G-20Y Summit

We design our world

G-20Y Summit 2019
Final Perspectives

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www.g20ys.org

There are a few places in the world where the future is being built.

The G-20Y Summit is one of them.

About G-20Y Association and G-20Y Summits

The 10th G-20Y Summit took place in Evian, France from October 23 to 27, 2019.

The G-20Y Association is an inspiring, independent and innovative platform for a new generation of business leaders addressing the biggest challenges of our times to shape a better future.

The G-20Y Association organizes G-20Y Summit each year to bring together a select group of executives from 20 of the major economies worldwide to engage in meaningful dialogue and co-creation, building a strong network of executives across industries and geographies.

In 2019, the G-20Y Summit overarching theme was dedicated to: Emerging Technologies and Digital Transformation: Disrupt to Win.

G-20Y Association believes that we are facing a crucial stage in human history as we witness the confluence of many innovative and disruptive technologies. Together, these will lead to an influx of changes. Disruptive technologies such as AI, robotics, the Internet of things, and blockchain have the potential to transform economic structures, business models, companies, and jobs.

The business ecosystem is undergoing an enormous transformation, as a result of the combination of more agile and innovative players and the intrusion of new technologies in all aspects of the business. Consequently, traditional market players ought to be ready to lead the change, or risk being disrupted.

In the face of the threat of new competitors and changes in consumer preferences, there is an urgent need for market players to reinvent themselves in order to remain competitive.

The G-20Y Summit delegates came together to discuss some key point. These are as follows: the best strategies that will govern the market growth in the near future; how to seize potential opportunities from breakaway business models and value chains; as well as working out what elaborate proposals implementable to businesses will help ensure long-term success.

During the G-20Y Summit, the executives participated in meaningful discussions and exchange of best practises in different committees and subsequently develop their perspectives:

I. Re Thinking Energy Markets Committee

II. Future of Banking. Beyound Financial Services Committee

III. Innovative Insurance and InsurTech Committee

IV. Emerging Technologies and Industries Strategy Committee

V. The Future of Jobs Committee

The companies that have participated at G-20Y Summits from 2010 to 2019 are: HSBC Holdings, MasterCard, Statoil, Société Generale Group, PepsiCo, Credit Suisse, McKinsey, London Stock Exchange Group, Mariott, ORIX Corporation, FedEx, KPMG, Nestle, ING Group, Eni, Rolls-Royce, Insurance Australia Group, Generali Group, Siemens, Prudential Financial, Total, Intesa Sanpaolo, Airbus, Standard Bank Group, E.ON, Bosch, Bayer AG, EDF, Zurich Insurance Group, PwC, Lufthansa, Enel, Philips, Deutsche Bank AG, Royal DSM, Swiss Re, Unilever, Munich Re, Lafarge, Nordea Bank, Daimler, GDF Suez, Hellenic Petrolleum, Sabic, Aflac, Schneider Electric, Danone, SAP, Bank of America, ATOS, BT Group and more. The list of participants also includes senior official representatives of national and regional governmental organisations.

G-20Y SUMMIT FINAL PERSPECTIVES 2019

We, the individuals in corporate executives leadership positions of the world leading companies, gathered in Evian, France, for the 10th annual meeting of the G-20Y Summit on October 23-27, 2019, with an overall view to strengthen international cooperation between business and financial leaders and to find innovative ideas towards sustainable prosperity on a mid- to long-term perspective.

As a result of three days and 5 formal sessions of discussions, we have assembled a set of perspectives on the the following topics on the G-20Y agenda, namely:

I. Re-Thinking Energy Markets

II. Future of Banking. Beyound Financial Services

III. Innovative Insurance and InsurTech

IV. Emerging Technologies and Industries Strategy

V. The Future of Jobs

The G-20Y business community adds value and contributes by raising fresh thinking and capturing the attention of the relevant leaders to identified questions in order to inspire them to create a better future.

DISCLAIMER: THE PRESENT PERSPECTIVES ONLY REFLECT THE VIEWS AND RECOMMENDATIONS OF THE G-20Y SUMMIT PARTICIPANTS THEMSELVES, NOT THOSE OF THEIR COMPANIES OR EMPLOYERS.

THE VIEWS AND PERSPECTIVES ON THE TOPICS ARE THOSE OF THE COMMITTEES WORKING ON EACH OF THESE TOPICS. THEY DO NOT NECESSARILY REFLECT THE POSITION OF ALL OF THE G-20Y SUMMIT PARTICIPANTS.

