



GLOBAL TECH ADVOCATES & HP

TECH TRENDS & CHANGING
IT ENVIRONMENTS



GLOBAL
TECH
ADVOCATES

INTRODUCTION

Global Tech Advocates, the only truly international grassroots tech community, has partnered with HP, the global technology company, to understand the tech trends, challenges and opportunities facing IT leaders at some of the world's largest and most innovative businesses.

A series of 25 interviews were conducted between March and June 2020, in the midst of the global pandemic when IT leaders were facing economic uncertainty, the rapid transition to remote working and the re-structuring of business models towards digital channels.

During a time of unprecedented disruption, IT leaders shared their experiences, learnings and perspectives with Global Tech Advocates and HP.

This report summarises the different ways IT leaders have adapted to the pandemic, their views on the new realities of doing business post-pandemic and the tech trends that are dictating their budgets and strategic priorities.

25
IT LEADERS



ATTENDEES

Alan Smithwick, Supply Chain Manager, LGC, Biosearch Technologies (SF Bay Area), *Sector: Manufacturing – biotechnology products manufacturer*

Albert Hitchcock, CTO & COO, Pearson, *Sector: Education*

Anant Patel, Head of Market Risk and Former CIO, *Sector: Financial Services*

Andrea Burrows, UK Managing Director & **Matt Parker**, Executive Director, IT and Student Operations, Online Education Services (Australia, UK), *Sector: Education*

Andrew Fray, UK Managing Director, Interxion (UK), *Sector: Data centres*

Carola Wahl, Board Director, Generali Insurance, *Sector: Financial Services*

Denis Timm, Head of Technical Support Group, UCL (UK), *Sector: Education*

Dirk Daumann, CTO, sennder (Germany), *Sector: Logistics – digital road freight logistics*

Frank Lubnau, CTO, ISS Facility Services (Germany), *Sector: Facility Services*

Fumbi Chima, Global CIO, Adidas (Germany), *Sector: Manufacturing – global clothing manufacturer*

Hima Mandali, CTO, solarisBank (Germany), *Sector: Financial Services*

Ivan Fadini, Business Innovation Director, Manpower Group (Italy), *Sector: Recruitment*

Josh Moont, CTO, WeSwap (UK), *Sector: Financial Services*

Maria Juesas, Senior Associate & **Isaac Cayellas**, Technology Director, InnoCells, part of Banco Sabadell (Spain), *Sector: Financial Services – fintech hub and accelerator within Banco Sabadell*

Mark Egan, Partner, StrataFusion (SF Bay Area), *Sector: IT – IT and security infrastructure transformation*

Michael Popoola, NetOps Leadership, Practice Fusion (San Jose, CA), *Sector: Healthcare – web-based electronic health record company*

Mike Giannoumis, CTO, PaySafe (Canada), *Sector: Financial Services*

Neng Li, Operation Manager, National Eastern Tech-Transfer Centre (China), *Sector: Innovation Platform*

Nick Folkes, Group CIO, G4S (UK), *Sector: Security – global security services company*

Nil Larom, Senior Director, UPRETS (China), *Sector: Financial Services*

Paul Westmore, IT Director, University of Plymouth (UK), *Sector: Education*

Patrick Maes, Global Head of Bank User Solutions, Credit Suisse (Switzerland/UK), *Sector: Financial Services*

Rick Hopfer, Chief Information Officer, Blue Cross Blue Shield (Hawaii), *Sector: Healthcare*

Steve Plunkett, Chief Product Officer, Supponer – Media & Broadcast Division (UK), *Sector: Media & Logistics – sports media and technology company*

Yi Xu, Founder, Human (China), *Sector: Technology*



INTRODUCTION FROM RUSS SHAW

Global Tech Advocates and HP set out to speak to IT leaders from around the world to better understand the tech trends and changing IT environments within their businesses. These IT leaders run the digital infrastructure of some of the world's largest employers, the most influential brands and innovative digital services.

What we didn't know was that a global pandemic was about to transform the international economy.

