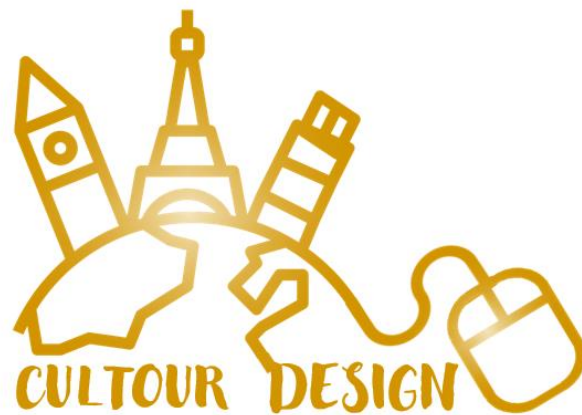# Handbook – Digital Tools in Tourism: A toolkit for the promotion
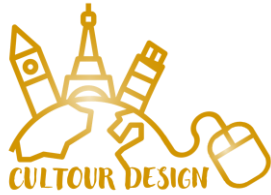
of cultural tourism through ICT solutions

CULTOUR DESIGN

REVISION HISTORY

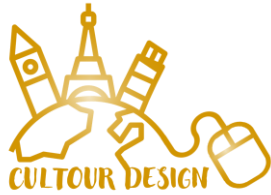| Version	Date	Author	Description	Action	Pages
1.0	11/02/2022	HEARTHANDS SOLUTIONS	Creation	C	10
1.1		DIGICULT	Insert	I	
1.2		KOMICHA	Insert	I	

(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

REFERENCED DOCUMENTS

ID	Reference	Title
1	2021-1-RO01-KA220-ADU-000033461	CULTOUR Design Proposal
2		

APPLICABLE DOCUMENTS

ID	Reference	Title
1	R1/T1.1	White Paper on Digital Cultural Tourism & Competence Framework
2		

Table of Contents

1. Introduction

1.1 Learning Outcomes

After completing this module, you will be able to:

- Have a deep knowledge of the digital trends in Tourism
- Be in position to conduct research in new digital tools
- Be able to use digital means for the promotion of Cultural Tourism
- Recognize the importance of ICT in the field for managing Tourism
- Have a deep understanding of digital marketing

1.2 Key words

Digital trends

Data research

Digital marketing

1.3 Estimated seat time

- 2 hours to read the main content
- 2 hours to read the additional sources
- 5 hours to check and experiment with the recommended digital tools
- 1 hour to complete the assessment

1.4 Glossary of terms

- **Digital marketing:** "the use of digital channels to market products and services in order to reach consumers. This type of marketing involves the use of websites, mobile devices, social media, search engines, and other similar channels" (Barone, 2022).
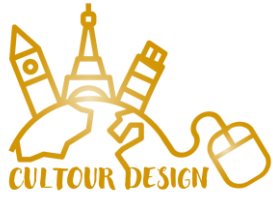
- **Internet of Things (IoT):** IoT is defined as "connected objects and devices (aka "things") that are equipped with sensors, software, and other technologies that allow them to *transmit and receive data – to and from other things and systems*" (SAP, 2021).

1. Digital Tools in Tourism: A toolkit for the promotion of cultural tourism through ICT solutions

1.1 Main content

The tourism industry has been growing exponentially over the last decade thanks to information and communication technologies. ICT has become particularly significant in the post-Covid era, with tourists now using the internet *in all phases of the customer journey* (Maurer, 2021). Users use a combination of mobile devices and computers accessing a multitude of services and products on the internet. As a result, tourism organisations and suppliers can benefit substantially from **digital tools** and **digital marketing** and **increase customer loyalty** via **improved customer experiences**. To capitalise on the vast opportunities that ICT offers in the field of tourism, learners must familiarise themselves with various digital trends and tools.

Digital trends in tourism

1. **Mobile technology/ Mobile integration**

In what could be called *the age of smartphones*, mobile technology and integration must undoubtedly be a part of tourism businesses' plans:

- **Mobile apps**. Dedicated mobile apps can help travellers book flights, access boarding passes, check their flight's status, and collect air miles rewards. Apps can also facilitate online room bookings or even provide travellers with digital room keys. Furthermore, apps can help with restaurant reservations and additional service requests (e.g., room service, spa appointments, gym reservations, etc.). Combined with beacon technology, apps can also maximise the effect of promotional messages via tracking of physical location. Combined with IoT, apps can even allow guests to control appliances in their hotel rooms.