G-20Y SUMMIT 2019
RE-THINKING ENERGY MARKETS COMMITTEE - FINAL PERSPECTIVES

Four main drivers are fostering change in the energy sector

1. Policies for sustainable and equitable development are increasingly being put in place from Governments around the world to achieve increasingly ambitious decarbonization targets. Recognizing the specificity of local social and development needs, this can be accompanied by the definition of support mechanisms for these areas, to reduce their costs for the transition.
2. Technology development catalyzes change. Costs are dropping faster than expected with renewable energies being already the dominant investment for power generation capacity expansion and soon bound to account for most of the share of the electricity generation. Moreover, new technologies are entering the market, such as batteries and DR, enabled by digitalization, which are altering the very principles of energy systems (e.g. making demand flexible and making electricity a storable commodity) and blurring the boundaries between sectors (e.g. electric mobility is already providing balancing services to power systems operators). Costs of power-to-X technologies are also showing great reduction potential, shaping expectations for a deeper sectors' coupling and integration.
3. Investors and customers' preferences are changing. They are becoming more sensitive to climate and sustainability issues, and showing more interest in renewable products. At the same time, they are becoming more demanding, raising the bar of expectations to a products/services experience comparable to those supplied by e-commerce. Customers are shifting from passive to active consumers. This is changing the traditional commercial model: from B2B/B2C to C2B and C2C.
4. New risks are emerging. Severe climate events are becoming more frequent as a result of climate change and the potential impact of cyber threats is increasing as digitalization unfolds, posing new challenges to system's reliability.

These changes are starting to have implications on the traditional energy trilemma paradigm. The main goal of energy policy has been traditionally to try to ensure that the energy supply meets the diverging objectives of being environmentally sustainable, reliable and affordable. These objectives are passed down to the industry players which strive to meet them in the most efficient way. The current change in the industry is creating further complexity, introducing into this model further challenges to cope with: managing new risks, including reinforced investment risk; catering to new customers' needs; minimizing social impacts.

The industry therefore needs to take the following main considerations into account

- Mainstreaming electrification is a no regret option along the most cost-effective pathway to decarbonization, as electricity is already the least carbon emitting and largely most efficient energy carrier. Electricity will grow faster than other sources of energy, driven by emerging markets and will make most of final energy consumption by mid-century. Oil and gas demand will continue to grow in the mid-term but then plateau and start declining. Reaching deep levels of decarbonization, i.e. tackling emissions also of hard-to-abate sectors, will require developing innovative CO2 reduction solutions such as the use of green hydrogen and other decarbonized gases, creating new market opportunities.
- Incumbent power companies will have room to grow (developing renewable energy generation, carbon neutral firm and flexible capacity needed to ensure the system reliability, networks, infrastructure for electro mobility, etc.), but they will have to compete with new entrants and decentralized solutions. The competitive arena will be broader and fiercer: new asset-light start-ups will enter the market along with oil & gas companies having to explore new business opportunities outside their traditional market that will be shrinking; sectors' integration will open the access to energy markets to players from transport, industry and buildings and enhance competition between different energy carriers.

- The emergence of a new operating framework, defined around the need for new services, decentralized energy sources and prosumers, is leading to a shift in industry value pools: from conventional to renewable generation/grids/downstream, including to distributed energy sources and to new non-commodity services (e.g. flexibility, energy efficiency audits and implementations, EV infrastructure). This shift reflects the increased value from the interaction around the customer.
- A bulk of investments in renewables and energy efficiency will be needed to achieve decarbonization, but given the current regulatory framework/market designs they will have to cope with increasingly higher risk profiles. An increasing share of RES in power is a challenge for generation assets cost recovery under a short-term market model. Moreover, it triggers increased needs for flexibility creating mounting reliability issues, but at the same time opening up opportunities for new business models and players.
- Businesses' role in society has shifted rapidly over the past years from a socially passive one, to a ¨light helper¨ via philanthropy, then evolving toward embedding social responsibility values into the corporate environment. However, the expectation bar continues to be raised for the whole energy sector by all stakeholders (e.g. employees, customers, investors) requesting the shift towards ever greater integration of the ESGs into mainstream business strategy in order to achieve a more trustful relationship.

Therefore, given the uncertainty of the economics of the transition, energy companies need to re-invent themselves.

Energy companies should adopt the following strategic priorities

1. Become more resilient to market volatility and emerging risks, through diversification (e.g. with stakes in regulated businesses such as grids, along with positions in new markets with strong potential growth even if not initially profitable), advocacy for regulatory frameworks improvements (e.g. RES auctions granting long-term contracts), stimulating the development of markets for risk-hedging tools (e.g. renewables PPAs, financial contracts for differences).
2. Upskill the workforce to make it digital-literate (e.g. by developing internal academy programs and by hiring talents from other sectors).
3. Engage proactively with regulators and policy makers to work out industry-society win-win solutions and ensure the energy transition unfolds following the most efficient path.
4. Shift mindset to become more "stakeholder-centric" adapting and anticipating the need and expectations of companies' stakeholders (e.g. increasing customers convenience and supporting them in their evolution to the role of prosumers; empowering employees to achieve their personal form of success; responsibly managing company image).
5. Build an ecosystem of partnerships for geographical and business diversification (e.g. JV with overseas organizations for accessing new markets) and to foster innovation (e.g. adopting an open-innovation approach towards start-ups and innovative SME).
6. Boost operational excellence, i.e. quality and cost, through digital transformation (e.g. IoT, AI, smart metering, robotic process automation), continued innovation and access to cheaper financing, as cost and differentiation matter in the new competitive environment.

