PART I

Chapter 2

Megatrends shaping the future of tourism

The future of tourism will be impacted by large-scale social, economic, political, environmental and technological changes, bringing new and often unseen challenges, threats and opportunities. These “megatrends” are slow to form, but once they have taken root, exercise a profound and lasting influence on human activities, processes and perceptions, including for tourism. Four megatrends are likely to have significant impacts and relevance for tourism: i) evolving visitor demand; ii) sustainable tourism growth; iii) enabling technologies; and iv) travel mobility. Exploring the multi-dimensional implications of these megatrends to 2040 is important to inform policy and shape the future of tourism.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
The next 50 years will see the centre of gravity of the world economy shift east and south. By 2030, developing countries are expected to contribute two-thirds of global growth and half of global output, and will be the main destinations of world trade. Emerging economies such as China and India are increasingly important markets for firms in many industries. A new middle class is fast emerging that will lead to a rise in consumption of basic consumer products and other product categories. These demand-side factors mean emerging economies are likely to remain favoured locations for production activities, while significant shifts towards services will see China and other emerging economies gain large shares in services trade at the expense of OECD countries in the long-run (OECD, 2016a).

Global tourism has grown significantly in recent decades, benefitting from the rise of globalisation and technological advances that have led to cheaper airfares, and also make it easier for people to plan and book their own travel, and then share their experiences with friends in real time. While that growth is projected to continue, shifting environmental conditions, technological innovations, and changing demographics are likely to dramatically transform the face of tourism by 2040.

To understand how tourism might evolve over the coming decades, this chapter explores those megatrends most likely to impact the sector. Megatrends capture significant, globally relevant, social, economic, political, environmental and technological changes over the long-term. They typically have decades-long impacts and, therefore, have the potential to fundamentally alter and upend industries around the world, including the tourism sector.

To determine and assess the key megatrends likely to impact for tourism in the years ahead, this chapter draws on responses to an OECD survey of member and partner countries, feedback from participants of an OECD workshop on Analysing Megatrends to Better Shape Future of Tourism (including representatives from government, international organisations, and industry), outcomes from the 2017 OECD High Level Meeting on Tourism Policies for Sustainable and Inclusive Growth, and is supported by a review of recent literature and data.

The chapter begins with an overview of megatrend concepts and the growth of the tourism sector in recent years. It then identifies and analyses key megatrends expected to drive change in coming decades, with a focus on four that will likely transform tourism: i) evolving visitor demand; ii) sustainable tourism growth; iii) enabling technologies; and iv) travel mobility. Each megatrend is examined with respect to its likely impact on the tourism sector, including key facts and projections for the future.

Finally, the chapter explores the policy implications of these megatrends and outlines a potential path forward for policy makers to help navigate the opportunities and challenges that megatrends will present. In particular, it suggests three areas of focus for policymakers: modernising regulatory and legislative frameworks, cultivating partnerships with key stakeholders and exploring ways to future-proof policies.

The specific impacts of megatrends for tourism to 2040 remain uncertain. In order to begin to look forward, however, governments must first have a clear sense of the value of
tourism for their economies and invest accordingly. They need to have a clear strategic vision with well-articulated objectives, and adopt an integrated approach bringing together key stakeholders. Developing comprehensive long-term plans that extend beyond the political cycle — while maintaining the flexibility to quickly identify and respond to emerging trends and evolving priorities — provides a stable platform for sustainable and inclusive growth. Growth that not only takes into account current and future economic, social and environmental impacts, but also addresses the needs of visitors, the industry, the environment, and host communities.

Overview of global megatrends

Around the world, a number of trends have emerged which have the potential to transform society. The most significant of these are megatrends, as they are large in scale and long-term in nature — usually relevant for at least two decades. Consequently, megatrends usually refer to circumstances that will unfold across the globe in a number of countries and that can often drive the global economy and society in specific directions.

Megatrends are likely to result in meaningful, long-term changes impacting social, economic, political, environmental and technological issues. Despite their potential for high impact, they often unfold slowly and follow relatively stable trajectories. Global megatrends that are likely to impact countries around the world over the next decade include demographics, economic interconnectedness, public debt, climate change and urbanisation, among others. A megatrend like urbanisation, for example, is likely to both unlock social and economic opportunities, while also straining infrastructure and resources as ever increasing numbers of people reside in cities. While the exact outcomes of these trends are not certain, informed predictions can be made which enable governments to start to take early steps to plan for them.

In order to prepare for megatrends, it is first necessary to fully understand them. Governments around the world must be proactive and look ahead now to make decisions that will have long-term implications, as well as to address potential challenges and to take advantage of opportunities that may result. Therefore, policy makers must consider the implications of megatrends in areas in which they bear responsibility, including ensuring economic prosperity, security, social cohesion and environmental sustainability (KPMG and Mowat Centre, 2013).

To assist with responding to megatrends, the OECD has developed an approach that focuses on four key categories: people, planet, productivity and polity (Table 2.1).

<table>
<thead>
<tr>
<th>Megatrend</th>
<th>Description</th>
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<tbody>
<tr>
<td>People</td>
<td>Generally refers to changing demographics, as well as trends related to health, labour and social cohesion. In the context of tourism, this trend is most closely related to evolving visitor demand, which refers to trends such as aging populations and the growth of the global middle class.</td>
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<tr>
<td>Planet</td>
<td>Generally refers to the state of the environment and the impacts of climate change, as well as access to resources such as food, energy and water. In the context of tourism, this trend is most related to sustainable tourism growth.</td>
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<tr>
<td>Productivity</td>
<td>Generally refers to sources of growth, such as technology, innovation and entrepreneurship. In the context of tourism, the rise of enabling technologies has impacted the way people around the world can travel, such as through platforms in the sharing economy. Advancements in automation are also likely to transform the sector.</td>
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<tr>
<td>Polity</td>
<td>Generally refers to the state of governance, trust and accountability in the public sphere. In the context of tourism, public decisions will have a role in a number of areas, particularly on travel mobility. For instance, mobility is significantly impacted by the degree to which national governments support international transport and facilitate travel.</td>
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The tourism sector and related industries are parts of the global economy set to be affected by a variety of megatrends. For instance, the International Air Transport Association (IATA) predicts that passenger demand over the next 20 years will be impacted by the emerging middle class in developing countries, diverging demographic outlooks, increasing liberalisation of aviation markets, and climate change (IATA, 2016). Based on feedback from member and partner countries, industry and international organisations, this chapter will explore similar trends, in relation to:
- Evolving visitor demand,
- Sustainable tourism growth,
- Enabling technologies,
- Travel mobility.

Global tourism has experienced steady growth for over six decades, culminating in an estimated 1.2 billion arrivals in 2016; a figure which is forecast to rise to 1.8 billion by 2030, with international tourist arrivals in emerging economy destinations projected to grow at double the rate of that in advanced tourism economies. Global expenditures on travel more than doubled between 2000 and 2016, rising from USD 495 billion to USD 1.2 trillion and accounting for 7% of global exports in goods and services (UNWTO, 2017a). In OECD countries, tourism accounts for, on average, 4.2% of GDP, 6.9% of employment and 21.7% of service exports.

Overall, projected growth in the tourism sector may be both helped and hindered by the key megatrends that have been identified. To effectively respond and adapt to these megatrends, policy makers and industry need to better understand what they are and the likely impacts they will have on tourism in coming decades.

**Megatrends transforming tourism**

When considering its likely evolution over the coming decades, it is clear that tourism will be transformed by large-scale social, economic, political, environmental and technological changes. While slow to form, once such “megatrends” have taken root, they exercise a profound and lasting influence on human activities, processes and perceptions.

Megatrends bring new and often unseen challenges, threats and opportunities, the impacts of which may vary between the economy as a whole, and individual sectors. While we cannot be certain how these influences will present for tourism, we can be confident that the structure of the visitor economy will evolve significantly between now and 2040, as: i) income and education levels increase in emerging economies, the global population continues to age, and new consumer groups emerge; ii) the global economy continues to shift towards low-carbon, resource-efficiency; iii) enabling technologies and peer-to-peer/shared usage platforms continue to create new tourism marketplaces and business models; and iv) the expected growth in visitor numbers, safety and security concerns, changes in travel facilitation policies, transport innovations, access infrastructure, and aviation regulations, all affect travel mobility.

It is critical for both governments and industry to explore and understand the multi-dimensional implications of these megatrends in order to inform policy and shape the future of tourism. An in-depth discussion of such trends will better enable policy makers to bring currently unforeseen and emerging issues onto the strategic policy agenda, develop potential scenarios and policy responses, and better assist public and private actors to capitalise on opportunities and challenges as they arise.
Evolving visitor demand

Over the next few decades, the structure of the visitor economy will evolve as income and education levels increase in emerging economies, gender imbalances are addressed, the global population continues to age, and new consumer groups emerge. Combined, these factors will impact on the propensity to travel as well as the expectations of travellers. Although expected to grow at a slower rate than in the past, the world population is forecast to rise from 7.4 billion in 2015 to 9.7 billion in 2050, driven by growth in developing countries.

