Executive Summary
of the NTG Country Interview Reports
on the Future of
Digital, Green and Social Skills in Tourism

Next Tourism Generation Skills Alliance

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by BREDA UNIVERSITY OF APPLIED SCIENCES, June 2019

1. Introduction

After the finalization of the NTG desk research and survey, semi-structured interviews were conducted in all partner countries to acquire additional in-depth understanding and insights into the future of digital, green and social skills from the perspective of people working in the tourism industry. Altogether, 264 interviews were conducted (16 in Bulgaria, 13 by EuroGites, 40 in Germany, 32 in Hungary, 20 in Italy, 33 in, 30 in the Netherlands, 30 in Spain, and 50 in the UK) with senior managers, human resource managers, company owners, entrepreneurs, heads of department and other relevant respondents in all five tourism sectors under investigation. Conversations were held with respondents at 41 companies in the category tour operators and travel agents, 50 in the destination management sector, 68 accommodation providers, 41 visitor attractions, 49 companies in the food and beverage sector and 15 training providers and consultancy agencies. Interviews lasted on average 45 minutes and covered the following themes:

- Theme 1: NTG Skills Sets. This section offers a description of current skills needs, shortages and training provision regarding digital, green and social skills.
- Theme 2: The future of tourism. This theme provides an understanding of interviewees' thoughts on tourism and the tourism industry in ten years' time.
- Theme 3: Digital skills. In this section an overview of digital skills that the interviewees rate as the most important in ten years' time is presented.
- Theme 4: Environmental management skills. Here, a summary of the environmental management skills thought to be relevant in ten years' time is delivered.
- Theme 5: Social skills. In this section, insights into social skills (i.e., personal-, communication-, and diversity skills) that are thought to be important in ten years' time are collected.
- Extra: Additional comments and suggestions, remarks on related topics or additional comments offered by participants are listed in this section of each Country Interview Report.

The interview guide can be viewed in Appendix 1. Each partner has collected the outcome of the interviews and the background information of Theme 1 in a **Country Interview Report**.

Below, a summary of Themes 2 to 5 of the Country Interview Reports can be found. The summary is structured as follows: first, ideas on the future of tourism, in general, are summarized. Next, **insights per sector** are provided: for each of the five NTG subsectors (tour operators and travel agents; destination management organizations; accommodation providers; visitor attractions; food and beverage operations) an overview of digital, environmental management and social skills considered to be relevant for working in the specific sector around 2030 are provided. For an overview of Theme 1 (current skills needs, shortages and training provision in partner countries) readers are referred to the individual Country Interview Reports.

2. The future of tourism

For the results of the NTG project to be relevant for the next generation of educators, companies, and workers in the field of tourism and hospitality, sectoral skills need to be developed with at least the year 2030 as a landmark on the horizon. Several megatrends - already visible today but with their full impact as yet unknown - are influencing the future of tourism. **Demographic developments** - the continued growth of the global middle class, more elderly tourists, digital natives[1] entering the travel market and a continued increase in Asian tourists - will result in more and different tourist preferences and choices than today. **Technological innovations and disruptions** (Artificial Intelligence (AI), robotization, Virtual Reality (VR) and Augmented Reality (AR), blockchain) will continue to impact tourism and change business models, jobs in tourism and tourist experiences. The inclusion of more sustainable practices in the consumption, production, and development of tourism is also a much-discussed topic in the industry.

The world today is very volatile, making it difficult to predict the concrete effects of these megatrends on tourism and hospitality over the next 10 years. Nevertheless, respondents in all countries envision **a growth of travel and tourism, both for leisure and business purposes**. More people will spend more time outside their own homes: a short break with family or friends or a day out with the entire family in a relaxing environment enjoying some tourist experiences. They also see more international visitors making their way to Europe, especially from Asia, notably China and India. This does not only pose challenges in terms of language and cross-cultural skills, but it also means that destinations will receive more "one time only" visitors.

Demographic changes will see more elderly people having the time and ability to travel, both in domestic and outbound tourism. For many younger people, travel is an essential part of their lifestyle and they will focus on all possible opportunities for travel, especially in outbound tourism. These digital natives are used to doing everything online (looking for travel inspiration, reviews, information; planning and booking their travels; communicating with providers). They do not consider themselves to be "tourists" but want to be immersed in a locality, looking for local experiences, wanting to live and be treated like "locals". This opens up opportunities for local cuisines but also for **food tourism and storytelling around food** in general. For these travelers, the **digitalization of heritage interpretation as well as presenting more diverse (historical) perspectives** are important and will create opportunities for people skilled in history, cross-cultural understanding and interpretation and storytelling.

