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Transformation of Robot Automated Food Service (RAFS) in the Perspective of Resource Change Management at Grand Sahid Jaya Hotel (Study at Grand Sahid Jaya Hotel Jakarta)



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ABSTRACT: The Fourth Industrial Revolution has triggered the use of new technologies across various sectors, including the hospitality industry. Digitalization in the hospitality industry aims to provide convenience and comfort for guests while addressing increasingly complex human resource challenges. One of the innovations is the use of robots for food service. This research aims to explore the transformation of robot automated food service at Hotel Grand Sahid Jaya Jakarta from the perspective of Resource-Based Theory. This study uses a qualitative approach with data collection techniques through observation and interviews with three key informants who have important roles in hotel management and an assessor who observes the Indonesian hospitality industry as a whole, along with the role of technology in the industry. The collected data is analyzed to understand how digital transformation through automated food service affects change management in hotel resources. The results of the study indicate that the implementation of robots in food service at Hotel Grand Sahid Jaya Jakarta provides several benefits, including increased operational efficiency, reduced labor costs, and improved guest satisfaction through faster and more hygienic service. However, some challenges were faced, such as resistance from employees who are worried about losing their jobs and the lack of a human touch in robot services that can only be provided by humans. The conclusion of this research is that the transformation of robot automated food service at Hotel Grand Sahid Jaya Jakarta has not yet provided added value to the hotel, thus requiring an effective change management strategy to overcome resistance and ensure a harmonious integration between technology and human labor. Moreover, the use of robots should be seen as a tool to enhance service quality and efficiency, not as a replacement for human labor.

KEYWORDS: Automatic Food Service, Hospitality Industry, Change Management, Fourth Industrial Revolution, VRIO Framework

I. INTRODUCTION

The industrial revolution 4.0 that has occurred since the 21st century until now has triggered the emergence and use of new technologies that affect many aspects of people's lives. Seeing the maturity of the industrial revolution 4.0, some visionaries began to discuss the industrial revolution 5.0, this is because industry 4.0 does not occur naturally like the previous indus trial revolution, it tends to be forced without adequate vision. To call a concept an industrial revolution, it is necessary to bro adly observe changes in both industry, business and society, it is clear that the industrial revolution is still under development, it needs to be combined with industry 5.0 to become a better concept (Demir & Cicibaş, 2019).

One of the aspects affected by the industrial revolution is technology in the tourism industry. The impact in this industry includes changes in goods and service providers such as tourist attractions, lodging, restaurants, travel services, and other providers. Technological changes in tourism such as digital transformation in the process of providing goods and services (Ahmadian et al., 2023). For example, there are now many changes in transaction styles and consumer behavior that seek information and use online-based transactions rather than coming in person or offline.

These changes encourage tourism service providers to improve their capabilities and master skills on the use of digital technology. These changes have also led to digital transformation in all fields of tourism service providers, one of which is hospitality. Hotels are one of the tourism service providers that must implement digital transformation to meet consumer needs in this digital era. In addition to meeting consumer needs, digital transformation is also needed since the Covid-19 pandemic in early 2020 which made the tourism business including hospitality sluggish and even decreased.

Digitalization in the hospitality industry aims to provide convenience and comfort for all hotel guests to access information and make transactions anytime and anywhere without having to meet face to face to minimize direct contact. This has started since the emergence of internet technology with the booking process through the hotel website and its influence is getting bigger when an online-travel-agent (OTA) appears which further facilitates the hotel search process by providing hotel options according to the wishes of prospective guests to the booking and payment process. With the use of hotel websites or mobile applications from OTAs, it is easier for hotel guests to carry out transactions such as the check-in process, payment to check-out, this makes it easier for consumers to enjoy hotel services.

The hospitality industry faces future challenges whose phenomena have begun to occur, this was conveyed by Mrs. Christiane D.Wasfy, General Manager of Ciputra World Hotel Surabaya, in her presentation at the Ciputra University Surabaya graduation ceremony in October 2018 about hotel digitalization related to human resource issues faced by the hospitality industry. The challenge of human resources in several fields of work today is the difficulty of finding prospective workers who are suitable and willing to work in the required positions. Although some hotels have carried out new strategies as has been done by PT Swiss-BelHotel International Indonesia as a regional branch office for Indonesia, Singapore, Malaysia, China and Australia by providing opportunities for students of the Faculty of Tourism, Ciputra University Surabaya to conduct practical lectures and research activities through the signing of a cooperation agreement in August 2015. This is one of the strategies to save the cost of finding human resources by conducting seeding during real work practice.

Other studies have also suggested that with an increasingly older population that is no longer productive, today's younger generation has a tendency to delay marriage and young couples are reluctant to have children (Kuo et al., 2017). This has led to a slowdown in the population growth rate, which is predicted to continue to fall to zero by 2036 (Tjiptoherijanto, 2001). There is no appropriate strategy to address the challenge of human resource scarcity, such as non-permanent job vacancies in hotels, less flexible working hours and workplace conditions that have become less attractive to today's youth.

The development of the digitalization era increasingly promises comfort and a new experience for every hotel guest by presenting robots to interact with guests (Ivanov & Webster, 2017). June 3, 2011 saw the arrival of robot technology in the US hospitality industry, with New York's Yotel Hotel naming its robot "Yobot" for storing guests' luggage in a storage room. In 2014, hotels in the western United States followed suit by presenting "Botlr" at Aloft Cupertino Hotel in California to deliver guests' luggage to their rooms (Yu, 2020). In Asia, Japan pioneered the front office robot in three different physical forms that are able to communicate in any foreign language to welcome guests and help guests check in, there is also a robot in charge of helping guests to deliver luggage to the room, and a robot in the room that helps guests to find out the necessary information related to the hotel and services needed by guests (Alexis, 2017). Hotel Henn Na built in July 2015 as part of the Huis Ten Bosch complex in Nagasaki Japan became the world's first hotel with more than 80 robots ready to serve all of its guests' needs (Northfield, 2015; Osawa et al., 2017b; Pierce, 2015) so it is referred to as a "strange hotel" (Northfield, 2015).

