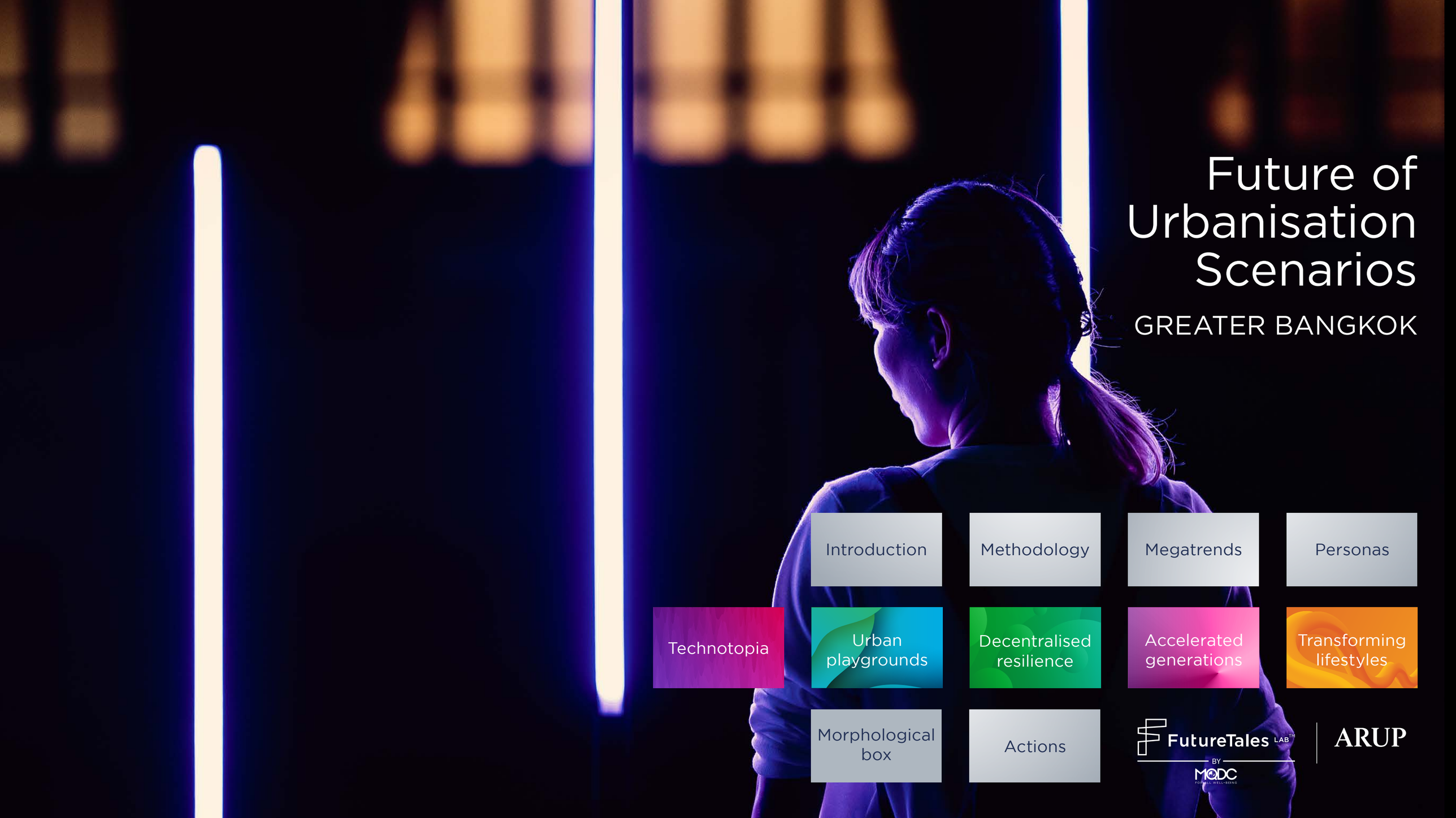
Future of Urbanisation Scenarios

GREATER BANGKOK



Introduction | Methodology | Megatrends | Personas

Technotopia | Urban playgrounds | Decentralised resilience | Accelerated generations | Transforming lifestyles

Morphological box | Actions

FutureTales LAB™ BY MQDC FOR ALL WELL-BEING | ARUP

A message from the future

WELCOME TO... 2050!

Greater Bangkok has dramatically transformed since 2021. The great megacity is a wonderous place for people to live, work, play and learn. Buildings and infrastructure have evolved to meet the challenges that climate change has brought. The world is now highly urbanised and has changed a lot. Some countries have fared better than others: some due to their geographic location but, generally, those which have thrived were proactive in adopting the United Nations Sustainable Development Goals and had strong economic and environmental resilience policies and plans.

2020 was an inflection point for people and the planet. COVID-19 highlighted key vulnerabilities including health, economics and supply chains. It also demonstrated how adaptable people could be. The realisation of how quickly things could change dramatically altered the path into the future. Many environmental tipping points had already been passed and caused immeasurable loss.

Innovative strategies coupled with new technologies provided solutions to improve both planetary and human health. A resilient future, however, was achieved by drawing from indigenous knowledge and grounding all decisions on strong culture and maintaining the Thai values of health, happiness, family and wellness.

Greater Bangkok emerged as a beacon of hope in the Southeast Asian region. A guiding principle – wellbeing for all – emerged as an aspiration to see human and natural systems thrive together. At first, the impact of this principle was akin to a gentle stream – a simple conversation about the future of our rapidly growing city. Over the decades, however, that trickle turned into a mighty torrent. In time every decision was measured against this principle.

As you explore the five plausible futures of Greater Bangkok 2050, use the information to assess risks and possibilities for the future. Use this knowledge to consider how the decisions that you make today can help you to *write the future that you want*.

Introduction

Foreword

As humankind confronts growing social and environmental challenges, many of the solutions must come from cities.

Visit Malaisirirat
Chief Executive Officer
MQDC

Cities are where these challenges are most acute, but they are also where we can achieve the most dramatic improvements.

In exploring the future of urbanization and Greater Bangkok, this report comes at a moment when ambitious thinking about the future is critical.
To become truly sustainable, cities need new approaches in areas from transport to energy, agriculture, healthcare, and education. Several alarming megatrends and challenges now demand a concerted response from public bodies and private organizations.

For MQDC, an insight that stands out in this analysis is that we must cherish and conserve the Thai heritage that informs this study. The strong values of kindness, caring, and community for which Thailand is celebrated can guide us to the future we seek of “For All Well-Being”, where all life flourishes.

Welcome to a vision of how urban life can transform. I hope that, like us at MQDC, you will find inspiration in its creative exploration of the vast changes now looming.

To meet the challenges that will be faced in the following decades we need to consider bold approaches and demonstrate leadership in sustainability.

Malcolm Smith
Arup Fellow

A global crisis is looming where urbanization has rapidly increased and our planetary resources are stretched to the limit. The COVID-19 pandemic is demonstrating both the importance of wellness of our people and the vulnerabilities of the human population.

Foresight thinking helps us to explore the future and think systematically about steering towards a preferred future. Arup is very excited to have collaborated with MQDC to explore the future of urbanisation for Greater Bangkok. Partnerships where entities have aligned values can create the best outcomes.

When we consider our urban areas, we need to focus on how people live but also how they interact to create a community where both people and the natural environment thrive.

We hope that this report creates discussions about the future and inspires a change to a sustainable future and helps to achieve wellbeing for all.

As cities grow, they benefit from economies of scale and deeper social, cultural and economic networks. However, rapid urbanisation in ASEAN can make it difficult for urban infrastructure development to keep pace.

This in turn gives rise to issues related to economic inequality, congestion, as well as environmental and health costs.

However, fast technological advancements present cities with numerous opportunities to prepare for and tackle these urbanisation challenges.[1]

DATO LIM JOCK HOI, SECRETARY-GENERAL OF ASEAN

Introduction

Background

Arup has collaborated with FutureTales Lab from MQDC to use foresight methodologies to explore the future of Greater Bangkok

In 2021 more than half the world's population live in cities. Two-thirds are projected to live in cities by 2050. In Asia, this transformation has happened recently and rapidly. Just 30 years ago, the urbanisation rate was only 31%. Today it is over 50%. Thailand's urbanisation has tracked a similar path.[2]

This shift has brought about a new urban form – the megacity, or urban agglomerations of 10 million or more people. Thailand's primary city Bangkok is among the world's 34 megacities with a population of over 10.5 million, doubling in just 35 years.[2]

Rapid urbanisation and cities of this scale tend to be associated with haphazard planning and development, causing social and environmental costs and vulnerabilities.

COVID-19 provides a stark reminder of how vulnerable cities can be. This crisis comes at a time of great global transformation. Climate change, resource consumption and declining biodiversity are key concerns. Urban dwellers are often larger consumers than rural counterparts. Cities account for over 70% of greenhouse gas emissions and consume almost 80% of the world's energy.[3]

At the same time, technologies of the Fourth Industrial Revolution are booming, energy systems are transitioning to renewables and transportation is electrifying. Social media is opening new horizons, while online platforms bring businesses, governments and citizens closer together.

