

WILLIAM FRY

IN ASSOCIATION WITH:

**Forbes**  
INSIGHTS

# EUROPE FOR BIG DATA



AN ANALYSIS OF THE KEY  
FACTORS DRIVING BIG  
DATA STRATEGIES

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OR SOON WILL BE, DATA COMPANIES
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# INTRODUCTION

**A** global data revolution, sometimes referred to as the Third Industrial Revolution, has well and truly arrived.

This report clearly shows that companies from every sector and geography are actively pursuing – actually accelerating – their investments in data-driven strategies.

All organisations are already technology enabled to exploit Big Data opportunities. Leading international businesses are using smart technology, including artificial intelligence and machine learning, to capture, analyse and use their corporate and customer-related data. Those using sophisticated techniques for analysing available data are better able to understand and respond to their target markets, discover new business models, create improved product offerings and realise key business advantages.

While approaches to data analytics differ, the business challenges and the opportunities that Big Data offer are now a key part of decision making across most industries and sectors. This is especially true when considering strategic questions such as deciding where to locate Big Data projects. Which jurisdictions have the best combination of key factors, such as

ease of doing business or a clear legal and regulatory regime with reliable access to relevant infrastructure and markets? Which jurisdictions have the best access to Big Data technologies and tech-savvy talent? Which provide access to buyers, partners and customers and also have tech-focused universities and research organisations? Which provide a competitive tax rate for corporates?

To delve deeper into these matters, William Fry partnered with Forbes Insights to survey 200 C-suite executives from leading companies around the world. The findings of the survey amply demonstrate why so many leading international organisations have already established their European HQs in Ireland as a decision centre for their EMEA and EU data strategies.

We would like to give a special thanks to Mr. John Frank of Microsoft and Mr. James (J.R.) Lowry of State Street for generously giving their time and invaluable insights. These and many additional insights are set out in this report. Enjoy!



David Cullen  
Head of Technology



John O'Connor  
Technology Partner



Leo Moore  
Technology Partner

# KEY FINDINGS

## IRELAND



**96%**  
VIEW IRELAND  
AS A FAVOURABLE  
INVESTMENT  
LOCATION

**82%**

RATE IRELAND'S DATA-RELATED  
REGULATORY CLIMATE AS



**GOOD TO  
EXCELLENT**

## DATA BECOMING THE NEW DRIVER



**2 OF THE  
TOP 5  
LOCATION DRIVERS**

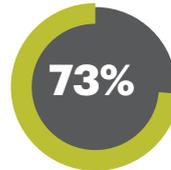
REGULATION OF DATA IS BECOMING A KEY  
FACTOR DRIVING WHERE TO LOCATE DATA  
CONTROL HUBS WITHIN A REGION

## KEEP EU DATA IN EUROPE



**81% AGREE**  
CONCERN OVER PRIVACY  
AND RELATED ISSUES IS A  
KEY DRIVER

## DATA-DRIVEN COMPANIES



**73%**  
OF NON-  
TECHNOLOGY  
ORGANISATIONS  
MAKE EXTENSIVE USE  
OF TECHNOLOGY

## NEW EU DATA REGIME

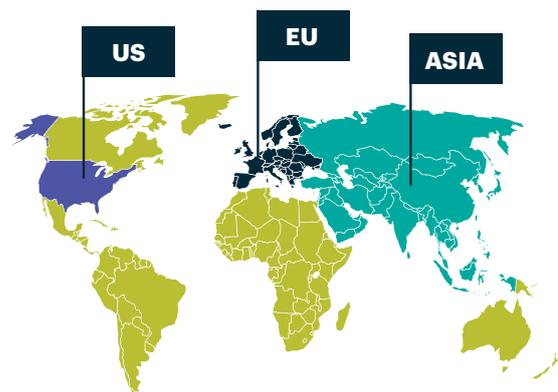


**76% AGREE**  
TIGHTER REGULATORY  
CONTROLS ARE THE BEST  
WAY FORWARD

## REGIONAL HUBS



**BIG DATA DECISION MAKING,  
OPERATIONS AND/OR STRATEGIES  
FOR REGIONS NOW BEING LOCATED  
WITHIN THOSE REGIONS**



**75%**

**BELIEVE DATA-DRIVEN  
INVESTMENT IN EUROPE WILL  
BE IN PHYSICAL FACILITIES**

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## **ALL COMPANIES ARE DATA DRIVEN**

Ongoing technological advancements are generating commercial opportunities from Big Data that a wide range of completely diverse industries and sectors are actively using in order to secure key business advantages. Even among non-technology organisations across multiple sectors, 73% are making extensive use of technology. In short, Big Data utilisation is industry and sector agnostic.

## **REGIONAL HUBS FOR REGIONAL STRATEGY**

International organisations are increasingly deciding to locate their Big Data decision making, operations and/or strategies for each geographic region (US, Europe, Asia) within that region, demonstrating that regionally based data control hubs are the foundation stone for managing regional data strategy. Most agree more data privacy regulations are a key driver to this. When asked where future data-driven investment in Europe would lie, 75% of respondents listed physical facilities.

## **SMALL NATION, MASSIVE DATA FOOTPRINT**

Despite Ireland's significantly smaller economy and population size (relative to the UK and Germany), it is perceived by international organisations (based on key factors driving location decisions) as one of the top two destinations for EU data-driven investments—just behind the UK (in first place) and ahead of Germany (in third place). 96% of respondents held a favourable view of Ireland as a data-related investment location which adds weight to Ireland's attractiveness as an EU data control hub.

## **NEW EU DATA REGIME POPULAR WITH BUSINESS**

It will come as a surprise to many that the EU's fast-evolving data privacy and data security regulations—despite vastly increased fines and a more onerous compliance regime—are being broadly welcomed, with 76% of respondents agreeing that tighter regulatory controls over data are the best way forward. Prior to the new EU General Data Protection Regulation (GDPR), which takes effect in May 2018, many international organisations perceived the EU region as suffering from a lack of harmonisation, leaving organisations to pursue a complex, expensive and uncertain jurisdiction-by-jurisdiction approach—which inevitably slows down Big Data projects. As a result, with the expectation that harmonisation can deliver cost and efficiency benefits, GDPR is being positively received.