This was followed by China with the Smart LYZ Hotel in Chengdu in January 2018 and Alibaba Group by building the FlyZoo Hotel in Hangzhuo China which carries the same concept of a hotel served entirely by robots in November 2018 (Liu et al., 2019; Lo et al., 2019). The level of readiness of countries in Asia to adopt robot technology in the hospitality industry is the highest, such as China (Alexis, 2017), however, complaints about the quality of services using technological innovations have begun to appear, caused by the failure of the robot to recognize the voice of the guest when sleeping, which is considered a service request, and the failure to copy the guest's passport documents during check-in (Bhimasta & Kuo, 2019). This is not only due to the low ability of robots to perform their functions, but also due to the difference in perceptions and expectations of hotel guests when interacting with robots with the initial objectives of Hotel Henn Na management in implementing robot technology. The waiting period for hotel guests in Indonesia regarding the presence of services using robot technology in hotels has ended on October 5, 2021. PT Hotel Sahid Jaya Internasional, Tbk (SHID) launched the use of automated food service in the Puri Agung Grand Ballroom of the Grand Sahid Jaya Hotel Jakarta. The renovation of the Puri Agung Grand Ballroom, which has been running for 6 months, has turned the ballroom into a large room that can be used for various events such as seminars, weddings, exhibitions and other events. The renovation is not only to fulfill market demand for new normal facilities during a pandemic that demands hygiene, security, and energy saving but also prioritizes technological innovations that are tailored to The needs of guests so that they can carry out good and strict health protocols.

As a pioneer of the presence of robotic services in Indonesian hotels, the management of the Grand Sahid Jaya Jakarta Hotel hopes that it can be a new experience for hotel guests and increase their satisfaction. The provision of automated food service is expected to provide a sense of security during a pandemic that requires maintaining distance and improving food hygiene for guests and reducing the potential for food waste. Hotel guests can accept the presence of robots in services within the hotel, this is due to the robot's ability to provide information in various languages with operational time that is not limited to operational

hours (Alexis, 2017).

As a company, SHID also has a business desire to develop sustainably by utilizing its resources. The theoretical basis that can be used is Resource Based Theory (RBT) as a form of refinement of the Resource Based View (RBV) proposed by Jay B. Barney in 1991. RBT continues to develop from a nascent beginner theory to one of the powerful theories in organizational understanding (Jay B. Barney et al., 2011). After 20 years since its introduction, RBT has reached maturity as a theory, this is because many use RBT rather than RBV. RBV has an important role for corporate strategy management, where corporate RBV became an important part of strategic management theory in the mid-1980s. Strategic management is a multi-paradigmatic science which explains that RBV is a new paradigm, although it does not dominate because there are other paradigms (Kantardjieva, 2015).

The use of RBV has become very popular and has become a new paradigm that was rumored to replace organizational theory in strategic management. In practice, this old and new paradigm can complement each other because there is at least one point of difference between RBV and organizational theory (Conner in (Kantardjieva, 2015)). RBV with a new existence, advancing with a more dynamic view and knowledge-based view, is believed to be a new theory of the company, but RBV cannot be a single theory in strategic management which is a multi-paradigmatic science (Kantardjieva, 2015).

An overview of the characteristics of resource strategies that can support strategic management practices, increase business capacity and competence to increase competitive advantage through the use of physical and non-physical resources owned (Lubis, 2022). This resource grouping can be done through indicators in the RBV approach, the use of RBV focuses on the company's incomparable and special resources (Maijanen, 2020).

In the RBV concept, resources refer to the VRIN framework (Valuable, Rare, Inimitable, and non-substitutability), which states that organizations will achieve sustainable competitive advantage if they have resources that are valuable, rare and difficult to imitate, and there are no substitutes (Jay B Barney, 2007). However, the VRIN framework was refined again with the VRIO Framework by incorporating non-substitutability into inimitable (resources that cannot be imitated) and adding organizational processes as a means to exploit resource potential (J B Barney & Hesterly, 2012). Thus, the VRIO framework consists of Valuable, Rare, Inimitable, and Organizations.

The use of VRIO framework takes an important role in RBT because Sustained Competitive Advantage (SCA) or sustainable competitive advantage can only be generated when it allows for the exploitation of valuable, rare, inimitable, an d organizational resources of the company (VRIO) (Kozlenkova et al., 2014). Broadly speaking, a company has a sustainable competitive advantage if competitors cannot imitate and duplicate the implementation based on certain resources owned by the company.

One of the valuable, rare or unique, and difficult to replicate resources of the Grand Sahid Jaya Jakarta Hotel is the implementation of automated food service which is now still the first pioneer in the use of robots for hotel services in Indonesia. This will be a sustainable competitive advantage for SHID if it is able to develop automated food service to be the only one in Indonesia and continue to innovate technology so that it does not lag behind technological developments and is difficult to imitate or duplicate by other competitors. So that consumers will be indoctrinated that automated food service is only owned by SHID at Grand Sahid Jaya Hotel Jakarta.

The use of robots as food serve in addition to having advantages also has disadvantages because if robotic transformation occurs massively there is a concern that human labor will lose its job by being replaced by robots (Alexis, 2017) should not happen because robots are here to help humans do their jobs better (Osawa et al., 2017a, 2017b). In addition to the previous reason that there is still a belief from some hotel guests that the service provided by robots is considered less or not personalized (Alexis, 2017). Although humans have many limitations, in a five-star hotel, guests expect a lot of human touches as part of the service they have paid for.

To create a loyal customer base, hospitality company managers need to try to identify factors that contribute to meeting the needs of their customers (Kharenko et al., 2023). Behavioral loyalty is when customers continue to buy or use a particular product, service or brand. Loyalty is related to repurchase activity or reuse of services based on customer desires based on attitudes or preferences (Wonganawat et al., 2022).

Finding factors in the automated food service needs to be done by SHID to improve services according to the needs of hotel guests and continuous technological innovation. SHID also needs to improve service innovation and service quality to increase service usage by consumers. Service innovation can play an important role to increase customer loyalty in the hospitality sector (Wonganawat et al., 2022).

