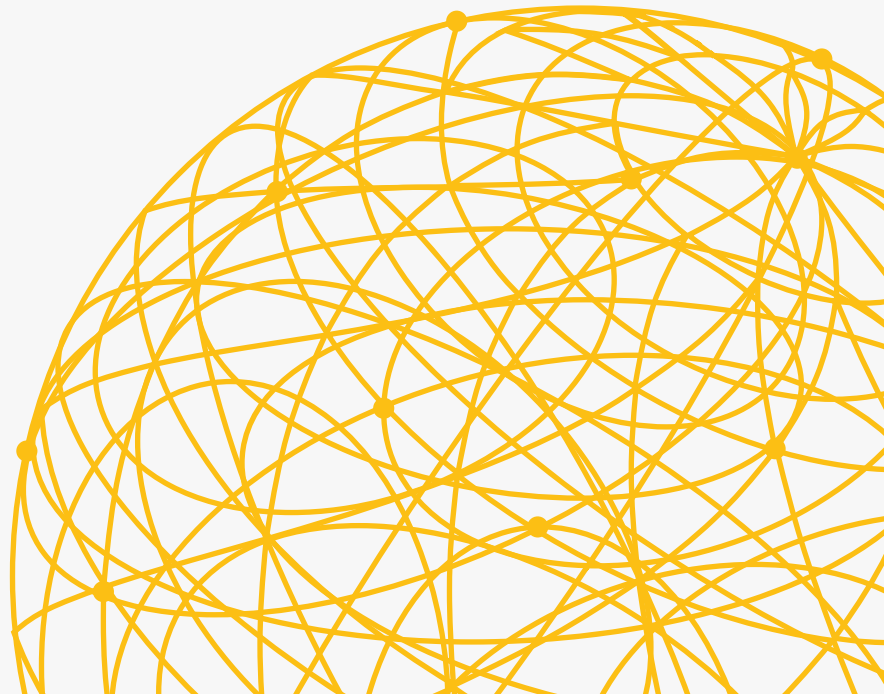




Accelerating sustainable tourism: Areas for public-private collaboration



As the effects of climate change intensify, sustainability has become an increasingly high priority for both governments and the private sector. The travel and tourism (T&T) industry occupies a unique place in these discussions. Not only is the sector especially vulnerable to the impacts of climate change, but it is also a major contributor to greenhouse gas (GHG) emissions and other environmental challenges. In this paper, we examine the definition and measurement of sustainable T&T, discuss barriers, and explore the ways that the public and private sectors can shape consumer behavior to accelerate sustainability in the industry.

**IKU FUJIMATSU, SOPHIE KAISER, JACOB LEVY, JULIA PARK, PEDRO RIBEIRO SIMOES,
AND THEODORE WADDELOW | NOVEMBER 2023**



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VEEI's overarching mission is to promote public policies that empower individuals, small businesses, and economies. It produces research and insights that inform long-term policy within the global payments ecosystem. Visa established VEEI as the next step in its ongoing work to remove barriers to economic empowerment and to create more inclusive, equitable economic opportunities for everyone, everywhere.

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 Imagining an open
future for payments

Accelerating sustainable tourism: Areas for public-private collaboration



Visa Economic Empowerment Institute

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Introduction

Travel and tourism (T&T) are vital economic enablers for many countries and local communities, supporting an estimated 10 percent of global gross domestic product (GDP), seven percent of global exports, and roughly one in 10 jobs worldwide (World Bank, 2023). The lockdowns and travel restrictions caused by the COVID-19 pandemic dealt a major blow to this sector, and recent factors such as rising inflation and geopolitical instability could present further risk to recovery. However, data from the United Nations World Tourism Organization (UNWTO, 2022) suggest that international tourism is well on its way to returning to pre-pandemic levels. Indeed, Visa's own analysis finds that international arrivals in 2022 were 75 to 80 percent of 2019 levels, and spending while abroad also matched the recovery (Visa Business and Economic Insights, 2022).

This comes as the climate crisis intensifies, with the summer of 2023 being the hottest on record and numerous communities experiencing droughts, floods, wildfires, heat waves, and other disasters linked to climate change. In response, governments, communities, and businesses are increasingly prioritizing efforts to reduce greenhouse gas (GHG) emissions to keep warming below the Paris Agreement goal of 1.5°C (United Nations Framework Convention on Climate Change [UNFCCC], n.d.).

The continued growth of T&T creates a core tension between myriad economic and social benefits that tourism delivers for many countries and communities and the negative environmental and social externalities it causes. While the carbon-intensive nature of T&T is a major concern, especially regarding transportation, this is not the only challenge. In many locations, the T&T sector is heavily dependent on the natural environment. Visitors to local attractions put pressure on local ecosystems and biodiversity, and their behavior and overcrowding can negatively affect destination communities.