G-20Y SUMMIT 2019
THE FUTURE OF BANKING. BEYOUND FINANCIAL SERVICES COMMITTEE - FINAL PERSPECTIVES

Changing the destiny of banking

Background

The banking sector faces an experiential change with the rise of digitization, change in customer behaviour and the emergence of new market participants potentially disrupting traditional value chains and service models. Today's banking organizations will need to adapt quickly to master those challenges and at the same time still cope with a demanding macro-economic environment and the consequences of the Global Financial Crisis already more than a decade ago. Due to these multiple changes, the Banking Committee has discussed how the banking industry will have to respond. Anticipating and extrapolating upcoming trends in technology and society it derived/identified future success factors that already today need to be in the center of financial institutions' strategic focus to successfully adjust their business models for the future. Changes banks need to undergo will have to be drastic and fast to maintain their important role in the global economy and will affect every part of banks' business models and operations. We believe a chance to successfully transform will lie amongst others in the vast amount of insight financial institutions possess on clients and financial transactions in order to become an indispensable part of a customer's financial and non-financial digital ecosystem.

Redistribution of power

We see the following key drivers for future developments in the financial industry:

Economies: Economic weight and political power will continue to shift to Asia. Globalization will still proceed, but at a slower pace. Greater focus on intra-regional activity and integration will replace that on global solutions and lead to more regionalized footprints. Economies will work to significantly bolster their institutions and infrastructure in order to realize long-term growth potential.

Markets: Yields in the near future are still likely to stay below historical averages. The price of money will further decrease given foreseeable economic growth trends.

Technology: Even greater reliance on technology and global access to devices will further reshape societies.

Whereas the former two drivers are considered external for our discussion and therefore difficult to change, the Committee focused on the technological advancements that can be threat and chance for financial institutions at the same time as well as on changing customer needs in light of new technological possibilities.

Technology is radically changing the structure of the financial sector

Technology goes beyond revising and automating current processes — it creates new landscapes, including:

- Big tech (major tech firms entering sector)
- Open banking (secure sharing of customer information)
- Value chain (specializing by function or customer segment)

Challengers, such as FinTech and Big Tech Companies prioritize arbitrage opportunities while leveraging the power of data, technology, speed to market and decreased build costs. Incumbent banks, because of their systemic structures, do not innovate in the same way and at the same pace, leaving them at a disadvantage.

Moreover, challengers from emerging economies have the advantage of an innovation-friendly environment given:

- Mass adoption of technology
- Solution driven focus
- Attracting new customer groups
- Data sharing culture
- Less strict regulatory frameworks (e.g. privacy protection)
- Patient investors
- Less governmental interventions

Independent of the technological challenges and to differentiate from emerging challengers banks need to re-focus on bringing themselves a new purpose. Trust, sustainability and customer focus are three key elements that each bank needs to focus on. In addition, incumbents still operate in a highly regulated market which is often seen as a burden and inefficient. However, a non-collaborative approach between banks and regulators could further lead to fragmented and sceptical responses from regulators that would be detrimental rather than supportive for the financial sector.

Maintaining the status quo without innovation will not position banks for the future. Banks will need to be seen as supporting "inclusive growth" and a fairer world order. Efforts in further digitization from emerging markets could lead to more financial inclusion for some of those in society currently excluded.

Changing customer needs

Partially driven by new technologies, customers are applying new standards to their interactions with banks based on the customer experience provided by challengers. Customers have instant access to information, products and services from challengers — and they expect their banks to deliver offerings that meet challengers' standards of access. We see the following key drivers that will likely change customer behavior and, therefore, have to be in financial institutions' focus when making business decisions.

Convenience increasingly important in decision making of clients
Convenience will be a key success factor since banks will have no other option than to meet these new standards as customers' tolerance and switching costs decrease. Service aspects such as a 24/7 availability will not represent game changers in and of themselves, however, they are baseline requirements upon which successful banking services are built. Designers of future services must carefully analyze the contexts and usages along with the daily activities of individual groups of customers to understand the entirety of "gain creators and pain relievers".