Service innovation can be a new customer interaction channel, distribution system or technology concept or a combination of the three (Hartono, 2013). Service innovation is not enough to increase loyalty among customers, but it is also necessary to introduce service quality to improve services (Nian et al., 2019). The purpose of better service quality is given to customers so that

customers can repurchase the same service from the same hotel. This has the potential to increase loyalty behavior among customers (Wonganawat et al., 2022).

Therefore, SHID as a company must convince guests that robotic transformation is not used to replace human labor and humanized services. But the use of robots for services in hotels is used to assist human work in hotels to be faster, more effective and efficient in providing services to guests. So that the improvement of services to hotel guests can be achieved with innovation in the field of technology needed by hotel guests as consumers. Based on the above background for the development of robotic transformation at the Grand Sahid Jaya Jakarta Hotel, this research is expected to describe several things, including the strategic management that SHID needs to do for automated food service at the Grand Sahid Jaya Jakarta Hotel in meeting guest needs using the RBT approach through the VRIO framework, How SHID achieves sustainable competitive advantage by exploiting existing potential resources to support automated food service. Technological and service innovations that need to be carried out to support automated food services are increasingly developing into technologies that can meet guest needs more dynamically according to the development of industry.

II. THEORETICAL REVIEW

The theoretical basis used in this research is Review Based Theory (RBT) as a reference for the strategic management of companies that oversee the Grand Sahid Jaya Jakarta Hotel. Before RBT was first developed, RBV by Jay Barney in 1991, this theory underwent refinement or the term more mature form into Review Based Theory (Jay B. Barney et al., 2011). In the 20 years since RBT was introduced, it has reached maturity as a theory, this is because many studies use RBT rather than RBV.

The use of RBV theory has become very popular and has become a new paradigm that was rumored to replace organizational theory in strategic management. In practice, the old and new paradigms can complement each other because there is at least one point of difference between RBV and organizational theory (Conner in (Kantardjieva, 2015)). RBV theory with a new existence with a dynamic view and knowledge-based view can be a new theory of the company but RBV cannot be a single theory in strategic management which is a multi-paradigmatic science (Kantardjieva, 2015).

In the managerial implications of strategic management, there are 3 approaches included in it, namely the Resource-based view (RBV), Knowledge-based view (KBV), and Dynamic capability view (DCV). After its initial appearance, the RBV theory over the years has evolved in a more dynamic direction and this approach not only emphasizes the role of resources but also how to exploit them (Maijanen, 2020).

According to the RBT approach, a company is a set of strategic and productive resources that are unique, rare, complex, complementary and difficult for competitors to imitate which can be utilized as an element to maintain its competitive strategy. A company's competitive advantage must be based on specific resources that are a barrier to copying activities and threats from substitute products or company services (Jay B. Barney et al., 2011). In relation to the opinions of experts, RBT is the company's wealth, both physical and non-physical, where to be able to achieve sustainable competitive advantage, resources must have economic added value which has characteristics that are difficult to imitate and not easy to replace. Company resources have been classified into six strategic resources, namely physical, reputation, organizational, financial, human intellectual and technology. The entrepreneurial sector is considered a human intellectual resource as firms strive to gain competitive advantage and adopt technological and non-technological innovations (Bakar & Ahmad, 2010).

In the RBT concept, the focus of attention is the issue of internal resources. The success of an organization is determined by internal resources which are grouped into 3 categories, namely the first physical resources, including all plants, equipment, locations, technology, and raw materials (J. Barney, 1991). Second, human resources, including all employees, along with their training, experience, intelligence, knowledge, skills and abilities. Third, organizational resources, including corporate structure, planning processes, information systems, patents, trademarks, copyrights, databases and so on. Decisions about the organizational design and competitive strategy of a company are very important to gain a competitive advantage and to improve company performance. The relationship between organizational structure, competitive strategy, and firm performance is usually analyzed using a contingency approach (Pertusa-Ortega et al., 2010).

Resource-based theory of sustainable competitive advantage is a powerful and concise source of information for work related to RBT. The concept of RBT is on the management of human resources and technology concerning strategic managerial within the firm (Jay B Barney, 2007). The RBT approach to the concept of transitional identity therefore draws attention to whether this transitional identity helps organizations preserve or even enhance valuable, rare, inimitable and irreplaceable aspects of identity (Jay B. Barney et al., 2011). The description of identity referred to in the above theory is about the various resources owned by the company that have valuable, rare, imperfectly replicable, irreplaceable properties in the historical and social context and capabilities of the company. This theory will also discuss how to analyze the company's capabilities and competitive resource

management (Jay B Barney, 2007).

The concept of RBT refers to the VRIN framework (Valuable, Rare, Inimitable, and non-substitutability), which states that organizations will achieve sustainable competitive advantage if they have resources that are valuable, rare, difficult to imitate and there is no substitute (Jay B Barney, 2007). However, the VRIN framework was refined again with the VRIO Framework by incorporating non-substitutability into Inimitable (resources that cannot be imitated) and adding organizational processes as a means to exploit resource potential (Barney and Hesterly, 2012). The use of the VRIO framework takes an important role in RBT because Sustained Competitive Advantage (SCA) can only be generated when it allows for the exploitation of valuable, rare, inimitable and organizational resources (VRIO) (Kozlenkova et al., 2014). Broadly speaking, the company has a sustainable competitive advantage if competitors cannot imitate and duplicate the implementation based on certain resources owned by the company.

Service quality is a measure of how an organization delivers its services compared to the expectations of its customers. Service quality is therefore largely based on customer expectations (Wonganawat et al., 2022). High service quality leads to better customer expectations, but conversely low service quality can have a negative effect on customer expectations. Likewise with products, customers always compare products with expectations, if the quality of the product is above expectations, it can increase customer satisfaction, otherwise it can reduce customer satisfaction (Wonganawat et al., 2022). There are even those who switch to other organizations' products and services or in this case other hotels.

Therefore, SHID as a company must convince guests that robotic transformation is not used to replace human labor and humanized services. But the use of robots for services in hotels is used to assist human work in hotels to be faster, more effective and efficient in providing services to guests. So that the improvement of services to hotel guests can be achieved with innovation in the field of technology needed by hotel guests as consumers.



