Azul & West

The Next Decade

The future is unknown and rapidly developing technology is fundamentally reshaping our society.

We have created a framework to consider current developments and extrapolated their use cases and adoption rates into the future. These scenarios can serve as a guide for your strategic plan. This is not a prediction of the future but an assessment of the potential routes of the journey and the opportunities that lead us there. If you would like to work with us in exploring these - please contact us. Alternatively any feedback or critique would be greatly appreciated.

As countries develop we have seen a mass migration of people from rural areas to cities to exploit better opportunities, ultimately leading to the rise of mega cities. In the coming decade this trend will

tapper as advanced manufacturing, universal access to the internet , online medical services and cheaper autonomous transport enable rural workers access to the opportunities once only available in large cities. Due to rise of more automated farming methods, home based power generation capabilities (solar, wind), interconnectedness and cheap autonomous transport means that the appeal of urban living will decrease significantly. Could undeveloped countries deviate from the familiar urbanization and development cycle of the past?

In rural areas, large distances and fewer obstacles will drive higher and earlier adoption rates for autonomous vehicles and drones. This is likely to be driven by areas that have stable and sunny weather patterns due to the easy of apply AI to these landscapes. Although the concentration in cities is unlikely to reverse - cities will once again sprawl ever outwards in a more disperse manner as the internet and autonomous vehicle & drones enable the cities tentacles to expand ever outwards. Autonomous vehicles and drones will connect large cities - highways on land and in the sky. Large autonomous ships will cruise the oceans connecting these cities and urban/rural states. While intercontinental travel will be fast and done via supersonic planes and sub space rockets.

AI will continue to develop and finally master complex navigation in busy city centers. Autonomous vehicles will change how we travel as vehicles are modified for various purposes: Fitness vehicles, mobile hotels, mobile shops, restaurants, clinics or operating rooms. Congestion may even increase due to additional vehicles on the roads - shops, delivery drones, travelers, etc. As vehicles become driver-less and connected - the ability to optimize travel increases - we are likely to see greater use of tiered lanes or even geo-fenced areas - free slow lanes and paid access for faster lanes or emergency vehicles.

As solar power and other renewable sources become more efficient and cheaper to install - we see the traditional centrist power generation model disappear to a more connected and intelligent infrastructure. We see the potential of solar to drive significant power surges in key times during the day driving cheap rates but then reversing significantly during the night or winter months. Areas with significant solar radiation will become the new energy powerhouses. However as power storage systems advance - the renewable solutions will replace exiting coal,
oil and nuclear power leading to cleaner air but generating other environmental concerns.

Due to the advances in medical technology - sensors and data will enable remote heath care from anywhere to anywhere. As personal devices become ever more connected with healthcare sensors - the potential for healthcare to be provided almost completely remotely increases. This will be a significant trend that will drive healthcare costs lower and increase adoption rates. As advanced manufacturing becomes more widely spread - small communities will start to produce their own drugs and treatments - potentially ignoring existing patents laws. Robotic enabled autonomous operating rooms will drive / fly directly to patients.

With significant advances in robotics, automation and 3D printing - ideas are likely to flow globally but be produced locally. We see the potential for small urban development's to cluster together to better

exploit these advantages - similar to development models in southern Germany Austria and Switzerland which have very good connectivity yet have no significant mega cities. The wide availability of high speed internet coverage will further reduce the need for skilled people to move to large cities to exploit the best opportunities. This will increasingly be done via online networks and communities as the education and opportunities become available to everyone with a connected device. These communities are likely to revolve around idea creators who are able to find creative ways to apply the latest technology and supported by communities or team who facilitate their rapid deployment. These are likely to be two models:
1. Open source with various communities crowd solving problems and
2. Closed private communities who will go to significant lengths to protect their intellectual property.
Freelances will come together to form teams and disperse once the project has completed - depending on their employers - they will either be paid in cryptocurrencies or e-money. High tech workers will also cluster in firms with extremely flexible hierarchies and structures as teams are continuously created and dispersed once projects are completed.

We also see the rise of the artisan and craftsmen - who using traditional methods create authentic experiences for their customers who feel increasingly disconnected in an ever more connected world.

The Financial market will undergo a significant revolution. Platforms will dis-intermediate all deposit and loan origination driven by smart algorithms and AI. Increasingly individuals will personally be able to lend out their saving to several borrowers directly through advanced algorithms on platforms or devices. Banks will no longer provide loans or deposits but instead sell algorithms that enable these activities. Intelligent assistants will guide their investment and spending habits. Tokens and distributed ledgers will replace shares as firms which will enable markets to be continuously open for trading.

Money itself will undergo a significant change and become electronic. It will take two forms - central bank e-money and anonymous cyptocurrencies. Central bank money will be an official currency but likely actively tracked and controlled by states. These are likely to be subject to high inflation or confiscation (via negative interest rates, etc.), taxed and surveillance. However increasingly individuals will turn to cryptocurrencies to mitigate these issues. These cryptocurrencies may well become illegal to hold as the states try to maintain control. (These will be decentralized models or potentially even other country's official currencies which either have anonymous characteristics or are less inflationary/ more stable).

As government debt levels are pushed to the limit and with increased spending on medical and pensions - the government will need to curtail benefits, raise taxes and restructure its debt (write offs and high inflation). The population will increasingly resort to alternative monetary systems to avoid punitive tax rates and inflation.

