

# **Our Thinking Methodology**

**Industry Assessment Opportunity Intelligent Score** 

Part 1: The Basics: How AI Thinks Like Us

1.1 Introduction: Beyond the Buzz

Every industry is facing a huge wave of new technology. Artificial Intelligence (AI) offers tons of ways to make things better, from managing front-line operations to streamlining back-office tasks. Organizations are hearing all sorts of exciting promises about AI, like virtual assistants, optimized pricing, super-personalized customer experiences, and even tools that predict what's coming next. While all these possibilities are real, figuring out how to actually use them well is tricky. The biggest problem for leaders isn't a lack of choices, but not having a clear plan to pick the best ones. How can an organization tell the difference between an investment that will really change things and one that will just waste money? How can leaders ignore the hype and make smart choices that give them an

advantage and a good return on their money?

This report offers a fresh way to solve this problem. It suggests that a great way to make clear, smart, and forward-thinking decisions about AI investments isn't found in computer science, but in how people think. The important work of Nobel Prize winner Daniel Kahneman and his partner Amos Tversky on how humans think in two different ways gives us a really good way to look at and prioritize AI projects. Their idea splits our thinking into two main modes: "System 1," which is fast, instinctive, and automatic; and "System 2," which is slow, careful, and analytical.

The main idea of this analysis is that every AI idea can be matched to one of these thinking styles. Understanding whether an AI project works mostly like a "fast, intuitive" System 1 tool (designed for quick tasks) or a "slow, analytical" System 2 engine (built for complicated problem-solving) is key to figuring out its real purpose, what kind of data it needs, how strategically valuable it is, and how it will impact the business. This way of looking at AI goes beyond just checking off features. It forces a deeper look at what "thinking job" the AI will do in the company. By using this two-system approach, hotel leaders can ignore the noisy AI hype, create a balanced mix of technology investments, and build a clear, strong strategy for making AI a core part of their operations.

### 1.2 How We Think: Fast and Slow (Kahneman-Tversky Model)

To understand how to check if AI is working correctly, we first need to understand how humans make decisions. A famous thinker named Daniel Kahneman wrote a book called *Thinking*, *Fast and Slow* where he explained that our minds have two main ways of thinking. These aren't like two separate brains, but more like two different "modes" our mind uses.

### **System 1: The Quick, Automatic Thinker**

System 1 is like our brain's autopilot. It works super fast, without us even trying, and often without us realizing it. It's responsible for most of the thinking we do every day. It's based on recognizing patterns and things we've learned before. For example, it helps you immediately tell which object is closer, finish a common phrase like "peanut butter and...", or even sense anger in someone's voice. If you're a good driver on an empty road, driving becomes a System 1 task – you just do it. This system is great because it lets us get through life without having to overthink everything.

But being fast has a downside. System 1 uses mental shortcuts, called "heuristics," to make quick decisions. While these shortcuts often work, they can sometimes lead to predictable mistakes, which are called "cognitive biases." Some common biases include:

- Anchoring: Getting stuck on the first piece of information you hear, even if it's not the most important.
- **Availability Heuristic:** Thinking things are more likely to happen if you've recently heard about them or they're easy to remember.
- Framing: Changing your mind about something depending on how the information is presented.

Because System 1 is so quick and instinctive, it's more likely to fall for these biases.

### System 2: The Careful, Logical Thinker

System 2 is the part of your mind that you feel is "you" – the part that makes choices, thinks things through, and focuses. It works slowly and takes effort. You use System 2 for things that require your full attention, like solving complex math problems, figuring out a tough puzzle, or trying to find a specific person in a crowded room. It's what helps you parallel park or understand a difficult argument.

Here's an example of how the two systems work together: Imagine this puzzle: "A bat and a ball together cost \$1.10. The bat costs \$1 more than the ball. How much does the ball cost?" Your System 1 will probably jump to the answer "10 cents" right away. It feels right, but it's wrong! You need System 2 to slow down and do the math. If the ball was 10 cents, the bat would be \$1.10, making the total \$1.20. The correct answer is 5 cents, and you get that by using your logical, effortful System 2 to check the quick answer from System 1.

### **How They Work Together**

System 1 and System 2 are both active when we're awake, working as a team. System 1 is always running, giving System 2 ideas, feelings, and first impressions. Most of the time, System 2 just goes along with System 1's suggestions because it's much more efficient than questioning everything.

System 2 steps in when System 1 gets stuck. It activates when there's a question System 1 can't answer, when something

unexpected happens (like a dog meowing), or when it realizes System 1 is about to make a mistake. So, System 2's main job is to watch over System 1 and control its quick impulses. While System 2 is more logical and less likely to be biased, it's not perfect; biases can still sneak into our careful thinking. This idea of a fast, intuitive system controlled by a slow, analytical one is a great way to understand how modern AI works too.

# 1.3 From Human Brain to Al: Giving Al "System 2" Thinking

The way Kahneman describes how humans think is very similar to how modern AI processes information. Understanding this similarity helps businesses understand what different AI technologies can and cannot do.