Considering this upward trend, various interviewees mentioned that realizing a good **quality of life for the residents of tourist destinations** is of great importance. This means that attracting more tourists is not always a priority. Attracting different types of tourists, a focus on quality and diversity or on better spreading tourists throughout a destination are sometimes considered more important. For sustainable development, there must be **a balance between the interests of visitors, local residents, and companies**. That triangle - in balance - is essential for a strong destination and to combat both over- and under-tourism. Although environmental management skills are considered very relevant (as will be discussed below), it is also notable that when asked about the future of tourism in general, only a limited number of interviewees mentioned the issue of **"green skills"; these are currently not considered to be as urgent as, for example, digital competences but will become highly relevant in the future**. In Spain, one respondent commented that green, social and digital skills should perhaps not be considered as separate skill sets since they have the ability to

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[1] The term digital native describes a person that grows up in the digital age, rather than acquiring familiarity with digital systems as an adult. Source: https://en.wikipedia.org/wiki/Digital_native

reinforce each other and create **synergy**. For example, digitization of offices can contribute to the reduction of the use of paper and of CO_2 emissions with employees working from home and customers not having to drop into the office since they can conduct their transactions online. At the same time, social skills are needed to adapt and manage communication and social relations in the digital era (Country Interview Report Spain).

The future labour market for tourism gives many respondents cause for worry. The negative image of some sectors, relatively low salaries, restricted career opportunities, and poor working conditions all contribute to the limited attractiveness of tourism for future employees. This poses a threat to the tourism industry as a whole and the accommodation, food, and beverage, and visitor attractions sectors more specifically. The tourism industry must put more effort into better positioning and highlighting the positive aspects of working in tourism. Another cause for worry is the fact that technological innovation and social trends are changing faster than companies can keep up with. It is one of the reasons for a shift in focus **from "jobs" and "professions" to learning and developing skills**, not only in tourism and hospitality but in other sectors as well. In the future, jobs will become more flexible and more fluid: strict boundaries between occupations and tasks will disappear. Staff will need to be able to work in different departments, at different levels and use different tools and applications. This is visible in the trend towards blended concepts (such as one service point for reservations, tickets, retail, access to experiences and more) as well as working in **interdisciplinary, international and mixed-age teams**. Several interviewees mentioned that these developments will require a **higher level of skills** as well as **more general skills instead of specific knowledge**. Some of the skills mentioned in this respect were **flexibility; critical thinking; creativity or the ability to think out of the box; analytical skills combined with digital skills; communicative and hospitality skills and life-long learning skills.** According to one respondent in the Netherlands, the future of work will revolve mostly around those skills that are unique to the human brain and the most difficult to "robotize": social intelligence and creativity (Country Interview Report the Netherlands). Equipped with these skills, people will be relevant for more than one sector and able to switch between jobs.

Digitization and automation will continue to impact all tourism sectors. One of the main developments is the ongoing integration of systems and processes such as reservations, booking, check-in, ordering, billing, payment, stock control, maintenance, and repair. These developments will not only affect staff but also enable companies to become more personal and meaningful for their guests. This ties in with the ongoing trends towards individualization and personalization. Guests are asking for increasingly **higher levels of customization, experience, and hospitality**. Optimizing the guests' experience will be based on **a combination of digital data and human service**. Companies in all tourism sectors have to deliver in these areas if they want to remain relevant.

All these interconnected and automated systems and processes will generate enormous amounts of **data.** One of the main challenges of the future will be **analyzing and interpreting** these data and putting them to use.

Despite the increasing automation and digitization, **the human factor** will still be crucial in 10 years' time in the tourism industry. Most interviewees do not think that humans will be substituted by robots when it comes to providing service. Even if robots will replace the persons scanning the entrance tickets to an attraction, for example, there will be a human around for welcoming guests, answering questions, troubleshooting or playing host. In line with the trends towards more individualization and personalization, **higher levels of hospitality skills and service delivery** will be required but the **shortage of staff**, now and in the future, notably in the accommodation, attraction and food and beverage sectors, will pose a big problem when it comes to realizing this.

3. TOUR OPERATORS and TRAVEL AGENTS

3.1. DIGITAL SKILLS

Digital skills are key in this sector, both today and in the future. At the same time, a serious shortage of digital skills seems to exist across the industry. The Bulgarian Report mentioned that although stakeholders are aware of the importance of digital skills in general, they have no clear idea of exactly which skills are needed to properly manage their companies in the current market (Country Interview Report Bulgaria).

In all countries, interviewees agreed that knowledge of **Microsoft Office** is indispensable and a priority when it comes to skills development**.** Furthermore, staff should be comfortable in front of a PC (Country Interview Report Ireland), not be afraid of different software packages (Country Interview Report Hungary) and possess overall technical literacy (Country Interview Report Bulgaria) or digital fluency. Other tools, skills and programs that will be needed in the future are: the Internet in general, online applications, tablets, Office 365, Google docs, online programs for planning and organising work such as Trello, social media, websites, blogs, vlogs, Skype, mobile conferencing, podcasts, headphones, scanning devices, emails and live chats with customers. Data analytics, skills related to applying technologies such as Augmented Reality (AR) and Virtual Reality (VR).