As household increasingly become self-sufficient through health and education via the internet, energy via solar panels , food via home plantations - the power of governments will be curtailed by the decreased ability to tax their citizens. this will be further amplified by internationally traded crypto

currencies and services (and goods) trades by individuals through the internet and manufactured locally over which the government has little to no control. In addition access to better information will enable consumers to better protect their rights - as any company seen has a negative impact on the environment or society are instantaneously flagged by AI to the billions of consumers globally. Companies with negative health, environmental or societal impacts will increasingly be marginalized by investors and consumers.

Better information will enable citizens to challenge their governments. As a result we see significant challenges to large countries. The larger superpowers will soon find out that their biggest threat are not each other but themselves. Their own internal populations will fracture and divide up their countries. Smaller countries or even city states will emerge. Governments will have more control over cities where residents are unlikely to become completely self-sufficient. These new countries will likely be based on either one of two models:

1. Authoritarian or centralized power - a benign surveillance state that continuously monitors its inhabitants and directs effort for their own wellness. Other more darker authoritarian models may evolve but will provide volatile and result in violence and chaos over time.
2. Direct Democratic states or distributed power - the existing democratic model of representative government will become less common and direct democracy powered by the internet takes over. The traditional model of representative government may continue in existing smaller states but will become a volatile form of government as continuous misinformation campaigns and vested interests impede effective governance or they may evolve to function more like direct democracies with voters allocating their votes to specific qualified individuals to resolve very specific issues as and when these issues arise.

States may form lose alliances spanning large geographic areas for defense and trade - similar to the EU but with a much weaker and more flexible structure. Wars will once again become more frequent between smaller states , or even city states - although more likely contained and smaller in scale than the last century and largely fought by drone armies and by very selective targeting of individuals in opposing states. These wars will be individualistic rather that the mass and random slaughter of the past.

Will city states dominate? Maybe not as we see the scenario for the rise of city states less likely due to high concentration of people and resulting demand for resources. Due to its population intensity - they are unlikely to be self-sufficient in energy , food or water (despite significant advances in energy and food production capabilities). This will leave them vulnerable to larger more dispersed rural / urban cluster states. We see the potential for inequality to be a core feature of the city and rural areas. Wealthy residents living in self-sufficient estates in the country side with poor urban dwellers cramped in cities and having to hustle to meet their needs.

States will fluctuate between nationalist tendencies and global / open societies. National tendencies will arise due to the need to maintain and create a coherent identity , culture, distribute wealth, act fast

and divisively and protect intellectual property. Global / open societies will generally follow a period of nationalism as states are required to access new intellectual talent and exploit trading opportunities.

The world is likely to evolve into a contradictory state of more open and global communities at a trade and information level but at the same time closed and partly rural at a community level. While at the same time governed by a more transparent system that openly encroach on personal freedoms. The internet will increasingly become walled as states try to maintain control over their population only to be challenged by the might of open and connected societies.

As more people and sensors are connected - pandemics and natural disasters can be predicted more accurately and with greater lead times enabling officials to take immediate action to limit their impact. A food contamination case can be identified in real time and all clients associated with the product can be notified. Companies will evolve to be socially and environmentally responsible as any negative impact are immediately broadcast globally by AI driven sensors and monitors with significant repercussions from a sales, regulatory and investor dimension. Companies will no longer be able to market their social or environment credentials without full commitment.

With an aging population, increased global mobility, genetic and biological engineering - the likely outbreak of a global or regional pandemic increases and is likely to have significant impacts. The already stressed medical services due to an aged demographic will break under the increased strain leading to sudden and dramatic collapses in population in affected regions as the young are unable to provide the services that enable longevity. Other events could include large solar activity which disable or disrupts significant tech infrastructure on which people have become completely reliant upon.

Space will become a new market place - initially as tourist destination for the ultra rich, but slowly evolving to a new frontier for mining and energy production. As the cost to space decreases more companies will be able to launch services (micro satellites, etc.) and provide new services. The moon also holds possibilities in terms of tourism, mining (on moon or asteroids) or even new specialized and automated manufacturing or industry as the moon transforms into a launch pad for further exploration. The technology of space travel will also significantly influence air travel as new trajectories and rockets enable intercontinental flight at significantly faster times and speeds. Space junk will start to play a more significant challenge in the future.

Religion - one would think that in a world where science and tech increasingly dominate that religion would be obsolete. That is unlikely to happen - in the west Christianity will survive. This will come as a result of Christianity deemphasizing the Old Testament and focusing on the moral and spiritual dimensions. The upcoming technology revolution will increasingly drive and entrench income inequality which will strength religion.

With the rise of the artificial world (robotics, genetically and biological engineering, AI, etc.) the question of what it means to be human will come to the fore. We believe there will be two clearer views - those of the science community and that of religion that emphasizes the natural.

Despite the incredible advance in technology and standard metrics of wellness (longevity, health, etc.) is the human soul better off?
What is the value of natural evolution vs. man-made artificial representations?
Can religion serve as the conscience that tempers the extremes of science and technological development?

These challenges will only increase as people stretch the boundaries of science. Technology often unbalances the natural system - the question we need to answer is which technologies are worth the price?

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