Customers will ask for seamless journeys, which start on one device and end on another. Younger generations especially will demand the right to participate personally in the service development propelling concepts such as service co-creation. Once financial banks' solutions feature a higher degree of usability, customers are likely to pay more for the use of such services and the pressure on profits might decrease in the long run.

Dynamic adaptation
Customers will expect banks to design products that dynamically adapt to their fast-changing circumstances of life and addresses their needs. Hence, customers will cease to accept being categorized as part of widely and generically defined customer-segments; instead they will expect to be always individually addressed or have the possibility of creating their own profile. This requires more agile structures, flexible management tools and automated workflows outside the typical product silos many traditional banks still operate in. Willingness to accept long-term commitments will decline to historical lows as the velocity of personal changes (i.e. changes in residences, jobs, family) accelerates.

With the increased speed of everyday life and the rising number of available service options, customers will appreciate those service offerings that review themselves automatically on a regular basis and suggest optimal choices underpinned by peer-to-peer analyses. Banks have precious data treasures that they can leverage in this regard through making smart AI-based customer advices.

One clear package, one clear price

Customers will increasingly focus on transparency regarding the costs related to the services that they obtain. In other areas of life, up-front purchase costs gradually move into the background for the benefit of total costs of ownership to evaluate the precise amount of financial pressure in each month (e.g. car financing). Banks must therefore integrate their separate services into reasonable packages. “One clear package, one clear price” should be the leading rationale.

Enabler and solution provider rather than product delivery
In the context of the value chain, banks will take over a supporting activity in the majority of business cases. Many banking services will become commodities embedded in the experience of a non-banking context (e.g. seamless payment of public transportation). Smooth performance will be crucial for the customer experience. This scenario might seem a threat, but in reality it opens up new possibilities for those banks that understand how to deal with their new role. The focus should shift to providing solutions to a problem rather than delivering products.

As innovative market entrants already demonstrate, banks will function as technology platforms offering access to a very valuable, sensitive set of data, and providing their banking licenses for third party service design. A bank’s main duty will be to ensure a satisfying level of regulatory compliance and cyber security.

Identity guardians and trust opportunity
Having access to sensitive personal data, it would be reasonable if banks transform into secure data vaults managing the digital identities of their customers. Once the public and private infrastructure features a high degree of interconnectivity and a significant amount of business operations moves into the digital space, the importance of digital identities rises as their number of possible application opportunities explodes.

On the one hand, customers will face more business interactions in which they have to identify and authenticate themselves online: both actions that can be performed by using the banks’ existing IT infrastructure. With greater possibilities though comes greater potential harm from abuse. Hence, customers are likely to pay for secure and transparent management of their digital identities.

On the other hand, online businesses have to fight a rising threat of fraud and will therefore be looking for online mechanisms that provide a reliable source of truth and a high quality of data. Banks can benefit from this challenge by bridging the gap between their customers and third parties as they establish digital trust within a transaction.

The level of associated trust demonstrates the striking advantage that differentiates incumbent banks from challengers. Depending on the complexity of the business request (e.g. digital signature, credit check), banks should develop new revenue streams by complementing customers’ banking with ID accounts. All in all, the business of trust promises to be a beneficial area. But it is a race against time as banks must proactively transform while regaining or at least maintaining customers’ trust.

Purpose and values
In addition, customers will demand higher standards of the banks they work with. In the aftermath of several financial crises and in anticipation of an uptake of sustainable investment options, customers demand to work with banks that share a common purpose and values — and act with integrity on corporate social responsibility. Hence, offering sustainable products and supporting green technologies can be expected to play an increasingly important part in future business relations which at the same time not only increase the connectivity with clients but pay into one of the banks’ most important USP which is its customers’ and society’s trust.

Future business models

To meet changing customer demands successful banks will offer not just the same financial services, but will establish themselves as trusted advisors, providing solutions, information, advice and digital platforms that customers can access 24/7.

Banks of the future must design new processes meeting needs from the customers’ perspective. Customers of the future will use the banks that provide choices, added value and a customized experience – one-stop shops

for all financial needs and additional related services. The future will require banks to become (part of) a financial ecosystem offering embedded services and products that are not purely banking products but address customers' broader demands.

External drivers of financial sector change should also be kept in mind:

- A refocus toward sustainable energy will make banks reassess objectives and operating models
- Customers and governments will remain key drivers of change
- Where sovereignty of data makes a difference, banks have opportunities as data custodians
- Some data may become more valuable and could create additional revenue streams
- Open banking will influence the future of banks

Do banks require a greenfield approach?
Perhaps one solution is combining the business model advantages of an existing firm with what is possible within a newly built business: a so-called "greenfield" approach. This involves existing firms building new businesses driven by customer needs where they can rapidly deploy changes to meet changing customer requirements, as well as shared experiences and solutions.