Most staff members - except in the technology-based companies - do **not have to be digital specialists**; they do not have to know how to build a website or how to construct AI-powered systems as this will mostly be outsourced in small and medium-sized companies. However, staff should **understand** the underlying concepts of **AI-powered systems and technologies** in order to be able to decide what kind of digital tool would be helpful to solve a problem. In Germany, it was suggested that future strategies can move into two directions: attracting more IT specialists to work in tourism companies with a co-current integration of digital knowledge into existing vocational training. On the other hand, and perhaps more likely, there is the possible expansion of "tourism-distant" tech companies and platforms (such as Google) into tourism since it is easier to gain sufficient knowledge of tourism-related matters than to acquire specialist IT knowledge (Country Interview Report Germany).

Digital skills need to go hand in hand with soft skills such as **adaptability, flexibility, openness to innovation and self-learning skill**s. **Data handling (security, reliability)** and **knowledge of GDPR** was also mentioned. Several respondents noted the need for more and better digital skills without being able to pinpoint exactly which skills are needed.

In addition to these more general digital skills and specific to this particular sector is knowledge of **Global Distribution Systems** such as Amadeus and Galileo (Country Interview Reports Ireland, Italy and Bulgaria) and other travel-related software (such as Tourplan for tour operators, Country Interview Report Ireland). Some employers prefer to hire employees with prior knowledge of the main Global Distribution Systems.

Skills related to **digital marketing and social media**, including the role of influencers are considered very important although in various countries (for example Bulgaria) respondents were not able to specify which skills or competencies will be needed for this in the future. Some participants noted a **lack of business communication skills for social media.**

Most respondents (with the exception of Germany) did not make a distinction between managerial, supervisory and operational levels when considering digital skills, although various interviewees felt

that analytical skills and making sense of big data are more needed at managerial than operational levels.

Training needs vary greatly across partner countries. Whereas in the Netherlands most interviewees are confident that young people have up-to-standard digital skills when they leave school and most of them are digital natives anyway (Country Interview Report The Netherlands), in Italy, for example, companies complain of basic IT deficiencies, starting from the Office package up to the practical application of the concepts of marketing and social media management (Country Interview Report Italy).

3.2. ENVIRONMENTAL SKILLS

Environmental or green skills are not a priority in the sector today. "Green tourism" is still perceived as a niche market and "price" is still the first consideration for most clients. However, many participants think that environmental management skills will increasingly gain relevance as customer requirements in terms of sustainability will increase with younger generations holding different values becoming more significant in the travel market.

Generally, it was quite difficult for interviewees to think of future environmental management skills. Some basic environmental skills that were mentioned: **getting the office to reduce and manage waste, electricity, the use of water and paper as well as recycling everything that can be recycled**. However, several participants noted that these are not actually skills but that behaving in a sustainable way is about **attitude, awareness, values and a holistic approach** (there should be no distinction between work and private life regarding sustainable behaviour).

For several tour operators environmental skills are more about other topics such as **knowledge of climate change;** not looking away from the **negative impacts of tourism** (pressure on the environment, on cultures or over tourism); **creating environmentally friendly experiences and products** and **positive impact for destinations** by using locally managed hotels, guest-houses, local agents, drivers and paying decent salaries. While all employees should possess the basic environmental "skills" listed above, incorporating sustainability into products and experiences as well as managing the negative impacts of tourism are thought to belong more to management levels. The UK Report mentioned that tour operators should not only educate their own travel consultants but also **the consumers** regarding sustainability topics (Country Interview Report UK). Several tour operators support sustainable projects in destinations visited or compensate for CO2 emissions of flights used; several tour operators hold a Travelife certificate.

3.3. SOCIAL SKILLS

Social skills are in high demand in the tour operator and travel agent sector. The Irish report mentioned that "the ability to interact with others in work terms, in groups, and person-to-person in a customer service context are highly prized" (Country Interview Report Ireland). This was confirmed in the Hungarian Report where interpersonal skills but also curiosity, tolerance, and trustworthiness were valued as important current skills (Country Report Hungary). In Germany, social skills are seen as being of central importance to the sector but are at the same time problematic as they do not receive adequate attention in dual vocational training and higher education (Country Interview Report Germany). In Bulgaria, the most important social skills are interpersonal communication, intercultural competencies, ability to listen and understand clients and partners, the ability to work in a team and quality assurance. At the same time, these areas are also considered as skills shortages (Country Interview Report Bulgaria). In the UK, customer service and communication skills are also considered as key social skills for tour operators and travel agents. However, there is a lack of such skills in employees joining the industry while it is also recognized that leadership and management

skills need to improve (Country Interview Report UK). The Spanish interviewees mentioned that social skills differ according to the position people hold in a company. Overall, versatility, adaptability, and flexibility - to learn fast, to manage different technologies, to cope with changes, to communicate with people from different cultures - were considered highly relevant skills (Country Interview Report Spain).

