Smart hospitality good practice examples

Module 1: Marketing

Good practice	Description
Global hotel marketing solutions	Market research takes plenty of time and it should be carried out efficiently, analysing the whole framework according to the SWOT (Strategies, weaknesses, opportunities, and threats) of running a business. The latest way to have complex, but complete ideas of the necessary information is through the use of Big Data.
	Revfine.com is a knowledge platform for the hotel, hospitality and travel industry with practical tips to optimise revenue. This platform was created in 2017. Mr. Martijn Barten, is the founder of Revfine.com.
	https://www.revfine.com/big-data-travel-industry/
Service creation for Hotels	Service creation is essential to define the soul of hospitality. The above 7Ps, i.e., product, process, people, place, physical evidence, promotion and price are collectively called the marketing mix for services. The marketing mix has to be designed so that they are consistent with each other and provide an image consistent with the positioning of our service in the minds of the customer.
	theintactone.com, is an education platform which cooperates with several Universities from India. The year which this platform is created is Unknown, the same for the name or company which has established this portal.
	https://theintactone.com/2018/07/12/sm-u1-topic-5-services-marketing-management-process/
Smart Booking process	Pricing should be a matter of quality, rather than of quantity. The main goal should be guaranteeing stable investments in proper salaries to the staff, hospitality services, and maintenance of rooms and public spaces.
	By Net Affinity in Revenue Strategies April 20, 2018
	Net Affinity is a technology and digital marketing company which specializes in driving new business directly to a hotel's website and helps independent hoteliers to drive bookings directly through their own brand website. The company was established in 2000 and headquarters is in Dublin, Ireland.
	.https://blog.netaffinity.com/hotel-pricing-strategies-the-friday-5/

Hotel wellness with Design	Design has to be one of the pillars of the wellness services, from an aesthetic perspective of the structure, and the consequent dedication of the website. The expected mirror effect of the quality and the uniqueness must attract potential customers of the hospitality sector.
	LODGING is the official publication of the American Hotel and Lodging Association (AHLA).
	By Ashley Holly McEachern - July 16, 2018
	https://lodgingmagazine.com/hotels-can-meet-global-demand-wellness-design/
Smart supply chain management in Hotel Industry	Logistics is an essential part to run a business, in particular it constitutes the basis of the pyramidal organization of market strategy. It should be effective, highly coordinated with the demand of the customers and the supply of the providers. The use of KPI is highly encouraged in order to guarantee the best performance of the whole service.
	From Linkedin site
	By Godfrey Otiato MCILT - June 21, 2018
	https://www.linkedin.com/pulse/how-implement-supply-chain-management-hotel-industry-otiato-mcilt
Hotel website builder	Presentation should be provided through official websites, creation of a blog and efficient customer service information. This one, shall be easily available via telephone or online assistance. This strategy takes into account different target groups' needs.
	By Net Affinity in Revenue Strategies December 19, 2019
	Net Affinity is a technology and digital marketing company which specializes in driving new business directly to a hotel's website and helps independent hoteliers to drive bookings directly through their own brand website. The company was established in 2000 and headquarters is in Dublin, Ireland.
	https://blog.netaffinity.com/why-does-your-hotel-need-a-blog-2/
Hotel digital marketing	Advertising should follow the trends of 21st century digitalization, investing money in social media managers to reach a wider audience. Thus, Twitter, Instagram and Facebook must be the top 3 channels to use to inform people about the interesting structure. This effect will reverberate on reviews websites such as TripAdvisor, Yielp and Google reviews. Other means could be personal blogs and emerging social media. The more is optimized the advertising, the more will guarantee positive comments to attract new guests.
	By Net Affinity in Revenue Strategies April 17, 2018

Net Affinity is a technology and digital marketing company which specializes in driving new business directly to a hotel's website and helps independent hoteliers to drive bookings directly through their own brand website. The company was established in 2000 and headquarters is in Dublin, Ireland.

https://blog.netaffinity.com/6-hotel-tips-for-twitter/

Smart guests poll	Guest polls are an efficient instrument to evaluate the customers' opinions, and to create their active engagement in the activities related to wellness and hospitality. Despite the common emails, which often are ignored after the departure of the guests, ways such as Facebook reactions, Instagram surveys or questions, as well as Google forms provided through social networks, increase the contact with the guests.
	Tremento is a communication design company working specifically for the hospitality industry.
	Posted at 11:18h in Hotel, Social by Caroline
	https://www.tremento.com/poll-post-social-media-hotels/
Hotel booking engine	Final review & assessments are useful to have a clear framework of the situation of the interested structure, not only dealing with its financial activities. It is about providing a broad prospectus of the functioning of the services, the personnel and the structure in general.
	Hotel News Resource the source for hotel industry news
	https://www.hotelnewsresource.com/article109135.html
	https://resources.trustyou.com/c/video-review-marketing?x=DK9L-h&cn=video-review-marketing&ct=Video
Smart network management	Nuclias Connect by D-Link is a complete locally-managed networking solution for organisations, with cost-effective scalability. Nuclias Connect is a software management platform which is addressed to medium sized businesses and to people with midrange IT admin expertise. It can be used either as an on-premises software application, or as a cloud base solution. The company which uses this platform can see live analytics, usage and reports organised by past dates, times, and locations. The application is pay as you go product. (Greece)
	D-Link produces electronic networking products providing services for the home consumer, business or service provider. The above text is retrieved from D-Link website.
	https://eu.dlink.com/gr/el/for-business/nuclias/nuclias-what-is-it/nuclias-connect