As a result of these challenges, the concept and pursuit of sustainable T&T has become more prevalent. At a global level, international bodies such as the UNWTO and the World Travel and Tourism Council (WTTC) are trying to formally define and measure sustainability. Businesses across the T&T value chain are actively responding to requirements and expectations of sustainability performance and transparency. In addition, consumer interest in sustainable T&T is growing. Recent survey data suggest that 66 percent of travelers worldwide are aware of the concept, and 46 percent have actively searched for sustainable travel options (Visa, 2023).

As a global payments network, Visa facilitates payments across T&T value chains, giving us a unique perspective on travelers' consumption choices and patterns, which contribute significantly to the overall environmental footprint of the T&T sector. Examining spend patterns can help assess how a traveler might behave. For example, when travelers arrive in a new city or country, they make countless decisions—what attractions they visit, where and what they eat, the means of transportation they use throughout their trip, and more—that have a significant impact on the local environment, economy, and community. To better understand these choices and the attitudes that drive them, the Visa Economic Empowerment Institute (VEEI) partnered with Oxford Economics to survey more than 1,600 consumers across five countries and conduct interviews with subject matter experts.¹ The survey results presented here focus on two verticals, transportation and attractions, and find that many consumers express a willingness to adjust their behavior to achieve sustainable outcomes. While the results are promising, there is a notable and well-known “say-do” gap in travelers' stated preferences versus their actual consumption patterns (Ipsos, 2021). Our research finds that information barriers are a notable contributor to the say-do gap. These barriers include a lack of accessible information and a lack of credible information, where sources are available but not trusted.

Based on our findings, we make several recommendations for policymakers seeking to encourage more sustainable outcomes and consumption options, both in the context of supporting the net-zero transition as well as protecting local ecosystems and resources. As policymakers implement these measures, we encourage them to collaborate closely with the private sector, which can provide innovative technologies and high-quality data to help develop solutions and inform decision-making. We identify the following areas for strong public-private collaboration:

- Invest in robust, sustainable mobility infrastructure where it does not already exist.
- Ensure public transit systems are accessible and inclusive, especially for out-of-town visitors.
- Help attractions and destination management organizations manage over-tourism.
- Take steps to develop a consistent framework for measuring trends in sustainability.
- Overcome informational barriers to help close the say-do gap.

Together, these measures can support travelers who are interested in making more sustainable travel choices while providing behavioral nudges to influence travelers who are less actively invested in behaving sustainably.

1. Some of the language and analyses presented in this paper originate from a broader study and may appear in future publications by Oxford Economics and Visa. For a description of the survey methodology, see Annex 1.

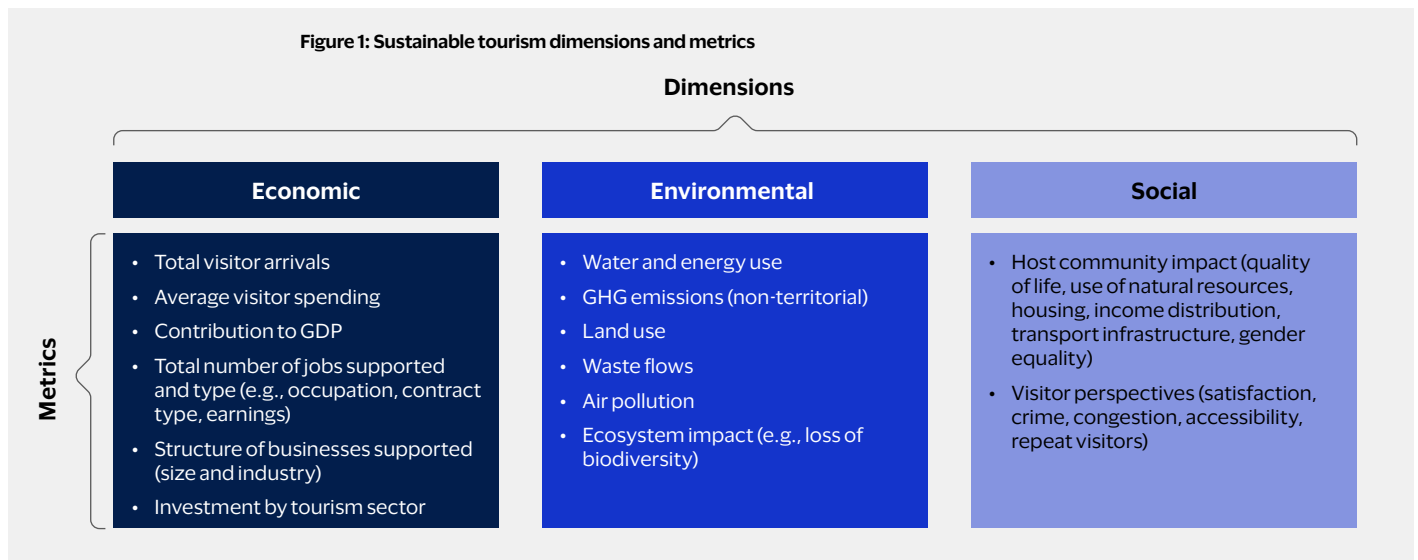
Defining and measuring sustainable T&T

Clearly identifying and defining what constitutes sustainable travel and tourism can be challenging. Before exploring what constitutes “sustainable” in this context, we must first define what we mean by “tourism.” The UNWTO defines tourism as the activity of “visitors”: travelers “taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited” (United Nations [UN], 2008). In this paper, we focus primarily on those taking trips for leisure. These trips may be domestic or international.