## **IRELAND'S DATA PRIVACY REGULATORY REGIME IS HIGHLY RATED**

Ireland's data privacy regulatory regime is held in very high regard internationally, in particular by international companies in Germany and outside of the EU, with 82% rating its data-related regulatory climate as good to excellent. This is a very strong indicator of a firm but fair regime that strikes the right balance between businesses and individuals.

## **DATA BECOMING THE NEW DRIVER**

There are many factors that position Europe favourably as a hub for setting up operations—stable government and access to the EU market, availability of expertise, ease of doing business, competitive corporate tax rates, proximity to customers and universities, access to local partners, time zones, language/culture. However, with data-related conditions and regulations ranking as top five location drivers, it is clear that international organisations, due to their ever-increasing reliance on data to gain competitive advantage, are placing much greater focus on being able to rely on clear and harmonised data privacy and data security regulations and on the enhancing potential of the 'cluster effect' of many Big Data companies operating in close proximity, leading to a climate of innovation<sup>1</sup>. Undeniably, regulation of data is becoming a key factor driving where to locate data control hubs within a region.

<sup>1</sup>In a London & Partners survey commissioned by the Mayor of London post Brexit (as reported in the Financial Times on 19 Sept 2016) Dublin beat London, Paris, Berlin and Zurich as the European city most closely associated with being an "innovation hub" and having a favourable regulatory environment.

# ALL ORGANISATIONS ARE NOW — OR SOON WILL BE — DATA COMPANIES

**D**ata drives all organisations. Recent technological advancements have generated commercial opportunities from Big Data that have become pivotal for organisations in all sectors. It no longer matters whether an organisation sells hardware, software, digital services, cloud services, consumer goods, pharmaceuticals or medical devices, financial services or products. 'Today', says Mr. John Frank, Vice President, European Union Government Affairs, Microsoft, 'all companies are technology companies—or soon will be'.

Our survey of leading international businesses validated this view, with 73% of executives from organisations that are not traditionally regarded as technology companies saying that their companies make extensive (and increasing) use of technology to exploit data opportunities. The figure increases to 85% in financial services and to 82% among executives from China and India.

From enterprise resource planning systems, mobile and e-commerce capabilities or digital marketing to systems driven by artificial intelligence (AI) and machine learning, businesses cannot expect to be, or to remain, competitive without investment in technology that enables data analytics.

Due to the power and early successes of such strategies, 'more companies are recognising the need to be smarter in their data collection and analysis', says Frank. Consequently, 'data management, data centres and cloud technologies—they're all high-growth businesses'.

Our findings overwhelmingly confirm this view. Almost nine out of 10 companies (87%—rising to 98% among financial services and 92% of social media companies) say they are exploiting Big Data to inform and optimise their business processes and strategies. Three quarters of all companies—traditional technology or otherwise—have in fact established significant/mature Big Data operations. Going forward, three out of five companies, 61%, plan to increase their Big Data investments substantially over the next 18 months.

## FUTURE TRENDS

- All organisations will harness Big Data opportunities
- Demand for the technologies that enable Big Data will increase
- Organisations will increase their investment in specialist personnel and data processing facilities

**'All companies are technology companies—or soon will be.'**

- Mr. John Frank, Vice President, European Union Government Affairs, Microsoft

## MOST COMPANIES ARE BECOMING TECH- AND DATA-DRIVEN

As a non-technology company, are you making extensive use of technology?