Figure 1. Research framework for automated food service at Grand Sahid Jaya Hotel Jakarta

On October 5, 2021 PT. Hotel Sahid Jaya Internasional, Tbk launched the use of automated food service at the Puri Agung Grand Ballroom of the Grand Sahid Jaya Hotel Jakarta. This launch not only aims to improve hotel services but also to fulfill market demand for new normal facilities during a pandemic that demands hygiene, safety and energy saving but also prioritizes technological innovation tailored to the needs of guests so that they can carry out good and strict health protocols. The provision of automated food service is expected to provide a sense of security during a pandemic that requires maintaining distance and improving food hygiene for guests and reducing the potential for food waste.

With robot technology, the automated food service owned by Grand Sahid Jaya Hotel is expected to have added value to increase the interest of hotel guests. The focus of development is not only on automated food service but also the exploration of

resources owned by the company. Exploration of potential resources owned can be used by companies to support automated food service services for the better. The potential resources selected by SHID consist of tangible resources, intangible resources, and in accordance with organizational capabilities (Jay B. Barney et al., 2011). These potential resources are owned by the company so that they can be used to support the development of automated food services at Grand Sahid Jaya Hotel Jakarta. This service improvement is important to increase the interest of hotel guests and develop the hotel business.

Improving service innovation and service quality is carried out in conjunction with resource exploration, with the aim that automated food service services can meet guest needs. The development of more dynamic automated food service will increase guest interest in the hotel, so that SHID can gain a sustainable competitive advantage. This analysis of owned resources is carried out with the Resource Based Theory (RBT) approach using the VRIO framework. RBT as a theory so that companies achieve sustainable competitive advantage by utilizing their resources. It is hoped that the automated food service will become a sustainable competitive advantage owned by the Grand Sahid Jaya Jakarta Hotel.

III. METHOD

This research uses a qualitative approach. Qualitative research methods do not rely on evidence based on mathematical logic, numerical principles or statistical methods. In this case, the focus of this research is the robotic transformation of automated food service services at the Grand Sahid Jaya hotel. The purpose of this dissertation research is to analyze automated food service using the RBT approach with the VRIO framework and make this service a valuable resource, rare and cannot be imitated by competitors. And the end result is that SHID as a company that houses the Grand Sahid Jaya hotel achieves a sustainable competitive advantage by exploiting its potential resources.

The qualitative data needed in this study are primary data and secondary data. Primary data is data that is directly taken at the location, namely the Grand Sahid Jaya Jakarta Hotel, the original data has not been changed or intervened by the hotel. Primary data is original data and is first collected by researchers for research purposes (Bailey in (Khuc & Tran, 2021)). In every research, scientists sketch information from the required data then process, analyze and achieve research objectives (Khuc & Tran, 2021). The data retrieved through the RBT (resources-based theory) approach focused on its internal resources and used the VRIO framework. The primary data needed in this study are:

- 1. Analysis of automated food service services at Grand Sahid Jaya Hotel Jakarta using strategic management with the RBT approach with the help of the VRIO framework.
- 2. How SHID achieves sustainable competitive advantage by exploitation of existing potential resources.

Secondly, secondary data is data that is not collected by researchers themselves and secondary data usually comes from indirect sources such as scientific journals, related research notes and other publications. Primary and secondary data are used collectively for the highest efficiency. If secondary data is data from previous research that is inherited and provides a theoretical basis for primary data, it will add updates and a better level of truth (Khuc & Tran, 2021).

The secondary data sought relates to the transformation of robots in the field of hospitality, if there are no references in the country, then international publications can be used. This is because SHID, the owner of the Grand Sahid Jaya Hotel, is the first pioneer in utilizing robots to serve and meet the needs of hotel guests.

In this study, several types of data collection techniques were used, namely observation, interview, and field documentation. Observation is one of the important research methods in social science as well as the most diverse method, it includes several types, techniques and approach.

To support the results of observations, the collection technique that researchers use in exploring primary data in this study is interview. This research consists of several stages, namely the pre-field stage, the field process stage, and the reporting stage. The following is a description of these stages:

- 1. Pre-Field Stage, at the stage where researchers make preparations before the data collection process in the field. These preparations include preparing questions in the form of a list of interview questions that will be asked to informants, scheduling interview times with informants, making initial observations to support preparation before interviews, and establishing good relations with informants. This pre-field stage has started since 2019 until early 2023.
- 2. Field Process Stage, in this field process stage is the stage where researchers collect data in the field related to the focus of researchers from field locations. In this data collection process, the author uses interview and documentation methods in the form of field notes and photos with informants. It should also be explained that this research uses semi-structured interviews. Semi-structured interview is a qualitative research approach that allows researchers to have a structured but flexible interview guide (Makri & Neely, 2021:6). In this type of interview, the researcher has a pre-arranged framework of questions, but also allows the respondent the freedom to elaborate or provide additional information deemed relevant. This approach allows the

researcher to gain a deep understanding of the research topic, while also allowing room for clarity and deeper exploration of issues that arise during the interview. As such, semi-structured interviews are a suitable technique to gain in-depth insights into respondents' perceptions, experiences and views regarding the implementation of Automated Food Service (AFS) in the context of the hospitality industry.

- 3. Data Analysis Stage, at this stage researchers transcribe interviews, and compile the data collected and arranged systematically so that it can be used as material for compiling dissertations.
- 4. The Reporting Stage is the last stage of the research, at this stage the researcher will make a report of the conclusions during the field process which will then be presented in the form of narrative text, this report will be presented in the form of a dissertation.

The informants referred to in this study have several criteria that are adjusted to the data needed in the research. The criteria are informants or sources who can answer the formulation of the problems in this study, informants involved in automated food service, or informants who are strategically responsible for this service. Informants consist of several people who can come from the same division or different divisions as long as they understand the automated food service at Grand Sahid Jaya Hotel Jakarta. In addition, informants are also taken from observers or experts in the field of hospitality who have extensive experience and knowledge related to the hospitality and food service industry and know the latest development trends in automation technology such as the use of robots.

