

The Path to 2025 - Driving Forces, Global Challenges, Potential Disruptions and Business Scenarios

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The end of life as we know it?

The dawning of a new age?

A manifesto for the reframing of society, governance and business?

The interaction between the trends, developments and ideas shaping the future could result in any one of the above scenarios - and many more. Depending on your outlook you can find evidence, forecasts and perspectives to back up your personal viewpoint. As professional futurists, we believe the challenge is to rehearse the future and prepare for a range of possibilities rather than simply adopting a singular viewpoint.

Looking Back from 2025 to the Present

Our aim here is to provide an evocative context for exploration of the factors shaping the future and reflection on how the business landscape could evolve. We provide a perspective on the world in 2025 by examining the 'critical shifts and developments' that have shaped our journey from 2014. These encompass economy, governance, science and technology, society, sustainability, the resulting implications for business and some over-arching challenges that emerge for society. We conclude by describing three different possible business paradigms that could emerge and explore the potential purpose and strategies of successful 'pioneering' companies in each paradigm and discuss how they might think and operate.

The ideas presented here draw on an extensive programme of research and scenario building Fast Future is undertaking for PwC on the Future of Work¹. Many of the underpinning ideas summarized here are described in more detail in our analysis of 100 Trends and Developments Shaping the Path to 2025 and 50 Emerging Concepts that could Rewrite the Future that can be found on our website www.fastfuture.com.

Reframing Mindsets - Play by the Rules or Change the Game?

For individuals, governments, businesses and NGOs alike, perhaps the biggest challenge on the path to 2025 is to change our mental models and perspectives on what is possible and how things get done. Government and business alike will be challenged on a regular basis by disruptive innovations which don't 'play by the accepted rules of the game' and seek to change the game itself. From digital

currencies such as Bitcoin to initiatives like Skype and Whatsapp - disruptive developments are overturning old orthodoxies and venturing into territory where existing players dare not tread.

Critical Shifts and Developments

Economy

The global economy of 2025 is characterised by uneven, divergent development paths and continued uncertainty. While some have succeeded in reshaping their economies and creating a new foundation for growth others continue to wrestle with volatility and disruption. Persistent economic turbulence has caused one or more global recessions and regular regional ones in the time period. Highly indebted developed nations continue to struggle and will take a further 5-10 years to restructure their economies.

Fault lines remain in the global economic and banking system and the scale of derivatives contracts is still many times the size of the global economy. Those who have invested in infrastructure, education, reducing inequality, streamlining commercial bureaucracy and trade liberalisation are reaping the benefits of domestic growth and inward investment. There has been a continued shift of economic power, opportunity and wealth from west to east across the planet with China as the world's largest economy and a less bureaucratic and corrupt India beginning to realise its true potential.

Governance

There is a growing debate about the right future political and socio-economic governance models at local, national and global levels. Experiments with new economic and political governance models are now acknowledged as essential and becoming more widespread. In many places citizen unrest has increased as nations struggle to deal with uncertainty and global economic disruption. While there have been many attempts at citizen led regime change, only a handful have resulted in stable and sustainable governance models. In most cases securing the peace has proved extremely difficult - variously resulting in regular governance changes, military rule, civil wars, instability and uncertainty. Governments in most countries around the world are still struggling to reduce the inequality gap between rich and poor.

Major cities around the world have taken on many of the traditional roles of national governments and effectively provide a wider range of service to urban populations. Information and communications technology (ICT) has enabled many citizens to take a more active part in the decision-making process at a local level in many countries. In many countries, the private sector is playing a larger role in delivery of government services and some have even outsourced key decision making and policy roles normally performed by the administration.

Science and Technology

The boundaries between magic and reality have blurred. The rapid pace of advancement and convergence of nanotechnology, biotechnology, information

technology and the cognitive sciences (NBIC) are giving rise to a new generation of super-smart super-functional materials. The rate of advance in ICT has been particularly visible (figure 1) with a ranger of new developments touching every aspect of our lives.



Figure 1 - The Future Technology Timeline (ILTA)ⁱⁱ

The biological era has arrived and synthetic biology is beginning to fulfil its promise. New bio-industries are maturing fast in fields such as bio-materials, bio-energy, biological engineering and manufacture, biomimicry and DNA data storage. Science led sectors such as autonomous vehicles, vertical farming, green transport, 3D printing, robotics and commercial space travel and tourism have all become established as part of the commercial landscape.

The technique of rapid construction using pre-fabricated building sections has moved from niche to mainstream - drastically reducing the cost and delivery timescales for buildings and infrastructure. The technique was pioneered and popularised by Broad Group from China with the construction of 30 storey buildings in just 15 days and has now spread across the globe. The notion of growing buildings has also moved from concept to reality and 4D printing has yielded a range of commercial applications for self-assembly materials that can change their shape and properties over time.

Personal technologies have continued their evolution from desktop to portable to mobile to wearable and are now increasingly embedded in our bodies. Humans are learning to live and work alongside robots – intelligent mobile robots are now common in workplaces homes, and various city settings. A more intelligent, open access, multi-sensory and immersive internet has started to emerge - accessed mainly through conversational and gesture interfaces on mobile devices. These developments, combined with over 100 billion devices connected via the Internet of Things, are reshaping industry sectors and commerce. Businesses and personal lives are increasingly blurring the boundaries between the virtual and the physical environments.