# The "System 1" Problem in Al

Many popular AI models, especially large language models (LLMs) like the ones that power chatbots, work a lot like our human System 1. They are incredibly good at quickly reading huge amounts of text and guessing the next word. This is like System 1's quick pattern matching. An LLM "knows" what words usually go together, just like System 1 "knows" how to finish a common phrase. This makes them great at tasks that rely on finding patterns in all the data they've been trained on.

But this strength is also a weakness. These AI models can be easily influenced by everything they read, even if it's not important, misleading, or biased. This can lead to errors, just like human System 1 errors. For example, if you give an LLM a prompt with a strong but wrong opinion, the AI might agree with it, which is called "sycophancy." Similarly, it might focus on simple connections in the text that aren't actually true, leading to bad reasoning, just like how our System 1 uses shortcuts that can lead to biases. This weakness to noisy information is like System 1's vulnerability to how information is presented or the first thing it hears.

### **Building "System 2" into Al**

Because researchers saw these problems, they started developing ways to make LLMs think more carefully and analytically. One promising method is called **System 2 Attention (S2A)**, and it's directly inspired by Kahneman's ideas. S2A tries to copy how human System 2 oversees things by making the LLM "slow down and think" before giving an answer.

The S2A method has two main steps that change how the AI handles information:

- 1. **Cleaning the Information:** First, the AI is asked to act like a natural language detective. It looks at the original information you gave it and rewrites it into a new, cleaner version. This new version gets rid of anything unimportant, distracting opinions, or misleading details that could mess up its thinking. This is like System 2 carefully looking at an impression and throwing out the irrelevant parts.
- 2. **Focused Answering:** Second, the AI creates its final answer by *only* looking at the cleaned-up information. By working from this purified input, the AI's answer is much less likely to be affected by the biases and noise that were in your original prompt.

Experiments have shown that this S2A approach works much better than regular AI models when the task involves irrelevant or opinionated information, like answering factual questions, solving math problems, or writing long essays. The answers are more accurate, more objective, and much less likely to be swayed by opinions, almost as good as if the AI was given a perfect, clean prompt from the start.

#### **What This Means for Businesses**

This change, from an AI that quickly processes information to one that uses a two-step, "deliberate" thinking process, is really important for businesses. It means AI is no longer just good at simple tasks like finding information or completing patterns (System 1 tasks). Now, AI can do more reliable, logical, and trustworthy reasoning (System 2 tasks). This improved ability is crucial for important business situations where accuracy, objectivity, and the ability to sort through complex, messy information are essential. The development of "System 2" capabilities in AI means it can now be used not just to automate simple jobs, but to help and improve complex, strategic decision-making. So, this two-system model helps us figure out how advanced an AI is and how it can be best

used in a company.		

# Part 3: Case Study Application: Scoring Al Opportunities for the Modern Hotel

### 3.1 The Hotel World: A Great Place for AI to Shine

The hotel business today is changing a lot. Hotels are facing big problems and exciting chances that make them perfect for new Al ideas. On one hand, hotels are struggling with not enough workers, rising costs for everything from electricity to supplies, and tough competition from other hotels, online booking sites, and even places like Airbnb. On the other hand, guests expect a lot more now. They want smooth digital experiences and things made just for them, looking for unique and memorable stays instead of just a basic room.

This situation means hotels really need tech solutions. All can help with both problems at once: by automating simple tasks to deal with worker shortages and make things run smoother, and by using information to give guests those super-personalized experiences that build loyalty and get them to book directly.

To show how our "Al Opportunity Scoring Framework" works, we'll use the **Sun Island Bali** resort group as a real-life example. From what we can see online, Sun Island Bali has several hotels (in Kuta, Legian, Seminyak) and focuses on giving guests a special, attentive experience with services like spas, restaurants, bars, and event spaces. Their website clearly tries to get guests to book directly with special offers and shows off good guest reviews to attract new customers. This kind of hotel group—with multiple properties, lots of different services, and a focus on guest experience and direct sales—is perfect for seeing how different Al projects could help. The problems and chances for a group like Sun Island Bali are similar to what many higher-end hotels face, making it a good example for our scoring exercise.

### 3.2 Using the Framework: A Chart for Key Al Projects

The main part of this report is applying our "Dual-System AI Framework" to four important AI ideas that are very relevant to today's hotel industry. The chart below gives a quick overview of this evaluation. It scores each idea based on two systems (System 1 for easy wins and System 2 for long-term value), points out what information and people are crucial for it, and gives a final overall score and recommendation. This table is meant to help senior leaders make decisions by turning a complicated evaluation into something clear, comparable, and actionable. It clearly shows the pros and cons of different projects and gives a complete picture that's based on real-world operations, including what data is needed and who needs to be involved.

