A Study on Hotel Reservation Trends of Mobile App Via Smartphone

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Abstract: *This article offers a study of the current use of the internet as a marketing tool, by the hotel industry. Mobile at the Forefront of Hotel Technology happen in 40 years, but when it comes to technology, 40-years is like going back to the days of Moses or the Roman Empire." Richard Goodwin... and it's true. While the mobile phone has been around since the 70's, it wasn't really until the launch of Apple's iPhone in 2.007 that the mobile space rapidly changed forever. Apple's iPhonc was responsible for popularising applications with millions of consumers, helped make touchscreen interfaces the norm, and broke new ground for overall design and finish. Front here on out innovation and mobile device development began progressing faster than ever before. A study from PricewaterhouseCoopers (PwC) found that globally, 75% of mobile users come from the smartphones category and more than two-thirds of American adults now own a smartphone. While it has been said that telephones took nearly 80 years to reach half of U.S. households, Smartphoues did it in less than 10 — Mobile technology has become part and parcel of daily life for most.*

Keywords: *Hotel Technology', Alice app, Nano hotel booking, Roombler, Smartphone.*

I.   Related Works

In the past few years, mobile technology has shaken up many industries including travel and hospitality unlike any other innovation in quite some time. As mobile technology has become firmly embedded into our everyday and ubiquitous in everything we do. guests are now a more self-sufficient bunch and more and more guests want control over their hotel experiences along with real time personalimtion. Gone are the days when offering Wi-Fi at a hotel was enough; travellers are booking hotels.. finding travel information. and controlling every detail of their trips from their smartphones and tablets. As a result, guests now expect the same comforts and conveniences when away from home and expect to see mobile technology integrated into their hotel experiences, "Travellers are setting standards across the globe when it comes to leveraging the latest mobile services. Not only do travellers have the highest rates of smartphone adoption, they're also doing more with their devices like booking, payments and check-ins, Their expectations for intelligent, personal experiences via mobile are high and continue to rise. Travellers are setting the bar for mobile services and will drive new innovations in the travel industry and beyond", Clinton Anderson, Senior VP Traveller Experience Sabre Travel Network.

But with the dawn of the new mobile traveller many hotels have found quickly themselves left behind and in the dark ages where their technology set-up is concerned. Legacy systems, that are tired, worn and well past their sell by date are no match for the demands of the new mobile generation. They are no longer a viable technology solution in an ever-competitive environment. However, while the consumer is mobile savvy, business are beginning to integrate mobile solutions into their business practices allowing for better customer service, and adding a competitive advantage. The hospitality industry is particularly well positioned to use mobile technology to enhance the guest experience, promote onsite and local services, increase revenues and improve operational efficiency.

Mobile technology allows hoteliers to provide guests with a certain degree of control over their stay such as self-serve check-in, checkout, room access and atmosphere controls, such as lighting and heating, and some offer home away from home entertainment options. More importantly mobile technology enables hoteliers to transform the way they connect and engage with hotel guests by helping then to better managing the guest experience and relationship. It allows management to proactively strategize in order to create fluid two-way communication with guests for improved hospitality brand perception. With mobile technology hoteliers can automatically collate pertinent guest information that can then be used io personalise the guest experience — such as offering discounts to

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favourite services or hotel restaurants, room upsell options. alternative check-in and out times etc. This personalised level of service resonates with guests, helping hotels to build a connection with the guests leading to long-term loyalty. And its not just all about the guest. Cloud and mobile technologies have the added advantage of substantially cutting operational costs, they are reliable and secure, and are flexible, offering remote access, anytime. anywhere. Mobile technology enables hoteliers to empower employees, manage day-to-day operations more effectively; it helps meet escalating guest expectations and serve guests better by providing greater immediacy and personal engagemen tThere is no doubt in saying that investing in mobile technology can substantially boost the customer experience. increase revenues and productivity, cut costs while providing your hotel with a competitive advantage. Organisations that aren't actively making use of newer mobile technology will find themselves increasingly struggling to compete as their competitors capitalise on the advantages that the technology offers,

2.1 The Evolution Of Hotel Technology-From Legacy To Mobility

Before the 60s, guests were lucky enough to have air-con. possibly, complimentary in-room tea and coffee facilities not to mention an in-room TV! The industry itself had launched the first automated electronic reservation system and the first toll-free reservation number. American Express had introduced us to the idea of portable, flexible credit! This was all before, hotel technology was even a thing.