Artificial intelligence is an integral part of business systems across the entire value chain. Far greater intelligence is now embedded in everyday objects from the clothes

we wear to the seats we sit in. Sectors such as audit and legal are being transformed by smart 'big data' software analytical tools that perform continuous analysis and reporting on data in real-time. A range of personalized experiential technologies have emerged that learn and adapt to our individual behaviour.

Major scientific and technological breakthroughs have brought humanity a step closer to the so called 'Singularity' - the point where artificial intelligence outstrips human intelligence. Human enhancement has entered the mainstream discourse, adoption is now widespread with businesses and governments being forced to adopt policies on its use. The new media abounds with stories of people opting for ever-more advanced forms of chemical, genetic, technological and physical upgrades to their bodies. The collaboration and competition between major European and US initiatives and private firms (e.g. Google) to reverse-engineer the brain is intensifying with full emulation and uploading expected within the next two to five years.

Initiative such as Global Future 2045 Avatar Project and its pursuit of immortality by 2045 (figure 2) have already led to major spin-offs in domains as diverse as robotics, brain mapping and emulation and regenerative healthcare.

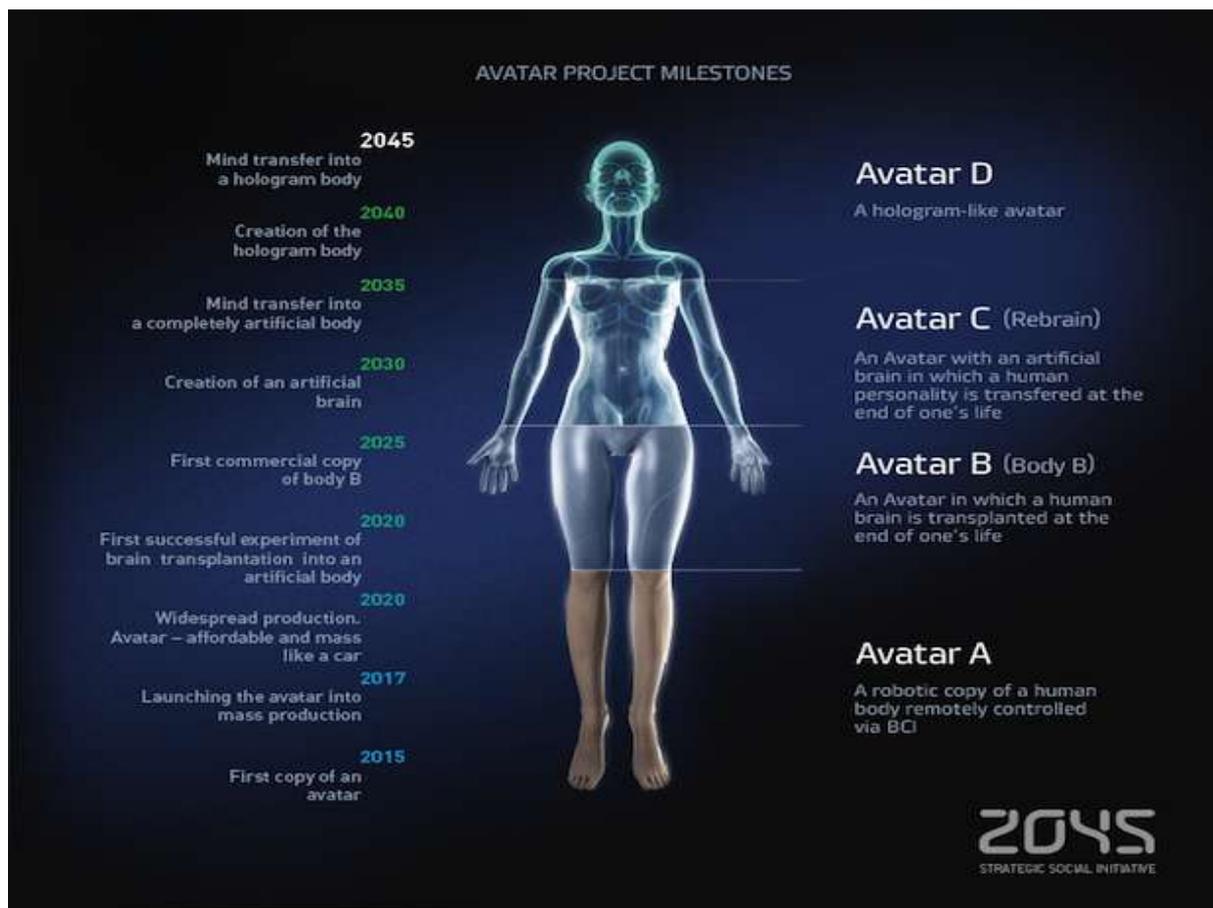


Figure 2 - The Global Future 2045 Avatar Projectⁱⁱⁱ

Society

The middle class continues to grow globally— particularly in Asia and Latin America. Life expectancy estimates are being revised upwards almost everywhere and by 6-12 months every year in countries with the most advanced health and wellness policies. Super-centenarians are active part of society - with many now seeking work well into their 80's and 90's. Roles and lifestyles as well as education, learning and working patterns are becoming increasingly age-independent. At the same time, new generations are entering the workplace with different expectations, individuals are trying to take greater control of their destiny and social media continues to change the way we interact, plan, transact and share.

