

TOPIC THIRTEEN:

SUSTAINABLE F&B MANAGEMENT FOOD & BEVERAGE

FOR VET LEARNERS AND PROFESSIONALS
IN THE HOSPITALITY INDUSTRY



PREPARED BY:

HOTEL SCHOOL Viesnīcu biznesa koledža, SIA
ERHVERVSAKADEMI DANIA
Italian Hospitality School SRL
City Unity College Nicosia
DigitalGuest APS
INERCIA DIGITAL SL

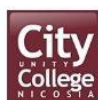
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TOPIC 13 F&B (FOOD AND BEVERAGE) MANAGEMENT SESSION PLAN FOR LEARNERS AND HOSPITALITY INDUSTRY PROFESSIONALS		
No	Content	Explanation/header
1	Problem/Topic	The hospitality industry has witnessed a rapid transformation over the years, with the introduction of new digital technologies. With the increasing demand for seamless and personalized experiences, restaurants, F&B, catering companies are turning towards digitalization to improve their operations and enhance guest experiences. In this course, the overall focus will be placed on the digitalization and sustainable practices of the hospitality sector. Further, also specific digitalization tools will be revised, for example, in-room IoT sensors, hospitality services, body area sensors, energy management, building automation and monitoring, augmented reality, and beacon technology. Finally, some major challenges, for example, interoperability, data management, and security and privacy will be revised.
2	Estimated time consumption on the learning process/ activities	Between 5-10 hours
3	Suggestions on solutions	By the end of this session, learners will understand sustainable digitalization practices applied in the hotel industry.
4	Learning activities	<p>There are several kinds of learning activities in the session plan that will address most of the 8 learning styles described in the two books published in conjunction with this project. Regardless of your preferred learning style, we do strongly recommend that you read the chapter on Digitalization in the hospitality sector before embarking on the learning activities below.</p> <p>Reading material The dedicated chapter in the Hospitality Digitalisation Guidebook is the perfect way to gain more knowledge on this topic if you are The Linguistic Learner or Verbal Learner.</p> <p>Case material The following case material is suited for The Kinesthetic Learner or Physical (tactile) Learners:</p>

- Digitalisation of restaurants – Gearing up for the future <https://www.resmio.com/en/spoon-bytes/digitalisation-restaurant-industry/#definition>
- How Quick-Service Restaurants Can Overcome Their Digitization Challenge <https://www.forbes.com/sites/forbestechcouncil/2023/01/03/how-quick-service-restaurants-can-overcome-their-digitization-challenges/?sh=44db72437679>
- Restaurant management is digitalizing: 9 key digital skills to acquire <https://hospitalityinsights.ehl.edu/restaurant-management-digital-skills>
- DETERMINANTS OF DIGITAL TRANSFORMATION IN THE RESTAURANT INDUSTRY [https://idus.us.es/bitstream/handle/11441/135953/Determinants of digital transformation in the restaurant industry.pdf?sequence=1&isAllowed=y](https://idus.us.es/bitstream/handle/11441/135953/Determinants%20of%20digital%20transformation%20in%20the%20restaurant%20industry.pdf?sequence=1&isAllowed=y)
- Digital Transformation in the Restaurant Industry: Current Developments and Implications <http://smarttourism.khu.ac.kr/file/202103/1622686942.pdf>
- The Digital Transformation of Hospitality Report 2021 <https://www.vitamojo.com/wp-content/uploads/2022/07/Vita-Mojo-Digital-Transformation-Report-2021-compressed.pdf>
- The service digitalization in fine-dining restaurants: a cost-benefit perspective <https://www.emerald.com/insight/content/doi/10.1108/IJCHM-09-2021-1130/full/pdf?title=the-service-digitalization-in-fine-dining-restaurants-a-cost-benefit-perspective>
- Digitalisation and IT strategy in the hospitality industry <https://www.preprints.org/manuscript/202309.0063/v1/download>
- The concept of sustainable food and beverage https://www.mpi.org/docs/default-source/pdf/white-papers/sustainable-f-b-whitepaper_rev3-14-pdf.pdf?sfvrsn=fc6f9d5a_2
- Restaurant Sustainability Guide <https://sustainable-saratoga.org/wp-content/uploads/2021/10/Restaurant-Sustainability-Guide-2021.pdf>
- Bars & Restaurants SUSTAINABILITY GUIDE <https://aib.ie/content/dam/frontdoor/business/doc>

[s/sector-expertise/hospitality/AIB-SectorSustainabilityGuide-barsandrestaurants-2022.pdf](#)