Changing demographics will have a major impact on visitor demand in coming years. In particular, trends such as the continued growth of the global middle class and aging populations mean that the global population will generally be richer and older in the decades ahead. Additionally, the rise in prominence of emerging generations will further upend current considerations that fuel the tourism market. Indeed, Millennials and Generation Z will become key forces in mobility and their travel behaviour could lead to significant shifts in the tourism market.

As a result of these trends, not only will the way people travel change, but their needs and demands are likely to be quite different when compared with tourism today – prompting new opportunities, and challenges, for the future, and a likely shift away from a currently dominant western view defining travel, holidays and related practices (Kyyrä and Rantala, 2016).

Due primarily to increased wealth in emerging economies, the world is experiencing a significant and rapid expansion of the global middle class. This major increase in middle class purchasing power and consumption is likely to play a major role in the world economy in the years ahead. Indeed, it has been estimated that the world is only a few years away from the majority of the world’s population being considered middle class (Kharas, 2017). Not only is the middle class increasing, but it is doing so at a rapid rate.

This trend will have broad implications, particularly since this growing demographic will have more spending power. The combination of this growth alongside advances in technology means that people in the middle class will have greater access to goods and services around the world.

Despite this high-paced expansion of the global middle class, challenges will abound in coming decades. For example, the impact of technology and automation on the labour force is one issue that could fundamentally alter the number of people in the middle class (Bremmer, 2016). Indeed, inequality could continue to rise within this large demographic.

Furthermore, growth trends vary across different parts of the world. The fast-growing middle class predominantly stems from emerging economies. Developed countries will experience a much slower expansion, and in some western jurisdictions, this has stalled or declined. As the middle class grows in developing economies, these parts of the world are going to play an increasingly important role as source markets for global tourism.

Another expanding demographic group is that of the elderly – due to a combination of increases in life expectancy alongside decreases in fertility rates (ESPAS, 2015). Due to aging populations, the share of people in the global population over 60 years of age is expected to nearly double over the next 35 years, with some regions experiencing more significant growth than others. The next 50 years will see population ageing affecting most OECD countries, and developing countries, notably in Africa and South Asia, experiencing considerable population increases. Fertility rates are below replacement rates in many
advanced countries and in some large emerging economies like China and Brazil. Between 2010 and 2060, the OECD’s population is expected to increase by 17%, but the working age population (age 15-64 years) may fall by 7%, which could lead to a labour shortage that is unable to meet increased tourism demand. The ageing of the work force may have negative effects on long-term growth, put pressure on social systems, and introduce major changes in consumption and investment flows.

As such, the range and volume of goods and services that older people are likely to consume, including tourism, are also positioned to grow substantially. Infrastructure and support services will need to be tailored to accommodate both increased demand and changing visitor needs and preferences. For example, accessibility (both physical access and information provision) is likely to be an area of particular concern for older tourists.

**Emerging generations** refer to demographic groups that are on the horizon. Generation Z (born in the late-1990s to early-2010s) and Millennials (born in the early-1980s to mid-1990s) will both represent important market opportunities in the tourism sector by 2040.

Both of these demographics have grown up with technology and were raised with the Internet, which will play a key role in how they access, navigate and interact with different tourism products and services. Indeed, they are likely to be particularly demanding compared to previous generations, having grown up with the quick and direct access to information enabled by digital technology. They are also more likely to travel independently compared to past generations and be open to temporarily accessing or renting products or services, such as modes of transport or accommodation, rather than owning them outright.

Different policy and industry pressures will result from changes in these demographic groups, each of which has very unique travel preferences.

**Key facts and projections**

At the end of 2016, there were approximately 3.2 billion people considered to be in the middle classes around the world. Annually, approximately 150 million people are joining this demographic group, with the majority of those (an estimated 88%) residing in Asia (Kharas, 2017).

As of 2015, the global middle class was spending USD 35 trillion annually – about one-third of the total global economy – however, that figure is forecast to nearly double (USD 29 trillion) by 2030, with only USD 1 trillion of the increase coming from developed economies (Kharas, 2017). Other projections indicate that, by 2030, this rapidly expanding middle class will result in increased populations in major cities, particularly in Asia (ESPAS, 2015).

The United Nations (UN) has projected that by 2050, nearly all regions of the world will have almost a quarter of their population aged 60 or older. This demographic group is currently growing at a rate of about 3% per year, and is expected to reach 1.4 billion people in 2030 and 2.1 billion by 2050 (UN, 2017).

The rate of aging is not expected to be equal around the world. For instance, in Europe, 25% of the population is already 60 years of age or older and that figure is expected to increase to 35% by 2050 (UN, 2017). Other parts of the world are not expected to see such a dramatic rise, though increases will occur around the world.

Research indicates that tourism is one of the major areas that will benefit from an aging population that is increasingly more inclined to pursue leisure-oriented experiences.
compared to past generations. Indeed, tourism targeted at older markets has been identified as a particularly high yield and high growth opportunity for the industry. For instance, individuals 65 years and older in the UK increased spending on overseas travel by GBP 1.3 billion between 1999 and 2011 while those between the ages of 16 and 34 decreased spending by GBP 922 million over the same period (Kingman, 2012).

Similarly, a recent study commissioned by the European Commission highlights the growth potential for accessible tourism in Europe. The study shows that accessible tourism demand by people with special access needs from the European Union currently generates a total economic contribution of EUR 394 billion in terms of GDP within the European Union (3% of total EU27 GDP in 2012). Furthermore, it estimates that if European Union tourism destinations were improved to achieve almost complete accessibility of buildings, hotels, restaurants, museums, and various accessible services, by 2020 demand would increase almost 44% resulting in a potential rise of 39% in economic contribution (Miller, 2014).

One such example is reflected in the rise of multi-generational travel, often involving families, and fuelled by older tourists with high spending power and significant leisure time. Approximately one-third of retired individuals have taken trips with people in other generations (Age Wave and Merrill Lynch, 2016). A unique challenge for destinations posed by this growing market is the ability to develop and align activities of interest to all members of the travel party.

Another niche segment that is likely to experience significant growth in the coming years is that of medical tourism. As the cost of medical insurance and procedures, whether for health or cosmetic purposes, continue to increase in developed economies, emerging economies will become attractive options. As the quality of medical practitioners and infrastructure improves and the costs remain low, relative to those in source markets, tourists will be more likely to consider travelling abroad for wellness purposes and/or to combine a medical procedure with a short break (Alén et al., 2015).

Millennials currently account for approximately 20% of international travel, spending an estimated USD 203 billion around the world. By 2040, they will range in age from 45 to 60, with the oldest beginning to approach retirement, and having accumulated additional wealth over the next 25 years, their proportion of total spending is expected to increase substantially.

Meanwhile, the generation that follows Millennials – Generation Z – will also be a major force in the tourism market and labour force by 2040, ranging between the ages of 30 and 45. By as early as 2020, this demographic group will make up the largest share of the global population at 2.6 billion, projected to overtake Millennials who are estimated will number 2.3 billion (Weinswig, 2016).

Data indicates that Millennials take more trips annually compared to other generations – at four or more per year. However, trips tend to be shorter in duration compared to other demographic groups (Globetrender, 2017). Furthermore, they are more likely to pick travel experiences that they consider to be “authentic” – preferring to head off the beaten track and “live like a local” (Future Foundation, 2016).

A study by Airbnb found that many Millennials consider travel more important than other priorities, including buying a home or a car. Additionally, Millennials surveyed in the United States, United Kingdom and China valued experiences more than ownership (Airbnb, 2016). When combined with a second nature use of digital technologies, this group are more likely to create their own travel itineraries than to rely on the advice of travel agents or participate in package tours.
Implications for tourism sector

All of these demographic factors appear to present significant growth opportunities for the tourism industry. As the population ages and more people enter the retirement phase of their lives, they are more likely to spend income and savings on leisure activities such as travel. Similarly, the overall growth of the middle class will mean more people are likely to spend on activities such as tourism.

While there is significant potential for tourism growth associated with an expansion of the global middle class, challenges may arise in the future. As populations in Asia are observing the most significant middle class growth, they are likely to experience the most significant increase in demand for pursuing travel and tourism. However, the tourism industry may need to take into account potential colliding interests, with fast growth in emerging markets contrasting with slow growth in developed economies (Kharas, 2017).

Furthermore, middle class growth may not be stable, with the current trajectory susceptible to influence from geopolitical or macroeconomic instability, while automation and emerging technologies could alter growth patterns and expectations. Governments and industry will need to continue to monitor these signals, estimate their likely impacts and adjust long-term strategies and target markets where necessary.