In addition, a more horizontal structure in the economy will disrupt traditional vertical structures. Given the macroeconomic rebalance of power, being more local will be necessary but not without losing global economies of scale and scope.

Looking at successful growth companies from various sectors, the most successful ones have managed to build multisided platforms offering a number of different services to users and clients being attracted to such ecosystems as they offer access to a broad number of relevant stakeholders. The role of users on such platforms such as sellers, buyers, wholesalers, etc. are manifold and offer a variety of roles along the value chains. Once established and attracting frequent traffic such platforms have become almost indispensable.

Recommendations for building multi-sided platforms or financial ecosystems

Culture

- Build emotional connections with customers and adapt brands accordingly
- Reinvent the organization: strive for efficiency while incorporating new technology and adapting to provide the "new customer experience"
- Shift bank culture: move from hierarchical organizations to other operating models (vertical to horizontal)
- Support digital culture: revolutionize the standard working environment of a traditional bank

Optimize operations

- Focus on customer solutions, adjust product portfolio accordingly
- Revamp bank's distribution models
- Create ecosystems increasing customer engagement
- Disintegrate the value chain and define where each financial institution has its competitive advantage
    - increase collaboration within and outside the banking sector,
    - set-up shared factories/joint ventures to access external scale where needed, transfer non-differentiating activities to third–party utilities
- Build next-generation IT infrastructure

Digitization

- Redesign the customer experience using digitization and technology
- Leverage big data and deep learning to enable full personalization: develop distinctive customer insight
- Push customer-centric digitization
- Digitize customer journeys: enable an ongoing dialogue with customers

Summary

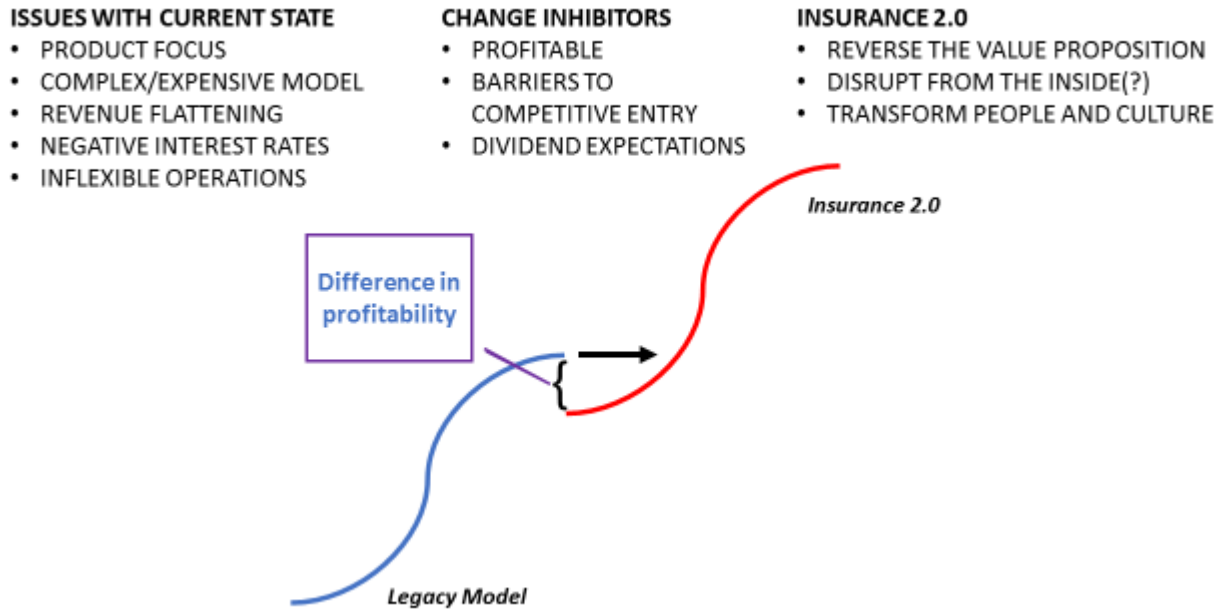
The bank of the future should accompany each customer on their journey. More than financial advisors, banks should be seen as companions in every day life. Banks should make each customer feel unique, with dedicated service offerings. Banks should ease any administrative tasks and enable automated processes to the extent possible while maintaining transparency.

The bank of the future should recognize that the "new customer" is digitally friendly. Digital processes and access to information are not just at customers' fingertips — they are part of their everyday lives. The bank of the future will have the opportunity to embrace technology while continuing to offer existing services: loans, investment opportunities, lines-of-credit, mortgages and insurances (in some markets) and additional complementary offerings that may be increasingly embedded in a more complex solution provided to an end user/buyer of a service/product.
All of those should make customer experience unique and demonstrate that the future bank is truly helpful to its clients, engaged in sustainable offerings and part of a wider ecosystem centered on themes and topics relevant to the client. Financial institutions can create their own future; it is in their hands how to decide whether it is a utopia or a dystopia.