Over the course of 25 interviews, we spoke to those on the frontline of a hyper-accelerated period of digital transformation unlike anything previously experienced. As one IT leader told us, digital transformation that would typically take five years was achieved in a fortnight.

Transitioning global workforces to remote working, replacing physical stores with digital channels, implementing new security policies across distributed IT environments and deploying video conference facilities. All of the traditional barriers to digital transformation –



concerns about costs, business disruption or low levels of employee adoption – fell away and the achievements of IT leaders and teams at pace was remarkable.

Beyond the scale of what was deployed across global IT environments, a number of trends emerged in the course of our interviews.

Some companies were better positioned to adapt to the new normal than others. The ability to adapt wasn't based on sector or size of business – instead it related to a company's previous rate of digital transformation and transition towards cloud services.

The technologies that have enabled companies to adapt to the global pandemic are not new, they have not emerged as a result of the new working landscape. What COVID-19 has done is simply to accelerate a process that many businesses were already undertaking as part of pre-existing digital transformation strategies.

Businesses that experienced the least disruption as a result of the pandemic were already implementing flexible working policies, were already purchasing digital services rather than hardware and were investing in their digital business models.

There is an ongoing journey for almost all companies from older legacy processes towards cloud services, or a hybrid of partial cloud and analogue. The global pandemic didn't start the process, but it increased the speed and urgency of IT leaders as they progress down that journey.

Whilst some IT leaders were prioritising issues such as cloud adoption, hybrid work environments and digital revenue streams prior to the pandemic, there is a growing consensus that the new normal into which we are entering will change those digital capabilities from a potential efficiency-driving solution to a fundamental requirement for all companies.

During this research we spoke to 25 IT leaders from nine countries around the world (US, Canada, UK, Australia, Italy, Germany, Spain, Switzerland and China), the majority of whom work for companies with 1,000+ employees and covering a diverse set of sectors including financial services, retail, healthcare, education and media.

Of course this is not a comprehensive study of the many different ways that the global pandemic has impacted businesses and economic performance worldwide, but it is a unique opportunity to generate insights into the IT leaders driving innovations that have enabled some of the world's largest businesses to survive the recent disruption and prepare for the post-pandemic reality.

In the report, we have shared the perspectives of those IT leaders and their views on key international tech trends, the technologies required to adapt to COVID-19 and their predictions for the return to work and normality in the future.

This marks the start of a new initiative from Global Tech Advocates and HP to continue peer-to-peer learning and knowledge exchange amongst global IT leaders. The Global Tech Advocates & HP Community launches in 2020 to bring like-minded IT leaders together to continue the discussions we have started and ensure companies are collaborating during transformative times.





KEY FINDINGS

REACTING TO THE PANDEMIC

Initial response to COVID 19 focused on avoiding initial work disruptions

- Enabling teleworking (VPN, Laptops, web-conference software)
- Deploying or scaling digital channels for customers

Secondary response is/has been focused on dealing with the new normal

- Developing short-term IT / transformation strategy
- Relaunching/evaluating paused transformation projects
- Evaluating if people really need to print; accommodating any needs

Third response is evaluating the impact of their new distributed IT

- Defining their work from home strategies
- Considering the security implications
- Creating new digital transformation and process improvement projects
- Determining implications for the office and opening back up

