Reflect

Insightful business ideas from Equatex

Making sense of a connected world

- Design psychology
- Ownership culture
- Future travel
- States versus corporations
- Internal collaboration

EQUATEX

Introducing a magazine of insightful business ideas that aim to inspire, engage and challenge

I would like to welcome you to *Reflect*, the new business magazine launched by Equatex to share what we hope is intelligent, innovative and relevant thinking with you. In each issue, we will tackle issues in our industry and global business; invite informed opinion and expert predictions for the future; think about big ideas; and maybe even take you out of your comfort zone.

In this inaugural issue, we try to make sense of a world that has become increasingly connected and demanding. Since the advent of mobile technology, business has changed at an incredible rate, and in our industry, I've become more aware of the huge adoption of tech within the corporate working environment. Yet for all the advantages a connected world brings, it's never been more important to make sure you engage with people.

Design Psychologist, Paul Davies, tells us why he believes that psychology is key when designing online financial platforms and recognising how people make decisions. Siemens' Marc Muntermann and Helmut Mannert then discuss how their business is engaging employees across the globe through a culture of ownership. Skyscanner's Filip Filipov continues with his vision of how technology could revolutionise travel and bring business people closer together. *The Sunday Times'* Economics Editor, David Smith, examines the relationship between nation states and global corporations, and finally, David E. Hawkins from the Institute for Collaborative Working offers us a framework for encouraging collaboration within multinationals.

We do hope you enjoy this first issue, and please let us know your feedback.

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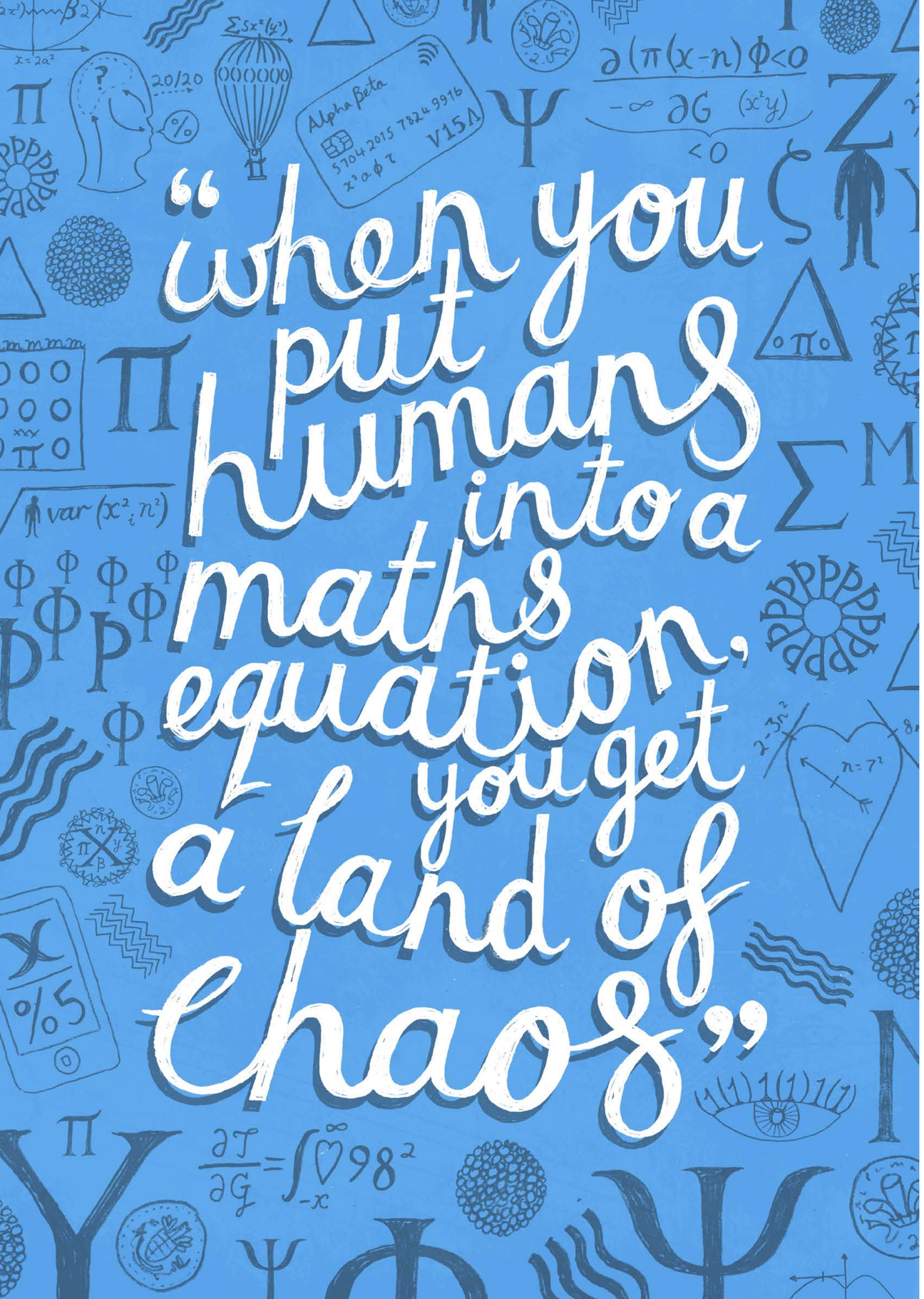


Words: Paul Davies, Etch UK
Illustration: James Grover

Online financial platforms will be ineffective if organisations only look to the principles of neoclassical economics when designing them but ignore psychology and fail to recognise the reality of how people make financial decisions, says Design Psychologist, Paul Davies

With financial start-ups such as Simple Bank, Starling and Nutmeg popping up almost weekly, there's never been a better time to consider why these new kids on the financial block are garnering so much interest and getting people excited about their finances.

These start-ups aren't introducing radically new propositions; they all leverage technology to place their products in the pathways of their customers – primarily online and in-app (and even in-watch). Yet, it's not simply a case of creating good-looking apps; the real success stories have come from those that have hinged their offer on the reality of how people save, what people feel about investment, and understanding the irrational rules of thumb people turn to when making financial decisions.

The underlying philosophy of starting with human nature, rather than with economic principles, is what will stand financial organisations apart going forward. Those who question the lessons of standard neoclassical economics, which assumes everyone is a perfectly logical machine and possesses unlimited capabilities to process information, will reap the rewards.

Double trouble for financial organisations

When it comes to creating any online platform, the project team will always consider how to make it easy for people to move from the beginning to the end of the process, whether this is buying a book or booking a hotel online. For most scenarios, you are designing for a behaviour that people understand and are intrinsically motivated to complete, such as booking a hotel for a holiday. The instant gratification people receive from these interactions means they are highly motivated to complete the online process.

Neoclassical economics would say that the same is true when people are considering their finances; after all, the decisions they make will gain or lose them money. But research has shown over and over again that people don't act in this perfect manner to maximise their individual self-interest; they are swayed by many other factors, which can lead to bad financial planning or, more often than not, no financial planning at all (Amir et al. 2005).

So when creating online financial platforms, organisations are twice as likely to get things wrong for the customer: they can build an interface that is incomprehensible and plan a proposition that is based on the perfect market hypothesis but not on how humans actually make decisions. Aligning both the design of the technology and the psychology of the proposition is the sweet spot that financial organisations should aim for.