G-20Y SUMMIT 2019
INNOVATIVE INSURANCE AND INSURTECH COMMITTEE – FINAL PERSPECTIVES

Insurance 2.0

The insurance industry is in the midst of a modification towards a new reality. The whole picture must be understood, from every aspect. Those who do not adjust will be left behind in this transforming market. Those who do not adjust will be left behind in this transforming market.



Digitalization is transforming the insurance industry. It has raised customer expectations and brought the possibility for an entirely new relationship with customers – from the traditionally distant one; to one that adds real value into their lives. Customers are expecting and receiving 'hyper convenient' services - personalized, anticipatory, instant. This transformation is enabling a new generation of insurance products, those that can succeed in providing new value and better experience to customers will be the winners. But those that cannot will be marginalized and commoditized as disruptors and new players replace them in an increasingly competitive landscape.

The insurance industry is ill-positioned in this rapidly changing environment. Saddled with long-established products linked to complex and expensive legacy systems underwriting and operating models are complicated and cumbersome. Despite this – and in the face of wide acknowledgement of the immediacy of transformational dynamics – the industry is too complacent and too resistant to change. Insurance is consistently profitable and distributes reliable dividends to shareholders. Further, the regulatory requirements and sheer number of supervisory regimes provide a barrier to the entry of new competitors of scale. However these will not insulate the incumbents from disruption for much longer.

Breaking through this complacency and taking the industry into the future requires a long term view that transcends a 'my term in office' perspective from industry leaders, boards and investors. There must be recognition that we need to invest at a scale that is genuine and sufficient to truly transform the insurance industry. In framing this long-term, future-focused view the insurance industry must:

- ✓ **Reverse the Value Proposition** – move away from how the products we have can fit our customers and focus on our customers immediate and evolving needs and desires. With the Millennials comprising an ever larger part of our customers and Gen Z following quickly thereafter, traditional products do not necessarily meet their needs and values. This environment is and will increasingly be fueled by access to data and insight leverage.

- ✓ **Establish insurance as a value-added component of an ecosystem focused on risk management and trusted advisor for customers –** a strong foundation of trust is critical to moving insurance forward into the future and this trust goes both ways:
  - o Insurers need to trust their customers if our customers are to trust us, especially as the service proposition will demand transparency of data.
  - o Insurers can offer the power of information to its customers, supporting them in driving their insurance decisions at various points in their life and offering products that meet their evolving needs. Products should be straightforward, easy for customers to understand and easy for insurers to deliver on when our customers experience a loss.
  - o Further to this, insurers should seize the opportunity to build long-term relationships with their customers that go beyond the purchase of a policy and settlement of claims: how can we help our customers to avoid claims in the first place through proactive advice and service offerings that are anticipatory rather than reactive. When we do have a claim, insurers should embrace this as a chance to show our customers why they made the right choice in choosing their insurance provider, adding value and leaving the customer delighted with the experience.

To meet the demands of the future, the industry needs a new model – Insurance 2.0 – and should carefully consider trading away control of the customer base through fintech partnerships by considering:

- ✓ **Disruption from the inside and in parallel –** establish an internal start-up to incubate new and innovative ways to connect with customers, build relationships with them and develop ways to meet their needs in a hyper-convenient world. This start-up requires a different approach and a dramatically new mindset with design-thinking at its core. The leadership and structure must be completely distant from the existing business, with the latitude of flexibility and unencumbered by legacy constraints of infrastructure and culture. Insurance 2.0 requires investment as well as recognition that this investment may not provide the returns to which industry leaders and investors have become accustomed in the near-term. Finally, there must be acceptance that business from the current model will shift to Insurance 2.0. The current model will remain sustainable for a certain period to serve existing customers who may not be ready for Insurance 2.0, but at a certain point Insurance 2.0 will move from start-up to business as usual, with the inevitable cannibalization of the 'old world' model.
- ✓ **Transformation of people and culture –** a business cannot embrace disruption without transforming its people and culture. Insurance 2.0 requires not only an evolution of the industry's relationship with its customers but also an evolution of its leadership and employees. The insurance industry needs to evolve recruiting, hiring and development to focus on aptitude and attitude rather than deep industry experience. Gig-economy models should be explored to draw in a more diverse, agile workforce and data science, Artificial Intelligence, robotics and other digital tools need to be embedded in the day-to-day. The level of change management required for the current workforce to support the shift to the future 'Bionic' way of working cannot be underestimated or overlooked. Organizations as well will need to consider the importance of their impact on society as this becomes an increasingly important topic for employees which means adopting ESG (Environmental, Social and Corporate Governance) for REAL to ensure employee engagement and customer trust.