THE RETURN TO WORK AND THE NEW NORMAL

Adoption of hybrid working environments

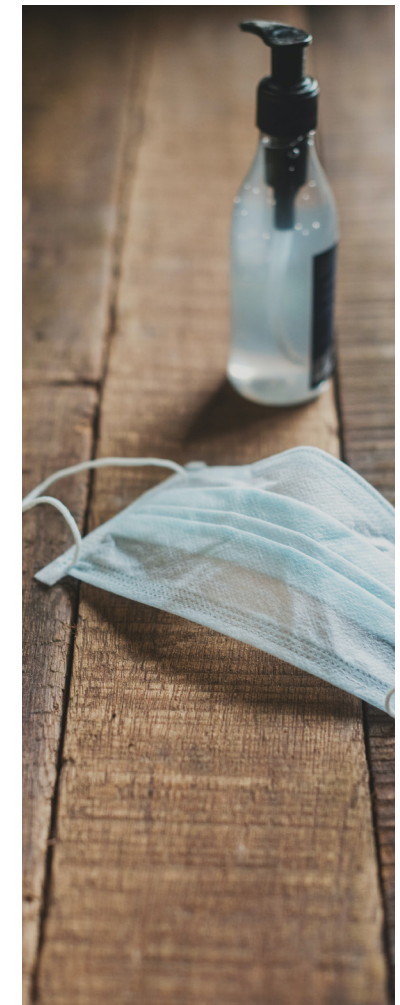
- Widespread appetite for continuation of remote working
- Widespread reviews of existing retail estate requirements and capacity
- Implementation of new hygiene and cleaning practices to ensure prevention of infection
- Continued use of video-conferencing facilities and review of employee hardware requirements

Impact on digital transformation strategy

- Increased senior buy-in to digital transformation
- Renewed focus on cloud services
- Security emerging as the biggest challenges for hybrid working environments
- Increased importance of digital channels for sectors with physical retail
- Opportunity to expand operations globally as a result of increased remote working – for education, financial services and recruitment

Return to pre-pandemic operations

- Increased health and safety issues for sectors where physical space is essential – education, healthcare, retail
- Introduction of new technologies to support physical events – sports, tele-technologies





01 TECH TRENDS FACING GLOBAL IT LEADERS



TECH TRENDS FACING GLOBAL IT LEADERS

We've been rapidly acquiring different companies throughout the world and we have a steadily growing global footprint and we need to centralise our data. Our biggest challenge is implementing one ERP system across all sites worldwide. When the pandemic struck, various sites were at different stages of implementation to this one system.

ALAN SMITHWICK
LGC

As part of building our flexible working environment we moved a lot into cloud services, which enabled us to implement flexible working which has proved incredibly useful now. Work was not something you did in a location. The location you found to do your work was appropriate to the nature of the task you needed to complete.

ANANT PATEL
INVESTEC

Covid has accelerated the need for online education and this has shone a spotlight on the inconsistency of provision. Quality digital education is not about lecture replay and pdfs but about engaging, multi modal, well-structured sessions.

ANDREA BURROWS & MATT PARKER
OES

We want to turn Pearson into a platform business that looks more like a Netflix or a Spotify. The personalisation of learning is a key aspect. Artificial intelligence is going to change our strategy. How do you turn the learning experience into a highly personalised, engaging, digital experience?

ALBERT HITCHCOCK
PEARSON

In recent years, many insurers have done their homework and invested significantly in engineering elements such as data management, data quality and security. Now insurance companies are focusing on scaling efficiency cases and using AI to differentiate their business, develop the customer experience and introduce new products. Being a data-driven company is one of the key success factors in insurance. Having access to customer data will become even more important than owning the customer interface.

CAROLA WAHL
GENERALI INSURANCE

As part of building our flexible working what's also driving innovation is the speed of light. How can you manage proximity and latency – which is all about the speed of light – to deliver the best services? Companies want to deliver content reliably and consistently to consumers. Any disruption results in catastrophe for a business.

ANDREW FRAY
INTERXION

We are expanding our engineering team significantly and have the ambition to apply technology solutions for operational work wherever possible. Our business is about optimizations to create win-win situations for everyone involved in the process. For us it's a data game and we leverage transactional and behavioural data in order to achieve those optimisations. We aim to be the operating system for the logistics world matching shipper and autonomous trucks. You can only realise that opportunity if you can automate and optimise the process and have the right data.

DIRK DAUMANN
SENNDER

Unless you have enough data and insights that help you through the digital transformation journey it's very difficult. For large, complex organisations without bespoke systems the data flow is not there.

FUMBI CHIMA
ADIDAS

In the recruitment space there is a strong need for automation to increase efficiency, reduce costs and to gain insights to ensure the right talent gets found. We need to get as much information as possible out of interviews and can use technology to understand soft skills.

IVAN FADINI
MANPOWER GROUP

These days people don't buy hardware, they buy services. Data centres will disappear as more and more people go to Amazon to buy a service.