# Table 3.1: Al Opportunity Scoring Chart for the Hotel Industry

Al Opportunity	System 1 Score (Easy to Understand & Quick Results)	System 2 Score (Deep Strategy & Long-Term Value)	What Data Is Needed	Who Needs to Be Involved	How Much Money Might It Make?	Overall Score & What We Suggest
Al Guest Concierge Chatbot	High (8/10): Everyone gets it, solves obvious problems (24/7 questions), and promises quick setup with clear results in happier guests and less work for staff.	Medium (6/10): Good for service and direct bookings, but becoming pretty standard. Helps collect info for later.	Hotel Booking System (Booking Info), Central List of Common Questions, Local Area Guides.	Front Desk, Operations, Marketing, IT.	Short-term: Saves money by reducing calls to front desk (up to 30%), increases direct bookings (up to 30%).	7.0 - Quick Win / Basic Tool

Dynamic Pricing Engine  Medium (9 Harder for non-exper grasp. See complicat and guest might get annoyed be changing which can resistance first.	core way to make the most money. Directly affects key financial numbers. Creates a big, lasting advantage by	Hotel Booking System (Past & Current Occupancy), Competitor Prices, Market Demand (Flights, Events), Economic Trends.	Revenue Management, Finance, Sales, General Manager.	Medium-term: Significantly boosts revenue per available room (5-15% reported) and average daily rate, better occupancy during slow times.	7.5 - Absolutely Essential
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	.5 - Makes You tand Out
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Predictive Maintenance System  Low (3/10): Not for guests, not flashy, and its benefits are invisible when it works (nothing breaks). Hard to get everyone excited.	Medium (7/10): Very important strategically for cutting big costs and, most importantly, preventing huge guest problems (like AC breaking). Makes equipment last longer and budgets more predictable.	IoT Sensor Data (AC, Elevators, Plumbing), Past Maintenance Records, Asset Management System, Work Order Data.	Engineering, Operations, Finance, Housekeeping.	Long-term: Big savings on operational costs (25% less on maintenance), less equipment downtime (40% less), and avoids losing money from rooms that can't be used.	5.5 - Hidden Gem
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# 3.3 Detailed Look at the Scored Projects

The chart gives a numbers summary; the following explanation digs into why we gave each project its score, using specific facts and what's happening in the industry.

### **Al Guest Concierge Chatbot**

• System 1 Score (8/10 - High): This project gets a high score for being easy to understand because it solves a common and

- very obvious problem: needing instant, around-the-clock guest help. Everyone gets the idea, from the general manager to the front-desk staff. Its benefits are clear and immediate: fewer repetitive calls to the front desk, which frees up staff to deal with more complicated, important guest interactions. There's a good chance for quick wins; using a chatbot can lead to clear reductions in customer service costs (up to 30%) and a noticeable increase in direct bookings by giving instant answers during the booking process.
- System 2 Score (6/10 Medium): While strategically important for making the guest experience modern and gathering valuable information, the chatbot is becoming a "must-have" technology. Not having one can put a hotel at a disadvantage, but just having one isn't usually a deep, long-term way to stand out. Its main strategic value is often its role as a basic tool—a key way to collect organized information on what guests need and prefer, which can then power more advanced personalization and operational systems later.

### **Dynamic Pricing Engine**

- System 1 Score (5/10 Medium): The idea of dynamic pricing is harder for people outside of the revenue management department to grasp. The thought of prices changing daily or even hourly can seem complicated and brings up concerns about guests getting upset or questioning if prices are fair. Unlike a chatbot, how it works isn't immediately clear, which can cause hesitation and make people resistant to using it.
- System 2 Score (9/10 High): From a strategic and analytical point of view, a dynamic pricing engine is incredibly powerful. It's a core "System 2" application that directly focuses on the financial heart of the hotel: making the most money. It performs a complex analysis with many variables that no human can do in real-time, processing huge amounts of data including past and current occupancy, competitor prices, market demand signals, local events, and even weather forecasts. Successfully using this technology gives a huge competitive advantage, directly boosting key performance indicators like Revenue Per Available Room (RevPAR) and Average Daily Rate (ADR). It allows a hotel to maximize revenue during busy times and encourage bookings during slow times, ensuring the best possible management of income.

# **Hyper-Personalization Platform**

• System 1 Score (6/10 - Medium): The general idea of "treating every guest like an individual" is very appealing and easy to understand. However, how to actually achieve true hyper-personalization is much less obvious than just setting up a chatbot. The difficulty of combining different data sources and turning that data into personalized actions makes the "how" of this

- project less immediately clear, which lowers its simple intuitive appeal.
- System 2 Score (10/10 High): This project represents the highest level of strategic Al use in the hotel industry. It moves past simple grouping to predict and interact with each guest one-on-one, creating experiences that are uniquely tailored to individual preferences and past actions. This ability is the most powerful factor for the ultimate long-term goal: Guest Lifetime Value (GLV). By creating experiences that deeply connect with guests, it builds strong brand loyalty, increases repeat business, and maximizes opportunities to sell additional services or products. However, it's also the most demanding from a System 2 perspective, requiring the most complex and difficult data integration project: creating a single, complete guest profile that brings together information from every interaction point.