With an ageing global population, seamless transport to and within destinations (including the challenge presented by the “first” and “last” mile – that travel from a person’s home to an airport, port or train station, and then on from their point of arrival to their destination) is a strategic issue that will increasingly need to be addressed. Tourism-related infrastructure, modes of transport, and information provision, will need to be carefully designed and operated to cater for a greater number of customers with reduced mobility and limited communications abilities, in order to help tourists confidently navigate their way around a destination. In the context of mobility, universal design refers to those transport systems that accommodate diverse abilities and needs. The adoption of such an approach can expand potential tourist markets to include people with special needs, whilst also benefitting travellers without mobility impairment. For example, walkway ramps provide access for those tourists with limited mobility or wheelchair users, but also convenience for those with wheeled luggage or parents travelling with a child in a pushchair.

While the purchasing power of older populations is projected to remain high in coming decades (Dobbs et al., 2016), the current trajectory could alter if work becomes less stable and the retirement age in countries continues to rise. This could lead to increased variation in levels of spending power for those approaching retirement in 2040. Flexibility will be critical in order to effectively respond to their evolving needs and changing expectations.

Various circumstances can impact the travel decisions of older tourists. For instance, those still in the labour force are more likely to make leisure travel decisions based on whether they have the money or time to do so, while travel decisions of those who are retired are more likely to be influenced by their health status (Alén et al., 2015). The implication being, that for those people that need to continue to work beyond the traditional age of retirement, simply whether they are healthy enough to travel will unlikely be the only consideration in any travel decision.

Despite the projected increase in the over 60s market in the years ahead, Millennials, Generation Z and other emerging generations will comprise the bulk of domestic and international tourists by 2040. An increasingly large proportion of these will be middle-class and originating from emerging markets. For example, recent research has found that
Millennials in China – which has experienced significant middle class growth – place a higher significance on travel than Millennials in other countries (Airbnb, 2016). The tourism sector will need to adapt to these trends and adopt innovative approaches to accommodate new demands and specific preferences of these individual groups. New Zealand’s marketing strategy in response to China’s growing importance as a source market is one such example (Box 2.1).

Box 2.1. New Zealand marketing to Chinese travellers

New Zealand has already experienced some of the impacts of evolving visitor demand. China is currently New Zealand’s fastest growing source market and the second largest overall. New Zealand’s Ministry of Business, Innovation and Employment forecasts that Chinese travellers will double between 2017 and 2023, expecting growth to 913 000 visitors who will spend an estimated NZD 4.3 billion per year. These trends prompted New Zealand to develop efforts that focus on helping the tourism industry respond to the influx of Chinese travellers.

In 2012, the government initiated a review of the Chinese market. That review included a recommendation calling for the development of a nation-wide toolkit that was designed to “accelerate the ability of New Zealand businesses and destinations to raise their service levels for the Chinese visitor market.” Tourism New Zealand took leadership in administering the toolkit, which is supported by the government, tourism industry groups and the private sector. As part of its efforts, Tourism New Zealand develops training and networking events with various industry segments.

The government’s efforts also involve a shift toward independent travellers and away from tour groups. In light of this shift, the Ministry of Business, Innovation and Employment commissioned the China Visitor Insight program in 2015 to help the tourism industry better understand the needs and preferences of independent travellers from China. The program provides webinars and online services on topics such as developing products specific to that market and reaching out via social media. It is focused on marketing toward independent travellers, as they are believed to be more likely to stay longer and travel further distances. Workshops developed to support these efforts have had more than 1,000 tourism operator attendees. Furthermore, the government is taking steps to encourage Chinese travellers to visit during off-peak periods and new and emerging destinations within New Zealand.

Also as part of its efforts to aid travel for visitors from China, New Zealand’s government has made it simpler for travellers from the country to visit, such as by extending the timeframe for multiple-entry visas for Chinese visitors and by providing them with access to more expedited processing at the border.


The predominance of emerging generations and their preferences for unique, customised, and sustainable travel experiences could lead to a shift away from more traditional sun, sea and sand, and attraction based tourism. Generation Z, for example, appears to be highly influenced by social media and recommendations by peers when making travel decisions. They are interested in taking risks on vacations and having unique experiences, as well as trips focused on relaxation (Globetrender, 2017). While the appetite for risk-taking may decline as Generation Z approaches retirement, it is likely that this preference will be taken up by following generations.
In order to capitalise on these changing trends, policy and industry decision makers will need to consider how to more effectively develop and connect travellers with more remote destinations, where appropriate, to provide diverse and distinct experiences outside of traditional tourism destinations, and support the socio-cultural and economic development of local communities.

However, the purchasing power of these groups in 2040 may impact their willingness and/or ability to travel, as they have faced economic circumstances that have generally made it more difficult for them to accumulate wealth as easily as for preceding generations (Dobbs et al., 2016). Indeed, Millennials were hit hard by the global recession, which impacted career advancement, and now face a changing workforce that is often precarious and increasingly automated, as well as greater inequality in general. These changing circumstances may also go some way to explaining the trend towards shorter trips and increasing popularity of cheaper travel options such as low cost airlines, home-sharing and ride-sharing platforms, hostels etc. These issues must all be considered in assessing the travel preferences of emerging generations in the decades ahead.

**Sustainable tourism growth**

Tourism is widely recognised as a human activity that is dependent on natural resources, while at the same time contributing to the depletion of these same resources. As for many sectors, tourism is a relevant factor in the consumption of energy and generation of greenhouse gas emissions. It also contributes to fresh water and land use, environmental degradation, and unsustainable food consumption. The sector also has various impacts on global biodiversity. Tourism’s interrelationship with these resources can be direct or indirect, and even though all tourism activities are ultimately local, they add up to phenomena of global significance.

At the same time, however, tourism can also raise awareness of cultural and environmental values, help finance the protection and management of protected areas, and increase their economic value and importance. When built upon broad stakeholder engagement and sustainable development principles, tourism can contribute to more inclusive growth through the provision of employment and economic development opportunities in both urban and rural areas, and promote social integration.

Tourism can play a key role in driving the transition to a low-carbon and resource efficient economy. Due to its cross-cutting nature and close connections to numerous sectors, even small improvements will have important impacts. In recognition of tourism’s potential to advance the universal 2030 Agenda for Sustainable Development – by mainstreaming sustainable consumption and production patterns that are resource efficient and result in enhanced economic, social and environmental outcomes – 2017 was declared the UN International Year of Sustainable Tourism for Development.

**Key facts and projections**

Estimates of tourism related emissions include all domestic and international leisure and business travel, with a focus on transportation to and from the destination, accommodation, and activities at destinations. Taken together, the tourism sector is estimated to contribute approximately 5% of global GHG emissions (UNWTO, 2017b). A more complete analysis would also include food and beverages, infrastructure construction and maintenance, as well as tourist retail and services.
Transport is responsible for around three quarters of the tourism total (aviation accounting for 40% and cars for around 32%), followed by accommodation (over 20%), and cruise ships. International aviation has increased its emissions by 83% since 1990, generating an estimated 781 million tonnes of carbon in 2015 (ATAG, 2016). In a business as usual scenario, it is estimated that the sector will generate three times this amount by 2035 (CREST, 2016).

Tourism is both dependent on fresh water resources and an important factor in local fresh water use. Tourists need and consume water when showering or using the toilet, when participating in activities such as skiing (snowmaking), and when using spas, saunas, wellness areas or swimming pools. Fresh water is also needed to maintain hotel gardens and golf courses, and is embodied in tourism infrastructure development (including accommodation), and food and fuel production. Changes in the availability or quality of water resources can have negative impacts on tourism (OECD, 2015).

Tourism growth and the trend towards higher-standard accommodation and more water-intense activities, and declining water resources, will lead to increased pressure on water resources in many destinations. As a consequence, tourism development may become less feasible or impossible due to declining water quality and the costs associated with providing fresh water. Impacts will ultimately depend on several factors, including the relative scarcity of fresh water in existing and potential tourism destinations, competition with other economic sectors such as agriculture or biofuels, and the structure of the tourist industry (e.g. small guesthouses vs. large resort hotels), and the level of water use per guest night. Regional conflicts over water use have already been reported (ITP, 2013), and are projected to increase in the future due to increasing demand and declining supply.

Food production and waste minimisation have a wide range of sustainability implications. For example, UNWTO-UNEP (2008), estimates that 25 billion tourist days were spent in 2005 alone. At an average of three meals per tourist per day, this represents roughly 200 million meals per day. With the number of international arrivals increasing by over 50% to 2016, this figure increases towards 300 million per day. Hotels, consequently have considerable power over food production and waste minimisation and can directly influence sustainable food production through regional or organic food purchasing policies. For example, the initiative by the Scandic hotel chain to only purchase organic and fairly traded coffee affects 20 million cups of coffee served per year (Gössling et al., 2011).

While well-planned tourism development has the ability to contribute to the economic and socio-cultural well-being of host communities, rapid and unplanned tourism growth can equally result in negative impacts, such as overcrowding, which can impact upon both the communities and the environment upon which it depends. For example, some studies have correlated tourism growth with the deterioration of traditional culture, as well as increased gambling, drug trafficking and even prostitution. There is also some evidence to suggest that increased tourism can result in higher property taxes and higher cost of living in host communities, which may become unaffordable for local residents (Kim et al., 2013).