Today and in the future, people are still very much needed in this sector as many clients appreciate **human contact and a personal touch**. **Service orientation, (inter) personal and communication skills** will therefore remain essential. **Communicative, cross-cultural and diversity skills** are needed for dealing with a wide range of customers and suppliers, for managing customer relations, and for dealing with complaints. In Ireland, "the ability to hold a conversation with customers…be able to initiate a conversation" was considered very important (Country Interview Report Ireland). These skills are expected **to remain of major importance** for the tourism industry: personal and human interactions are needed to balance the increasingly technological character of the sector.

Empathy or the ability to really understand the customer, his/her dreams, needs and feelings are also considered very important. With the ongoing individualization and personalization, everybody wants to be treated as an individual so staff must try and understand what is going on in the individual minds of consumers. **Active listening skills** - "to be able to read between the lines" - are crucial here this as well as **telephone techniques**. **Life-long learning and self-learning skills** are important to understand and cope with the ongoing changes in society.

Languages can be helpful but are not everywhere regarded as essential. **Writing skills** are also important: how to communicate effectively in short text (chat box, WhatsApp) for different target groups - formal (older customers) vs informal (peers). **Sales skills** and **commercial awareness** were mentioned, related to commerce and e-commerce.

Creativity and exceeding customer expectations are relevant, especially when creating tailor-made holidays (which is still often a human activity). Product development, based on trends in the market and in the destination, is of great importance. Having own **travel experience** helps employees to provide better and more credible customer service.

Other skills of the future for tour operators were unanimously stated as **being able to work in teams, collaborative skills, sharing of knowledge and insights**.

4. DESTINATION MANAGEMENT ORGANIZATIONS

4.1. DIGITAL SKILLS

The expectation in several countries is that DMO's will move away from simply providing information (which visitors can access themselves through the internet) to **providing inspiration and experiences** for visitors. Another aspect of the changing role of DMO's is that instead of being a communication partner for local stakeholders, they are now in the process of assuming the role of **consultants** and **provide advice** on how to attract (new) target groups; they also need to better support local stakeholders when it comes to digital development and, for example, developing new products and creating a wider audience on TripAdvisor, Booking.com and so on. In other words, **community management** (stimulating the network of regional/local entrepreneurs to be digitally active) will become more and more important for DMO's.

With increasing digitization, most of the information, communication and booking processes will take place online in the future, making digital media even more important than today. This means that all employees need **digital skills**. Mentioned were skills for using the Internet, Office, online applications (including GPS applications), financial software, CRM software, database management, and accommodation booking software.

At the management level, skills are also needed for **data-analytics and data-driven marketing, understanding algorithms, developing strategies based on data gathering and being able to measure results of campaigns.** Skills for conducting tourism market studies and tourism trend analysis were also mentioned (Country Interview Report Italy) as well as data protection, business intelligence and the ability to make strategic decisions regarding digital solutions (Country Interview Report Germany). In the Irish Report it was noted that "collecting and analyzing data effectively can help destination managers to develop and market a destination but it was acknowledged that many do not collect such information and those that do often do not know how to analyze it effectively" (Country Interview Report Ireland).

Social media skills are considered key for the future in this sector; all staff members need to know about social media, also those that do not work with them on a daily basis. It is, however, not necessary for everyone to be a specialist in online marketing or social media and several DMO's outsource these activities to specialized companies. In the UK report, it was noted that in 2030, it will be important for businesses to understand the concept of **immersive technology** in order to animate the experiences they offer (Country Interview Report UK). This was supported in other countries where several respondents commented that **developments in AR, VR, beacons, QR codes** et cetera should be closely watched. The EuroGites Report also referred to **digital storytelling and design** (Interview Report EuroGites). While a DMO is not necessarily an innovator, it should be in the know about such developments and tools as these will impact the destination. **Lifelong learning skills** were deemed important to keep up with these and other ongoing technological innovations. Several interviewees mentioned **writing skills** as being important. Online content also needs to be written; writing content for applications, a pitch, campaigns and so on is still very much needed (but also becoming more and more problematic). Also, **offline (printed) information** will still be in use in 2030 according to several interviewees.

4.2. ENVIRONMENTAL SKILLS

In most countries, participants acknowledge that green and environmental management **skills** are not a priority today. In some countries, notably the Netherlands and Hungary, respondents are of the opinion that green skills do not really exist and that environmentally friendly behavior is more about attitude and a value transition; it is a mindset and not a skill.

However, there is an increased focus on **green initiatives, products, and experiences** as customers are increasingly expecting sustainable products and services. The UK Report mentions that in the future, "tourists will visit a destination with a view to do something that will benefit that location such as charity work or take part in for instance beach cleaning" (Country Interview Report UK). Also, DMOs see it as their task **to create a good quality of life for their residents** while maintaining a balance between the interests of visitors, the industry, local communities, and the environment and avoiding conflicts between these parties. **Skills** are needed for **preserving a destination in balance for future generations**; for creating **more leverage** when it comes to tourism without increasing the numbers; for making visitors **look beyond the most visited areas** although these things are also considered to be the responsibility of (local) governments. In Germany, in this context, the creation and moderation of expert networks for the management of tourism demand (over-tourism / under-

tourism, sustainable development), in cooperation with, for example, protected area administrations were mentioned (Country Interview Report Germany).