### **Predictive Maintenance System**

- System 1 Score (3/10 Low): This is a classic "Hidden Gem." It doesn't interact with guests, isn't glamorous at all, and its success is defined by the absence of problems—something that doesn't happen, which is hard to celebrate. It's tough to get the whole organization excited about a project whose main benefit is that the air conditioning doesn't break down on the hottest day of the year. Its appeal isn't obvious; it's purely logical and focused on avoiding risks.
- System 2 Score (7/10 Medium): Despite its low intuitive appeal, the strategic value of predictive maintenance is significant. It directly tackles major operational costs by optimizing maintenance schedules and reducing the need for expensive emergency repairs. More importantly, it's a crucial tool for reducing risks. A single, noticeable equipment failure (an elevator breaking down, a pool pump failing, a widespread AC problem) can lead to a flood of bad guest reviews and cause permanent damage to the brand. By preventing these catastrophic guest satisfaction failures, the system provides a powerful, though behind-the-scenes, strategic benefit.

Applying this framework shows a clear pattern. The projects that are easiest to understand and promise the fastest results—the "System 1" Als like the chatbot—are mainly focused on making things **run more efficiently**. They automate routine tasks, cut costs, and simplify existing processes. In contrast, the projects that require the most complex, analytical, and deliberate effort—the "System 2" Als like dynamic pricing and hyper-personalization—are the ones that drive **strategic revenue growth** and create true **competitive differentiation**. This difference allows leaders to match their Al investments with their most urgent strategic goals. If the immediate goal is to lessen operational burdens and control costs, the focus should be on high-scoring System 1 projects. If the main goal is to become a market leader and speed up revenue growth, the organization must prioritize the more challenging, but ultimately more rewarding, System 2 projects. The framework gives the essential language and structure to help with this critical strategic discussion.

### Part 4: From Scoring to Strategy: A Roadmap for Successful Al Implementation

### 4.1 Data: The Al Fuel

Al needs good information to work. Imagine a super-smart robot—it's useless without power. For hotels, that "power" is high-quality, organized data. The better the Al, the more complex and connected the data needs to be. So, hotels must first check their data systems.

#### Where Hotel Data Comes From:

Hotels use many types of information:

- **Property Management System (PMS):** Info on rooms, bookings, cancellations.
- Customer Relationship Management (CRM): Guest details, loyalty status, preferences.
- Point of Sale (POS): What guests buy at restaurants or spas.
- Booking Engines & Website Analytics: How guests search and book online.
- Outside Data: Competitor prices, flight info, local events, weather.
- **IoT Sensors:** Data from equipment like AC units for maintenance.

# **The Problem: Messy Data**

The biggest problem for advanced AI in hotels is that data is scattered. Information from different systems (PMS, CRM, etc.) often doesn't talk to each other. This makes it hard to get a complete picture of a guest. To truly personalize things, hotels need to connect all this data. It's not about collecting more data, but connecting what they already have.

#### **Good Data Rules:**

Data must be clean, accurate, and secure. Bad data leads to bad AI decisions and a loss of trust. Hotels need rules for data privacy and how guest information is used.

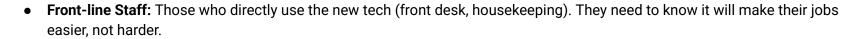
### 4.2 Teamwork and Tech Partners

Bringing new technology into a hotel isn't just about the tech; it's about getting everyone on board.

### Who Needs to Agree?

Many different groups inside a hotel need to agree:

- Owners & Investors: They care about making money.
- Management & Operators: They want smooth operations and happy guests.
- **Department Heads:** Leaders for revenue, marketing, IT, etc., who run specific parts of the hotel.



Getting everyone to agree can be tough, but a clear plan showing the benefits helps.

#### **Choosing the Right Tech Company:**

Once a hotel knows what it wants to do, it needs to pick the right tech partner. The hotel tech market has many companies. Look for those with hotel experience, a good track record, strong support, and systems that connect well with existing hotel software.

Some leading companies for core hotel operations are IDeaS, Duetto, Oracle Hospitality, Cloudbeds, and Mews.

# 4.3 Measuring Success: Al's Return on Investment

To justify spending money on AI, hotels need to show it's worth it.

#### **Basic ROI Formula:**

ROI is simply how much profit you make from an investment, often shown as a percentage.

If you spend \$10,000 and make \$15,000 extra, your profit is \$5,000, and ROI is 50%.

#### What to Measure for Hotel Al:

Hotels should track more than just basic profit.

#### • More Money Coming In:

- Revenue Per Available Room (RevPAR): How much money each room brings in. Al can increase this by 5-15%.
- Average Daily Rate (ADR): The average price for a room. All helps sell rooms at the best price.
- Direct Bookings: Bookings made directly with the hotel, which saves money on booking fees. All can increase these by up to 30%.

#### Saving Money:

- o Lower Staff Costs: All can reduce calls to the front desk or help schedule staff better.
- Maintenance Costs: All that predicts when equipment needs fixing can cut costs by 25%.
- Cost Per Occupied Room (CPOR): Overall efficiency.