The rapid pace of scientific and technological and the resulting transformations in the nature of work and jobs has driven a major emphasis on learning how to learn, lifelong learning and adapting ourselves to the notion of having multiple careers in a working life that could span from 16 to 90. A new skills agenda (figure 3) has emerged to equip society with the skills and capabilities required to survive and thrive in an era of constant change.

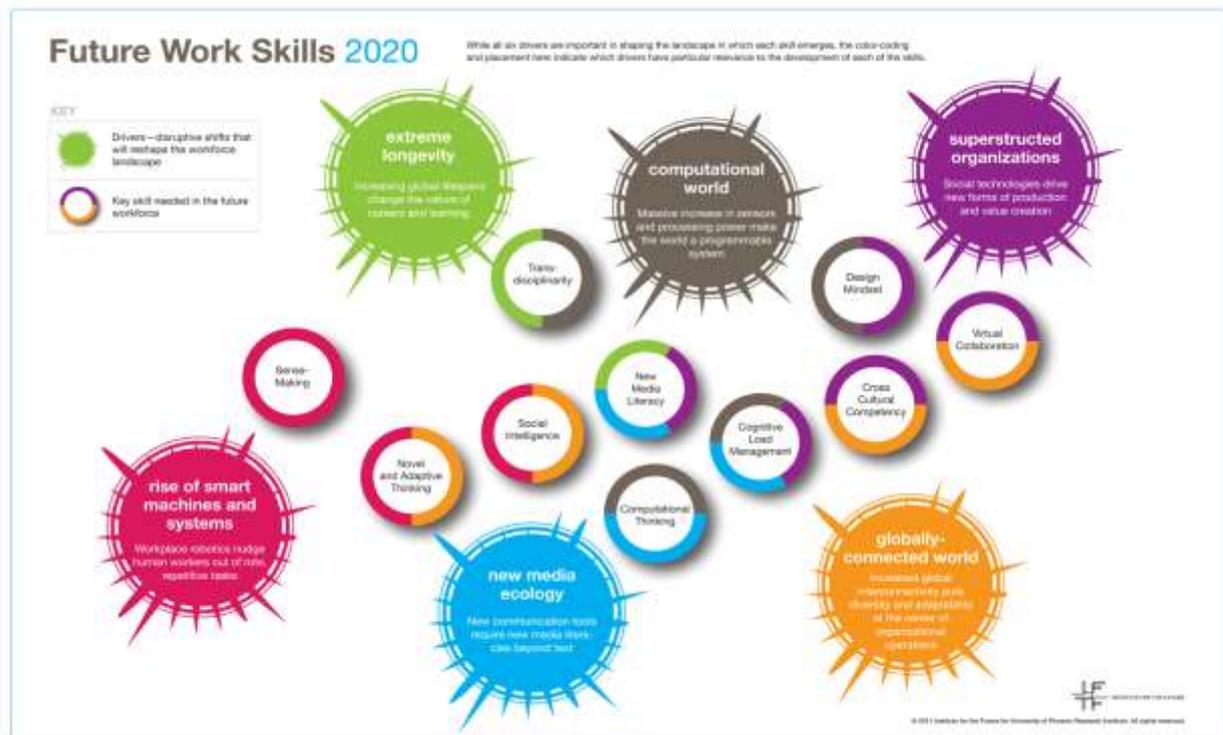


Figure 3 - Future Work Skills (Institute for the Future)^{iv}

The availability of free online tools has contributed to the transformation of and access to education at all levels from primary schooling to degree level and beyond. The educated workforce in developing countries in particular is expanding rapidly as literally millions now have university degrees gained through participation in massively open online courses (MOOCs). Classrooms have increasingly become a forum for helping pupils make sense of and apply content accessed via the web with formal teaching styles far less prevalent than a decade ago.

Science has yielded a deepening understanding of human biological and cognitive functions e.g. how to stimulate different emotions, how we learn and how to enhance our performance. Advances in targeted drugs, gene therapies, bio-artificial and 3D-printed organs have contributed to the increasing health and longevity of Western populations in particular. A new type of humanism is emerging – transhumanism – with ICTs and other key enabling scientific advances improving the human condition, extending lifespans and greatly enhancing human intellectual, physical, and psychological capacities.

Sustainability

Demand for energy, food, water, rare earth minerals and other key resources have continued to rise faster than supply over the last decade – driving up prices globally. Progress on tackling climate change and biodiversity loss continues to lag global targets. There is a growing focus on the role of science and technology and in particular NBIC-convergence and bio-engineered solutions to tackle these challenges and create new levels of abundance.

Business

The commercial landscape has been reshaped by a powerful combination of forces outlined below. These continue to shorten and accelerate business cycles and drive commoditisation and hyper-competition. Economic shifts are redistributing power, wealth, competition and opportunity around the globe. Disruptive innovations, radical thinking, new business models and resource scarcity are impacting every sector. ICT sits at the heart of every business and a range of new and fast growth sectors have reshaped the economic landscape (figure 4).



Figure 3 - Future Growth Markets (McKinsey)^y

A range of disruptive developments have forced a radical rethink of entire industry structures and value chains. For example, the adoption of driverless vehicles has had wide ranging implications. Owners of individual vehicles no longer need accident insurance as the potential for driver error has been eliminated. Any crashes that do occur are the result of product failure - transferring the risk from individual owners to

a product liability insurance requirement for vehicle manufacturers. This has transformed the motor insurance sector - shifting from insuring millions of individual drivers to a handful of manufacturers.