MARK EGAN
STRATAFUSION

The biggest trend for manufacturing is understanding the factory of the future. We consider connected machines, managing data, optimising production and smart manufacturing. This is about connectivity, data flow and collecting data. But data is worth nothing when you don't know what to do with it. If you are properly aggregating the data and applying artificial intelligence you can start to make compelling decisions for the business.

FRANK LUBNAU
ISS FACILITY SERVICES

“Open banking is expanding across UK and Europe. Governments are requiring banks to allow users to access their own data in a secure and consistent way across any platform. This opens up very interesting opportunities for WeSwap to on-board new customers using that data, saving admin costs, whilst also making it a better user experience.”

JOSH MOONT
WESWAP

“There are so many financial processes that need to be digitised and haven't been – like mortgages. Given we are coming into a world where everything needs to be digitised, compliance and regulatory constraints need to adapt to the new needs and habits.”

MARIA JUESAS & ISAAC CAYELLAS
BANCO SABADELL

“Our company is very concerned about sustainable development. Some facilities in the company are equipped with artificial intelligence to save energy consumption. Transfer environmental protection knowledge to all employees regularly, save paper, water and electricity, and improve their environmental awareness. Information Liquidity is also particularly important for our industry. In recent years, our focus has been on digital transformation, integrating paper-based information into digital information, establishing online databases and interactive platforms.”

NENG LI
NATIONAL EASTERN
TECH-TRANSFER CENTRE

“The key trends for sports marketing are artificial intelligence and computer vision. We invest tens of thousands of euros per game, which is fine because there are hundreds of thousands of viewers attracting advertising spend. But if we could reduce the cost of the equipment we use that would make a huge difference. So instead of having big crews and trucks at every venue when a game is going on, we are moving to lightweight technology”

STEVE PLUNKETT
SUPPONOR

“Compliance is the biggest trend we're seeing and a huge amount of time and money has been invested to support this. We're also streaming a huge amount of data. The speed of transactions is important in payments, where everything needs to be done in real time – validation, customer checks etc. The only way to do this is by streaming data.”

MIKE GIANNOUMIS
PAYSAFE

“If you want to digitise, you need to think end-to-end from a client perspective and a technology perspective. Investing in intelligent automation, complementing services with digital chatbots, distributed ledger technology, artificial intelligence and cloud are becoming the norm. There are a number of constraints that need to be taken into account – including the ability to explain in human language why we came to a decision and ensure that bias is not introduced into our systems.”

PATRICK MAES
CREDIT SUISSE

“The biggest difference between human and AI is human emotion. If emotion can be detected and quantified, it will be a big breakthrough in the development of human society.”

YI XU
HUMAN

“My industry has traditionally been analogue - it's about a human being provide a service. But digital is creeping in and we're thinking about IoT, video analytics, edge computing and analytics that detect security events and digitally connecting that information so a Security Officer can address the risk in a faster and more efficient manner.”

NICK FOLKES
G4S





02 RESPONSE TO THE PANDEMIC



RESPONSE TO THE PANDEMIC

“ Suddenly our previous manner of business communications had to change simultaneous to increased demand for certain product types that we had to scale up operations to meet. Alternative collaborative solutions were a necessity and I believe the whole experience has changed us as an organization. We are tighter knit corporation today as a result.

ALAN SMITHWICK
LGC

“ In banking there is a regulatory requirement to capture every conversation, which is a challenge when transitioning to remote working. The client may want to use different video-conferencing facilities so we've had to work out how to record everything centrally.

ANANT PATEL
INVESTEC

“ Many staff were sent home as possible, but we had to keep staff working in the data centre. We split them into completely segregated shift teams, created critical maintenance, fibre cabling and hands and eyes teams and socially distanced everyone. We've seen a significant increase in productivity since introducing remote working so far.

ANDREW FRAY
INTERXION

“ We are seeing big interest and take up of digital services. Some of our products have grown several thousand percent in terms of usage. We're currently planning our big return to school in the UK and US and most of our university partners are asking us to help them get online.