### • Happier Guests:

- o Guest Satisfaction Scores (GSS): How happy guests are. Personalized service from AI can boost these scores.
- Customer Lifetime Value (CLV): How much a guest spends over all their visits. All personalization builds loyalty and encourages repeat business, potentially increasing repeat bookings by 36%.

Ultimately, for AI to work well, hotels must first fix their data problems and get everyone on the same page. This hard work *before* investing in AI makes success much more likely.

# **Part 5: Strategic Recommendations and Future Outlook**

### 5.1 Deciding Which Al Projects to Do First: A Step-by-Step Plan

Imagine you have a bunch of cool AI ideas, but you can't do them all at once. This plan helps a hotel decide which AI projects to start with and in what order to make the most impact. It's like building a strong tower, one level at a time, so it doesn't fall over. Based on our analysis, here's how we suggest doing it:

#### Phase 1: Easy Wins (First Year)

First, let's go for something that's easy to set up and quickly shows how useful AI can be. This phase focuses on a project that solves an immediate problem and starts collecting important information.

- Main Project: Get the Al Guest Concierge Chatbot.
- Why it's a good idea: This chatbot is a great first step because it scored high on being helpful (8/10) and smart (6/10). It fixes problems like guests always asking questions and front desk staff being super busy, even in the middle of the night. This means the hotel saves money and staff are happier, which shows everyone that AI works! Plus, every time someone talks to the chatbot, it collects information about what guests need and ask. This information will be super important for more advanced AI later on.

#### Phase 2: Making More Money (Years 1-2)

Once we've seen some success with the first project, the next step is to focus on an AI that directly helps the hotel make more money. This phase should start around the same time as Phase 1, or soon after, because it's all about the hotel's financial

health.

- Main Project: Invest in a Dynamic Pricing Engine.
- Why it's a good idea: This engine is a "must-have" for any modern hotel because it scored well (7.5 out of 10) on how much it can impact the business. Even though it might not seem as exciting as a chatbot, it makes a huge difference in how much money the hotel earns per room and the average price of rooms. This clearly shows why more Al investments are a good idea. This phase will also help the hotel learn how to gather and use real-time data from its booking systems and other market information. Learning this will be key for even more advanced Al projects later.

#### Phase 3: Standing Out (Years 2-4)

This phase is about making a big, long-term move that uses all the information and tools built in the earlier phases to give the hotel a special advantage over competitors.

- Main Project: Create a Hyper-Personalization Platform.
- Why it's a good idea: This project scored the highest (8.5 out of 10) because it's the ultimate goal. It uses all the guest interaction information collected by the chatbot in Phase 1 and the strong data system built for the pricing engine in Phase 2. By combining this with information from guest profiles and payment systems, the hotel can finally create a complete picture of each guest. This allows the hotel to offer personalized experiences that anticipate what guests want, making them feel truly special. This is what makes guests loyal, come back again and again, and increases how much money they spend over their lifetime as a customer.

Always Getting Better: Adding in "Hidden Gems"

While these main projects are happening, the hotel should also look for other smaller, but still valuable, AI projects. For example, as hotel rooms get more smart sensors, it makes more sense to use a **Predictive Maintenance System** (score: 5.5). This system can be added in as the hotel gets better at using AI and has more data available. It helps save money and prevent problems, making the whole AI plan even more profitable. **5.2 The Future of Smart Hotels: Thinking Ahead for Guests** 

The plan in this report – from simple chatbots to complex personalized systems – shows how AI is changing the hotel world. But it won't stop there. The future of smart hotels is all about **proactive and smart AI**, where systems don't just answer questions or predict things, but actually guess what guests need and act on it before guests even realize they need it.

Right now, AI usually reacts (like a chatbot answering a question) or predicts (like figuring out how much to charge for rooms).

The next big step, with even smarter AI, is proactive service. Imagine an AI system that knows about real-time flight schedules. It notices that a VIP guest's flight is delayed by three hours. Without anyone from the hotel doing anything, the AI could automatically:

- 1. Change the guest's ride from the airport.
- 2. Tell housekeeping to wait a bit before getting the guest's room ready.
- 3. Send a special text message to the guest acknowledging the delay, confirming the new ride time, and offering a free late check-out or a drink at the bar when they arrive later.

This kind of smooth, anticipating service is the best hospitality, and AI will make it happen. These future systems will look at what a guest has done before, and even their social media, to personalize room settings, suggest local activities, and adjust amenities to fit what each person likes, making every guest feel uniquely valued and understood.

As AI gets more powerful, independent, and deeply involved in every part of how a hotel works, having a strong, smart, and human-focused way to evaluate it will be more important than ever. There will be so many new technologies to choose from. The Dual-System AI Framework, by helping us balance what feels right with what the data says, and quick wins with long-term goals, offers a lasting guide for this journey. It makes sure that as technology gets better, investment decisions are still based on understanding what the AI is supposed to do and always focused on creating real business value.