Other skills cited were **recycling and reusing materials in events**, **reducing the use of plastic and paper, reducing the carbon footprint, promoting the use of renewable energy resources by services providers and in offices** as well as **skills to promote and develop environmentally friendly tourism experiences and products** (e.g. low carbon footprint walks or tours by E-bikes or E-bus; restaurants with "green" concepts or organic foods; art and design dedicated to the environment; awareness of local foods and other locally sourced products).

4.3 SOCIAL SKILLS

By far the most important skills, today and in the future, are **hospitality or customer service skills.** These include **communication skills, multicultural and diversity awareness** (including catering to an increasingly aging population with various health and mobility issues), **friendliness, flexibility, and emotional intelligence**. Being able to **ask the right questions, listening and interpersonal skills** are indispensable, especially for those working in visitor centers, while **commercial skills** are also needed. In fact, **the human factor** is becoming more important every day as "there is no substitute for a smile" (Country Interview Report Spain). The Hungarian Report draws attention to skills that will be necessary for different destinations (today already) to minimize and handle the conflicts between the local population and tourists (Country Interview Report Hungary).

Creative skills are also a must-have: the ability **to create a "WOW" experience** (as one respondent in The Netherlands phrased it) for a particular customer or group of visitors and exceed visitor expectations was seen as very important.

Language skills are mainly rated as relevant in non-English speaking countries. However, it seems that language skills are decreasing.

Cross-cultural skills are of great importance, both when providing customers with information and when trying to attract businesses. These skills are also relevant for **tour guides** (these were mentioned a few times) as well **as storytelling skills**.

Collaborative skills and teamwork are must-haves. DMO's run many campaigns for which teamwork, creativity, openness to innovation and a spirit of commerce are necessary.

5. ACCOMMODATION PROVIDERS

5.1. DIGITAL SKILLS

Right now, the trend is towards **more travel and more accommodation bookings**, both for leisure and business purposes. Not only more "digital natives" will travel but also more elderly visitors, more tourists from Asia and other origins, more families and more business travelers (who will - as was mentioned in the Country Interview Report Bulgaria - expect to find mobile offices in their accommodation). This highly diversified demand opens up opportunities for new kinds of accommodation dedicated not only to urban and holiday experiences but also to wedding and gastronomic events, to adventure, entertainment, and science (Country Interview Report Bulgaria). Although digitization and automation will continue to advance at high speed, **human contact** will remain crucial in the accommodation sector.

As in other sectors, a **blending** of jobs and tasks is expected with, for example, receptionists assisting in the food and beverage department. In smaller accommodations - as was recorded in the Hungarian Report - staff need to possess a wide range of skills as they will have to be able to work as, for example, receptionist, housekeeper and cook, all in the same job (Country Interview Report Hungary).

Helpful for the expansion of the larger hotel chains is the increasing regulation of AIRBNB in cities like Barcelona, Amsterdam, and Paris. Nevertheless, AIRBNB and other private hosting concepts are here to stay (EuroGites Interview Report) and also tie in with the wish for local experiences. So, growth wise, the immediate future for the accommodation sector looks bright; the downside is **the increasing shortage of staff**. Although, due to automation and digitization, fewer people will be employed in accommodations than today, the total number of employees in this sector is expected to grow. There is **a great need for people with a vocational background,** but it is very hard to attract them and, in the future, a further decline in both the number and skills level of potential new employees is expected.

Basically, all staff will need **digital skills** and know how to work with computers, tablets, mobile applications, Office, e-mail, hotel software (such as Flexys, Hostware, Opera) and so on. Front desk (and other) staff need to be able to work with **property management systems** (PMS); sales staff with CRM cloud-based systems (such as Sales Force). For accommodations which also host events, knowing how to work with **projectors, video equipment, and sound systems** is required.

Housekeeping, technical and maintenance departments are also increasingly working with mobile applications and online services. Housekeeping apps are connected to check-in and out, for example, enabling staff to clean those rooms that are needed first; or to control the robotic vacuum cleaner. Most installations will be software based and connected to the Internet: digital television, heating, lighting, and air conditioning. This means that technical and maintenance staff need to be able to solve problems online, with mobile applications and software.

Although young generations possess relatively good digital skills and learning to work with a variety of software packages or online applications is in general not thought to be a problem for them, there is **a need for continuous improvement of the digital skills** mentioned above.

The future will **be AI controlled**. All systems (CRM, PMS, marketing) are in the process of being integrated into one PMS (in some hotels this is already a reality) which will manage everything from the front desk and F&B operations to sales, multichannel distribution, revenue management and so on. Developing such AI-driven systems, applications and tools are mostly outsourced to external technology companies. The ongoing integration of systems and processes will make it possible **to increasingly personalize offers and come up with relevant propositions** for customers. It will also enable **flexible daily rates** based on capacity and demand and realized through AI.