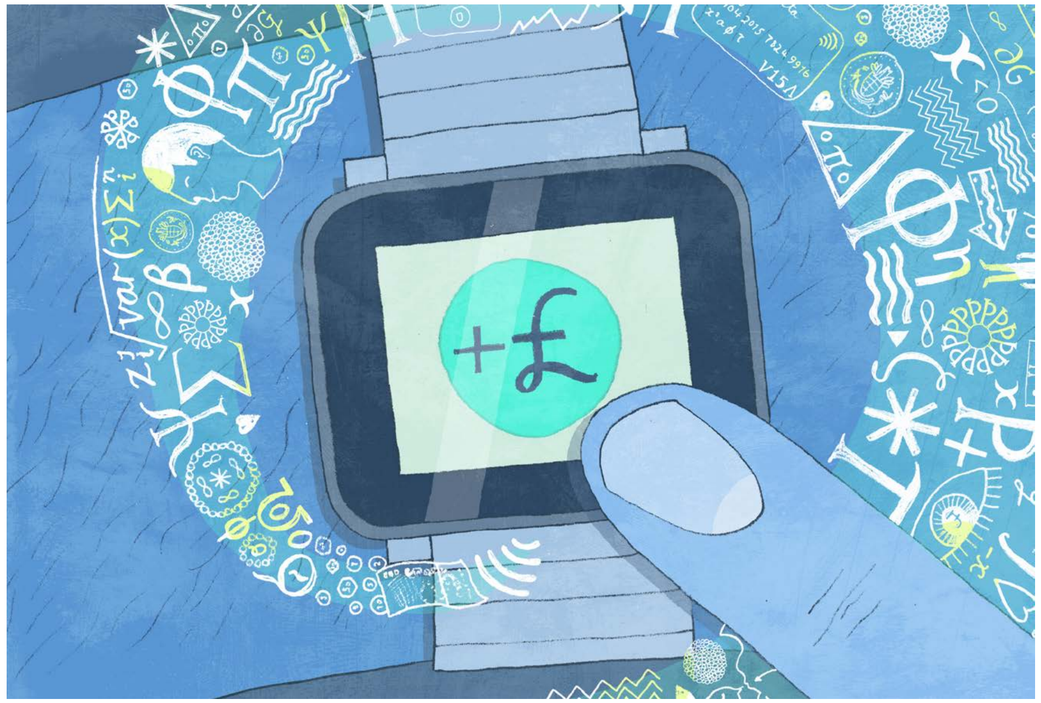
Design without psychology leads to frustration

Aside from the financial sector, it is evident that the principle of applying psychology to any design leads to a better customer experience, and ignoring it can lead to design disasters.

Take ticket machines, for example. Most of us have experienced using a complicated machine while travelling in a foreign country. The machine may work, but its complex interface perfectly demonstrates how engineering a solution is different to designing a solution. →

Paul Davies works for Etch UK, a user-experience agency that partners with ambitious leaders who want to act on the opportunities for business growth. Paul is a registered psychologist and trained designer, and has worked on user-experience projects for Old Mutual Wealth, BBC, Barclays Capital, UBS and the UK Cabinet Office.

For more information, visit **www.etchuk.com** or follow Etch **@EtchUK** or Paul **@TheDesignPsych** on Twitter.



In comparison, the new contactless payment system on the London Underground makes travelling around the UK capital effortless. There is no need for a ticket – you simply walk up and present your contactless card, smartphone or smartwatch and away you go. The introduction of contactless technology has opened the door for solutions like this, but the psychology of understanding how people want to engage with systems is what led to the creation of the technology.

In nearly every area of life, a lack of thought in human-interface design can cause frustration, from washing machine dials to door handles, toilet flushes to remote controls. We get used to these frustrations because our motivation to carry out the behaviour is high enough to persevere in most cases. In situations where people's motivation is low, any frustration leads to the behaviour not being carried out. This explains statistics such as why only 51% of eligible employees in the UK sign up to defined benefit retirement plans, even when such plans are fully paid for by the employer (research by Benartzi & Thaler), or why only 14% of Americans surveyed by the Employee Benefit Research Institute are very confident that they will have enough money for their retirement.

If the design of a financial platform is user friendly, then people are more likely to carry out the intended behaviour even if their motivation isn't particularly high. Neoclassical economists would argue that motivation in saving for a pension should be high but that is simply not the case.

Forget maths, economics is psychology

Ludvig von Mises was an Austrian economist, sociologist and philosopher who understood that economics isn't a mathematical science – it is a social science. He put forward the idea that economics is actually a subset of psychology, where psychology is the study of the human mind; praxeology is the study of human choice and action; and economics is the study of human choice and action under conditions of scarcity.

Rory Sutherland, Vice Chair of Ogilvy Group UK, is quoted as saying: "Economics is and should be a social science, not a masturbatory exercise in numerical modelling which achieves a spurious mathematical neatness at the expense of stripping away from human behaviour almost everything that makes us human." When viewed in this manner, the study of economics is more than the study of perfect markets; it is an investigation of how we make decisions en masse that affect these markets.

Economists who rigidly stick to mathematical and mechanistic models are uncomfortable with many of the implications of psychology and the illogical manner in which people make decisions, and so leave it out altogether, preferring a model that is mathematically consistent and predictable. Unfortunately, building platforms from this foundation can be incredibly expensive, produce little customer adoption and, in the worst cases, can lead to a detrimental customer outcome. When you put humans into a maths equation, you get a land of chaos as we don't make decisions in a logical way.

Don't put all your eggs in one basket

So how does our illogical nature lead us to make irrational investment decisions? In a revealing study by Benartzi & Thaler, people were asked how they would invest their retirement money if they had just two funds to choose from. The first group was given the choice between a fund invested entirely in stocks, the other in bonds. Most people chose to split their investment between the two funds, explaining that they didn't want to 'put all their eggs in one basket', so achieved an asset allocation of 50% stocks.

> The psychology of understanding how people want to engage with systems often leads to the creation of technology. Take the new contactless payment system on the London Underground – you present your smartwatch and away you go

Learning from this, the project team gave the second group a different choice: a fund invested entirely in stocks or a 'balanced' fund that contained a 50/50 split between stocks and bonds. Logically, this group was given a shortcut to create a balanced asset allocation; however, they instead chose to split their money equally between the two funds again, therefore achieving a 75/25 split of stocks. And yes, a third group was given the choice between the balanced fund and a bond fund, and they chose to split equally again, giving them a 25/75 split.

All groups in the study made their financial decision on a rule of thumb – don't put all your eggs in one basket – or, as psychologists call it, the diversification heuristic. This heuristic is so powerful when it comes to making decisions, it overrides the logic of which product (or, in this case, allocation of assets) people actually choose. Humans have built up these heuristics over time through evolution as they helped us to survive. Now, we naturally fall back on them. They normally do us good service, but every now and again, they cause us to make wrong decisions by using a rule of thumb.

It's not just people uneducated in finances that are swayed by this effect. Harry Markowitz, founder of modern portfolio theory and Nobel Memorial Prize Winner in Economic Sciences, was asked how he allocated his retirement account and replied: "I should have computed the historic covariances of the asset classes and drawn an efficient frontier. Instead … I split my contributions 50/50 between bonds and equities."

