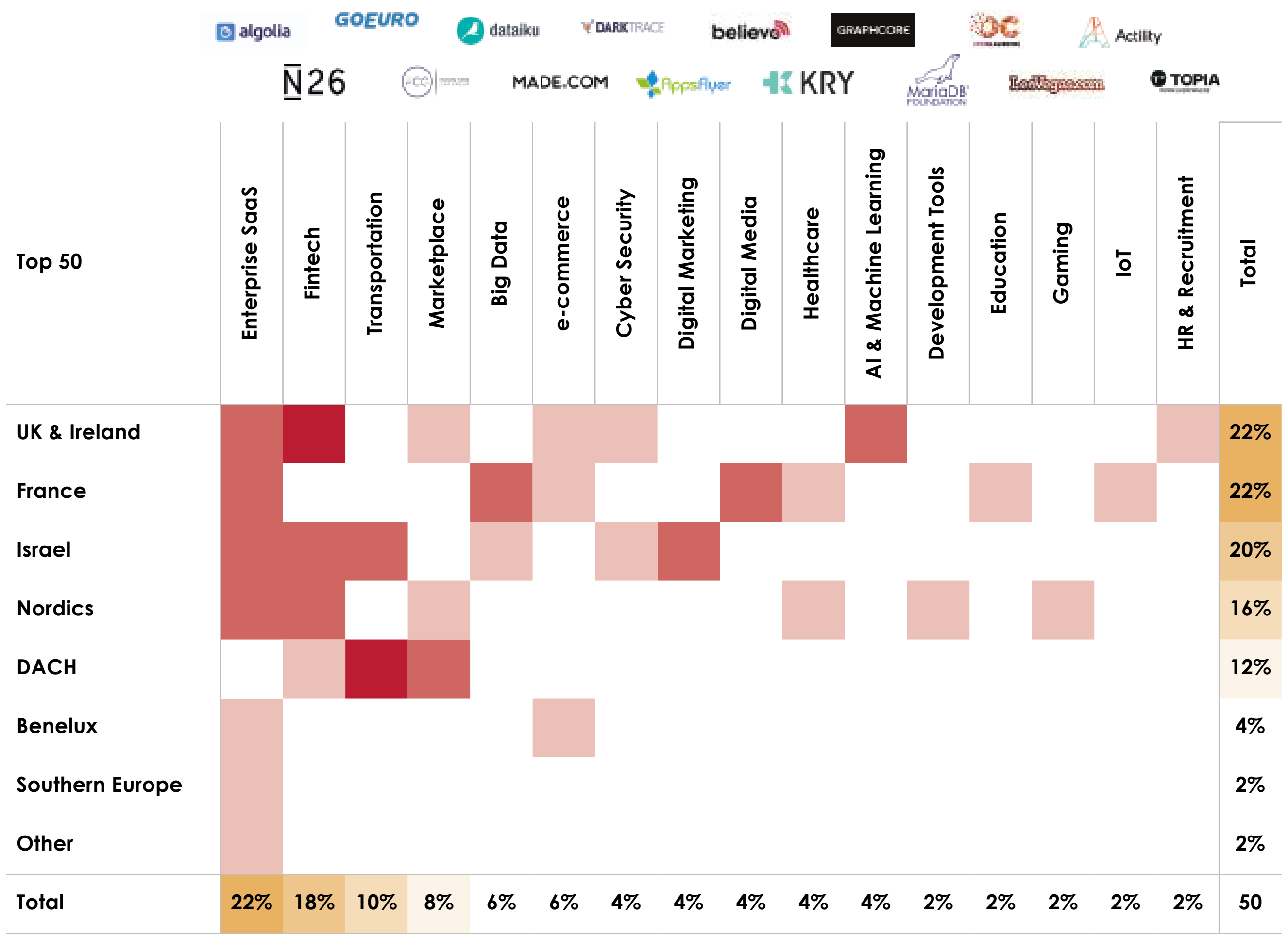
Source: Company data, Capital IQ, Mergermarket, press articles, linkedin, as of March 2018

EUROPE'S HEAT MAP

Where Do Smart Investors Put Their Money?