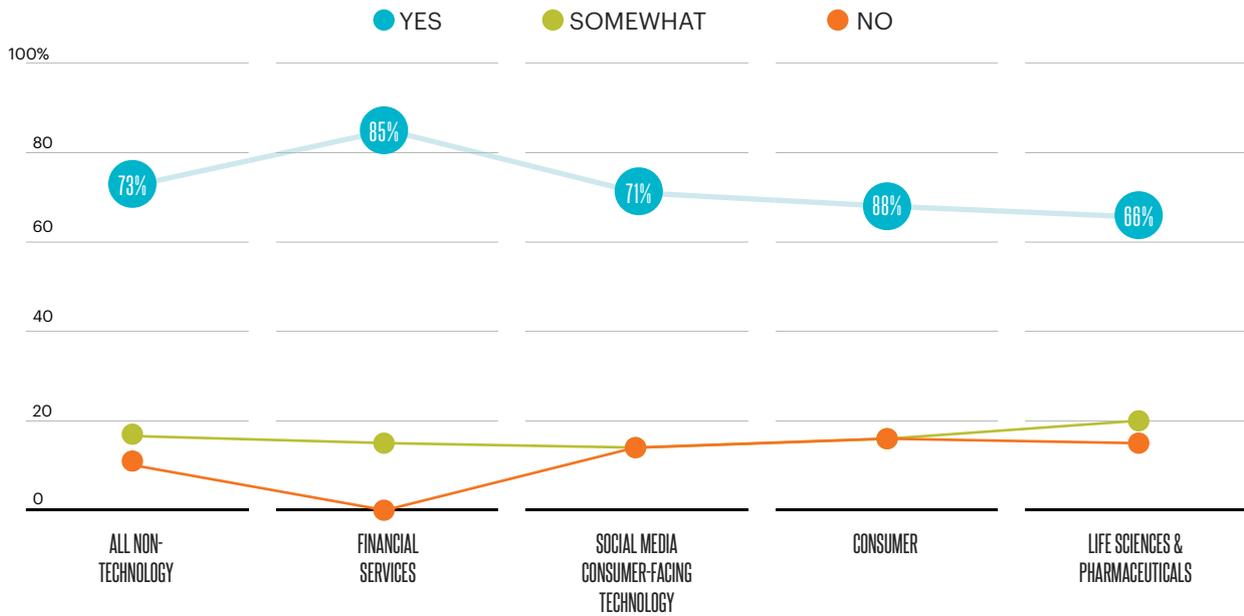


CHART 1

## THE VAST MAJORITY OF COMPANIES ARE MAKING USE OF BIG DATA

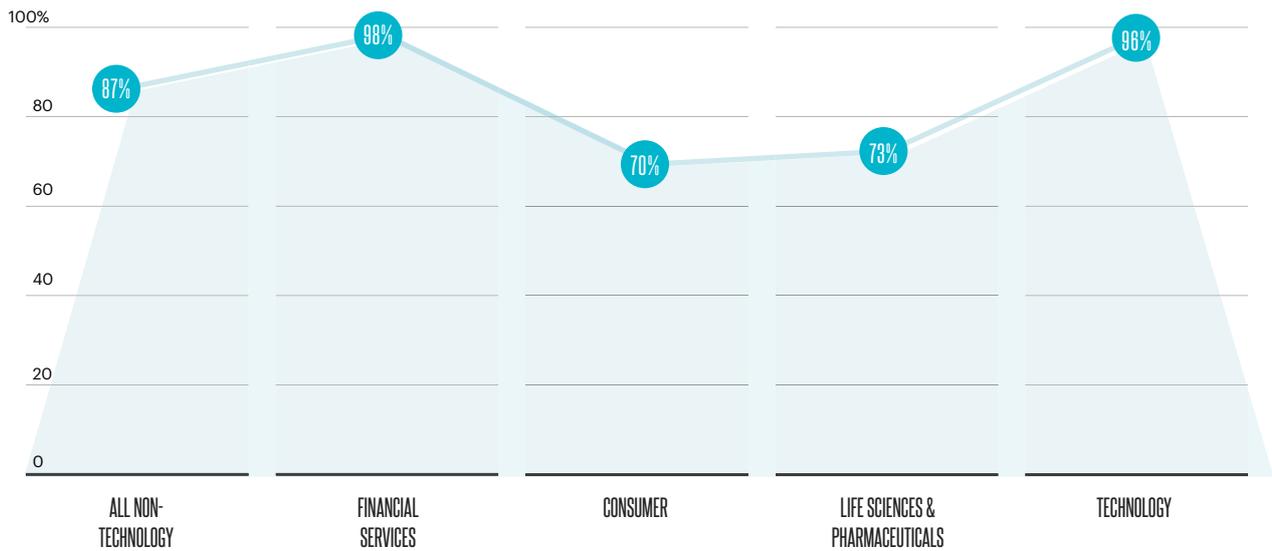


CHART 2

MATURITY OF BIG DATA OPERATIONS

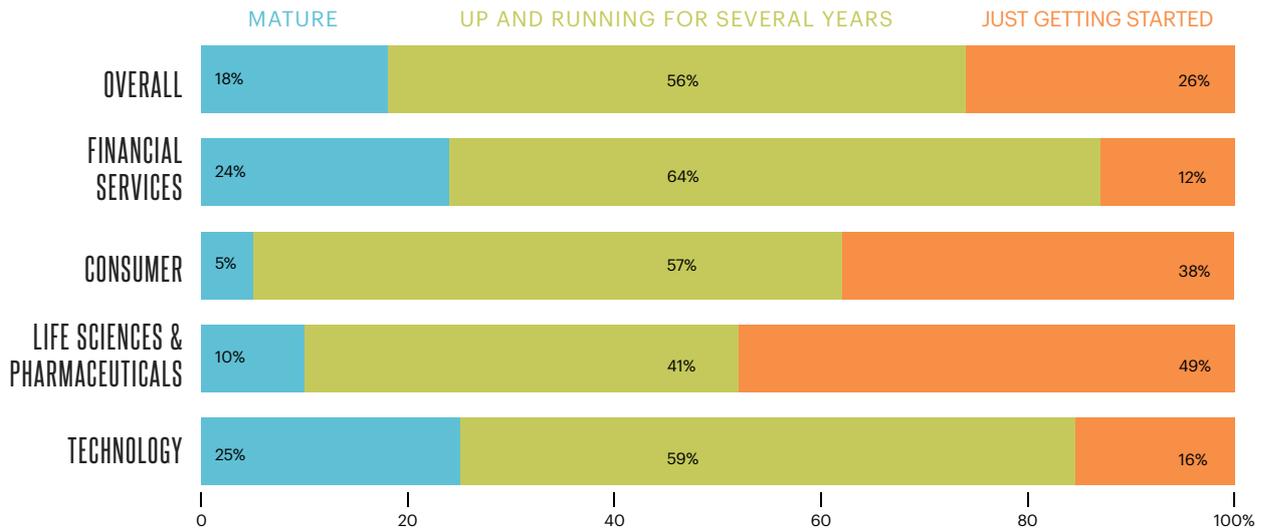


CHART 3

COMPANIES ARE MAKING SIGNIFICANT INVESTMENTS IN BIG DATA

Over the next 18 months, our investments in Big Data will...

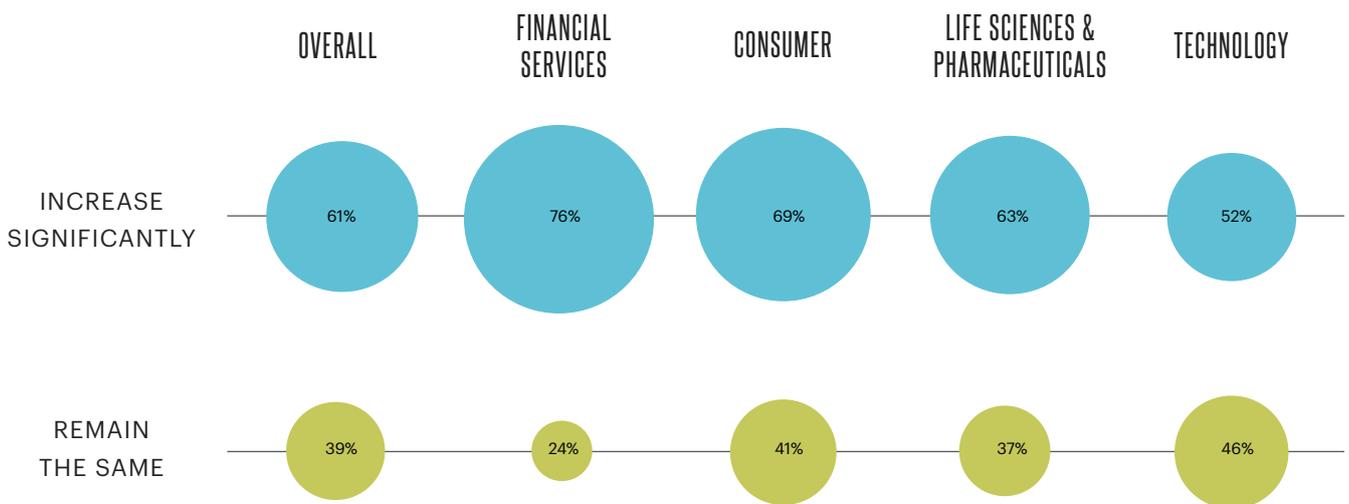


CHART 4

# INDUSTRY VIEW

## MICROSOFT: ENSURING TRUST IN CLOUD SOLUTIONS

Microsoft is the first company to see their EU-U.S. Privacy Shield certification accepted by the U.S. Department of Commerce. What this means, states Microsoft Vice President for European Affairs, Mr. John Frank, is that 'any data which we transfer from Europe to the United States [is] protected by the Privacy Shield's safeguards.'<sup>1</sup>

In addition, Frank believes that 'the Privacy Shield is an important achievement for the privacy rights of citizens across Europe, and for companies across all industries that rely on international data flows to run their businesses and serve their customers. It sets a new high standard for the protection of Europeans' personal data.'