- SUSTAINABILITY Best Practices Guide. High-efficiency steps for implementing low-impact operations and embracing future-ready foodservice
https://members.restaurantscanada.org/wp-content/uploads/2019/02/SustainabilityGuide_Versi on_FinalDigital.pdf
- A GREEN RESTAURANT GUIDE Your Path to Sustainability and Efficiency
<https://www.socalgas.com/documents/innovation/f sec/Green%20Guide.pdf>
- 3 Steps to Reduce Plastic and Benefit Your Business. A GUIDE FOR RESTAURANTS AND EATERIES
https://www.oneplanetnetwork.org/sites/default/files/from-crm/psi_plastic_reduction_guide.pdf
- Where innovation meets recognition Food & beverage industry awards
<https://www.foodbevawards.com/>

Video material

The following videos are suited for most of the 8 learning styles, as they in various ways combine different learning styles. We encourage the Kinesthetic Learner or Physical (tactile) Learners to view them together with others who are interested in this topic. Perhaps a colleague at work or a fellow student:

- The restaurant of the future
https://www.youtube.com/watch?v=bEWJ-S_mkko
- How Virtual Restaurants Could Become a \$1 Trillion Industry
<https://www.youtube.com/watch?v=Ru2irhp3yPo>
- AI: THE FUTURE RESTAURANTS | Impact of Artificial Intelligence in Food Service Industry
https://www.youtube.com/watch?v=dTjuC_nLq8U
- Fast Food Restaurant Simulation
<https://www.youtube.com/watch?v=qs0KSv0AqDM>
- Restaurant technology trends to watch in 2021
<https://www.youtube.com/watch?v=T10yIfcPFuw>
- Why Restaurants Need Tech: The Impact of Technology on Hospitality
<https://www.youtube.com/watch?v=QfUFH22YV4E>
- How restaurants are using data to shape the future of food delivery
<https://www.youtube.com/watch?v=bytsURjQDfi>

- This is the future | Top 10 Popular Food Trends You Need to Try in 2023 and 2024
<https://www.youtube.com/watch?v=7KetlgMYFeY>
- High cost of ingredients and work trends changing restaurant menus in 2023
<https://www.youtube.com/watch?v=C4lcBllxaVQ>
- Food Trends You're Going To See Everywhere In 2023
<https://www.youtube.com/watch?v=6-49r126LV8>
- Future Food | The Menu of 2030
<https://www.youtube.com/watch?v=mnoCy0j7DNs>
- The AI Revolutionizing the Restaurant Industry (April 12, 2023)
<https://www.youtube.com/watch?v=fUGd0aO1VKc>
- 4 Restaurant Technologies to Try in 2023
<https://www.youtube.com/watch?v=yX89pDCup5w>
- 6 Restaurant Trends: Innovations for Successful Restaurant
<https://www.youtube.com/watch?v=cvguWFjNZhM>
- 3D Food Printing In Michelin-Starred Restaurant (ft. Hermanos Torres)
<https://www.youtube.com/watch?v=LMD6DgM7-mE>
- This 3D-Printed Meat Cuts Like Steak
<https://www.youtube.com/watch?v=tXksi9gynQE>

Suggestions for courses on the topic

The following suggestions are especially suited to Interpersonal Learners or Social Learners (aka Linguistic Learners):

- Discover Sushi Singularity food teleportation and 3D sushi printed restaurant in Tokyo
<https://www.youtube.com/watch?v=Av43lmLmcd0>
- 'Genius' 3D-printed steak ready for restaurants
<https://www.youtube.com/watch?v=OYfFM0tVqB0>
- Dutch chef uses 3D printers to create tasty works of art
<https://www.youtube.com/watch?v=b6AZUPtpNc8>
- How the Spyce Robotic Restaurant Works | The Henry Ford's Innovation Nation
<https://www.youtube.com/watch?v=IXEsWYME2nk>
- 7 Ways A.I. Will TRANSFORM Restaurants In The Future
<https://www.youtube.com/watch?v=n14qRFixuFo>
- China's Fully Automated Restaurant
<https://www.youtube.com/watch?v=uoZ7lWz16tk>
- Is 3D Printed Food the Future?
<https://www.youtube.com/watch?v=2kCjSq1-0s>

Theme: Course Module Session Plan (for wider user audience / non-teachers)

