

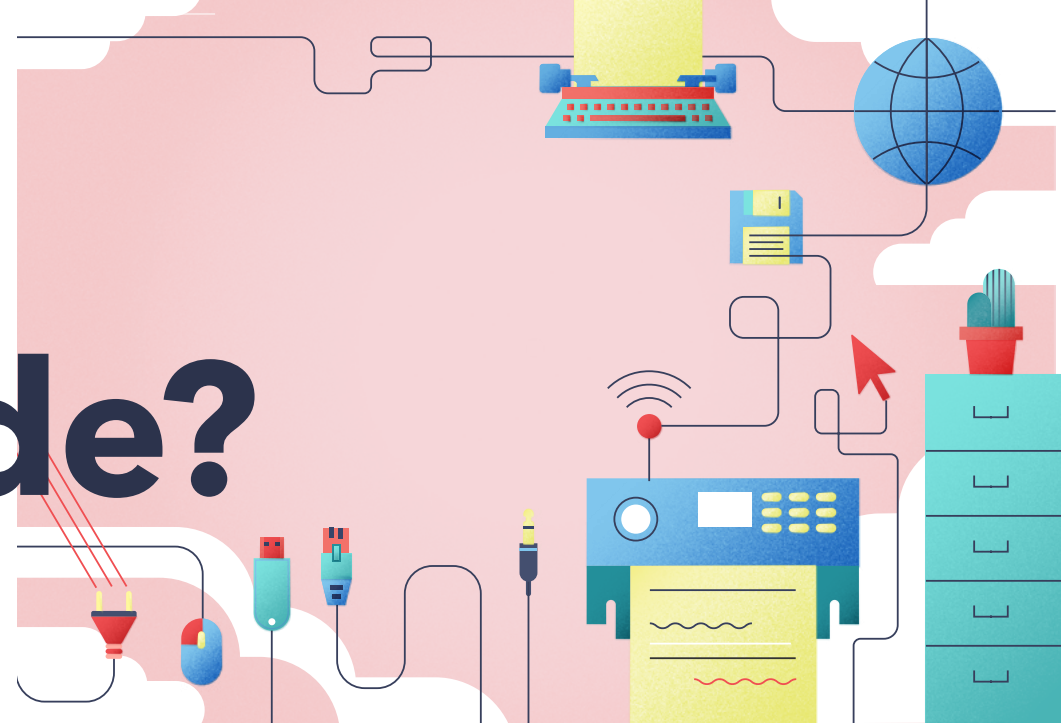


The Modern Workplace

Examining the evolution, trends, and future of our work environment



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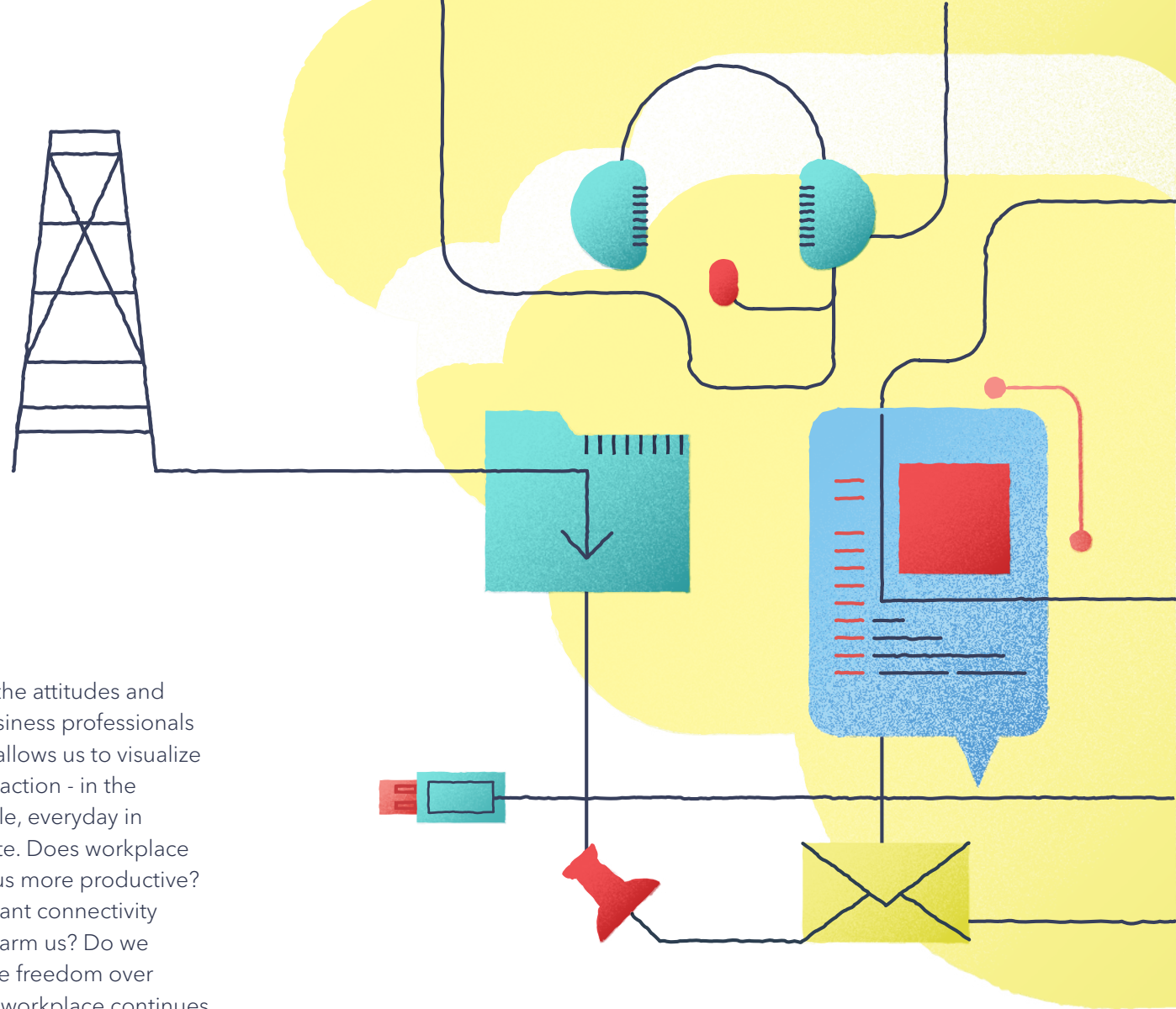
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Intro

The nature and culture of work has changed over time. In the last 20 years, this change has been dramatic, catalyzed by global economic movements and rapid developments in technology. While impossible to separate from each other, these forces have shaped the evolution of the modern office into a more diverse, connected, and agile place.

Understanding these macro factors will help us broadly contextualize how and why our work environment has changed. Complementary to

this, examining the attitudes and behaviors of business professionals at a micro level allows us to visualize the evolution in action - in the practical, tangible, everyday in which we operate. Does workplace flexibility make us more productive? How does constant connectivity both help and harm us? Do we prioritize creative freedom over stability? As our workplace continues to evolve, these questions become essential in creating an environment that serves both employee and organizational needs.



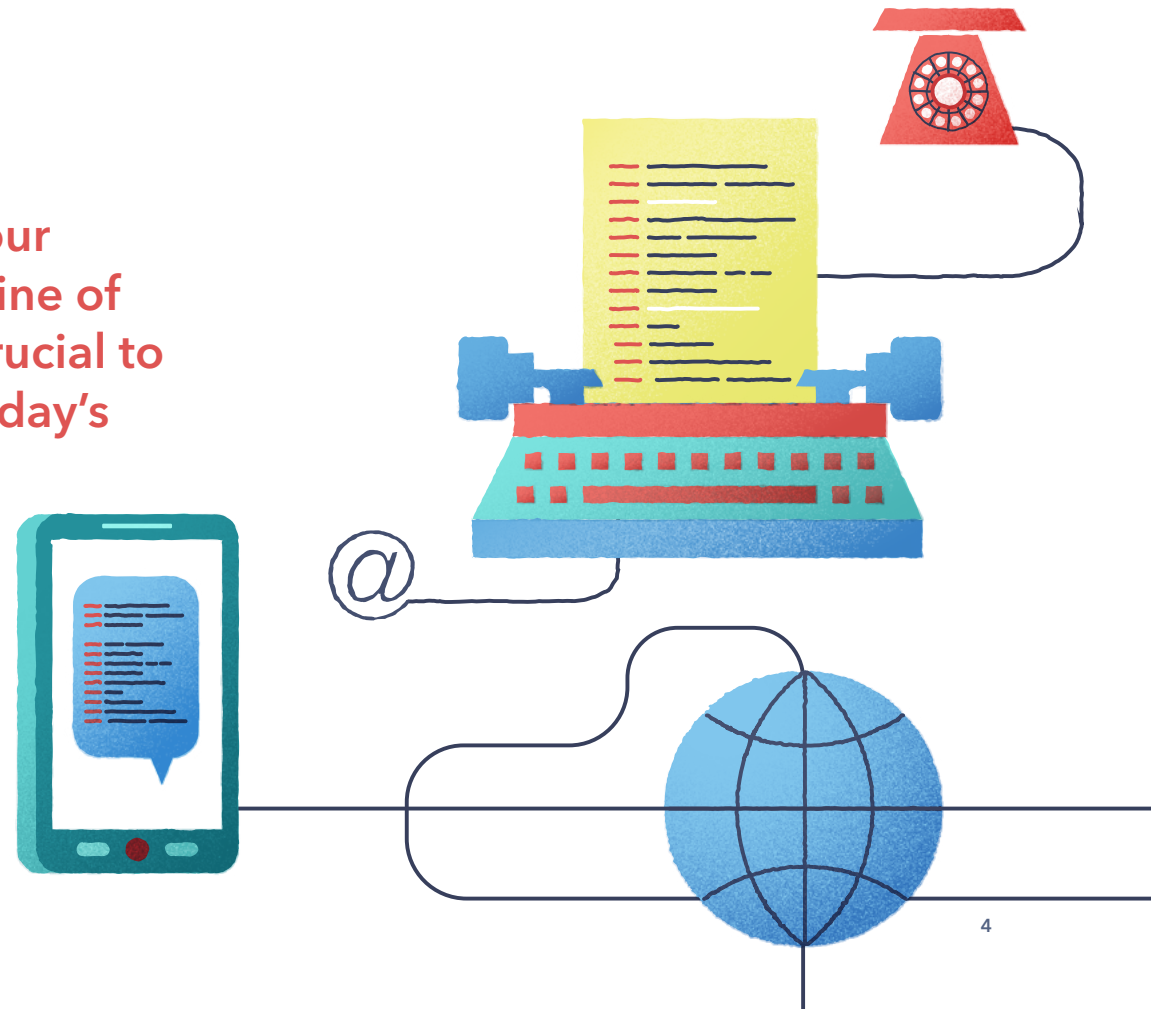
Why Now?

Globalization makes for a more connected world

Globalization has played one of the most significant roles in transforming the modern workplace. While the true “beginning” of globalization has been disputed, our modern concept of it starts in the 1980s, and has been largely shaped by developments in technology, such as the internet and industrial automation.

It is through the long-term effects of globalization that we have achieved

Contextualizing our place in the timeline of globalization is crucial to understanding today's workplace



a more diverse work environment, for both people and ideas. It is also partly through globalization that the nature of our work has evolved from production-based to service and knowledge-based labor.