Following the urbanisation patterns of other megacities, infrastructure and urban development are reaching well beyond the Bangkok Metropolitan Area (BMA). Enabled by government economic and land-use policy, the 'Greater Bangkok' region is becoming a hotspot for exciting new industries and communities.

The Eastern Economic Corridor (EEC) is a notable example of extra-urban development outside Bangkok's formal boundaries. This special economic zone is located east of the BMA, and consists of newly expanded highways and motorways, high speed rail, upgraded ports and industry clusters. Connecting Bangkok with Pattaya City approximately 150km away, the EEC is expected to attract foreign investment, create new smart cities and promote 'S-curve industries' as part of the Thai Government's Thailand 4.0 plan to transition to an innovation economy.[4]

Forward planning, vision and ambition are needed to ensure a megacity's liveability, sustainability and resilience for the long term. Ongoing urbanisation of the region requires wise choices from policy makers, city developers and the community. Because of the long lead time between planning decisions and establishment of new infrastructure and settlements, decisions often have to be made decades in advance.

How to use this report?

Arup's Foresight + Innovation team have collaborated with MQDC's FutureTales Lab to explore the question: What will urbanisation look like in Greater Bangkok in 2050?

Foresight offers tools and methods to enable multiple stakeholders to analyse future risks and opportunities. Please use this report to consider the trends that are shaping the future of urbanisation in Greater Bangkok. Read through and interact with the five plausible futures that we have developed. Imagine these futures and what these mean for the people who live in them. Think about what is good and bad about these futures and what would need to be done to achieve a preferrable future.

The final section of this report puts forward some recommended actions. Please build on these and collaborate with stakeholders across industry, government and the community to make critical choices that will make Greater Bangkok a thriving city-region for people and the environment they depend on.

URBANISATION

Transforming new and existing urban areas to attract people and meet the future needs of communities and the environment

Methodology

Focal topic

This foresight study examined the future of urbanisation through the concept of 'wellbeing for all', which reflects an aspiration of FutureTales Lab to imagine cities where humans and natural systems experience optimum levels of health, happiness and fulfillment.

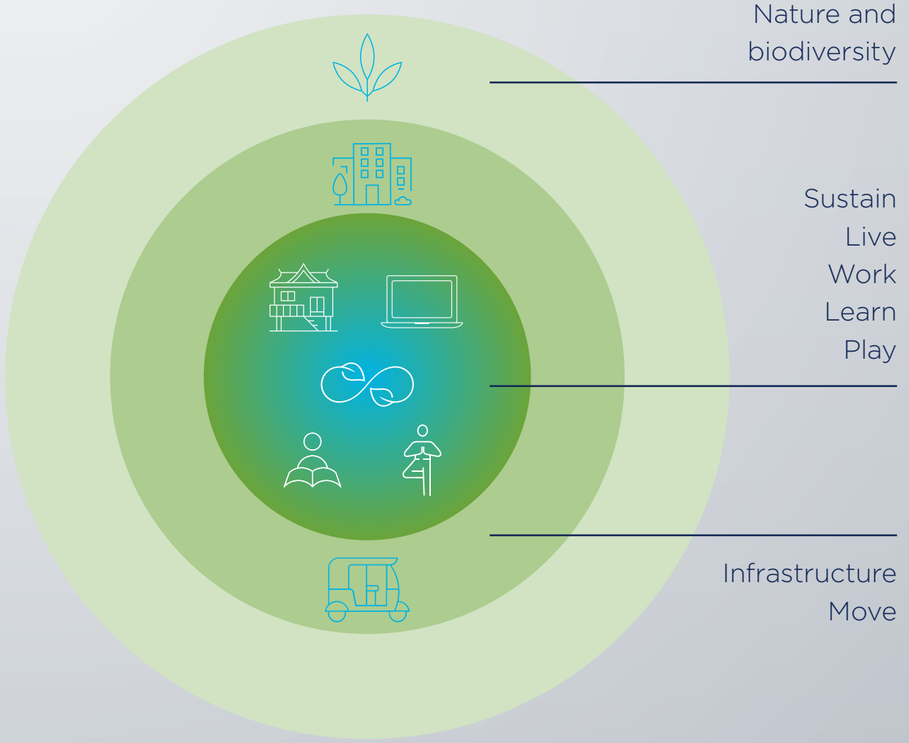
The concept of wellbeing is defined by a framework of key outcomes from urbanisation. The framework for wellbeing puts people at the heart of our urban environments. After all, that is why we are creating these places.

We must consider all facets of the human experience in cities, including how people live, work, learn and play. It is also important to think about how people can create sustainable lifestyles both from environmental and economic perspectives.

These elements are enabled by the infrastructure that is built to form the city, which includes transport systems. Crucially, the built and human dimensions of cities are all underpinned by a healthy planet where nature and biodiversity are thriving and therefore provide a healthy environment in which to live.

This framework is used to consider what actions need to be taken to achieve optimal wellbeing outcomes for the people and environment of Greater Bangkok.

Framework of key urbanisation outcomes used in this foresight study



LIVE
Our lifestyle, where we live and any related issues that impact liveability

WORK
The types of jobs we perform, working conditions and new skills

PLAY
The ways we stay active in urban spaces and participate in recreation

LEARN
Lifelong learning as well as new ways of learning and education access

MOVE
People's ability to move through urban areas via active, public or private modes

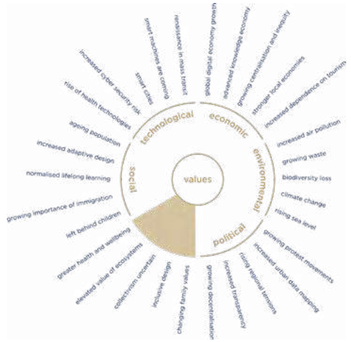
SUSTAIN
The capability of an urban area to sustain people on individual and community levels

NATURE & BIODIVERSITY
The health of ecosystems and how they relate to the built environment

INFRASTRUCTURE
All built structures and the resources that are used to create and support them

Methodology

Foresight process



Horizon scan

The process commenced with a horizon scan of trends and weak signals shaping the future of urbanisation. This step involved literature reviews and brainstorming, with special input from industry experts in workshops and interviews. The STEEPV (Social, Technological, Economic, Environmental, Political, Values) framework was used to ensure trends reflected a wide coverage of issues.

A qualitative assessment produced a short list of 30 high impact trends.

Click here to see details of the high impact trends

Megatrends

High impact trends were synthesised into seven megatrends, or powerful forces for change arising from the combined influence of multiple trends. Megatrends have global scale and build up over long periods of time. While global in scope, the implications of a given megatrend can be assessed at the local level.

Megatrends are important to watch because they often point to sources of disruption and transformational change.

Click here to see details of the megatrends

Key factors

Analysis of the seven megatrends and their component trends helped identify key factors that determine the future of Greater Bangkok. These factors describe drivers of change with significant uncertainty in terms of how they will be expressed in the future or how they will impact urbanisation.

These factors drive the focal point of the scenarios.

Click here to see details of the key factors

Morphological box and projections

Morphological box was the chosen scenario technique for this study because it allows for the exploration of complex issues by providing a structured process to select the most consistent and relevant scenarios.

With this method, scenarios can be built from future projections identified in each key factor. Projections are future states or alternative developments of a key factor. In this study, key factors consisted of between two and four possible projections.

Click here to see details of the morphological box

Methodology

Foresight process

Scenario building

Scenarios are evidence-based stories of the future. They are not predictions, but rather a narrative of how the future could turn out given the interplay of key factors or uncertainties.

A combination of one projection for each key factor was used to create five unique scenarios.

Developing narratives

A number of methods were used to explore the details of each scenario. Six personas were developed in order to consider how different future residents might experience each scenario. How they interacted with each other in each scenario was also explored.

The Causal Layered Analysis (CLA) method was used to structure a dialogue about alterative futures.

Graphics were developed to explore in detail how elements of the wellbeing framework would manifest in each of these future scenarios.

Implications and actions

Each scenario was assessed in terms of threats and opportunities for the wellbeing of residents and visitors to Greater Bangkok. To stimulate follow up discussions and actions, implications were identified for each scenario.

Actions were developed in a workshop brainstorming exercise and were further refined to a specific set of actions for policy makers, city developers and communities.