For Course Module Session Design in DigitalGuest Platform Technical Solution

		<ul style="list-style-type: none"> • Restaurant of the Future 2023 Food Robots On The Rise https://www.youtube.com/watch?v=KQkmFZQ-2SA • AMAZING Future Generation Fully Automated Restaurant https://www.youtube.com/watch?v=Az5Cs-C0p3A&t=470s • 3D-printed sushi? Japanese company brings restaurant idea to SXSW https://www.youtube.com/watch?v=9aqkyZxUjhc • Cafe Trends to look out for in 2023 https://www.youtube.com/watch?v=Ww0CWg3MFJ8 • A Bite of Innovation: Secret of the Crayfish craze https://www.youtube.com/watch?v=yt7zZXNo2b8 • Robotic Restaurant Created By MIT Grads Opens Second Location https://www.youtube.com/watch?v=J34TUwfMJLU • How the World's First Autonomous Pizza Robot Works https://www.youtube.com/watch?v=fNpBDwYLi-Q • Will Robots Replace Fast Food Workers? https://www.youtube.com/watch?v=oJkQkr3Yy2Q
5	Goals	<p>At the end of this course on Food and Beverages management practices for sustainable hospitality digitalization, students will develop the following knowledge, skills, and attitudes:</p> <p>Knowledge: Students will gain an understanding of the environmental impact of digitalization in the hospitality industry and F&B sector, and how sustainable digitalization practices can be implemented in the F&B sector.</p> <p>Skills: Students will develop skills in understanding digitalization and its use in the F&B sector. The latest digital tools and challenges associated will be revised.</p> <p>Attitudes: Students will develop a positive attitude toward sustainability and the role of digitalization to ensure long-term economic, social, and environmental goals.</p> <p>Overall, the course will equip students with the knowledge and skills necessary to implement sustainable hospitality digitalization practices, while also fostering a commitment to sustainability and environmental stewardship within Food and Beverage sector.</p>
6	"If....then you can...."	After completing this part, you will be able to:

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		<ul style="list-style-type: none"> • Understand the concept of sustainable hospitality digitalization and its importance in the food and beverage sector • Identify key areas of restaurant, F&B operations where sustainability can be improved through digitalization • Apply sustainable digitalization strategies to enhance the guest experience and improve operational efficiency • Revize the latest digitalization tools that can be used in F&B settings
7	Guide lines (points)	<ul style="list-style-type: none"> • PowerPoint material • Case study • In-class discussion questions • Test
8	Cases for practice (individual/in groups)	<p>Case Study: Sustainable Hospitality Digitalization at the Green Hotel</p> <p>The Restaurant is a small restaurant located in a popular tourist destination. The restaurant is known for its sustainable practices and has won several awards for its environmental initiatives. Recently, the restaurant management team has decided to invest in digitalization to improve guest experiences and streamline operations. The idea of the management is to implement a full robotisation and automation of the processes. However, the management team is also concerned about the impacts of digitalization and automation and wants to ensure that their sustainability goals are not compromised. Probably the restaurant will become a Robotic Restaurant.</p> <p>Questions:</p> <p>What are some of the benefits of digitalization and automation for the restaurant?</p> <p>What are some of the environmental concerns associated with digitalization and automation?</p> <p>How can the Robotic Restaurant incorporate sustainable practices into its digitalization and automation efforts?</p> <p>Can you identify the difference between the advantages and disadvantages of digitalization and advantages and disadvantages of automation and robotization of the restaurant?</p> <p>What renewable energy sources can the restaurant adopt to reduce its carbon footprint?</p> <p>How can the restaurant reduce its water consumption through its digitalization efforts?</p> <p>How can the restaurant manage its electronic waste and promote responsible disposal of old devices?</p>

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		<p>What are some green transportation practices that the restaurant can implement to reduce its carbon footprint? How can the restaurant promote sustainable digitalization practices to its guests? Which innovation should the restaurant implement and how much these will cost for the restaurant? What the customers will like better - the robotic restaurant or the usual restaurant turned into a sustainable and digital but proceeded by human staff?</p>
<p>9</p>	<p>Process schedule/models/frameworks</p>	<p>In order to complete this unit, you can follow this process framework:</p>
<p>10</p>	<p>Test</p>	<p>In order to accommodate the 8 different learning styles, we strongly suggest that you take the “test” below in a manner that resonates with you. For example, if you are an Interpersonal Learner or Social Learners (aka Linguistic Learners) you might want to do this with others, whereas if you are a Naturalist or Natural/ Nature Learner you might wish instead to test some of the question below in real life.</p> <p>What are some environmental benefits of implementing sustainable digitalization practices in the F&B sector? Name two types of energy-efficient equipment that restaurants can invest in to reduce their carbon footprint. How can restaurants manage electronic waste in a sustainable manner? Explain the importance of promoting green transportation practices in the F&B sector. What are some ways that restaurant , F&B management can educate guests about sustainability initiatives? What are some of the challenges with sustainable restaurant digitalization?</p>
<p>11</p>	<p>Checklist</p>	<ul style="list-style-type: none"> • Can you name and explain 5-7 of the technologies and digitalization tools applied in restaurants?