Diversification of the workplace

Globalization has eradicated many of the invisible borders between countries by connecting people, trade, and information. In a short space of time, this has led to the most diverse global workplace in history.

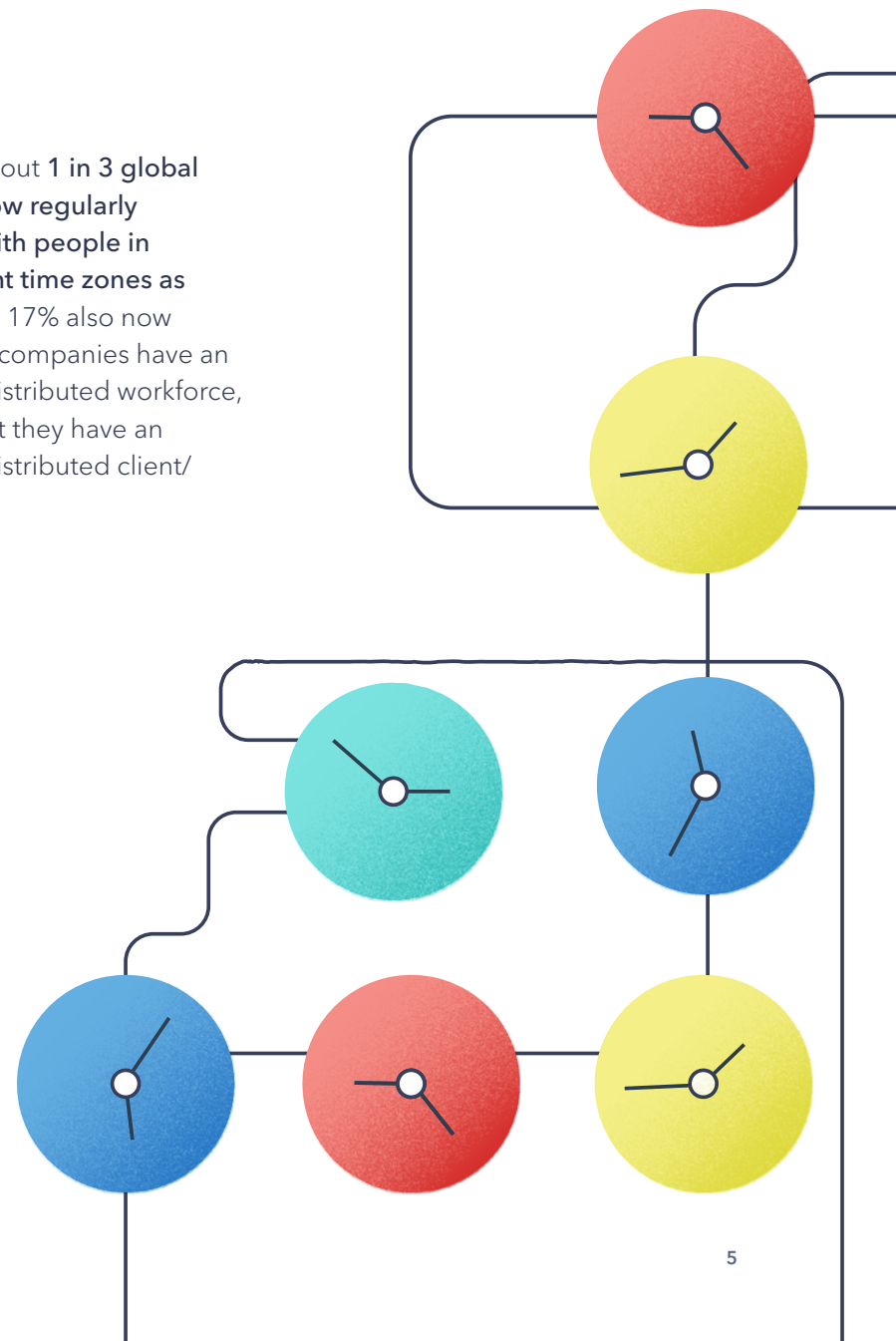
A significant driver of this has been the spread of multinational corporations, especially in emerging markets. For example, data from the [United Nations Conference on Trade and Development](#) on the flow of foreign direct investment (FDI) demonstrates this change.

From 1970 to 2017, global FDI flows increased from \$13 billion to \$1.4 trillion - a more than 100-fold increase.

This growth has been especially transformative for emerging markets, where FDI flow increased nearly two hundredfold between 1970 and 2018. In developed markets, the flow of investment has helped to transform the cultural makeup of multinationals by bringing in workers from emerging countries. **A new reality of the "multinational corporation," defined by much greater diversity and global collaboration, has come to define the modern workplace.**

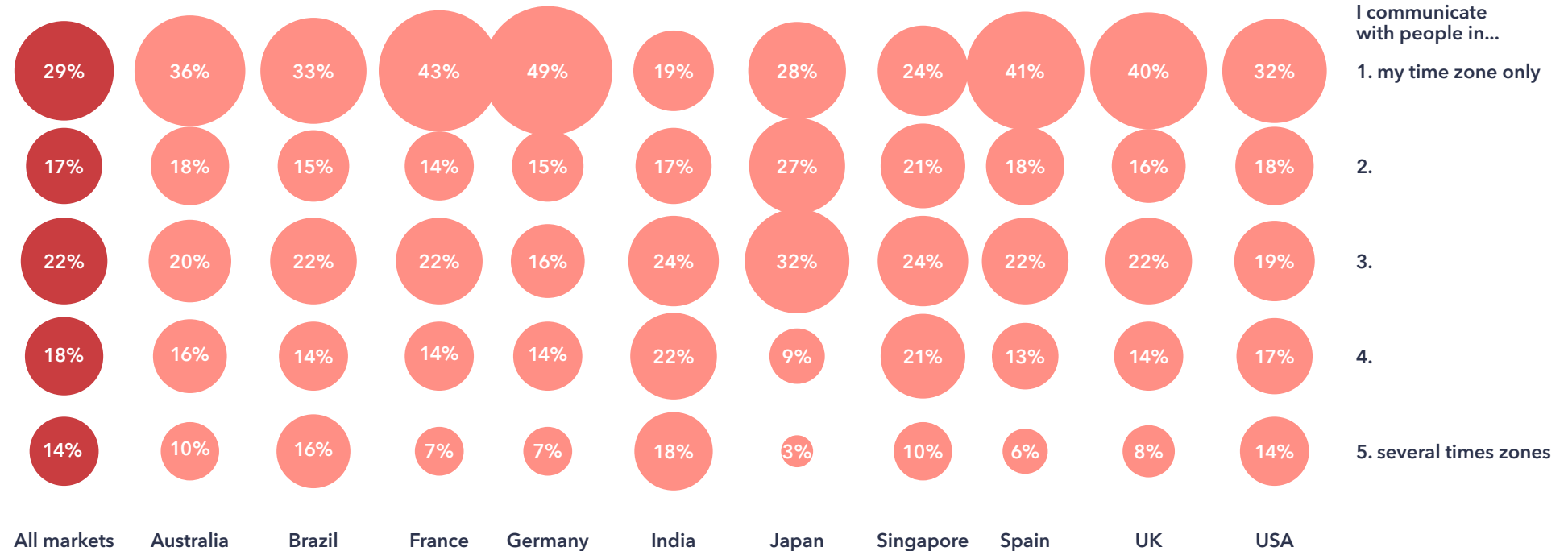
And the effects of this are evident in the day-to-day worklife of many professionals. The number of people employed by foreign-owned companies in the U.S., for example, increased [22% between 2007 and 2015](#). Our own research

indicates that about **1 in 3 global professionals now regularly communicate with people in multiple different time zones as part of their job**. 17% also now report that their companies have an internationally distributed workforce, and 26% say that they have an internationally distributed client/customer base.

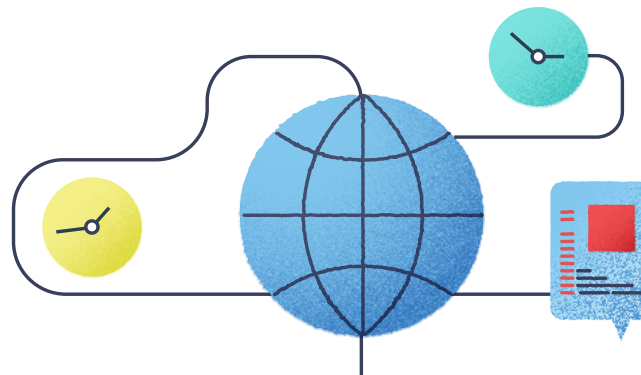


Working with colleagues across time zone

% of professionals who agree with the following:



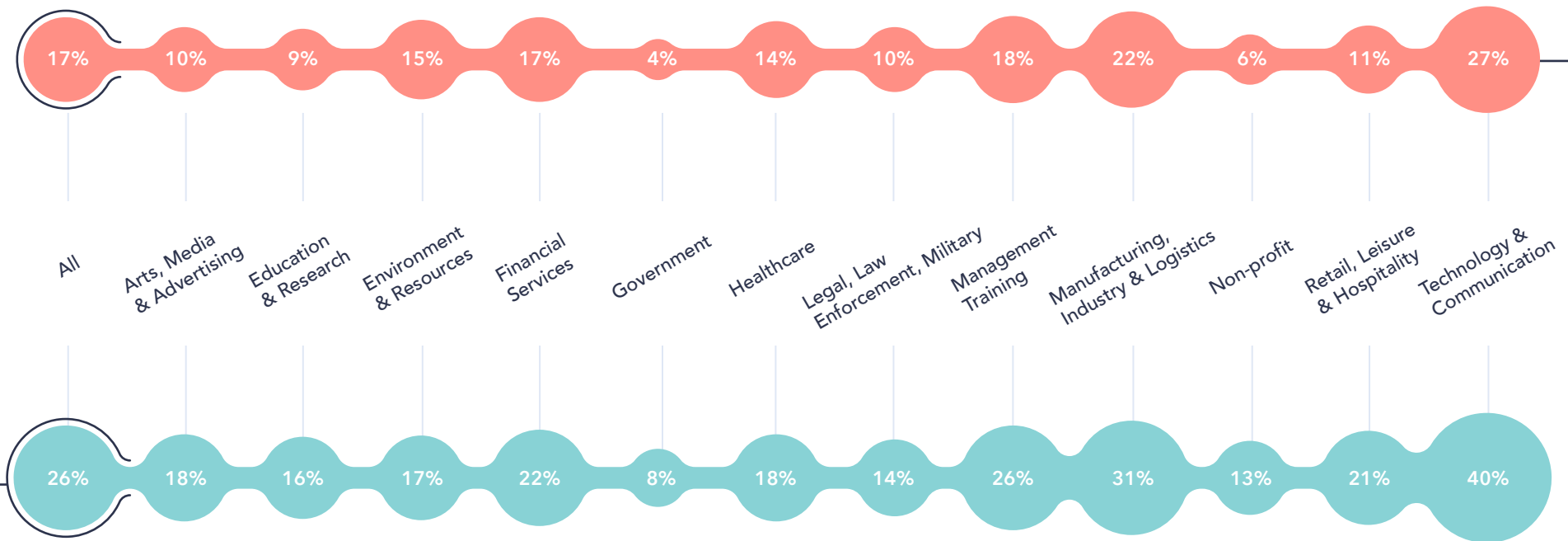
Question: Please select the point on the scale that best describes you/your company - are you at one end of the scale or somewhere in the middle? **Source:** GlobalWebIndex Work Q1 2019 **Base:** 17,000 business professionals aged 16-64