Putting future thinking to use

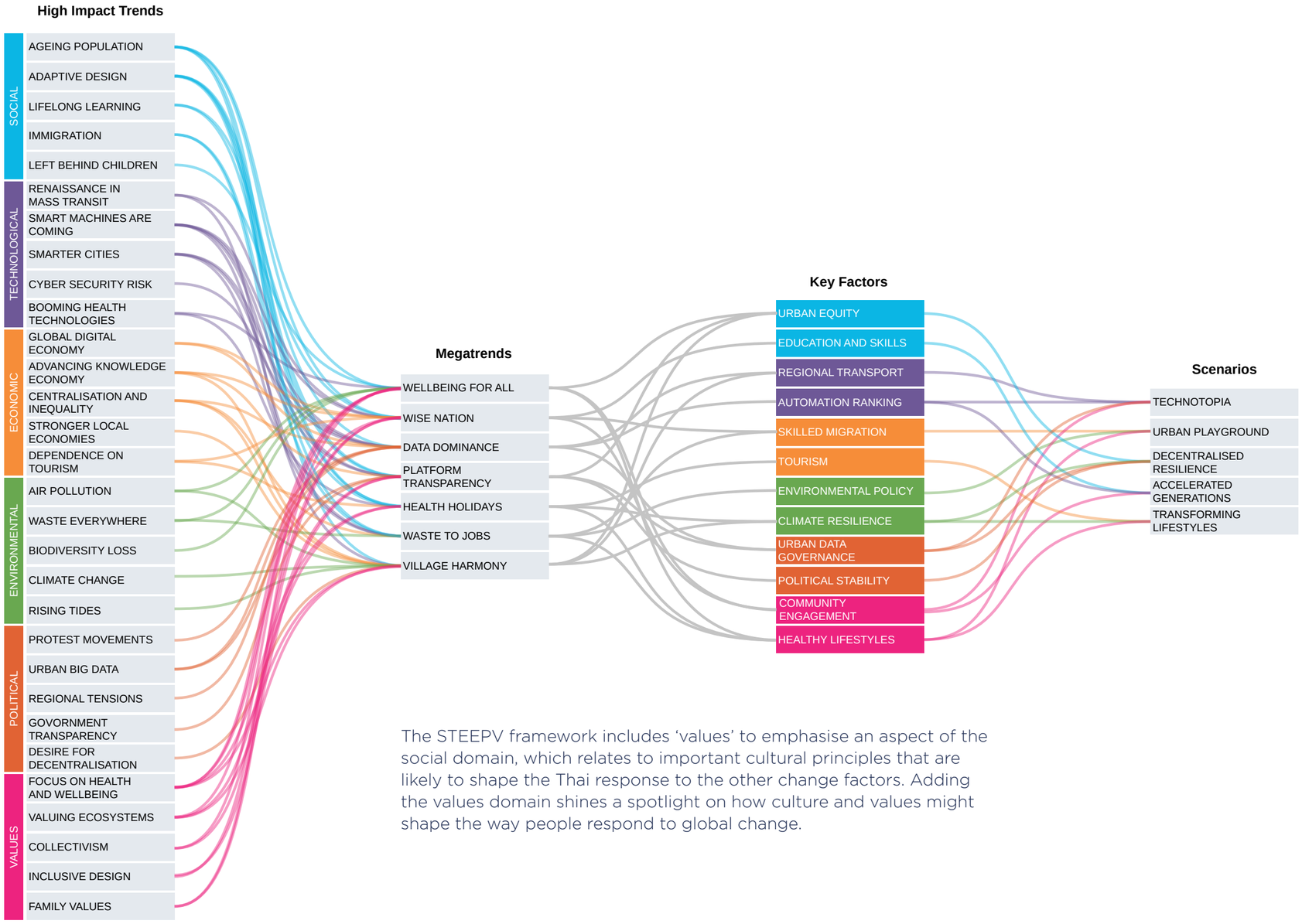
The most important step in the foresight methodology is taking future thinking and ensuring it is used to drive better decisions.

All assets in this report are designed to help facilitate discussions about a possible future of urbanisation in Greater Bangkok. Some ways that you could use these assets include:

- Run an ideation workshop using the trends cards
- Run a workshop using the graphical assets and personas to further explore the consequences of each scenario
- Use the scenarios to do wind tunnel testing to check the robustness of policies and strategies

This diagram captures the process and evolution from the high impact trends to megatrends, to key factors and the scenarios.

The connections between these elements show their influence.



The STEEPV framework includes ‘values’ to emphasise an aspect of the social domain, which relates to important cultural principles that are likely to shape the Thai response to the other change factors. Adding the values domain shines a spotlight on how culture and values might shape the way people respond to global change.

Megatrends

Megatrends are powerful forces for change occurring at the intersection of high impact trends. Megatrends have global scale and build up over long periods of time. Their component trends are patterns of change that can be verified with historic data.

As such, megatrends are best viewed in hindsight, but can offer clear signals to decision makers about the future in the short to medium term. While global in scope, the implications of megatrends can be assessed at the local level.

SEE ALSO
Full Megatrends report

Personas

We can only appreciate and understand scenarios of the future of urbanisation when we think about how people live in these futures.

We would like to introduce you to the following six characters who live in Greater Bangkok in 2050. Some of them know each other and some don't, but their interactions tell you about how well the city meets their needs and impacts on their wellbeing. We will explore a day in the life of each of these personas in the scenarios section.

MOTIVATIONS & VALUES

Saifah
Male, 7

A school student who loves sport and will take any opportunity to get outdoors. Due to his mild autism, he has had a hard time making friends at school but finds it easy to open up on the playground. He always enjoys traveling to visit extended family outside the city.

Lucy
Female, 25

Likes to keep on the move, looking for new places to explore. Travelling to Bangkok several years ago, she is an ex-pat from the UK working in the agriculture technology sector. She has a strong voice for equal rights for the people of Bangkok.

Apinya
Non-binary, 36

A free spirit and young at heart, Apinya is active in their community, often volunteering to support those in need. They work when they can, taking part in the gig economy and not working the same job for very long. They enjoy frequent travel to countries and places of cultural significance and history.

Li Jun
Male, 45

Doing his part for the advancement of Bangkok and driving a clean and efficient technology agenda. His skills in leveraging data for improved efficiency have propelled his career. Since relocating from mainland China, he aspires to help the people of Bangkok by leveraging technology.

Hathai
Female, 63

Driven to keep her family and community together and happy. Mindfulness, meditation and health are important parts of her life as she strives to make Bangkok a place that she and her family can be safe in. Her passion for food has driven her career and she doesn't want to retire any time soon.

Mongkol
Male, 82

Despite his disability which makes walking challenging, he finds enjoyment in keeping active with his great-granddaughter and engaging with his local community. He loves music, regularly practising on his piano for anyone who wants to listen.

Scenarios

Welcome to Greater Bangkok in 2050.

These five divergent scenarios present plausible futures which are created through a series of possible events.

Each scenario consists of opportunities and challenges for residents and visitors. These scenarios have implications for the way that people live, work, play, learn, move and sustain in Bangkok.

These scenarios can be used to test strategies and aid with the decision making process. These may help to identify blind spots or consider future complexities.

We encourage you to use these to expand your thinking about the future. Are there unexpected consequences that you need to watch out for? What opportunities do you see in these scenarios that you want to embrace? What do you need to include in your planning to maximise these potential opportunities?

"Scenarios are not predictions. They are not meant to be 'right' or 'wrong', 'good' or 'bad', but to offer interesting (and in some cases challenging, stretching or controversial) pictures of the future.

They provide a safe space – a sand pit – to explore alternative ways the policy area might develop and the choices that various stakeholders might make under different market conditions."

UK Government, Futures Toolkit

Scenarios

Technotopia

Autocratic governance and high-tech solutions prove effective in tackling climate change and economic crisis.

- Live, Play, Sustain
- Move & Infrastructure
- Nature & Biodiversity
- Work & Learn

Scenarios
Technotopia

Key factors that shape Technotopia

Automation Ranking

Bangkok is a frontrunner ranking in the top five in the region for levels of automation across sectors. This has been a result of large international technology firms entering the Bangkok market, transforming the city into a hub for digital and technological innovations.

Regional Transport

Regional transport has seen significant moves to non-road-based systems. The private sector has established fast and efficient transport networks which have driven down personal vehicle ownership. Bangkok is home to a spaceport which provides commercial travel to national space stations.

Community Engagement

Bangkok communities are not engaged in policy, planning or urban development.
An autocratic approach is being taken, led by China-based conglomerates acting as they believe is best for communities and the Bangkok economy.

Personas in Technotopia

Morning
Midday
Afternoon
Evening
Quote

Click the timeline above to explore the Personas

Saifah
Does school remotely from his bedroom using a virtual reality system.

Lucy
Gives a guest talk at Saifah's school about agritech and new foods in development at her lab.

Apinya
Checks in to complete their minimum daily time requirements for work. This earns them their meal tokens for the day and part of their accommodation.

Li Jun
Arrives at the office early for a virtual meeting with his team members around the world.

Hathai
Opens her ghost kitchen early to start food prep with her robotic chefs.

Mongkol
Starts the day with an appointment from the robotic physio at his home. His digital twin organises a time to meet with his great granddaughter.

Scenarios

Technotopia

HOW DID THIS HAPPEN?

After a period of political discord, post-pandemic economic collapse and climate shocks in the 2020s, global banks and tech giants stepped in to establish themselves as dominant funders and technology providers for the region.

Initially, protracted debates and competition among provincial governments prevented decisive action to cope with these crises. Direct humanitarian assistance flowed in from large Asian economies.

Debt laden Western countries offered what they could but were still reeling from post-GFC and post-COVID-19 economic stimulus spending. In contrast, highly developed economies in the region extended a 'hand of friendship' from a position of financial and technological strength, offering reconstruction funds and high-tech infrastructure know-how.

