



Organization Readiness For ICT Implementation In In-House Hotel Booking Systems (Study Case: Zest Hotel Sukajadi)

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How to Cite :

Jahida, H. A., Lestari, Y. D., Dianawati, N. (2025). Organization Readiness For ICT Implementation In In-House Hotel Booking Systems (Study Case: Zest Hotel Sukajadi) . EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 13(3). doi: <https://doi.org/10.37676/ekombis.v13i3>

ARTICLE HISTORY

Received [20 February 2025]

Revised [18 June 2025]

Accepted [25 June 2025]

KEYWORDS

ICT, Online Travel Agencies (OTAs), Hotel, Digital Transformation, Organizational Readiness, Nvivo.

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ABSTRACT

Hotels are increasingly exploring digital transformation by developing in-house booking systems as an alternative to Online Travel Agencies (OTAs). While OTAs enhance market reach and occupancy rates, their high commission fees and limited pricing control impact revenue management. Additionally, technical issues such as data synchronization errors create operational inefficiencies. To mitigate these challenges, some hotels, like Zest Hotel, implement hybrid systems that integrate both OTA and direct booking methods to improve system compatibility and customer engagement. Using qualitative research methods and NVivo for thematic analysis, this study identifies seven key factors influencing ICT adoption in hotels: leadership management, employee competence, organizational culture, structure, resource allocation, strategic alignment, and innovation. Despite limitations in scope, the findings provide a framework for understanding ICT adoption in hotel booking systems. Future research could explore trends such as cybersecurity, artificial intelligence, hotel segmentation, and business sustainability.

INTRODUCTION

Indonesia's rapid advancements in Information and Communication Technology (ICT) have transformed various industries, including hospitality, by enhancing operational efficiency, customer engagement, and service automation. Hotels increasingly rely on digital platforms for bookings, customer service, and marketing, with Online Travel Agencies (OTAs) like Booking.com, Expedia, and Agoda playing a crucial role in attracting guests and expanding market reach. However, heavy reliance on OTAs presents challenges such as high commission fees, limited pricing control, and constraints in customer relationship management.

To address these issues, many hotels have started to adopt a hybrid strategy, combining OTAs with in-house booking systems. This approach helps reduce dependency on third-party platforms, lower commission costs, and improve direct guest relationships. However, successful implementation of an in-house booking system requires organizational readiness before implementing the system to ensure that it will work properly and achieve its goals.

LITERATURE REVIEW

Information And Communications Technology (ICT)

Information and Communication Technology (ICT) has significantly contributed to Indonesia's economic and industrial transformation, driving growth in sectors such as education, finance, tourism, and e-commerce (Hindrayani et al., 2024). The rapid expansion of internet connectivity and mobile technology has enabled businesses to enhance operational efficiency, expand market reach, and adopt innovative digital models like online marketplaces and fintech solutions. However, digital inequality remains a challenge, particularly in rural areas where ICT accessibility is hindered by infrastructure and economic disparities (Marwan et al., 2014).

Smart tourism initiatives, such as AI-driven recommendations and virtual tours, are also reshaping travel experiences (Priatmoko & Dávid, 2021). Similarly, fintech services have improved financial inclusion, while smart city programs enhance governance and public services (Mudrikah & Quddus, 2024). Despite these advancements, addressing digital literacy gaps, strengthening cybersecurity, and ensuring equal ICT access remain essential for sustaining Indonesia's digital transformation.

Online Travel Agencies (OTAs)

The rapid growth of Online Travel Agencies (OTAs) in Indonesia, driven by advancements in Information and Communication Technology (ICT), has transformed the travel and hospitality sectors. Platforms like Traveloka, Tiket.com, and Agoda facilitate real-time transactions, price comparisons, and personalized customer experiences, making them integral to the modern travel ecosystem (Rosyidi, 2019). OTAs also enhance digital tourism marketing, allowing accommodations of all sizes to reach a wider audience and promoting rural tourism destinations through ICT-based solutions (Priatmoko & Dávid, 2021). Additionally, customer data collection and analysis help businesses optimize pricing strategies and improve service offerings (Mulyana et al., 2023).