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		<ul style="list-style-type: none"> • Can you recall sustainable restaurant (F&B) digitalization practices used in the case study? • Can you list and explain major challenges in sustainable restaurant (F&B) digitalization?
	Link to the next topic – suggestions – feed up	<ul style="list-style-type: none"> • Topic 9 Indicators • Topic 7 The Tools of Digitalisation in Hospitality Dania: • Topic 11 Sustainable Budgeting • Topic 13 Hotel Management • Topic 14 Economic Benefits from Sustainable Hospitality Digitalisation Practices • Topic 15 Development of Entrepreneurial Ideas and Professional Networks
12	Activities and environment for 8 learning types:	Please make sure that every session plan includes the activities and environment for 8 learning styles . Formulate and integrate it in the descriptions:
13	The Linguistic Learner or Verbal Learners (aka Linguistic Learners):	There are reading tasks and materials, as well as presentations and group discussions
14	The Naturalist or Natural/ Nature Learners	Real-life case studies from hospitality industry are used to illustrate the concepts of discussion
15	The Naturalist or Natural/ Nature Learners	You can go to the park and complete these activities in the park.
16	The Musical or Rhythmic Learner or Aural (audio) Learners	Video material and suggestions and presentation on the topic
17	The Kinesthetic Learner or Physical (tactile) Learners:	There are in-class discussions and case study questions
18	The Visual or Spatial Learner or Visual (spatial) Learners	There are visuals used in the presentation and graphical presentation of data. Visual examples in the form of videos are provided
19	The Logical or Mathematical Learner or Logical (analytical) Learners:	Solving case studies and real-life case study applications, in-class discussions, and brainstorming suggestions for the Robotic Restaurant or Green Restaurant
20	The Interpersonal Learner or Social Learners (aka Linguistic Learners):	Group discussions in-class, case study discussions and in-class activities
21	Memo:	

The Linguistic Learner or Verbal Learners (aka Linguistic Learners): The linguistic learner is one who learns best through linguistic skills including reading, writing, listening, or speaking. (Verma, E, 2023).

The Naturalist or Natural/ Nature Learners: The naturalist learns by working with, and experiencing, nature. If this sounds a lot like a scientist, it's because that's how scientists learn. The naturalist loves experiences, loves observing the world around them, and captures the best information or knowledge through experimentation. (Verma, E, 2023).

The Musical or Rhythmic Learner or Aural (audio) Learners: The musical or rhythmic learner is one who learns using melody or rhythm. (Verma, E, 2023).

The Kinesthetic Learner or Physical (tactile) Learners: The Kinesthetic learner is a person that learns best by actually doing something. (Verma, E, 2023).

The Visual or Spatial Learner or Visual (spatial) Learners: A visual or spatial learner is a person who learns best if there are visual aids around to guide the learning process. For example, someone who can learn best from diagrams, pictures, graphs would be a visual or spatial learner. (Verma, E, 2023).

The Logical or Mathematical Learner or Logical (analytical) Learners: The logical or mathematical learner must classify or categorize things. They also tend to understand relationships or patterns, numbers and equations, better than others. (Verma, 2023).

The Interpersonal Learner or Social Learners (aka Linguistic Learners): The interpersonal learner is someone who learns by relating to others. Often, these people share stories, work best in teams, and compare their ideas to the ideas of others. (Verma, 2023).

The Intrapersonal Learner or Solo Learners: The intrapersonal, as opposed to interpersonal, learner is someone who works and learns best when they are alone. (Verma, 2023).

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Memo:

The course elements include the elements and features to meet the needs of all styles of learning digitalization. As the course is aimed at a wider audience, to make more effect of the course, it is based on the principles of including the elements and activities according to three Learning Approaches.

The course elements are based on the approaches: the Behaviourist Approach, when activities are built to respond to some form of stimulus, the Cognitive Approach, when the activities are based on knowledge and knowledge retention, and the Humanist Approach, based on explanations of individual experiences – in that case by representing good practices and challenges by sustainable hospitality companies and their challenges in digitalization. Approaches to embedding sustainability and ESDGC in the content of hospitality digitalization are used.

On the basis of the Theory of Planned Behaviour that allows to assess of thoughts before and after education, the surveys can be offered and analyzed to measure the output of the session plan, increased capacity of digitalization skills, and development of entrepreneurial ideas to benefit from competences.