There are 3 types of informants, namely key informants, main informants, and additional or supporting informants (Heryana & Unggul, 2018). Key informants are informants who have comprehensive information about the issues raised by researchers, key informants also understand information about the main informants. The selection of key informants is based on the unit of analysis to be studied, for example researching an organization, the key informant is the leader of the organization.

This research can also be developed through information obtained from key informants and from other elements whose numbers cannot be determined that have a connection with the research topic, namely by using the snowball technique to get more accurate results. These additional informants are also competent parties who can become the next key informants in this research.

Research instruments refer to the tools or techniques used by researchers to collect data in a study. The resources grouped above are the resources owned by the Grand Sahid Jaya Hotel Jakarta at this time for analysis purposes using the RBV approach with the VRIO framework. From the resources that have been grouped as a reference for making interview questions for the interview process. These resources can be added and subtracted if during the process of collecting data through interviews, researchers can dig deeper from informants. From this resource analysis, it is hoped that it can make automated food service a sustainable competitive advantage owned by the Grand Sahid Jaya Jakarta Hotel.

The data analysis stage is an important stage in research including qualitative research, the analysis technique used by researchers is triangulation. Data analysis in this study used the Miles and Hubermen model method. The data collection process carried out three important activities including data reduction (data reduction), data presentation (data display), conclusion drawing, and verification (Miles, 1994).

IV. RESULTS AND DISCUSSION

After the interviews were conducted, the recordings were transcribed and processed into codes that will help the researcher to analyze how AFS operates in the field and the integration with theories such as RBV and Change Management. To maintain objectivity, every quote in this research will refer to the transcript and the reference will be in the form of a code positioned at the end of the quote in a bracketed symbol "()", for example:

Based on the interview with Informant 2, he stated that the implementation of robot technology in the hospitality industry will greatly help hotel services, especially during a pandemic. Informant 2 stated, "Yes, if we look at eee this covid case, it is already not allowed to have contact with humans, the most effective is actually the most effective robot, it does not transmit anything, this is one example. (Bambang, 2-475, lines 31-34)"

The code written in less () has meaning:

- Bambang : Informant's Name
- 2-475 : Second appendix on page 475
- Lines 31-34: indicates the location of the line in the interview transcript.

The following table shows the codes in the analysis using N-Vivo which are used to analyze field findings based on theories and concepts both inductively (theories or concepts used after field findings are analyzed) and deductively (theories or concepts that

have been explained in Chapter 2). This process is called theoretical triangulation in qualitative research.

Table 1. Triangulation Theory

Code Name	Triangulation Theory
COVID context	This code relates to the context of COVID-19 which provides stimulants to hotels to use AFS services in hotels to reduce contact with guests, but still be able to carry out services. This relates to the Theory of Industrial Evolution, namely the transition from Industry 4.0 to Industry 5.0 where not only integrating technology in the form of digitization and automation but also building collaboration between humans and technology (Demir & Cicibaş, 2019). In addition, this code is also related to the theory of Change Management which has also been explained in chapter 2 (Ivanov & Webster, 2017; Tuomi et al., 2021).
Implementation in the	This code refers to the formulation of the problem that wants to explore the implementation of AFS in
Field	hotel services. This relates to the theory of Robotic Transformation and concepts related to the Implementation of Robots in Hotels that have been explained in chapter 2.
AFS service innovation	These three codes are also related to the formulation of research problem number three which aims to
for	explore innovation in the implementation of AFS with the aim of not only serving guests, but also preparing
AFS to Serve Guests	for hotels to enter the next era of industrial evolution, namely 5.0. This code will show the integration of
AFS to Adapt to	AFS implementation with customer-focused service and industry 5.0.
Industry 5.0	
Achieving Competitive	This code is used to analyze how management sees AFS from a Competitive Advantage perspective. (Porter, 2008).
Advantage	
The Role of Human or	Related to the role of humans in making decisions regarding the implementation of technology in husiness
Human Resource	activities or hotel services. This code shows how many human roles cannot be replaced by
	robots or other technology
	This code relates to the informant's story of starting to think about the impact on the environment from
	the implementation of existing technology. It is known that the implementation of technology comparings
Sustainability	the implementation of existing technology. It is known that the implementation of technology sometimes
Sustainability	has a negative impact on the environment and society (Prasanna et al., 2019). Therefore, two out of three
	informants shared the importance of sustainability in technology implementation as a
	form of responsibility to society and to achieve competitive advantage as well.
	The codes in this group show how this research uses a qualitative approach, whose focus is not to test
Other findings	theories but to see the reality in the field and then abstract it using theories or concepts. The field findings
	coded in these codes are presented using theories or concepts that have not been discussed in
	Chapter 2 or the Literature Review.
Not yet a CA	This code relates to how the informants stated that there are several sides that make AFS not yet a Competitive Advantage for the hotel.
Character of	These three codes relate to the character of customers who visit the hotel, as described by the informants.
Indonesian Customers	Apparently, these field findings influence how the hotel builds and implements existing services. This
	relates to the customer-focused service explored in the research formulation. Although this code cannot
	be analyzed with the literature review in chapter 2, it can be studied with the concept of customer-focused
	service integrated with the implementation of AFS in the RBT-VRIO framework
	(Liu et al., 2019; Sigalas, 2015).
Millennial Generation	
Character	
Generation X and above	
characters	
State of Hotels in	This code relates to the informant's story about the state of hotels in Indonesia, which will affect what
Indonesia	services will be useful to achieve Competitive Advantage and how technology should be implemented in
	services. This code relates to the theory of Competitive Advantage discussed in RBT and Industrial
	Evolution.
Human Shortcomings	This code relates to how robots can fill human shortcomings especially in terms of precision and