The exponential growth in the tourism sharing economy is a case in point. Peer to peer platforms have the potential to drive economic growth and job creation, and generate added value by encouraging tourists to disperse to less well-known destinations. However, it may also generate negative externalities. Accommodation sharing services in particular may impact neighbours and local residents, due to noise and other disturbances, and by contributing to pressure on the local housing market. In a worst-case scenario, poorly
managed growth of these services may also have a detrimental impact on the historical fabric of destinations and reduce the appeal of areas as places to live and visit (OECD, 2016b).

The OECD report on Green Innovation in Tourism (OECD, 2013) highlighted an industry perception that customer reluctance to pay a premium for more environmentally sustainable products or services. However, customer perceptions may be changing. Results from a 2015 study showed that 66% of global consumers were willing to pay more for sustainable brands, up from 55% in 2014, while for Millennials, the figure was significantly higher at 73%, up from only 50% (Nielsen, 2015). However, while a growing number of travellers express a willingness to pay a higher price for sustainability, in some markets, there is still a large proportion of those who are not (López-Sánchez and Pulido-Fernández, 2016). A key factor influencing purchasing decisions is brand trust, which is why third-party certification programs have become so common in the field of sustainable tourism.

Each year, the World Travel and Tourism Council (WTTC) recognises tourism destinations and enterprises for best practices in sustainability relating to the community, environment, innovation, and people. In its most recent report, there were a number of key trends identified that provide insight into the future of sustainable tourism (WTTC, 2016):

- There has been a notable increase in quality and quantity of applications from urban destinations, highlighting the growth in urban tourism as well as an increased use of tourism for economic development by municipal governments.
- Conservation and preservation of biodiversity have always remained a constant priority over time. However, as a result of a global push for climate action, climate change and GHG emissions are increasingly seen as critical elements of any sustainability initiative.
- Social enterprises are becoming more engaged in the tourism sector, due in part to the role of social media and mobile technology in connecting people quickly and easily.
- The “people” aspect has become more prominent in the tourism sector, resulting in greater promotion of employment, training and workforce participation as key drivers for industry development.
- There is a greater focus on measurement and evaluation of sustainability initiatives, which has in turn increased the overall standards in this area.

**Implications for tourism sector**

The consequences of climate change will be felt across the travel and tourism sector over the coming decades. Existing tourism offers in many countries will be challenged as the physical environment is altered and extreme weather events become common. For instance, much of international tourism occurs in coastal regions, which are under significant threat of storms, flooding and tidal surges. Southern destinations are likely to face extreme heatwaves in the summer seasons, and northern destinations that rely on outdoor winter activities will face shorter periods of snowfall, leading to potentially larger seasonal variations for many countries. For both government and industry, this will require a serious rethinking of how travel activities are offered and how tourism is managed over the long-term (Box 2.2).

It will become increasingly important for governments and industry to work together in a pro-active approach to ensure the sustainable development and management of attractions for the benefit and enjoyment of local communities and tourists in both the short and long term.
With the number of international arrivals estimated to reach 1.8 billion by 2030, and domestic arrivals potentially four times that figure, the transition to a low-carbon and resource efficient economy presents a range of opportunities and challenges for tourism policy makers. These include the need to better understand the current and potential impacts of different forms of tourism on the environment and natural resources, and providing the right incentives throughout the value chain to promote sustainability, and demonstrate that environmentally-friendly policies can also be business friendly.

To achieve greater resource efficiencies, green investment structures, and cross-sectoral synergies there is a need to consider various sustainability drivers (UNEP, 2011). These include, for i) energy – increased costs and carbon surcharges; government incentives; eco-labels; as well as regulations/legislation on energy efficiency; ii) water – price structures reflecting water scarcity and responsible water management; and iii) biodiversity – regulation regarding sensitive ecosystems, as well as national policies attracting revenue through tourism for protecting critical biological habitats. Under such a green investment scenario, tourism could make a larger contribution to GDP growth, while significantly reducing water consumption, energy use and CO₂ emissions, compared to a business-as-usual scenario.

Within this context, and due to its cross-cutting and fragmented nature, tourism policy needs to be considered within its broader policy context. Support and leadership from policy makers at the highest level can help ensure that the impacts on tourism of related policy areas and initiatives are also considered. The linkages between different policy areas together create a policy mix that shapes how tourism develops over the short, medium and long term.

An integrated governmental approach, with input and support from industry and civil society, is therefore necessary to address the multi-faceted challenges faced by the tourism industry. These include protecting, managing and enhancing natural and cultural resources, and developing the infrastructure and skills needed to meet expected future demand. Such
an approach will help to secure the longevity of tourism as an economic and social force by focusing on environmental sustainability, inclusiveness, diversification, innovation and strategic improvements to productivity; rather than simply reacting or seeking to meet short-term objectives to stabilise, adjust or shift towards new market opportunities.

**Enabling technologies**

New technologies continue to reshape markets and sectors around the world, and the pace and scale of disruption appears to be hastening. From the sharing economy to the Internet of Things, to autonomous vehicles and artificial intelligence, and blockchain technology to big data analytics, a range of new and emerging innovations are promising to unlock more opportunities for people around world.

Together, these trends could make travel more affordable, efficient and accessible to many people. The reconceptualisation of intermediaries likely means that long-standing models of tourism in areas like accommodation or travel agencies will continue to be radically reshaped, with more travellers connecting directly through a technological platform with a service provider, rather than dealing with a hotel, a booking agent or professional travel agent.

Policy makers will need to consider how to provide a supportive environment that promotes innovation as new technologies emerge, with the potential benefit of more easily connecting tourists with a broader array of business partners and destinations. At the same time, however, new technologies will also have complex and less well-understood implications on workers employed in the tourism industry. For example, the advent of new technologies that can automate human tasks through machine learning and artificial intelligence could completely change how people work, what they do, and more generally how many jobs are available. Policy makers must also consider how to manage these rapid changes to mitigate potential negative consequences.

In recent decades, technological advancements have made travel more affordable, accessible and simpler for many people, and in the future, technology has the potential to completely changing what is thought of as tourism (e.g. integrated ticketing, mobile payment systems). For example, as virtual reality technology continues to improve, it is conceivable that virtual tourism could either complement or supplant physical journeys for some travellers. Conversely, as people live increasingly digital and connected lives, the opportunities to unplug and have analogue, natural experiences while on trips may well become a preferred alternative to purely digital experiences.

How people’s behaviours will change in light of these types of paradigm-shifting technologies is not yet clear, but technology poses both broad opportunities and challenges for policy makers who will want to ensure that their national and local economies are best positioned to thrive in the world of tourism in 2040.

**Key facts and projections**

**Digital platforms** are often used to inform travel decisions and their impact is likely to grow in coming decades. Indeed, online platforms are used to advertise and book vacations online, making it easier and simpler for travellers to plan. In particular, social media is often used to influence the decisions of emerging generations, such as Millennials or Generation Z. While the increasing pervasiveness of social media presents opportunities for those marketing destinations, it can also present a threat for vulnerable destinations.
(communities, cultural or environmental attractions) unprepared or unsuited to rapid growth in tourist traffic due to sudden popularity on one of more platforms. However, as environmental conservation efforts need to become more agile, technology can also be a solution. Despite potential challenges, digitalisation is expected to greatly benefit the tourism sector, creating an estimated USD 305 billion in value between 2015 and 2016.

Over the same time period, digitalisation in the aviation, travel and tourism industries is estimated to migrate USD 100 billion in value from traditional players to new competitors, and generate USD 700 billion in value for customers and broader society (WEF, 2017). However, while use of digital platforms can bring convenience to consumers and increase capacity to accommodate travellers, there are also challenges that come with disrupting the traditional system.

The sharing economy in particular has grown quickly in the past five years to capture a sizable portion of economic activity. The growth has been most notable in transportation and accommodation, but continues to extend to many other sectors. The top five sharing economy sectors could see global revenues jump from USD 15 billion in 2014 to USD 335 billion by 2025 (PwC, 2015). Home-sharing platforms such as Airbnb, HomeAway and Couchsurfing are now significant competitors to the hotel industry – Airbnb is valued at an estimated USD 30 billion, which compares favourably to the Hilton chain at USD 19 billion and Marriott at USD 35 billion. Airbnb bookings continue to grow at a rapid pace, from 4 million nights in 2011 to 40 million in 2014 and a projected 80 million in 2017 (Duryee, 2012; Somerville, 2015). Only one in 10 travellers from the United States used private accommodation in 2011, a figure which jumped to one in three travellers by 2015 (Quinby, 2016). However, concerns have been raised about the quality of home-sharing accommodations compared to hotels. Some jurisdictions have made progress on regulating home-sharing but many more are still determining how best to respond to its emergence and growth.