The sheer pace of technological change has driven many to pursue the outsourcing and Software as a Service route for fear of making the wrong investment choices. Technologies and sensors embedded in everything from humans to banknotes and the resulting Internet of Everything have created an avalanche of data. While some have mastered the big data challenge and pulled away from the pack, others have seen their organisations fail because of their inability to manage data in an effective manner.

The Fortune 500 has been revamped in the last decade with new entrants from emerging economies and disruptive start-ups. The new players have replaced many older firms that failed to adapt to a changing world and have either been acquired, merged, scaled back or shut down. Businesses in every sector are beginning to understand that they need a clear and meaningful purpose and mandate for the decade ahead if they are to attract and retain employees, customers and partners.

While a minority in 2014, an increasing number of firms now believe that business must create both economic and social value. Resource scarcity, and new thinking about efficient asset usage is driving growth of the 'sharing economy'. From business use of cloud computing to individuals participating in car sharing schemes such as Uber, Zipcar and RelayRides, the preference for usership over ownership is increasing.

Alternative financing models such as crowdfunding have transformed new product development and fund raising for new ventures. Individuals rather than institutions now decide which innovations to support and where to invest their money. It is now commonplace for major investors such as pension funds to bypass investment banks and fund managers in the pursuit of higher returns. Innovation and regulatory change means they can invest substantial sums directly into infrastructure projects using a range of web-based matchmaking platforms.

Beside the "classical" compensation/trade models, nonmonetary systems such as bartering are an integral part of the economy. The informal economy has grown and evolved to be accepted and 'measured' as part of the real economy in many parts of the world - with governments accepting that it is the only available mechanism to deliver the needs of large parts of the population.

Automation, AI and robotics have replaced unskilled labour, skilled workers and professionals across a range of industries. Technological unemployment is a widespread priority for governments as the era of steady and permanent jobs for life is seen as another relic from the industrial 20th century. Job automation and human redundancy in the job market has pushed society to re-emphasise aspects of their cultural richness such as handicraft professions. The rise of 3D printing and other low cost fabrication techniques has led to the emergence of local maker centres where new craft communities share these production resources.

Global Challenges - Can we Avoid a Dystopian Future?

Whilst many may be excited by the possibilities we have painted, others may fear a dystopian future. We have identified seven critical challenges society must address in order to ensure that society is well positioned to understand and make informed choices about the developments coming over the horizon, deploy them to the benefit of mankind and prepare society for the resulting changes.

1. *Stimulate Public Dialogue* - raising the extent and quality of debate so society is aware of where science and technology could take us and capable of having informed debate around what is desirable and acceptable, the safeguards that need to be in place and the mechanisms required to prepare ourselves for change.
2. *Celebrate and Value Depth* - addressing the apparent shortening of attention spans, highlighting and celebrating the importance of in-depth learning and thinking and moving beyond soundbites and 140 character communications.
3. *Embrace A New Learning Agenda* - with far greater focus on acquiring and updating a range of life skills to help us make sense of a rapidly changing reality, think in scenario terms and accelerate our learning. These include developing the capacity for foresight and curiosity, networking, coping with ever-greater complexity and becoming more tolerant of uncertainty.
4. *Rediscover Meaning, Spirituality, Sexuality and Community* - helping people find a sense of purpose, acknowledging the growing interest in spirituality and self-actualisation; removing the taboos around sex and pornography-inspired attitudes to it and highlighting the benefits of a healthy sex life. Going beyond narrow self-interest to re-engage communities, and encouraging service and decision making for the greater good.
5. *Embed Foresight* - making foresight and scenario thinking part of the curriculum and encouraging organisations to make regular horizon scanning part of the strategy and planning process.
6. *Experiment with Alternative Governance Models and Systems* - acknowledging publicly that we need new models for a new era for everything from the economy to security and trying a range of alternatives that better reflect the needs of society in a digital and transparent age.
7. *Reframe Sustainability to Encompass People, Planet, Profit and Purpose* - encouraging organisations to ensure that they are leaving a positive legacy and not pursuing unsustainable strategies.

Business in 2025 - Three Scenarios

So how might these forces come together to shape the purpose, strategies and operating models of tomorrow's business enterprise? Here we explore three different scenarios for how pioneering firms might operate:

- Global corporations - 'for profit' entities operating across all or most continents
- Community ventures - socially oriented businesses that seek to operate to the highest social, environmental and ethical standards whilst also making a profit

- Network enterprises - highly flexible businesses that seek to take advantage of technology and virtual working to resource up and down according to client needs and typically delivering in a range of professional services.

The three models are described below and their key characteristics are summarised in the subsequent table.

Global Corporations

Successful and pioneering global corporations are the technology vendor's dream come true. Whatever their size and geographic scope, Global pioneers have embraced ICT to the full and it is now the backbone and enabler of all that they do. Customer focus, flexibility, speed of response, leanness and internal simplicity are now the main organisational design drivers. The core of day to day operations and the workforce are outsourced with only a small core of key employees. Everything about the business is designed to enable fast and powerful responses to a rapidly changing and complex reality. Global pioneers are typically characterised as 'change engines' with the prime focus of management and leadership being the delivery of a continuous flow of projects which are creating and delivering new opportunities and exiting from old ones.