Co-funded by the
Erasmus+ Programme
of the European Union

- **Virtual queues**. Virtual queues can help travellers avoid waiting in line with other people by scanning a QR code and getting a notification when their turn to enter cultural sites/stores has come.

- **QR codes for menus or additional services.** Restaurants, hotels, cultural sites, etc. can provide QR codes to provide access to virtual menus or lists of additional services. By scanning QR codes with a smartphone, users can see all relevant information on their device.

Image title: QR code

Source: Pixabay.com

2. **Internet of Things (IoT)**

IoT is defined as "connected objects and devices (aka "things") that are equipped with sensors, software, and other technologies that allow them to ***transmit and receive data – to and from other things and systems***" (SAP, 2021). In the travelling and hospitality industry, IoT can improve customer experience by eliminating touchpoints and allowing people to control appliances.
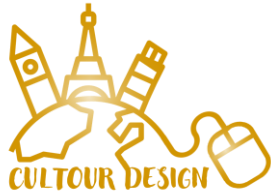
3. Chatbots and Artificial Intelligence (AI)

Chatbots simulate human interaction by quickly responding to basic queries through texts on websites and/or social media, 24/7. Chatbots can fulfil basic functions (such as help you choose seats or reset passwords), but, for more complicated queries, you will need a live agent.

AI in general can improve customer experience by responding to human speech and providing tourist information, as is the case with 'Connie'- an AI-driven customer service robot created by Hilton and IBM: https://www.youtube.com/watch?v=iKV_iics4TU&t=8s

4. Personalisation

Offering a personalised experience has become one of the top trends in the tourism industry, by combining big data and machine-based learning. Products and needs are hence linked to consumer behaviour and preferences, generating automated options (e.g., greeting of guests in hotel rooms, etc.) that make a great impression and the overall difference in the customer experience.

5. Virtual Reality (VR) and Augmented Reality (AR)

Virtual recreations of various sites (cultural sites, hotel rooms, etc.) are now possible thanks to AR and VR and give users the opportunity to make more informed choices. From booking the ideal hotel room, to visiting re-imagined ancient ruins or following interactive virtual maps and watching 360 videos, virtual tours are increasingly gaining popularity as technology advances.