Overcoming the optimism bias

Many organisations attempt to rally people to get to grips with their finances in the same manner in which parents urge their children to study for their exams – by stating how important it is for their future. However, this kind of messaging can lead to the opposite effect to the one intended.

When something is communicated as important, we understand that it deserves attention. Attention is something few of us have right now but we will have more of in the future, so with the best of intentions, we plan to return to this serious planning when we have more time to dedicate to it. This optimism bias – that we will have more time, more money and be happier in the future – leads to nothing happening in the present, and this is repeated over and over again until we hit the moment of panic when it might be too late.

In a recent campaign, Virgin decided to lead with how simple, quick and easy starting to save for retirement is, as opposed to how important it is. Urging customers to get started by stating the simplicity encourages people to start the behaviour right now. Backing this up with follow-up messages about reallocating savings over time and at key life events is more likely to create an engaged saver who acts first and then refines their choice over time.

Putting theory into practice for the bottom line

Considering psychology when designing for financial platforms isn't only about altruistically helping customers to make better decisions; it will help support business objectives, increase revenues and enhance competitive market position.

The 2014 Design Management Institute Analysis states: "In the past 10 years, design-driven businesses have outperformed America's Standard & Poor's 500 – by 228%." The Canadian design team, Teehan+Lax, decided to put theory into practice and launched an experiment to test their belief that companies that put design and psychology high on their business agenda will see it reflected in their stock price. In 2006, they selected 10 companies on the stock exchange that fitted select criteria: the companies all demonstrated care in the design of their products and online tools; there was evidence of the companies creating a positive customer experience when doing business with them; they possessed a history of innovation in their marketplace; and they inspired loyalty in their customer base.

Putting these 10 companies into a mutual fund, Teehan+Lax demonstrated their confidence by investing $50,000 of their own money into the fund. A year after the fund's inception saw it mature to +39.3%, and four and a half years later the fund is +101.8% – outperforming Nasdaq and S&P 500 by a considerable amount.

Stories like this, as well as research from the Design Management Institute and the UK Design Council, have given rise to many customer-centred financial products. In America, for example, the PNC Bank is one of the leaders in providing an excellent user experience to its customers. The organisation's online banking platform has a number of great features, including the innovatively named 'Punch the Pig', which encourages impulse saving by allowing customers to automatically transfer $10 into their savings account by one click of a button.

In summary, I am convinced that products and services based on how people really make decisions, and developing them into usable and easy-to-use technology, is the secret of success. If financial organisations adopt the freedom to explore and create propositions based on insights from psychology and behavioural research, they will be able to offer ground-breaking platforms that help customers make the best decisions – and they will thrive because of it. ■

> "The underlying philosophy of starting with human nature, rather than with economic principles, is what will stand financial organisations apart going forward"

UNDERSTANDING BEHAVIOURS

Equatex's Head of Marketing and Communication, Kevin Mann, on why employees are like consumers when it comes to incentive schemes

Equity plans are powerful tools to help foster engaged and loyal employees whose goals are aligned to an organisation's long-term ambitions. A plan's effectiveness in achieving this is greatly dependent on a good user experience throughout the life cycle of a scheme.

As Paul Davies highlights in his article, employees are like consumers with inherently human traits and expectations built up from familiarity with a wide range of financial services. Understanding their behaviour as consumers (and human beings) enables us to design interactions that not only smoothly facilitate the processes underlying equity ownership but go further to positively contribute to the ultimate objective: employee engagement. Clarity, simplicity and ease of participation can greatly maximise take-up rates in voluntary plans, while the ability to easily monitor a plan's performance at any time from any device supports continued commitment to the success of the business.

Today, up to 80% of workers have a smartphone and, according to a recent survey by *Computing Magazine*, over 71% of companies provide smartphones to at least some of their employees. The rapid adoption of smart devices in recent years has unlocked many new opportunities to further enhance employees' connection and engagement with their share ownership and incentive schemes.

Our role as an administration partner and technology provider is to enable organisations to deliver a motivational experience for their employees across the wide range of plans available worldwide. We believe that every employee interaction with their reward scheme should be engaging. That is why we have a substantial continuous investment programme in technology innovation.

For example, we will be devoting around CHF2 million over the coming 18 months to push the boundaries of how new technologies can contribute to the success and effectiveness of equity plans as powerful employee engagement vehicles. As part of this, we will be working with a mix of clients, academic partners and leading consumer experience companies to research and develop new services fit for the next generation. From enhancements to the EquateMobile App and EquatePlus online platform, to deconstructing the full employee experience and rebuilding it for the future, we have a range of exciting initiatives to challenge how global share plans should be run in our highly connected and demanding world.

Words: Marc Muntermann and Helmut Mannert, Siemens
Illustration: ©Ikon

A place to call your own

Equity culture is an integral part of Siemens' wider culture of ownership. Marc Muntermann, Head of Global Share Programs, and Helmut Mannert, Head of Top Executives and Equity Compensation, discuss the impact of employee share ownership on the success and performance of their company

As part of a drive towards wider ownership culture at Siemens, our aim is to build an equity culture and turn employees into co-owners of the company. In general we believe that investing in share ownership has a positive impact and leads to, for example, a higher engagement and economic output. Yet, Siemens is relatively unique in the German market. Around half of the companies listed on the German stock exchange do not utilise broader employee stock purchase plans. They are far more popular in the US and UK. One could even say that German companies sometimes tend to focus on the costs, rather than on the benefits of these programmes.

Over the past year, we have implemented a broad equity portfolio at Siemens that targets every employee at every level – from top manager to shop floor workers. For example, our global Share Matching Plan reaches out to more than 340,000 employees in 60 countries. The principle of this programme is simple: employees invest part of their salary in Siemens shares. After three years of participation, they receive one additional share (gross) for every three shares bought. Until now more than 144,000 employees have taken the opportunity to participate in the plan and thereby become a shareholder of 'their' company.

Turning employees into business owners influences the way they think, behave and invest: they are more active, take more responsibility for our resources, and are better at collaborating with colleagues. Employees are entrusted with the company; if they see something is wrong, they then provide support and information. And so, these positive side effects lead to a positive financial outcome for our business.

You could say that employees do not control the general impact. Take a factory worker, whose failure rate is slightly higher than the average of his colleagues. He might say that this has no impact on the overall company performance. Would an owner also argue that way? A slightly higher failure rate in production on a global scale obviously has an impact on the business's bottom line as the costs will be higher. As owners, we believe that all employees are essentially responsible for the success of Siemens and together, they can influence it. As they say, the whole is greater than the sum of the parts.

Over the last three years, we have been conducting research on our equity culture and its relation to employee engagement, employee participation and the wider business. Working in conjunction with Professor Doctor Michael Wolff (Chair of Management and Management Accounting) and Ulrike Zschoche (Research Assistant Management and Management Accounting) at the University of Göttingen in Germany, we specifically looked at participation rates in our employee share schemes across different organisational units. The fundamental aim of the study is to ask what the impact of increased participation rates is on employee engagement, on employee performance, and on the operational performance of the business. Is the money we are spending on equity plans beneficial to the company or are fellow organisations right in not implementing employee share ownership because of the high costs involved?