1 in 3 global professionals now regularly communicate with people in multiple different time zones as part of their job

Working Internationally

% of professionals who report that their workforce or customers/clients are distributed internationally



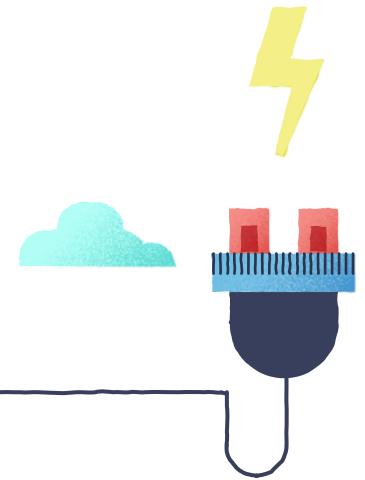
International distribution

- of workforce
- of clients/customers

Question: Which of these best describes the geographic distribution of your company's workforce/customers? International (based in more than one country) **Source:** GlobalWebIndex Work Q1 2019 **Base:** 17,000 business professionals aged 16-64

1 in 4 global professionals work for companies with an internationally distributed customer/client base

Globalization has catalyzed the evolution of work in the developed world from mainly production-based to service and knowledge-based labor



From production-based to service-based economies

Another major effect of globalization has been to accelerate the process of industrialization in emerging markets, in turn catalyzing the evolution of work in the developed world. **In a short space of time, we have transitioned from production-based to service and knowledge-based labor.**

Critics of this process suggest that it is responsible for the loss of industrial jobs in the developed world. And in truth, many working-class people in

mature markets have been left unable to reap the vast rewards of globalization, while those living in **extreme poverty** have been lifted out of it.

Industrial work opportunities have also markedly declined, but globalization tells only part of this story. Advancements in technology, rather than the direct movement of jobs, have largely propelled this effect in developed markets.

Where the industrial labor force has declined, however, the knowledge-based labor force has flourished. Between 1980

and 2015 in the U.S., **employment growth** in analytical skills-based jobs (77%) and social skills-based jobs (83%) outpaced the overall jobs economy (50%) – a trend that is mirrored in many large, developed countries.

These figures demonstrate how rapidly the face of labor in mature markets has changed. Industrial work has given way both highly technical and specialized labor, as well as work requiring strong interpersonal skills; the shift from production-based to service-based economies.

The Distributed Workforce

One of the major changes in work culture in recent years has been the growth of the distributed workforce. Enabled by the rise of technology, companies all over the world are increasingly allowing – and sometimes actively encouraging – remote working or other flexible arrangements. Through this evolution, “clocking in” has become a figurative expression.

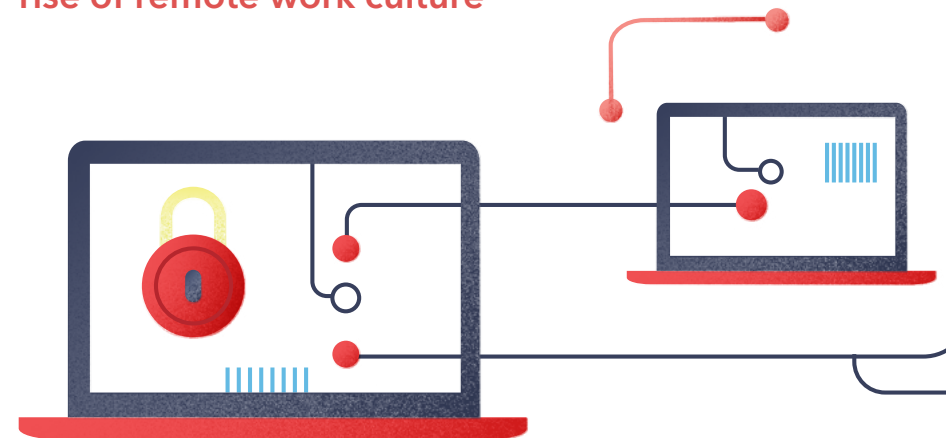
Technology as a catalyst

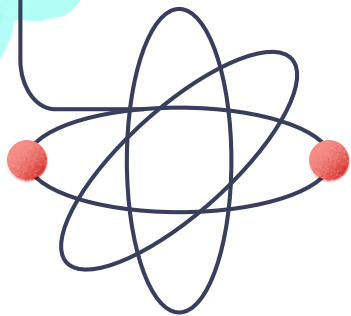
Nothing has enabled the rise of the remote workplace more than

technological advancements of the last twenty years. The development of videoconferencing, collaboration software, and better network security all represent crucial elements of this. Perhaps none of these, however, as much as the spread of high-speed internet access.

In the U.S., less than 30% of adults had broadband access in the home in 2005; by 2019, this had risen to 73%. Broadband access in the European Union has expanded at similar rates. These advancements, however, have been largely contained to the

The development of videoconferencing, collaboration software, better network security and, most crucially, high-speed broadband, have led to the rise of remote work culture

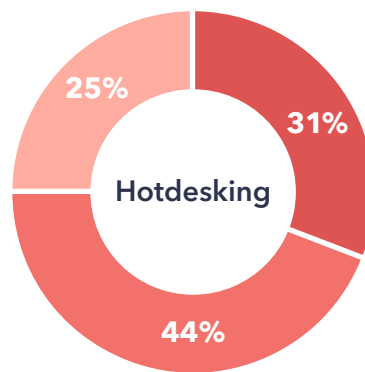
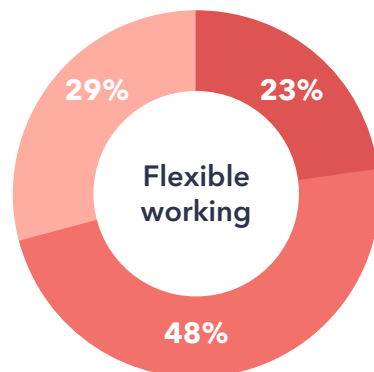
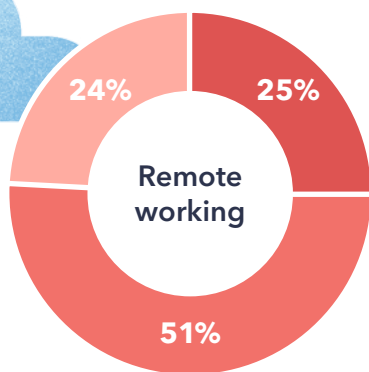




WORKPLACE FLEXIBILITY

% of professionals who say the following types of flexible work arrangements are permitted in their companies:

● Permitted Broadly ● Permitted in Some Circumstances ● Not Permitted



Question: What is your company's policy towards the following? **Source:** GlobalWebIndex Work 2019
Base: 17,000 business professionals aged 16-64

83% of professionals in executive management positions are permitted to work remotely, while 63% of general office workers have this same benefit.

developed world, with total internet penetration levels significantly lower in places like Southern Asia (36%), Eastern Africa (27%), and the Caribbean (48%).

With the rise of high-speed internet access in developed markets, the nature of "remote work" has changed and expanded. Most employers have become increasingly tolerant, and even encouraging, of this type of workplace benefit. Our research into knowledge professionals indicates that, **across industries, three-quarters of people report that their employers permit remote working**

to some extent. For one quarter of workers, working remotely is broadly accepted.

No longer is this the domain of lower-paid jobs like telemarketing. Rather, we see that **tolerance for remote working actually increases as seniority and achievement level in the workplace increases**. 83% of those in executive management positions report being permitted to work remotely, while 63% of those classified as general office workers have this same benefit. Though commonly permitted across industries, the technology and communication, management training, and arts, media, and marketing sectors lead in their acceptance of remote working.

Adjacent benefits to remote working, like agile working, are also quite high. 69% of global professionals are permitted to “hot desk”, with 25% saying they are “broadly” permitted to engage in this practice.

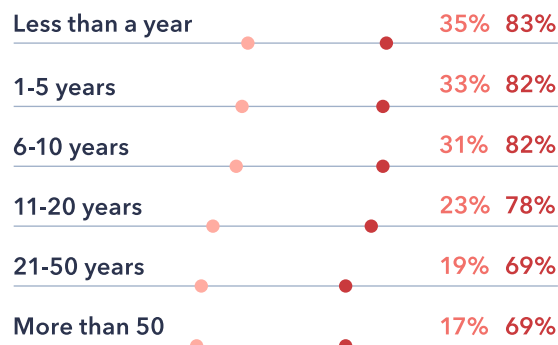
REMOTE WORKING BY EMPLOYEE AND COMPANY AGE

% of professionals who say that remote working is permitted, to various degrees, in their companies”

Among age groups of professionals



Among age of company



● Permitted Overall
● Permitted Broadly

Question: What is your company's policy towards the following?
Working Remotely **Source:**
GlobalWebIndex Work 2019
Base: 17,000 business professionals aged 16-64

The influence of youth and agility

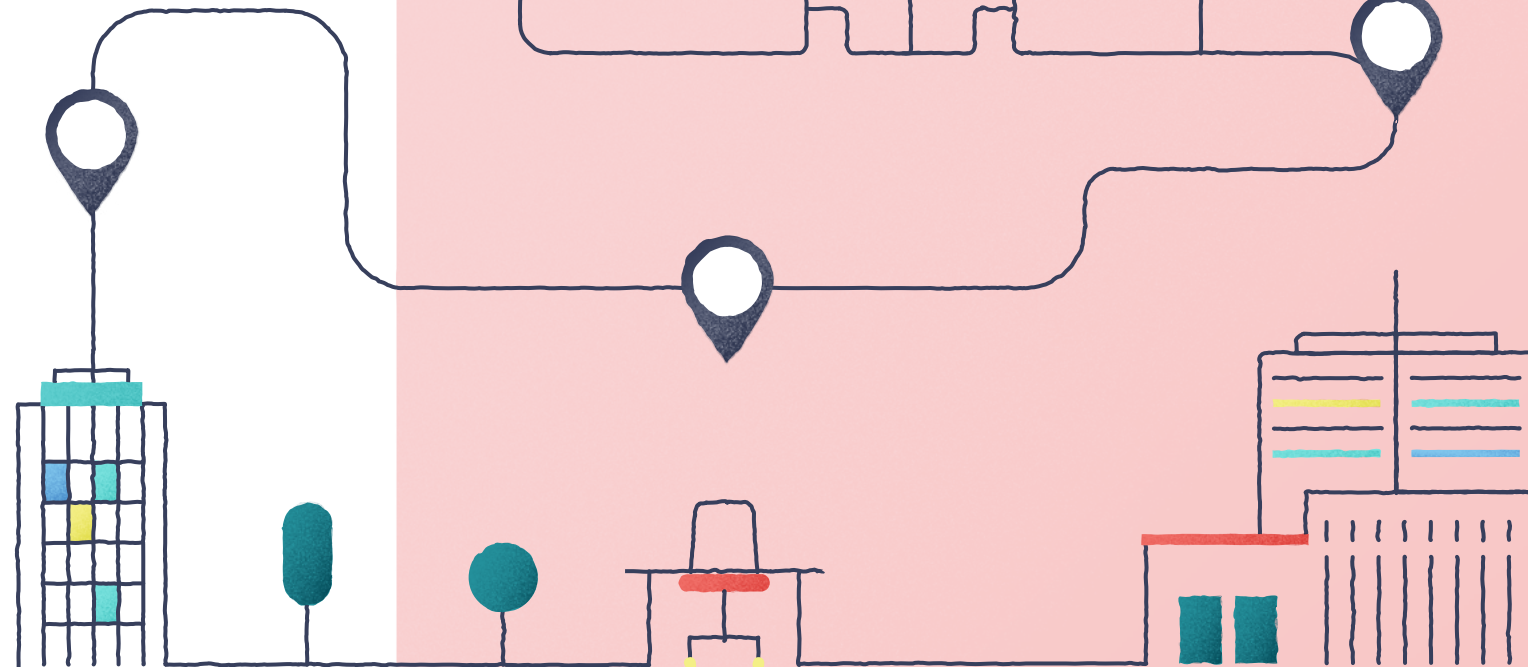
Younger professionals report a broader acceptance of remote working in their companies. Among 16-24 year-old workers, 80% say that remote working is permitted. Similarly high rates exist among 25-34 year-olds, but begin to decline as workers get older. Among 55-64 year-olds, 66% report that their workplace permits remote working.