Under strict governance, a strong masterplan was established for urban development of Greater Bangkok. This plan places hard infrastructure and automation as the focus for reconstruction and economic development, which results in a resilient, economically prosperous and efficient city.

However, the highly efficient tech-centred city has brought about highly sedentary lifestyles with associated health problems. The healthcare system is efficient and automated. However, many treatment decisions are made by AI and questions about how ethical some of these decisions are have become common.

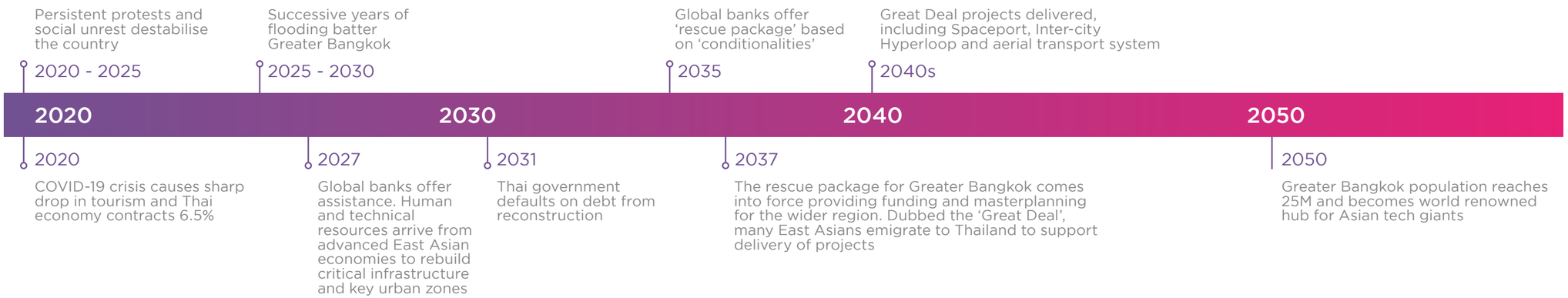
Gradually, financial and technological assistance and intervention came with conditionalities, such as privatisation of critical infrastructure, adoption of Asian based smart city technology and establishment of a more authoritarian style of governance. These conditions were deemed essential to managing the ongoing financial problems facing Thai national and provincial governments.

The relative success of the new style of governance promoted trust and goodwill among most Thais, while some are choosing to return to rural villages fearing repressive tech enabled social policies of the city.

The tech giants provided many valuable services, including efficient and affordable delivery of essential services, such as transportation, clean energy and water, sanitation and even green spaces.

Younger generations of Thai people saw the advantage of the job opportunities and more convenient lifestyles and were willing to compromise on some of their freedoms and privacy in exchange for these services.

And while the repressive style of governance can be confronting, benefits include political and economic stability and effective action on climate change.

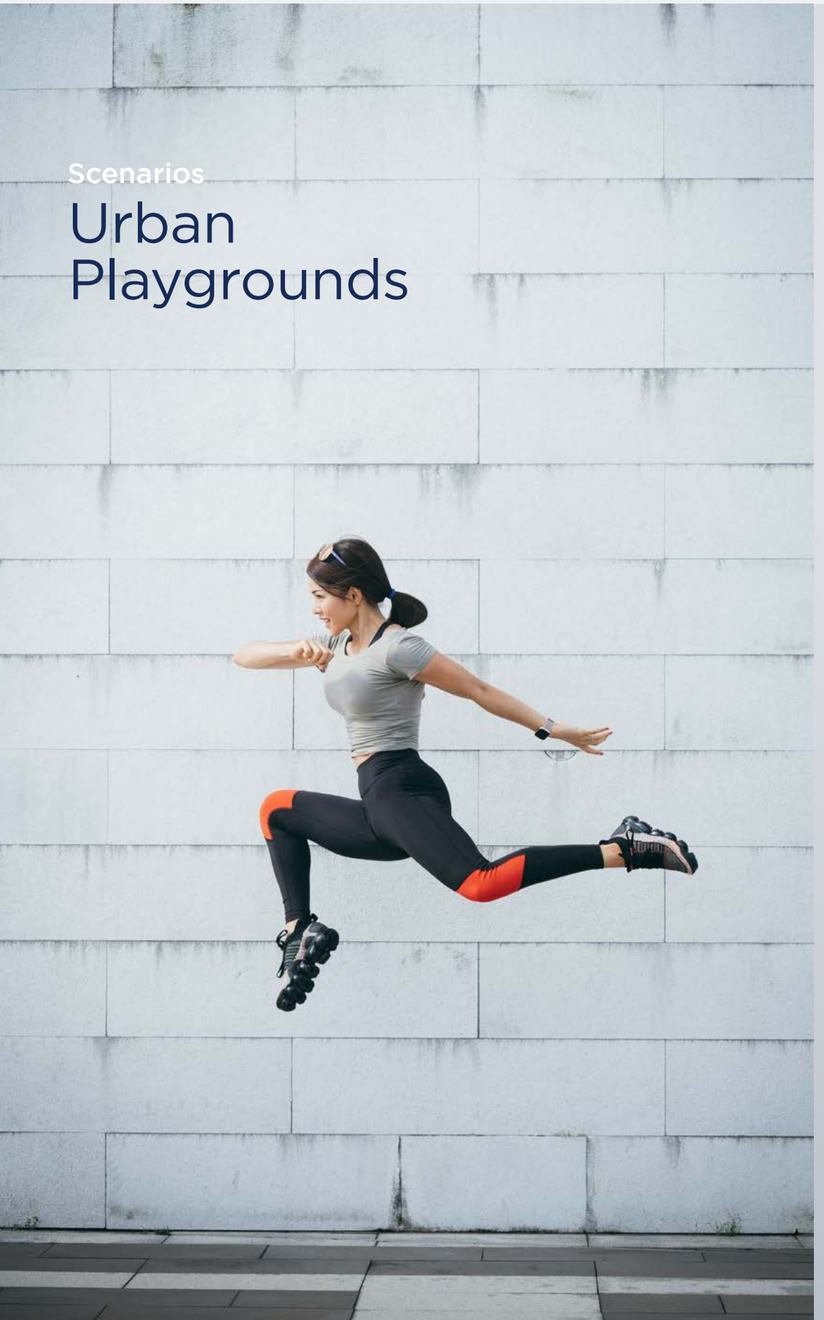


Scenarios

Urban Playgrounds

Tactical urbanism promoting health and physical activity has given rise to an unplanned patchwork of green neighbourhoods and play equipment for all ages.

- Live, Play, Sustain
- Move & Infrastructure
- Nature & Biodiversity
- Work & Learn



Scenarios

Urban Playgrounds

Key factors that shape Urban Playgrounds

Population Health

The Bangkok population health is very good for all ages and across demographics. Driven by the shift to active urban design and climate sensitive policies, people live longer while healthcare costs have decreased.

Environmental Policy

A strong policy shift to new methods of urban development and urban greening have resulted in significantly improved environmental conditions throughout the city.

Skilled Migration

Bangkok has become a hub for sustainable technology development. This has been driven by the significant increase in skilled worker migration. Professionals have come from around the world to settle in one of the most liveable cities with their families.

Personas in Urban Playgrounds

Morning

Midday

Afternoon

Evening

Quote

Click the timeline above to explore the Personas

Saifah
Attends a jungle kindergarten designed to help connect children to the environment and encourage active healthy lifestyles.

Lucy
Does a run to her work in the morning. Works with her team on masterplanning a new community farm that can self-manage its production quantities.

Apinya
Substitutes for a school class on balanced nutrition. In advance of taking the class, Apinya is provided with summarised student profiles for those in the class.

Li Jun
Takes part in a focus group testing session. Those who are physically disabled are testing the latest public autonomous vehicle models. The groups help co-design some features.

Hathai
Begins the day with some quiet meditation at the park. Special pods allow residents to meditate in complete silence in the heart of the city.

Mongkol
Holds some early morning appointments with community members for a whole of life health check-up.

Scenarios

Urban Playgrounds

HOW DID THIS HAPPEN?

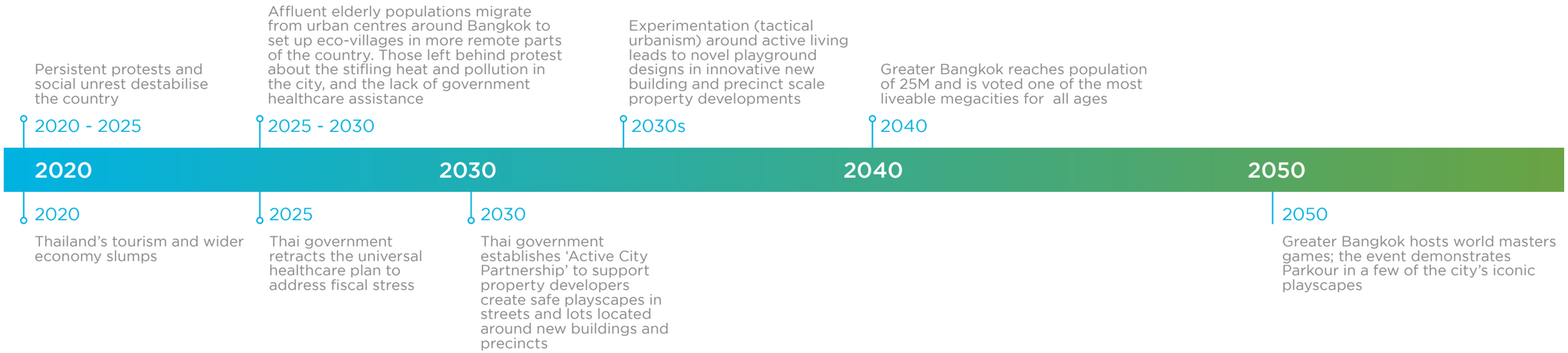
Provincial governments in Greater Bangkok step up efforts to reduce air pollution and manage extreme heat in urban areas after decades of growing human health problems, especially among elderly populations.