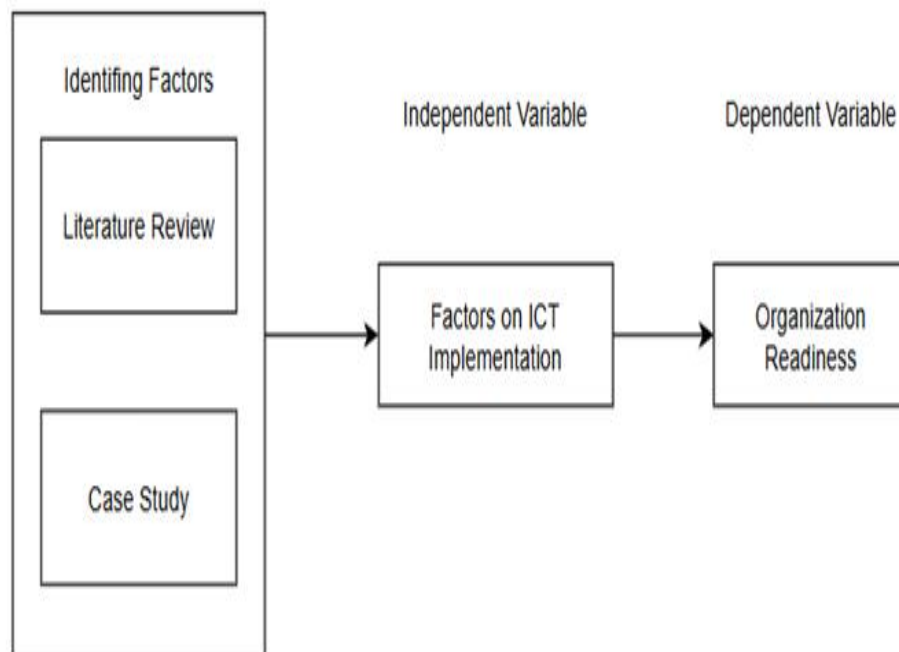
Despite these benefits, challenges such as intense competition, service quality concerns, and consumer trust issues persist. Hotels and airlines must continuously adapt to OTA algorithms and pricing models, while travelers rely heavily on reviews and rankings for decision-making (Winarko & Husna, 2020). While ICT-driven OTAs have significantly improved business operations and consumer accessibility, ongoing technological advancements and strategic adaptations are crucial for sustaining their impact in the digital travel landscape.

Impact of OTA on Hotel Booking Systems

The integration of Online Travel Agencies (OTAs) into hotel booking systems has transformed customer interactions and operational efficiency but also introduced technical and financial challenges. Many hotels struggle with system integration issues, as their property management systems (PMS) do not always synchronize with OTAs, leading to overbookings, pricing discrepancies, and delayed room availability updates (Azdel et al., 2023). Additionally, the lack of real-time data synchronization between OTA listings and direct hotel reservations increases customer dissatisfaction and operational burdens (Zhang et al., 2017). Beyond technical concerns, OTAs contribute to brand dilution, as guests engage primarily with OTA platforms rather than the hotel itself, limiting direct customer relationships and loyalty-building.

opportunities (Raab et al., 2018). Moreover, OTA-generated reviews, ranking algorithms, and discount promotions significantly influence consumer decision-making, often misaligning with hotel strategies (Salsabila et al., 2024).management and stakeholders that occur in a stock market (Wolks, 2001).

Figure 1. Conceptual Framework



The conceptual framework illustrates the relationship between Factors on ICT Implementation as the independent variable and Organizational Readiness as the dependent variable. The framework is structured to show how key factors influencing ICT adoption are identified through literature review and case study analysis, forming the foundation for assessing organizational readiness. These combined inputs define the Factors on ICT Implementation, which serve as the independent variable in the study. The direction of the arrows in the diagram represents the flow of influence, demonstrating that the factors derived from literature and case studies shape the implementation process, ultimately determining how prepared an organization is to adopt ICT solutions effectively.