In the interview with Forbes Insights, Frank says EU-U.S. models like the Privacy Shield are of benefit to corporations 'because it gives companies something they can rely on: they understand the protections that are expected; they don't have to worry about different agreements with each individual EU member state.'

Advances like the Privacy Shield 'reduce data risks,' but by no means to zero. One way to further reduce data risks of both the compliance and operating variety is to work with an established provider of cloud services. A good step, says Frank, 'is to go to a cloud provider that understands both the privacy and the cybersecurity worlds really well.' Frank says that because cloud providers 'work with a range of clients, they tend to have a better understanding

of the rules as well as a strong handle on best practices.'

Compliance and safety are merely the start. Another advantage of turning to a third party data manager is access to advanced capabilities. Big data processes such as machine learning 'are highly specialised' says Frank, meaning companies have much to gain from working with someone 'with experience in the field.'

The cloud also makes sense, says Frank, owing to issues such as scalability and limiting capital investments. As more companies collect and manage more data, Frank cannot imagine a CIO thinking it makes sense to build everything from scratch. 'Given the speed with which technology is advancing and rising risks and cost of going it alone, the cloud is a compelling model.'

Overall, says Frank, 'the key opportunity for most enterprises arises from asking the question: how can cloud computing, big data and machine learning be [harnessed] to enhance products and services, improve customer experiences and lower costs, along with other strategic ideas that can arise from deeper analysis.' Certainly, companies can save money and reduce risk in the cloud. But, says Frank, 'the transformational aspects are even more exciting.'

<sup>1</sup>Microsoft Signs Up for Privacy Shield, August 1, 2016, John Frank, Vice President for European Union Government Affairs, Microsoft <https://blogs.microsoft.com/on-the-issues/2016/08/01/microsoft-signs-privacy-shield/#sm.001r6econ1dytfs4116mm912jdvdb>

# INTERNATIONAL COMPANIES ARE ESTABLISHING EUROPEAN HQs TO MANAGE THEIR DATA STRATEGY FOR EUROPE

## WHAT DATA-DRIVEN INVESTMENTS ARE BEING MADE IN EUROPE?

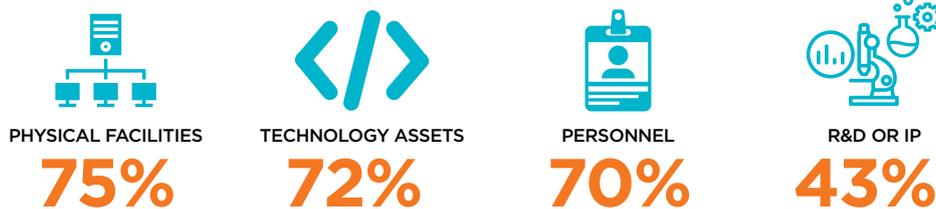


CHART 5

International companies are increasingly deciding to locate their Big Data decision making, operations and/or strategies for each geographic region (US, Europe, Asia) in that region. For example, in relation to Europe the survey shows that 80% of international organisations already have a European business presence. Couple this fact with exponential growth in Big Data operations, says one interviewee, and it follows that a growing number of companies are or should be looking ‘to open or expand data operations in Europe’.

The deep-rooted culture within Europe of placing a high value on personal rights, especially privacy, is a recurring theme of our findings. As one interviewee explained, ‘European citizens are extremely privacy-minded’ and as a result, ‘far more comfortable seeing their data protected by European law’. This is an observation strongly supported by survey participants: 81% say privacy issues drive the need for standalone data operations to be located in the European Union.

Using a European location to warehouse and manage data confers a ‘strong commercial advantage’, says one interviewee. Accordingly, 61% of respondents say they are likely to consider an EU hub for data-driven investment.

But the figure is even higher for respondents from the financial services sector: 73%. This is ‘by no means surprising’, says Mr. James (J.R.) Lowry, Head of State Street Global Exchange in EMEA. Large financial firms ‘like State Street are starting to get a lot more serious about Big Data’, Lowry continues. As the company expands such operations, ‘it is more than likely that we’ll tend to favour European locations for our European data’.

As for the overall results, the most frequent form of data-driven expansion is an investment in facilities (including physical facilities and commercial property), cited by 75% of survey participants. This is followed closely by investment in technology assets (72%), personnel (70%) and finally R&D/intellectual property (43%). Perhaps nowhere is this more evident than in Ireland’s concentration of international Big Data organisations in Dublin, which includes, for example, European HQs for Facebook, State Street, Microsoft, LinkedIn, Twitter, Google, Airbnb and Citi, to name a few.

### FUTURE TRENDS

#### International organisations will increasingly:

- Choose regional data hubs
- Invest in facilities, personnel and commercial property
- Require local expertise

# INDUSTRY VIEW

## STATE STREET: READY TO ROLL WITH BIG DATA

Unquestionably, ‘it’s early days for our Big Data programs—you have to walk before you can run’, says Mr. James (J.R.) Lowry, Head of State Street Global Exchange in EMEA. However, ‘the expectation is that this is something that is going to take off in a big way’.

The key consideration for State Street, says Lowry, is how the data will be used. First steps, he anticipates, will focus on ways to help clients and strengthen relationships (for example, better aggregating all of their relevant data into one place). Key challenges, says Lowry, include ‘understanding all of their holdings’, which can be global in nature, ‘and representing pricing/valuation and [related attributes/variables] in a meaningful way’.