The difficulty of defining sustainable tourism is that the environmental footprint of T&T activities cuts across multiple industry verticals, such as transportation, hospitality, and attractions, with their own unique characteristics. These verticals consume key resources like energy, water, and land, in addition to producing waste, GHGs, and other pollutants. The UN Environmental Program (UNEP, 2023) estimates that “in a ‘business-as-usual’ scenario,” tourism would generate a 154 percent increase in energy consumption, a 131 percent increase in GHGs, a 152 percent increase in water consumption, and a 251 percent increase in solid waste disposal between now and 2050. While this reaffirms the urgency of addressing the environmental impact of T&T, measuring success is less straightforward.

Historically, discussions of sustainability in relation to T&T focused on relatively narrow issues around preserving local ecosystems. For example, early thinking on the topic examined “ecotourism” as a concept specific to nature-based locations and preserving natural assets to ensure their long-term sustainability (Fennell, 1999). While these issues remain important, dialogue has since broadened to encompass a wider range of factors and considerations. For example, the Cape Town Declaration, issued in 2002, framed the issue as “responsible tourism,” defined as “making better places for people to live in and better places for people to visit [...] requiring operators, hoteliers, governments, local people, and tourists to take action to make tourism more sustainable” (Goodwin, 2014). This framework focuses more on the decision-making of stakeholders to maximize the opportunities and minimize the negative effects from tourism. In 2005, the UNEP and UNWTO expanded this line of thinking by defining “sustainable tourism” as “tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment and host community.” This definition emphasizes the inter-temporal trade-off between the industry’s present activities and its capacity for sustainable, long-term growth.

Figure 1 displays a selection of metrics Oxford Economics identified that are associated with each of the three impact categories set forth by the UNWTO: economic, environmental, and social. While these metrics are useful for conceptualizing sustainability in terms of T&T, measurement and benchmarking challenges persist at the micro (business) level. To further complicate things, the overarching term “sustainability” conflates and encompasses several issues, with which there are often tradeoffs. For example, if one travel vendor can demonstrate impressive efficiency in their water consumption, but produces a higher level of GHG emissions, does this constitute a sustainable operation? (Kesse-Guyot et al., 2023). Various stakeholders may weigh these factors differently, especially when the economic benefits of tourism are often tangible and easily measurable, whereas ecosystem impacts like GHG emissions and social impacts like residents’ quality of life can be more challenging to measure.



Many frameworks that measure and rank sustainability within and across the T&T sector have proliferated.² Still, there is a lack of clarity surrounding what constitutes a sustainable travel choice—presenting a barrier to travelers, businesses, and policymakers. For the traveler, it can be difficult to parse sustainability information around travel choices, destinations, and merchants. In fact, our consumer survey found that access to credible information was one of the most common barriers travelers encounter when trying to make more sustainable choices. From the business perspective, even if there is a genuine desire to provide travelers with accurate and useful information, effectively measuring environmental factors and impacts can be extremely

2. Prominent examples include: The World Economic Forum’s [Travel and Tourism Development Index](#); Euromonitor’s [Sustainable Travel Index](#); the UNWTO’s [Statistical Framework for Measuring the Sustainability of Tourism](#); and the European Commission’s [European Tourism Indicators System](#).