Marc Muntermann joined Siemens in October 2011. He leads the Global Share Program team, and is responsible for the design and administration of all company-wide equity programmes. Before joining Siemens, Marc was Practice Leader in Towers Watson's Talent & Rewards line of business where he was responsible for Global Data Services and conducted consulting activities in regards to non-executives, executives, executive board and supervisory board remuneration.

The research was extremely robust: there were five million data points from up to 300,000 employee applications across 60 countries and on average around 10,000 organisational units. What sets the study apart is that three scientific models were specifically designed to analyse this data. Most studies prior to this tended to provide a high-level overview, based on available public information.

Providing shares to 144,000 employees on a global scale no doubt costs the organisation quite a lot of money. But for Siemens, the research so far confirms our beliefs and indicates that an increase in employee share ownership is linked to a higher engagement score, which is then linked to higher individual performance and higher revenue for the business.

As part of our 'Vision 2020' programme, we are now looking to build on the study. Expanding share-based employee participation will help to foster an ownership culture across the company. So, our goal is to increase the number of employee shareholders to around 200,000 worldwide.

Relative to this, we have recently implemented a new profit sharing scheme. The idea is that if Siemens is making good profits, those earnings are not only for the company and shareholders – a portion also belongs to employees. If we are doing well, a pool will be funded. Then the managing board can distribute the pool and provide shares from it to all employees globally. There are only a few employee share plans based on profit like this in the world, and it is a first for Germany.

With employee share ownership – both the Siemens profit sharing and Share Matching Plan – employees can influence our success. An employee is then not only an employee of the company. It belongs to them so they are more invested, enthusiastic and focused on growth. It's different to other investments, for example, a mutual fund which cannot be influenced at the end of the day. Instead, employees think, "If I work hard and do my best for the company, then the company lets me participate in that success, not only via free shares but also in dividends for the shares kept."

Employee share ownership is always discussed on a cost basis, and companies think they do not have the liquidity to invest. Yet, the costs are very transparent and the benefits need to be argued for. We would love to see more organisations in Germany recognise how employee ownership can lead to corporate success. Likewise, it would be fantastic if the German government considered it as an advantage for German employees as well. On the one hand, employees are investing in Germany; on the other, organisations are investing, which should lead to higher revenues, and therefore, higher taxes for the state. The implications for the wider economy are huge and the country could become more competitive. In this case, why shouldn't the German government support long-term employee shareholding from a tax perspective? Compared with Austria and the UK, for example, Germany still has a long way to go. ■

For more information on Siemens and the University of Göttingen's joint study, please contact Prof. Dr. Michael Wolff (Michael.Wolff@wiwi.uni-goettingen.de) or download the study at www.uni-goettingen.de/de/51945.html

"EQUITY IS ONLY ONE PART OF OUR OWNERSHIP CULTURE AT SIEMENS"

Helmut Mannert, Head of Top Executives and Equity Compensation at Siemens, tells us more about the company's ownership culture

As well as our profit sharing and stock sharing plans, there are three more shareplans currently in place, encompassing all levels of employees in the business. As part of their compensation package, senior managers receive Siemens Stock Awards, which are shares based on the performance of the company against our competition. A voluntary scheme for our top senior leaders, Share Ownership Guidelines, sees a percentage of their base salary converted into shares. And finally, our Special Allocation scheme is based on the extraordinary achievements of individuals.

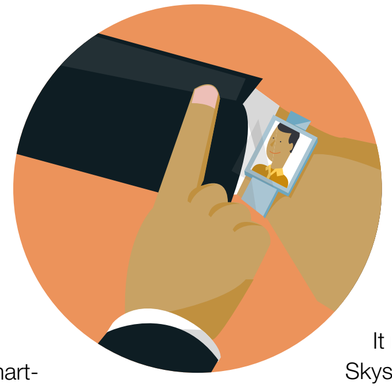
Equity is only one part of our ownership culture at Siemens. Leadership, people orientation, corporate behaviours and values also play a huge role in fostering a sense of ownership. Our managers should serve as role models for the company's strategic direction and ensure the sustainable and efficient use of available resources – thus inspiring and empowering their teams to give their best for the company. Entrepreneurial behaviour should be the standard and foundation for how we act at Siemens. This applies to each individual in the company – only then can behaviours constantly evolve and improve.

We strive for a people-oriented approach that values and clearly fosters diversity of experience and expertise. If this is reflected in all that we do, we'll improve the performance of our company. If everyone in the company acts responsibly, achieves excellent results and is innovative, they will personally contribute to the sustainable success of Siemens. Responsible, excellent, innovative – these values are the foundation of our ownership culture. We strongly believe that employee shareholders act responsibly and are oriented to the long term when they directly participate in their company's success. That's why the equity culture is an integral part of our ownership culture.

The future of travel

and what it means for international business

Words: Filip Filipov, Skyscanner
Illustration: Rachel Cameron



It's the year 2024. You are travelling from Zurich to New York for a business meeting with a new client. Your Digital Travel Buddy sifts through all the data of your previous business trips to provide you with a tailored itinerary and book your travel. After checking in using your smart-watch, you arrive early at the airport to shop its virtual walls before a holographic staff member informs you that your flight is ready for boarding and guides you to the gate. There's no line at security as the latest biometric software scans people from afar. On the flight, your seat becomes a virtual office and you have a quick meeting in 3D with a business colleague. Arriving in New York, your favourite music is playing when you check in to your hotel room. After a quick Vitamin C shower to recover from jetlag, you then leave for your meeting.

It may sound far-fetched, but Skyscanner's vision for the future of travel is much more realistic than you would at first think. The global travel search engine recently collaborated with industry experts and futurologists on a report exploring how travel will become richer, easier and more intuitive within the next 10 years. As Director of B2B, Filip Filipov, explains, business travel will likewise be transformed by technology.

At Skyscanner, we think of ourselves as a tech company, rather than a travel company. For us, it was important to drive the conversation in the industry: what kind of technology will make travel easier in the future? How will travel evolve as we know it?

Economically, travel is more affordable than it has ever been and politically, we are seeing the reduction of visa restrictions as diplomatic relations warm up between historically disparate countries. But it's technology that holds the real transformations for travel. Since Steve Jobs unveiled the iPhone in 2007, there has been an explosion of tech that has led to us being more connected than ever before.

Your Digital Travel Buddy

Travel discovery is currently very time-consuming as people spend hours comparing prices across multiple sites and platforms. Imagine having our own Digital Travel Buddy, powered by AI and living on a wearable device, that will act as a personal assistant and plan and book our travel for us. It will understand our individual preferences, organise itineraries and act as a tour guide. For these 'e-agents' to become a reality, it is a question of utilising existing technology such as Siri or Microsoft's Cortana that already allows us to communicate with a machine.

The advent of touch screen technology has given rise to wearable devices that will only continue to evolve and become more mainstream. The Apple Watch can now be used to store your boarding pass and check in; in the 2020s, wearable devices will be smaller and faster. The equivalent of Google Glass in 2024, for example, could allow us to instantly translate foreign languages on menus. Travel companies may also use virtual reality to provide a showroom for travellers, so you can put on a headset and walk around a hotel or other location in real time.

The benefits for business travellers will be huge, perhaps even more so than for leisure travellers who need help but still want to retain that moment of discovery when arriving at a new destination. Business travellers require more control when they are travelling – they may need to arrive in a city at a specific time for a meeting – and the aforementioned technology will make their lives easier.