In addition, Lowry believes State Street will also turn Big Data inward, seeking all manner of opportunities to enhance and optimise processes, pricing, marketing and other critical business elements. Whether focused inward or outward, investments in European-based data operations going forward will be meaningful, he believes.

But where will the company invest? Most of the group’s clients are themselves global, ‘so understanding’ all of these data

flows ‘can be a very complicated matter’. Still, Lowry agrees that keeping European data segregated and ‘in Europe’ makes a great deal of business sense given European laws and regulations relating to data.

Meanwhile, ‘we already have a substantial business presence in Ireland’, a country that ‘has a great reputation as a destination for [technology- and data-focused] investment’. As State Street evaluates its continuing investment in Big Data, Ireland remains ‘a solid candidate’.

### FIRMS ARE ACTIVELY CONSIDERING EUROPE FOR THEIR DATA-DRIVEN INVESTMENTS

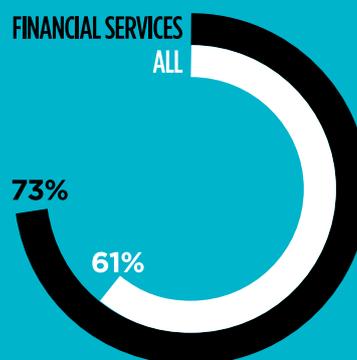


CHART 6

# EUROPE'S DATA PRIVACY AND DATA SECURITY REGULATIONS ARE A NET POSITIVE

## OPINIONS ON DATA PRIVACY AND SECURITY CONTROLS



CHART 7

Europe's data protection regime is being substantially upgraded. Taking centre stage (and discussed below) are (1) the General Data Protection Regulation (GDPR), (2) the EU-U.S. Privacy Shield and (3) recent decisions of the Court of Justice of the EU. These changes carry enormous implications for any business collecting, managing, analysing or in any way using customer data relating to the European Economic Area (which according to the survey, should be nearly all companies).

The survey findings reveal some fascinating and, at first glance, seemingly contradictory responses. Eight out of 10 organisations (81%) surveyed believe their existing, voluntary data privacy and security controls are already adequate in terms of protecting consumers. Moreover, seven out of 10 respondents (71%) believe that any new privacy laws enacted have the strong tendency to significantly increase

operating costs for businesses and therefore prices for consumers. In spite of this, 76% of respondents agree that tighter regulatory controls over data are the best way forward.

The fact is, interviewees explain, that Europe's fast-evolving data privacy and data security regulations actually improve the playing field. Prior to the new regulations, the region suffered from a lack of consistency, leaving companies to pursue a complex and potentially expensive and risky jurisdiction-by-jurisdiction approach. The GDPR and Privacy Shield, says one interviewee, introduce greater 'clarity and certainty, so that companies can better understand the rules and needed practices'.

# KEY CHANGES

So what are the new rules? The two most relevant and influential are:

## GDPR

The EU's GDPR attempts to accomplish two core objectives:

- Strengthening data protection rights. International organisations, regardless of where they are based, are likely to find themselves subject to the GDPR, which holds businesses accountable for failure to protect privacy, not least by providing for fines of up to 4% of global turnover.
- Harmonising data protection regulations across the EU, which will include a 'Lead Authority Mechanism' approach to data protection compliance for the entire EU region.

According to survey participants, though GDPR substantially increases compliance costs (a view cited by 59% of respondents), over the long term,

it is a welcome harmonisation that will vastly improve the efficiency and effectiveness of data strategies/operations.

## THE EU-U.S. PRIVACY SHIELD

The EU and the US concluded discussions on the Privacy Shield in June 2016, with the measure adopted by the EU with effect from 1 August 2016. This arose from the invalidation by the EU's Court of Justice of a prior EU-US framework legitimising data transfer to US-certified companies.

The key issue was the potential loss of European citizens' privacy at the hands of the US National Security Agency's (NSA) supposedly/allegedly indiscriminate surveillance programs. Armed with assurances to the contrary from the NSA, the Privacy Shield clarifies the circumstances, strict though they may be, under which European data may be transferred to US servers. Though the Privacy Shield is still subject to challenge, it is in effect the law today for

U.S. data transfers.

Among survey respondents, 19% say legal challenges in relation to the approved data transfer mechanisms have had no impact on their European data management decisions. Meanwhile, 50% say they will still be investing in facilities in either Ireland and/or the EU regardless of these legal challenges.

# OTHER RECENT DEVELOPMENTS

**M**icrosoft has contested US warrants for data held on servers of its subsidiary based in Ireland. The case received enormous interest from international technology companies and privacy advocates alike, many of whom filed legal briefs in support of Microsoft. The Irish Government also submitted its own legal brief in the US proceedings. On July 14, 2016, a three-judge panel of the Second Circuit ruled unanimously in favour of Microsoft.

Before commenting more deeply, it is important to consider the full range of regulatory activity in Europe and related jurisdictions. In addition to rules surrounding data, Europe is also an active participant in a range of regulatory changes.

For example, the Digital Single Market (DSM) is one of the 10 key elements underpinning the European Commission's Europe 2020 initiative. Key goals of the DSM include harmonisation of the rules for cross-border digital services such as music or video streaming or payment systems.

In addition, companies must also concern themselves with the ways the Transatlantic Trade

and Investment Partnership (TTIP) will impact European commerce.

Other sweeping rule changes include the Organisation for Economic Cooperation and Development's (OECD) base erosion and profit shifting (BEPS) principles for taxation, along with a wide range of individual dual nations creating incentives for intellectual property (IP), known as IP boxes.

Overall, regardless of the regulation, rule change or related lawsuits, survey respondents still indicate strong support for continued investment in European data operations (see chart 9). This is further indication that as more regulations are finalised, though compliance costs may rise, companies value greater certainty.

Finally, in a surprising note, 90% of survey participants say that compelling the unlocking of devices in matters of national security should be upheld. This includes 93% of US-based respondents.