6. Robots

Robots are one of the latest trends in digital tourism and are expected to gain popularity as digital assistants, with their features ranging from customer service to more complicated data processing. Providing information, responding to basic queries, analysing preferences, or even cleaning -these are only some of the possibilities in robotics to be utilised in tourism.
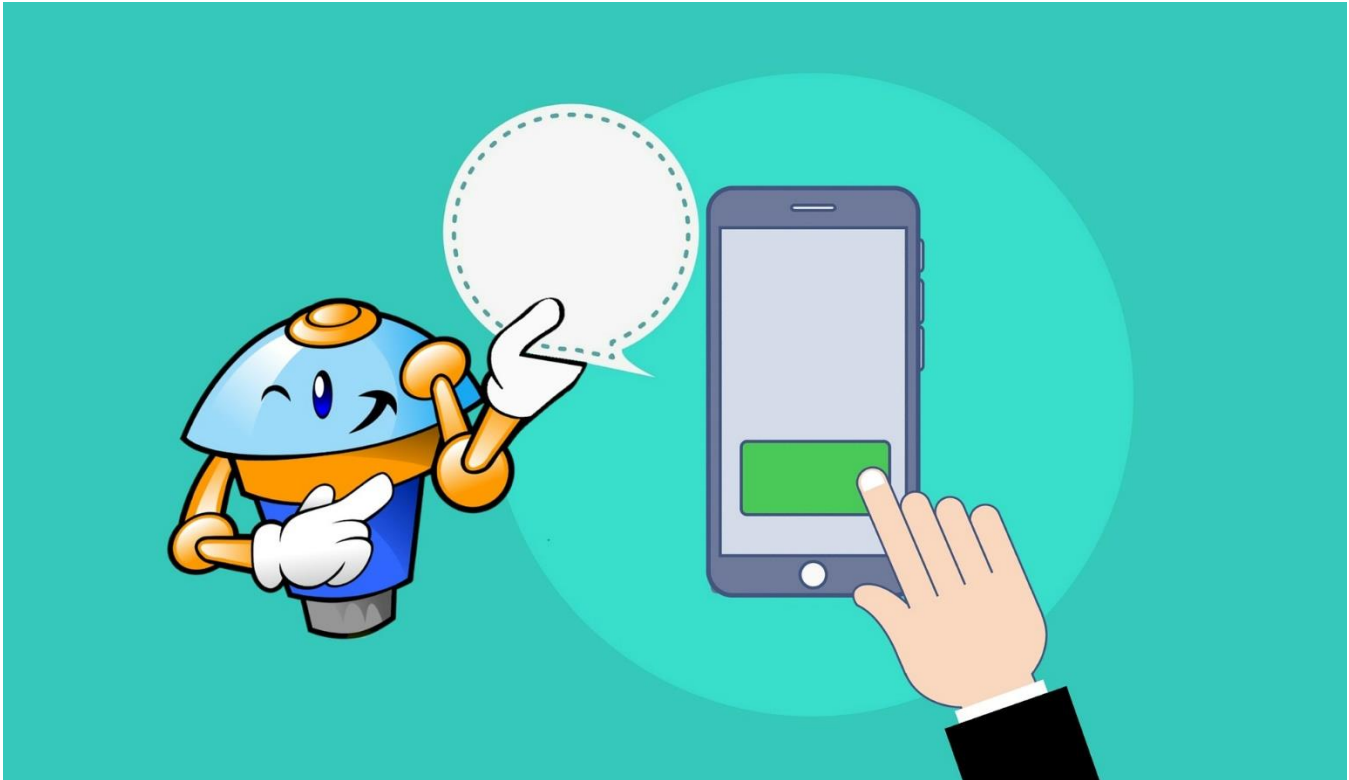
Image title: Chatbot
Source: Pixabay.com

How to conduct research **in new digital tools**

To gather and analyse information with the scope to generate more relevant solutions, tourism professionals are advised to perform the methodical process of ***data collection*** using digital tools. This process can provide valuable insight into customer behaviour by allowing the evaluation of quantity and quality results based on hypothesis testing that eliminates assumptions.

The prevalent reason for collecting data is ***to predict future probabilities and trends,*** like, for example, changes in customer behaviour and preferences.

To collect data digitally, businesses/cultural organisations can ***embed digital tools in their websites***, like the following:

- Surveys
- Questionnaires
- Checklists

Co-funded by the
Erasmus+ Programme
of the European Union

By engaging customers in data collection, stakeholders can see how their products and services are rated in real time.

Existing platforms can help users create **unique/customised surveys**, by changing various features easily (e.g., themes, typefaces, colours, etc.) without having to hire a graphic designer. Such platforms can also provide **extensive analytics** on the user journey, thus eliminating the need for manual calculation.

Similarly, such platforms can allow users to embed copied links or have them appear as popups on their website and/or social media.
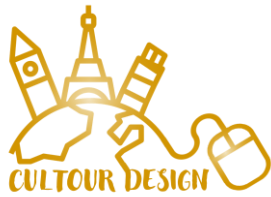
Data collection tool examples:

Formplus

Typeform

Bloomreach

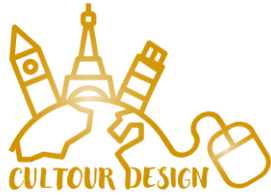Image title: Survey

Source: Pixabay.com

Overall, computational analysis of **big data** can reveal patterns, trends, and associations between large and diverse sets of information and provide substantial insight into human behaviours, preferences, and interactions. **Open data** can refer to large or small datasets and is **intentionally released for public use** (Gurin, 2014). Big data can offer numerous opportunities for sustainable tourism, as it combines **large volumes of information, real-time synchronization, and granularity** (Kalvet et al., 2020). Open data is also increasingly popular in the field of tourism, as it can enhance tourist experience (e.g., through map-applications and location-based information, real-time displays of public transportation info, etc.); it can also contribute to **tourism monitoring and planning** thanks to Application Programming Interfaces (APIs), like, for example, Google Maps API (ibid.).