Remember personalisation

At Skyscanner, we refer to big data as linked data. Say you know that an 18–24-year-old, who is single, male and lives in a city, prefers to book holidays 69 days in advance. That's amazing, but the truth is that historical data is not necessarily a sign of how people will behave in the future. True personalisation comes when you have many different data points to draw on and can anticipate how people will behave.

Travel services will be able to deploy deeply intuitive semantic tools that will understand your preferences and offer a tailored experience: you are a regular business traveller, you only take hand luggage and you always fly first class.

Business travellers frequently use the same hotels and flights, so digital systems that remember this information save time when rebooking. Considering many organisations still use offline travel agents, from a supplier's point of view, they can better plan itineraries without the need for long phone calls.

Airports you want to spend time in

Airports have been considered a pain point in a traveller's journey and they need to transform to become part of the experience. In the future, there will be no need for check-in desks as people can use their wearable devices to check-in with a voice command. Security is another pinch point. There is different tech in development that allows you to scan people from a distance, and departures may soon operate a biometric immigration system using facial recognition. →

It's fundamentally about convenience so the airport itself will employ functionalities that make you feel more at home, whether that's a cinema, gym or outside space. Business travellers spend as little time as possible at an airport so there are opportunities to encourage them to spend more time there.

Singapore's Changi Airport has recognised many of the above problems, and its new terminal, due to open in 2017, will deploy biometric scanning, digital boarding via mobile, and virtual concierges that showcase products you can buy and have delivered to your home.

From plane to hotel

On flights, you will have your own space with built-in climate control and sonic disrupters. On-board communications will change radically by the end of this decade. Business travellers will be able to use their seat as a virtual home office and hold Skype-style 3D holographic conversations with colleagues. Haptic gloves will even allow you to shake hands with your colleague. Right now, we have tap technology where we touch a screen and a signal is produced; haptic uses electronic magnetics so the screen replicates the feeling of a surface, for example sand or water. It may be a stretch of the imagination but Disney is in the process of creating a new interface called REVEL.

The prospect of low orbital flights is also really exciting and I believe entirely realistic – you could travel between London and Sydney in 2.5 hours, and the consequences for business travel would be incredible as inter-continental flight times would be radically cut. If Virgin Galactic achieves its Space Tourism programme, I think the biggest impact will be on commercial aviation. It may cost £600,000 for a few hours in space, but if flights into the stratosphere are produced in scale, then I don't see why it wouldn't become cheaper. It might not be commercially active in 10 years, but it is definitely achievable.

Even if low orbital flights don't become a reality, there won't be any need to worry about jetlag. There's a hotel in Las Vegas that offers rooms with Vitamin C showers and special lights to help fight the effects of jetlag. Features like this are only the beginning; hotels will transform with personalised, intuitive and embedded technology. The simplest form of personalisation is to check in and see your name in your room. Personalisation isn't difficult; it's just a question of connecting the right data with the right tech. The Internet of Things will help you control everything, down to the light level in the room and the temperature of the shower. A hotel in Hong Kong already gives tablets to its guests from which they can control lighting, the curtains and music in the room.

Becoming a reality

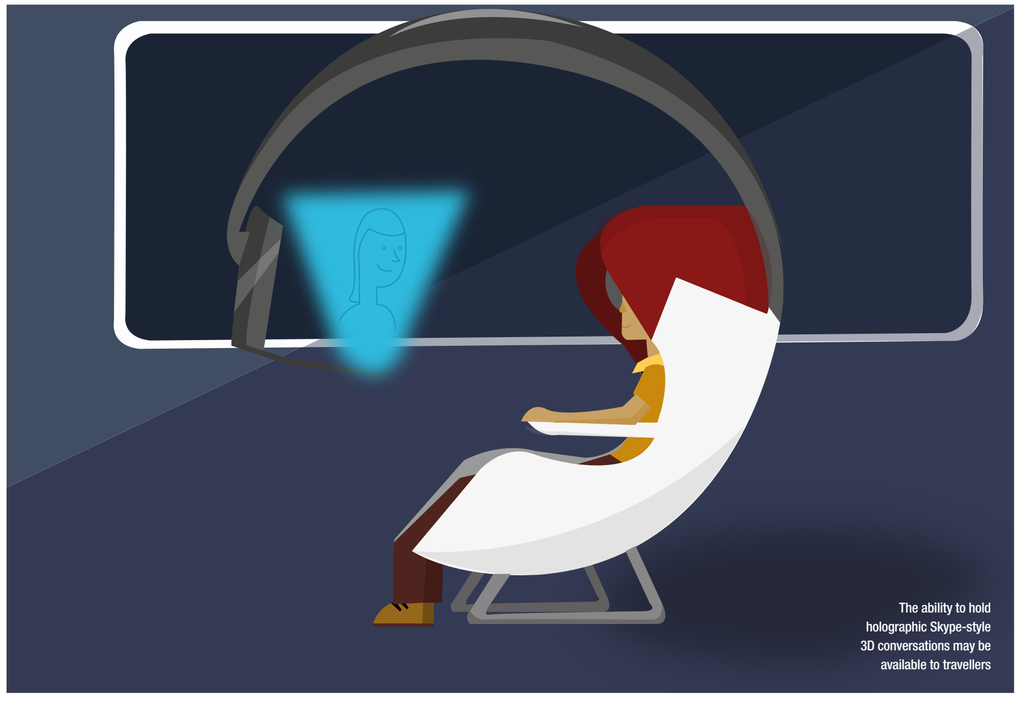
It will be interesting to see how many of our predictions become a reality. Perhaps the timing of the technology may be earlier, or indeed later, but most of what I've mentioned is already in existence in some form. It may not be mainstream yet, but that will come. A lot of people believe that tech is about those few early adopters, those innovators who will inspire others, but people only use tech if it is useful and they find value in it.

People also say that telecommunications will kill business travel, but I don't think this will happen. I think we will see even more business people travelling as it will be more convenient and cheaper. Travel will become more accessible to more people and the pain points we experience today will be solved by tech. Think of a world where the traveller comes first, and the technology comes together to make that experience intuitive and inspirational. ■

> "Departures may soon operate a biometric immigration system using facial recognition"

Filip Filipov is the Director of B2B at Skyscanner, responsible for defining and building the products to allow the travel industry to make use of powerful APIs and data analytics and industry insights. Filip previously held a variety of senior management positions in a wide range of industries and areas. He has worked as a consultant in New York and London on strategy and supply chain management projects, before moving into the travel industry, where he held a number of roles including his role as an associate for Travel Capitalist Ventures.

Skyscanner's report on the future of travel is available to read at **www.skyscanner 2024.com**



The ability to hold holographic Skype-style 3D conversations may be available to travellers

Words: David Smith, *The Sunday Times*
Illustration: Rachel Cameron

Who runs the world?

The Sunday Times' Economics Editor, David Smith, explores the shifts in power between nation states and global corporations

It is more than 40 years since Joseph Nye, the American political scientist, wrote his seminal article on multinational corporations for *Foreign Affairs*, the journal on international politics produced by the US Council on Foreign Relations. Nye's article, 'Multinationals: The Games and the Rules: Multinational Corporations in World Politics', was addressing what at the time was a growing phenomenon: large businesses operating across borders and increasingly exerting considerable power over governments. →

As he put it: "As dramatic as the rise of the multinational corporation has been its increased political prominence." While attracting inward investment from these new leviathans of the world economy brought benefits, many governments even then had come to fear this kind of economic takeover as their predecessors had been concerned about military invasion.