Smart property management system	Hoteliga is a smart user – friendly system for companies' management applications and other accommodation properties including a booking engine. The Hoteliga PMS (Property Management System), helps the users to have the ability to manage on their own the daily operations of their property in a smart way (work remotely), even with the use of a smartphone. Hoteliga is a reliable platform for hotels and vacation apartments and offers multi-language support and access from any device. The Hoteliga is sponsored by Cosmote, a Greek communication provider. (Greece)
	Hoteliga is a Greek company whose purpose is to offer owners of accommodation property, a user-friendly and integrated platform. Hoteliga was established in 2014 and its headquarters is in Poland. The above text is retrieved from Hoteliga's site.
	Here is an official youtube promotional video: https://youtu.be/G-SlvyS1Ous
	Some companies which uses Hoteliga solution:
	Hotel Appolon in Berlin, Germany https://www.apollo.io
	Josephine page from Menorca, Spain http://www.menorca.com/es/
	Finday eco boutique hotel https://findayhotel.gr/
	https://www.hoteliga.com/en/products/pms

Module 2: Communication

Good practice	Description
Quick Booking	The 'Quick Booking' option lets the front office staff to book a reservation in a few seconds and generates a booking/reservation number. If Reservation is not Confirmed your Booking Status will be Waiting List.
	Product Version from Hotel Management Software from SMART:
	CogWave HMSV6 Enterprise(Large Hotel Property Management)
	CogWave HMSV6 Express(Middle Size Hotel Property Management)
	CogWave HMSV6 Genie(Small Hotel Property Management)
	http://smartmanagementsystems.com/wp-content/uploads/2017/06/Smart-Hotel.pdf
7 Ways to Make Your Hotel Smarter	One of the most important issues which you need to address on a constant basis involves online guest reviews. Websites such as Booking.com and TripAdvisor can make or break a hotel. In the same respect, the majority of feedback found on these and other portals involves whether or not the guests felt that their needs were being catered to.
	1. Enhanced Connectivity to Guest Services and Staff Members

2. Intelligent Environmental and Entertainment Controls

3. The Inclusion of Voice-Ready Technology

4. Smart and Interactive Maps

5. Personalised Forms of Entertainment

6. The Concept of Sustainability

7. Adopting Smart and Targeted Forms of Data Collection

https://www.revfine.com/smart-hotel-system/

https://www.revfine.com/smart-hotel/

How to Manage in a cloud Hotel Management System	Smart hotel management software improving guest in-hotel experience. Extra value of HotelFriend can offer: • All tools from one company • State-of-the-art features • Premium Service Order app with instant payments • Integrated Channel Manager • Own Booking Button • Customer Relationship Management (CRM) • Transparent pricing with no extra costs https://hotelfriend.com/b/products
Payments platform for hotels	Give guests a personalized experience by offering their preferred payment methods, loyalty schemes, and more. https://www.adyen.com/hotel-payments
The right hotel management solutions brochure	NEC is one of the key suppliers of hotel management systems to the Hospitality industry. By merging leading IT and Communication network technologies, NEC deploys solutions with the scalability, capability and affordability to meet the demanding and changing business needs of hotels, event centers, cruise lines and travel organizations. https://www.nec-enterprise.com/solutions/Smart-Hospitality-219
Fully Featured Hospitality Management	Smart Hotel Software is a full featured Property Management Software Solution for single or multiple Hotel and lodging businesses. Smart Hotel Software will manage your reservations, deposits, check ins, check outs, guest folios, payments, sales & audit reports, housekeeping, maintenance and yield management. https://smarthotelsoftware.com/hospitality-management

Hospitality is Connected	Smart hotel trends include voice-activated controls like Amazon's Alexa and Google Home. Smart hotels are timesavers. Guests no longer have to pass by reception because they can check-in and check out directly from their phones. They can use their phones as room keys. All without having any human interaction. https://blog.smartvel.com/blog/smart-hotels-what-to-expect-from-the-future-of-hospitality
Reception Management	Smart Hotel Control enables complete overview at the reception. From check-in to check-out, all calls and signals sent by guest from their room are registered at the reception. Further more – reception receives emergency signals such as flood and burglary All signals are shown in real time. http://4smarthotel.com/solutions/reception-management/
Google My Business (GMB) listing	Booking should be easy for guests, following the standard procedure of a certified structure. Guests will be able to find the position through the average online research. Once it has been accomplished, online services, such as Booking.com, Trivago, Expedia and so forth, will be able to localize the position of a given structure, its description containing the basic information and photos and the redirect to official websites. By Net Affinity in Revenue Strategies April 25, 2018 Net Affinity is a technology and digital marketing company which is specialized in driving new business directly to a hotel's website and help independent hoteliers to drive bookings directly through their own brand website. The company is established in 2000 and headquarters is in Dublin, Ireland. https://blog.netaffinity.com/slideshare-google-my-business-for-hotels/
Hotel virtual payment	Payments, especially the virtual ones can provide benefits to both guests and hosts. The easiness of the system, the timing can be assessed through the balance of the guest's expectations and the guarantees for the owner of the structure. WEX is a global leader in supplier payment solutions, for almost 20 years and have helped their customers to gain a competitive edge with simplified accounts payable processing. by Greg Thompson Posted February 26, 2018 https://www.wexinc.com/insights/blog/wex-travel/ways-virtual-payments-can-benefit-hotels/
Facial Recognition Check-in in Marriott China	Issuing an account, whether before or during the stay of the guests will be designed according to the most comfortable and fastest option available. It can be possible through the traditional creation of a virtual personal account or through the latest technologies, namely facial recognition.