The 1960s — 24 Hour Room Service + Mini-Bars: The 1960s itself was dominated by wars. civil rights and assassinations but it was also a decade that brought us the Beatles and began a space race that ended in a moon landing! In the hotel world. Inter-Continental was an industry first to introduce a number of new amenities. such as retractable drying lines in guest showers, ice and vending machines in guest corridors and business lounges. Travelodge debuted wheelchair-accessible rooms and Westin was the first hotel chain to implement 24-hour room service. But the minibar was probably one of the most fascinating things to be introduced in the 1960s; created by the German company. Siegas, it was rapidly adopted by many luxurious hotels and became an expected perk at high-end chains. Despite the high mark up (even then!), guests indulged on the snacks and beverages on offer. However it wasn't really until the 1970s that the mini-bar went mainstream; when Hilton Hong Kong decided (as a trial) to stock its minibar with alcohol they literally saw sales increase by 500% overnight. With the possibility of creating a new and effective ancillary revenue stream, other hotels began to quickly follow suit.

The 1970s — In-Room TV + Concierge services: Television sets may have made an appearance in hotel rooms in the 1950s but it was in the 1970s, with the permanence of color, that TV saw significant changes. It was the decade that introduced us to Dallas and TvI*A*S*H., the ESPN channel and premiered shows such as SNL and Good Morning America. As television grew in sophistication so did the demand for its service; the Sheraton-Anaheim was the first to offer free in-room movies in 1973; this was then closely followed by two hotels in Florida who were the first to offer HBO, and a year later, both Showtime and The Movie Channel made their debut.

By mid-1970s we began to see the start of branded amenities being introduced; Four Seasons offered their own. name-brand shampoo! Hyatt was an industry first when it opened its Regency Club; a concierge club level that provides the ultimate in VIP services, and Days Inn established the first seniors program.

The 1980s — PCs, Reservation Systems, In-room Phones + Keycards: However, it was in the 1980s that we all started to get a little bit more technical; if it wasn't for a number of technologies that got their start in the 1980s, life and work as we know it today might be a little different! It was in July of 1980 when IBM took the PC out of a niche market and put it mainstream. While it might have had a starting price tag of $1,565 in the early days, by the end of the '80s, the world was in the midst of the PC revolution. Apple announced The Macintosh in 1983, and in the same year. Motorola came to the market with its version of the cellphone. Microsoft launched in 1985 and to round off the list of advancements for the decade the concept of the World Wide Web f the Internet was introduced.

But it wasn't just the computer giants (as we know them today) that were making significant changes. hotels were also making some sizable technological advancements of their own. In 1983. Westin was the first major hotel company to offer reservations and checkout using major credit cards, and in 1986 Days Inn managed to create and provide an interactive reservations system capability of connecting **all of its** hotels. In the same year, Teledex Corp introduced the first

telephone designed specifically for hotel guestroom& VingCard, now ASSA ABLOY. invented the optical electronic key card and Holiday Inn was the first to offer a centralized travel agent commission system_