And, predicted Nye in 1974: "The odds are that both the size and political impact of multinationals will continue to grow … Predictions that 300 giant corporations will run the world economy tend to be based on simple projections of past ten-percent annual growth rates, and fail to take into account some of the disadvantages that appear with large size, particularly in manufacturing, when temporary monopoly advantages have been competed away. The challenge to governments will come more from global scope and mobility than from corporate size. Even smaller multinationals can make crucial allocative decisions that challenge the welfare goals of governments. Corporate mobility (which is greater in service and some manufacturing than in extractive industries) is not only a challenge to small states, but also to large states like the United States."

Nye was right about the continued rise of multinationals and that their power and influence would be exerted in a more subtle way than the 'Coca-Colonization' feared in the 1970s. Global businesses have learned to become more culturally aware as they have become larger. Even so, most modern economic developments would not have occurred without the multinationals that were all-powerful back then, and the new ones that have emerged since. Globalisation is not the result of countries interacting with each other but corporations. They drive the trade and investment flows that provide the fuel for economic growth. Perhaps the most significant modern economic change – the rise of China as it emerged from behind its closed and protected walls – would not have happened without Western-based multinationals. They were the ones that invested in the People's Republic, used it as an export base, and opened it up to the world economy.

The rise of these global corporations has often appeared unstoppable. It is hard, for example, to think of the American economy without the contribution of US-based multinationals. A McKinsey Global Institute study, published on the eve of the global financial crisis, found that while US multinationals accounted for fewer than 1% of all American businesses in 2007, they generated 23% of private sector gross domestic product (measured by value-added). Even more impressively, they had contributed 31% of the gains in real GDP and 41% of the gains in productivity since 1990.

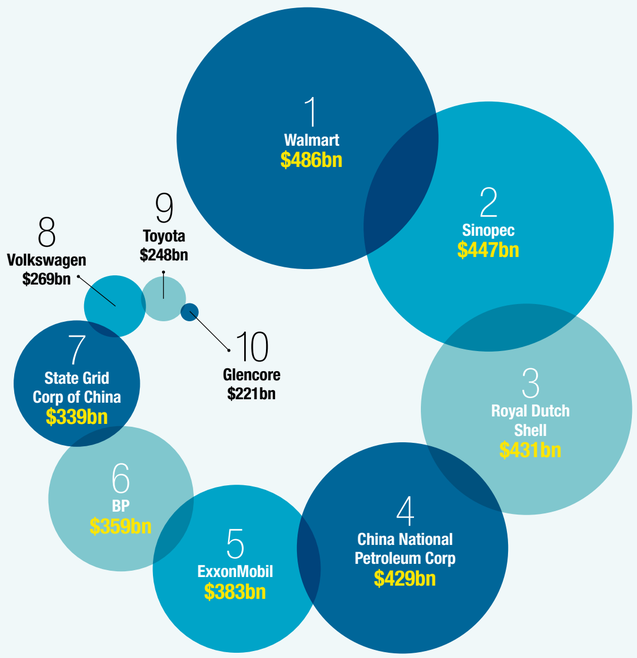
"While their activities create 23% of US private sector value added, they account for larger shares of productivity growth and US private R&D spending," McKinsey said. "They pay higher average wages than other US companies. They account for almost half of the nation's exports and more than a third of its imports, resulting in a more favorable trade balance than other US companies. US multinationals also exert a significant indirect, or 'multiplier,' effect on the economy, which magnifies their contributions further."

Despite the rise of China and of mega firms from Europe, Japan and other Far Eastern countries, US-based multinationals still dominate. The annual Fortune Global 500 list is a ranking of these big beasts in the world's corporate jungle, who between them account for $31.2 trillion of revenues and $1.7 trillion in profits. The two figures are not directly comparable, but as an illustration, the $31 trillion of global 500 revenues compares with global GDP of around $75 trillion. It is the equivalent, in other words, of more than 40% of the world's GDP. These 500 companies employ more than 65 million people between them.

Though there are firms from 36 countries that rank large enough to feature in the Fortune Global 500, America still dominates with 128, more than a quarter, followed by China with 95, Japan with 57, France with 31, Britain and Germany with 28 each, South Korea with 17, Switzerland and the Netherlands with 13 each and Canada with 10. America's Walmart, the world's biggest corporation, was instrumental in locating production in China and has operations globally. Many of the other global giants, including China's Sinopec, BP, Royal Dutch Shell and ExxonMobil, are in the oil industry.

Not all the world's biggest companies would meet the definition of a true global corporation, particularly in China, where for some firms size mainly reflects domestic turnover. Most, however, do. Again, comparisons between GDP and corporate revenues are imperfect, but they show that Walmart would have ranked as the 28th largest economy in the world in 2013, with Royal Dutch Shell as 29th, ExxonMobil as 30th and Sinopec as 31st, all of them with bigger revenues than the GDPs of, for example, Austria, South Africa, Thailand, Denmark, Singapore and Nigeria. A top 100 of global economies and global corporations would include 37 international businesses among its numbers.

THE TOP 10 GLOBAL CORPORATIONS BY REVENUE (2014)



Source: Fortune

COUNTRIES WITH A SMALLER GDP THAN WALMART'S ANNUAL TURNOVER

AUSTRIA SOUTH AFRICA VENEZUELA COLOMBIA THAILAND UNITED ARAB EMIRATES DENMARK MALAYSIA SINGAPORE NIGERIA CHILE HONG KONG EGYPT PHILIPPINES FINLAND GREECE ISRAEL PAKISTAN PORTUGAL IRAQ IRELAND … AND MANY MORE.

Does that mean that multinationals, not governments, run the world? Combine even a few of these like-minded businesses and you are talking, if not of world government by big corporations, but of an enormous concentration of potential power. When politicians rub shoulders with CEOs at the Davos World Economic Forum in the Swiss Alps each January, the question of which of them genuinely has their hands on the levers of power is a valid one.

When Nye posed the question more than 40 years ago, he thought that the answer was no, and would remain so. Multinationals would interact with governments, and often there would be a lot of tension in that interaction, but extrapolating the rise of the global corporation and ending with world domination was probably not going to happen.

A few years ago, you could have been forgiven for thinking that this was too cautious a prediction. If the global corporation of the 1970s was most likely to be found in manufacturing, the big players by the eve of the financial crisis – in power and influence if not in turnover – were in the financial services sector. Investment banks, the modern masters of the universe, appeared to run the world economy. Goldman Sachs helped the Greek government make its public finances look more respectable and invented the concept of the BRICs (Brazil, Russia, India and China). The investment banking community called the shots. In America, pressure from the industry led to the scrapping of most of the Glass-Steagall Act, the legislation adopted in the 1930s to restrain risky banking activity.

Even Labour's Gordon Brown, who had been suspicious of the banking community in his early days as Chancellor of the Exchequer, was won over. In his final Mansion House speech in June 2007 before becoming prime minister, he was fulsome in his praise. "The financial services sector in Britain, and the City of London at the centre of it, is a great example of a highly skilled, high value added, talent driven industry that shows how we can excel in a world of global competition," he said. "Britain needs more of the vigour, ingenuity and aspiration that you demonstrate that is the hallmark of your success."