Post-COVID-19 economic downturn caused the private sector to retreat into old polluting ways, which pushed smog levels to new highs across the region. This coincided with a sharp rise in extreme heatwave days attributed to climate change. These factors combined into a perfect storm for the rapidly ageing population in Greater Bangkok. Healthcare costs escalated to unsustainable levels, resulting in a significant social divide and rapidly rising death rate for those over the age of 80.

Loss of investment, an exodus of elderly people and public demand for action prompted some provincial governments to experiment with urban design concepts to promote physical activity, reduce air pollution and cool the city. Unfortunately, ongoing political instability at the national and provincial level meant that the region lacked an overall masterplan to address the crisis. Nevertheless, innovative tactical urbanism projects created green 'playscapes' – streets and public spaces that promoted incidental exercise for all ages. The mentality of "never leaving the playground" became a trend in these experimental pockets of the city, which became focal points for a total wellbeing subculture. This trend went on to grow organically in the absence of a coordinated plan.

The Thai government started to observe the marked improvements in health and happiness of people who lived near these newly developed urban developments and stepped in to fund and enable public-private partnerships with developers to mainstream playscapes with new or redeveloped precincts. The political level came to see this movement as essential to Thailand's future prosperity and happiness.

Creative urbanists, engineers, planners and development professionals from around are inspired by the challenges of Thailand's rapidly ageing society, air pollution and climate change.

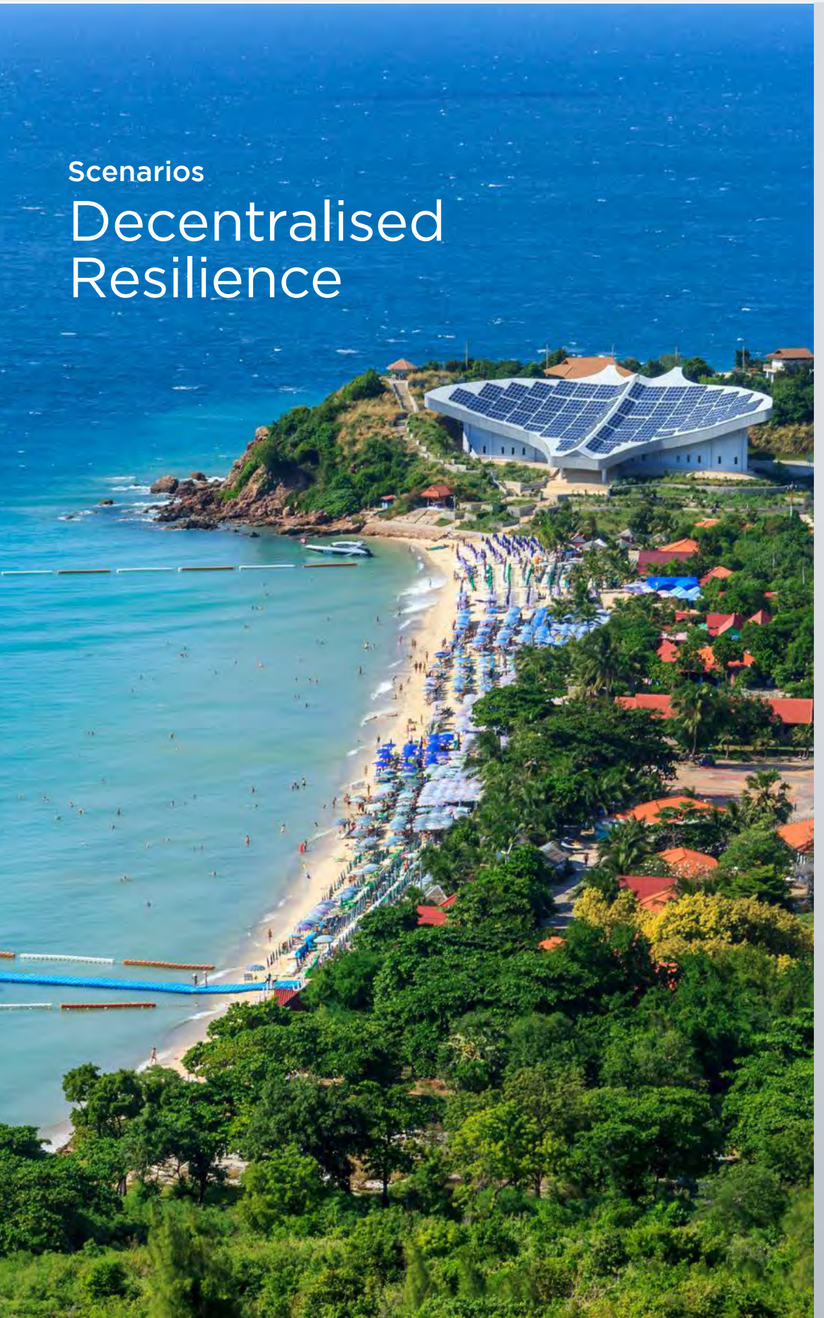


Scenarios

Decentralised Resilience

Many Bangkok people now happily live in planned sustainable communities on higher ground, but old flooded districts are still home to those who could not afford the move.

- Live, Play, Sustain
- Move & Infrastructure
- Nature & Biodiversity
- Work & Learn



Scenarios

Decentralised Resilience

Key factors that shape Decentralised Resilience

Climate Resilience

Bangkok has been pushed to rebuild itself after facing severe impacts from climate change. Newly developed districts of Bangkok have been co-created with communities to be resilient to future climate shocks. Old districts are faring less well.

Regional Transport

Much of the transport infrastructure of Bangkok was inundated by severe flooding. Bangkok has reinvented its transport systems embracing the water and developing high speed transport modes (such as hyperloop) connecting its districts.

Urban Equity

Bangkok is facing severe socioeconomic divides between those who can afford to live in the newly developed resilient districts and those who have to make do in flooded regions and rural areas that are not connected to public transport networks.

Personas in Decentralised Resilience

Morning

Midday

Afternoon

Evening

Quote

Click the timeline above to explore the Personas

Saifah

Catches the school bullet which takes Saifah 200km from home to school in under 10 minutes.

Lucy

Catches a drone to her food lab based in one of the super sky-scrapers in the old CBD.

Apinya

Gets to work early. They activate and coordinate the robots that are purpose-built for clearing debris and other waste from waterways.

Li Jun

Arrives at his workplace in the outer districts of Bangkok. His business operates in one of the gated business parklands.

Hathai

Checks into one of the floating logistics centres in the old city. She received her nutrient materials from the automated warehouse robots.

Mongkol

Catches a shared shuttle to the community farm to gather ingredients to cook breakfast.

Scenarios

Decentralised Resilience

HOW DID THIS HAPPEN?

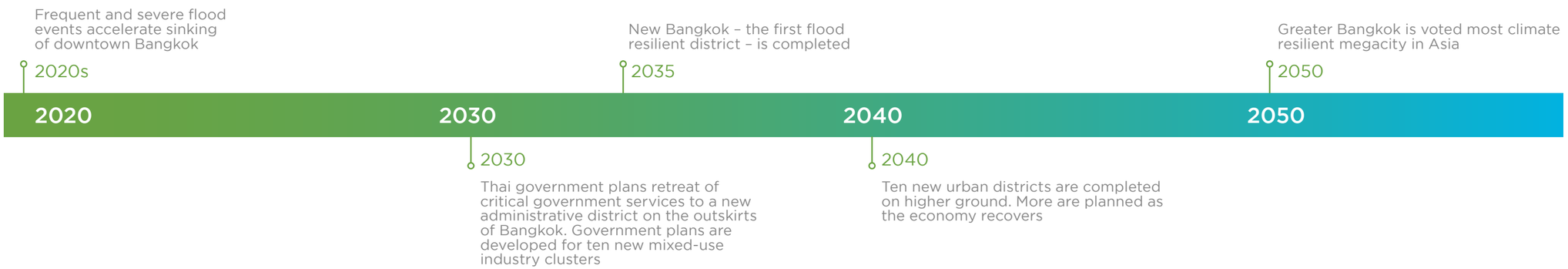
Intense periods of drought and floods have broken large parts of Thailand's food system. Flooding and rising sea levels have progressively inundated many of Bangkok's central buildings and districts. The region's economy has suffered and many have been left homeless. The poor and homeless have sought refuge in abandoned buildings. National and provincial government budgets are stretched thin but good adaptive planning practices have fast tracked re-developments on higher ground around the outskirts of the city.