The 1990s — Cellphones, Laptops, Internet. Websites ± Online Booking: Following the technological developments of the 1980's, IT became a major global industry. By the mid-1990s, computers had become an indispensable part of everyday life; they were standard in most workplaces and computer skills were considered essential in many occupations. In a short space of time offices took on a new form, going from 100% computer-free to becoming a deeply embedded component of the daily grind, And while the advent of computers in the workplace made many operations faster and more efficient, it was the huge potential that came with the Internet that turned out to a game changer_ Throughout the 90s, it proved to be one of the greatest communication advances of our century and quickly became embedded into the fabric of society. By creating a direct line of communication between people all over the world, vast amounts of information could be easily accessed and shared. Search engines, both Yahoo and Google came into being, and suddenly the world became much smaller and more accessible,

Hyatt Hotels and Promus Hotel Corporation were the first to take advantage of the Web by launching their very own wcbsitcs in 1994. The first online hotel catalogue, [Travelweb.com,](Travelweb.com) also made its debut in the same year and in 1995 Choice Hotels International and Proms were the first to offer guests real-time access to central reservations. Choice and Holiday Inn were the first to introduce online booking capability — and again, it was Choice who was the first chain to trial in-room PCs as a standard guest amenity_

With computers well established, society hooked on the Internet and mobile devices fast becoming the norm in the hands of average consumers, one last development would launch before the end of the decade.. ahead of Y21((remember that hype!)… Wi-Fi! In August 1999, six companies came together to create the Wireless Ethernet Compatibility Alliance (WECA), and ahead of the 2000's, it was a development that was about to "inspire a mania unseen since the days of the internet boom".

The 2000s — Wi-Fit, 'Phone, Apps + Mobile technology: The 2000s saw radical changes in how technology developed (is still developed) and also in how it is used and is being adopted by companies and consumers, In the early 2000s, dependence on the laptop as a necessary tool for work increased and mobile phones became the device to have with you on the go. While hotel Wi-Fi began to steadily increase in 2003 with more than 6,000 hotels making it available to guests it was the release of the iPhone in 2007 that marked a change in views on technology and mobile. It became the world's first advanced smartphone, offering customer friendly features such as a touch screen interface and a virtual keyboard. With the addition of an operating system and ability to access apps, cellphones quickly become the primary [mobile] device of use.

In 2009, Tatelity introduced the first mobile hotel app for guest service and operational enhancements. In 2010, Apple again came to the market with a revolutionary product, the iPad. Not so long after, The Plaza Hotel in NYC was the first to set new standards for hospitality technology trend adoption by providing an in-room iPad for guest use. In 2012, Conrad Hotels & Resorts, through a partnership with Intelity, introduced the first service-enabled hotel brand app; this development caused the industry to question and change its view of mobile technology as a bridge to guests.

In 2010 it was estimated that there were 62million smartphones in the US, by 2017 it is expected that the numbers will surpass 200 million smartphone users. nearly 65% of the country's total population. I'm not sure anyone could have predicated the overwhelming rate that smartphones were adopted and how they have gone on to shape our everyday lives_ Our phones have become an extension of our lives. we now have instant access to practically everything; from the latest news, to online shopping, banking services, live streaming, mapping and geo-location apps,, the ability the control heating, ventilation, security via home automation systems, to the less rudimentary activities such as email, chats, social sharing, booking services such as taxis, and/or reservations. We have become so familiar with this 'new' way of doing things that the majority of businesses have had to adapt to meet our new consumer needs.In the 1960s, the height of luxury expected from a hotel visit included air-con.

complimentary in-roorn tea and coffee facilities, a mini-bar, and an in-room TV (still black and white), Fast forward 5 decades later, it is not longer necessary to check-in at the front dest, you can do that with your mobile device. Mobile keys are more convenient and more desired by guests. Forget Showtime and The Movie Channel, you can now stream your

preferred shows from the apps on your phone. Similarly, if you need any guest services, you can just get in witch with staff member via chat or the hotel's app —no need to pick up the in-room phone. And while the in-room coffee and mini bar may still be there, more and more hotels are opting to offer baristas and pantry style canteens to create a more social atmosphere. Step into the back office and the scene is slowly changing. While hotels were full of enthusiasm up until the 90s creating reservation systems and websites, many (not all) have been slow to adapt to newer hotel technology to make their operational lives so much easier and in the long run, financially better off, Those that have embraced the new mobile SaaS service have reaped the operational efficiencies: employees can process orders, bookings, payments, and check customers in and out, whenever, wherever. With communication now occurring more efficiently across departments, hotel mobility allows employees to provide services to guest anytime, anywhere leading to increased guest satisfaction.