ALBERT HITCHCOCK
PEARSON

“ We have had more than half our workforce working remotely, since day one and more recently 100% are remote. It hasn't disrupted what we are doing, it's just accelerated what we were already doing. The relationships with our University partners are changing. They want to transition to online education and need to do this at speed but they are asking to slice up our offering, as well as partnering end-to-end. It's accelerated our efforts to un-bundle services, which has been positive for all parties.

ANDREA BURROWS & MATT PARKER
OES

“ In a couple of weeks, we saw what would have normally taken two years in terms of digital transformation. There is no question about digital anymore or whether remote working is productive.

CAROLA WAHL
GENERALI INSURANCE

“ The business came close to zero, with a very steep curve towards a full stop. What we are seeing now is a very slow restart. Office buildings are opening first but automotive is slowly starting again. For facility and property management, hygiene and cleaning is a challenge as clients are asking for very different requirements. We will use sensors and technology to create traffic light systems, monitor cleaning and deliver transparency in terms of service.

FRANK LUBNAU
ISS FACILITY SERVICES

“ From a tech perspective, COVID-19 hasn't changed what we were already doing. We were already undertaking major shifts towards cloud computing and reviewing security risk and penetration. COVID-19 has restricted innovation. There are no more projects where implementation takes anything greater than six to nine months. Now people are thinking about what they can produce in a quarter to see immediate outputs.

FUMBI CHIMA
ADIDAS

“ We made a quick decision to go remote. Since our operating model was designed to enable external developers, we were already operating with a partially remote setup before the pandemic. Big firms we work with faced challenges resulting from the legacy infrastructure they were dependent on. Being based in one location, they found it hard to work offline. Most of our partners, however, were able to transition to work fully remotely with the help of knowledge sharing apps.

HIMA MANDALL
SOLARISBANK

“ In the recruitment space there is a strong need for automation and technology to improve candidates' experience, increase efficiency and gain insights to ensure the right talent gets found. We need to get as much information as possible out of a pleasant and seamless candidate's journey by using technology to understand hard and soft skills.

IVAN FADINI
MANPOWER GROUP

“ The most important challenge is how do we access our customers without physical branches and how do we ensure all of our services are available through home banking services. These issues were important before, but now they are more important than ever.

MARIA JUESAS & ISAAC CAYELLAS
BANCO SABADELL

Traditional payment processing has taken the largest hit because there is no foot traffic. Some sectors are dead – airline and travel – but other areas that we support like grocery stores are going like wild. From an ecommerce side, there are no sports so there's nothing to bet on, but people are playing games and playing things like poker online. Our other areas like e-cash are exploding. Segments of the population who don't want to use credit to gamble online and want to anonymise their cash has growth.

MIKE GIANNOUMIS
PAYSAFE

During a boom, investors are willing to try new things but during a bust companies revert to their core strategies. You're seeing oil companies cut down on their renewable energy strategies, for example.

NIL LAROM
UPRETS

For the sports industry, we had technology that people bought for specific games and teams we deployed to cover specific games. Now that events aren't happening, we have a group of people who are not getting paid. It's also a challenge for global companies to undertake a massively fragmented rollout of new environments when you don't know what people's home office set-up looks like or involves.

STEVE PLUNKETT
SUPPONOR

We interview hundreds of thousands of people every year and in parts of our business we have transitioned to using video technology to conduct those interviews in response to Covid-19. Internally we went from about 1.5 million minutes of video conferencing every week to 9 million minutes and we haven't seen a single blip in service. Moving our productivity platform to a specialist like Google has made all the difference.

NICK FOLKES
G4S

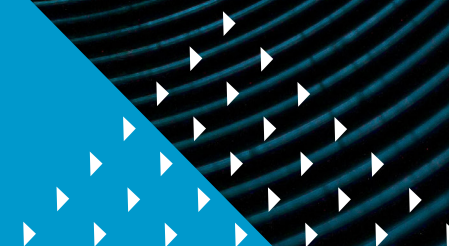
As people started working at home, we developed intelligent HR software systems, using remote video interview and automatic selection of candidates by emotional artificial intelligence, along with real-time analysis of emotional characteristics combined with the big five personality and RIASEC career assessment model, giving professional reports, improving HR work efficiency, increasing diversity and minimizing artificial bias.