Sharpening the industry's strategic focus on delivering for customers, employees and our communities should act as the catalyst for the positive disruption of the sector. Insurance must reinvent itself to regain the trust, of all our stakeholders and this, ultimately, is how we will benefit them in the new reality of our transforming market.

G-20Y SUMMIT 2019
EMERGING TECHNOLOGIES AND INDUSTRIES STRATEGY COMMITTEE – FINAL PERSPECTIVES

SMART CITIES

A smart city cannot impact and improve people's quality of life without "smart citizens", citizens who are included and whose privacy is respected. How can citizens be empowered to make the best use of tools and services based on new technologies provided by local and national authorities and businesses?

How do you design services to make a Smart City fully inclusive? What does a Smart Citizen need to consume the services? What skills, both soft and hard, are needed both in the administration and in the public?

We approached our discussion through the following framework, based on three dimensions:

1. The **Areas** where the smart city is deployed: mobility, utilities (water, electricity, waste management, etc) health, safety, environment, digital infrastructure.
2. The **Key Technologies** that can enable Smart Cities: artificial intelligence, data analytics, IoT, drones, blockchain, chat bots, remote collaboration tools.
3. The **Challenges** facing Cities in developing their Smart City strategies: trust/ethics, data privacy, leadership, people skills, organization, public-private collaboration and the pathways to scale.

The **lens** we used is that of the citizens, their needs and their quality of life. By quality of life we mean:

- easy access and smooth consumption of services
- sustainable environment
- inclusivity for all ages, income brackets, cultural backgrounds
- work/life balance

There can be no Smart Cities without Smart Citiz***ens***.

Cities are under strong pressure from increasing population, due to the largest economic migration influx ever seen and growing concentration in urban settings. This puts a strain on housing, jobs, infrastructure, health, education systems. Large corporations can move away from offices spaces, and make some available on demand. This applies mostly to knowledge workers (smart work, we work spaces model; there are many corporations where 30% or more of the workforce is permanently working remotely). But 90% of businesses are small/local businesses or services.
City planning should foresee how to relieve pressure on the core of the city by multiplying centers in the suburbs (Sandton example in Johannesburg; Delhi model where every minute there are 40 people who permanently move into the city; by policy in India today, every city with more than 2 million inhabitants must have at least 5-6 metro lines running 30-40 km outside of the city itself).

How can technology work to support this? Remote collaboration tools of course can reduce travel and improve efficiency. Robust broadband infrastructure is the backbone to make this work. The AmazonGo digitally enabled self-service supermarket model reduces number of workers in the store, as an example of how this is changing the patterns of work and retail. Another example is the boom in restaurant home delivery.

Coming to the users, the Smart Citizen, what is their perspective? Google Maps could have an additional layer to customize information around personal circumstances and required information (routes, available parking, co-working space available depending on time of day and traffic along the route, favourite restaurants). However, this is a trade-off with implications on data ownership and privacy. Local governments are developing tools to map crowd movement and for example insert additional bus stops or buses to cater for peaks in demand (Melbourne example). On mobility the key approach is that of seamless multimodality, and a strong public transport infrastructure, in a future scenario of connected, autonomous, shared and electric (CASE). This brings more productivity, more leisure time, less pollution.

But how do you incentivise sharing behaviour which today is not always the preferred modality? Tools with customisable itineraries for multi-modality can be an option.

But, there is a key overarching theme. How do we develop trusted digital identities that allow to customize services real time while respecting the willingness to disclose by people?

Besides mobility, health is a sensitive area where people's consent needs to be fully acquired and managed.

Blockchain could be considered as the technology that could be used to manage digital identities. It can help build trust on data protection, as the identity is not owned by a single body but rather a public-private consortium. However, we are at the beginning of this journey. How to familiarise end-users with this concept to ease adoption and trust in digitally enabled services in a smart city?

What partnership models to deliver these services?

You need a clear regulatory and legal framework for partnerships. Besides the public-private partnership models where the management responsibility can be retained either by the public, or - as in the case of concessions - by the private, also the social enterprise model could be interesting to consider as a viable form of service delivery for public services.

Inclusion is key in designing these experiences, starting from human needs, thinking how technologies can improve the quality of life without compromising the inherent human need to be social and integrated into the community.

G-20Y SUMMIT 2019
THE FUTURE OF JOBS COMMITTEE – FINAL PERSPECTIVES

It is difficult to make accurate predictions about the changing nature of labour markets, work patterns, and how our societies will respond to expected demands on future skills for example. The future of jobs, and what work will look like, are shaped by demographic changes; technological disruption; changing employment relationships and the rise of the gig economy; and the changing aspirations and motivations of individuals.