Strengths and Opportunities	Weaknesses and Threats
Big data: Immense volume of data, potentially (close to) real time, processable at a relatively low cost, geographical granularity, benefits of mobile positioning data demonstrated.	Complexity, quality, and unstructured nature of data, access to some key data sources restricted, concepts and definitions sometimes different for similar data sources,
Open data: Increasing availability, favorable conditions to use data, APIs (application programming interfaces).	
Applications: New indicators, cross-border dimension (e.g., to govern cultural routes), co-creation of analytical tools and public services, predictive analytics, appealing visualization to communicate messages, major expectations regarding benefits by stakeholders, rapid developments regarding tools, benefits of mobile positioning data demonstrated.	Need for interdisciplinary skills for the development, stakeholder collaboration, privacy protection, ethical issues, legislative gaps to access the data, cultural tourism specific aspects difficult to extract.

Image title: Table 1. Potential of big data for tourism statistics

Source: Kalvet et al., 2020.

Big data tools

Big data tools are useful tools to engage and attract wider audiences.

Examples:

Google Trends: https://trends.google.com/trends/?geo=IT

Google's tool to monitor online searches and help generate new solutions/approaches.

Destination Insights: https://destinationinsights.withgoogle.com/intl/en_ALL/

Google's tool to monitor travel trends and assess tourist behaviours with the scope to improve visibility and attraction.

Existing data

Alternatively, users can perform *online research* using data provided from other sources, as long as they have the human resources to perform this task timely and efficiently. Online data is present in sources like the following:

- Reports (Country reports, NGO reports, etc.)
- Newspapers
- Website articles
- Previous surveys conducted by various stakeholders and using either quantitative research or qualitative research (e.g., focus groups).

How to use digital means for the promotion of Cultural Tourism

- **Digital marketing**

Internet, social media, mobile apps and other ICT tools and solutions are now a part of the daily lives of billions of people around the globe. As a result, traditional marketing techniques gave way to **digital marketing** with the scope to reach consumers faster and improve products and services.

Digital marketing combines marketing strategies used in online and offline platforms and provides new approaches in marketing communication. Its goal is to create new customer

experiences, engage wider audiences, and increase interactions in new digital environments. Subsequently, digital marketing can effectively *reach more customers, inform them, and engage them in using a multitude of products and services* (Cobanoglou et al. (Eds.) 2021).

The field of tourism can benefit from **digital marketing methods** like the following:

Search Engine Optimization (SEO): the construction of an advertising model based on a website's traffic. The main goal here is to direct the customer toward the desired site/content/output.

Affiliate marketing/Affiliate partnership: Performance marketing compensating third-party publishers for generating/redirecting traffic.

Search engines: Online target marketing based on keywords.

Social participation/social spread/social interaction: Communication with customers, information-sharing, enhancing engagement, increasing loyalty. Main tool to use: **Social media platforms.**

E-mail newsletters: News about products, discounts, campaigns, services, etc.
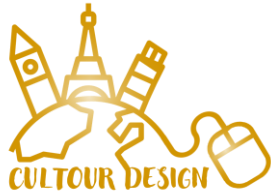
Mobile marketing: Reaching target audiences through smartphones, tablets, and other mobile devices.

Website marketing: "the strategic promotion of a website to drive relevant traffic to the site" (Santo, 2022).

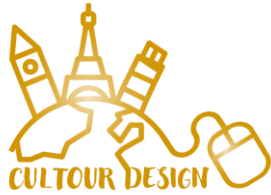Image title: Online marketing

Source: Pixabay.com

To ensure effective digital marketing strategies, businesses need to create **quality content** able to engage wider audiences and increase loyalty. Content marketing *is "a strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience — and, ultimately, to drive profitable customer action" (*Content Marketing Institute, 2015)*.* All written and visual elements are considered content and should, therefore, be the subject of scrutiny and professionalism.