His timing was unfortunate, and the financial crisis that quickly followed changed the nature of the relationship between governments and big business. The big banks, having called the shots for a quarter of a century, now needed to be rescued by those governments. Royal Bank of Scotland, the biggest bank in the world on the eve of the crisis, had to be rescued by the British government, while protesting that it remained solvent. Its acerbic chief executive, Fred Goodwin, was stripped of his knighthood. Most of Wall Street needed a bailout, following the collapse of one of its number, Lehman Brothers.

When Joseph Nye was writing about multinationals in the 1970s, America's car companies were prominent among them. In the financial crisis they needed emergency help from the American government to keep going. Chrysler, Ford and General Motors lobbied for aid to see them through the crisis and eventually got it, though this did not prevent GM, seen as the bellwether of the US economy ("what's good for General Motors is good for America") from temporary bankruptcy. How much did these rescues, often humiliating for these big businesses and the people who ran them, change the dynamic? Was it just a short break in the rise of global corporate power, or something more fundamental?

Some see the impact of the 2007–09 crisis as long lasting, implying a decisive shift in the balance of power between corporations and governments. Though economies have shown themselves to be vulnerable, and in the case of countries such as Greece that vulnerability persists, economies survive. Corporations, in contrast, and most notably the banks, would not have survived without government and central bank support. Some see a new post-crisis form of capitalism, in which collaboration rather than confrontation between business and government becomes the norm. Others, such Mariana Mazzucato, professor in the economics of innovation at Sussex University, argue that this has always been the case.

In her new book *The Entrepreneurial State*, she argues that the public sector has often been the driving force behind what are generally regarded as private sector innovations, including in information technology. As she puts it, the book "challenges the image of the lethargic, regulating state versus the dynamic business sector – using historical examples to show how some of the most high risk and courageous investments that led to revolutions in IT biotechnology and nanotechnology, were sparked by public sector institutions. It offers a new way of thinking about political economy in the 21st century."

Whether or not this is a generally accepted view, governments have been sharpening their claws in their dealings with big business in the post-crisis era. This has been most obvious in the case of the banks, which have been subject to tougher regulation, higher capital requirements and special taxes such as Britain's bank levy. There has also been additional pressure to ensure that multinationals do not try to minimise their tax bills. The technology giants, in particular, have been widely criticised and have come under pressure to pay their fair share of tax.

The Australian government recently announced a multinational anti-avoidance law, which will take effect at the start of 2016. Companies dealing with Australian customers will be expected to pay an appropriate amount of Australian tax. As the Australian Treasury puts it: "Approximately 30 large multinational companies are suspected of diverting profits using artificial structures to avoid a taxable presence in Australia. Where the law applies, multinationals will be subject to the Government's new doubled penalty regime for tax avoidance and profit shifting schemes. This means that not only will tax avoiders need to pay the tax that they owe, they will also face penalties of up to 100% of the tax they owe and interest."

So the relationship between big business and governments is constantly evolving. There are times when the balance shifts sharply in favour of corporations, and times when it shifts back. The latest book from Nye, to return to where we started, is called *Is the American Century Over?* He concluded that it is not, despite all the emphasis in recent years on the rise of China. Soft power, the concept popularised by Nye, includes the global influence of a country's businesses and the worldwide importance of a country's brands. In both respects, America is in a strong position. There may be friction between businesses and governments. Mostly, however, they are pulling in the same direction. ■

> "There may be friction between businesses and governments. Mostly, however, they are pulling in the same direction"

David Smith has been Economics Editor of *The Sunday Times* since 1989. He is also chief leader-writer, assistant editor and policy adviser. He also writes columns for *Tax Journal*, *Estates Gazette* and other publications. David is the author of books including *The Rise and Fall of Monetarism*; *Mrs Thatcher's Economics*; *North and South*; and in 2015, *Something Will Turn Up: Britain's Economy Past, Present and Future*

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Words: David E. Hawkins, Institute for Collaborative Working
Illustration: Sergiy Maidukov

It takes an orchestra to play a symphony

As business becomes increasingly global, internal collaboration has never been more important – but it's also becoming more difficult. David E. Hawkins, Operations Director and Knowledge Architect at the Institute for Collaborative Working, considers a human framework for success

How do you get organisations to collaborate? Certainly, there's lots of good material out there by many gurus who talk about building trust and so on. But the real challenge is realising that most organisations tend to be incentivised the wrong way to get people to collaborate. Across an organisation, the drivers for different functions can be almost diametrically opposed.

Imagine you have a sales team marketing to a client, and one of the sales team's dependencies is its supply chain. On the one hand, they are looking to collaborate with a client, but in terms of working with the supply chain, they are being very un-collaborative because the procurement department has been incentivised to save money, not spend. Tensions begin to build up, not just with the outside world but also within the organisation itself.

At the Institute for Collaborative Working, we look at collaboration in four dimensions: collaboration with customers, particularly where customers want greater integration of services; collaboration with supply chains where some of that supply chain will be mission-critical to the delivery of a service or a product; collaborations with external partnerships where organisations need to work cohesively with third parties because the solution for the customer requires technologies and capabilities which are outside the organisation's current portfolio; the fourth dimension is internal.

I've spent most of my career working for multinational organisations and it's often considerably easier to collaborate with somebody outside of an organisation than it is with somebody inside it. You've got constant tensions between marketing, sales, production, supply chain, quality control etc., all being frequently performance measured against different criteria.

And so it comes down to understanding that internal collaboration is all about identifying the various functions of an organisation, and how well they are aligned. If you look into those external relationships that have failed, the reason they have failed is generally because of internal tensions pulling against a common aim.

But internal collaboration has become less and less straightforward with modern business, and inevitably so. Half a century ago, organisations brought in materials, processed them and sold them. They effectively had everything under their own control. Now, you've got a very diverse platform of different stakeholders and different deliverers all required to operate cohesively. It's also an inevitability that these diverse supply chains and support chains will increase, and there is no question that tensions will then build up between local operations and central control systems, some of which fly in the face of collaboration.

We have to understand the pressures, thoughts and considerations of people all over the world. Big organisations operating globally have tried to address this by standardising the processes they operate, but the more processes that are standardised without consideration of the implications for the individuals involved in them, the greater the potential for people to drift apart. They're not in communication with each other, they're communicating with a vast system; you've got a big machine full of data, but the data is in complete disarray.

It comes down to management. Senior managers understand the necessity for people to work together; people on the ground like to work together; the biggest blockade is the permafrost that sits between them. But management is changing, and the permafrost beginning to thaw. What you are now seeing is Henry Ford's model of command and control being torn up as people build enterprises across the globe.

It's a difficult challenge, particularly when you are not only working under the same brand across the world but also working with third parties outside the organisation, but the drum beat needs to be set, from the chief executive down, making sure that organisations are internally aligned, and then making sure there is compatibility between the various components of organisations.

I was instrumental in creating what's known as the CRAFT methodology, which brought together a lot of experience and knowledge from our various members on what makes collaboration work. It became the foundation of framework BS 11000 – not a tick box exercise, but a process of addressing issues in order to eliminate friction and enhance engagement, and thus collaboration. Every one of the requirements within BS 11000 is there because it impacts on the way people behave.