**90% of survey participants say that compelling the unlocking of devices in matters of national security should be upheld.**

## COMPANIES BELIEVE...

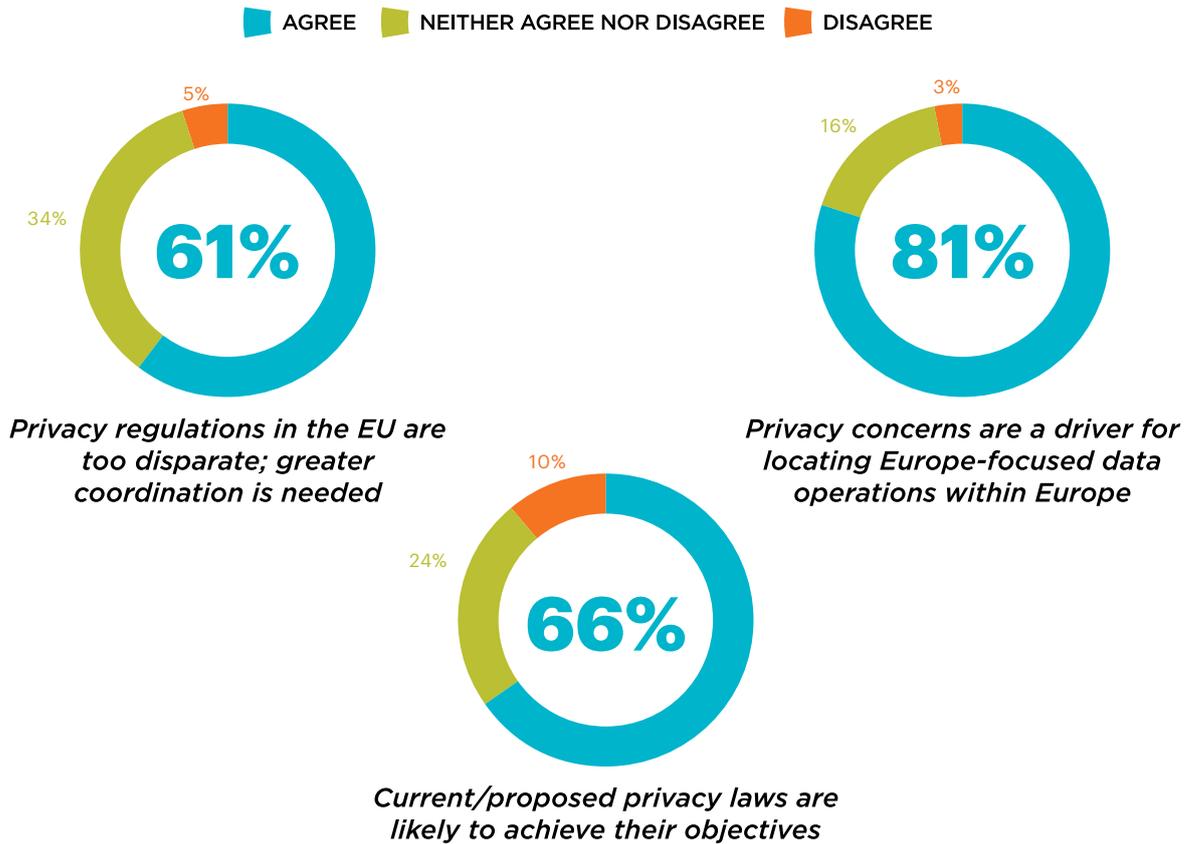
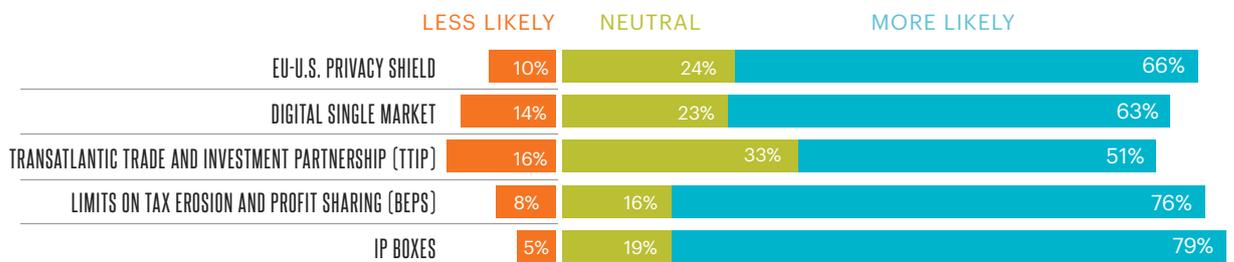


CHART 8

## ARE YOU MORE OR LESS LIKELY TO INVEST IN EUROPE AS A RESULT OF...



Survey conducted prior to adoption of the EU-U.S. Privacy Shield and very shortly following adoption of the GDPR.

CHART 9

# CHOOSING A LOCATION: WHAT INTERNATIONAL ORGANISATIONS CONSIDER

## TOP RANKED 'LOCATION' ISSUES FOR DATA-DRIVEN INVESTMENT



TAX RATES



EASE OF DOING  
BUSINESS



LEGAL  
FRAMEWORK



AVAILABILITY  
OF EXPERTISE

CHART 10

Many traditional issues remain relevant, such as stable government, availability of expertise, ease of doing business, competitive tax rates, proximity to customers and universities, access to local partners and affiliate operations, time zones, language/culture and cluster effect. But what is becoming abundantly clear from our findings is that companies are placing greater focus on data privacy and data security regulations, proximity to data regulators and access to the EU market of any

potential host nation.

Privacy Shield means that it is possible to transfer personal data from the EU to US companies that are certified for Privacy Shield. The processes required to self-certify and to maintain compliance is more onerous by comparison with its predecessor.

A majority of companies, 55%, still say an EU 'one-stop shop' (known under GDPR as the Lead Authority Mechanism) is largely feasible. Our respondents identified several challenges that

remain, such as availability of staff (cited by 79%) and complexity/divergence of laws/regulation (cited by 70%). Whether needing one or more locations, where should organisations locate their operations in light of the heightened importance of data privacy and data security regulations, proximity to data regulators and access to the EU market?

The survey provides specific guidance indicated in the rankings. Respondents were asked to review 12 specific drivers of location relating to data operations, ranking each in relative importance.

In terms of results, the top five most important issues include tax rate, ease of doing business, legal framework, talent and data-related regulations (see chart 11).

A key question, however, is whether or not organisations are paying adequate attention to data privacy and data security regulations, proximity to data regulators and access to the EU market. Consequently, companies may want to take a closer look at their selection criteria to ensure that data-driven legal frameworks and related support are receiving adequate attention.