Unfortunately, with government funding stretched thin, not all can be housed in these redeveloped 'islands of resilience'. Many of the poor are left to develop more informal housing solutions by repurposing disused buildings or living in flood resilient housing pods. These communities have also worked together to establish vertical gardens and farms in high-rise buildings of flooded districts, and built floating markets.

Following the example of these community-led settlements, many developers engaged directly with customers and communities to design new neighbourhoods and buildings.

Transportation infrastructure consortiums have also included community representatives to inform design of innovative aerial based systems to link the new districts, informal settlements and promote labour market mobility, enabling movement to anywhere in Greater Bangkok within 30 minutes.

The mentality of working from anywhere is prevalent across the region enabled by low orbit satellite broadband that is made free for all. The sharing economy is booming with shared energy from micro-grids, food co-ops, co-housing, ghost kitchens and product libraries. These more sustainable lifestyles are less costly and as people value time over money in these developments many of them have reduced working hours so that they can spend more time with family and enjoying life.



Scenarios

Accelerated Generations

The elderly have re-engaged in society, leveraging years of expertise to create a globally famous startup region where urban and economic development align with traditional Thai values.

- Live, Play, Sustain
- Move & Infrastructure
- Nature & Biodiversity
- Work & Learn

Scenarios

Accelerated Generations

Key factors that shape Accelerated Generations

Education & Skills

Access to education has been greatly improved in Bangkok with the integration of the elderly into education systems. Bangkok leads Asia in educational attainment, which is driving its rapidly growing technology sector.

Community Engagement

The urbanisation of Bangkok is led primarily by communities. The trend of growing co-creation that is dominating the private sector is also influencing higher level planning and development for the built environment.

Automation Ranking

Bangkok is globally renowned as a frontrunner for digital innovations and automation technology. Driven by a strong startup culture, Bangkok is home to some of the world's leading robotics laboratories

Personas in Accelerated Generations

Morning

Midday

Afternoon

Evening

Quote

Click the timeline above to explore the Personas

Saifah

Has a morning learning activity with mixed age groups. People from his community all come together to share and learn each week.

Lucy

Takes the morning off to go to her yoga and meditation class. Working flexibly lets her engage with her friends in older generations.

Apinya

Catches an autonomous shuttle from home. Apinya searches for a book on emerging technology to read on the journey.

Li Jun

Goes to work as a transport innovation advisor where he is designing a new space orbit mode of transport for interstate and international travel.

Hathai

Has a morning conference where she is speaking on how to successfully start and run food businesses.

Mongkol

Gets some morning exercise. His local community across age groups will often get together to exercise.

Scenarios

Accelerated Generations

HOW DID THIS HAPPEN?

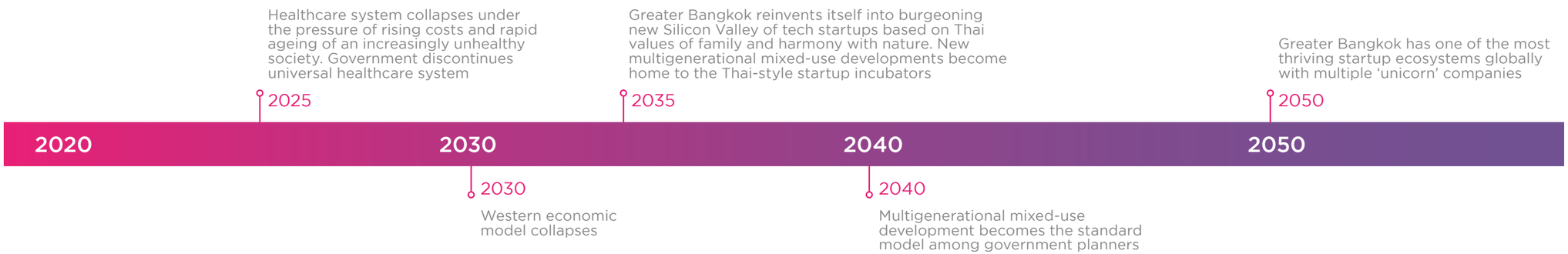
Rapid ageing and a transport system dominated by autonomous vehicles create a highly sedentary society and unaffordable healthcare system, which requires more older Thais to delay retirement.

Greater Bangkok has expanded rapidly but governments have struggled to plan effectively.

Governments change too frequently, and many planners are pressured to defer visionary and integrated planning ideas until a future where politics is more stable. Instead spatial and infrastructure planning happens in a haphazard way as the government adopts Western style car dominated low density development.

With increasing expenditure directed to roads, little could be done to address environmental problems. Consequently, pollution has choked the city, while hotter and more intense wet seasons has caused problems for infrastructure.

With the environment changing and Greater Bangkok ill prepared to adapt, tourist and migrant numbers have dwindled causing economic hardship. Thai government ends universal healthcare, which forces many older Thais to either come out of retirement or delay retirement to cover growing healthcare costs.

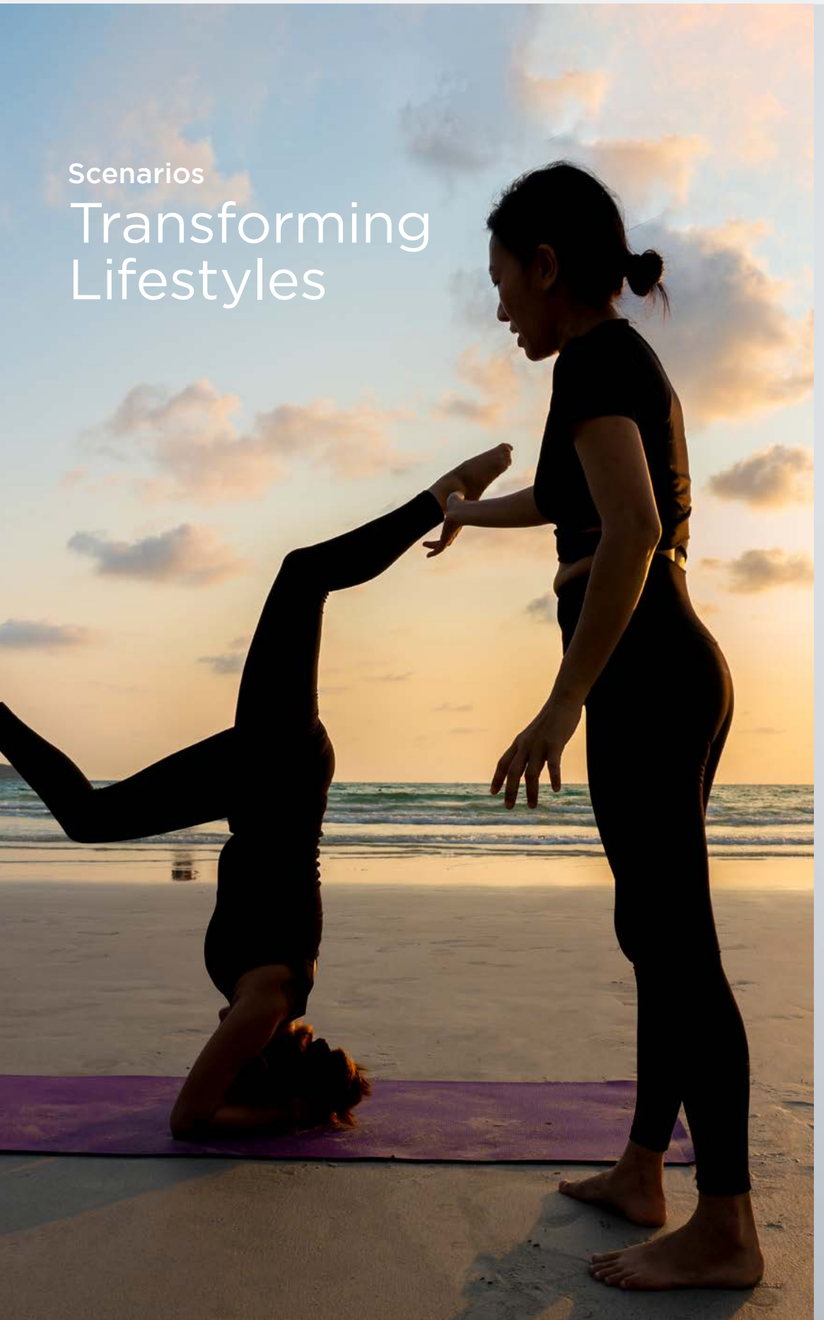


Scenarios

Transforming Lifestyles

The top destination for global travellers seeking long-stay health retreats, mind-body-spirit balance, eco-tourism or retraining for the jobs of the future.

- Live, Play, Sustain
- Move & Infrastructure
- Nature & Biodiversity
- Work & Learn



Scenarios

Transforming Lifestyles

Key factors that shape Transforming Lifestyles

Tourism

The tourism market has significantly evolved in Bangkok. The number of visitors is low, but those who do visit stay for extended periods and spend significantly, driving economic growth. Education has become one of the largest exports, with professionals travelling from around the world to upskill.