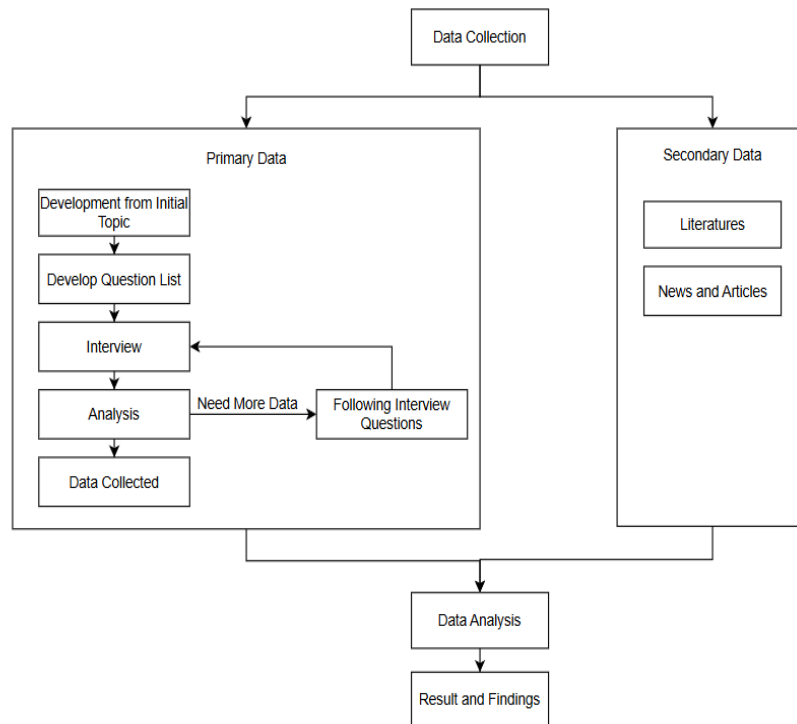
METHODS

Research Design

This study follows a structured research design, starting with issue analysis to define the research problem and its significance in the hospitality industry. Objectives are then established, followed by data collection through interviews and literature reviews. The collected data is analyzed using qualitative techniques, such as NVivo, to identify key patterns and insights. The findings are then presented, leading to conclusions and recommendations for industry stakeholders and future research.

Methods Of Data Collection

This research employs a mixed-method approach, integrating both primary and secondary data sources to ensure a comprehensive understanding of the subject matter. The data collection process follows a structured methodology, as depicted in the data collection framework.

Figure 2. Data Collection Method

This research gathers primary data through semi-structured interviews, using carefully developed questions to explore key aspects of the study through open-ended discussions. Secondary data, including academic literature, industry reports, and media publications, provides a theoretical foundation and contextual background. Peer-reviewed journals, books, and conference papers establish the study's framework, while news articles and industry reports offer contemporary insights. The combination of primary and secondary data strengthens research credibility, enables triangulation, and ensures a comprehensive analysis for more reliable and insightful findings.