While we have reached 2016. (and the end of our bldg) the hotel technology developments continue on. This year in Japan, the Henn-rta Hotel, the world's first robot hotelopened, furthering conversations of automations place within hotel technology: new smart hotels are here, the concept of IoT is being brandished about. With 2020 fast approaching. we wonder what additional technological advancements will happen before the end of this decade!

III. PROPOSED SYSTEM

Fromon-premiseto cloud computing, things are shaking up in the world of hotel property management softw are. As wearable tech trends begin to revolutionize luxury and resort hotels. mobile capabilities are also making it possible for hotel staff to manage their property's operations away from the front desk,


With the new reliance on mobile, hotel management software apps are growing in popularity with many hospitality property management and vacation rental software solutions cashing in on mobile capabilities. But instead of simply listing popular hotel software with mobile functionality, I've found four hotel management apps if you wish to operate your property on your smartphone, tablet, or even srnartwatch, ALICE, features both department specific apps (Staff, Guest, and Concierge) as well as an overarching suite you can use for better operating efficiency across your property. With ALICE Staff, users can expect features like internal messaging to keep in touch with staff members as well as the ability manage and assign tickets. ALICE Concierge is helpful for those at the front desk. enabling employees to integrate your PMS system to access important guest information and allowing you to track all requests within one system, including incidents, reservations, transportation services. wake up calls. and more.

What's most exciting about this app is its property. Nano Hotel Booking Guest component, where guests can voice accomplishes much of the same work as their needs and desires, giving them real- traditional desktop-based solutions_ time status updates and notification on the including a calendar that informs users of progress of a particular service. Guest room occupancies and vacancies as well as tracking metrics are also available on all how many rooms will be freed up in a set requests and reservations_ period of time, ALICEisavailablefor Rooms undergoing construction can also be both iOS and Android operating systems.marked off, Users additionally have the option to craft seasonal prices and record Cost: Pricing information for ALICE isn't each room's appliances, such as a listed publicly, but you can contact refrigerator, T. or telephone, customer service for a quote here.

3.2 **Nano Hotel Booking And Property Management**
Nano Hotel Booking and Property Management is compatible with iOS systems.
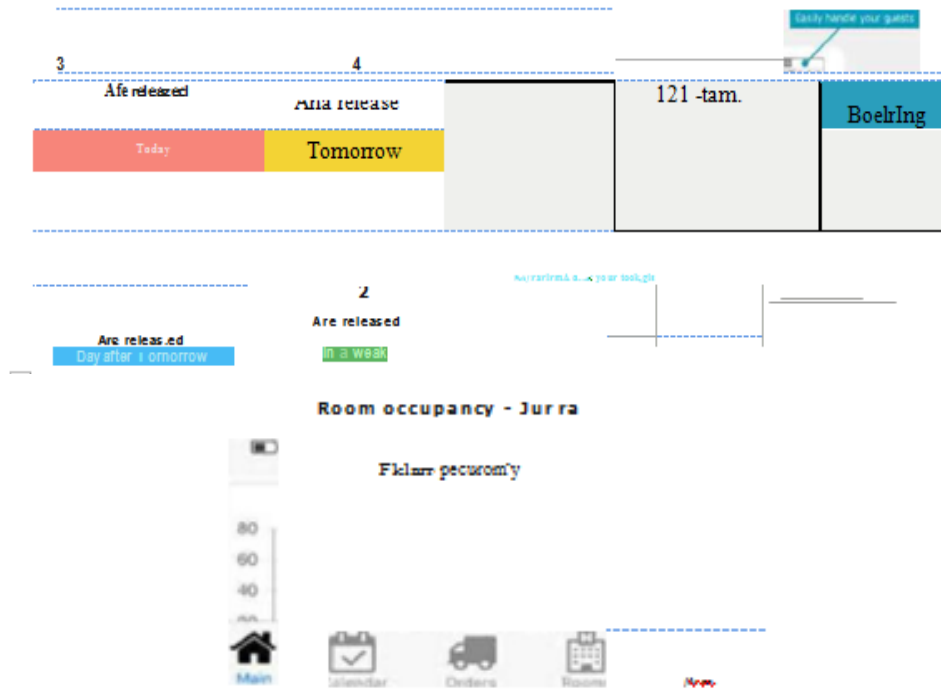
Erziman Asaliyev's hotel management app is a great option for hotel managers on the Users can also integrate online travel sites, go who still want to keep tabs on their such as Booking_com and Expedia, with more coming down the pipeline, including Airbnb. And if these features aren't convincing enough, Roombler assures no training is necessary, hopefully meaning users won't experience the steep learning curve that often comes with traditional hotel management software.