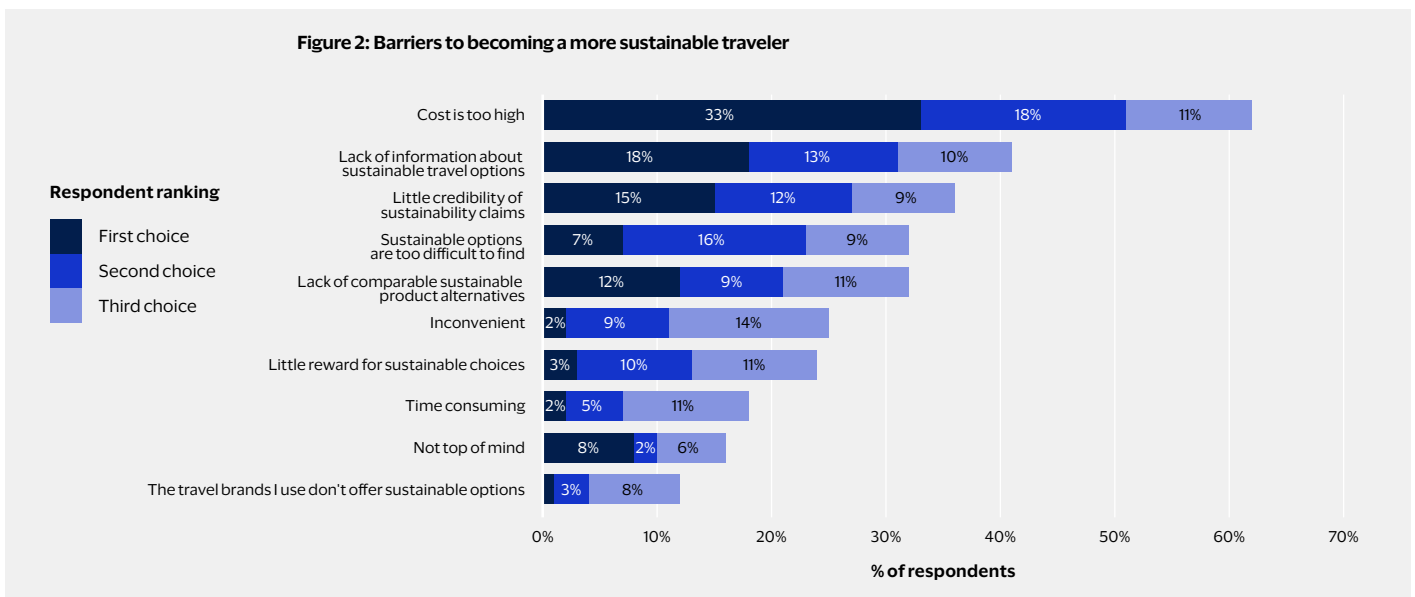
challenging. Moreover, with rapidly growing expectations and requirements for corporate sustainability reporting, companies may be uncertain about where to direct their investments to have the greatest impact. Inaccuracies or misrepresentations—even unintentional—could potentially expose them to accusations of greenwashing, legal liability, and reputational damage. And for policymakers, it may be difficult to know where to allocate resources or implement programs to support or nudge travelers to make more sustainable choices, particularly in less developed countries where resources are scarcer.

In this paper, we do not seek to solve these difficulties by presenting a novel framework for defining and measuring sustainability in the context of T&T. Rather, by acknowledging these challenges, we hope to provide a set of considerations for the private and public sector as they strive to slow the effects of climate change and help local communities and ecosystems thrive. In the following sections, we focus on two verticals within the T&T sector—transportation and attractions—where technology and policy can have a significant impact in facilitating sustainable choices.

Identifying barriers to sustainable T&T

The diverse, overlapping, and conflicting definitions of what constitutes sustainable T&T can be a challenge for conscious travelers worldwide. This challenge is exacerbated by other intrinsic aspects of the T&T sector: its fragmented nature and the large number of micro, small, and medium sized enterprises (MSMEs) that operate within it. The T&T sector cuts across multiple verticals including transportation, accommodation, attractions, food and beverage services, tourism services (e.g., booking agents), events (e.g., conferences), and more. This creates two core market failures that impact MSMEs. The first is a coordination failure, occurring in instances where different verticals interact. For example, a travel agency that specializes in all-inclusive tourism packages and works with airlines, hotels, and tourist attractions may have an incentive or a need to coordinate across verticals to ensure certain sustainability standards are met. Often, however, each component of a trip is planned or executed independent of the other, making it extremely difficult to coordinate across verticals to create an end-to-end “sustainable” tourism experience. The second market failure is an asymmetry of information. MSMEs make up roughly 80 percent of licensed tourism and tourism-related businesses (World Bank, 2020). Unlike larger

Figure 2: Barriers to becoming a more sustainable traveler



Source: Oxford Economics, Sustainable Travel Survey, 2023

enterprises, MSMEs may not have access to the information and resources—data, capital, people, skills—needed to make investment decisions, implement more sustainable practices, market their offerings, and simply stay up to date with the latest standards and certifications.

At an individual level, consumers also face barriers to making informed choices about traveling sustainably. Figure 2 displays the main barriers to becoming a more sustainable traveler expressed by survey respondents. They indicated that the most common barriers—after cost (62 percent)—were a lack of information (41 percent) and a lack of credibility of available information (36 percent).

These findings are validated by Visa’s (2023) Global Travel Intentions Study—our largest and longest running global consumer insights program, which surveys travelers across continents on their travel journey and payment behavior. At the global level, the latest survey finds that 67 percent of travelers who searched for sustainable travel options had difficulty finding information. The survey also finds that most travelers surveyed (51 percent) would like more information on sustainable travel options. These findings highlight the need for greater transparency and data sharing regarding sustainability in the T&T sector.