At the management level, **collection of data** and **data analysis** is increasingly important. The job of the general manager will change. While the core of this profession will still be making sure that guests have a wonderful experience, the use of data and digital tools enables the manager and his/her team to learn more about guests and provide better service.

Online marketing (Google Analytics, SEO, SEA)**, e-commerce, and social media skills** are indispensable. Today, it is already impossible to operate a large hotel chain without all these skills; small businesses will either have to catch up very quickly or they will disappear. In small companies, **designing, maintaining and creating content for websites** is seen as important (being able to work

with Adobe Creative Cloud, Photoshop, and DTP were mentioned) as well as designing and analyzing **digital surveys**.

AR and VR are on the rise, especially to add "experience value" to an accommodation. Although **knowledge** of the possibilities of AR and VR is important in order to be able to make decisions, the actual production of AR and VR tools is mostly outsourced to specialized companies.

Online accommodation booking platforms and service providers require advanced digital skills; they are in fact technical companies where digital skills are part of the DNA. Apart from a general digital fluency, these companies require staff to be able to work with, for example**,** Guesty (Airbnb Property Management Software), Monday (team management software), and Wishbox (a guest experience management system, using smart automatic tools and wizards to accompany guests in their own language from initial booking until the check-out).

As in the other sectors, digital skills need to go hand in hand with **creativity** as well as **analytical and life-long learning skills.**

5.2. ENVIRONMENTAL SKILLS

Generally, it was quite difficult for organizations to predict future environmental management skills. Whereas environmental management in this sector is in some countries partly regulated by laws, green policies are generally conceived at the management level, so employees need to be **aware of and follow company policies and procedures rather than possess specific green skills.** As mentioned before, many - young - people are very aware of the need to be sustainable and for them environmentally friendly behavior is more a matter **of attitude and awareness than of skills**.

When green skills are specified, they are - as in other sectors - related **to water, waste and energy management; reduction of the use of paper and plastic; recycling and composting; use of rain and underground waters; promotion of public transport or e-transport modes for both customers and staff; use of more local produce and sustainable materials for building and interior design**.

To a certain extent, **sustainability is seen as consumer-driven**: when consumers indicate that sustainability is an important consideration for staying in an accommodation, businesses will automatically adapt. One large hotel chain (who wants to be a leader in this field) noted that **social, environmental and ethical considerations are central to the buying preferences** of the young generation, especially for those younger than 25 years old (Country Interview Report the Netherlands).

Several accommodations are in possession of **Green Key** certificates. While certification can provide incentives to introduce environmentally friendly practices, the German Report noted that a problem here is the lack of clarity in certification standards and procedures (Country Interview Report Germany).

5.3. SOCIAL SKILLS

The main problem in this sector is **finding staff** in the first place; the next problem is retaining them. People do not want to work 24 hour shifts anymore, and several participants noted that there seems to be a growing **lack of service and interpersonal skills**: relating to other people outside of one's own circle of friends, knowing how to have a conversation, understanding other people's needs and providing service seem to be increasingly difficult for young people. The UK Report states that in the future "training around social skills might become more important as people use technology more and more, which might mean that some social skills are not automatically developed through face-to-face interaction" (Country Interview Report UK).

Flexible working will most likely be the norm in the future and this will require a huge shift within this sector that has traditionally seen long working days. According to the Irish Report, "flexible working needs to be approached in a proactive manner rather than a reactive manner in order to attract and retain the best staff. Managers will need to know how to manage individuals and how to best address their unique needs and utilize their specialized skills as opposed to a one-type-fits-all mindset" (Country Interview Report Ireland). This was also confirmed in the UK Report.

Nevertheless, **service skills and customer orientation** are considered to remain key in this sector. With increasing individualization, every person wants to be met with an **individual (or personalized) approach**. This might be **less formal** than today (but that is also part of personalized service) and needs to take **diversity** into account. This does not only mean more elderly and culturally diverse customers but also more **families** will travel together, something which - as the Spanish Report stated - many accommodation providers are currently not used to (Country Interview Report Spain). Other social skills mentioned were **empathy, creating memorable experiences, anticipating customer needs, listening skills, ethics, matters of security, and privacy**.

Language skills depend upon the location of the accommodation. English is required by all; other language requirements depend on the country. **Cross-cultural competencies** are seen as important; being able to respectfully interact with and know more about **Chinese and Indian guests** and their cultures will probably become more important in the next ten years.

6. VISITOR ATTRACTIONS

6.1. DIGITAL SKILLS

Most interviewees envision **growth for this very diverse sector** (if not disrupted by economic and political events). However, competition is also growing, and in several countries (e.g. Wales but also in the Netherlands) publicly funded heritage organizations are under pressure to generate more income for maintaining their buildings/sites/collections. A balance between heritage protection and commercial activities to generate more income needs to be found here but is not easy to achieve (Country Interview Report UK).

As in other sectors, jobs will become more general; a person working at the reception will alternate his/her activities with, for example, supervising the swimming pool or work in retail. In all these tasks, **putting the customer first / service orientation** will be the most important skill. A major problem is **a shortage of staff** and for the future, **an increasing lack of people willing to work in this sector and the service industries, in general,** is foreseen.