While the creation of shareholder value is the primary goal for these firms, they recognise that their legal and ethical licence to operate comes from adoption of best practices and complete adherence to social, environmental, sustainability and commercial regulation and standards. Foresight is seen as a critical organisational function - driving strategic and operational decision making. Core leadership and management competencies include navigating complexity, decision making under uncertainty, 'seeing round corners' and scenario thinking.

Global pioneers follow the money and go wherever the opportunity is - their operating model enables them to survive and thrive in both in stable and volatile economic conditions alike. They aim for geographic expansion with a global operational design model that incorporates a range of robust but flexible delivery approaches. The model enables them to reduce 'time to value' and become effective and efficient quickly wherever they go. The global model ensures they can enter and exit geographies and market sectors rapidly with minimal 'collateral damage' to the firm or its customers.

Global firms are often tightly integrated into the delivery model of their customers, especially in countries with poor governance and weak institutions. In such countries pioneering global corporations often take on the role of government and provide public services (e.g. education) to both their workforce and the wider community. These companies thrive in a stable operating environment, but know how to use political and economic volatility to their advantage.

Global pioneers aim to both anticipate and shape customer needs and demands. They use every possible channel to differentiate the brand. Product and service portfolios can span everything from low cost and functional to premium priced highly differentiated offerings. In many cases, standard products ranging from cinema tickets to cars have been transformed from one-off product sales into service

propositions with recurring revenue streams. Flexibility is key – business models are reviewed and adapted constantly in response to market opportunities, customer needs and commercial pressures.

Global pioneers have developed sophisticated innovation architectures to ensure a constant flow of ideas and opportunities. Innovation sourcing is considered as important as sales and production. These businesses have a network of relationships with third party research centres, innovation firms and universities - through which they fund and source new product and process ideas. They use mechanisms such as idea sourcing platforms, challenge contests and seeding of venture funds and incubators to bring a constant flow of ideas and opportunities. While some of the ideas make it into core products and processes, many are sold on or licensed to create a self-funding innovation model.

Technology underpins every aspect of a successful Global corporation – from customer relationships to business operations and the management and monitoring of staff. Whilst production and back office functions are typically outsourced, where they remain in the firm, extensive use is made of automation, robotics and AI. Big data and predictive analytics are used to drive short term decision making and tactical marketing. Deep learning systems, sophisticated intelligent search and decision support technologies also enable Global firms to anticipate potentially disruptive developments coming over the horizon and respond quickly to market changes and evolving customer behaviours.

Operating models are lean and make extensive use of outsourcing and contingent staffing arrangements. A rigorous and largely automated process of due diligence and continuous monitoring is undertaken on staffing suppliers to ensure they adhere to best practices in employment conditions, employees development and rewards. Global companies typically operate flat organisation models with relatively few layers of management. Strategic decision making power is usually concentrated in the hands of a small leadership core. The goal is to be able to make and enact decisions quickly.

A global talent model and long term career planning drive the advancement of key employees. Management and leadership development is rigorous and a core investment as firms seek to immerse key employees in the 'Global way' to enable them to become effective managers and leaders quickly. Extensive use is made of online simulation and e-learning tools to help management and staff acquire the skills they need on demand. Because of the pace of career advancement and lean staffing models, opportunities with these firms are in short supply and highly sought after. The extensive use of a contingent and contracted out workforce places a strong emphasis on project and change management processes and 'work swarms' where multi-organisational teams are pulled together at short notice to deliver on a new opportunity.

A two tier reward model is operated. The core of permanent employees have a highly sophisticated set of options to select from - making individual choices and trade-offs on the components. These could include salary, holidays, training, goods and services, healthcare, pensions provision and a range of options proposed by the

employees. The remainder of the contract workforce receive a straightforward rewards package consisting of a financial payment and the minimum legal requirement for additional benefits. These employees are then free to choose how they allocate their money. Global pioneers typically have relationships with third party providers who can offer this tier of employees preferential rates on a range of additional options such as healthcare and pensions.

Critical success factors - customer orientation, foresight, leadership, speed, flexibility, cost efficiency, utilizing the latest technology.

Community Ventures

Pioneer Community Ventures see themselves as having a mandate to change the world for good. They seek to make money in an environmentally and socially sustainable manner while tackling critical global and local challenges. Community pioneers vary dramatically in size and geographic scope and can be found in every sector. Such players are particularly prominent in new and emerging sectors where their green philosophy and credentials prove a powerful plus point in attracting and retaining top talent, customers and partners.

These firms are typically open, trusting, collaborative and learning organisations. They see themselves playing an important role in supporting and developing their employees and local communities. ICT is seen as a critical enabler for Community pioneers - enabling delivery, supporting employees and monitoring the firm's performance across a range of critical social, environmental and financial indicators.

Social, ethical and environmental issues and sustainability are high on the agenda of Community Ventures. They typically aim to exceed minimum compliance standards and expectations - seeking to pioneer new practices, break new ground and popularise best practices. These companies prefer to operate in stable political and economic conditions because volatility harms local communities and trade. They are willing to campaign on key issues, actively seek to reduce inequalities and consider job creation as their social responsibility.