Additionally, flexible workplace culture seems to be the hallmark of younger, smaller companies. **Among companies that were founded less than 11 years ago, remote working is accepted generally by over 80%, and accepted widely by about one-third.** Rates of this decline among more established companies, with a significant decline among companies that have been around for twenty years or more.

While there is an interplay here, with younger companies often attracting younger workers, an additional factor is present: younger workers demand more work-life balance. As they have come of age and entered the workforce during the years of rapid workplace transformation, **flexibility is now part of the package for many young professionals.**

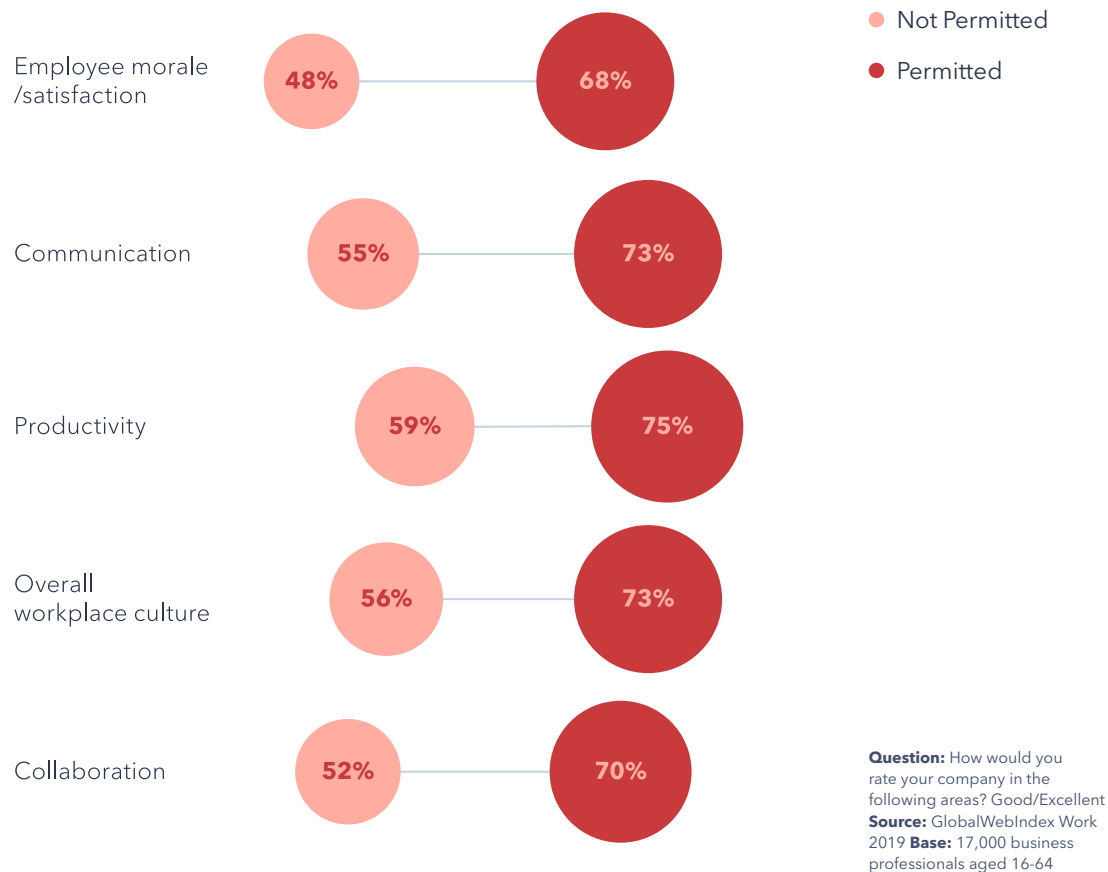
Millennials, having entered the workforce en masse in the last 15 years, have driven much of this change. According to [Deloitte's Millennial Survey](#), a good work-life balance is the most important factor for young professionals when evaluating job opportunities. Following this are (2) opportunities to progress and (3) workplace flexibility (i.e. remote working, flexible working). This is indicative that, for younger generations, a balance of lifestyle benefits in the workplace often outweigh other more traditional markers of a "good" prospective job.

And they may have the right idea. While there are challenges, especially from the perspective of employers, the benefits of remote working and other flexible practices are evident.



THE POSITIVE ASSOCIATIONS OF REMOTE WORKLIFE

% of professionals in companies which permit vs. do not permit remote working who rate their companies 'good' or 'excellent' on the following:



Productivity gets a boost

Among global professionals, remote working is often associated with better personal outcomes. Those who work for employers that permit remote working are more inclined to rate their companies as “good” or “excellent” for employee morale, communication, productivity, collaboration, and overall culture.

Other research focusing on workplace practices and satisfaction reinforces these results. A [Gallup](#) poll in 2017 found that there is an optimal balance for productivity, and it leans toward more frequent remote working. Based on their findings, American professionals who spend between 60-80% of their

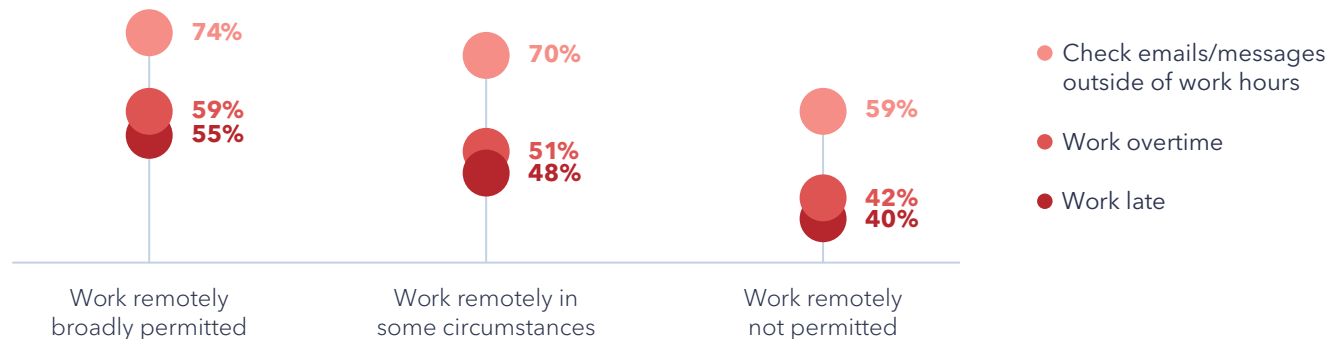
time working remotely reported being the most engaged with their work.

Physical vs. psychological constraints

Greater levels of productivity come with a cost to employees, however. Further interrogating the data suggests that **remote working is associated with a tendency to work longer and harder**. The likelihood of doing things like working late, working overtime, and answering emails or messages outside of office hours directly increases as workplace tolerance toward remote working increases. In offices where remote working is not permitted, 40% of employees report working late once a week or more.

THE INCREASED PRESSURES OF REMOTE WORKLIFE

% of professionals in companies which permit vs. do not permit remote working who do the following once a week or more:



The same pattern emerges among communication and project workload. Where working remotely is broadly permitted, **36% of employees are juggling 5 or more projects simultaneously, compared with 29% of those in companies where it is accepted on a more limited basis, and only 19% of those in companies that do not permit this practice at all.**

The root of this drive to work longer, take on more projects, and maintain constant communication when working remotely is not entirely clear. A likely factor at play, however, is the pressure to emphasize one's commitment to the job when a visible, physical presence means that this is no longer obvious to colleagues and management.

While free from **limitations of a traditional work environment, the constraints of remote workers take on a more psychological nature.**

Where working remotely is broadly permitted, employees are more likely to work late regularly (55%) vs. where it's permitted with limitations (48%) and where it's not permitted at all (40%)

Question: How frequently would you say you do the following? At least weekly
Source: GlobalWebIndex Work 2019
Base: 17,000 business professionals aged 16-64



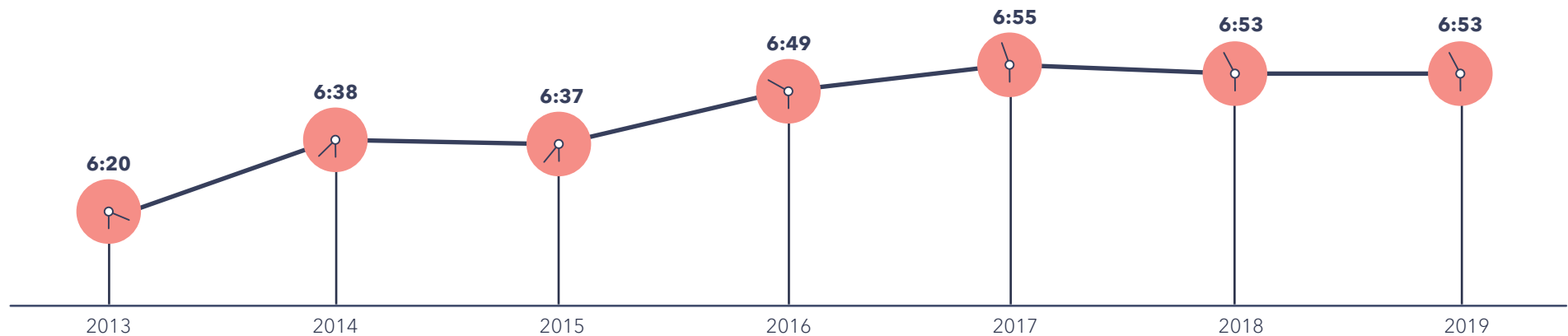
The (Overly?) Connected Employee

While remote workers exhibit this behavior more than most, all professionals have become increasingly connected through technology. To a great degree, this is a reflection of our society's overall movement toward near-constant connectivity. In 2013, for example, global internet users were spending a combined

average of 6 hours, 4 minutes on screens between their mobile and desktop/laptops. By 2019, this had increased to 6 hours, 49 minutes, with the pendulum swinging toward mobile. Among knowledge professionals, time spent on screens is just shy of 7 hours per day.

MORE CONNECTED THAN EVER

Average time spent per day online (across desktop/laptop and mobile devices) among professionals since 2012



Disentangling how much of our connectivity stems from work vs. leisure activities is difficult, all the more so because device usage increasingly encompasses both. Among professionals who use a laptop for work day-to-day, 15% of them report that they own the device. And when a

smartphone is used for work purposes, **nearly 50% of workers report that it's their own phone they are using.** Employees who report using their own phone for work purposes are also reporting considerably more screentime. **These professionals spend, on average, about 3 hours**

8 minutes per day on a mobile device, compared with employees whose companies provide a mobile device - 2:30 minutes per day.