	consistency. This brings advantages if the hotel implements robots in its services. This code relates to
	the theory of achieving Competitive Advantage and how robots can work together with humans.
Role of AFS or	This code relates to the role of AFS in the field that answers the research problem formulation regarding
Technology in the	the implementation of robots in hotel services.
Field	
Practical	This is a practice that refers to the hotel management's innovation in implementing existing technology
Anthromorphism	to attract customers. The concept used is also anthromorphism which can explain how robots made like
(Innovation)	humans can attract customers.
Resources Required	
	This code relates to how informants provide an overview of the resources needed by the hotel at this time.
	This is more related to the description of resources in general (outside AFS). Therefore, the theories and
	concepts used to analyze these codes are also not yet in the Literature Review such as innovation and
	customer-focused services (Kuo et al., 2017; Liu et al., 2019).
Customer-focused	
service	
Innovation	
Human Resource	
Challenges	
Robotic Transformation	This code relates to the field findings on robotic transformation analyzed with the literature review
	discussed in chapter 2, especially how robots can assist humans in doing work, but cannot replace them
	(Verevka, 2019; Xu & Wang, 2021).
Weaknesses of robots	
VRIO	This is one of the main codes in the research related to the VRIO framework used to look at the
	implementation of AFS in hotel services (Jay B. Barney et al., 2011; Liu et al., 2019; Sigalas, 2015). This
	framework is used to see how the hotel sees AFS in achieving Competitive Advantage and organizes
	existing resources based on this framework.
Inimitable	
Organization	
Valuable	

A. Strategic Management from an RBT Perspective

After analyzing interviews with three informants and then processing them using Nvivo, this study gets an overview of how AFS is used to meet guest needs from an RBT perspective, especially the VRIO (Valuable, Rare, Inimitable, and Organizations) framework. In Grand Sahid Jaya Hotel, the robot used for AFS (Automated Food Service) is one of the resources owned by the Hotel to serve customers in the hope of meeting guest needs. Based on interviews with Informant 2, the robot is generally used only when guests request (submit a request to the hotel) and is included in the service from the hotel (no need to add a fee). The following is an explanation of PT HSJI's strategic management in using RAFS (Robot Automated Food Service) using the RBT perspective, specifically the VRIO framework.

The first value is valuable, which refers to the question of whether the resource adds value to the company's product or service (Höse et al., 2022). If the resources are valuable, then it allows the company to empower opportunities or defend against threats (Nothnagel, 2008). Based on an interview with Bambang, he stated that the implementation of robot technology in the hospitality industry will greatly help hotel services, especially during a pandemic. Bambang stated,

"Yes, if we look at eee this covid case, yes, it is not allowed to have contact with humans, the most effective is actually the most effective robot, it does not transmit anything, this is one example. (Bambang-XI, 2-475, line 31-34)"

Bambang's statement shows that RAFS (Robot Automated Food Service) are a valuable resource because they will help hotels to survive in serving their guests without the need for touch in the face of pandemic threats. Bambang also stated that the use of robots was also introduced during the pandemic. This proves that RAFS as a resource are indeed valuable.

Apart from helping hospitality in dealing with the pandemic, the implementation of RAFS in the Grand Sahid Jaya Hotel also has a positive impact in terms of Human Resources, especially in the field of cost efficiency. Informant 1, who acts as President Director of PT.Hotel Sahid Jaya International, Tbk. which houses the Sahid Hotel and Sahid Jaya International Hotel chains, stated several statements such as "*Well, it's okay to have a few people, to maintain the cost.*", "So if you count with it, it will also be more efficient.", and, "*That's actually the basis for managing in terms of labor costs and also overcoming in terms of service* (Hariyadi, 3-507, lines 3-7)." The statements above show that AFS or technology can streamline Human Resource management, especially in terms of costs.

Informant 2 as General Manager stated, "*I can cut 25-30% of the number of employees working with just one robot* (Venny-XI,XVI-C, 1-427, lines 5-8)." This means that one robot can help hospitality to reduce labor costs quite significantly.

In general, the following is a picture of the strategic management of PT HSJI based on interviews with Informant 2 who acts as General Manager of Grand Sahid Jaya Hotel and Informant 1 as President Director of PT Hotel Sahid Jaya International, Tbk.



Source: Processed Data

B. Innovation and Industry 5.0 in Hospitality from a Change Management Perspective

As discussed in Chapter 2, innovation plays an important role in the implementation of robot technology in hospitality services. One of the unique findings in the field comes from an interview conducted with Informant 2 who stated, "This is called a humanized robot. (Venny, 1-426, line 27)" Informant 2's question led to a practice that became a theory and term that is often used in the relationship between humans and machines, namely Anthropomorphism. This practice refers to the attempt to give non-living objects human characteristics (Nowak & Fox, 2018).

This practice is considered to change human behavior towards non-living things by increasing engagement so that humans feel more 'connected' to these non-living things (Han et al., 2023; Kang & Kim, 2020). In addition, this practice also attracts

Visitors when practiced in business because humans who usually only relate to each other, but are introduced to non-human things that may be quite new to them. This interest was found in the field when Informant 2 stated that the RAFS (robot automated food service) attracts visitors when it is given a waiter's outfit and features that show human characteristics such as blinking eyes. "I am also confused, how come being served by a Ris so proud. It's proud and they take pictures sir." This statement shows how visitors are interested in taking selfies when RAFS are implemented in hospitality services. Informant 2 himself feels that RAFS has its own charm for visitors so he implements many innovations such as dressing the robot according to the theme of the event.

The fact that this RAFS invites innovation in hotel services cannot be separated from Change Management. Informant 2 stated that conducting Change Management is not easy because it is not certain that the superiors will immediately accept the existing change ideas. This aligns with the statement by Tuomi et al. (2021) that changes in the roles and responsibilities of HR in the hospitality industry can lead to apprehension and resistance. However, with effective communication and approachability, these changes can be accepted and may even become routine. In the interview, Informant 2 stated, *"When I bought the smart TV, everyone made a fuss. Yes, except Mr. Haryadi. It was noisy, all my owners were noisy. Bringing it, everything. Now every meeting wants to use smart TV."* This is consistent with the statement Tsai & Shih (2013) which states that a communication strategy is needed to persuade stakeholders to carry out change management and this requires sufficient knowledge of the new system to be implemented.