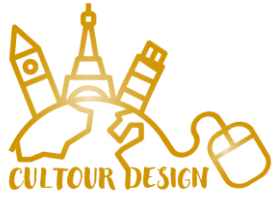**Other essential digital tools:**

- **Dynamic packaging including online booking engines and ticket sales:** Innovative tools for online booking and ticketing. They include features like the following: dynamic pricing, built-in payment system, real-time itinerary builder, trip planning assistant, document management, etc. In this way, customers can combine packages of products and services depending on their preferences. For example, a museum can sell a package with an entrance fee and an audio guide, etc.

- **Tailor-made all-inclusive pass:** A destination or a tourism office can offer an all-inclusive pass that allows access to different venues and events as well as public transportation linking the points of interest.

1.2 Additional resources

No.	Title of resource	Type of resource	Link
1	**Amadeus' experimental travel agent's assistant using the Pepper robot**	YouTube video	https://www.youtube.com/watch?v=NPbH6QI3qFY

2	**Create Your Bot Booking Travel using the SnatchBot platform**	YouTube video	https://www.youtube.com/watch?v=iKV_iics4TU&t=8s
3	**How Virtual Reality is Transforming the Travel Industry**	Online article	https://www.revfine.com/virtual-reality-travel-industry/
4	**Robots in the Travel Industry: 8 Real-World Examples**	Online article	https://www.revfine.com/robots-travel-industry/
5	**Digital tools for heritage tourism**	Online article	https://tourism4-0.org/digital-tools-for-heritage-tourism/
	8 facts why affiliate marketing is great for travel and tourism businesses	Online article	https://www.postaffiliatepro.com/blog/affiliate-marketing-for-travel-and-tourism-businesses/

Website Marketing: The Definitive Guide (Infographic)	Online article	https://www.brafton.com/blog/distribution/website-marketing-the-definitive-guide/

Co-funded by the
Erasmus+ Programme
of the European Union
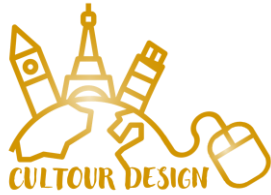
2. Assessment

2.1   Knowledge Assessment

Question 1(multiple choice or true/false): Virtual queues help travellers avoid waiting in lines by:
[giving them priority] **[scanning a QR code]** [imposing fast lanes]

Question 2 (multiple choice or true/false): You can control appliances in a hotel room thank to IoT:
[True] [False]

Question 3 (multiple choice or true/false): Chatbots are:
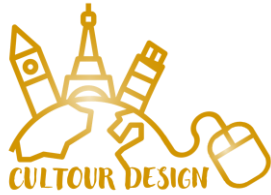**[Virtual assistants]** [robots that greet you at the airport] [live agents responding with texts]

Question 4 (multiple answers correct): Digital tools and digital marketing can:
[increase customer loyalty] [improve customer experience] [hinder customer service] [decrease flexibility in travelling]

Question 5 (multiple answers correct): Personalisation features:
[monitor consumer behaviour and preferences] [gather data on demographics] [are open data] **[generate automated options]**

Question 6 (multiple answers correct): Data collection is about:
[gaining revenue from advertising] [minimising risk in communications] **[gathering and analysing information] [predicting future probabilities and trends]**

Question 7 (multiple answers correct): This is a digital marketing method:
[Survey] [Analytics] **[Mobile marketing] [Website marketing]**

Question 8 (matching): Match the terms with their definitions.

Term 1 **Big data: Immense volume of data revealing patterns, trends, and associations**.

Term 2 **Open data: Small or large volume of data that is intentionally open to the public**.

Term 3 **Search Engine Optimization (SEO): The construction of an advertising model based on a website's traffic.**

Term 4 **Website marketing: The strategic promotion of a website to drive relevant traffic to the site**.

Term 5 **Quality content: Strategically chosen** content to engage wider audiences and increase loyalty.

Question 9 (matching): Match the concepts with their explanations.

Concept 1 **Improved customer experience**: **A customer experience with added value.**

Concept 2 **Efficient research: Quality or quantity research based on data collection and analysis**.