The true reach of connectivity in the workplace is evident when looking at the

time spent on professional communication. On a typical workday, business workers receive about 30 emails and use 4.4 apps on average. Among those whose employers provide a mobile device, this increases to 36 emails per day and 4.7 apps on average.

Question: On average, how long do you spend online on a mobile/ on a PC/laptop tablet? **Source:** GlobalWebIndex Core Survey Q1 2013-Q2 2019 **Base:** 925,812 business professionals aged 16-64 across all waves of data

Business professionals who own the smartphone they use for work purposes are spending nearly half an hour more of mobile screen time per day vs. those whose companies provide their smartphone



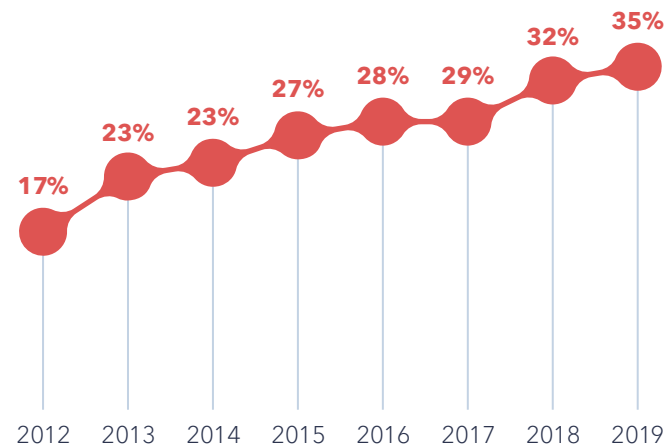
From email to apps

While email changed the face of workplace communication with the spread of the internet, so apps are furthering this evolution in tandem with modern technology. Our global data indicates that, **between 2012 and 2019, the incidence of global professionals using business or work-related apps doubled.** And understandably so; apps have enriched the

communication experience by allowing workers to utilize things like cloud storage, massive file transfer systems, chatbots, and API integration across endless platforms and services.

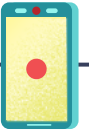
GROWTH IN WORK APP USAGE

% of professionals who report using work-related or business apps since 2012



Question: In the last month, which of these app types have you used?
Source: GlobalWebIndex Core Survey Q2 2012-Q2 2019 **Base:** 958,226 business professionals aged 16-64 across all waves of data

2 out of 3 workers waste at least 30 minutes per day just switching between workplace tools



PERCEPTIONS OF WORK APP USAGE

% of professionals who report the following, among those that use at least 1 app at work:

87%

I am using more apps than I did 5 years ago

78%

In 5 years time, I expect the number of apps I need to use will increase further

68%

I typically spend at least 30 minutes per day just switching between workplace apps and tools

56%

Having to switch between apps and tools makes it harder for me to get essential work done

Question: Thinking about the apps / workplace tools you use in your day-to-day job, which of these statements would you agree with? **Source:** GlobalWebIndex Work 2019 **Base:** 13,533 business professionals aged 16-64 who say they use at least one app in a typical day

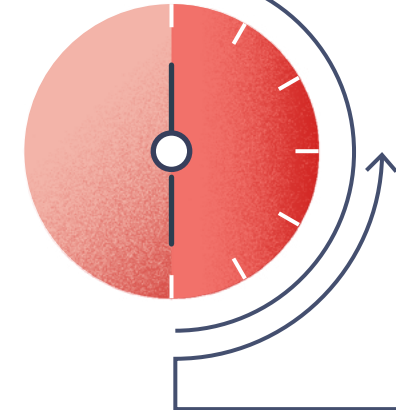
The complex relationship with workplace connectivity

The effects of increased connectivity at work are complex, and not entirely positive. **For the majority of workplace app users, 30 minutes per day are wasted just switching between different tools.**

More than half of these workers also report that this switching process makes it more difficult to get essential work done. Additionally, email communication as a drain on productivity is an issue that has been well documented. For example, a [2016 Adobe study](#) among U.S. professionals found that, on average, these workers were

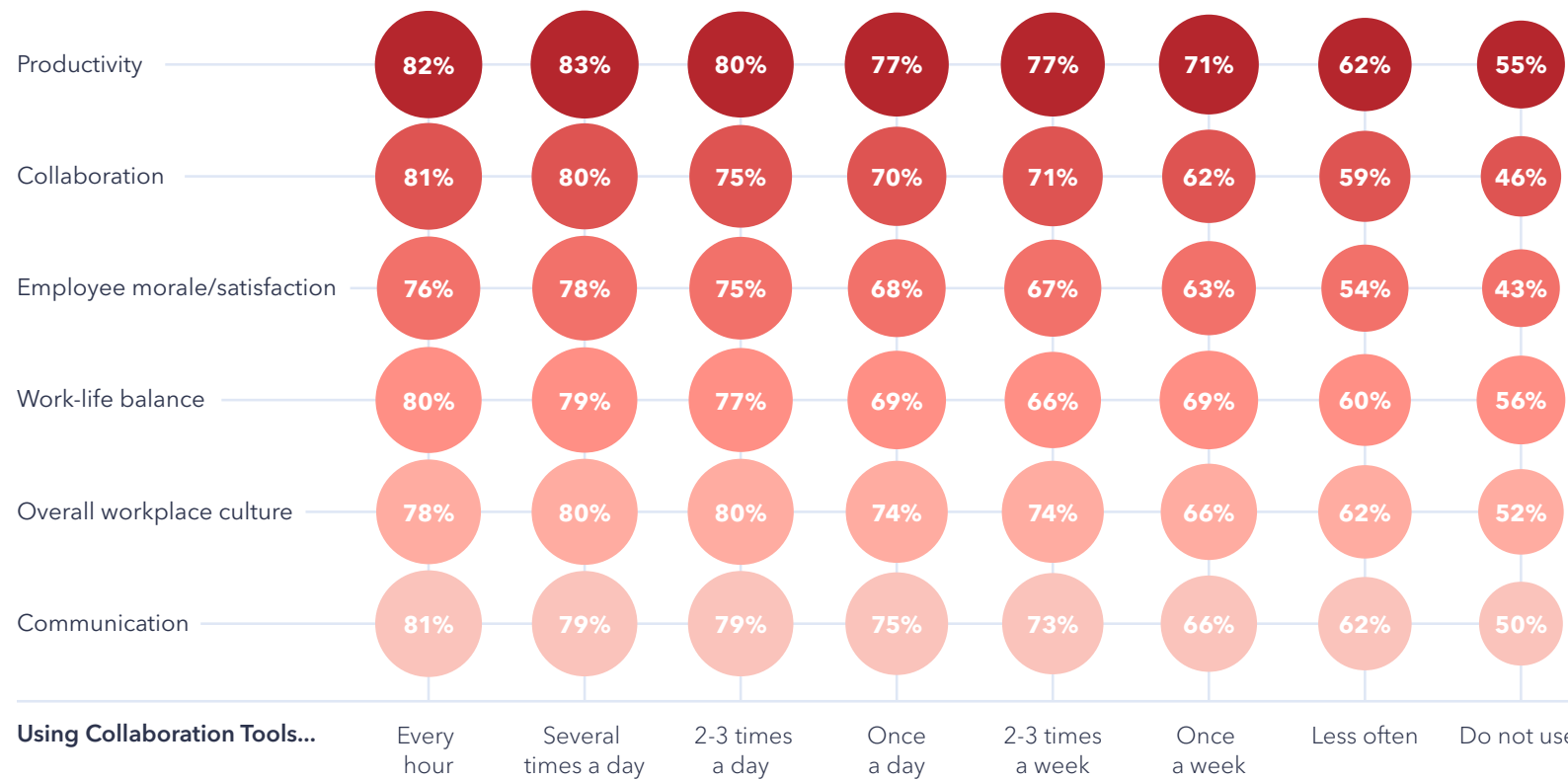
spending 3.1 hours per day checking work email on a typical weekday. Carleton University's [2017 survey of Canadian professionals](#) found similar results, discovering that professionals spend about one-third of their time at work, and one-half of their time when working remotely, checking and responding to email.

Though the potential time drain is a factor, keeping connected is actually associated with better workplace outcomes in other areas. **The relationship between email/app frequency and certain characteristics – such as productivity, collaboration, and communication – is positive.**

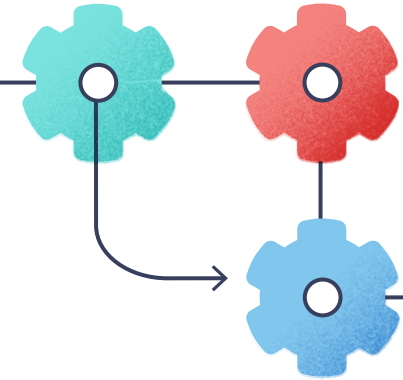


CONNECTIVITY AND POSITIVE WORKLIFE OUTCOMES: COLLABORATION TOOLS

% of professionals who rate their companies "good" or "excellent" on the following:

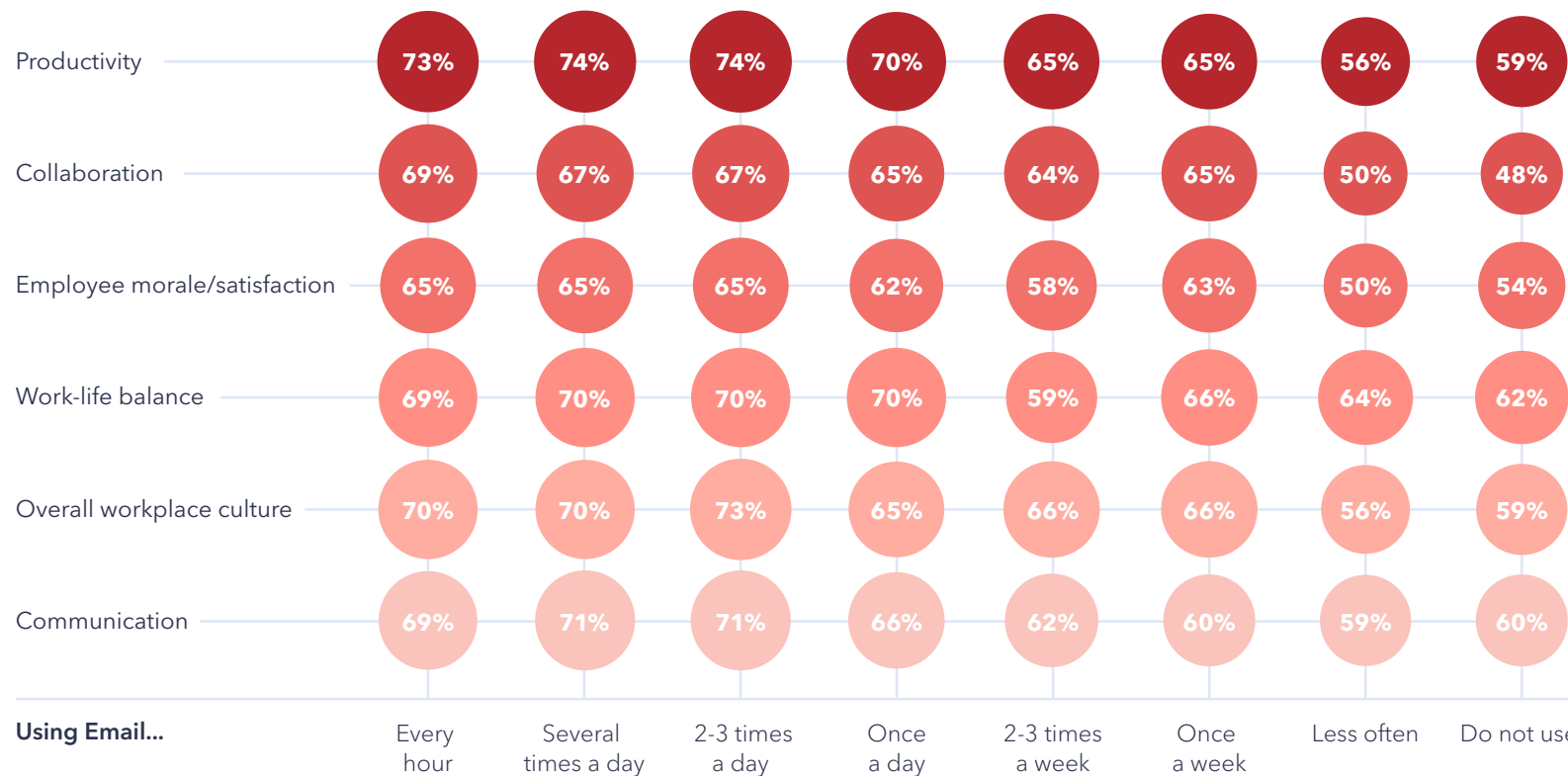


Question: How would you rate your company in the following areas? Good/Excellent **Source:** GlobalWebIndex Work 2019 **Base:** 17,000 business professionals aged 16-64