Roombler operates on i0S.

Cost: Roombler can be paid for in both monthly and yearly installments_ with a yearly commitment promising a 2.0% discount. This software comes in four packages: Micro (€0/month or E0/year) for up to two rooms, Small (E24/month or €19/year) for up to five rooms, Medium (E61/month or E49/year) for up to 10 rooms, and Large (€124/month or €99/year) for up to 40 rooms. Larger packages come with more features, such as a control panel, web booking_ and more OTA channels.
A free I 5-day trial is available for those interested.

3.4tourismart
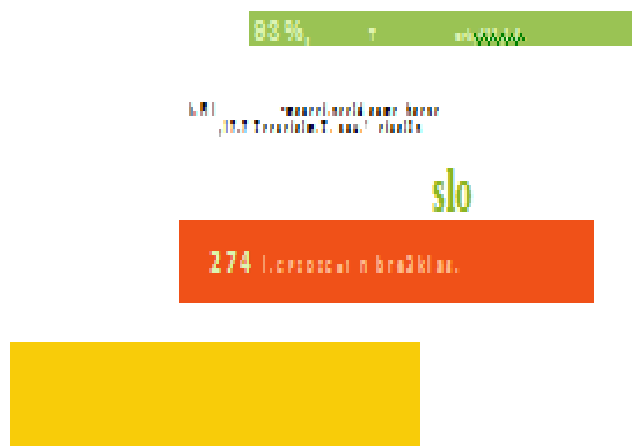
Is Fl I -mcarri.nrrld camr hcrxr ,17.7 Trrericlm.T. sou.' ˙riec1In˙ tourismart has the capabilities of any leading hospitality property management software, except this option can fit in the palm of your hand. Features include real- time communication where hoteliers can speak with guests to help facilitate room service. Guest profiling is also available_ which can help hoteliers track their guests preferences and even predict their future purchases or requests. eputation management and push notifications round out tourismart's standout features, enabling you to provide better service to prevent a bad review and alert guests to potential deals and discounts at your property, such as a discount spa day or half off drinks at the hotel bar. Touismart operates with both Android and 105. Cost: tourismart conies in three basic packages that ascend in price and number of rooms. For up to 35 rooms (recommended boutique hotels, suites, and traditional guesthouses), users will pay €25/month. For up to 100 rooms (recommended for leisure resorts, luxury apartments,. and small city hotels), users will pay ˙E130/month. For more than 100 rooms (recommended for luxury and all-inclusive hotels, independent, or part of a large hotel chain), users can expect to pay €240/month. If you need something beyond the basic package, you can submit a pricing enquiry here_