JW Marriot Sahar - Smart Hotel Room	Revfine.com is a knowledge platform for the hotel, hospitality and travel industry with practical tips to optimise revenue. This platform created in 2017. Mr. Martijn Barten, is the founder of Revfine.com.

- Las Vegas Hotels Go High Tech
- Voice control devices with amazon alexa
- Hilton and Marriott connected rooms
- A Virtual Honeymoon to London and Hawaii
- Visit Hamilton Island in 360˚ Virtual Reality with Qantas

https://www.revfine.com/technology-trends-hospitality-industry/

https://www.revfine.com/facial-recognition-hospitality-industry/

https://www.youtube.com/watch?v=zb0_dEAW0QI

https://www.youtube.com/watch?v=DAMiV_i46hs

https://www.youtube.com/watch?v=GRFhcWgFD8g

https://youtu.be/i6yMqXLnpN4

https://youtu.be/lJype_TafRk

Bookboost Guest messaging **EVA Hotel digital Receptionist** **Becheckin digital key and room energy management**	Informing guests is a fundamental step to take into account, when there is the first contact with the concerned structure. It means showing interests towards them before their arrival, creating a positive attitude and a cosy atmosphere. Connecting on a personal level, can improve the outcome of the experience, and also address better the future guests. Hotel management is a portal for hotels management solutions, like on line booking engine, website design, etc. Article Posted in Hotel Management

https://www.siteminder.com/r/trends-advice/hotel-management/ways-improve-guest-services-hotel/

https://appstore.siteminder.com/apps/bookboost

https://appstore.siteminder.com/apps/eva-hotel-receptionist

www.digieva.net

https://www.becheckin.com/en/index

Smart promotion technics	Promotions should be decided according a given period of the year or festivity. Moreover, the area and the target category have to emerge as guidelines, in order to provide efficient coupons and discounts. The distribution channels can be the traditional ones, as well as the virtual ones, using ad-hoc platforms and social networks. Article by Evangelos Christou in Journal of Hospitality Marketing & Management 20(7):814-829 · October 2011

Hotel Concierge App guests revenue accelerator	Newsletter can be a powerful tool to reach guests and new ones. If possible, a structure should provide a regular short assessment to its customers. In addition, the positioning of a given structure in the main newsletter concerning hotel sector can be another option to gain visibility.
Smart CONNECT for PMS	Hotel Concierge App guests can book hotel rooms, services, and deals, change delivery details, make mobile check-in and -out faster and chat with the staff directly. It brings travel experience to a new, digital level. By Social Tables February 2020 https://www.socialtables.com/blog/hospitality/hotel-newsletters/ http://www.hotelinteractive.com/subscribe.aspx https://hotelfriend.com/b/hotel-mobile-app https://www.smarthotel.nl/en/smartconnect-for-pms/
Property management software	Accounting can be complex, due to the set of challenges that implies. A centralized system should operate and be available from every device of the hotel staff, monitoring all the revenues and expenditures related to the management of the hotel and its components. Hotel Management is a hospitality industry's magazine and it covers hotel investment, development, operations, design, technology, brand strategies, etc. by Alicia Hoisington Apr 2, 2018 10:21pm https://www.hotelmanagement.net/property-management/4-challenges-and-solutions-to-hotel-accounting https://www.hotelmanagement.net/property-management/4-challenges-and-solutions-to-hotel-accounting
Beekeeper operational communication platform	Beekeeper and Whispr launched a new app that gives housekeepers step-by-step cleaning instructions in line with Centers for Disease Control and Prevention guidelines for COVID-19. Hotels can activate the "Cleaning Task Lists" by Whispr app for free if they are already Beekeeper users. The app is being used by Marriott International and Hilton properties in certain parts of the United States. Beekeeper expects to extend it to further properties in Ireland, Germany, the U.K. and China next week. By Chuck Dobrosielski Mar 25, 2020 10:00am https://www.hotelmanagement.net/tech/beekeeper-whispr-launch-covid-19-cleaning-app https://apps.apple.com/us/app/whispr-ai/id1465963786

https://www.beekeeper.io/en

Smart hardware device for hotels **Galaxy Lithium Ion Battery Systems**	EcoStruxure is Schneider Electric's IoT-enabled, plug-and-play, open, interoperable architecture and platform. Innovative solutions in electrical distribution, fire protection HVAC and BMS systems, access and lighting control, on at Every Level from Connected Products to Edge Control, and Apps, Analytics and Services. The target market includes online travel agencies, hotel on the go, experience seeking travellers, etc. The Ecostruxure provides best customer satisfaction, operational efficiency, energy and sustainability performance. The innovative product is Lion battery in UPS (Greece). By Schneider Electric website, Feb. 2020 https://www.se.com/ww/en/work/campaign/innovation/overview.jsp https://youtu.be/ZGrch1-Wm9A https://www.se.com/ww/en/product-range-presentation/66102-galaxy-lithium-ion-battery-systems/?filter=business-3-critical-power%2C-cooling-and-racks#tabs-top
Mobile money service	M-Pesa is Africa's most successful mobile money service by Vodafone. It provides access to financial services to the millions of people who have a mobile phone, but do not have or have only limited access to a bank account. M-Pesa provides people with a safe, secure and affordable way to send and receive money, top-up airtime, make bill payments, receive salaries, get a short-term loan and much more. By Vodafone website, Feb. 2020 https://www.vodafone.com/what-we-do/services/m-pesa https://www.vodafone.com/content/dam/vodcom/images/m-pesa/video/What_If_Mpesa_16_9.mp4
TV management entertainment	Soft AP by LG means software enabled Access Point. This "virtual" Wi-Fi feature executes by software working on the device to create a wireless hotspot. LG Commercial Smart TV enables guests to share secured content sharing between TV and their own devices when Soft AP is on. By LG website, Feb. 2020 https://www.lg.com/global/business/information-display-hospitality-healthcare