Examining our consumer survey insights

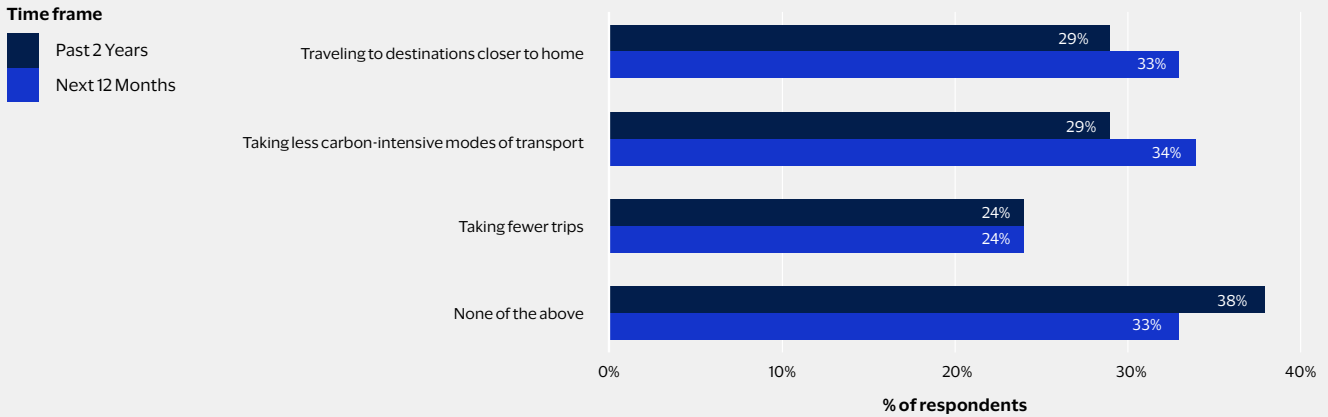
As noted previously, the T&T sector is an amalgamation of many diverse actors across multiple distinct verticals, each of which is confronting its own sustainability-related considerations and challenges. In this section, we share insights from our recent consumer survey in partnership with Oxford Economics on two specific areas of traveler decision-making. The first is local transportation: Upon arriving at a destination, how does an individual or group of travelers decide to move around the city or locality? The second is the attractions that travelers come to see: What do they decide to visit, and when? For each of these areas, we present key findings from our consumer survey and discuss their implications.

Transportation

Consumers are increasingly aware that their transportation choices have the potential to adversely impact the environment. Due to its carbon intensity, air travel has become an area of special concern—particularly given the reality that many travel corridors (both internationally as well as domestically in larger countries) have no alternate mode of transportation, such as rail. Efforts are growing to address this quandary, such as investing in and scaling up the production of sustainable aviation fuel. Another important aspect of transportation is the choices that consumers make about how to travel within a destination and the environmental implications of these choices. For example, a tourist who uses a local bus system to travel between attractions or a rail system to travel from the airport to a city center will have a smaller carbon footprint (i.e., the amount of carbon dioxide emissions associated with an activity) than a traveler using a taxi for these same trips.

The survey results reveal that there is some appetite among consumers to switch to more sustainable modes of local transportation when traveling. As shown in Figure 3, 29 percent of survey respondents have sought to minimize their travel carbon footprint by taking less carbon-intensive modes of transport in the past two years. An even greater proportion, 34 percent, plan to take less carbon-intensive modes of transport when traveling in the next 12 months.

Figure 3: Steps consumers are taking to minimize their travel carbon footprint



Source: Oxford Economics, Sustainable Travel Survey, 2023

While this finding indicates that consumer behavior and intentions are trending in the right direction, an additional 33 percent of respondents expressed no plans to minimize their travel carbon footprint in the next 12 months. So how can policymakers encourage travelers to move around destinations using more sustainable modes of transport?

Aligning the transportation sector with sustainability goals requires implementing a broad set of policies. First and foremost, policymakers should invest in robust mobility infrastructure—like bus and railway systems—providing tourists with a variety of more sustainable transit options. Furthermore, policymakers should consider efforts to reduce the carbon intensity of all transport modes, such as encouraging a shift to electric vehicles (EVs). Given that cost and lack of information are two of the primary barriers to behaving more sustainably, policymakers should also consider how to make transit options affordable and convenient for tourists and residents alike.

This is a key area where the public and private sectors can collaborate. The private sector can help to promote affordable and convenient solutions through innovative technology. For example, recent research by VEEI explored the impact of implementing contactless, open-loop payments systems in public transit (Keyes & Levy, 2023). These systems allow users to tap their everyday credit, debit, or prepaid card (or use a payment-enabled device such as a smartphone) to pay for transit fares. Closed-loop systems, by contrast, require riders to purchase and reload a special card that can only be used for making payments to a single service provider. The study found that large cities that adopted open-loop systems—such as London and New York—observed an average increase in daily ridership of six percent within the first two years, growing to 10 percent after two years of implementation.