CONNECTIVITY AND POSITIVE WORKLIFE OUTCOMES: EMAIL

% of professionals who rate their companies 'good' or 'excellent' on the following:



Question: How would you rate your company in the following areas? Good/Excellent **Source:** GlobalWebIndex Work 2019 **Base:** 17,000 business professionals aged 16-64

Among business professionals who report using collaboration tools only once a week, for example, their rating of productivity in their organizations as “good” or “excellent” is at 71%. As frequency of collaboration tool usage increases, so does this perception: among those who use collaboration tools several times a day, 83% rate their companies highly on productivity.

A similar pattern exists for frequency of email communication. However, two insights emerge here. Firstly, **usage of collaboration tools/apps is associated with higher employee ratings of their companies vs. usage of email.** This suggests

the transition from email to apps will continue to happen. Additionally, while positive ratings increase as communication frequency increases, **there is a point of observed diminishing returns.** Somewhere between checking email/apps “several times a day” and “every hour,” outcomes tend to plateau and, in some cases, actually decline slightly. **There is an optimal level of being “connected,” and while this is high, it’s not at the maximum.**

The right to disconnect

Functioning in the zone of “optimal communication” may be delicate, as it has become all too easy for business professionals to

become hyper-connected in today’s workplace. Further complicating this, we’ve seen how connectivity is no longer limited to the workday – for many workers, it has long-since leaked into their personal hours.

Our study of global business professionals reveals how pervasive this has become. Nearly **70% of workers report that they check their email outside of work hours** at least once a week, with almost 40% of professionals saying they “always” do this. Other research has found similar patterns; human resources consulting firm Randstad, for example, found that **42% of employees** report feeling obligated to check in with work while on vacation.

Frequency of communication eventually yields diminishing returns for productivity, this happens somewhere between messaging colleagues “several times a day” and “every hour”





With the line between work and personal hours blurred, the negative effects on mental health and quality of life are becoming evident. Maintaining constant availability outside of work hours is associated with a greater risk of **physical health problems, anxiety,**

and a worsening of our **interpersonal relationships.**

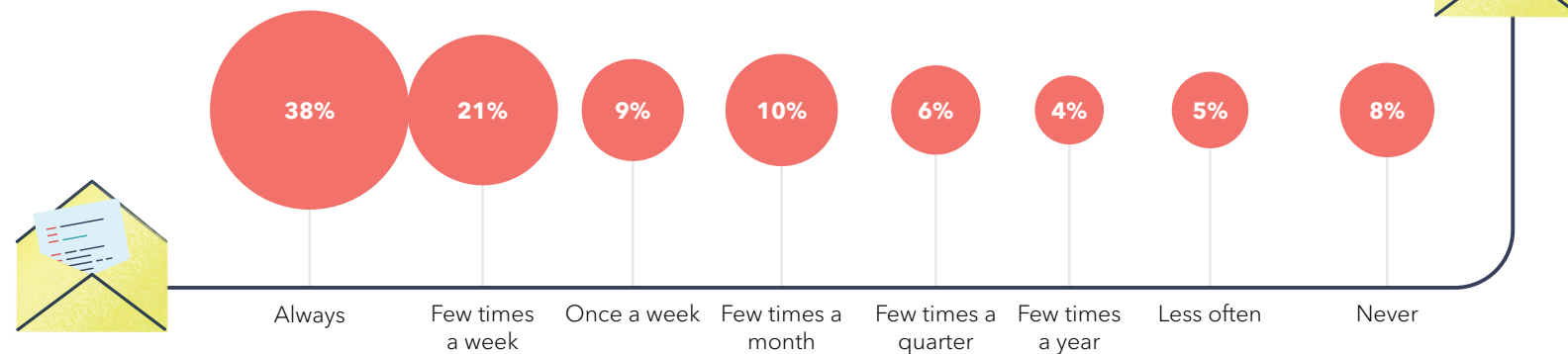
Some governments and companies have recognized the effects of this technology burnout and taken action. **Volkswagen** was far ahead of this trend back in 2012, when it

turned off its Blackberry servers from sending emails outside of work hours in response to the demands of its unionized workers in Germany. In 2014, German manufacturing firm **Daimler** introduced the "Mail on Holiday" assistant, an email functionality that

deleted messages sent to employees while on vacation. And in a 2016 precedent-setting case, **French workers** won the right to not check email outside of working hours.

CONNECTIVITY AND NEGATIVE PERSONAL LIFE OUTCOMES

% of professionals who report checking their email outside of normal working hours at the following frequencies:



Question: How frequently would you say you do the following?
Check emails/messages outside of your normal working hours
Source: GlobalWebIndex Work 2019 **Base:** 17,000 business professionals aged 16-64

The Democratization of the Workplace

Technological developments have facilitated a more fluid, equitable way of working. By creating seamless connections across employees of all levels. With the rise of startup culture, having an agile and collaborative environment has loosened many of the formal boundaries that had long-since existed to keep hierarchies in place.

The flat organization

No organizational change elicits the idea of the “modern” workplace quite like the flat structure. Defined by the absence of traditional management hierarchies in favor of equality, agility, and free-flowing ideas, the flat structure epitomizes the influence of Silicon Valley tech culture on our

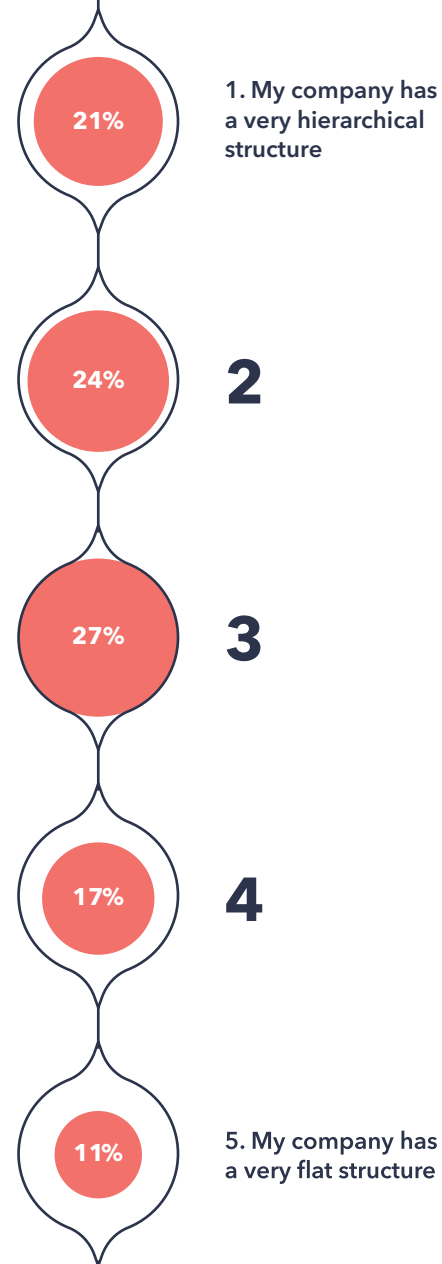


More than 1 in 4 global business professionals report that their company has a relatively flat structure

broader work environment. According to our research, **more than 1 in 4 global business professionals now report that their company has a relatively flat structure.**

But the idea of the flat structure continues to be analyzed for both its pros and cons. Proponents of this method argue that it allows for greater collaboration and creativity, freeing employees from the office politics and excessive management layers that often get in the way of doing their best work.

However, the concept of a flat structure has come under fire recently. Some of the tech companies that **pioneered** this organizational structure - such as Github, Medium, and Zappos - have even openly moved away from it. Of significant challenge has been the effort to scale companies while maintaining flatness, and this is the critical juncture at which many of its pioneers have abandoned this philosophy. But is the flat structure worth scaling and, fundamentally, is it worth pursuing?



FLAT VS. HIERARCHICAL STRUCTURE

% of professionals who rate their company as having a hierarchical vs. flat structure

Question: Please select the point on the scale that best describes you/your company - are you at one end of the scale or somewhere in the middle?
Source: GlobalWebIndex Work 2019 **Base:** 17,000 business professionals aged 16-64

Benefits and Drawbacks

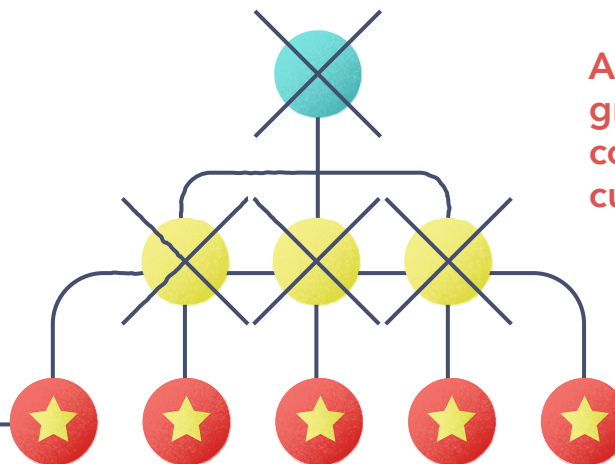
Examining how employees in both flat and hierarchical organizations report on their workplace outcomes validates some of our assumptions about each system, but also raises new questions. **Those who work in flatter organizations typically report higher levels of communication, collaboration, and productivity.**

Workplace culture and compensation tend to be rated higher among professionals in flatter organizations, as well. These findings support the idea that flatter structures foster creativity and collaboration. To an extent, suspending layers of organization in favor of greater fluidity of people and ideas can be of benefit.