Module 3: Accommodation

Good practice title	Description
Augmented reality	Augmented reality is intended to enhance the physical environment of the end user via devices such as smartphones and tablets. Some applications within the hotel sector include offering in-house interactive elements (such as maps and points of interest), providing a digital history of the property and supplying guests with

relevant information when they are located within certain areas of the hotel (such as a menu if they happen to enter a restaurant).

https://www.ehl.edu/en/about-ehl/innovation

https://www.youtube.com/watch?v=H_VxlcdP0Kk

Digital Concierge	At many hotels, guest can now communicate their needs to the staff through a smartphone. Imagine asking for more towels or a late check-out without getting out of bed. That's what this technology will soon allow all hotel guests to do.

A digital concierge powered by AI that is able to collect guest feedback, answer FAQs and create personalised itineraries, improving the overall guest experience.

Hotels that implemented digital concierge:

- Dorsett Hospitality International (DHI) is one of Asia's fastest-growing international hotel groups https://www.dorsett.com/

- Scandic is the largest Nordic hotel operator with a network of about 280 hotels with 55,000 rooms in six countries https://www.scandichotelsgroup.com/en/in-brief/

- Marco Polo hotels provide their guests with a unique travel experience which embraces the local charm and the adventure of travel with the deeply instilled elegance and warmth of the in-house culture of Marco Polo hotels the-ascott.com

https://www.youtube.com/watch?v=gs3zTP4m8Fo

https://www.youtube.com/watch?v=69KgynWs7CA

https://www.youtube.com/watch?v=CeCYXCPUSdc

https://www.youtube.com/watch?v=n3Au6_zJu4g

https://www.youtube.com/watch?time_continue=43&v=Eww781DikRU&feature=emb_title

https://www.mediaconcepts.com/mobile-concierge.html

https://www.youtube.com/watch?v=2x4mgLHI_Ew

Keyless Entry: Gone are the days of losing a key card and being locked out of a room. In modern hotels, a guest's smartphone will soon replace the cards that we currently use to unlock hotel doors. In fact, some major hotel groups are using this technology already. Starwood Hotels provide keyless entry to guests through its SPG app.

Hotels that already implemented keyless entry:

- Coast Canmore Hotel & Conference Centre
- The Woodmark Hotel
- Martin Resorts
- The Clarendon Hotel

- Silversmith Hotel

https://www.youtube.com/watch?v=e60bAfR4_O4

https://www.youtube.com/watch?v=NPr15d1K7dw

https://www.openkey.co/hotels-keyless-entry-next-level/

Smart Mirror

Behind a great hotel there is always a great team and a customer orientated strategy that takes care of details that can make the difference between just spending the night in a hotel room and a memorable experience. Imagine watching TV in the bathroom mirror during your stay. This is already a reality at several luxury hotels across the globe, where guests can watch high-definition TV in mirrors, usually while enjoying a bathroom, sauna, or swimming pool.

SMART Mirrors transform the bathroom vanity into a personalized digital hub, enabling you to be more efficient and effective every single day. The SMART Mirror is designed with an interactive touch and voice-to-text controlled display that is fully customizable and highly capable. The user interface allows you to create your own custom SMART Mirror dashboards featuring your favorite apps and widgets from the Google PlayStore. The SMART Mirror offers the convenience of bringing your calendar, weather, email, music, social media, video streaming, home control, live TV and more to the bathroom mirror.

Hotels that implemented this technology:

- Renaissance Hotel
- Dream South Beach Hotel
- The Jefferson Hotel

Companies that produce Smart Mirrors:

- https://www.seura.com/
- https://www.myqaio.com/es/

https://www.youtube.com/watch?v=XBKoRxt-iLw

https://www.youtube.com/watch?v=8Pvg559znlA

https://www.seura.com/projects

Robots

Hotels across the country are rushing to introduce robots with the promise of enhancing the guest experience and increasing efficiency. The automated companions can do everything from make and pick up deliveries to help guests find their way around.

Hilton Los Angeles Hotel

Hilton Worldwide is pleased to introduce "Connie", the result of our collaboration with IBM. Connie is the first Watson-enabled robot concierge in the hospitality industry, and is currently being piloted at the Hilton McLean in Virginia. Connie draws on domain knowledge from Watson and WayBlazer to inform guests on local

tourist attractions, dining recommendations and hotel features and amenities. Connie, named for Hilton's founder Conrad Hilton, marks the first time IBM has developed a Watson-enabled robot for the hospitality market.

Connie will work side-by-side with Hilton's Team Members to assist with visitor requests, personalize the guest experience and empower travelers with more information to help them plan their trips.