The same is true for ride-sourcing, which has also encountered similar challenges despite its significant growth in recent years. The continued, rapid growth of ride-sourcing firms such as Uber, Lyft and BlaBlaCar is also providing more options for people when travelling that can be cheaper and more efficient. Employment by ride-sharing firms in the United States increased by 69% between 2010 and 2014, and then by another 63% in 2015 alone (Hathaway and Muro, 2017). Ride-sourcing firms are experimenting with new offerings such as rides with drivers who are proficient in English or cross-border trips to further gain a foothold with tourists (Sawers, 2016).

Future growth in the dining and travel experience realm can be expected in the sharing economy as well, as consumers become more comfortable and familiar with the opportunity to eat in someone’s home when on a trip (through platforms such as BonAppetour and VizEat), or take advantage of a tour or personalised experience through platforms like Vayable, ToursbyLocals and recently through Airbnb’s Trips feature, which offers tours and unique experiences hosted by locals.

Rapid advances in automation through robotics, machine learning and artificial intelligence are poised to disrupt labour markets around the world in the next two decades, potentially eliminating up to 69% of existing jobs in India, 47% in the United States and 30% in the United Kingdom (Frey and Osborne, 2013; Kim, 2016). However, these disruptions in sectors ranging from manufacturing to retail to administration are also likely to deliver more efficient, affordable goods and services in a range of areas.
In 2015, the world’s first hotel staffed by robots opened in Japan and the firm behind the idea plans to open 100 more locations by 2021 (Kikuchi, 2017). Many jobs in the tourism sector, ranging from travel agents to hotel staff, are likely to be impacted by the increased penetration of automation into the economy. At the same time, real-time translation software is making it more convenient for tourists to travel to areas in which they do not speak the language. Indeed, translation apps are now able to translate signage and are expected to go beyond that capability into translating verbal statements in coming years (NITB, 2013). This can add to the options made available to tourists, but also have the potential to impact the duties of tour guides.

Additionally, companies in the tourism sector are using big data and predictive analytics to increase knowledge of consumer behaviour and customise travel experiences accordingly. Indeed, the industry is already developing virtual assistants powered by artificial intelligence to help travellers book trips more easily (Boztas, 2017; Levere, 2016). Big data is also being used to make services more efficient and targeted by using such data to track purchasing behaviour and predict service demand (Song and Liu, 2017). For instance, data generated through social media sites can impact the way decisions are made in the sector (Miah et al., 2017). However, with the increased use of big data come concerns over privacy, inaccuracy and misuse of such information.

Autonomous vehicles (AVs) are already successfully being piloted on the roads in a number of jurisdictions and it is anticipated that the application of this technology on a broader scale could happen by 2025 or sooner (Keating, 2017; Assis, 2017). Sales of AVs could reach more than 20 million by 2035 (IHS Markit, 2016). Widespread adoption of AVs would have major implications for travel mobility and tourism both within major urban centres as well as for inter-city or regional travel.

Blockchain technology, known predominantly for underpinning cryptocurrencies such as Bitcoin, has a broad range of potential applications in many sectors. For example, it permits people to securely register their ownership over data and also to engage in transactions more efficiently and with higher degrees of trust. Blockchain applications in tourism could include better forms of identity management and more secure, efficient communication for travellers with the entire spectrum of travel service providers, from airlines to loyalty reward programs (Gjerding, 2017; Aitken, 2016).

Furthermore, it could also reduce costs associated with exchange rates among foreign currencies when travelling abroad. Indeed, the use of cryptocurrency such as Bitcoin, would eliminate any fees or the need to exchange currencies at all when travelling abroad, potentially increasing the appeal of international travel. This is particularly the case for emerging economies, as cryptocurrencies could be an effective hedge against inflated currencies and therefore offer greater certainty and security. Blockchain technology also has the potential to change and simplify loyalty programs for frequent travellers (Kowalewski et al., 2017).

At present, virtual reality (VR) technology is used primarily in video games, however, tourism is a sector that could obviously be impacted if people were readily able to experience new and exotic locations without leaving the comfort of their own homes. In the tourism sector, balancing the potential and promotion of VR destination experiences against the interests of those along the traditional tourism value chain, will likely become a key decision point for many marketing entities.

In Canada, Destination BC has developed an immersive VR tour of the Great Bear Rainforest designed primarily for travel trade and media partners. Similarly, Tourism
Australia has captured high-resolution footage of their most popular tourist destinations for use in immersive VR experiences (Box 2.3). Some hotel chains have also experimented with VR in-room experiences that make it possible to experience destinations without ever stepping foot outside.

**Box 2.3. Experience Australia in 360°**

In 2016, Tourism Australia produced a number of virtual reality videos that allow online users to experience some of the country’s most famous sites such as the 12 Apostles, Sydney Harbour, Whitehaven Beach, and the Gold Coast. A total of 18 clips were developed as part of the latest iteration of its global “There’s Nothing like Australia” campaign which focuses on aquatic and coastal experiences. The 360-degree mobile technology is immersive, allowing viewers to feel as though they are experiencing the product when viewing videos of helicopter flights, kayaking, snorkelling or sailing. The footage can be viewed through VR headsets as well as online and via mobile phone apps.

The immersive VR experience aims to entice prospective travellers to visit and experience the unique aquatic and coastal tourism attractions in Australia, targeting key markets such as the United States, United Kingdom, China, India, Japan, South Korea, Singapore, Indonesia, Malaysia and Hong Kong. The global marketing push proved successful with more than 10 million views in the few months after its launch and a 64% increase in engagement on the Australia.com website. Emerging VR technologies are providing new ways for consumers to engage with destinations, providing a level of immersion and engagement unmatched by other media platforms, through a more compelling mode of storytelling.

Tourism Australia partnered with TNS and Google Think Board to understand the potential of VR as a marketing and promotional tool for tourism businesses and destination marketing organisations. Research findings highlighted that VR experiences bring a destination to life and can help to make travellers consider destinations they otherwise would not have. According to their estimates, 25% of travellers plan to use VR in the future to assist with choosing a holiday destination (22% in the United States, 25% in the United Kingdom, 30% in Australia). This technology is reported to allow travellers to get a feel of the destination, to preview the experiences on offer, and to assist with managing expectations. Consumers appeared to be most interested in experiencing VR content relating to nature and wildlife, and aquatic and coastal offerings (www.australia.com/360).

Virtual tourism experiences may increasingly provide an opportunity for alternative on-site experiences at locations considered too environmentally or culturally sensitive to allow physical visitor access. For example, climbing on the Uluru monolith, within the UNESCO World Heritage listed Uluru-Kata Tjuta National Park, will cease from 26 October 2019 to reflect its significance as a sacred site to the Anangu, the park’s traditional Aboriginal owners. VR might provide future visitors with the option to enhance their experience at Uluru, while contributing to the local economy. However, any VR activities would not be focused on the Uluru climb area, but on other areas of the park that promote the parks cultural and natural values.

Augmented reality (AR) could end up being equally transformative for the sector, as travellers and service providers adapt to technologies such as holograms or mobile apps that add virtual elements to real-life situations. Easier access to navigation information,
translations, and even virtual interactions with historical figures are possible ways of enhancing visitor experiences using AR technology. For example, the International Centre for Cave Art, near Montignac in south-west France, is a vast site cut into the landscape that houses a full-scale replica of the Lascaux cave system augmented with the latest digital technologies to help protect fragile archaeological finds.

**Implications for the tourism sector**

The inherent unpredictability of how enabling technologies that are already in existence will continue to evolve – as well as the emergence of new and yet unknown technologies – makes specific actions today by policy makers a challenge. The rapid rate of technological change in society, which is likely to only accelerate in scale and speed, further exacerbates the difficulty of adjustments to existing approaches and novel policy responses. Technological innovations could, either radically or incrementally, alter the tourism experience, how people work within the sector, and raise questions about how to best manage these transitions.

However, there do appear to be shared key characteristics of new and anticipated emerging technologies that can help guide policy responses. Digital technologies will help connect people with more information, people and experiences, more quickly than ever before. They will likely make marketplaces and operations across a range of endeavours more efficient. These changes are likely to be disruptive to a variety of sectors, including tourism, and in the short-term may dislocate many workers from their existing work patterns. Increasing fluency and the ability to make data-driven decisions in an environment with vast amounts of information will become increasingly important.

New technologies may offer the opportunity to provide highly customised products and experiences to travellers, as tourists increasingly have more transparent and comparable information at their fingertips when making decisions about where to stay, how to get to a destination and where to eat. However, the rise of digital platforms and aggregators in travel and tourism may also squeeze the profit margins of existing tourism suppliers across sectors ranging from transportation to accommodation to dining.

Policy makers will also need to consider how and whether to pursue more digital strategies to market and deliver tourism services in a global environment where that approach is likely to be prevalent. For example, Austria launched a digitalisation strategy for Austrian tourism in September 2017 (Box 1.13). Some destinations, however, will likely opt to differentiate their travel experience by offering more analogue and offline options that are not overwhelmed with visitors at the same sites and locations that are consistently ranked highly online.

A priority area for policy makers will be the continued emphasis on future-proofing and anticipating how enabling technologies will unlock new opportunities and pose challenges to the tourism sector should be a priority focus. Regular review processes of how particular sectors are vulnerable to disruption and potentially can be re-oriented to stay ahead of the disruption curve should be held, with perspectives of all key stakeholders, including innovators.