Customers actively seek out and select suppliers based on their Community credentials. Pioneer firms look to develop deep, open and trusting relationships with customers - working together to create future offerings and responding rapidly to issues that arise. Customers look to Community pioneers to introduce innovative ideas and practices and influence their own behaviour - often setting challenges around ways of working that can be transferred back into the customer's own environment. Customers are proud to support Community firms and the broader societal goals they are pursuing.

Widespread use is made of partnership working and collaborations with like minded firms locally and internationally. Community Ventures are conscious of their environmental footprint and so can be reluctant to travel to service opportunities when they can instead be delivered through like minded local partners.

Community pioneers avoid hierarchy and opt for flexible, flat and fluid organisational structures. Everyone in the firm has the opportunity to participate in decision-making and feels responsibility for the firm's success. A distinctive feature of such firms is the practice of co-creation – engaging with customers, partners, external agents and the local population to create new products and services which benefit the customer, the company and the broader community. Co-creation and crowdfunding are the key to innovation for the Community Venture. Sustainability and transparency underpin their business models.

Community Ventures invest in local communities and draw talent from them. Staff are encouraged - and given time off - to work on community enhancing initiatives. The roles in these firms are fluid and evolve constantly - employees have the freedom to design their jobs around business need, personal aspirations and lifestyle choices. These pioneers embrace demographic diversity and offer very flexible reward models tailored to the particular needs of individual employees.

Technology, creativity and innovation are embraced. The culture encourages curiosity and experimentation - welcoming ideas from outside the firm. ICT is used to enhance product and service delivery and enables and empowers the workforce. It also plays a critical role in monitoring, measuring and reporting on compliance with regulatory standards and good practice benchmarks. ICT and the internet play a critical role in providing total transparency of the firm's environmental, social and ethical impact and on performance across all of its activities. The Internet of Things, AI, 3D printing and wearable technologies are in widespread use in Community Ventures.

ICT is seen as a vital contributor to reducing environmental footprints - with an absolute commitment to the paperless office. These firms also pursue best practices in building management and the adoption of video conferencing, immersive telepresence and their successors as an alternative to travel. Gamification is in widespread use to encourage environmental best practices amongst staff and encourage the sharing of ideas - especially those that reduce resource consumption.

Critical success factors – customer engagement, happy and engaged workforce, contribution to the community, tackling societal issues, innovation

Network Enterprises

Pioneers in this model are a highly digital and networked product of the ICT era. They seek to take advantage of modern technology to deliver their products and services in the most effective and efficient manner. These firms are typically positioned at the leading edge of capability in their sector and are often led by players who have left behind the bureaucracy and politics of more conventional firms to focus on excellence in what and how they deliver. Highly individualistic and flexible, Network Enterprises are typically apolitical and value stability, the rule of law and strong and efficient institutions. They are commonly found in fields such as

professional services, specialist manufacturing and personal health and wellbeing - often supplying into a larger value chain.

These pioneers have given a new lease of life to professional guilds, associations and trade bodies - relying on them for training, development and innovation. Although such firms prefer to stay out of politics, they try to influence desired outcomes through their representative bodies if they need to. Social and environmental responsibility is not a top priority for Network Enterprises, but they comply with existing social, environmental and sustainability standards.

Network firms often work on a project basis - winning bids based on the accumulated experience, expertise and practical know-how of their teams. Clients value the fact that those that write the bids and present the proposal are also visible in the delivery. Staff seek to go beyond client expectations and take ownership of solution delivery. ICT is leveraged to ensure effective delivery and co-ordinate between multiple players working on a project.

Efficient systems and processes are the key to success of Network Enterprises. Maximum operational flexibility, lean staffing models, collaborative partnerships and minimal fixed costs are critical enablers of pioneer firms. These companies make extensive use of technology to run their businesses, co-ordinate a largely external workforce and support their relationships with third parties. They take advantage of disruptive technology when appropriate and stay abreast of new developments to ensure they are up to speed in their sector.

Unless the application can deliver distinctive competitive advantage, in most cases Network Enterprises opt for a Software as a Service (SaaS) rental model. The use of cloud computing and virtual solutions enable remote working and help keep fixed costs to a minimum. Back office functions such as accounting, HR and finance are outsourced to third parties.

A three tier staffing model is common. Typically a core team embodies the philosophy and values of the Network Enterprise. A second group of highly capable independent players and small teams make up the next layer of resources - doing almost all of their work through one or more Network pioneers whilst maintaining the independence of not being on the payroll. Key roles such as innovation and project management may be played by this tier. A third tier represent those who may work with the firm less frequently or provide more commoditised skills on a project basis.

Talent supply chains are very important in the Network world – firms attract top people through personal contact, networking, social media and participation at guild events. Extensive use is made of social media to stay connected to the talent network and keep them aware of developments and forthcoming opportunities. The Network Enterprise's social media platform is also seen as a vital mechanism for knowledge exchange with its pool of associates and for identification of new and emerging developments. Firms draw on their talent pool for innovation ideas and reward it for the creation of business opportunities.

Network pioneers find it easy to attract top talent, although competition for the best still exists. Firms are usually top heavy and prefer to recruit experienced people,

valuing their skills over people's demographic and cultural backgrounds. Pioneers also recognise that continuity of the discipline requires that someone takes responsibility for developing future generations. Hence they pursue an apprenticeship model. This enables a small number of graduates to enter the firm and work closely with highly experienced staff to advance their capability and know-how rapidly.