» We analysed the top 50 contenders and plotted them against sector and geography to create a heat map that sheds light on which countries or industries are most likely to produce the next billion-dollar companies

» We are seeing billion-dollar companies emerge from a relatively diverse range of sectors and geographies, however Enterprise SaaS, Fintech and Transportation in the UK, France, Israel as well as the Nordics appear to be the most represented



Source: Company data, Capital IQ, Mergermarket, press articles, linkedin, as of March 2018

EXPERT VIEW

WorldRemit

Catherine Wines

Director & Co-Founder, WorldRemit

WorldRemit is a pioneer of digital remittances – we focused relentlessly on creating a product that allows our customers to support family and friends living all around the world via a safe, secure and convenient money transfer service.

We often compare remittances with the travel industry. A few years ago, you would have to go in person to meet with a travel agent simply to book a flight; now, this process has shifted almost entirely online. We wanted to do the same for money transfers by making remittances safer, cheaper, and easier through harnessing digital technology.

The shift to mobile remittances on both the send and receive side remains the main driver of our future growth. An explosion of mobile ownership across Africa and Asia has transformed the financial industry for those traditionally cut-off from financial services. In particular, there has been a rapid adoption of mobile money accounts and WorldRemit now handles over 75% of all international money transfers to these accounts.

We had global ambitions from day one – building an international business was fundamental to our mission in providing customers with the ability to send money anywhere in the world. London was, therefore, the logical place for us to found WorldRemit – its ability to connect and bridge with other financial services hubs is unparalleled.

The approach to regulation of our industry has been forward-thinking. The Financial Conduct Authority's sandbox programme developed the conditions for regulators and entrepreneurs to work side-by-side to create, test and scale new technologies, reducing risk and improving the end result for consumers. Alongside the fact the UK remains – for now – the leading hub for tech investment and talent in Europe, being based in London was central to creating a global category leader.

Until our first significant round of funding in 2014, we had a relatively small team. As co-founders, we had complementary skills and backgrounds and we were united in our vision of the social impact we could deliver. This cohesion and sense of mission proved vital when we brought on board our investors, including Accel and TCV, and began to grow faster. Retaining and communicating these shared values will be a critical challenge as we continue scaling the business.

For our success, as well as the wider fintech sector, we must also inspire and support more women to thrive in tech businesses. There is no single fix to the current gender gap in tech: as founders, we need to create structures that support women; as leaders, we need to champion the role and importance of women to the future of tech.

Meanwhile, the changing landscape of Europe poses challenges and opportunities. Europe's diversity of cultures, languages, and regulations can be a significant barrier to scale, which will only be exacerbated by Brexit. For the moment, we are staying in the UK with a license for the rest of Europe. Depending on the negotiations, we may have to establish an office elsewhere and get a license there.

Whilst controversial, the UK's decision to leave the European Union has not ended the country's pivotal role in the future of financial services. However, the retention of a skilled talent pool remains critical. Finding engineering talent to scale our business has always proved challenging, regardless of the referendum – technology companies are simply having to look further afield for talent, whether in Eastern Europe, Asia or Africa. Visa programmes designed to attract and retain international talent will, therefore, be critical to the UK's future success as a fintech hub.

The ability to operate with a banking license that applies throughout the European Union has proved incredibly valuable to fintech companies. In contrast, firms seeking to operate in the American market must tackle the complexities of each individual states' regulation. There is, then, every likelihood that Europe's first $50 billion technology titan will be a fintech company.

The companies leading the charge for European fintech are numerous. This is an enormous sector with several emerging leaders such as Transferwise and Revolut. While these companies are not focusing on the remittance space, they are collectively raising awareness for mobile and online money transfer which in turn benefits the industry. There is plenty of space for several businesses to carve up the market and flourish.

METHODOLOGY

We crunched the data on the European billion-dollar technology companies founded since 2000, with the aim of analysing what it takes to create a outstanding success, what are key characteristics of the founders and find any parallels and differences with US and Asia and our report from last year[1][2]

OUR METHODOLOGY AND SOURCES

We have included:

Tech companies only, with a bias towards Internet/ Software (Cleantech and Biotech excluded).

Companies falling into the following macro-sectors: eCommerce (e.g. sale of goods or services), Audience (e.g. monetisation through ads and lead gen), Software (e.g. license of Software), Gaming (including gambling), Fintech, Marketplaces and Augmented Reality / Virtual Reality (AR/VR).

Headquartered in Europe.[3]

Founded in 2000 or later.

With an equity valuation of $1bn+ in the public or private markets.

First caveat: our sources only include public data (e.g. press articles, blogs and industry rumours), and the accuracy of our dataset is limited to the disclosed data.