The sector, and especially smaller companies, is perceived **as lagging behind** compared to tourism companies and hotels regarding the use of big data, online marketing (in many small companies still non-existent today) and social media management. Nevertheless, digitization and automation are increasing and **digital skills** (working with computers, tablets, mobile applications, Microsoft Office, e-mail, a variety of software such as PMS, reservation and ticketing systems, etc.) will become more important both for operating businesses and improving the visitor experience. A difference with today is that in the near future, **everybody** will need to have such digital skills. Now, technical staff, housekeeping or gardeners are not always required to have digital skills. However, with the increasing integration of systems and processes, many technical installations are - or will be - mainly approached through the Internet: if the air-conditioning has a problem, staff will launch an app to locate and possibly repair the problem. In general, most interviewees consider basic digital skills not

to be a problem for the younger generation of digital natives. However, **a gap** was noted between **large and small companies;** here digital skills are one of the key areas for upskilling.

Online marketing and social media skills are seen as increasingly indispensable. It was noted that while most young people have plenty of knowledge of social media, **business communication skills for social media** are lacking. **Writing skills** for producing content and announcements for online and social media is another problem area. Being able to **update websites and other online media** (including graphics and visual design) is also seen as important. Several interviewees mentioned **dealing with the press** (both online and offline) as a skill that will increasingly be needed.

Since **experiences** are central to attractions and guests are asking for increasingly higher levels of experience and customization, **creativity, storytelling skills and the ability to create experiences without or with the use of AR, VR, mixed reality, and mobile phone applications** are perhaps more important here than in the other sectors. Many attractions are currently investing in digital apps (for information, tours and trails, storytelling, etc.) or VR adventures to enhance the visitor experience. While the **content production** is often a collaboration project between the attraction and a technical company, the actual development of such applications, AI-powered systems and so on is mostly contracted out to specialist companies. Some attractions consciously refrain from developing (more) digital experiences since they want to provide **a personal experience** for their visitors with room for interaction with hosts/tour guides/docents. This is in line with what was observed in the Irish Report: the industry is moving away from a place of lecture to "a place to engage in conversation" (Country Interview Report Ireland).

All interviewees see AI and robotics as becoming increasingly important but mainly for **gathering and interpreting data** such as recognizing guests when they are online and coming up with relevant (tailor-made) propositions for them. Knowledge of **GDPR** compliance is relevant here. Most respondents do not see robots replacing humans at service points or in bars and restaurants soon and there will always remain a need for human **tour guides**.

6.2. ENVIRONMENTAL SKILLS

While at the staff level**, no special skills are required currently,** the general feeling is that future generations will demand a more sustainable environment, also during their breaks, day outs and holidays. Since "guests eventually will not want to stay in unsustainable parks as they do not want to have a guilty conscience during their holiday" (Netherlands Country Interview Report), attractions will have to plan for this. In fact, sustainability (such as **waste separation and management, minimizing the use of plastic and paper, energy and water saving, recycling, conservation, and nature education, using local products, reducing carbon footprint**) has to become part of the DNA of all employees. Environmental management of heritage sites and dealing with **too many visitors** were also mentioned.

At the management level, **sustainability is a focus point** for several companies. The use of solar panels, electric vehicles, local and organic products is on the rise. Many sustainability-related issues are outsourced to other companies: installing electricity saving devices and solar panels or heat pumps and so on. For some attractions located in rural areas access other than by private transport is difficult, a situation unlikely to change in the near future.

The Hungarian Report made mention of the increasing number of events and festivals at historic locations where the protection of the sites and their environment require special policies and extra efforts from both staff and visitors (Country Interview Report Hungary).

Certification is supported by several attractions; it is also increasingly important from a marketing perspective. **Green Key** and **BREEAM** were mentioned here.

6.3. SOCIAL SKILLS

By far the most important skill, today and in the future, is **hospitality and customer service**. In Wales, for example, the organizations interviewed universally identified social skills as the most important. **Taking an interest in people**, **dealing with diversity**, **making all guests feel welcome**, and contributing to **great customer experience** are crucial for success in this sector. **Creativity, the ability to think outside of the box and being able to create personalized experiences and tours** are needed for this. **Communication skills**, being able to engage with visitors and create unique experiences through **storytelling** (both online and "live") and **interactivity** (for example, encouraging visitors to interact with exhibits and share their views) were also mentioned. **Tour guides** are seen as still having an important role in the future. In the Irish Report one respondent noted that "visitors want experiences that they cannot find anywhere else" and "are interested in people rather than the site" Country Interview Report Ireland). The ability to tell a good story will, therefore, remain important.

With more demanding and assertive guests who are increasingly aware of their rights, **handling complaints, complaints management**, and **problem-solving skills** were listed as becoming more relevant. **Dealing with safety regulations, aggression, knowledge of laws affecting the sector and customer rights** are also important. **Customer relationship management skills** were repeatedly mentioned as well.