Open-loop payments also provide improved access to data for system planning—a benefit cited by 70 percent of transit agencies in VEEI’s recent survey (Keyes & Levy, 2023). According to Andreas Hardeman, Manager, Aviation & Aerospace, Travel & Tourism at the World Economic Forum, digital payment data “can help policymakers understand the demand for different modes of transportation, identify peak hours or popular routes, and assess the effectiveness of existing transportation infrastructure.”

Our latest survey builds upon these findings by estimating consumers’ willingness to pay for ease of use when it comes to public transit. In order to estimate their willingness to pay, the Oxford Economics team employed conjoint analysis—a statistical technique used to determine how survey respondents value different attributes when making decisions. The results indicate that the average respondent was willing to pay \$2.92 more per transit ride to use contactless payments over cash.

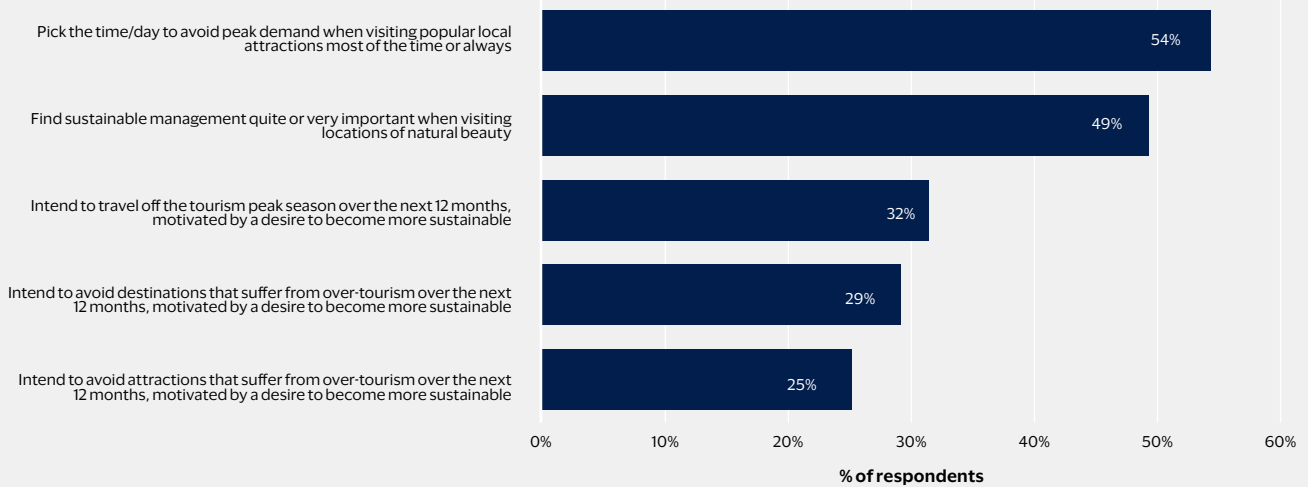
As previously discussed, consumers’ stated preferences often do not match their actual consumption patterns. Still, the finding tells an important story: Not only have contactless, open-loop payments been shown to increase ridership, but consumers would be willing to pay a premium for the frictionless ticketing experience they provide. It is also worth noting that open-loop payments often result in lower costs for transit agencies and consumers. In fact, recent VEEI research found that 73 percent of transit agencies with open-loop payments reported reduced fare collection costs after adoption, further demonstrating how the private sector can help promote solutions that are both convenient and affordable (Keyes & Levy, 2023).

Attractions

When managed correctly, tourism can help to protect ecosystems, create local jobs, and revitalize cultural traditions—bringing benefits to both tourists and local communities. Managing tourism at popular attractions is a crucial part of this equation, requiring a balance between tourism growth and local needs. If not managed correctly, growth in the number of visitors to a particular attraction—such as a national park, a beach, a historical site, or a museum—can lead to “over-tourism,” damaging fragile ecosystems, overwhelming local economies, and crowding out local populations.

As shown in Figure 4, the survey finds some evidence that tourists are aware of over-tourism and are willing to adjust their behavior to avoid contributing to it. Motivated specifically by a desire to become more sustainable, 32 percent of respondents to our survey intend to travel off the tourism peak season in the next 12 months and 29 percent intend to avoid destinations that suffer from over-tourism. And although our survey did not specify a motivation, an additional 54 percent claim to avoid peak demand when visiting popular attractions most or all of the time.

Figure 4: Consumers' perceptions and intentions to modify future travel behaviors



Source: Oxford Economics, Sustainable Travel Survey, 2023

Although promising, these findings may also suffer from the say-do gap. Indeed, the notion that more than half of tourists worldwide avoid peak demand when visiting popular attractions seems counterintuitive. This underscores the need for the public and private sectors to develop solutions that make it convenient for tourists to act on their intentions and behave more sustainably.