Awareness

Awareness is about opening people's minds. It's about providing a mandate for an organisation to collaborate, and it's about getting high-level support for the approach when it is appropriate. You need that clear direction from the top. The visions and values of an organisation have →

to be supported, and people need to recognise that collaboration is important.

One of the things I do when I go in to see an organisation is look for the Chief Executive's Statement of Intent in which he or she says, "We are going to be a wholly collaborative global organisation." Then I go into the HR Department to look at the staff appraisal process. I can say that in at least 60% of the cases I've looked at, collaboration wasn't even a consideration. How do you expect the staff on the ground to take it seriously and be comfortable applying it if it's not something they're going to be measured against? It's about taking a concept from chief executive to the frontline.

Knowledge

This stage is about applying collaboration to specific sets of circumstances. Does it make sense to be collaborative? One of the biggest threats to collaboration, particularly if you have to bring in third parties, is when employees inside organisations are made to question why they should be helping others. In some cases, particularly in the world of outsourcing, people are being asked to train others who are going to take over their jobs. It doesn't inspire people particularly well. Case by case, then, you have to ask, "Does this interaction require collaboration, or is it transactional?" If it's the latter, why bother? That starts to refine where you put a clear focus on collaboration.

Internal assessment

Intelligent people, having had their weaknesses identified, can manage them. It's about picking a team, but it's beyond the traditional Myers–Briggs way of saying, "This is a community-engaging individual." Internal assessment means working out exactly who in our organisation has the propensity to work in a collaborative arrangement.

There are people who come to work from nine to five, and do what they are asked to do; they are intelligent machines. There are others who come to work and ask, "What could be done differently today?" They are completely different characters. You need some of both, but you certainly wouldn't put a core team of the former together if you were looking at developing something new.

Partner selection

Let's say you've got a group in the UK working with a group in Malaysia – both very smart bits of an organisation and both operating under the same brand. Finding somebody in Malaysia who can talk to somebody from Newcastle may be quite difficult, and that's a potential constraint. Sometimes managers assume that we've got all of the clever material and that we can email each other, but we don't necessarily read the same words in the same way.

Internally, this diversity can be a huge opportunity to challenge what doesn't make sense, but at the same time it's a risk. If employees don't understand one another, the sides of the collaboration will start banging up against each other. You need to start saying, "I'm going to create a global team to achieve something," and then make sure team leaders across the globe meet certain criteria: they need to be able to communicate, they need to be incentivised, and they need to have a propensity to collaborate.

Working together

Teamwork has a value, and it has a contribution, but how do you build and orchestrate teams across the globe? It's hugely expensive to shift people to one place so that they can actually coalesce as a team. Instead, then, teamwork needs to stem from leadership that doesn't tolerate non-collaborative behaviour. Again, you have to go back and ask, "How many of our leaders and senior managers actually have collaborative bents themselves?" It's not about looking at leadership in its older sense, but about influencing groups of disparate people to march in single directions without giving them uniforms and 12 weeks of basic training. People tend to work together if they are encouraged to and inspired to.

> "Senior managers understand the necessity for people to work together; people on the ground like to work together; the biggest blockade is the permafrost that sits between them. But management is changing, and the permafrost beginning to thaw"

Value creation

You may look at your own bit of a business and be very enthused by it, but when a colleague across the other side of the world comes up with an idea, it goes in the back pocket. Encourage cross-fertilisation and get people to understand that different people look at the same problems in different ways. Whether you engage in kaizen, lean or a full-blown continual improvement programme, it doesn't really matter; it's all about creating an environment in which different views are valued.

You get two benefits from doing this: the first one is that every so often you have a brilliant idea pop out; the other is that by encouraging a group to look at alternatives and come up with new ideas as a group, you actually help to reinforce the group dynamic. If an employee in China comes up with a great idea and sends it to a colleague in Germany, the colleague should be saying, "OK, what does this mean?" In deliberating that in a non-contractual and non-rigid way you actually help to break down barriers because even if it's not a good idea, you're having a great conversation; you get more of an understanding of each other. It's about building an environment where engagement is valued, and not devalued by machines.

Staying together

Quite clearly, any collaboration is made or broken on the level of trust that exists between individuals. If you are working in a challenging, creative environment, you are inevitably going to have issues and frictions coming up, but I actually think they are constructive. It's not the problem that is the issue, but the way in which you manage it. What tends to happen in most organisations is that every time an issue arises between one or other divisions it immediately escalates up and becomes a dogfight – it's easy to send an email to the boss. Instead, the management on both sides needs to be pushing the issue back down and saying to the people on either side, "Sort it out – come up with a solution!" It's all a matter of joint team management.

Exit strategy

In a big organisation a plan might be laid down for the development of a product in India, and once that project is developed the team will be disbanded and moved into manufacturing in Vietnam. But what happens to that group that you've spent a lot of time and effort creating in India? How do they see the future? If they are really that good, should they be moved on? People forget that this is not a tick box exercise or a process of winding up contracts and closing down operations; it's about making the most of investments made and knowledge gained, and sharing that internally. ■

David E. Hawkins is Operations Director and Knowledge Architect for ICW. He has had an extensive career in projects and procurement, particularly in the construction industry, working in many parts of the world. He has developed training programmes and has been a leading speaker in the field of exploiting relationship management through effective leadership and strategy development.

For more information on the ICW, visit **www.instituteforcollaborativeworking.com**

TOOLS FOR THE JOB

Equatex's Head of IT, Martin Wüthrich, on their approach to collaboration

Technology is changing the way we collaborate; it's a facilitator. Whereas before we worked in a very static way, we now use collaboration software, such as Confluence and JIRA, which allows multiple people to work together on one platform wherever they are in the world. As with any tool, it requires upfront investment but the benefits far outweigh this initial cost.

I've found that the platforms are very lively and people are receptive to each other's ideas – one member of the team can start a blog post or a document and then other people contribute to it. Confluence's news feed also allows you to join in your colleagues' conversations; JIRA is similar to a shopping cart so we can trade tasks and assign them to people. This all means an accessible knowledge base is created and we can comment on projects much earlier, which then helps in avoiding problems further down the line. To ensure our employees get involved, we employ the concept of gamification, so award people who are the most active on the platforms – it's fun and gets us all talking.

People are more connected than ever before and it makes life much easier, especially in an age of remote working and global organisations. We have teams based across the world – Oslo, London, Zurich and New York – and technology has helped in keeping us close together. By using a tool like Skype for Business, there is no difference in phoning a colleague on the 12th floor here in Zurich or in Norway. Everything is mobile phone friendly too; we can access Equatex's collaboration tools on our smartphones so we are always involved in the conversation.

Collaboration can be strategic and then sometimes it is very organic. I see it as an opportunity to explore people's ideas and have a better understanding of your colleagues' projects. Technology is fantastic, but it's also important to meet with people and talk to them face-to-face. When we are working on a project, we sit people together in a way that makes sense and ensures great collaboration. I personally find social events important too as you can learn so much from people in different areas of the business. Many initiatives at Equatex have started because of small talk during a coffee break.

> "To ensure our employees get involved, we employ the concept of gamification, so award people who are the most active on the platforms – it's fun and gets us all talking"