Second caveat: the analysis is based on data as at April 30th, 2018, unless otherwise stated, which has obvious limitations related to, for example, the state of equity markets, recent company performance, etc.

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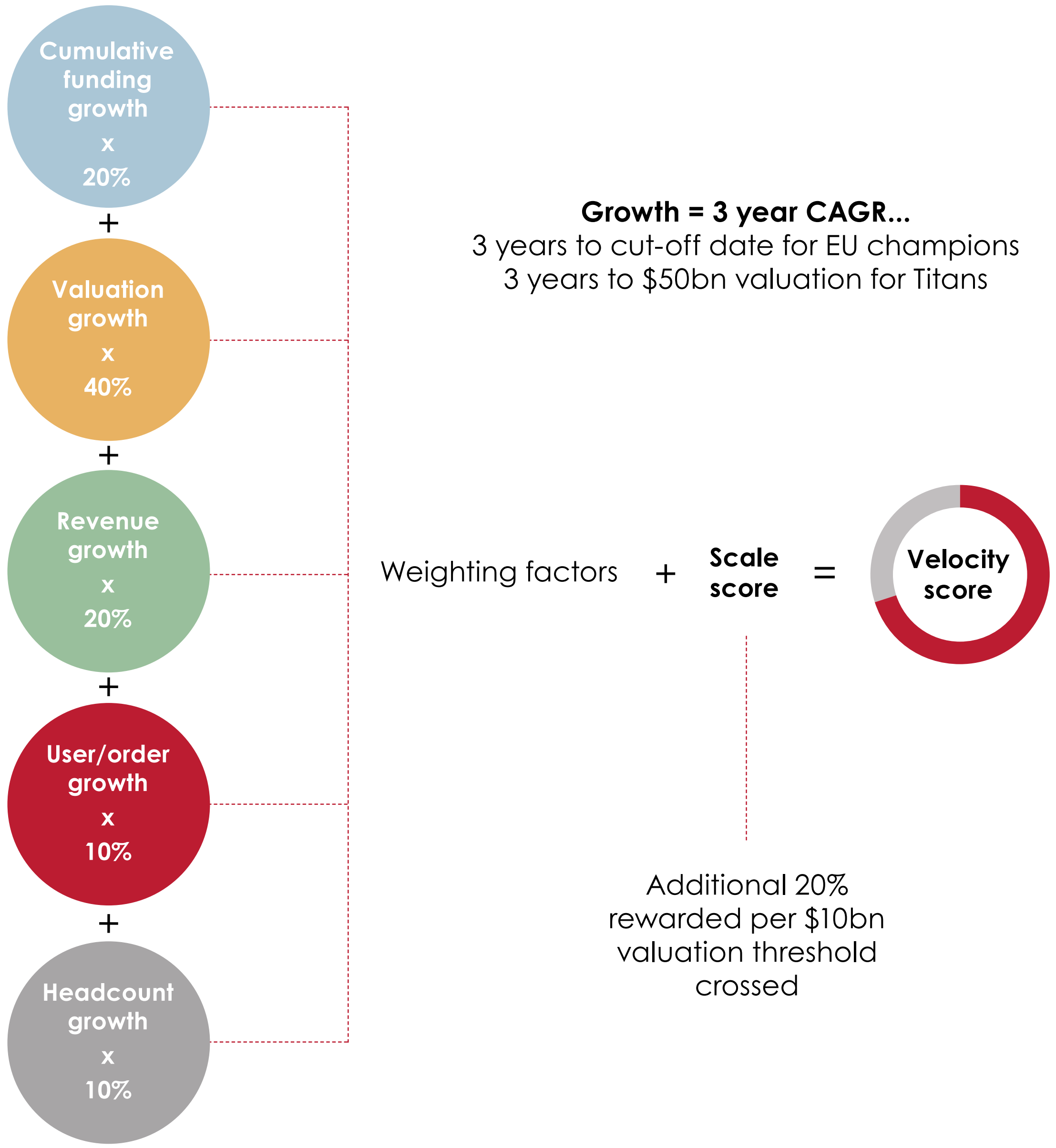
1) When we reference Asian companies, we refer to Asia-Pacific and Middle-East (e.g. incl. UAE and New Zealand)
2) We have used a slightly longer timeframe than the US report in order to capture a large number of billion $ companies founded in 2000-2001
3) Including Israel; and companies which were founded in Europe and later relocated to different geographies

THE GP BULLHOUND VELOCITY FACTOR



Note: Where no data point was available, the weights have been rebased to give the remaining factors the same impact in the overall score.