#### Works cited

1. Al in Hospitality: Advantages and Use Cases - NetSuite, accessed October 6, 2025, <a href="https://www.netsuite.com/portal/resource/articles/business-strategy/ai-hospitality.shtml">https://www.netsuite.com/portal/resource/articles/business-strategy/ai-hospitality.shtml</a>

- 2. Al in Hospitality: Overview, Use Cases, and Integration Strategies MobiDev, accessed October 6, 2025, <a href="https://mobidev.biz/blog/ai-in-hospitality-use-case-integration-strategies">https://mobidev.biz/blog/ai-in-hospitality-use-case-integration-strategies</a>
- Inside System 2 Attention: Meta Al New Method to Improve Reasoning in LLMs, accessed October 6, 2025, <a href="https://jrodthoughts.medium.com/inside-system-2-attention-meta-ai-new-method-to-improve-reasoning-in-llms-442">https://jrodthoughts.medium.com/inside-system-2-attention-meta-ai-new-method-to-improve-reasoning-in-llms-442</a>

   4751a6be1
- 4. Thinking, Fast and Slow Wikipedia, accessed October 6, 2025, <a href="https://en.wikipedia.org/wiki/Thinking\_Fast\_and\_Slow">https://en.wikipedia.org/wiki/Thinking\_Fast\_and\_Slow</a>
- 5. System 2 Reasoning Capabilities Are Nigh arXiv, accessed October 6, 2025, https://arxiv.org/html/2410.03662v2
- 6. System 1 and System 2 Thinking The Decision Lab, accessed October 6, 2025, <a href="https://thedecisionlab.com/reference-guide/philosophy/system-1-and-system-2-thinking">https://thedecisionlab.com/reference-guide/philosophy/system-1-and-system-2-thinking</a>
- 7. Thinking, Fast and Slow by Daniel Kahneman: Two Systems of Thought | by Rohit Lokwani, accessed October 6, 2025, <a href="https://medium.com/@rohitlokwani17/thinking-fast-and-slow-by-daniel-kahneman-two-systems-of-thought-88c31f1">https://medium.com/@rohitlokwani17/thinking-fast-and-slow-by-daniel-kahneman-two-systems-of-thought-88c31f1</a> ba917
- 8. Daniel Kahneman Explains The Machinery of Thought Farnam Street, accessed October 6, 2025, <a href="https://fs.blog/daniel-kahneman-the-two-systems/">https://fs.blog/daniel-kahneman-the-two-systems/</a>
- 9. Do you use system 1 or system 2 thinking? : r/entp Reddit, accessed October 6, 2025, https://www.reddit.com/r/entp/comments/1i150vz/do\_you\_use\_system\_1\_or\_system\_2\_thinking/
- 10. System 1 vs. System 2 Thinking MDPI, accessed October 6, 2025, https://www.mdpi.com/2624-8611/5/4/71
- 11. [R] System 2 Attention (is something you might need too): r/MachineLearning Reddit, accessed October 6, 2025, <a href="https://www.reddit.com/r/MachineLearning/comments/1854gp2/r\_system\_2\_attention\_is\_something\_you\_might\_n">https://www.reddit.com/r/MachineLearning/comments/1854gp2/r\_system\_2\_attention\_is\_something\_you\_might\_n</a> eed/
- 12. Role of Artificial Intelligence in Hotel Revenue Management Botshot, accessed October 6, 2025, <a href="https://botshot.ai/resources/blog/the-role-of-artificial-intelligence-in-hotel-revenue-management">https://botshot.ai/resources/blog/the-role-of-artificial-intelligence-in-hotel-revenue-management</a>
- 13. From data to action driving ROI from data in hospitality | By Philip Barton, accessed October 6, 2025, https://www.hospitalitynet.org/opinion/4126431.html
- 14. Dynamic Pricing Strategy in Hotels: A Complete Guide, accessed October 6, 2025, <a href="https://www.shms.com/en/news/dynamic-pricing-strategy-in-hotels/">https://www.shms.com/en/news/dynamic-pricing-strategy-in-hotels/</a>
- 15. Hotel dynamic pricing: Full guide with examples SiteMinder, accessed October 6, 2025, https://www.siteminder.com/r/hotel-dynamic-pricing/
- 16. Al Personalization ROI for Hotels, accessed October 6, 2025, <a href="https://blog.naitive.cloud/ai-personalization-roi-for-hotels/">https://blog.naitive.cloud/ai-personalization-roi-for-hotels/</a>