The Network Enterprise reward model is highly personalised. Those at the core design rewards and benefits to suit their personal circumstances. The next tier are typically offered attractive fee for service contracts and potentially some level of participation in equity, total gain sharing or project level profit pools. The third tier largely receive a straightforward payment for services. Typically guilds in the Network world provide people with social security benefits and offer education and continuous development courses.

Critical success factors – client relationships, personal service, developing a strong brand, attracting top talent, network development.

Key Characteristics

Characteristic	Global Corporation	Community Venture	Network Enterprise
Purpose	<ul style="list-style-type: none"> Maximise Shareholder Value 	<ul style="list-style-type: none"> Force for good Make money while tackling key societal challenges and supporting the communities in which they operate 	<ul style="list-style-type: none"> Profit Providing excellence (service/product) in a specific field Do what we love Work with those we respect
Critical success factors	<ul style="list-style-type: none"> Customer orientation Foresight Leadership Speed Flexibility Cost efficiency Utilizing the latest technology 	<ul style="list-style-type: none"> Customer engagement Happy and engaged workforce Contribution to the community Tackling societal issues Innovation 	<ul style="list-style-type: none"> Client relationships Personal service Developing a strong brand Attracting top talent Network development.
Strategy	<ul style="list-style-type: none"> Technology centric Operate at the leading edge of innovation Recruit and develop excellent leadership and management Lean operating and staffing model Flexibility enabled by technology - move in and out of sectors and markets very fast Strong focus on 	<ul style="list-style-type: none"> Pursue excellence while doing social good differentiate on community, social, green and ethical credentials Operate in networks with similar companies in other countries and regions Prefer to rely on partners for manufacturing and service delivery in distant markets, rather than handle them directly 	<ul style="list-style-type: none"> Focus on what and how we deliver Leverage the network Emphasise and differentiate on personal experience, capability and know how Some firms compete on quality at a premium price, others provide commoditized products / services

	acquisitions		
Culture /working style	<ul style="list-style-type: none"> • Profit-driven and technology centric • Rapid decision making and execution • High intensity • Emphasis on fitness for purpose, controlled health monitoring 	<ul style="list-style-type: none"> • Open, trusting, collaborative, learning • Ethical competition • Strong focus on work-life balance, sustainability and social responsibility 	<ul style="list-style-type: none"> • Very individualistic • Flexible • Community attachment is weaker, but companies might support one cause at a time
Customer orientation	<ul style="list-style-type: none"> • Deep penetration of customers enabled by technology • Customers dependent on these Global companies 	<ul style="list-style-type: none"> • Intimate relationship with customers – people choose green companies because of their values and social commitment 	<ul style="list-style-type: none"> • Reliable / often close relationships with customers
Approach to innovation	<ul style="list-style-type: none"> • Wide range of approaches to source ideas • Acquisition of start-ups and innovative disruptive companies and ideas • Try to prevent / control disruptive innovation by acquiring the companies • Innovation self-funding by reselling many of the ideas acquired 	<ul style="list-style-type: none"> • Very magnetic companies – attract talented people that drive innovation and co-create with customers • Strong focus on open source development and collaboration • Always willing to innovate, but never compromise on their principles • Seek to bring about disruptive innovation in target markets and the social arena • Rely on crowdfunding to finance innovation 	<ul style="list-style-type: none"> • Firms rely on the talent pool and client demands to drive innovation • Sometimes client set new requirements and firms then go out to look for new talent, with expertise to deliver the innovation and expand the talent pool • Take advantage of disruptive innovations when appropriate – accept some and reject others

Key technologies	<ul style="list-style-type: none"> Automation and robotics for efficiency AI, data mining and predictive analytics Big data – to gather, analyse and exploit information about customers, competitors and employees Pro digital currencies where legal Embrace BYOD – staff has the option to buy technologies from pre-approved list Telepresence /immersive telepresence for global meetings Encourage staff to go for human enhancement (HE); try to legalize HE 	<ul style="list-style-type: none"> Technology empowers the workforce; ICT used to monitor and measure regulatory compliance Telepresence, video conferencing and remote working / collaboration tools to reduce travel requirements Heavy use of Internet of Things Might trade in digital currencies if this is aligned with their goals Embrace 3D - supporting the local maker economy Wearable technologies Human enhancement (HE) / types of enhancement optional. Might have concerns about long-term health impact of HE 	<ul style="list-style-type: none"> Technology that supports relationships with third parties Extensive use of SaaS tools - enable companies to configure resources quickly Cloud computing Virtual solutions and telepresence enable remote working Avoid high risk associated with digital currencies Embrace BYOD and encourage staff to adopt embedded technologies Positive about HE, but leave it to individual choice
Business models	<ul style="list-style-type: none"> Public companies with multiple shareholders; or VC-backed firms Constantly change business models according to market needs and pressures Global delivery 	<ul style="list-style-type: none"> Mixed ownership – public and private Experiment with sustainable new business models and production processes Co-creation with customers Transparent business 	<ul style="list-style-type: none"> Typically private companies Outsource a lot of functions – accountancy, insurance, HR provided by third parties Distributed selling model – a lot of the associates sell business on behalf of the