ABOUT US

GP Bullhound

GP Bullhound is a leading technology advisory and investment firm, providing transaction advice and capital to some of the best entrepreneurs and founders. Founded in 1999,the firm today has offices in London, San Francisco, Stockholm, Berlin, Manchester, Paris, Hong Kong, Madrid and New York.

MERGERS & ACQUISITIONS

We act as a trusted adviser to many of Europe's leading technology companies in competitive international sale and acquisition processes. The firm has completed 380 successful M&A transactions to date, worldwide, with a total value of over USD 17bn.

INVESTMENTS

Through our investment team, we provide investors with access to the most ambitious privately-held technology and media companies. We currently manage four closed-end funds for a total value of USD 100m and our Limited Partners include institutions, family offices and entrepreneurs.

CAPITAL TRANSACTIONS

We advise companies and their owners on capital related transactions including venture capital, growth capital, acquisition funding, secondary block trades and Initial Public Offerings. The firm has completed 110 rounds of financing for technology companies to date, with a total value of USD 1.4bn.

EVENTS & RESEARCH

Our events and speaking activities bring together thousands of Europe's leading digital entrepreneurs and technology investors throughout the year. Our thought-leading research is read by thousands of decision-makers globally and is regularly cited in leading newspapers and publications.

OUR MARQUEE CREDENTIALS

AVITO
Private Placement
BARING VOSTOK, KINNEVIK

$101 million

DELIVERY HERO
Private Placement
US HEDGE FUND

$85 million

INNOGAMES
Sale of equity stake
MODERN TIMES GROUP

€260m valuation

PRODIGY FINANCE
Investment from
INDEX VENTURES & GLOBAL INVESTMENT BANK

$240 million

13TH LAB
Sold to
FACEBOOK

Undisclosed

SOLITA GROUP
Sold to
APAX DIGITAL

Undisclosed

OUR TEAM

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PER ROMAN *Managing Partner*
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STAFFAN INGEBORN *Non-Executive Director*
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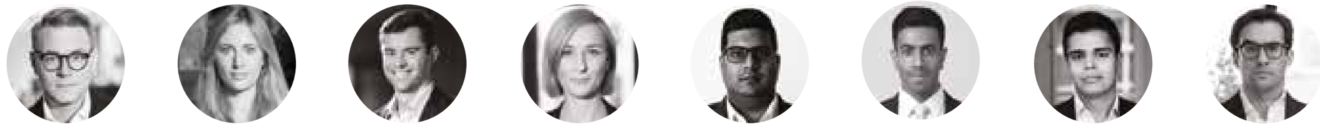

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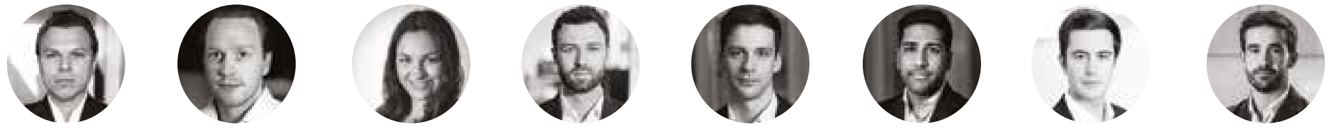

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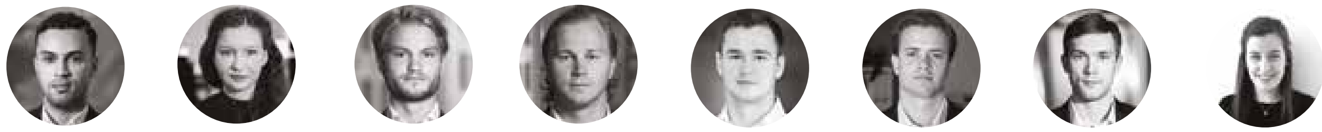

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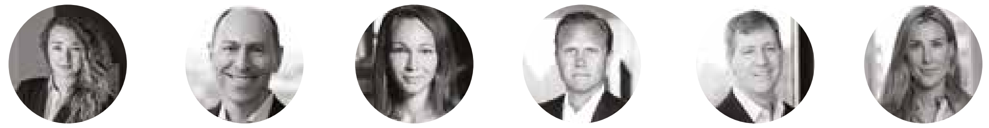

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