The fact is, interviewees explain, that Europe’s fast-evolving data privacy and data security regulations actually improve the playing field. Prior to the new regulations, the region suffered from a lack of consistency, leaving companies to pursue a complex and potentially expensive and risky jurisdiction-by-jurisdiction approach. The GDPR and Privacy Shield, says one interviewee, introduce greater ‘clarity and certainty, so that companies can better understand the rules and needed practices’.

## THE MOST IMPORTANT ‘LOCATION’ ISSUES FOR DATA-DRIVEN INVESTMENT

1	Tax rate
2	Ease of doing business
3	Legal framework (including data-related laws)
4	Talent
5	Data-related conditions/regulations
6	Proximity to customers
7	Proximity to universities
8	Centrally accessible
9	Political/regulatory track record
10	Climate
11	Size of our industry in the country
12	Language

CHART 11

## MOST BELIEVE A ONE-STOP-SHOP FOR EUROPEAN DATA OPERATIONS IS STILL FEASIBLE



CHART 12

**The GDPR and Privacy Shield introduce greater ‘clarity and certainty, so that companies can better understand the rules and needed practices.’**

# FOR DATA-DRIVEN INVESTMENTS— IRELAND IS A LEADING CONTENDER

## SMALL NATION, MASSIVE DATA FOOTPRINT

Despite its relatively small population, Ireland is Europe's second most favoured destination for data-driven investment



**1st**  
56%  
**UNITED KINGDOM**



**2nd**  
45%  
**IRELAND**



**3rd**  
42%  
**GERMANY**

CHART 13

Looking solely at data-driven investment, Ireland's position is especially remarkable in spite of its, (relative to both the UK and Germany) significantly smaller economy and population ranking—just behind the UK but still ahead of Germany.

But perhaps even more noteworthy is Ireland's high rating in terms of the merits of its data-related regulatory climate overall and its data privacy regulatory regime (see further analysis on page 20).

So what is it that makes Ireland so desirable from data and technology perspectives? According to Microsoft's John Frank, 15 or so years ago, Ireland 'made a conscious decision' that it would become a leader in tech-driven investment. Already, 'they had a cool climate, which is great for a data centre', says Frank. But in addition, 'they began making very thoughtful investments in areas such as connectivity'.

### OUR KEY FINDINGS

96% of survey respondents have a favourable view of Ireland as a data-related investment destination—with 45% of them describing it as excellent.

86% say a data-driven Irish investment is either likely (34%) or possible (52%) in the next year; 86% say such an investment is either likely (37%) or possible (49%) within three years.

Ireland is an ideal location for organisations providing services to European customers.

In addition to this, says Frank, ‘Ireland, consciously, presents a very stable and supportive regulatory environment—they have a solid track record, and they want tech investment. The net point, today’, adds Frank, ‘is that Ireland is a very compelling location for technology-based investing’.

State Street’s Lowry points to a range of additional advantages. In Ireland, for example, there are plenty of universities, its people are well-educated, and the island, says Lowry, is ‘close to the UK and the Continent’, or in other words, customers and service providers.

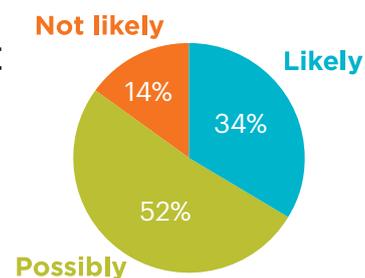
Ireland is already home to many of the world’s leading international companies across all industries and sectors. Not surprising given that it ranks first in the world for investment incentives, and first for international competitiveness in the Eurozone. Source: IMD World Competitiveness Yearbook 2016.

In addition, nine out of the top 10 global software companies have operations in Ireland; all of the top 10 global ICT companies and all the top 10 ‘born on the Internet’ companies possess significant EU- or EMEA-facing operations in Ireland. 18 of the world’s top 20 pharmaceutical companies have substantial operations in Ireland, and six of the world’s top 10 selling pharmaceutical products are exclusively produced in Ireland. 13 of the largest 15 global medical technology companies have operations in Ireland. 15 of the largest 25 global financial services companies have substantial operations in Ireland. Sources: Irish Development Authority and Enterprise Ireland.

The country is fast becoming a world leader in Big Data, the Internet of Things, machine learning, AI, fintech, ICT skills, energy efficiency, health innovation and cloud computing—to name just a few data-intensive focuses. Locating in Ireland becomes even more compelling when considering the traditional factors alongside its data privacy and data security regulatory regime, proximity to data regulators and access to the EU market. Ireland also features a competitive corporate tax rate of 12.5%. In addition, the country also offers a Knowledge Development Box with a tax rate of 6.25% for companies. All of these factors taken together drive Ireland’s appeal as a European or EMEA headquarters.

## HOW LIKELY ARE YOU TO MAKE A DATA-DRIVEN INVESTMENT IN IRELAND WITHIN THE NEXT YEAR?

CHART 14



## RESPONDENTS RATE IRELAND ‘GOOD TO EXCELLENT’ ACROSS A RANGE OF CRITICAL ATTRIBUTES

Political/regulatory stability/track record



Quality of life



Data privacy regime



Proximity to universities and technology programs



Central/accessible location



Proximity to customers



Culture & language



Tax rate



Data regulation climate



Talent cost/availability



Tax incentives



Construction costs



Climate/weather



<sup>1</sup>100% among German firms — 67% saying ‘excellent’.

<sup>2</sup>95% among those with the most mature/sophisticated Big Data programs

CHART 15

# INTERNATIONAL VIEW OF IRELAND'S DATA PRIVACY REGULATORY REGIME

Companies from every sector and geography are actively pursuing their investments in data-driven business strategies. So strong is this growth that today, it is virtually impossible to distinguish between any core business and its associated data operations. All organisations are in fact becoming data-focused.

As companies' reliance on and experience in global data operations increases, they are recognising the wisdom in locating their data control hubs within the region of operation. Consequently, as more companies invest in both data strategies in general and in Europe specifically, more companies are choosing to locate or expand their digital operations hubs within Europe.

Data privacy regulation and related security measures adapted throughout Europe are in fact a net positive for businesses. New developments such as the EU's General Data Protection Regulation and the EU-U.S. Privacy Shield are being welcomed as a sound footing on which to make data-related investment decisions. As such, Europe's data regulation is likely to accelerate investments in Big Data and associated business strategies throughout the region.