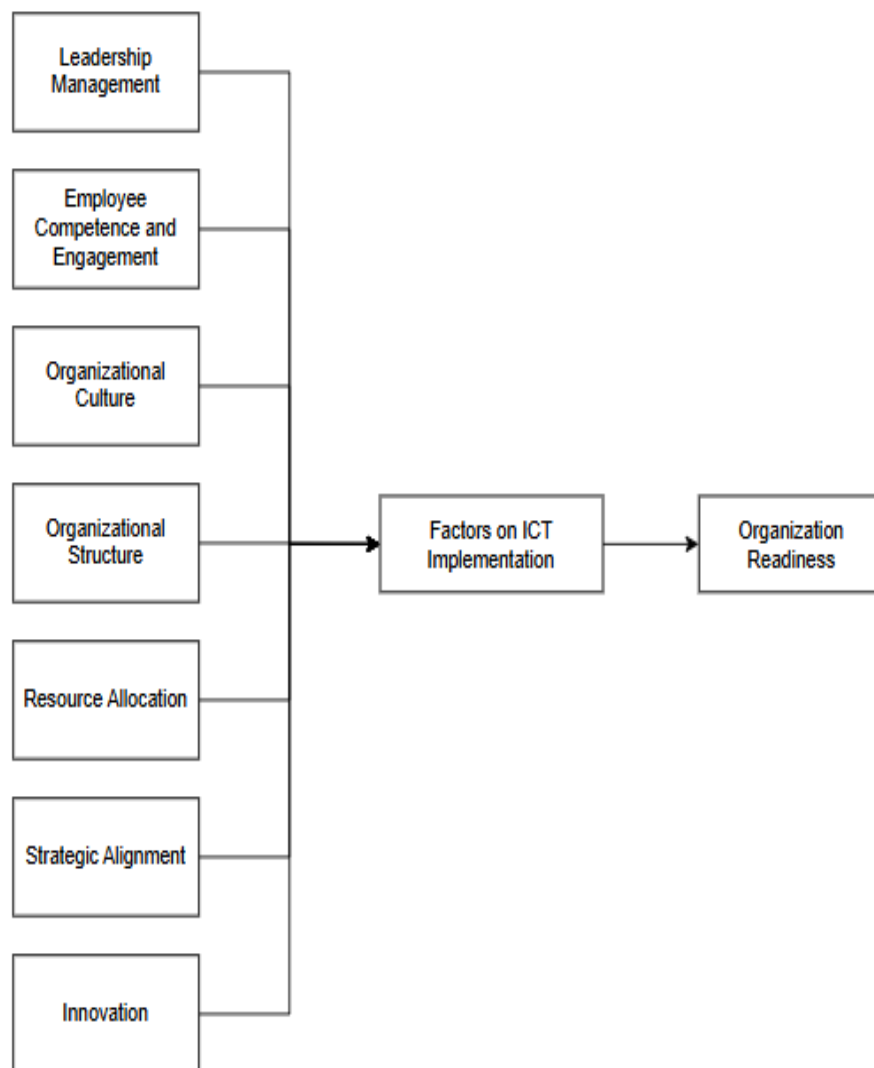
Data analysis

This study employs a qualitative approach to analyze the digital transformation at Zest Hotel, focusing on the integration of an in-house booking system and its interaction with Online Travel Agencies (OTAs). Data from in-depth interviews with hotel management and staff were analyzed using thematic analysis in NVivo to identify key themes related to organizational readiness, employee adaptation, and strategic decision-making. Word frequency analysis further highlighted dominant concepts, while triangulation with secondary sources ensured the reliability of findings, providing a comprehensive understanding of ICT adoption in hotel operations.

RESULTS

Factor Identification in ICT Implementation

The successful implementation of Information and Communication Technology (ICT) in hotel booking systems requires a structured approach to assessing organizational readiness. This study identifies seven key factors influencing ICT adoption in hospitality operations based on conceptual framework.

Figure 3. Factors on ICT Implementation

1. **Leadership Management:** Effective leadership plays a crucial role in driving ICT adoption by setting a clear vision, ensuring alignment with business objectives, and securing necessary resources. Strong management commitment facilitates smooth digital transformation and minimizes resistance to change.
2. **Employee Competence and Engagement** – Digital literacy, technical skills, and employee willingness to adopt new systems significantly impact ICT implementation. Training programs and ongoing support are essential to improving system efficiency and reducing operational disruptions.
3. **Organizational Culture:** A technology-oriented culture fosters innovation and acceptance of digital transformation. Resistance to new systems can be mitigated through change management initiatives that encourage employees to embrace technological advancements.
4. **Organizational Structure:** The flexibility of an organization's structure influences the integration of ICT across departments. Decentralized structures allow greater adaptability, while rigid hierarchies may present barriers to ICT adoption.
5. **Resource Allocation:** Adequate financial, technical, and human resources are fundamental to ICT implementation. Investments in IT infrastructure, staff training, and software development are necessary to ensure system sustainability and efficiency.

6. Strategic Alignment: ICT initiatives must align with overall business objectives, enhancing operational efficiency, customer engagement, and revenue management. Hotels that integrate ICT solutions with strategic goals achieve better outcomes in digital transformation.
7. Innovation: Continuous technological improvements are essential for sustaining ICT adoption. Hotels that invest in research, AI-driven tools, and automation enhance service quality, operational efficiency, and customer experience.

These factors collectively determine an organization's readiness for ICT implementation and influence the effectiveness of digital transformation strategies in the hospitality industry.