Not only rejection from superiors, but also from employees. Informant 2 stated, "There must be rejection, sir, one or two of them feel threatened that I won't work for a long time." The statement is in accordance with the results of the study Zizic et al. (2022) which states that changes caused by the introduction of modern technology, and the increasing complexity of products and production, directly affect industrial enterprises and workers. Informant 3 also realized this fact because he explained how human error is a human shortcoming that can be covered by robots. Therefore, humans are required to continue to be creative and innovate. These two things are important in Change Management.

Technology, Society and the Hospitality Industry are intertwined in the context of change and innovation, especially in the face of machine-human collaboration. The threats that drive innovation in hospitality in Indonesia are mainly related to the pandemic that accelerates the adoption of technology, especially the use of robots. The organization of events, such as the opening with a standing party style, is a concrete example where technology such as robots can replace the role of employees in some aspects of operations. The pandemic has awakened the hospitality industry to the need for more efficient and secure solutions, thus driving more massive technology integration.

Collaboration between machines and humans is key in managing these changes. Informant 1 as President Director and Informant 2 as GM Hotel, highlighted the role of Human Resources Development (HRD) in seeing human resources (HR) as a unique and valuable asset (TNC). It is necessary to understand that technology does not only replace, but can coexist with human workers. HRD's strategy in managing this collaboration involves introducing HR that can complement the role of technology. In the view of Informants 1 and 2, the use of robots in certain events not only helps efficiency, but can also reduce the number of employees needed, in line with the principles of industry 5.0 which emphasizes cooperation between humans and technology.

Informant 2 said that the presence of robots can coexist harmoniously, especially in situations where the use of technology provides significant benefits. Technology integration in the hospitality industry not only creates operational efficiency, but also provides flexibility in human resource management. Therefore, technological innovations in the hospitality industry, such as the use of robots in events, highlight the need for a balance between efficiency, safety and social responsibility towards workers. Collaboration between machines and humans is expected to shape a resilient and adaptive hospitality industry amidst dynamic changes.

C. Technology, Society and the Hospitality Industry (TD and SCOT Paradigms)

All three informants agreed that humans and technology can work together to achieve Competitive Advantage in the future, especially in the Hospitality Industry that prioritizes Service. The findings in this field led the research to the concept of TD (Technological Determinism) and SCOT (Social Construction of Technology).

In the context of hospitality industry development, the view that humans and technology can work together to achieve Competitive Advantage reflects an inclusive and adaptive approach to the times. Two paradigms that can support a deeper understanding of the complex relationship between humans and technology are Technological Determinism (TD) and Social Construction of Technology (SCOT).

Technological Determinism (TD) is a paradigm that believes that technological development has a dominant role in shaping

social and structural changes in society (Baek & Lee, 2021; Giotta, 2018)). In the context of the hospitality industry, TD's view will emphasize that the use of technology, such as robots and automation, is not just a response to the times, but also a key driver in redesigning the way hotels service and operate. On the other hand, Social Construction of Technology (SCOT) presents a perspective that involves the active contribution of society in shaping and constructing the meaning of technology (Giotta, 2018; Țicău & Hadad, 2021). In the context of hospitality, SCOT highlights how technology acceptance and adaptation is not only influenced by the technology development itself but also by social dynamics, local values, and shared interpretations by various stakeholders.

In other words, if TD emphasizes technological determinism that technology inherently brings about change SCOT leaves room for social, cultural and contextual forces in shaping technology use and adaptation. The relationship between people and technology in the hospitality industry, as highlighted by informants, reflects the complex interplay between technological drivers and shared social constructions by society.

The confluence of the Technological Determinism (TD) and Social Construction of Technology (SCOT) paradigms can form a foundation for understanding the transformation of the hospitality industry and the direction towards Industry 5.0 that follo ws the times. The field findings from the interview with Venny as the GM of the Hotel reflect how these two paradigms can synergize in the context of hospitality in Indonesia.

Venny's views on the use of technology, particularly robots in the hospitality industry, provide an overview of the deterministic influence of technology. Related to the TD paradigm, technology is considered the main driver of change in the industry, especially in response to challenges such as the pandemic. The use of robots as efficiency and safety solutions can be understood as a result of technological forces driving changes in the structure and operations of the hospitality industry.

However, SCOT also plays an important role in shaping the acceptance and adaptation of technology in the hospitality industry. Venny highlighted how the acceptance of robots in certain events brought significant benefits, such as operational efficiency and headcount reduction. This technology acceptance is not only deterministic, but also shaped by social dynamics and organizational context.

The combined TD and SCOT paradigms help explain that technology acceptance in the hospitality industry is not a passive process, but involves complex interactions between technology and society. Industry 5.0, which emphasizes cooperation between humans and technology, can be achieved through a social construction process where technology acceptance is continuous.

Venny also emphasized that the use of technology, such as robots, needs to be adapted to local values and guest expectations. This reflects the SCOT approach that considers how technology is interpreted and constructed by different parties in society, and how these interactions shape the use of technology in specific contexts.

By combining the TD and SCOT paradigms, the hospitality industry can achieve a balanced transformation between technological drivers and social constructs. This creates a foundation for hospitality to better enter Industry 5.0, considering not only technological advantages but also values, sustainability and community engagement in the transformation process.

The description above, leads this research to a model that can be used by the Hospitality Industry to achieve Competitive Advantage relating to Technology Transformation and Innovation.



Source: Processed Data

The above model is designed by combining various important concepts in achieving Competitive Advantage in the hospitality industry, especially in the use of technology. The main inspiration for this model came from the informants, such as Informant 3 who highlighted technology trends and innovation in technology, and Informants 1 and 2 who discussed more about the importance of hotel characteristics and uniqueness. In this context, technology trends, characteristics and uniqueness of hotels are articulated as variables that are interrelated and impact the creation of technological innovation.

First, Informant 3's understanding of technology trends brings the RBT (Resource-Based Theory) dimension into the model. Technological trends are identified as internal resources that can be the foundation for creating competitive advantage. By understanding the latest developments, hotels can design technological innovations that are relevant and accommodate market preferences.