Technology can play a key role in encouraging sustainable behavior by providing destinations with useful information about the habits of their visitors. To predict congestion and manage crowds, destinations can use advanced technology—such as artificial intelligence—to analyze consumer behavior and monitor tourism flows. Destinations can also leverage data—including spending data from digital payment providers—to learn more about their visitors. Armed with these tools, destinations and public authorities can make better-informed decisions when taking steps such as marketing off-season tourism and introducing dynamic pricing. Dr. Dirk Glaesser, Director of Sustainable Development for the UNWTO, confirms this notion. “We’ve demonstrated the ability through non-traditional data sources to improve the understanding of tourism flows,” he says, “and to shed light on their implications in a very timely manner.”

Visa Destination Insights (VDI) is one solution that provides real-world intelligence for the tourism industry. Based on Visa transaction data, VDI’s insights help destinations understand traveler behavior to make more informed decisions. VDI clients include entities like the Lake Tahoe Visitors Authority, the destination marketing organization for the south shore of Lake Tahoe, a ski and vacation hotspot in the Sierra Nevada mountains on the California/Nevada border of the United States. The insights provided by VDI (2022) have helped the Lake Tahoe Visitors Authority manage overcrowding and seasonal lulls in addition to helping them “become more strategic in [their] approach to marketing.” Ultimately, sustainable management of attractions will require careful stewardship and close collaboration between the public and private sectors.

Developing sustainable T&T

The global transition to net-zero and a low-carbon economy will have implications for nearly every facet of business and economic activity. Moreover, growing attention to the plight of the natural world—including the United Nations’ adoption of the 2022 Kunming-Montreal Global Biodiversity Framework, and its goals of conserving 30 percent of land, sea, and inland waters, and restoring 30 percent of degraded ecosystems—will energize new scrutiny on a wide range of industries and activities (Convention on Biological Diversity, 2022). In this context, it is imperative to find a more sustainable path forward for T&T—preserving myriad economic benefits, while protecting the cities, communities, parks, and other cultural and natural treasures that attract visitors.

Achieving these goals requires close collaboration between the public and private sectors, leveraging both innovative technology and policy-based solutions. Based on the findings and analyses presented in this paper, we offer the following areas for public-private collaboration:

- **Invest in robust, sustainable mobility infrastructure where it does not already exist.** By providing tourists with sustainable options for moving around their destination—such as walkable streets, bike lanes, bus lines, and railway systems—policymakers can decrease reliance on single occupancy vehicles and reduce GHG emissions in the long-term, while also improving quality of life for residents. Of course, investment decisions and resource allocation should be based on proper cost-benefit analysis. Such analysis can be informed by the types of data described above, to better understand demand as well as economic and environmental rationale for such investments.
- **Ensure public transit systems are accessible and inclusive, particularly for out-of-town visitors.** When tourists reach a new destination, they may not know how to effectively use local transit infrastructure and may therefore default to carbon-intensive means of transportation. By prioritizing accessibility and ease of use, policymakers can mitigate this issue, thereby increasing transit ridership. Steps to promote a frictionless consumer experience can range from posting signs in multiple languages to adopting contactless, open-loop payment systems.

- **Help attractions and destination management organizations manage over-tourism.**

When too many people visit an attraction at one time, it may have negative repercussions for local communities and ecosystems. By taking steps such as imposing reasonable limits on the number of visitors, promoting off-season travel, and introducing dynamic pricing, attractions can limit the likelihood and negative impacts of over-tourism.

- **Take steps to develop a consistent framework for measuring trends in sustainability.**

Having access to high-quality data is a vital resource for policymakers and businesses, allowing them to set targets, monitor trends, and gauge progress. The converse is also true—missing or unreliable data is a major impediment. In this light, the efforts by multilateral stakeholders within T&T to identify a broader measurement system that can be used to coherently measure trends in sustainability is a welcome step. These efforts can be accelerated by seeking to leverage the power of alternative sources such as payment transaction data. Where necessary, these initiatives should be accompanied by capacity-building efforts to help MSMEs interpret, apply, and ultimately benefit from data collection and sharing.

- **Overcome informational barriers to help close the say-do gap.** The extent to which tourists will drive change through their decision-making rests on the strength of their preferences and their access to credible information to differentiate between service providers. Our research has, in general, confirmed that a significant contributor to the “say-do” gap—tourists saying that they want to behave more sustainably but failing to do so—is informational barriers. These include both informational gaps (a lack of accessible information) and credibility gaps (when information is available but is not trusted by tourists).

Additionally, national and sub-national efforts to improve energy efficiency and dramatically ramp up the scale of renewable energy will make it easier for travel-related vendors to reduce their environmental footprint. A continued investment in the production of sustainable aviation fuel will also reduce the impact of flights for journeys where alternate forms of transportation are not available.