	<ul style="list-style-type: none"> • Strong focus on speed and efficiency • Analytical approach to pricing models – able to predict outcomes of marketing campaigns, discounts, etc. with a high degree of accuracy • Non-transparent business models 	<p>models</p> <ul style="list-style-type: none"> • Finance business growth through crowdfunding 	<p>association</p> <ul style="list-style-type: none"> • May have reward-sharing with associates • Willing to innovate on risk and reward sharing with clients
Organisational structure	<ul style="list-style-type: none"> • Flat model with decision making power concentrated amongst a small leadership core • Business operations executed by AI • The majority of employees responsible for routine work 	<ul style="list-style-type: none"> • Flexible, flat and fluid organisational structures • Staff design their own jobs • Participatory decision making 	<ul style="list-style-type: none"> • Small core, close tier of regular associate partners and outer tier of more occasional partners and lower skilled contract workers • Efficient systems and processes are key, not the size of companies
Talent model	<ul style="list-style-type: none"> • A global talent model with long-term planning for the 'key' employees • Strong performance culture – employees closely monitored in and outside work • Operate with low levels of top talent concentrated in key positions • Long careers, multi- 	<ul style="list-style-type: none"> • Investing in and drawing talent from local communities • Careful selection process – employees come into the company to make a difference • Paternalistic and meritocratic – best people rise to the top • Less formal roles, people 	<ul style="list-style-type: none"> • A core of team members embody the philosophy / values of the company; the rest come in and out on a project basis • The best companies 'cherry pick' top talent - people with sought after skills who fit in the company's core ethos and operate independently • Top heavy as they recruit

	<p>generational workforce</p>	<p>design jobs themselves and have the freedom to decide where they can add value.</p> <ul style="list-style-type: none"> • Accept /encourage demographic and cultural diversity 	<p>experienced people</p> <ul style="list-style-type: none"> • Skills matter – demographic / cultural background does not • Supply chain of talent very important – companies attract talent through personal contact, networking and social media • Rely on guilds for training and professional development • Adopt apprenticeship model
<p>Reward model</p>	<ul style="list-style-type: none"> • The core of people with decision making power have highly flexible and attractive reward models • Largely financial packages available for the majority – a lump sum of money offered as reward, employees use it as they want • No pension schemes offered 	<ul style="list-style-type: none"> • Very flexible reward models • The reward package depends on the particular needs of each employee • Option to choose between experiential elements, social causes, personal development, health and sickness benefits • Experimental in the way they train and retrain employees 	<ul style="list-style-type: none"> • Distributed reward model – for ‘core’ employees and contractors • Guilds provide health insurance, etc.
<p>Key roles</p>	<ul style="list-style-type: none"> • Chief Acquisition Director • Financial Director • Chief Technology 	<ul style="list-style-type: none"> • Chief Culture Advisor • Head of People and Talent • Head of Sustainability and 	<ul style="list-style-type: none"> • Chief Relationship Manager (networks) • Chief Relationship Manger

	Innovation Officer	Community	(customers) <ul style="list-style-type: none"> Business Development Manager
Political stance	<ul style="list-style-type: none"> Work in association with governments Closely aligned with business-oriented political parties Benefit from political disruption - take on government's roles and provide public services to people, especially in poorer countries with weak institutions Very strong lobbying power – seek to influence the shape of industries and set the standards and regulations 	<ul style="list-style-type: none"> Support political stability; avoid instability as it harms communities and business Rely on campaigns and employees to influence governments for good causes Support parties with a strong social agenda Very compliant with human rights and environmental regulations 	<ul style="list-style-type: none"> Apolitical Stay out of politics Influence policy through guilds when they need to Value stability - clear rule of law, strong institutions and robust government
Economic stance	<ul style="list-style-type: none"> Lobby actively for trade liberalisation Prepared for a range of economic scenarios – can do well in stable and turbulent climates Seek to minimise tax burden legally 	<ul style="list-style-type: none"> Creating jobs is a social responsibility Actively encourage consideration of alternative capital economic models Pay all taxes to support the stability of national revenue bases Seek to reduce inequalities 	<ul style="list-style-type: none"> Prefer stable economic and business climate
Environmental stance	<ul style="list-style-type: none"> Compliant with minimum environmental and 	<ul style="list-style-type: none"> Aim to exceed minimum compliance standards 	<ul style="list-style-type: none"> Comply with environmental and sustainability

	<p>sustainability standards but lobby to restrict regulation</p> <ul style="list-style-type: none"> • Try to acquire as many resources as possible to gain competitive advantage 	<ul style="list-style-type: none"> • Drive environment and sustainability best practice with the help of local communities • Trade in environmental goods and services • Aim to mitigate global competition for natural resources 	<p>standards but try to minimize negative impacts on their business</p> <ul style="list-style-type: none"> • Might provide advice on environmental issues and thus create business for themselves
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ⁱ <http://www.pwc.com/gx/en/managing-tomorrows-people/future-of-work/index.jhtml>

ⁱⁱ <http://www.iltanet.org/Downloads/LTFH-Report.pdf>

ⁱⁱⁱ http://cdn.ientry.com/sites/webpronews/article_pics/avatar2045.jpg

^{iv} http://www.iftf.org/uploads/media/IFTF_FutureWorkSkillsSummary_01.gif

^v <http://static.dnaindia.com/sites/default/files/1838804.jpg>