Sheraton Los Angeles Hotel

The Sheraton Los Angeles San Gabriel Hotel, opening in January 2018, will be the first in the U.S. hotel industry to tout eight TUG robots. The robots were developed by Aethon, a provider of autonomous mobile robots. Known for its trusted service in healthcare, Aethon's robots will be introduced at Sheraton's newest Los Angeles property, located in San Gabriel, ten miles from downtown Los Angeles. Visitors to the 288-room stylish hotel will be greeted by Aethon's four-foot high, friendly-looking innovative TUG robots whether looking for directions to elevators or receiving an in-room delivery.

"Having eight robots is a first for the U.S. hotel industry, and we know our TUG robots will be an approachable, cutting-edge addition to the world-class service guests expect at Sheraton properties," said Wanda Chan General Manager. "Robots are the next wave of hospitality technology and we believe our overnight guests and those in the local San Gabriel community will find the robots to be intriguing and fun."

The TUG robots have a proven track record of success in hospitals globally by making more than 50,000 deliveries each week. The robots will easily navigate through the hotel using an internal built-in map. TUG robots also have sensors that will allow them to safely move around people and obstacles, and they will use the hotel's WiFi system to communicate with elevators and automatic doors.

https://www.youtube.com/watch?v=ifgf6bZhxiE&feature=youtu.be

https://www.youtube.com/watch?v=bsXRfZPo3Mw

https://aethon.com/

Hotel environmental management **Heat management system** **innovative controlling service for air condition units**	Heat supply can be a very costly factor while running a business, especially in hospitality structure. The ideal plan must combine eco-sustainability and money-saving through renewable energy sources, according to the European Commission reports about the Tourism Sector. EU publication 7.4 Efficient applications of heat pumps and geothermal heating/cooling, Joint and Research Centre (JRC), 2017. This best practice is an extract from the report Best Environmental Management Practice in the Tourism Sector.

	Energy Upgrading of Hotel PLAZA in Kalamata with Solar Thermal system, Heat Pumps and Smart Control of Heating - Air Conditioning & Production of DHW Systems, with savings of € 20,000 per year and depreciation in less than 2 years
	https://www.andrianos.gr/en/news/latest-news-joomla/energy-upgrading-of-hotel-plaza-in-kalamata-with-solar-thermal-system-heat-pumps-smart-control-of-heating-air-conditioning-production-of-dhw-systems-with-a-savings-of-%E2%82%AC-20%2C000-per-year-and-depreciation-in-less-than-2-years
	Hotel menu Pro
	A central control system though a one remote control is available at Passion ECO air-condition series. This remote control allows the administrator to control up to 64 air condition units.
	https://www.inventorairconditioner.com/control-system-of-air-conditioners-hotel-menu
	https://ec.europa.eu/environment/emas/takeagreenstep/pdf/BEMP-7.4-FINAL.pdf
	https://www.andrianos.gr/en/
	https://www.inventorairconditioner.com/control-system-of-air-conditioners-hotel-menu
Air conditioning unit with asymmetrical high-capacity heat exchanger	Air ventilation is crucial in the wellness experience and it must fit with the room or suite parameters. Hotel energy should be regulated in order to guarantee a proper environment for customers, as well as the right investment by the structure that must avoid excessively expensive expenditures.
	2020 Feb, By website of Menerga company which is a high-tech engineering company that provides energy-efficient air conditioning, ventilation, heating and cooling. We reduce energy consumption and energy demand of new and existing buildings.
	https://www.menerga-adria.com/energetics/ventilation-air-conditioning-according-type-building-space/hotel-ventilation/
Smart Hotel automation solution	Smart hotel climate control Smart Hotel Control is a smart room management system based on C series of microcontrollers. It's a flexible solution applicable for different size hotels – from small inns to luxurious hotels.
	2020 Feb, By website of EUROICC Company which is a producer of controllers and designer of automation solutions.
	http://4smarthotel.com/featured_post/climate-control/
Mobile face recognition control	Face recognition door lock. Smart digital dynamic face recognition door lock access control system.

2020 Feb, By website of Shanghai Zucheng, a company which is integrates R&D, production, sales, and service in the field of access control and time attendance systems.

https://s4a.manufacturer.globalsources.com/si/6008850076673/pdtl/Facial-recognition/1167741516/Dynamic-face-access-control.htm

https://www.smart-home-security.cn/news/rfid-access-control-system-electronic-door-lock-system-for-hotels.html

Switchable Smart Glass	Switchable Smart Glass Windows curtains can be replaced by switchable glasses.
	2020 Feb, By website of Intelligent Glass British manufacturer who is dedicated to quality and reliability. The products manufactured by Intelligent Glass are designed to offer instant and controllable privacy using switchable smart glass.
	https://intelligentglass.net/categories/switchable-smart-glass/
Domina hotel with the automatic fire detection system	New interface for the hotel automation system domina hotel with the automatic fire detection system
	Hotels security needs offering a new solution with high technology and innovation standards, which uses the integration between the Domina Hotel Automation System and automatic fire detection system in order to guarantee an efficient and secure control which includes the Company know-how.
	Published by Reuters, 26 September, 2019, Updated 26 September, 2019 on website of todayonline.com
	https://www.ave.it/en/news/new-interface-hotel-automation-system-domina-hotel-automatic-fire-detection-system
Innovative bed design	Smart bed solution HI-bed It is enhanced by the function of personal health tracker monitoring time and quality of sleep, preserving an accurate historical archive of time spent in bed, weight and personal habits and providing immediate and comparable comparisons over time on wellbeing. A system equipped with intelligent alarms and automated functions, such as the control of lights when leaving the bed and the movement of the bed bases, which will soon be ready to respond to voice commands and take on the role of a real health coach.
	2020 Feb, By website of Hi-Interiors company
	https://www.hi-interiors.com/hi-bed/
The cloud-based dashboard, providing real-time fullness status, activity	iWaste Intelligent Container Technologies
	differently from the house waste disposal. Every guest produces 1kg of waste per night, thus its management is a must-have formula in every hospitality structure, especially in the eco-sustainable 21st century.