IV. Hotel Technology: Offering Guests A Choice In Service

'Hospitalitem= is a Latin word meaning "friendliness to guests," so it's not hard to see where the word hospitality comes from. Hospitality involves making others feel comfortable and welcome and are the foundations on which the hotel industry are built on. Since the beginning, it is thought that these long-standing traditional values can only be successfully delivered and received as a face-to-face interaction.However, Mobile hotel technology has shaken up things in the travel and hospitality industries unlike any other innovation in quite some time. While telephones took nearly 80 years to reach half of U.S. households. Smartphones did it in less than 10. Pew research estimates that 90% of Americans have cell phones; 64% of which are a smartphone of some kind. Millennia's were and sometimes still are the first to be collared as the group most likely to be mobile *l* smartphone dependant but mobile technology has been embraced by all travelling age groups due to its sheer convenience and efficiency.This rapid adoption though has caused some needless apprehension for some luxury and boutique hoteliers. For them. they believe that the very idea of mobile hotel technology entering their hotel space could undermine the human touch many travellers appreciate.

While there is no doubt that the relationship between hospitality and technology is a balancing act.. by providing guests the choice, technology can actually add value, convenience and personalization to their stay resulting in improved guest satisfaction, loyalty *and* increased revenues.Newer mobile hotel technologies are not meant as a replacement or substitute for hotel staff in any way but rather to compliment and enhance existing hotel services allowing your staff to further service guests. Offering a choice of service has been a game changer in other industries such as the banking, healthcare_ retail, and more. All have embraced advances in technology: Airlines allow travellers to drop bags, check-in, print boarding passes prior to flying and also give then the option to control the screen, seat and menu in advance, According to SITA's Passenger IT Trends Survey 2016, 57% of all passengers use self-service technologies for check-in. The traditional service employee check-in promoted long lines, disgruntled customers and large staffing levels to complete repetitive tasks but self-service has brought greater efficiency, convenience and shorter wait times for all passengers!

7 Reasons Your Hotel Should Have A Mobile Website App
- This year 2,230,000,000 people will regularly connect to the internet with a mobile phone
- 32 % of worldwide hotel web access in December 2013 was with a mobile phone. In Latin America the numbers are rapidly increasing and today represent 2.4 %.
3, 1 out of 4 Smartphone users books a hotel with his phone when he plans a trip
4. The sales of tablets in South America increased by 171 °A between the 2nd trimester of 2012 and the 2nd trimester of 2013
5. 21 % of people don't return to a page when they try to look at it with a Smartphorie and the page is not set up for Smartphones
6. Next year North Americans will spend 39,5 thousand million on travel booked with a mobile phone. They are the main tourists in Latin American countries.
7. 72 % of travelers say that the option to book a hotel through a mobile device is a **good** thing

V. Analysis Of The Research Results

It is empirical to note that from the financial results above, it could be concluded that the Mandarin Oriental Hotel financial growth was as a result of the implementation of the Smartphone application that drove the mobile marketing and sales revenues to be higher than in the previous years. Mandarin Oriental Hotels case then draws from similar trends in other hotels such as the Hilton Hotel, Intercontinental Hotel whose annual financial reports for the same period posted positive returns after the implementation of their Smartphone applications especially for reservation,

VI.   Research Conclusion

The development of mobile applications by majority of hotels may seem al so simple, however, when it comes to the actual investment in the research and development that would go into such a venture, a hotel has to evaluate all the return-on-investment prospects before venturing into one (Hughes, 2009; Wang & Wang, 2.010}. Mobile applications have however been one of the greatest tools for customer base increase especially for big hotels such as the Hilton Hotel that posted 10 0,00 0 reservations through the mobile applications (Heller, 2011). It can be concluded then that the cost of developing a mobile application for the marketing of hotels is a viable venture that not only is cost saving but also one that offers efficiency and effectiveness in generating revenues from customers.

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