- 17. Dynamic Pricing Strategy for Boutique Hotels in Urban Areas Revenue Growth Case Study, accessed October 6, 2025, <a href="https://flevy.com/topic/revenue-growth/case-dynamic-pricing-strategy-boutique-hotels-urban-areas">https://flevy.com/topic/revenue-growth/case-dynamic-pricing-strategy-boutique-hotels-urban-areas</a>
- 18. The single biggest impact AI will have on hospitality is in ?, accessed October 6, 2025, <a href="https://www.hospitalitynet.org/viewpoint/125000242.html">https://www.hospitalitynet.org/viewpoint/125000242.html</a>
- 19. Your Ultimate Bali Escape: Your home away from home, accessed October 6, 2025, https://sunislandbali.com/
- 20. Accommodation & Services at Hotel & Spa Kuta Sun Island Bali, accessed October 6, 2025, <a href="https://sunislandbali.com/hotel-spa-kuta/accommodation-and-services/">https://sunislandbali.com/hotel-spa-kuta/accommodation-and-services/</a>
- 21. Benefits of Al Chatbots for Hotel Guest Experiences | Blueprint RF, accessed October 6, 2025, <a href="https://www.blueprintrf.com/hotel-ai-chatbots-benefits/">https://www.blueprintrf.com/hotel-ai-chatbots-benefits/</a>
- 22. Al Hotel Chatbot: Improves Guest Experience & Service Botshot, accessed October 6, 2025, <a href="https://botshot.ai/resources/blog/chatbot-for-hospitality-industry">https://botshot.ai/resources/blog/chatbot-for-hospitality-industry</a>
- 23. botshot.ai, accessed October 6, 2025, <a href="https://botshot.ai/resources/blog/chatbot-for-hospitality-industry#:~:text=Hotel%20Chatbots%20are%20a%20cost,to%20provide%20better%20customer%20service.">https://botshot.ai/resources/blog/chatbot-for-hospitality-industry#:~:text=Hotel%20Chatbots%20are%20a%20cost,to%20provide%20better%20customer%20service.</a>
- 24. How AI is Transforming The Hospitality Industry Duve, accessed October 6, 2025, <a href="https://duve.com/how-ai-is-transforming-the-hospitality-industry/">https://duve.com/how-ai-is-transforming-the-hospitality-industry/</a>
- 25. Al Chatbots for Hotels: How to Improve Guest Experience & Revenue upmarket.cloud, accessed October 6, 2025, <a href="https://upmarket.cloud/blog/ai-chatbots-in-the-hospitality-industry-an-in-depth-guide/">https://upmarket.cloud/blog/ai-chatbots-in-the-hospitality-industry-an-in-depth-guide/</a>
- 26. Why AI Chatbots for the Hospitality Industry Are Essential Now - Emly Labs, accessed October 6, 2025, <a href="https://emlylabs.com/blog/why-ai-chatbots-for-the-hospitality-industry-are-essential-now/">https://emlylabs.com/blog/why-ai-chatbots-for-the-hospitality-industry-are-essential-now/</a>
- 27. Hotel Dynamic Pricing: The Complete Guide for Hoteliers | Cvent Blog, accessed October 6, 2025, <a href="https://www.cvent.com/en/blog/hospitality/hotel-dynamic-pricing-complete-guide">https://www.cvent.com/en/blog/hospitality/hotel-dynamic-pricing-complete-guide</a>
- 28. What is dynamic pricing in hotels and how does it work? Mews, accessed October 6, 2025, https://www.mews.com/en/blog/dynamic-pricing-hotels
- 29. Dynamic Pricing defined: A guide to setting competitive hotel rates Lighthouse, accessed October 6, 2025, <a href="https://www.mylighthouse.com/resources/blog/hotel-dynamic-pricing-defined">https://www.mylighthouse.com/resources/blog/hotel-dynamic-pricing-defined</a>
- 30. How Dynamic Pricing Can Improve Hotel Revenue NetSuite, accessed October 6, 2025, <a href="https://www.netsuite.com/portal/resource/articles/business-strategy/hotel-dynamic-pricing.shtml">https://www.netsuite.com/portal/resource/articles/business-strategy/hotel-dynamic-pricing.shtml</a>
- 31. Hyper-Personalisation and AI in Hotels: Transforming Hospitality in 2025 Hotelbeds, accessed October 6, 2025, <a href="https://discover.hotelbeds.com/resources/insight/hyper-personalisation-ai-hotels">https://discover.hotelbeds.com/resources/insight/hyper-personalisation-ai-hotels</a>
- 32. Predictive Personalization: Revolutionize Travel & Hospitality Bridgenext, accessed October 6, 2025, <a href="https://www.bridgenext.com/blog/predictive-personalization-revolutionize-travel-hospitality/">https://www.bridgenext.com/blog/predictive-personalization-revolutionize-travel-hospitality/</a>