A second key priority should be to strengthen regulatory and compliance frameworks to make them more permissive of innovation and responsive to rapid technological changes. These approaches need to be considered within the context of overall economic and social policy frameworks which necessarily overlap and touch on the operations of
both national, sub-national and local governments and many different sectoral fields, ranging from housing to transportation to security issues.

A third key issue for consideration in both the tourism sector and more broadly, is how to best balance concerns about privacy and security in an increasingly connected, data-rich world. For travellers, the benefits of sharing more data could include faster transit and security clearances, but there will likely be a growing demand for the development of appropriate safeguards to ensure data is not being used for unauthorised purposes.

Technologies have continually and progressively reshaped tourism value chains, and will continue to do so. The ongoing evolution of business models within the sector will offer new opportunities for many entrepreneurs while disrupting others. A greater focus on communication, networking and partnership management skills for businesses in the space will be critical. Therefore, working closely with government bodies to develop strategies should be a top priority to seize on the potential to offer better services for travellers (Box 2.4).

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### Box 2.4. Smart Destinations Project in Spain

A Smart Destination is an innovative tourist destination using state-of-the-art technology for the sustainable development of a tourist area, accessible to everyone, that facilitates the visitors’ interaction with and integration into their surroundings, increases the quality of the experience at the destination while also improving the quality of life of its residents.

This initiative has been developed and promoted by the Spanish Secretariat of State for Tourism, through SEGITTUR (a state owned company responsible for promoting research and development for innovation and new technologies in the Spanish tourism industry), to improve the position of Spain as a world tourism destination. The methodology developed fosters innovation, sustainability and competitiveness at a local level through the development and deployment of ICT with the aim of creating differentiated and highly competitive services.

Destinations seeking to become SDs must implement a strategy aimed at increasing competitiveness through more sustainable use of their natural and cultural attractions, the creation of additional innovative resources, and improvements in the efficiency of their production and distribution processes. Issues considered as part of the Smart Destinations initiative include, ensuring sustainable development, managing the carrying capacity of destinations, contributing to the seasonal and territorial distribution of tourism flows, increasing profitability, ensuring that residents share in the wealth generated by the tourist activity, and increasing tourist satisfaction.

On the way to becoming a Smart Destination, stakeholders are confronted with vast challenges and possibilities which need to be carefully considered, prioritised and selected. Geo-referenced data, Big Data, the Internet of Things, Open Data and many other data-related sources and concepts represent fundamental elements for the transition towards more intelligent, sustainable and competitive tourist destinations that meet the needs of all stakeholders involved ([www.segittur.es/en/inicio/index.html](http://www.segittur.es/en/inicio/index.html)).

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**Travel mobility**

Transport is an essential component of the tourism system and plays a vital role in moving tourists efficiently from their place of residence to their final destination and on to
various attractions. Transport connects the markets in tourism generating regions to destinations and facilitates the internal movement of visitors between components of the tourist experience (e.g. accommodation, attractions, commercial services, etc.), and can be a major element of the attraction or an experience in their own right. The location, capacity, efficiency and connectivity of transport can play a significant role in how a destination physically develops, influencing the mobility of visitors and the connectivity of tourist experiences within destinations.

The synergies between transport and tourism policy are significant and clear, and governments have an important role to play in leveraging the linkages between these policy areas. While transport policy aims to achieve strong connectivity and seamless transport that meets both the short- and long-term needs of the economy and the community, these same policies affect tourists as they move around a destination. Providing integrated, multi-modal transport systems (including land, sea and air transport) between cities or across borders, requires coordinated responses to technical, institutional and financial issues from a variety of stakeholders (OECD, 2016c).

Transport has always been a key enabler of international tourism, bringing consumers to commercial services and providers to global markets. However, inflows of tourists can put significant pressure on transport infrastructure and related services such as roads, buses, railways, maritime transport and – perhaps most notably – aviation.

From an international tourism perspective, the dominant role that air transport plays in delivering tourists to destinations is clear. In 2015, for example, the UNWTO estimates that air transport accounted for just over half (54%) of all international arrivals, while travel by road accounted for 39%, water 5%, and rail 2% (UNWTO, 2016a). While air and road are by far the primary choices of transport for international tourists, rail and water, and by extension, cruise terminals and international train stations, have an important role to play in distributing visitors to and around their destination of choice.

The rapid growth in tourism and air transport, in recent decades, is in response to two major factors i) higher incomes and an emerging middle class in emerging economies, which encourage greater consumption expenditure, including travel (by all modes) and; ii) air travel has become better value for money, as a result of improved aerospace technology and market liberalisation. Aviation liberalisation has encouraged competition, fostered the creation of new routes and enabled new airline business models to emerge, such as charter and low-cost carriers, which injected a greater level of competition in the airline industry (ICAO, 2013).

The projected growth of tourism over the next 20-25 years will provide enormous economic benefits and job opportunities in destinations all over the world. However, the growth and success of the sector relies upon the ability of people to travel safely and freely cross borders (WEF, 2016). Travel mobility will be affected by a range of internal and external factors presenting opportunities and challenges for industry and policy makers. All of which must be considered in tourism policies and strategies to ensure sustainable growth of the sector.

Travel facilitation measures in particular, including customs and immigration policies and visa requirements for visitor entry, are key components in ensuring ease of mobility between destinations. When these processes are made time-consuming, expensive or bureaucratic, they can act as disincentives for travel to that destination. Indeed, a destination can be made more desirable when such processes are instead streamlined and efficient.
Border measures and overall safety and security efforts are, of course, shaped by larger external factors such as geopolitical instability and increased risk of terrorist attacks. The world has entered a time of significant uncertainty, as protectionist sentiments rise and many nations retreat inwards. While travel mobility is inextricably linked to these geopolitical changes, they are inherently unpredictable and difficult to prepare for in any sector.

**Key facts and projections**

The number of international tourist arrivals is projected to grow significantly in coming decades. Air passenger traffic in particular is expected to nearly double between now and 2035, expanding from 3.8 billion to 7.2 billion passengers (IATA, 2016). The International Transport Forum (ITF), forecasts that the number of passenger-kilometres will double to 9 trillion by 2030, pushed by the large growth in the Asia-Pacific region, which will represent 40% of world passenger traffic, up from 30% in 2015 (OECD/ITF, 2017).

The ITF has also forecast strong growth in global road and rail passenger travel to 2050, with estimates ranging from 120% to 230%, depending on future fuel prices and urban transport policies. This growth is driven by non-OECD countries, where passenger volumes are projected to grow between 240% and 450% (OECD/ITF, 2015). Similarly, the cruise industry has enjoyed strong growth over a period of 30 years, driven initially by demand from North America and more recently by growing demand from Europe and the rest of the world. Cruise Lines International (CLIA), estimates that over the ten years 2004/2014 demand for cruising worldwide increased from 13.1 million to 22 million passengers (+68%) with 3.4% growth achieved in 2014. In 2018 global passengers are expected to exceed 25 million before reaching 30 million in 2024 (CLIA, 2015).

The strong growth in world air passenger traffic experienced in recent decades is expected to slow between 2030 and 2050, for two main reasons. Firstly, slower growth after 2030 is driven by projected GDP and population growth, which slow or even decrease (e.g. the expected population peak in China is 2030). Secondly, the network gradually reaches saturation, with fewer and fewer potential new links. This is especially true of very long distance routes, for which the low-cost carrier business model cannot be readily adapted, and leaving regional networks with more capacity to grow (OECD/ITF, 2017).

In Asia, for example, this means that passenger numbers at mature, long-haul airports are expected to grow at a slower rate than at secondary and often regional airports. Regional airports, many of which are still largely dependent on domestic traffic, only recently started to accept international flights. Their growth has been facilitated by the commencement of regional flights, in particular from low-cost carriers. For instance, the number of international flights at Chongqing airport increased five-fold between 2010 and 2015, while passenger demand is expected to increase at more than 15% in the region over the next two decades. This contrasts with the Beijing or Shanghai regions, which have experienced less than 5% growth in international passenger numbers in recent years, and a figure that is not expected to rise in the foreseeable future (OECD/ITF, 2017).

For shorter routes, growth in high-speed rail, with established networks in Europe and a quickly expanding network in China, may present increasing competition for the aviation sector, particularly in light of it being perceived as a convenient and more environmentally friendly alternative. For example, in the European Union, rail travel significantly increased in the decades preceding the economic crisis, largely thanks to the building of a large
I.2. MEGATRENDS SHAPING THE FUTURE OF TOURISM

high-speed rail network. For some city pairs (e.g. Paris and London and Paris and Brussels),
high-speed rail has now largely or completely replaced aviation as the mode of choice for
most passengers (OECD/ITF, 2017).

While old and new destinations alike stand to benefit from the upward trend in
international passenger aviation, and the expansion of the global aviation industry more
broadly, the sheer growth in movement will also pose significant challenges.