Furthermore, the importance of hotel characteristics and uniqueness in providing experiences to customers expressed by Informants 1 and 2 are also integrated in the model as variables that influence innovation creation. Both are internal hotel factors that play an important role in determining competitive advantage. Especially, the hotel's characteristics and uniqueness lead to the implementation of RBT, where the hotel's internal assets, including its unique character, become the basis for innovation that differentiates from competitors.

Innovation in technology, as stated by Informant 2, becomes the result of understanding technology trends and integrating the hotel's characteristics and uniqueness. Therefore, this innovation becomes the main focus in achieving competitive advantage. This model emphasizes that efforts to continuously innovate in technology need to be supported by internal aspects of the hotel that differentiate from competitors, in line with the principles of RBT.

In the context of Dynamic Capability, market research conducted by Informant 2 is an integral part of the model. Market research illustrates the hotel's dynamic ability to respond to changing market needs and preferences. In addition, change management, as stated by the informant, becomes an important element to manage the transformation generated by technological innovation, ensuring smooth integration and acceptance from all hotel staff and visitors.

In addition, there is one important dimension that was also found in the interviews, namely the ethical dimension. This dimension describes ethical considerations in the use of technology, such as the replacement of human roles by robots. The integration of ethics in technology reflects corporate social responsibility, in accordance with the concept of sustainability. The cost savings and interpersonal conflicts avoided through the use of technology reflect the ethical considerations that guide the development and implementation of innovation.

Thus, this model integrates RBT and Dynamic Capability theories, along with ethical considerations, to create a solid foundation for change and sustainability in the hospitality industry. It is important to note that in addition to the variables highlighted by the informants, the interviews also highlighted the ethical dimension as a crucial element in the context of technology use in the

hospitality industry. This dimension raises the question of corporate social responsibility in integrat ing technology without compromising ethical values. The existence of robots as a substitute for human roles is an ethical challenge that needs to be faced wisely.

The replacement of human roles by technology, as mentioned by informants, illustrates the need for a balance between operational efficiency and social sustainability. The avoidance of interpersonal conflicts and cost savings through the implementation of technology raises questions about its ethical impact on employees, who are ultimately human beings with values and rights.

In this context, ethics is not only a consideration in the development and implementation of innovations, but also underscores the importance of valuing the human role in them. It is important to ensure that the use of technology does not completely replace the role of humans, but rather becomes a tool to increase efficiency and provide space for humans to focus on more creative and contextual aspects.

In addition, the emphasis on ethics also creates a drive for continuous innovation among humans. By viewing technology as a partner, humans are faced with the challenge of continuously improving their skills and abilities, so that they are not only dependent on technology, but also become the main driver behind change. This is what makes the integration of ethics a solid foundation for change and sustainability in the hospitality industry, ensuring that technological advancements have a positive impact without neglecting human values.

V. CONCLUSIONS AND SUGGESTIONS

A. Conclusions

In this study, the implementation of Robot Automated Food Service (RAFS) technology at Grand Sahid Jaya Hotel, Jakarta, is analyzed using a qualitative approach and refers to the theories of Robot Transformation, Industry 5.0, and Resource-Based View (RBV). The findings from this study provide valuable insights into the integration of RAFS in the hospitality industry and its relevance to the Industry 5.0 concept. The use of a qualitative approach enabled an in-depth investigation of the subjective views and experiences of the informants involved.

From the analysis, it can be concluded that the implementation of AFS at Grand Sahid Jaya Hotel has an impact on operations and customer experience. The concept of Industry 5.0, which emphasizes collaboration between humans and smart technology, is visibly reflected in the implementation of this RAFS technology. The use of robots in food and beverage service speeds up processes, increases efficiency, and provides a consistent experience for customers.

Although RAFS has an impact on customer experience and assists in HR management, it is not yet able to provide a competitive advantage based on an interview with Venny as GM of Grand Sahid Jaya Hotel. Bambang as an assessor, gave another opinion that the implementation of robots will be very beneficial for hotels because it reduces human error and helps reduce the hotel budget spent on HR.

HR. Although Venny, felt that the RAFS has not provided an advantage, he confirmed the points given by Bambang. Therefore, robot transformation needs to be continuously developed by incorporating innovation, creativity, and good resource and change management.

In addition, the Resource-Based View (RBV) theory helps in understanding how the hotel's resources can be optimized through the integration of RAFS technology. RAFS become a valuable asset in the face of increasingly complex service demands. By utilizing this technology, hotels can generate greater added value and meet higher customer expectations.

In conclusion, the implementation of Robot Automated Food Service (RAFS) technology at Grand Sahid Jaya Hotel, Jakarta, provides benefits in improving efficiency and customer experience, but not yet to form a competitive advantage. The Industry 5.0 concept is reflected in the implementation of RAFS, while the Resource-Based View (RBV) theory provides insight into the importance of managing resources in the face of industry change. The findings provide useful insights for the hospitality industry in facing the era of technological transformation and intensifying competition.

B. Suggestions

The main limitation of this study lies in the qualitative approach used. While it was able to uncover the subjective and in - depth views of the informants involved, this limitation required the researcher to limit the scope of the analysis to only the limited perspectives obtained from a few informants. Therefore, future research is recommended to combine qualitative and quantitative

approaches to provide a broader and quantifiable understanding of RAFS implementation in the hospitality industry.

In addition, the focus of the study was limited to Grand Sahid Jaya Hotel, Jakarta. The relevance of the findings is limited to the specific situation within one hotel. A follow-up study covering a number of other hotels in Indonesia would provide a higher diversity of data and allow for a more in-depth comparison of technology implementation outcomes across different environments and markets. In this way, the generalizability of the findings can be enhanced, and their practical implications can be more widely accommodated.

Finally, there are limitations in the perspectives used in the analysis, especially in the application of the Resource-Based View (RBV) as the main theoretical foundation. Future research is expected to broaden the perspective by incorporating various other theories and concepts, such as the Theory of Resources and Capabilities or the Open Systems Approach. By adopting a more diverse approach, the understanding of resource management and corporate strategy in the face of changes in the business environment will become more holistic.

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