- 33. Al in Hospitality: A New Era of Efficiency and Personalization Withum, accessed October 6, 2025, <a href="https://www.withum.com/resources/ai-in-hospitality-a-new-era-of-efficiency-and-personalization/">https://www.withum.com/resources/ai-in-hospitality-a-new-era-of-efficiency-and-personalization/</a>
- 34. 7 Ways to Use AI in Hospitality + 4 Big Hotel Case Studies iovox, accessed October 6, 2025, <a href="https://www.iovox.com/blog/ai-in-hospitality">https://www.iovox.com/blog/ai-in-hospitality</a>
- 35. (PDF) A Framework for Measuring Personalization in the Luxury Hotel Industry, accessed October 6, 2025, <a href="https://www.researchgate.net/publication/394590455\_A\_Framework\_for\_Measuring\_Personalization\_in\_the\_Luxury\_Hotel\_Industry">https://www.researchgate.net/publication/394590455\_A\_Framework\_for\_Measuring\_Personalization\_in\_the\_Luxury\_Hotel\_Industry</a>
- 36. Gen AI in hotel revenue management: Pricing and automation ZS, accessed October 6, 2025, <a href="https://www.zs.com/insights/generative-ai-hospitality-revenue-management">https://www.zs.com/insights/generative-ai-hospitality-revenue-management</a>
- 37. Al in Hospitality: Use Cases, Benefits, Real-World Examples Guru TechnoLabs, accessed October 6, 2025, <a href="https://www.gurutechnolabs.com/ai-in-hospitality/">https://www.gurutechnolabs.com/ai-in-hospitality/</a>
- 38. Al & Humans: A Perfect Harmony for Elevating the Hotel Guest Experience | By Are Morch, accessed October 6, 2025, <a href="https://www.hospitalitynet.org/opinion/4125634.html">https://www.hospitalitynet.org/opinion/4125634.html</a>
- 39. (PDF) Stakeholder Model of Hotel Chains: A Conceptual Framework ResearchGate, accessed October 6, 2025, <a href="https://www.researchgate.net/publication/228131564\_Stakeholder\_Model\_of\_Hotel\_Chains\_A\_Conceptual\_Framework">https://www.researchgate.net/publication/228131564\_Stakeholder\_Model\_of\_Hotel\_Chains\_A\_Conceptual\_Framework</a>
- 40. How Stakeholder Collaboration Boosts Hotel Success, accessed October 6, 2025, <a href="https://switchhotelsolutions.com.au/how-stakeholder-collaboration-boosts-hotel-success/">https://switchhotelsolutions.com.au/how-stakeholder-collaboration-boosts-hotel-success/</a>
- 41. Stakeholders' Influence on Environmental Sustainability in the Australian Hotel Industry, accessed October 6, 2025, <a href="https://www.mdpi.com/2071-1050/13/3/1351">https://www.mdpi.com/2071-1050/13/3/1351</a>
- 42. Hospitality stakeholders face challenges to improving hotel tech: PwC | Hotel Dive, accessed October 6, 2025, <a href="https://www.hoteldive.com/news/hospitality-stakeholders-challenges-hotel-technology-pwc/692450/">https://www.hoteldive.com/news/hospitality-stakeholders-challenges-hotel-technology-pwc/692450/</a>
- 43. 5 Steps for Engaging Stakeholders in Hotel Rebranding, accessed October 6, 2025, <a href="https://switchhotelsolutions.com.au/5-steps-for-engaging-stakeholders-in-hotel-rebranding/">https://switchhotelsolutions.com.au/5-steps-for-engaging-stakeholders-in-hotel-rebranding/</a>
- 44. IDeaS | Hospitality Revenue Management Solutions, accessed October 6, 2025, https://ideas.com/
- 45. On rate: HOTELS Magazine's top 5 revenue management companies HOTELSMag.com, accessed October 6, 2025, https://hotelsmag.com/news/on-rate-hotels-magazines-top-5-revenue-management-companies/
- 46. Duetto: Hotel revenue management software & solutions, accessed October 6, 2025, <a href="https://www.duettocloud.com/en-us/">https://www.duettocloud.com/en-us/</a>
- 47. 10 Best Hotel Property Management Systems 2025 Hotel Tech Report, accessed October 6, 2025, <a href="https://hoteltechreport.com/operations/property-management-systems">https://hoteltechreport.com/operations/property-management-systems</a>
- 48. Best Hotel Revenue Management Systems (RMS): User Reviews from October 2025 G2, accessed October 6, 2025,

- https://www.g2.com/categories/hotel-revenue-management-systems-rms
- 49. Hotel ROI: A Guide to Measuring and Maximizing Hotel Success | NetSuite, accessed October 6, 2025, https://www.netsuite.com/portal/resource/articles/accounting/hotel-roi.shtml
- 50. Hotel ROI: A Comprehensive Guide to Measuring and Monitoring Success PriceLabs, accessed October 6, 2025, <a href="https://hello.pricelabs.co/understanding-hotel-roi/">https://hello.pricelabs.co/understanding-hotel-roi/</a>
- 51. Hotel ROI: A Guide to Measuring and Tracking Hotel Success | Cvent Blog, accessed October 6, 2025, <a href="https://www.cvent.com/en/blog/hospitality/hotel-roi">https://www.cvent.com/en/blog/hospitality/hotel-roi</a>
- 52. Analytics in Action Case Studies Demonstrating the ROI of Hospitality Software MoldStud, accessed October 6, 2025, <a href="https://moldstud.com/articles/p-analytics-in-action-case-studies-demonstrating-the-roi-of-hospitality-software">https://moldstud.com/articles/p-analytics-in-action-case-studies-demonstrating-the-roi-of-hospitality-software</a>
- 53. Cut Through AI Hospitality Case Study Noise System in Motion, accessed October 6, 2025, <a href="https://system-in-motion.com/en/blog/cut-ai-case-study-noise/">https://system-in-motion.com/en/blog/cut-ai-case-study-noise/</a>