Environmental Policy

There are strong environmental policies, which are supported by a booming eco-tourism sector. Habitats have been rehabilitated and urban areas made wild to accommodate biodiverse flora and fauna.

Skilled Migration

There has been a boom in highly skilled migrants moving into Bangkok as professionals seek desirable locations to work remotely. Professionals come to Bangkok to upskill in their human-centred capabilities.

Personas in Transforming Lifestyles

Morning

Midday

Afternoon

Evening

Quote

Click the timeline above to explore the Personas

Saifah

Attends his multinational school where he is learning skills such as creativity and collaboration with those that think differently.

Lucy

Goes for a run and watches the sunrise before attending her Thai cultural education course. She loves being so connected to the Thai people.

Apinya

Meets a tour group at their eco-village resort to guide them through nature reserves.

Li Jun

Gets to work early in the morning to work with his team of data scientists. They prepare a report for their retail clients on the food traffic and spending patterns of citizens across the city.

Hathai

Books a premium meditation space in the morning. She practises mindfulness as the sun rises.

Mongkol

Gets up early to practise his music in the village square. His neighbours and others often gather to hear him play. His village embraces the sharing economy, with many communal spaces maintained by the residents.

Scenarios

Transforming Lifestyles

HOW DID THIS HAPPEN?

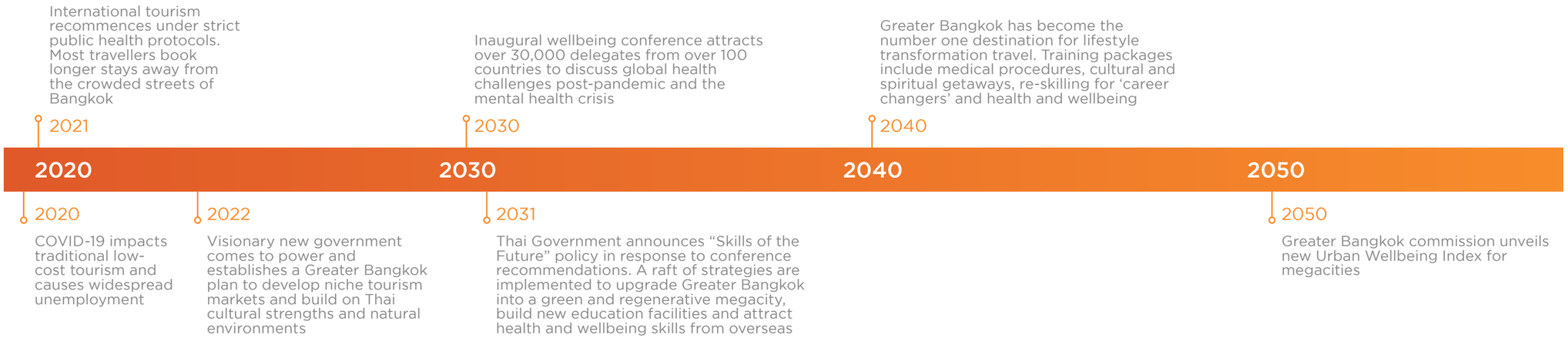
Successive waves of pandemics shift tourism in Greater Bangkok towards long-stay health retreats, mind-body-spirit balance and upskilling for new job requirements.

Ongoing global issues with pandemics and travel bubbles have driven the evolution of the Bangkok tourism market to focus on longer-term stays and lifestyle transformations. Holiday packages are designed to accommodate periods of lockdown and quarantining. Technology and the digital economy accelerate during the pandemic, but many knowledge and tech professionals need to learn new skills to be job ready for these new opportunities. The Greater Bangkok region has become a destination for long term medical and health retreats, digital detoxes and professionals looking to work remotely from desirable locations. Thai governments doubled their efforts to clean up Greater Bangkok and local industries in a bid to support the tourism industry's pivot towards health and nature-based experiences.

Urban developments reflect this focus on human and environmental wellbeing. Green canopies, waterscapes and meandering paths permeate the city, encouraging people to slow down and reflect on what's important to them.

The upgraded economy has developed to provide innovative professional and personal development opportunities. Visitors come to the region to learn about Southeast Asian cultures, religions and wisdom traditions.

The traditional skills of the Thai people include mindfulness, adaptability, empathy and ethics. These skills are in high demand in the high-tech automated future. Knowledge professionals are seeking to counterbalance the world dominated by artificial intelligence. Seeking human interaction and connection with biological life is a novelty, and many suffer physical and psychological problems brought on by digitally immersive living.



Morphological Box

Assessment of key uncertainties resulted in a morphological model of 12 factors, each with 2-4 projections

URBAN EQUITY

Extent of access and quality of urban services (housing, clean energy and water, sanitation, healthcare, transportation etc.)

EDUCATION & SKILLS

Dominant education model and cost, which determines access to future-relevant skills appropriate to 2050 industries and jobs

REGIONAL TRANSPORT

Extent of road-dependence and congestion of transport system across the Greater Bangkok region

AUTOMATION RANKING

Thailand's ranking on AI and automation systems (reflects adoption/application in industry and government)

SKILLED MIGRATION

Extent to which Thailand can attract and retain high skilled migrants to develop s-curve industries

TOURISM

Quality of Thailand's tourism market based on tourist numbers and spend

ENVIRONMENTAL POLICY

Strength of government policy and private sector commitment to environmental objectives

CLIMATE RESILIENCE

Extent to which communities and infrastructure are prepared and can rebound from extreme flood events

URBAN DATA GOVERNANCE

Public trust in institutions that collect and use data generated by city assets and services, and whether citizens can control how their data is used

POLITICAL STABILITY

Stability of governments and coordinated masterplanning across the Greater Bangkok region

COMMUNITY ENGAGEMENT

Extent to which local communities are involved in planning and development decisions

HEALTHY LIFESTYLES

Overall state of health for most Thais

Click to explore the projections and factors

Key factor definitions | Technotopia | Urban playgrounds | Decentralised resilience | Accelerated generations | Transforming lifestyles

Actions

This project has explored the trends that are shaping the future of urbanisation in Greater Bangkok

We live in an era of volatile global change.

Economies around the world are reeling from COVID-19. New technologies are entering the market at an unprecedented rate. Climate change and biodiversity continue to trend in the wrong direction. Human health statistics are similarly worrisome. With most people living in cities today and more expected in the coming decades, the future of human and planetary wellbeing will depend on new trajectories for urbanisation.

Urban policy, planning and development need updating to enable adaptive and regenerative urban systems and spaces. The scenarios presented in this report offer a starting point to consider how Greater Bangkok could evolve over the next 30 years. Each scenario portrays both positive and negative outcomes from critical trends and uncertainties.

The aim is to spark the imagination.

Scenarios are not predictions. The future is likely to be a mixture of all five scenarios; and there may be other scenarios that we have not considered. Scenarios are best used to explore a range of important risks – uncertainties with both threats and opportunities that can be identified and managed to meet important goals.

This report places human and environmental wellbeing as a central organising goal for urbanisation in the region.

Shaping Greater Bangkok into a wellbeing-oriented 21st century city requires open and creative minds to collaborate and plan for how the city will mitigate future threats and capitalise on exciting opportunities.

Crisis response to acute events like pandemics and natural disasters will be critical, as will guiding longer term innovations and transformations like shifting to renewable energy and adapting to sea-level rise. This process will involve careful orchestration of foresight and innovation processes across the region.

This section outlines key implications and actions to take the future of urbanisation conversation further. The discussion is based on the five scenarios and outlines key issues and initiatives policy makers and planners, developers and communities could consider to help achieve wellbeing for all in Greater Bangkok and beyond.

IMPLICATION 1

PROMOTING COMMUNITY CO-CREATION IN THE 'SMART SOCIETY'

Community co-creation and participation are emerging principles in urban planning, but these principles assume freedom of speech and social diversity.

Unfortunately, there are signs globally that these freedoms are being curtailed. According to US-based pro-democracy group Freedom House, governments around the world are increasingly manipulating content, disrupting internet service and orchestrating physical attacks on human rights defenders and independent media.[5]

Proponents of smart cities and the digital economy promise that the constellation of digital technologies (smart devices, the Internet of Things, artificial intelligence, GPS tracking etc.) can improve infrastructure, service provision and offer indicators of overall city performance (economic activity, safety, community sentiment etc.).

It is hoped that this big data can provide more detailed, nuanced, and real-time understanding of urban spaces, infrastructure and citizens. However, concerns have been raised that ever-increasing amounts of citizen data (including video) pose risks to privacy, civil liberties and make the city 'hackable' and vulnerable to bad actors.[6]

Currently, some form of behaviour monitoring system is being deployed or piloted in countries and cities, both in the East and West. The development of China's social credit system and use of CCTVs to monitor COVID-19 public health mandates has been well-documented. Other countries have also introduced monitoring. France, for example, used drone cameras to monitor adherence to coronavirus restrictions until it was banned in January 2021 by the country's privacy watchdog.[7]

ACTIONS

Policy Makers	Implement effective policy for promoting community participation. Sourcing and ownership of smart city technology will need to be evaluated by good governance principles and be implemented with consideration of the values of Thai people. Develop principles for good governance of direct foreign investment or bank finance in cities based on Thai values and aspirations.
City Developers	Experiment with community led projects. Examples of this can be seen in some co-housing developments in Western countries. Assess and mitigate governance risks associated with foreign investment and smart city technology. Prioritise social inclusion and accessibility with the development of new infrastructure.
Community	Understand your data privacy rights and be aware of the implications of sharing personal information. Consider a balanced use of physical and virtual environments in your lifestyle. Upskill and improve e-literacy by having an active voice in the way technology impacts the city.