With growing numbers of international guests, the need for **language** (and having site information and interpretation available in a range of languages) and **cross-cultural communication skills** is growing. In this respect, the expected advance of the number of Chinese visitors and need to know more about China and Chinese culture was mentioned several times.

All interviewees mentioned **working in very diverse teams** and **collaborative skills** (for example to work with external partners to develop technology solutions or in the organization of events with many different partners) as increasingly relevant.

7. FOOD AND BEVERAGE OPERATIONS

7.1. DIGITAL SKILLS

Several interviewees, notably in Spain, foresee huge changes in the food and beverage sector related to **digital innovations**. Technology is already having a large impact, partly because technological innovations in this sector have been lagging behind until recently and partly because the relationship with the customers has to a large extent been digitized. Eating habits are changing and for current and future generations eating in restaurants will be a "new normal" as will be buying (semi) ready-made meals, or ordering food online and having it delivered to their homes. Today, many people "only cook at home to celebrate something" (Country Interview Report Spain). In Italy, a drive for a better quality of future gastronomic offerings was noted with a focus on regional specialties and locally sourced ingredients in line with the demand for local experiences (Country Interview Report Italy).

This increasing demand requires a sector that can supply huge quantities of (semi) prepared foods which will trigger **industrialization of the sector** (Country Interview Report Spain). Food will be

prepared at central locations and distributed to multiple outlets and restaurants (Country Interview Report Hungary). The **use of online applications and technologies** has already greatly increased: online reservations, ordering food online, having conversations with chatbots about one's orders, digital payments, reviews and producing "Instagram-able" food dishes are all part of daily routines in many countries today.

All these online interactions produce huge amounts of **big data**. This can create opportunities for small restaurants or food outlets with access to these data. However, in the Spanish Report, it was noted that it seems more likely that the sector **will be invaded by large tech companies** (Google, Amazon, Facebook, Alibaba) who control technology as well as data. These companies, who have increasingly been referring to food and gastronomy as very important, are likely to become the interfaces between food producers and customers (Country Interview Report Spain).

Digital skills requirements in this sector depend on which side of the business is considered. Although everybody will need **basic digital literacy** (working with Internet, e-mail, apps, tablets, Office, Skype et cetera), people working in the actual production of food will need to be able to work with **robots** which will take over various kitchen processes and **mobile apps** which will be needed for operating kitchen technology, for stock control, ordering ingredients and optimization of production processes in general.

When looking at the "office" side of the food and beverage sector, skills for working with integrated **property management systems** (reservations, orders, delivery, billing and payment, CRM, business intelligence, online security, data protection, cloud) are important as well as **digital marketing**, managing **websites and social media**. These are seen as increasingly relevant to position the company as well as creating an online reputation and followers. **Digital storytelling** (around food and restaurants) is also important here.

Perhaps, robotization and digitization can provide a part of the solution for what seems to be the major problem in this sector: **the current and growing lack of skilled workers**. Also worrying is the noted **gap** that is emerging between those companies that are willing and able to incorporate digital innovations and those that cannot or do not want to work with new technologies.

7.2. ENVIRONMENTAL SKILLS

Environmental skills are currently not a requirement when hiring staff in this sector. The impression is that **sustainable practices are to a large extent customer driven**: the younger generation - both as customers and as employees - increasingly has a sustainable mindset; they also have an interest in healthy eating and want to know where their food is originating from. This means that companies will have to meet their demands in this field to remain relevant.

The use of environmentally friendly materials (for construction, furnishing), **the sustainable use of resources** (energy, water, waste) and **the use of regional and/or organic products** are mentioned as important but whether these are skills or belong more to a management vision is open for discussion.

Spanish interviewees noted that the habits of ordering and home delivery of food is generating a lot of **extra waste and CO2 emissions due to the large amount of packaging and transport needed**. The EU single-use plastic ban will pose challenges for companies operating in this field (Country Interview Report Spain).

7.3. SOCIAL SKILLS

Despite the ongoing automation and digitization processes, also in this sector, **excellent service skills** and **putting the customer first** are and will remain **core skills**. With guests looking for food and beverage locations that have similar social values to their own, **creating memorable (culinary) and personalized experiences** (partly based on digital data) will become more significant.

Important in this respect are **communication skills** (being able to deal with people from all walks of life, from diverse cultural backgrounds, gender, and ages), **the ability to read and understand body language, listening skills, providing service with a smile, exceeding expectations and meeting quality standards**. However, such face-to-face interaction skills seem to lack as was also noted in the accommodation sector.

"**Attitude" and "personality**" were mentioned as being a critical factor for success in this sector: staff needs to be "a people person" since "people buy into people, not the product" (Irish Country Interview Report).

The need for **language skills** varies per country. Whereas these are not seen as a strict requirement when hiring staff in several (English speaking) countries, the ability to speak foreign languages (or being able to use translation applications) is rated as very important in, for example, Hungary (Country Interview Report Hungary).