data and equipment health of garbage compactor	Bin-e is an IoT-based smart waste bin that recognizes, sorts and compresses the waste autamatically. https://www.greenhotelier.org/our-themes/waste-management/ https://wasteharmonics.com/iwaste/ http://www.bine.world/
Smart IoT platform **Smart Lion battery**	Eco Struxure Power is an IoT-enabled architecture and platform that digitizes and simplifies medium- and low-voltage electrical distribution systems. It provides actionable data to aid the decisions that help protect people, safeguard assets, maximize operational efficiency and enhance business continuity. Future-ready EcoStruxure Power systems facilitate both regulatory compliance and cyber resilience. By Schneider Electric website, Feb. 2020 Galaxy Lithium Ion Battery Systems The only UPS with LI-ON batteries (Greece). The Schneider Electric (Lithium-ion) battery solution for three-phase UPSs is a high-value, innovative energy storage protection solution for data centers, industrial processes, and critical infrastructure. The Li-ion battery solution significantly reduces battery footprint and weight to allow more effective use of space. It also doubles battery life and simplifies maintenance compared to traditional batteries. The higher operating temperature reduces cooling requirements, and the included battery management system improves backup storage predictability and manageability, which reduces total cost of ownership. By Schneider Electric website, Feb. 2020 https://www.se.com/ww/en/work/campaign/innovation/power-distribution.jsp https://www.se.com/ww/en/product-range/66102-galaxy-lithium-ion-battery-systems/?filter=business-3-critical-power%2C-cooling-and-racks
E-cooling management system	Smart HVAC app by Vodafone is a comprehensive solution that offers the ability to remotely manage and provide important alerts for cooling / heating units. With this solution you get a complete overview of the operating status of the cooling / heating units and receive important information on location, temperature, power supply and humidity, achieving maximum efficiency of the units. (Greece) By Vodafone website, Feb. 2020 https://www.vodafone.gr/business/products-solutions/iot/smart-hvac/
Digital telephone network	modulus vPBX it's a cloud virtuel call center service by Modulus that include interactive vice response, announcements, teleconferences, voice mail, access to the

internet and many more services which provided to an alone customer or to the group of customers. (Greece)

By Modulus website, Feb. 2020

https://www.modulus.gr/en/services/vpbx/leitoyrgies/

Smart fire alarm system	Addressable Fire Detection Panels. The BSR-100X series of Analogue Addressable Fire Alarm Panels consists of 3 models(1,2 and 4 loop connections), named BSR-1001, BSR-1002 and BSR-1004 respectively, all sharing the same control interface, functionality and indications. The accompanying software application for Windows PC, BSR-100Xprovides utilities for calculating installation parameters, configuring the control panel and keeping an event log record. The panels offer an extensive list of adjustments and characteristics for the control of the installed devices and sirens. These parameters can easily be adjusted using a PC based program. The programming of the panel can also be done through an onboard USB. Messages can be viewed on LCD display whereas LEDs are used to show basic operations such as alarms, pre alarms and faults. (Greece)

By Olympia Electronics company website, Feb. 2020

https://www.olympia-electronics.gr/bsr-100x.en.aspx

Module 4: Cathering

Good practice title	Description
Nanofood	Nanotechnology is a technology with small particles of matter - nanoparticles measured nanometers (i.e. one billion meters part or 80,000 times per person particle smaller than hair thickness).

Using nanotechnology for food in industry, it is possible to enrich food and drinks needed by man body substances, reduce in it fat, salt or sugar quantities.

They allow us to improve the flavour, bacterial resistance and .

The food industry uses nanotechnology to create nano-components to improve the colour, texture and taste of food.

Nanoparticles TiO2 and SiO2 and amorphous silica are used as food additives. TiO2 is used to coat donuts in the form of coloured powders in the manufacture of pills temperature fluctuations allow longer food storage undamaged

Nanosalt - Similar to the common salt, only the crystals are smaller. When microscopic particles are put together, they have a larger surface area than ordinary salt crystals - more in contact with the tongue, making the food tasting salty than it really is.

Oil particles are replaced by water in the production of nanomajonese particles coated with oil. In this way, mayonnaise becomes less oily while retaining its flavor.