Zest Hotel Sukajadi Case Study

Zest Hotel Sukajadi, a mid-range hotel catering to both business and leisure travelers, operates under Swiss-Belhotel Management, a brand known for its structured approach to digital transformation. The hotel recognized the need to reduce reliance on OTAs not only to gain greater control over its revenue streams but also to enhance consumer engagement through direct interactions. By implementing an in-house booking system, Zest Hotel Sukajadi aimed to provide a more seamless booking experience, personalized services, and better communication with guests. Unlike OTAs, which act as intermediaries, the in-house system allows the hotel to collect guest data, customize offers, and manage customer relationships more effectively, ultimately improving guest satisfaction and loyalty.

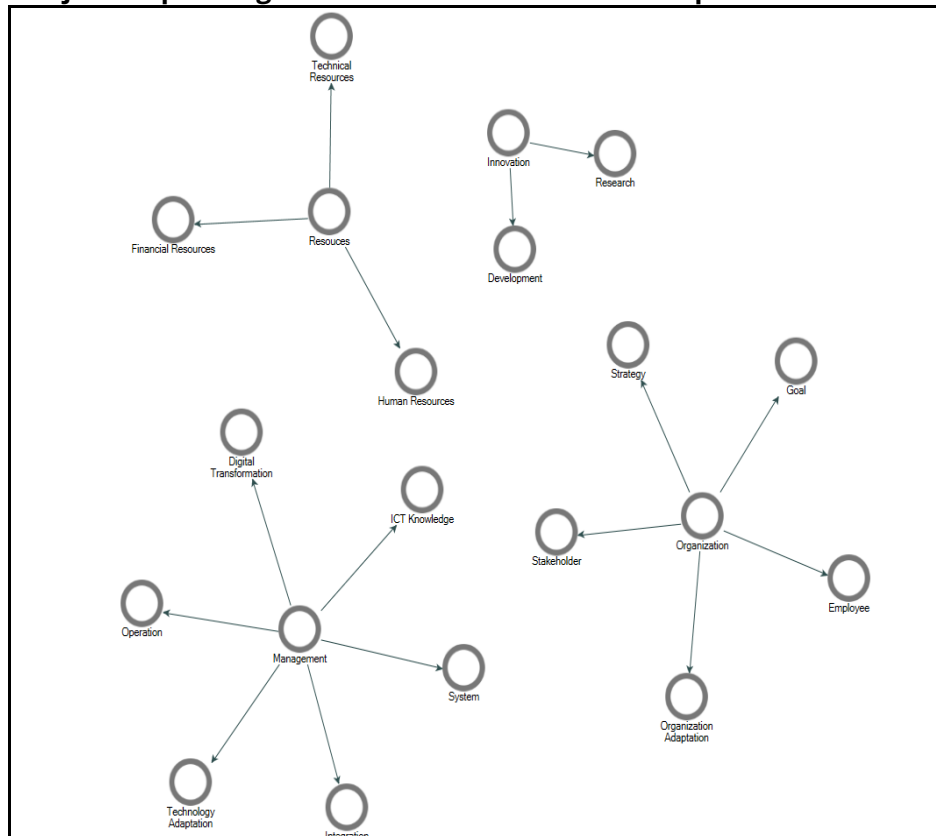
Despite the shift towards an in-house system, OTAs remain a crucial distribution channel for Zest Hotel Sukajadi. The hotel strategically balances direct bookings and OTA partnerships by integrating its system with leading platforms such as Traveloka, Agoda, and Tiket.com. This hybrid approach ensures that the hotel retains OTA-generated traffic while simultaneously promoting direct bookings through exclusive offers, membership programs, and enhanced customer service. The integration between the in-house system and other hotel operations, such as front desk services and loyalty programs, provides a more personalized experience for guests, encouraging them to book directly rather than through third-party platforms.

Figure 4. Word Cloud Representation of Key Themes in Zest Hotel's Digital Information



The word cloud effectively summarizes the key themes from the interview data, visually reinforcing the main points of discussion. It highlights how organizational readiness for digital transformation is driven by system integration, management strategy, financial considerations, and the balance between OTAs and direct bookings. The strong presence of "readiness" and "transition" suggests that hotels must continuously adapt to technological advancements and market shifts, further validating the conceptual framework of organizational readiness.

Figure 5. Project Map Of Organizational Readiness For Ict Implementation At Zest Hotel



The NVivo-generated conceptual map illustrates the interconnected factors influencing organizational readiness, highlighting the relationships between key themes such as resources, management, innovation, and organization.