For example, as the number of international arrivals grows, there will be greater
demand pressures on the tourism sector to adapt in the face of climate change. Although
tourism is currently responsible for around only 5% of global GHG emissions, the aviation
industry is responsible for the large majority of that figure, generating 781 million tonnes
of carbon in 2015 alone (ATAG, 2016). If travel and tourism remain on a business-as-usual
pathway, the sector will become an increasingly important source of GHG emissions.

However, climate change itself imposes further risks. While average daily temperatures
could rise around three degrees, maximum daily temperatures could rise as much as four to
eight degrees by 2080. These extreme heat waves are likely to ground one-third of airplanes
in the future, resulting in more costly cancellations and delays (Coffel et al., 2017). Extreme
weather events are also expected to cause more frequent and severe turbulence, especially
on a number of popular transatlantic routes (Williams, 2017). Both government and industry
will require a rethink of aviation and its regulations to prepare for these threats.

Security and border measures not only play an important role in travel mobility, but also
in the customer experience. IATA reports that security wait times are among the top
grievances of travellers, and these complaints are likely to worsen in the coming years
(WEF, 2016). In the United States, for instance, the United States Department of Homeland
Security has indicated that such burdens are inevitable, especially during peak seasons
(Hetter and Pearson, 2016).

Similarly, the World Economic Forum has declared entry visas “one of the worst
bureaucratic inefficiencies for travellers” that can deter people from visiting a destination
(WEF, 2016). In fact, there is some evidence to suggest that countries that have improved their
visa facilitation processes have seen an increase in the number of international visitors of
between 5% and 25%, with positive economic impacts rippling throughout the economy
(UNWTO and WTTC, 2012). On the whole, most countries are seeking to balance enhanced
travel facilitation processes with maintaining or improving border security, while fewer
nations now requiring entry visas from particular citizens. In 2008, destinations on average
required 77% of the global population to have an entry visa, dropping to only 61% in 2015
(UNWTO, 2016b).

Travel and tourism is also highly sensitive to the threat of terrorism, pandemics, and
other large-scale crises. Examples include, the H1N1 outbreak in Mexico in 2009, which
resulted in a loss to the tourism industry in the order of USD 5 billion, and the United States,
which took six years to reach pre-crisis levels following the terrorist attacks on September
11, 2001 (WEF, 2016). More recently, during the outbreak of MERS (Middle East Respiratory
Syndrome) in 2015, more than 54 000 people cancelled trips to South Korea and economists
estimated that the impact on the economy was in the region of several billion US dollars as
a result (Misrahi, 2015).

Natural disasters such as the Hurricane Maria, which devastated Caribbean Islands
including Puerto Rico in 2017, are forecast to grow in regularity and destructive capacity in
the coming years. Such storms have the ability to cripple transport networks both in the
direct aftermath and for extended periods following such events, with potential impacts on international and domestic accessibility and connectivity.

**Political instability** can especially dissuade travellers from visiting a destination if there is a real or perceived threat involved. This will pose a unique challenge in the coming years, as the global middle class grows and emerging economies account for an increasing number of inbound and outbound trips. These nations, which tend to have a higher risk of political instability, will account for nearly 57% of international arrivals by 2030 (WEF, 2016).

**Implications for the tourism sector**

Managed effectively, transport and tourism synergies can improve visitor mobility to and within destinations, enhance visitor satisfaction, and help to secure the economic viability of local transport systems and services by servicing both residents and tourists. Ensuring that the medium- to long-term needs of the tourism industry are considered by governments as part of transport access and infrastructure planning can help to maximise and spread the socio-economic benefits of tourism more widely and manage visitor impacts over time.

The future growth of tourism and air transport are very much interlinked, and will depend largely on sustained world economic and trade growth, a growing middle class in developing economies, as well as declining ticket prices and airline operating costs, which will be impacted by aircraft technology, improvements in airline resource management and the price of fuel. Airspace and airport congestion could also constrain the growth of selected markets (OECD, 2016c).

Policy makers will need to be agile in order to respond effectively to these and other developments, to implement policies and practices that enable greater traveller mobility and confidence, while promoting sustainable tourism growth and maintaining or enhancing security and border integrity. Examples include the likely need for greater consistency and harmonisation of international standards in relation to safety and security, and international transport regulations to reflect geopolitical power shifts (e.g. aviation). Governments might also envisage the need to impose restrictions or limits on inbound (e.g. visa restrictions) or outbound travel (e.g. carbon footprint limits or mandatory carbon offsetting), in order to meet international emissions reduction commitments and/or achieve sustainable development goals.

The aviation industry in particular will face significant challenges as a result of climate change and increased demand for air travel. Emerging literature suggests that the industry may need to brace for thinner profit margins or push more aggressively on climate action, by designing lighter vessels or developing engines that produce fewer emissions (Williams, 2017; Coffel et al., 2017).

However, global market based measures that incorporate the price of carbon are likely to be one of the most effective mechanisms to reduce emissions with potential implications for both short and long haul destinations. There is evidence to suggest that increasing the price of travel may be the only way to have a meaningful reduction in GHG emissions. However, policy options to reduce the impact of tourism on climate change will need to reflect the wider context of tourism’s place in the structure of a country’s economy and, more broadly, the complex dimensions that underpin a country’s connectedness to the global economy (OECD/UNEP, 2011).
At the destination level, good accessibility will continue to play an instrumental role in overall competitiveness and in spreading the benefits of tourism beyond major centres. The provision of suitable infrastructure and adequate means of transportation are fundamental requirements to facilitate the mobility of tourists. In order for tourism to deliver on its potential as an engine for economic growth, it requires access to source markets and multimodal transport systems in-country that offer convenience, capacity, reliability and connectivity to suit all destination types (e.g. integrated seaside resort, or small scale isolated eco lodge). By promoting the development of intermodal hubs and gateways, transport policies at the national and sub-national level can not only help attract, manage or direct visitor flows but also facilitate a shift to more eco-friendly transport options, which can help consolidate a destination’s reputation as sustainable.

Many of the underlying difficulties in meeting the associated infrastructure challenges can be attributed to governance issues that span infrastructure planning, policy, regulation, financing, procurement and management. The importance of institutional coordination cannot be stressed enough when it comes to the seamless operation of multimodal transport systems. Good governance at all levels of government and co-operation with the private sector is needed to improve decision-making and create incentives to invest in connectivity. There is a need to think in terms of mobility systems rather than modes and modal networks.

In addition to diversifying the tourism offer, better connectivity with regional and rural destinations can serve another function by helping to eliminate overcrowding and infrastructure pressures in major tourism centres. Such issues have become prevalent among popular tourist destinations such as Barcelona, Amsterdam and Santorini, all of which have found it challenging to manage massive inflows of tourists. Transportation infrastructure initiatives could be beneficial in destination planning and combating “over-tourism” by improving access to nearby destinations.

Given the anticipated growth of the Asian region as a source market for global tourism, jurisdictions are pursuing targeted initiatives to improve mobility and increase access. For example in November 2014, the United States and the People’s Republic of China concluded a reciprocal visa validity arrangement to strengthen the ever-broadening economic and people-to-people ties between the two countries. Both countries agreed to increase the validity of short-term tourist and business visas issued to each other’s citizens from one to ten years – the longest validity possible under United States law – and increase the validity of student and exchange visas from one to five years. This arrangement will improve trade, investment, and business ties by facilitating travel and offering easier access to both economies. Since this policy change was implemented, Chinese demand for United States visas has grown by more than 50% compared to the same period in 2014 (OECD, 2016b).

In 2017 the Australian and Chinese governments established held the “China-Australia Year of Tourism”, to increase tourism between the two countries and provide opportunities for further engagement at the economic, commercial, social and academic levels. Australia commenced a trial Frequent Traveller Visitor visa for Chinese nationals in December 2016, valid for up to ten years and allowing multiple short stays of up to three months for tourism or business. Other Australian initiatives for the Chinese market include online lodgement for visitor visa applications; trials of a fast-track (48-hours) visitor visa processing service; and a simplified Chinese lodgement option through a service delivery partner. Similarly, 2018 will be the EU-China Tourism Year, with the multiple aims of i) promoting lesser known
destinations, ii) improving travel and tourism experiences, iii) providing opportunities to increase economic cooperation, and iv) providing a launchpad to make progress on EU-China visa-facilitation and air connectivity. Additionally, the governments of Canada and China have officially named 2018 the Canada-China Year of Tourism, with the goal of doubling two-way visits by 2025, based on 2015 statistics.

Another example of the type of innovative measure that national governments and industry are seeking to introduce to improve travel mobility across borders is that recently introduced by the Airports Council International (ACI) and IATA. The Smart Security Strategy is a multi-pronged strategy to modernise security measures at the border for ease of mobility (Box 2.5).