Nanotechnology can enrich a variety of foods with tiny tasteless capsules of vitamins, minerals or supplements

https://www.theguardian.com/what-is-nano /what-you-need-know-about-nano-food

https://www.nanowerk.com/spotlight/spotid=1360.php

3D Food Printing System	This technology allows to create food complex geometric shapes that would not be possible by hand. Suitable products for printing: • fruit puree • caramel mass • chocolate • pancake dough • other masses https://www.youtube.com/watch?v=a18RTHB-KnY https://www.youtube.com/watch?v=yoKjoj2XL3c
EATING PACKAGES 	This invention is named WikiCells and not only preserve the freshness of the food, but it can have a variety of flavors. Let's say the packaging of sweets is sweet and the potato chips have a savoury taste. The eating cup was created for the Italian company Lavazza and according to the manufacturers it is not just fun and original idea, but also a tribute to ecology - after drinking coffee and eating a cup (agree, sounds strange) you do not have to wash it, so do not waste water means. If you don't want to eat a cup, throwing it away will destroy it without harming the environment, just like any other organic waste. The cup - a biscuit made from a fluffy dough covered with sugar-icing, which is waterproof, so you can boldly pour drinks into it. Enjoy coffee and cookies! https://laikas.tv3.lt/lt/info/9746/daiktu-pusryciai-4-viename--kava-valgomame-puodelyje/
MOLECULAR CULINARY	Molecular gastronomy is a separate, interdisciplinary branch of science, offering collaboration and the formula for success between chefs and scientific laboratories - the understanding that chemical, biochemical and physical processes determine the taste and quality of food. Methods used - experimental food preparation and chemical analysis (eg chromatography, mass spectrometry, assay oxidation, protein denaturation),

physical chemistry (hardness, elasticity, density tests, melting / boiling, colloids, emulsion stability), psycho-neurophysiological methods (eating tests, questionnaires, brain activity monitoring).

Food accessories for molecular cuisine:

- agar,
- claro gelatin,
- egg or soy lecithin,
- ascorbic acid,
- calcium bicarbonate,
- calcium chloride,
- sodium alginate,
- transglutaminase,
- liquid nitrogen,
- dry ice.

https://splice-bio.com/molecular-gastronomy-the-food-science/

Tasting menu in restaurants	Tasting menu is usually afforded by above-average restaurants The tasting menu does not have to include truffles, molecular cuisine or artwork on the plate. Tasting mini pizza set, vegetarian / vegan or even uncooked, live food menu. Restaurants are increasingly used to taste, discover, enjoy.
PSYCHOTASTIG	The waiters match the clothing to the dishes. When guests gather, 3D projection is turned on is restourant. By tasting the wine, it is possible to observe its production, wine-growing, etc. The lobsters are spotted here in the waves, with light breezes and sea scents. Such dinners are called "psychotasting".
Smart tables 	Smart tables Designed specially for cafes, desserts stores, bars, shopping mall food-courts, hotels and other public places. Suitable for indoor and outdoor use. Include waiter-free, Artificial Intelligence assisted ordering and entertainment software. Multitouch. Scratch resistant. Water resistant. Customers can browse interactive menus (showcasing video or photos, ingredient info, nutrition facts, and the cooking process), place orders, as well as review and pay bills directly from the table. You do not need a whole team of waiters to fulfil orders. Orders go directly from the table to the cloud. This is more efficient and means less risk of human error or "soft-pocketing" https://www.itrestaurant.net/tables

E-Cooler application temperature data logging, refrigerator GPS, etc.	Vodafone Cooler Control is an application with which customer could monitor any cooler with this system. The application can find the device in case of stolen, can monitor the temperature of the cooler, so the customer could informed in case of corruption of electricity or any malfunction of hardware. (Greece)
	By Vodafone website, Feb. 2020
	https://www.vodafone.gr/business/products-solutions/iot/vodafone-cooler-control/
E-Coffee application.	Smart Coffee Machines app by Vodafone offers the ability to effectively manage and monitor professional coffee machines remotely, to know the actual coffee consumption per point, the operating status of each machine and to be informed in time of damage. (Greece)
	By Vodafone website, Feb. 2020
	https://www.vodafone.gr/business/products-solutions/iot/smart-coffee-machines/
E-slush machines application.	Smart Slush Machines app by Vodafone. You can control all the basic functions of granite machines. By updating the location of each machine and monitoring its use, you ensure that granite orders are kept in-store and know the actual granite consumption per point, the operating status of each machine, and are informed in time of damage or theft. (Greece)
	By Vodafone website, Feb. 2020
	https://www.vodafone.gr/business/products-solutions/iot/smart-slush-machines/

Module 5: Wellness

Good practice title	Description
Going zero waste toilet paper.	Surprisingly, there are a lot of options when it comes to toilet paper. I don't think that there's one right answer here, but finding what works best for you.
	https://www.goingzerowaste.com/blog/zero-waste-toilet-paper
Best smart toilets 2019	Toilet hygiene equipment is rapidly developing.
	https://wisepick.org/best-smart-toilet/
Best Smart Shower System	The Smart Home Begins its Bathroom Invasion
	https://thesmartcave.com/best-smart-shower/

Smart bath	Sauna in shower https://www.bathtubsplus.com/ariel-bath-platinum-6-kw-steam-shower.html
Drying water tap	Dyson has launched its Airblade Tap hand dryer, it washes and dries hands with no need to leave the sink. https://www.dyson.co.uk/commercial/hand-dryers/airblade-wash-dry-short.html
Medical Alert Systems	Medical Alert Systems to save guests in hotels, SPA, rooms and outdoor https://www.theseniorlist.com/best-medical-alert-systems/
Drying water tap	Drying water tap. Dyson has launched its Airblade Tap hand dryer, it washes and dries hands with no need to leave the sink. By Dyson website, Feb. 2020 which is a British trading company. https://www.dyson.co.uk/commercial/hand-dryers/airblade-wash-dry-short.html
Drying system after shower	Body drying after shower the latest AI state-of-the-art solutions balance eco-sustainability, innovation and relaxation. Valiryo Body Dryer replaces the conventional towel with a skin-friendly, germ-free, antibacterial and highly pleasant air stream generated by a highly efficient electrical power plant. The After Shower Experience https://youtu.be/H1x-i3uF0R8 https://youtu.be/H1x-i3uF0R8
Cordless hair drying system	Hair Drying. Traditional hair dryers are neither eco-friendly nor healthy for one's hair. These gloves guarantee the right care to the environment and hair. If the choice comprises electric devices, during the last decade several items have been implemented such as the cordless AER dryer. The common hair-dryers can be quite uncomfortable, obliging the user to stay in the same place. In addition, the rechargeable solution helps to save energy, despite its coziness. By Alison Lynch Tuesday 30 Dec 2014 4:01 pm article on metro website AER Announces The Launch Of The First Professional-Grade, Smart, Cordless Hair Dryer Dyson Supersonic Hair Dryer https://youtu.be/Nf4gZU3cU3U https://metro.co.uk/2014/12/30/put-down-your-hairdryer-because-we-give-you-the-eco-friendly-hair-drying-gloves-5004259/