Concept 3 **Customisation: The effect of giving a customer a unique experience based on their preferences.**

Concept 4 **Mobile marketing: Reaching target audiences through smartphones, tablets, and other mobile devices.**

Concept 5 **Affiliate marketing:** Performance marketing compensating third-party publishers for generating traffic.

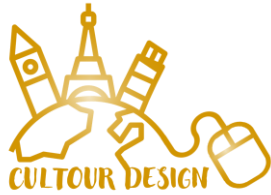Question 10 (matching): Match the problems with their solutions.

Problem 1 **My website lacks traffic: Focus on digital marketing methods.**

Problem 2 **Customers seek online assistance beyond office hours: Integrate virtual assistants/chatbots.**

Problem 3 **I want to attract more visitors to destination X: Use big data tools to monitor travel trends and assess tourist behaviours with the scope to improve visibility and attraction.**

Problem 4 **I want to find out more about my customers and their relation to my product/service: Embed a survey or questionnaire in your website.**

Problem 5 **I want to create quality content: Hire professionals to help you**.
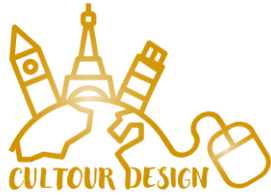
2.2 Skills Assessment

You are managing an archaeological site that comprises a museum at the outskirts of a relatively isolated town. You want to increase online visibility of said destination and attract more travellers, but you do not know how to entice them to choose such a remote destination that needs multiple ticketing and bookings (ticket for the archaeological site, ticket for the museum, audio guide, transportation, etc.). What are your options?

Solution:

Use the following digital tools:

- **Dynamic packaging including online booking engines and ticket sales:** Innovative tools for online booking and ticketing. They include features like the following: dynamic pricing, built-in payment system, real-time itinerary builder, trip planning assistant, document management, etc. In this way, customers can combine packages of products and services depending on their preferences. For example, a museum can sell a package with an entrance fee and an audio guide, etc.

- **Tailor-made all-inclusive pass:** A destination or a tourism office can offer an all-inclusive pass that allows access to different venues and events as well as public transportation linking the points of interest.

3. References

Barone, A. (2022, September 9). *Digital Marketing Overview: Types, challenges, and required skills*. Investopedia. Retrieved October 7, 2022, from https://www.investopedia.com/terms/d/digital-marketing.asp

Cobanoglou, C., Dogan, S., Berezina, K., & Collins, G. (Eds.). (2021). *Advances in Hospitality and Tourism Information Technology*. USF. Retrieved October 7, 2022, from https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1187&context=m3publishing

Content Marketing Institute. (2015). *What is content marketing?* Content Marketing Institute. Retrieved October 7, 2022, from https://contentmarketinginstitute.com/what-is-content-marketing/

Friis Dam, R., & Yu Siang, T. (2021, January 2). *5 Stages in the Design Thinking Process*. Retrieved from Interaction Design Foundation: https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process

Gurin, J. (2014). *Big Data and open data: How open will the future be?* . CORE. Retrieved October 7, 2022, from https://core.ac.uk/download/pdf/159607722.pdf

Kalvet, T., Olesk, M., Tiits, M., & Raun, J. (2020). Innovative tools for tourism and Cultural Tourism Impact Assessment. *Sustainability*, *12*(18). https://doi.org/10.3390/su12187470

Maurer, C. (2021). *Digital Marketing in Tourism*. SpringerLink. Retrieved October 7, 2022, from https://link.springer.com/referenceworkentry/10.1007/978-3-030-05324-6_82-1

MyComputerCareer. (2021, October). *MyComputerCareer - Training for a better life*. Retrieved from The Rise of Hybrid Jobs and Hybrid Skills: https://www.mycomputercareer.edu/news/the-rise-of-hybrid-jobs-and-hybrid-skills/

Santo, A. (2022, September 6). *Website marketing: The definitive guide (infographic)*. Brafton. Retrieved October 7, 2022, from https://www.brafton.com/blog/distribution/website-marketing-the-definitive-guide/

SAP. (2021). *What is IOT and how does it work?: SAP insights*. SAP. Retrieved October 7, 2022, from https://www.sap.com/insights/what-is-iot-internet-of-things.html