IMPLICATION 2
SUPPORTING HEALTHY CITIES AND PEOPLE

Cities are large emitters of photochemical smog and urban development is a driver of habitat and biodiversity loss.

Smog has serious implications for human health and can force people to remain indoors on severe smog days. Green space in the form of parkland and waterways is important for physical and mental health.

Research shows that green space improves mood, reduces urban heat and cardiovascular mortality.[8] Access to green space has also been linked to improved mental wellbeing, general health and cognitive development in children.[9]

A review of child and adolescent mental health revealed improved attention and memory, with some evidence suggesting that the link may be explained by lower air pollution, higher physical activity and social interaction.[10]

A large-scale Chinese study showed that excessive screen time in young children (3-4 years) poses a risk to psychosocial wellbeing, which was largely explained by reduced parent-child interaction.

Rapid urbanisation places development pressure on precious green space.

A study of Southeast Asian cities revealed shrinking green space and increasing built up areas over 25 years (1989-2014); the researchers projected this to continue as further development occurs on higher ground at the green urban fringe.[11] Encouragingly, the BMA is looking at this issue with the governor recently stating a goal to increase per capita green space from 6 sqm to 9 and to make the city more walkable following the 15 minute city model of Paris.[12]

ACTIONS

Policy Makers	Develop policy and strategies to support and evaluate bottom up innovation and scale up proven solutions. Develop strategic policy goals for active and healthy lifestyles as well as explore what planning interventions might help meet those goals. Goals can address urban design standards, per capita green space for active travel and recreation, and green canopy for reducing urban heat. Commission studies and develop policy papers assessing the role of the built environment in supporting Thai health and wellbeing. Establish a ‘wellbeing cities’ policy network including government, not-for-profit and private developer organisations.
City Developers	Develop and implement a wellbeing rating tool for property developments in conjunction with industry. The tool may involve building a database of strategies that address key health challenges for urban populations. Research and development on urban and building design to enhance wellbeing. Use latest wellbeing research to drive product development. Allow for urban spaces to be experimented with. Test new strategies and models for how spaces are built, used and change over time.
Community	Consider crowdsourcing funding for urban development that will increase the liveability and value of your home. Participate in stakeholder engagement exercises to influence the urban development of your community. Where possible, promote the health, active living and maintenance of green space in your property and wider community.

IMPLICATION 3

PLANNING FOR A DIFFERENT CLIMATE AND HELPING TO MITIGATE

Climate change is causing sea level rise (SLR) and shifts in the intensity and frequency of extreme storms.

Like many cities, Greater Bangkok is situated in a low-lying river delta system, vulnerable to flooding, storm surge and SLR. The latest research from Princeton University's Climate Central shows that SLR vulnerability in Bangkok could see much of the city inundated by 2050.[13]

Hard adaptation decisions need to be made, including major investments in engineered solutions (sea walls) and development of greenfield areas in less flood-prone areas, such as the Eastern Economic Zone, well outside the Bangkok Metro Area.

Such adaptation measures are likely to exacerbate socio-economic divides. The poor are less able to move to outer suburban areas, where they would need to pay public or private transport costs to commute to work.

While adapting to climate change, Greater Bangkok can also be at the cutting edge of zero and negative carbon initiatives in construction, transport, services and lifestyles. Clean energy technologies, like solar photovoltaics and wind turbines, can power the city when combined with adequate energy storage solutions. Growing affluence and consumption in the city means that more needs to be done to develop sharing and circular economies.

Collaboration on a community scale can allow for the establishment of microgrids, recycling, reuse and waste centres, food gardens and sharing economy schemes. This sustainable community living can reduce climate impact and improve lifestyles.

ACTIONS

Policy Makers	Formulate an adaptation policy framework that covers retreat, protecting assets and distributed settlement patterns. Commission cost-benefit studies of different adaptation strategies. Use adaptation studies to inform urban policy such as the location of new developments and building standards. Explore wealth redistribution policies to address climate related inequity (e.g., lower taxes in climate resilient developments).
City Developers	Use latest modelling and data on sea level rise and flooding to inform land acquisition and project development strategies. Explore and develop resilient community models that can adapt to the climate crisis. Consider critical infrastructure risks associated with sea level rise and flooding. Develop community facilities to manage these risks such as food and water shortages, power outage, damaged communications.
Community	Consider projects that you could do on a community level to improve your lifestyle. Establish resilience plans to protect you, your home and community in cases of disaster. This may include community solar to maintain power in the case of a network failure. Work towards maintaining community cohesion and reducing socioeconomic divide in your community.

IMPLICATION 4

HARNESSING WISDOM OF AN AGEING POPULATION

While the ageing population poses clear challenges to healthcare costs, having more older people could bring more perspective and better judgement to social and economic life.

In the face of unprecedented global challenges, it makes sense to consider how private and public organisations can integrate older workers, build more age diversity and create roles that value 'eldership' and 'wisdom'.

A strength of Thai culture is the high regard for older generations and the close connection of extended families, which have historically cohabitated in multi-generational homes and villages. Through the 2nd National Aging Plan on the Elderly (2002-2021), the Thai government has policies and programmes to support more active involvement of seniors.[14] For example, tax incentives are available for organisations hiring older workers. However, such policies face significant headwinds from deep-set attitudes toward 'retirement' from paid work and growing trends in Thailand toward segregated 'senior living communities'.[15]

Furthermore, as the world economy becomes increasingly dominated by tech companies, concerns have been raised about a culture of age bias in the sector.[16] [17] Harvard Business Review found evidence of age bias among Silicon Valley venture capitalists towards younger founders, typically under 40.[18] Recent age discrimination class actions have been settled by major tech companies like Google.[19] A 2018 survey of over 500 founders revealed that 89% agreed that older people face age discrimination in the tech industry.[20]

ACTIONS

Policy Makers	Commission research on existing models of inter-generational mixed-use communities. Examine possible changes to planning schemes to enable inter-generational communities. Develop a framework for accommodating long-term demographic changes in Thai cities. Consider the possibility for Bangkok to carve a niche for age friendly precincts. Share city data and identify issues that you would encourage the startup ecosystem to solve.
City Developers	Experiment with models of inter-generational mixed use communities. Consider dwelling type and mix, commercial space for type of industry/enterprise. Seek community involvement in designs. Develop new business models for inter-generational communities such as commercial space that could subsidize affordable housing for retirees. Run design competitions for future mixed use and startup hubs. Encourage designers to work with communities and promote wider collaboration.
Community	Connect people from different generations through their lifestyle and work. Provide multiple opportunities for people of all ages to connect, share skills and resources. Learn about people's interests and skills to help them stay engaged in the community whilst ageing.

IMPLICATION 5

NURTURING TOURISM AND THAI HERITAGE

Globalisation has brought more than economic integration – it has also created a 'sameness' to urban design and architecture. Anthropologist Marc Augé called this phenomenon 'non-place' or places that look similar no matter where you are in the world.[21]

Where local history and culture have been extracted from the built form, global travellers are left with perpetual déjà vu as they trek through airports, hotel lobbies, shopping malls and CBDs. Could this be a plausible future for Greater Bangkok?

With the pandemic crisis persisting for the foreseeable future, the International Air Transport Association has stated that demand for air travel may not recover for several years and not reach pre-COVID levels before 2024.[22] With the list of airline bankruptcies ballooning to over 80 companies globally,[23] [24] international travel and tourism is likely to become a more expensive and novel experience. Such a prospect would require Thailand to accelerate plans to become a premium destination. Travellers are likely to think hard about where to spend their precious time and money, perhaps shirking sameness for the exceptional. They may also have to assess risks of further health restrictions, if outbreaks occur. Careful thought will be needed about how to enhance the experience of travellers in such circumstances. For example, providing office facilities, access to open green spaces and expedited testing.

ACTIONS

Policy Makers	Develop an urban wellbeing index and invest in government capacity in the wellbeing domain. Develop strategies to transform greater Bangkok into a wellbeing hub. Achieve this by bringing visitors closer to nature, lowering pollution levels, developing transport pod system. Encourage long stays through visa incentives. Consider the jobs of the future and develop training programmes that will help people be job ready.
City Developers	Experiment with different urban and building designs to support more elderly populations in the city. Develop urban designs that promote urban meandering, rest and relaxation. Create spaces that promote innovation and allow for collaboration between people of all ages.
Community	Embrace changes brought about through globalisation, while maintaining the uniqueness of Thai culture. Make your community a space where global citizens and travellers can come, belong and thrive. Consider the strengths of Thai people and culture and how they can be shared with the global community to train them with future skills.

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