Digital shower room cleaning	Shower rooms cleaning that has to be Innovative, but eco-friendly shower rooms aimed to the clients' wellness. The latest must-have is the Roomba i7+. Coming with a Clean Base Automatic Dirt Disposal.
	The Da/Spa Shower Makes Comfort More Eco-Friendly by Amelia Roblin — July 28, 2011 — Eco
	References: behance.net & ecofriend
	GROHE SPA F-digital Deluxe: Lights, music, steam… stimulation for all the senses.
	Airports deploying smart tech to keep restrooms clean article by By Robert Silk Dec 21, 2018
	Azure Automation watcher tasks public app for virtual machines Posted on 28 November, 2017 by Eamon O'Reilly Principal Program Manager, Azure Functions
	TaskWatch wearable cloud infrastructure transforms enterprise data into actionable and measurable tasks. https://youtu.be/w0bV6desl8o?t=25, https://youtu.be/3lLqh0GFa3I?t=6
	https://ecofriend.com/10-eco-friendly-showers-for-a-green-bathing-experience.html
	https://www.irobot.co.uk/Home-Robots/Vacuuming
Applications for people with special needs	People with special needs to target better this category and maximize its benefits.
	The Smart Devices Transforming the Lives of People with Disabilities article by Dan September 26, 2018 in mytherapy website.
	Top 5 smart home devices to assist people with disabilities everyday life by disability horizons website
	https://www.ncbi.nlm.nih.gov/books/NBK44662/

Module 6: Local transportation

Good practice title	Description
Autonomous Wheelchairs	Autonomous Wheelchairs are the Future of Mobility in hotels in-door and out-door.
	https://www.wired.com/video/watch/autonomous-wheelchair
Flying Uber taxi	Flying Uber taxi as the best solution for smart autonomous transportation for guests to/from hotel/train/bus station provided by Hyunday to be available in 2023.
	https://www.engadget.com/2020-01-06-hyundai-and-uber-flying-taxi-concept.html?guccounter=1

Smart stick for blind people	WeWalk by Vodafone is a smart stick for blind people which is a smart Bluetooth connected device that connected to a mobile phone, so any blind person can talk and answer to mobile phone through this device.
	https://gigalife.vodafone.com/innovation-unbound-winning-startups-social-issuess-tackle-social-issues/

Smart Hospitality innovation learning best practice in European Union and Worldwide

(Learning methodologies, programmes, subjects, forms, infrastructure, materials, tools, etc.)

Learning innovations	Face-to-face	Blended learning	Virtual Self-Improvement
Learning methodologies, programmes, subjects, forms, infrastructure, materials, tools, etc.)		CIRTOINNO learning materials.	iGenius - virtual psychological Self-Improvement programme on Innovation. Smartness is one of 5 personal features, which forms Innovator. Available in EN and LT languages. (Stasys Paulauskas, SSI)

iSelf-Improvement portal, where students can learn and train by reading learning materials and answering questions. Teachers can introduce here learning subjects, learnings materials, questions, see statistics of student's achievements, etc. (Stasys Paulauskas, SSI)

InProject - Innovation project design interactive template with Business plan calculator. (Stasys Paulauskas, SSI)

BisPlanModel - virtual model of business plan for 10 years innovation implementation. (Stasys Paulauskas, SSI) |

TEFI is a network of educators, researchers, industry actors. The network is committed to a type, scale and form of tourism that is both sustainable and just, and that values people and planet alongside economic outcomes.

Hotelschool The Hague has organised the Genio Worldwide Innovation Summit.

Improving the Guest Experience through Service Innovation: Ideas and Principles for the Hospitality Industry and Principles for the Hospitality Industry

HOTELIER ACADEMY is an online, educational source of knowledge,. (English and Greek version)

DMH Academy is an on line platform to access knowledge from industry leaders and learn how to implement a Digital Marketing Strategy in customer unique Hospitality business context.

Appendix: Weblinks to online courses

Victoria University Australia: Tourism, Hospitality & Events Learning and Teaching Academic Standards

Guide to Massive Open Online Courses (MOOCs)

Although MOOCs are created by universities, universities rarely distribute MOOCs themselves. Instead, they rely on course providers such as:

Coursera

edX

FutureLearn

Udacity

So it's on those platforms and others that students actually take MOOCs.

Hospitality business assessment innovations - best practice in European Union and Worldwide

	PC based Self-Assessment	Mobile APP based Self-Assessment
Self-Assessment tool used in Smart Hospitality business	SELF ASSESSMENT TOOL – Circular economy in Tourism Business.	