As organisations consider their location options, one location continues to impress far beyond its relative size: Ireland. Ireland is a top contender, with its data privacy regulatory regime held in very high regard internationally. Specifically, 82% of respondents rate the Irish data regulation regime as good or excellent.

This rating is even higher among those from one of the world's most demanding data-management markets: Germany-based respondents. Germany is often considered one of the more challenging regimes in the whole of the

EU in terms of data-protection enforcement. So for 57% of its residents to confer a rating of excellent on Ireland's data regime speaks volumes about the positive international view of the nation's orientation, capabilities and stature.

Ireland is already home to a who's who of global businesses across a wide range of industries. Even though its economy and population are not those of alternative locations—for example, when compared with the UK or Germany—Ireland is by comparison a data-strategy giant. Whether considering a data-driven investment, a new operations footprint or an ideal location for a Europe/EMEA HQ, Ireland is a leading contender.

## IRELAND'S DATA-RELATED REGULATORY FOOTPRINT

Admired by Europe's most discerning observers (Germany)

Good  
Excellent

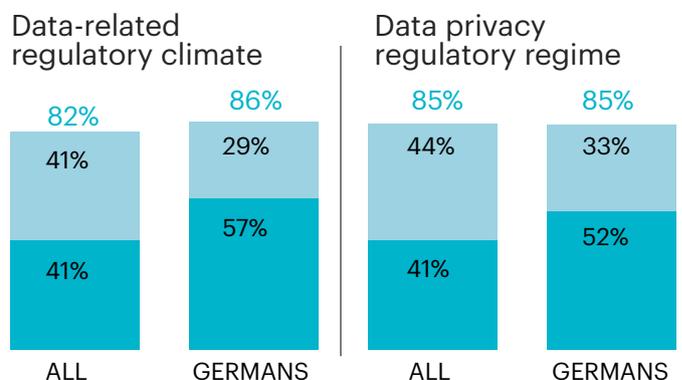
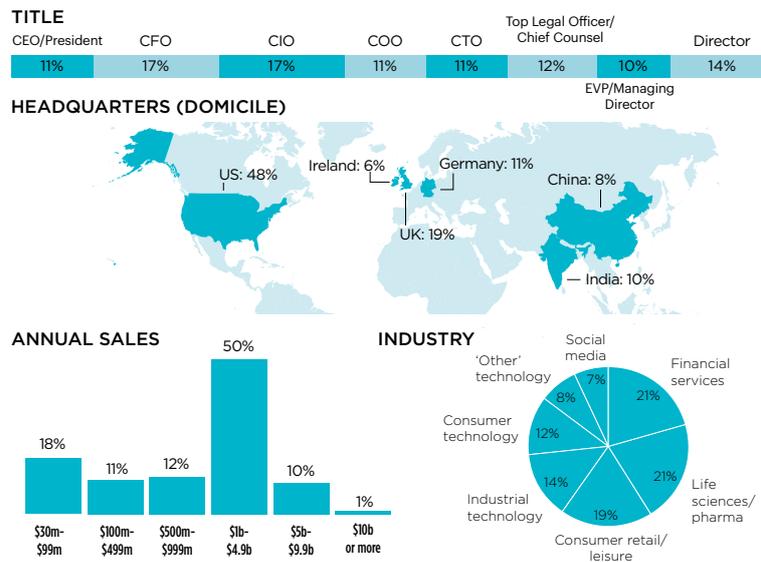


CHART 16

# METHODOLOGY

The core insights found in this report are derived from a quantitative survey. Forbes Insights, in conjunction with the Ireland-headquartered law firm William Fry, conducted a survey of 200 C-suite executives from around the globe. Completed in May 2016, its key demographics include:



Forbes Insights and William Fry would like to thank the following individuals for their time and expertise:

- John Frank, Vice President, European Union Government Affairs, Microsoft
- James (J.R.) Lowry, Head of State Street Global Exchange in EMEA

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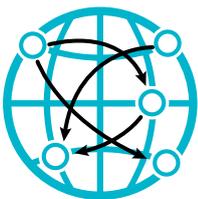
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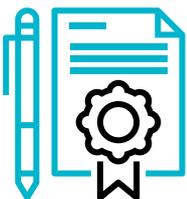
# ABOUT WILLIAM FRY

William Fry is one of Ireland's leading legal and tax practices with over 450 professionals. Our client-focused service combines technical excellence with commercial awareness and a practical, constructive approach to business issues. We advise leading domestic and international corporations, financial institutions and government organisations. We regularly act on complex, multi-jurisdictional transactions and commercial disputes. We are ranked by international directories, clients and market commentators alike as being a leader in our main areas of work: Corporate & M&A, Banking & Finance, Litigation & Dispute Resolution, Asset Management & Investment Funds, Real Estate, Insurance, Tax, Competition & Regulation, Projects & Construction, Employment & Benefits and Technology. Our Tax team brings together tax lawyers, accountants and consultants in one highly innovative team. We are also Ireland's only representative member of Taxand, a global firm of tax advisors with more than 400 tax partners who are represented in over 40 countries.



## LEADERS IN ADVISING MULTINATIONAL FDI

Foreign direct investment is one of William Fry's core practice areas. With a team of commercially focused legal and tax professionals who possess unrivalled experience and expertise, we understand the challenges facing a company looking to establish and grow in Ireland. We are the leaders in advising multinational FDI into Ireland. We continue to make significant investment in our overseas presence, most recently opening our third US office, in San Francisco. Our London office continues to grow, and as an independent law firm we avail of a strong global law firm network to service our clients at home and abroad.



## IRELAND'S LARGEST TECHNOLOGY & IP PRACTICE

Our Technology team is market leading in advising on all aspects of technology matters for suppliers, users and creators and recently received a Standout ranking in the FT Innovative Lawyers 2016 Report. We advise on supply of goods/services, licensing, outsourcing, e-commerce, data protection and intellectual property, as well as the broader range of corporate and commercial transactions typical in a full service law firm. Our client base includes both Irish start-up companies and established international brands.



## FINANCIAL SERVICES & BREXIT

Brexit has had an immediate effect on the investment choices available to international businesses. Our dedicated Brexit team draws on our market leading Asset Management and Investment Funds, Insurance, FDI, Tax, Banking & Finance and Regulatory teams to practice strategic and practical advice to both mature and growing multinational businesses.

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