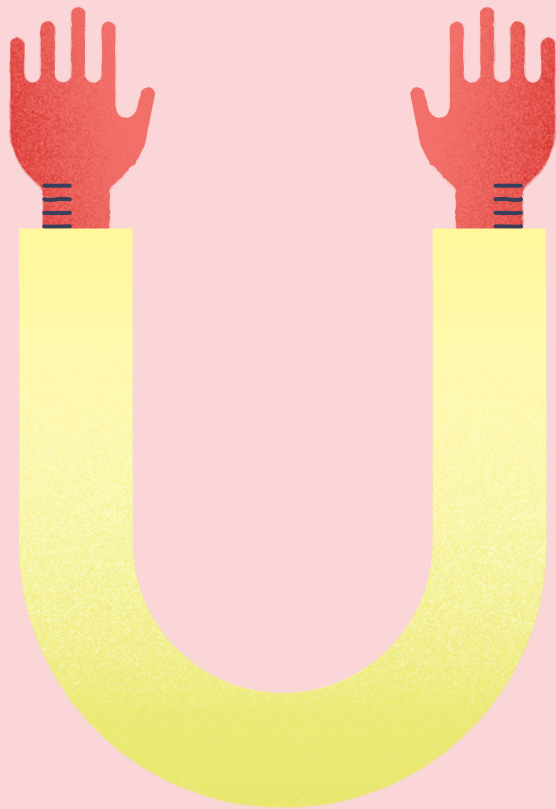
There are very obvious ways in which hierarchical

companies provide greater benefits for employees, however. As companies scale, establishing layers of management structure becomes natural for efficiency and organization. This is why larger and more well-established organizations tend to have greater hierarchy. With this blend of size and structure come traditional benefits that, in our modern workplace, have become more difficult

to find. **Benefits such as subsidized healthcare, paid maternity/paternity leave, and life insurance, are still the hallmarks of the hierarchical organization.** And this is where the differences between the organization types are most profound. **42% of those working in very hierarchical companies report having access to subsidized healthcare, for example, vs. only 23% of those in very flat companies.**



A flatter structure is associated with greater ratings of collaboration, communication, and overall workplace culture



The U-curve, Illusions, and Downfalls

Though each organizational type has a distinct offering, there are unexpected areas of workplace benefit where both extremes thrive in comparison to organizational structures that fall somewhere in the middle.

It is in the area of strategic impact where we see this U-shaped curve emerge most powerfully. For example, 72% of professionals working in a very hierarchical company agree that they have a clear understanding of their company's strategy. Among those who fall somewhere in the middle, this drops to 64%, then rises again to 76% for workers in a very flat company.

Similarly, employees in both hierarchical and flat organizations strongly feel that the teams in their companies are working toward a shared goal, with this metric declining dramatically in the middle tier.

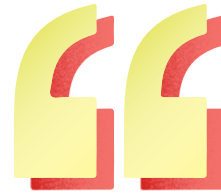
While puzzling at first, the rationale behind this becomes evident when again looking at why many tech companies abandoned the flat org model. With true "flatness" the ease of maintaining transparency and ensuring alignment with company strategy is there. These companies tend to have fewer employees and a closer, more candid relationship among colleagues and management. On the other extreme, very large and well-established companies

face different pressures that often manage to achieve the same effect. There are dedicated communication channels, protocol for decision-making, and oftentimes accountability to shareholders and to the public. While not always ensuring complete transparency, these factors provide direction and, therefore, enhance alignment.

In between these two structures are varied phases of growth and scaling, the stages at which many initially flat-modeled companies have been **forced to change** their approach. There are practical challenges to growing a company while trying to maintain flatness, and these are significant.

As layers naturally emerge to manage them, an unfortunate byproduct in flat orgs has been known to occur: a “hidden” structure and system of company politics under the illusion of flatness.

In a [blog post](#) explaining why they abandoned the flat model, the CEO of video-software company Wistia articulated this issue well: “If you don’t explicitly define your structure, then you are left with an implicit one, and that can stifle productivity. We had hoped that being flat would let us move faster and be more creative, but as we grew, we ended up with an unspoken hierarchy that actually slowed down our ability to execute.”



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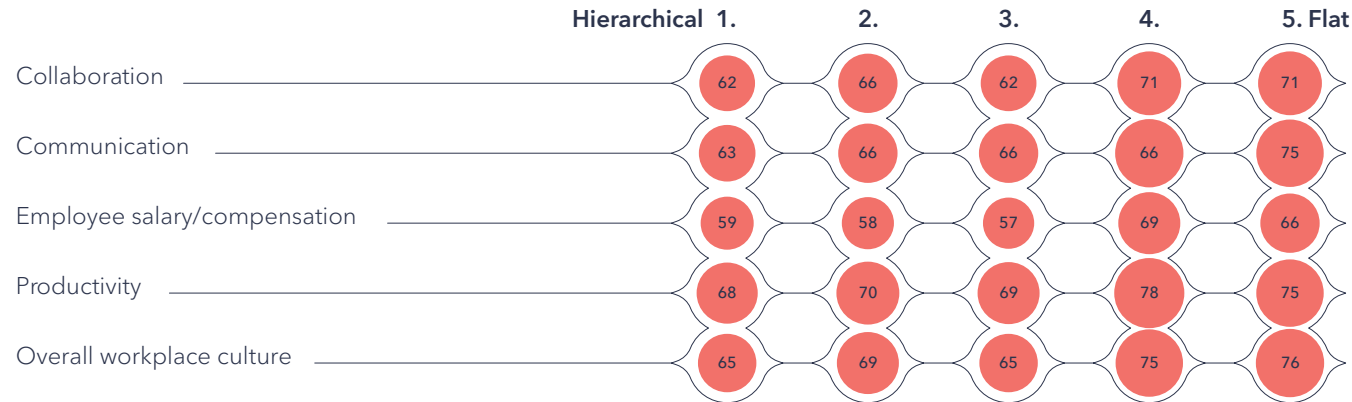
Chris Savage, Founder and CEO, Wistia



FLAT VS. HIERARCHICAL STRUCTURE

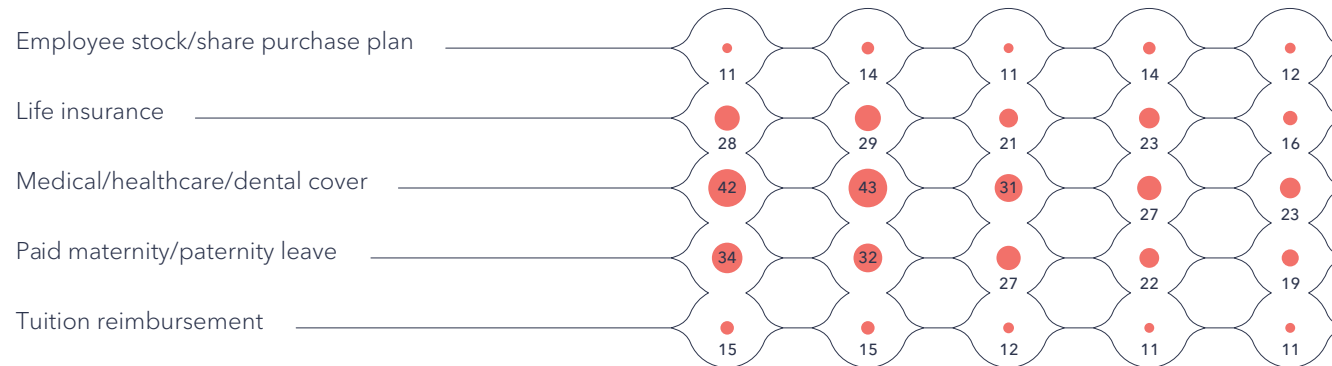
The Benefits of Flatness

% of professionals who rate their company as "good" or "excellent" in the following categories split by organizational structure



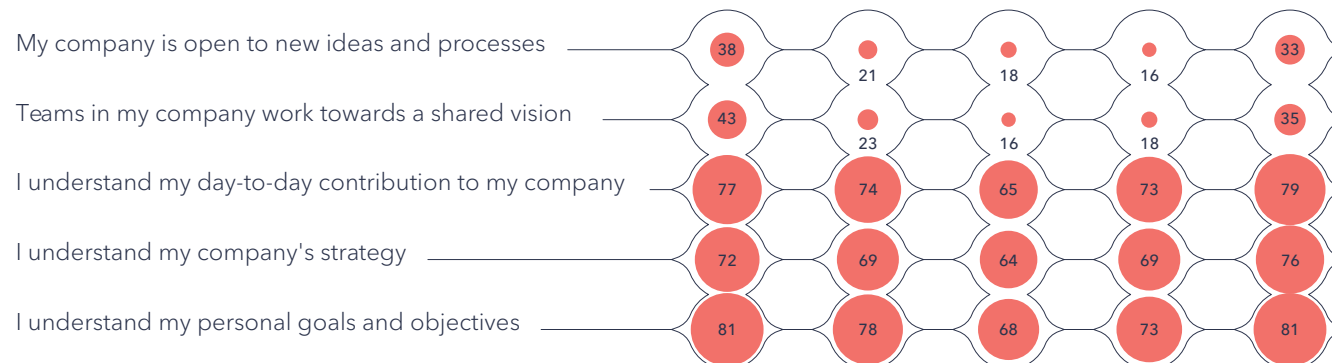
The Benefits of Hierarchy

% of professionals who report their companies provide the following benefits, split by organizational structure



The U-shaped Curve of Strategic Impact

% of professionals who agree with the following statements split by organizational structure



Question 1: How would you rate your company in the following areas?

Question 2: Which of these benefits does your company offer to employees Good/Excellent?

Question 3: To what extent do you agree or disagree with these statements?

Source: GlobalWebIndex Work 2019 **Base:** 17,000 business professionals aged 16-64

What's next

Understanding these evolving elements of the workplace is crucial, both for addressing the pressing challenges of today and in looking toward the future of work.

Recruitment, for example, is an area that can benefit from a better understanding of workplace trends - and it's an issue that's capturing the immediate attention of most professionals. Our data reveals that **finding staff is one of the top**

challenges facing teams across industries globally.

With 1 in 3 employees concerned with hiring, it supersedes other key business challenges in terms of importance. These include staying profitable, hitting revenue targets, and maintaining government compliance.

Preparing the global workforce for future challenges requires a clear understanding of these trends, as well.



1 in 3 business professionals report that hiring talent is a key business challenge, superseding profitability in terms of immediate importance

And what we can understand from the past might help us adapt to what many consider the biggest challenge of the future: automation.

Automation has been a threat to human jobs since the Industrial Revolution. And from then on the invention of machines to outperform human workers in terms of efficiency and precision has been constant. As explored earlier, automation – like globalization – has been one of the key phenomena to change the makeup of our labor force, heralding the transition from production to service-based economies. The role of this global force

is evident when looking at the decline of the U.S. manufacturing industry. It **tripled** in productivity between 1972 and 2018. The number of employees to make this happen, however, dropped by about 75% in the same time period. Industrialized job prospects deteriorated even more quickly in the **90s and 2000s** as better technology accelerated automation.

Despite creating a loss in manual jobs, automation has historically been good for workers because it has created a need for more specialized labor to facilitate the service and knowledge-based

economy. As companies – and indeed entire industries – have scaled to massive proportions, the levels of labor specialization within them have ballooned. More people are hired to program and operate the machines, and even more are brought in to sell, analyze, manage, and otherwise support the cogs of large-scale enterprise. Our workforce is now **highly educated**, much more so than it was even twenty years ago, and automation has helped make that happen.

But the balance is now starting to shift. On the cusp of unprecedented advancements in automation, driven

by the likes of AI and machine learning, we are approaching a point of inflection at which this technology may do more harm than good - at least for a sizeable part of the workforce.