DISCUSSION

Organizational Readiness for ICT Implementation in Hotels

The study on Zest Hotel Sukajadi's transition to an in-house booking system highlights seven critical factors determining an organization's readiness for ICT adoption:

1. Leadership Management

Strong leadership is essential in guiding ICT adoption, ensuring alignment with strategic objectives, and securing resource allocation. At Zest Hotel Sukajadi, corporate leadership played a pivotal role in shifting reliance from Online Travel Agencies (OTAs) to in-house bookings by overseeing system integration and continuous upgrades.

2. Employee Competence and Engagement

Staff readiness, digital literacy, and willingness to adapt significantly impact ICT success. Zest Hotel implemented structured training programs, ensuring employees across departments were proficient in using the new system. While younger employees adapted quickly, senior staff required additional training and ongoing support.

3. Organizational Culture

An innovation-driven culture fosters ICT adoption. At Zest Hotel, initial resistance emerged due to concerns over system complexity and job security. Internal workshops and change management initiatives helped facilitate a smooth transition, emphasizing the benefits of in-house booking over OTA dependence.

4. Organizational Structure

A flexible organizational structure supports seamless ICT integration. While hierarchical decision-making initially slowed system implementation, structured coordination between the reservations, IT, and front office teams improved integration, ensuring smooth functionality alongside OTAs.

5. Resource Allocation

Successful ICT implementation requires sufficient financial, technical, and human resources. Zest Hotel allocated substantial investments in software development, system integration, and training. Dedicated IT personnel and AI-driven pricing tools were introduced to optimize revenue management.

6. Strategic Alignment

ICT adoption must align with business objectives, such as reducing OTA commission costs and increasing customer engagement. Zest Hotel strengthened its direct booking strategy through exclusive website discounts, loyalty rewards, and targeted marketing campaigns.

7. Innovation

Sustained ICT adoption requires continuous technological upgrades and adaptation to market trends. Zest Hotel implemented AI-driven pricing strategies, automated customer service chatbots, and seamless payment integration, enhancing guest personalization and operational efficiency.

Challenges in ICT Implementation

Despite the advantages of an in-house booking system, several challenges emerged:

1. OTA Integration: Balancing in-house systems with OTAs remains critical, requiring real-time synchronization to prevent pricing conflicts and double bookings.
2. System Synchronization: Initial delays in updating OTA platforms led to overbooking issues, later mitigated through automated updates.
3. Customer Behavior: Travelers often prefer OTAs due to convenience and loyalty programs. Zest Hotel tackled this by offering exclusive incentives for in-house booking system.
4. Employee Adaptation: Front desk staff initially struggled with the transition, requiring extensive training and IT support to ensure system proficiency.

Impact on Business Performance

The ICT implementation at Zest Hotel led to measurable improvements:

1. Reduced OTA Dependence: In-house bookings increased every year, lowering OTA commission costs.
2. Improved Data Utilization: Access to customer insights enabled personalized marketing and loyalty program enhancements.
3. Operational Efficiency: Automated processes reduced booking errors, streamlined check-ins, and optimized revenue management.
4. Competitive Advantage: Direct engagement with guests through a proprietary booking system strengthened brand positioning.

CONCLUSION

This study examined organizational readiness for ICT implementation in in-house hotel booking systems, with Zest Hotel Sukajadi as the primary case study. The findings highlight that organizational readiness is influenced by several critical factors:

1. Leadership management
2. Employee competence & engagement
3. Organizational culture
4. Organizational structure
5. Resource allocation
6. Strategic alignment
7. Innovation

Successfully transitioning to an in-house booking system requires strong support from various aspects. A hybrid approach, where hotels maintain OTA partnerships while increasing in-house bookings, helps ensure financial stability during the transition. Employee training, digital literacy programs, and customer engagement strategies are essential for encouraging in-house bookings. This study highlights that ICT implementation is not just a technological shift but a strategic transformation requiring careful planning, resource allocation, and stakeholder involvement to optimize hotel operations in the digital era.

SUGGESTION

This study has provided valuable insights into organizational readiness for ICT implementation in in-house hotel booking systems. However, given the dynamic nature of digital transformation in the hospitality industry, further research is needed to explore emerging trends, challenges, and opportunities in ICT adoption.

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