Box 2.5. Airport Smart Security Strategy

Security checkpoints continue to be among the greatest grievances for travellers and much of the technology and conventional measures used at the border have become outdated and inefficient. Given the anticipated growth in air travel to 2040, evolving security threats and passenger dissatisfaction with queues and intrusive measures, a strategic partnership between Airports Council International (ACI) and IATA was established to develop a Smart Security Strategy. The two organisations have signed a memorandum of understanding to leverage their respective resources and expertise to “improve the journey from curb to boarding” (IATA, 2013).

Smart Security is a three-pronged strategy to integrate risk-based security concepts, advanced screening technologies, and process innovations in order to streamline security processes and improve the passenger experience. Priority components include passenger screening, cabin baggage screening, alternative detection methods, checkpoint environment and management, centralised image processing and risk-based differentiation. Improvements in these areas, such as advanced detection algorithms, can help to improve the ability of “future-proofing” security measures in response to evolving threats and demands of the aviation industry (ACI and IATA, 2017).

Smart Security has been piloted in several international airports such as Amsterdam Schiphol, London Heathrow, and Melbourne International, and passenger satisfaction surveys have indicated that these trials have been successful (Future Travel Experience, 2016). ACI and IATA have embarked on a second wave of these developments, and continue to hold workshops and events around the world to facilitate knowledge translation.

Multi-destination visas such as the Schengen Area in Europe, the Economic Community of West African States (ECOWAS), Borderless Borders in East Africa, and a planned ASEAN single visa, are becoming more common. These schemes can offer dramatic reductions in costs, enhance the attractiveness of destinations, allow multiple governments to share the burdens of processing, security screening and administration, as well as improve regional security and data-sharing.

Trusted traveller programs such as the APEC Business Travel Card (ABTC) are also becoming more popular as a means of improving efficiency and harnessing big data. The ABTC scheme, for example, helps to enhance border integrity and security in participating economies by increasing the number of low risk travellers – those checked against “watch lists” of other participating economies. According to the APEC Policy Support Unit, the scheme reduced transaction costs for ABTC holders by 38% between 2010 and 2011,
representing a total savings of USD 3.7 million. Total at-the-border immigration time savings experienced by ABTC holders during the same period was 62 413 hours, with monetary value of USD 1.9 million.

Preparing for megatrends

How should policy makers begin to prepare for the challenges and opportunities posed by megatrends that will play out over the next quarter of a century? There are major uncertainties inherent in predicting the particular path of certain megatrends, such as the impacts of certain technologies. Meanwhile, other trends, such as aging populations, are more assured in their path but still come with questions in terms of likely impacts and most effective ways to respond. Consequently, the best approach for policy makers should be to consider how to build systemic and strategic approaches to adapt in an increasingly fast-moving, inter-connected and dynamic environment.

In addition to adopting an integrated governmental approach, there are three key areas that require focus: i) modernising regulatory and legislative frameworks, ii) cultivating partnerships with key stakeholders and i) exploring ways to future-proof policies.

Modernising regulatory and legislative frameworks

The emergence of new business models and technological innovations in recent years, such as ride-sourcing and home-sharing platforms, have highlighted the urgent need for governments to develop more flexible and adaptable regulatory and legislative frameworks. Given the likelihood of continued fast-moving technological developments in the sharing economy, as well as the rise of artificial intelligence, more pressure will be placed on existing frameworks. As a result, these reforms will only become more pressing.

Undertaking regular reviews of regulatory frameworks to remove outdated requirements and promote the emergence of innovative approaches to delivering goods and services is one such strategy. Broadly engaging stakeholders in the development of new regulatory frameworks to ensure that the perspectives of new and emerging market entrants are reflected is also critical.

Greater inclusion of, and support for, predictive mechanisms in the policy and regulatory process is also a key means of ensuring that policies developed today are not obsolete before they come into force. Both new and existing frameworks should be assessed against medium- and long-term trends.

Cultivating partnerships with industry, other governments and key stakeholders

The impacts of megatrends and the process of policymaking generally, are more cross-cutting both sectorally and jurisdictionally than ever before. Travel mobility issues that involve visa and security coordination among jurisdictions, sustainable approaches to tourism for resources that are shared among countries, and the challenges of regulatory digital platforms that operate globally, all illustrate the increased need to think beyond local and national issues to craft effective responses.

A renewed focus and investment in international and regional fora that can look at horizontal issues effectively and develop shared governance and policy responses is one means to ensure responses are balanced and effective. Furthermore, increased engagement with key stakeholders (industry and civil society) in the tourism and related sectors should also be a priority. For example, the Turkish Ministry of Culture and Tourism recently brought
together over 300 tourism stakeholders including Ministers, tourism leaders, local authorities, and NGOs at a meeting of the Tourism Council, in order to better understand key tourism trends and inform the preparation of a new long-term tourism strategy and action plan. Understanding how best to adapt infrastructure needs for an aging population will require conversations with officials and representatives from financing, infrastructure, housing, planning, social services and many other ministries. Tourism policy makers will play a key role in articulating issues but the policy remit will often lie elsewhere.

The need to engage more closely with industry and ensure that the perspectives of SMEs, emerging businesses and traditional operators are all understood is a vital consideration as the sector takes on a different shape in the coming years and decades. Policy makers need to ensure that while they develop approaches that prioritise the public interest, the perspectives of businesses on the cutting edge of new and innovative approaches to delivering services are essential to shaping those decisions. Industry-government tables that consider medium- and long-term issues on which to prioritise action, offer one possible way of developing and ensuring close and regular engagement.

**Taking steps to future-proof tourism policy**

Governments can often be challenged when faced with rapid changes and shifts to the status quo. Promoting a culture of innovation and change management within government will be vital to ensuring that long-term megatrends are given due consideration within the decision-making process. The use of innovation labs and design labs which tackle forward-looking issues through creative engagement with a broad range of internal and external stakeholders is one potential means of promoting a culture of continuous improvement and future-oriented thinking.

Long-term scenario planning exercises are another way to begin conversations about potentially transformative changes on the horizon. Examples of country approaches include Finland’s national foresight network, which is designed to leverage data to inform decisions and prepare for the future, as a potential model for anticipating and preparing for change (Hartikainen, 2015), while Austria’s Federal Ministry of Science, Research and Economy conducted an extensive study and scenario planning exercise to address trends posed to influence the tourism sector specifically (Box 2.6).

Policy makers focused on tourism will also need to work closely with their colleagues in other ministries to develop systems that can measure and monitor megatrends such as demographic change in order to better prepare for their impacts. Where these systems already exist, they need to be leveraged to anticipate and prepare for potential policy and service delivery changes that may be required. These systems also require robust data to analyse and stay abreast of key megatrends, how they are unfolding and whether any course corrections or adjustments are occurring or require action.

Finally, in a public sector environment where data is increasingly driving decisions, the ability to harness and make sense of that data becomes increasingly important. Tourism policy makers must ensure that they either have the capacity to make data-driven decisions or that other departments with that capacity are fully briefed on key tourism trends and issues to play a supportive role.
Box 2.6. **Is everything different? Tourism 2025 (Austria)**

Despite the unpredictability of megatrends and the impacts they may have, governments can begin to take steps to “future-proof” policy through long-term thinking and scenario planning exercises specific to the tourism industry. Austria’s Federal Ministry of Science, Research and Economy recently conducted one such project in collaboration with the Interdisciplinary Research Centre Tourism and Leisure of the University of Innsbruck. The study, ”Is everything different? Tourism 2025” delivered a comprehensive analysis of the trends and drivers impacting the country’s tourism sector, mapped out both positive and negative scenarios to 2025, and provided recommendations for policy development accordingly.

In order to paint a complete picture of the supply and demand sides of the sector, the study took a threefold exploratory approach to data collection. This included a systematic media analysis, qualitative interviews with key experts, and a workshop to evaluate the empirical results. Key driving forces were identified – such as geopolitics, climate change, ecological drivers, demographic drivers, economic drivers, and technological drivers – which together push six trend areas. For each trend, a number of challenges were highlighted and recommendations made to address them.

For example, demographic drivers have changed tourist behaviour, resulting in more guests going online to book trips, post reviews and share information. To address this, the report recommended that the tourism sector think about the technical requirements to facilitate these experiences, such as ensuring access to wifi in rural communities and offering professional digital communication with guests.

The recommendations made in the study involve government, industry, interest groups and research stakeholders and initiatives. In order for success to be realised, co-operation and joint efforts between all stakeholders in the tourism sector will be necessary (www.bmwfz.gv.at/Tourismus – available in German only).

References


I.2. MEGATRENDS SHAPING THE FUTURE OF TOURISM


ICAO (International Civil Aviation Organization) (2013), Global Air Transport Outlook to 2030 and trends to 2040, Montréal, Canada.


I.2. MEGATRENDS SHAPING THE FUTURE OF TOURISM


UN Environment, “Sustainable Tourism Growth”, Presentation to the OECD from Arab Hoballah, Executive Director, SEED, Entrepreneurship for Sustainable Development, 21 June 2017, Paris, France.


UNWTO-UNEP (2008), Climate Change and Tourism – Responding to Global Challenges, UNWTO, Madrid.


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