



ARUP

**FUTURE OF URBANISATION**  
Trend Cards

This card set has been produced as part of the Future of Urbanisation for Greater Bangkok project delivered by Arup Foresight and Innovation for FutureTales lab of MQDC.

This card set accompanies a megatrends report which can be requested from FutureTales Lab of MQDC. The megatrends report includes all references for the information contained in these cards.

If you have any questions about this card set or the megatrends report, please reach out to the contacts below.

All images © Getty

## **Dr Anne Kovachevich**

Foresight + Innovation Leader  
Arup Australasia  
[anne.Kovachevich@arup.com](mailto:anne.Kovachevich@arup.com)

## **Dr Pannin Sumanasrethakul**

Foresight Research Director  
FutureTales Lab  
[Pannin\\_su@dtgo.com](mailto:Pannin_su@dtgo.com)

# Aging population



© Getty

The Thai population is rapidly aging, driven by a combination of longer life spans, influx of retired migrants and lower birth rate. By 2040, 17 million Thais will be 65 years or older - more than a quarter of the population.

# Adaptive design



© Getty

Adaptive design and the reuse of older structures and assets is an emerging trend for Thai architects. The sustainability and heritage values are becoming more recognised by developers.

# Lifelong Learning



More adults globally are recognising the importance of lifelong learning. A global survey of over 7000 people aged between 16 and 70 found 88% believed they needed to take more responsibility for learning and upskilling for their job.

# Immigration



© Getty

Thailand alone accounts for half of all ASEAN migrants. These migrants have been critical in filling skills gaps particularly for the growing Thai knowledge economy.

# Left behind children



Few job opportunities outside of Bangkok forces parents to move to cities for work, leaving their children behind. According to UNICEF, more than one in five Thai children (or over 3 million) are left in the care of a single parent or their grandparents.



# Renaissance in mass transit



The Bangkok Gold Line automated rail system is a first of its kind for Thailand and will connect other mass transit systems. This system opens in 2020 with plans for a second phase opening in 2023.



# Smart machines are coming



A survey of 270 Thailand companies found over one third will be increasing investment in robotics and automation by at least 5% to increase productivity. The automation market in Thailand is expected to be valued at US\$12 billion by 2023.

# Smarter cities



© Getty

The 2017 Thailand 4.0 initiative is targeting 100 smart cities across Thailand in 20 years. The public sector has already dedicated US\$11 million to begin building a digital economy facilitated by smart cities.

# Cybersecurity risks



© Getty

Over 35% of businesses in Thailand had their most significant cyber breach cost US\$1 million or more in damages. Investment in cybersecurity across Thailand has reached US\$63 million following the introduction of the Cybersecurity Act.

# Booming health-tech



© Getty

Thailand's medical device market is forecast to grow by 8-10% by 2021. Thailand's over 1400 hospitals bring in close to US\$600 million annually from international visitors, making Thailand the fifth largest medical tourism market.

# Global digital economy



© Getty

The Thai digital market has developed quickly with a focus on e-commerce and data centres. E-commerce spending rose 18.2% annually between 2016 and 2020.



# advanced knowledge economy



The Thai government has developed digital economy policy that aims to increase the knowledge economy to 50% of the Nation's GDP and focusing on local solutions for digital and information services.

# Centralisation and inequality



© Getty

Progress that was made in reducing poverty in Thailand is backtracking as the economy slows. Between 2015-18 poverty grew from 7.2% to 9.8%. The Thai economy has also been one of the slowest in SEA with only 2.7% growth in Q4 2019.



# Stronger local economies



© Getty

Small-to-medium enterprises in Thailand contribute to 42% of GDP and employ 78% of the working population. Their strength is founded on digital readiness and willingness to embrace digital innovation.

# Dependence on tourism



© Getty

In the 10 years to 2018, the contribution of tourism to Thailand's GDP increased from 5.3% to 12.5%; visitor numbers grew from 14M to 38M, heavily driven by the Chinese market.

# Air pollution



© Getty

92% of people in Southeast Asia are exposed to levels of air pollution that are considered a serious health risk. It is projected that population-weighted exposure to air pollution in Southeast Asia will grow by 30% by 2030.

# Waste everywhere



© Getty

Thailand generates more than two million tonnes of plastic waste annually. Thailand is ranked the 6th most plastic polluting country in the world. With Thailand having many coastal zones, much of plastic waste is lost into the ocean.

# Biodiversity loss



© Getty

UNESCO Bangkok has launched an event to take action in restoring their mangrove ecosystems that play a critical role in preserving biodiversity. The mangrove systems are also important for the protection of people and urban areas from flooding.

# Climate change

© Getty

The number of disasters caused by heatwaves is projected to double across all nations between 2014 and 2050. This is then anticipated to more than triple between 2050 and 2100.



# Rising tides



Based on the projected sea-level rise for 2050, land that accommodates over 300 million people will fall below the elevation of an average annual flood event. Thailand is one of the top six nations that will have the most people impacted by this flooding.



# Protest movements



© Getty

Recent protests in Thailand have seen tens of thousands gather to push for a reform of the monarchy. The Thai monarchy is a sensitive topic – it's a criminal offence to criticise the monarchy.

# Big urban data



It is projected that there will be more than 75 billion Internet of things (IoT) devices globally by 2025. Several Thai government initiatives such as Thailand 4.0 and Smart City and Industry 4.0 have a focus on increasing the number of IoT devices.

# Regional tensions



© Getty

Recent territorial and maritime disputes have increased uncertainty and will likely slow economic co-operation for the next five years. A continuous simmering tension between China and the USA may call SEA nations to take sides.

# Government transparency



© Getty

The Thai people have recently pushed for increased government transparency as they announced a US\$61 billion COVID-19 fund to support impacted industries.

# Desire for decentralisation



Thailand's trend towards further decentralisation is driven by internal and external factors. The internal democratisation of Thailand is the main driver, while geopolitics is having external influence through economic impacts like the Asian currency crisis.

# Focus on health and wellbeing



© Getty

Thai people's growing awareness of health behaviours is driving a shift in personal and collective wellbeing. Increasing urbanisation is providing Thai people with greater access to more health and lifestyle products and services.



# Valuing ecosystems



© Getty

Ecosystems services are being increasingly valued by Thai people and developers. Benefits of ecosystems are now being considered in urban planning such as the impact on property value, carbon sequestration, water filtration and recreation.



# Collectivism



© Getty

Hofstede Insights identified Thailand as highly collectivist. This manifests in the Thai people's tendency to maintain strong and close relationships with their extended family. Thai society fosters relationships where everyone takes responsibility for each other.

# Inclusive design



The elderly population in Thailand will exceed 20 million by 2050. Urban development will need to cater to those with a disability and diminished mobility to ensure critical infrastructure can be accessed in the future.

# Family values



© Getty

The proportion of one-person households increased from 6% to 14% between 1987 and 2013. This predominantly occurred in urban areas.