We can however anticipate broad trends and plan for them. Greater flexibility will be required by our institutions to support future job requirements, including the private sector partnering with public policy makers. Individuals will redefine what job success looks like according to their own aspirations. Employers will need to respond to future skills in demand and new working arrangements.

New approaches to building human capital

It is widely agreed that investments in human capital — through training, education and knowledge transfer — have great potential to meet the dual goals of improving social mobility and improving productive capacity.

A common concern among employers is the alignment between labour market needs and our systems of education and training. Employers are demanding an increasingly diversified range of skills and capabilities, some of which are not taught in traditional learning environments and some not taught at all. Education and training needs to prepare people with future capabilities including both aptitude and attitude.

There is an opportunity to better focus our education and training systems so they build skills and capabilities that deliver genuine gains in human capital.[1] Micro-credentials offered through more agile and quicker education systems are an emerging concept which has the potential to better link the need for new workforce skills needs to our education and training systems, even though barriers to adoption exist. Vocational education is also a proven pathway to build human capital through on the job learning.

Upskilling to prepare the workforce of the future

Technology and automation is challenging many existing jobs and creating new opportunities. In many fields humans and technology will be highly complementary leading to a bionic workforce[2] where humans can leverage their strengths in non-routine work and for tasks that require emotional intelligence and less binary decision making. On the other hand, many economies are experiencing a severe shortage of qualified talent for the new digital economy.

Job displacement created by skills mismatches has a direct impact on economic output, tax revenue and social security costs. To address this challenge, organisations and governments will need to invest in continuous upskilling and reskilling approaches. The World Economic Forum estimates over the next decade, the cost of reskilling 1.4 million displaced workers in the US will amount to US$34bn, but these costs are lower than the costs of inaction.

Visionary leaders are needed to champion upskilling initiatives. They need to set a positive vision of what the future jobs will look like, skills required, and can reinforce the long-term business and social elements that sustain growth in their region, country, or industry. To improve the lifelong learning experience, companies need to engage with government, education and community partners.

[1] Some estimates suggest that only around 20% of the private returns to education (through higher lifetime earnings) are the result of genuine human capital formation (Caplan 2018).
[2] According to Boston Consulting Group (2019), the Bionic Company effectively combines the capabilities of humans and machines to develop superior customer experiences and relationships, more productive operations, and dramatically increased rates of innovation.

The Gig-Based Economy and the rise of the liquid workforce[3]

In many countries alternate work arrangements are increasing, these contractors/freelancers consist of both individuals with future "in-demand" skills and other participants of the sharing economy. This has been accompanied by an increasing shift to virtual work. There is an opportunity for organisations to leverage these trends when they consider how to meet their future workforce needs. Workplaces of the future will likely give rise to increased reliance on more temporary, flexible and outsourced services, which is already trending especially with people in digital and technology roles.
As the prevalence of the gig economy shows, payment for services and outputs — rather than full-time employment — is increasingly preferred. In some areas the need for specific skills and contributions may supersede the need for full-time work:

- More than a quarter of workers participate in the gig economy in some capacity (estimates in the US suggest between 25-40% of workforce are already in "non-traditional" work arrangements).
- By 2020 the number of self-employed workers in the US is projected to triple to 42 million people while more than one in ten workers already rely on gig work for their primary income.
- Freelancers are the fastest-growing labour group in the EU, with their number doubling between 2000 and 2014. Deloitte's latest millennial study found that 64% of full-time workers want to do "side hustles" to make extra money.

Over the medium to longer term, society will need to consider the impact of increasing gig work on the funding of social programs including impacts on the tax base, health insurance and pension funding. Companies will also need to consider the impact of changing geographic and physical work environments; reduced tenure and loyalty for individuals toward organizations; and presenting new value propositions to individuals who have a variety of opportunities.

An increasingly digitally connected workforce will facilitate access to global talent markets. We are already seeing an increase in work-sharing and crowd-sourcing platforms that enable work to be done by anyone with access to the internet. According to the World Bank there are 1.1 billion people who are "digitally invisible" - can we imagine future jobs that are completed by these untapped workers? If these trends eventuate there is the potential to deliver a significant increase in living standards for the workers in these countries.

Conclusion

There is a fundamental shift between processes operated by humans to processes designed and audited by humans. Embracing the liquid workforce – the gig economy together with ongoing learning – will be vital to this. If we want to enable the smart cities of the future we should enable smart citizens by innovating our existing education and training systems. Fluid links between tiers of education and training, such as school-based apprenticeships and more cohesive school-to-university pathways, have the potential to improve outcomes for individuals and society.

Success for the future of jobs will mean addressing these challenges and empowering individuals to achieve success as they define it themselves.

[3] According to Accenture (2016), the liquid workforce refers to being able to effectively adapt to constant change and the demands of the new work environment – including changing nature of skills, projects and work patterns.