According to analysis from the **Brookings Institute**, one-quarter of U.S. jobs – roughly 36 million – are set to face “high exposure” to automation – meaning that they are likely to be phased out – by 2030. The risk of being replaced by machines varies greatly by job type, largely along the lines of education. Jobs that don’t require a bachelor’s degree, for example, are more than twice as likely to be replaced

vs. jobs that do. And the safest areas of employment tend to require non-routine responsibilities, social and emotional intelligence, human creativity, and very high technical expertise.

While the opportunities to work with machines will certainly emerge, they are likely to be limited both in number and in response to technical knowledge. And so this new wave of automation has serious implications for our society, as we grapple with the prospect of mass unemployment. In some policy circles, solutions are already being discussed to address this.

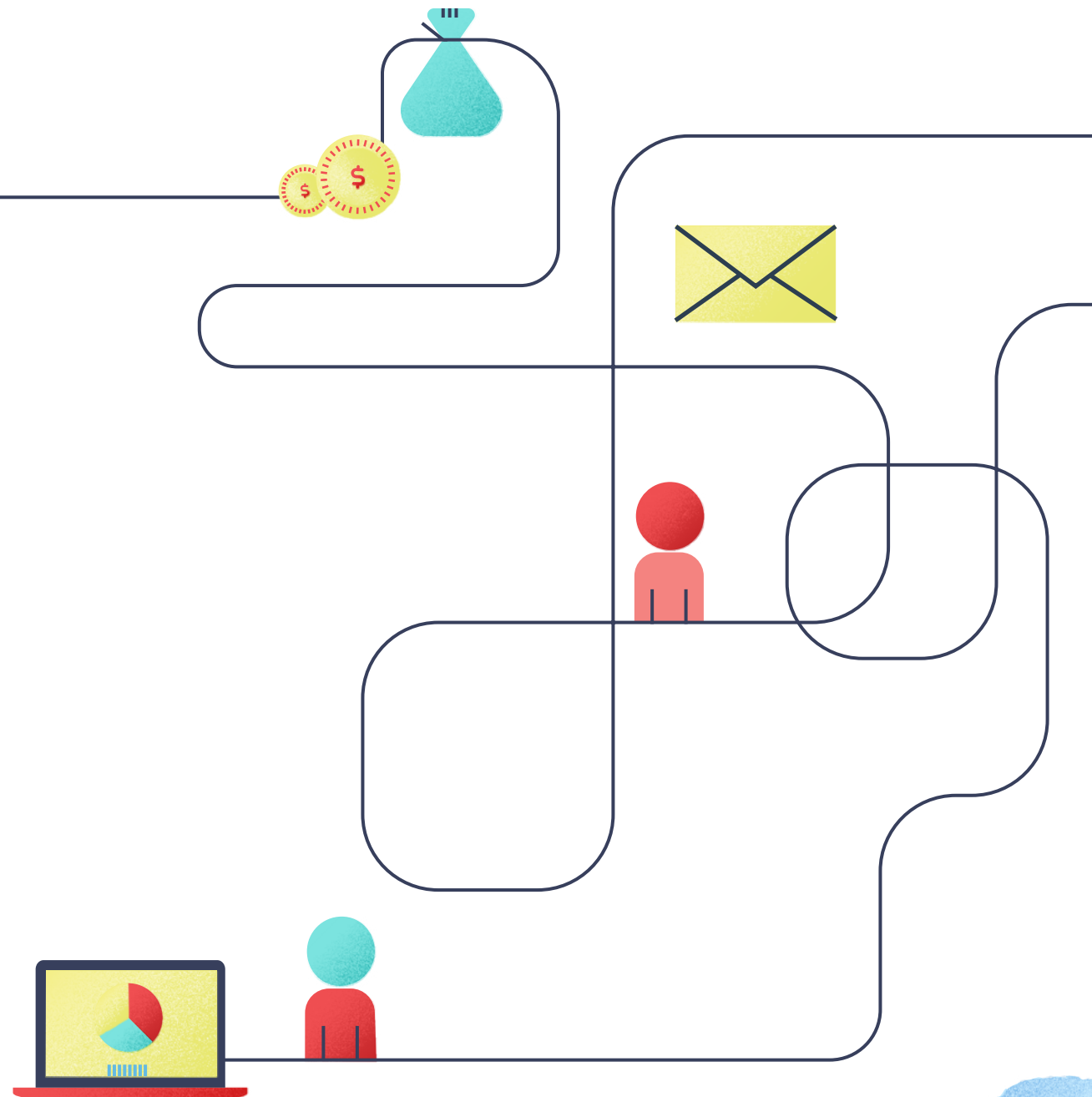
We are approaching a point of inflection at which automation may do more harm than good – at least for a sizeable part of the workforce



Universal Basic Income, the theory that all individuals or households should be provided a standard living stipend by the government, is one of these. [Finland](#) experimented with this idea for two years to investigate how it might benefit unemployed citizens. American entrepreneur-turned presidential candidate [Andrew Yang](#) has also made it one of the pillars of his campaign.

How this will affect the nature of work – and society as a whole – is still unknown. What is clear, however, is that organizations and employees have to prepare for a future where our relationship with technology

is increasingly intertwined. For many, this immediately means upskilling workers on highly technical knowledge. But there is another side to it – the human side. Social skills, creativity, and the ability to quickly adapt and respond to the everyday crises, both small and large, of our environments are intrinsically human things. Nurturing these very human characteristics, in combination with supporting technical specialization, may be crucial to preparing for the future of work.



Notes on Methodology

Introduction

All figures in this report are drawn from **GlobalWebIndex's online research among business professionals aged 16-64** across 10 different countries. Please note that we only interview respondents aged 16-64 and our figures are representative of **online business professionals** of each market.

Our Research

Each year, GlobalWebIndex interviews 17,000 business professionals aged 16-64 across 10 markets. Respondents complete an **online questionnaire** that asks them a wide range of questions about their professional lives, the companies they work for, and their relationship with technology in a work context. Additionally, our recontact methodology of surveying allows us to link these business professionals with their responses on our Core Survey, giving us further

insight into their personal lives, lifestyles, and digital behaviors as consumers. **We source these respondents in partnership with a number of industry-leading panel providers.** Each respondent who takes a GlobalWebIndex survey is assigned a unique and persistent identifier regardless of the site/panel to which they belong and **no respondent can participate in our survey more than once a year** (with the exception of internet users in Egypt, Saudi Arabia and the UAE, where respondents are allowed to complete the survey at 6-month intervals).

Our Quotas

To ensure that **our research is reflective of the online population in each market, we set appropriate quotas on age, gender and education – meaning that we interview representative numbers of men vs women, of 16-24s, 25-34s, 35-44s, 45-54s and 55-64s, and of people**

with secondary vs tertiary education.

To do this, we conduct research across a range of international and national sources, including the World Bank, the ITU, the International Labour Organization, the CIA Factbook, Eurostat, the US Bureau of Labor Statistics as well as a range of national statistics sources, government departments and other credible and robust third-party sources.

This research is also used to calculate the “weight” of each respondent; that is, approximately how many people (of the same gender, age and educational attainment) are represented by their responses.

Internet Penetration Rates Across GlobalWebIndex's Markets

GlobalWebIndex's research focuses exclusively on the internet population and because internet penetration rates can vary significantly between countries (from a high of 90%+ in parts of Europe to lows of c.20% in parts of APAC), the nature of our samples is impacted accordingly.

Where a market has a high internet penetration rate, its online population will be relatively similar to its total population and hence we will see good representation across all age, gender and education breaks. This is typically the case across North America, Western Europe and parts of Asia Pacific such as Japan, Australia and New Zealand. Where a market has a medium to low internet penetration, its online population can be very different to its total population;

broadly speaking, **the lower the country's overall internet penetration rate, the more likely it is that its internet users will be young, urban, affluent and educated.** This is the case throughout much of LatAm, MEA and Asia Pacific.

This table provides GlobalWebIndex forecasts on internet penetration (defined as the number of internet users per 100 people) in 2019. This forecasted data is based upon the latest internet penetration estimates from the International Telecommunication Union (ITU) for each market that GlobalWebIndex conducts online research in.

Internet Penetration Rates

(GlobalWebIndex's Forecasts for 2019 based on 2017 ITU data)

Table below refers to the total population in each market

Argentina	78%	Indonesia	39%	Russia	80%
Australia	88%	Ireland	87%	Saudi Arabia	83%
Austria	88%	Italy	62%	Singapore	85%
Belgium	89%	Japan	92%	South Africa	62%
Brazil	71%	Kenya	43%	South Korea	95%
Canada	94%	Malaysia	83%	Spain	87%
China	59%	Mexico	69%	Sweden	96%
Colombia	66%	Morocco	69%	Switzerland	96%
Denmark	97%	Netherlands	89%	Taiwan	83%
Egypt	54%	New Zealand	71%	Thailand	58%
France	85%	Nigeria	94%	Turkey	71%
Germany	88%	Philippines	59%	UAE	95%
Ghana	48%	Poland	66%	UK	96%
Hong Kong	91%	Portugal	97%	USA	80%
India	42%	Romania	54%	Vietnam	55%

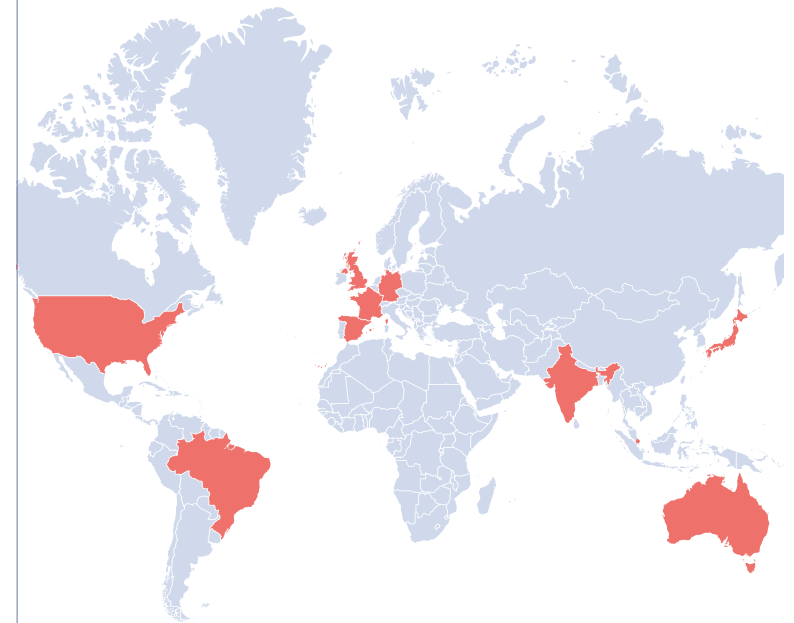
Internet Penetration Rates: GlobalWebIndex Versus ITU Figures

As GlobalWebIndex's Core Research is conducted among 16-64 year-olds, we supplement the internet penetration forecasts for a country's total population (reproduced above) with internet penetration forecasts for 16-64s specifically.

Forecasts for 16-64s will be higher than our forecasts for total population, since 16-64s are the most likely age groups to be using the internet.

Sample size by market

This report draws insights from GlobalWebIndex's 2019 Work Study across 10 countries, with a global sample of 17,000 respondents.



Australia	1250	India	2000	UK	3000
Brazil	1000	Japan	1000	USA	4000
France	1250	Singapore	1000		
Germany	1250	Spain	1250		



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