The T&T sector faces myriad challenges in its journey towards sustainability. Many key decisions on strategies for sustainability and resilience rely on policymakers at all levels of government. But they are not alone in this journey. The private sector has much to offer, and we welcome continued dialogue on the future of T&T in a world grappling with momentous environmental challenges.

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Annex 1: Methodology

Consumer survey methodology

Oxford Economics surveyed 1,663 consumers across the US, UK, Germany, Brazil, and India during the Summer of 2023. The survey was managed by YouGov. During fieldwork, YouGov set national representative quotas, but then restricted the sample to respondents having traveled in the recent past (or those who have intention to travel in the next 12 months). For this reason, our sample is not representative of the population of the five countries considered.

Conjoint analysis methodology

On the back of this survey, we used conjoint analysis methods to explore factors driving travelers' preferences for transport options and the extent to which consumers were willing to pay more to travel sustainably.

Within our survey, respondents were faced with a set of alternatives, in our case hypothetical travel options, each with different attributes. For example, respondents were faced with journeys that differed by journey time, emissions profile, payment method, and price. Respondents were then asked to select which alternative they would choose within a randomized set. Discrete choice modelling was used to assess how changing certain attributes, for example increasing the price of a journey, would affect the probability of a respondent choosing it within their set of alternatives.

As illustrated in Table 1, each option is defined in terms of a number of attributes, with each attribute comprised of multiple levels. In our transport survey, options varied by travel time (ranging from 30 to 60 minutes), the emissions profile of the journey (measured in terms of relative emission reductions), payment methods, and price (based upon typical costs of public transport journeys in each country).

Attributes	Levels
Travel time	30 minutes, 40 minutes, 50 minutes, 60 minutes
CO2 emissions reduction	0%, 20%–30%, 40%–50%, 66%, 75%
Payment method	<ul style="list-style-type: none"> • Cash • Closed-loop transit card • Credit or debit card payment through an app • Mobile wallet payment • Contactless payment using a card
Price	<ul style="list-style-type: none"> • For UK respondents: £3–£50 • For US respondents: \$3–\$50 • For Germany respondents: EUR 3–EUR 50 • For India respondents: INR 18–INR 300 • For Brazil respondents: R\$6–R\$100

By leveraging the differences in regression coefficients between sustainable travel options and price (how each of these affected the probability of a respondent selecting an option), we computed willingness to pay (the average dollar value a respondent is willing to pay to travel more sustainably).

Annex 2: Text descriptions of figures

Figure 1: Sustainable tourism dimensions and metrics

Figure 1 displays a selection of metrics Oxford Economics identified that are associated with each of the three tourism impact categories set forth by the UNWTO: economic, environmental, and social. The “economic” category includes the following metrics: total visitor arrivals, average visitor spending, contribution to GDP, total number of jobs supported, structure of businesses supported, and investment by tourism sector. The “environmental” category includes water and energy use, GHG emissions, land use, waste flows, air pollution, and ecosystem impact. Lastly, the “social” category includes host community impact (quality of life, etc.) and visitor perspectives (satisfaction, accessibility, etc.).

Figure 2: Barriers to becoming a more sustainable traveler

This stacked bar plot displays the main barriers to becoming a sustainable traveler identified by respondents to our survey. The most frequently cited barrier is high cost, which 62 percent of respondents ranked in their top three barriers. The number two barrier is lack of available information, which 41 percent of respondents ranked in their top three. The number three barrier is lack of credible information, which 36 percent of respondents ranked. The least cited barriers were “not top of mind” at 16 percent and “the travel brands I use don’t offer sustainable options” at 12 percent.

Figure 3: Steps consumers are taking to minimize their travel carbon footprint

This bar plot displays the steps that respondents to our survey have taken to minimize their travel carbon footprint in the last 12 months, and the steps they plan to take in the next two years. The top two steps cited were “traveling to destinations closer to home” and “taking less carbon-intensive modes of transport,” which 29 percent of respondents claim to have done in the past two years. In the next 12 months, 33 and 34 percent of respondents plan to take these steps, respectively. An additional 38 percent of respondents have taken no steps to minimize their travel carbon footprint, while 33 percent have no plans to do so in the next two years.

Figure 4: Consumers’ perceptions and intentions to modify future travel behaviors

This bar plot displays the percentage of survey respondents that express certain perceptions and intentions about their travel behavior. In descending order by percent of respondents: 54 percent pick the time/day to avoid peak demand when visiting popular most of the time or always, 49 percent find sustainable management quite or very important when visiting locations of natural beauty, 32 percent intend to travel off the tourism peak season in the next 12 months, 29 percent intend to avoid destinations that suffer from over-tourism, and 25 percent intend to avoid attractions that suffer from over-tourism.



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