YI XU
HUMAN





03 POST-PANDEMIC STRATEGY



POST-PANDEMIC STRATEGY

From the front-line perspective of the business it is difficult to look beyond this pandemic with so many challenges still immediately in front of us. No one can predict what the full impact will eventually be. However, investment in our remote working abilities with full access to systems and office equipment is definitely a priority.

ALAN SMITHWICK
LGC

We are thinking about the new world in two parts – the pandemic world (pre-vaccine), where we need to work from home until we can transition back into the office. But the second part is post vaccine, where we explore increased flexibility. COVID has shown us that the future is not just Work from Home, but Work from Anywhere. It will be very much a blended world.

ANDREA BURROWS & MATT PARKER
OES

Technology can trigger a step-change in our behaviour and we have seen that during the pandemic. These are very interesting times and we have the opportunity to take the best out of this crisis, which is to live a healthier and less stressed life.

CAROLA WAHL
GENERALI INSURANCE

We are of the assumption that we will need far less physical space and offices. Our offices are typically in the centre of very expensive cities. We will go through big changes from a real estate perspective. From a technology perspective, putting everything in the cloud means we don't need to change our approach. We will accelerate our transition away from the last legacy systems we're using.

ALBERT HITCHCOCK
PEARSON

We haven't seen any data centres fall over, but we've limited the maintenance we're doing. There haven't been any security issues, but physical updates and patches are limited. We're going to be busy.

ANDREW FRAY
INTERXION

We are well equipped for remote working, but I would like to see more innovation in that space to connect people in a more efficient way and allow more informal conversations within the team.

DIRK DAUMANN
SENNER

There are also opportunities – notwithstanding the sad loss of life and the impact on the economy – WeSwap staff, on furlough, have been given resources to self-learn and upskill whilst not working. Conferences are moving online, so there is lots of content to engage in.

JOSH MOONT
WESWAP

ISS is suffering from a very severe security breach. We had a ransomware attack that is ongoing since January. We have sent millions of euros handling that. With the flexibility we need for our customers, we will outsource and find a more scalable partner model for our technology.

FRANK LUBNAU
ISS FACILITY SERVICES

Security is never done, it is a constant upkeep. We have doubled our cyber capacity. Investing not only in the tooling but with more employees and uplifting minimum security standards.

HIMA MANDALL
SOLARISBANK

We are working on a short-term and long-term digital strategic plan in order to uplift our current capabilities and to be able to give our customers a better service. That entails that in the future we will digitalize more parts of the offering without harming the security and privacy of our clients

MARIA JUESAS & ISAAC CAYELLAS
BANCO SABADELL

“ We used to build security infrastructure based on the assumption that you are in a building using a machine you'd been given. We are going to move to a zero-trust situation where we don't know what device you're using or where you are when you use it.

MARK EGAN
STRATAFUSION

“ Any technology that helps us reduce our overheads to stay competitive in the marketplace is attractive to us. We have had a sustained program for many years in investing in technology to reduce our cost structure and that has put us in a good place to deal with the financial challenges the pandemic has presented.

NICK FOLKES
G4S

“ COVID-19 means that there is increased understanding of the importance of collaboration tools at a senior level. That is a big win. On the application side – payment systems and trading platforms – putting that into the cloud in this constrained environment will be slowed down because of COVID-19.

PATRICK MAES
CREDIT SUISSE

“ China leapfrogged into digital ahead of other countries, so we haven't really seen hyper-acceleration of digital services during the pandemic. We were already there. China has been able to emerge from the crisis a lot faster than the rest of the world. First in, first out and a very strict management of the crisis means we are expecting to return to pre-COVID levels of investment in 2021.

NIL LAROM
UPRETS

“ In the future you will end up with office spaces that are places you go to collaborate; not places you go to work. There will be an increased expectation from employers that you can work from home.

STEVE PLUNKETT
SUPPONOR





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