



EXECUTIVE INSIGHTS

Deploying Generative AI in the Hotel Industry

How to utilize this new technology to create a competitive advantage

As the hotel industry comes roaring back to life in the wake of the pandemic, companies are turning to new technologies to improve business performance and enhance the guest experience. One technology suddenly thrust onto center stage is generative artificial intelligence (AI), which uses machine learning algorithms to analyze data and generate insights that can improve pricing, guest experiences and operational efficiency.

At L.E.K. Consulting, we believe that incorporating innovative new applications of generative AI is quickly becoming a strategic imperative for hospitality executives. Generative AI will transform aspects of key business processes faster than many imagine, and it is therefore critical to understand the opportunities and risks that AI can provide. In this *Executive Insights*, we will explore the benefits of generative AI for hotels and the key challenges of implementing it as well as provide a roadmap for successful deployment.

Benefits of generative AI for hotels

Some of the most promising business functions where generative AI can provide a wide range of benefits to hotels include:

- **Personalized guest experiences:** Generative AI can help hotels provide personalized recommendations and customized experiences. By analyzing guests' data, such as their preferences, behavior and purchase history, the technology can provide tailored suggestions for activities, restaurants and other amenities. AI can also customize digital marketing content such as social media posts and responses to reviews. AI-based tools have already emerged that can ensure guests feel seen and heard in a timely manner.

- **Virtual and phone-based assistance:** AI-based large language models are increasingly being used for consumer-facing chatbots and other customer service tools. Generative AI tools can be trained to answer frequently asked questions with quick automated responses in multiple languages. Other tools are already integrating with phone lines to accept room service orders by voice.
- **Optimized pricing:** AI-powered pricing tools can help hotels optimize pricing in real time based on supply and demand, seasonal trends, and local events. By analyzing data such as booking patterns, occupancy rates and competitor pricing, generative AI can provide recommendations for dynamic pricing that maximize revenue during peak demand periods and minimize revenue loss during slow periods.
- **Increased operational efficiency:** Generative AI can automate many of the repetitive and time-consuming tasks that hotel staff typically perform, such as booking rooms and processing check-ins. This can free up staff to focus on higher-value tasks and improve overall operational efficiency. AI-based smart building systems can also optimize housekeeping and maintenance by monitoring temperature and lighting, sensing leaks, and coordinating team member schedules.

Challenges of implementing generative AI in hotels

While the benefits of generative AI are clear, executing it in the hotel industry can be challenging. Some of the key barriers include:

- **Data quality and availability:** Generative AI relies on high-quality data. In the hotel industry, data may be fragmented across multiple systems and not well organized or consistent. Additionally, some data may be sensitive, such as guests' personal information, and may require additional security measures.
- **Integration with existing systems and processes:** Deploying generative AI may require integrating with existing systems, such as property management and customer relationship management systems. It will also require training staff on new technologies and workflows. These can be complex and time-consuming and may require ongoing investment to ensure successful adoption.
- **Losing the human touch:** Generative AI-based tools can drive operating efficiencies but come with a perception risk when used in the front office – virtual chatbots may not sound fully human and come with the possibility of inaccuracies. Hotels must carefully manage the guest experience to ensure they don't risk damaging the personal connections that can do

so much to build loyalty. This is a hot area of innovation, and we have previously termed the initiatives to better calibrate these interfaces "digital empathy."

Roadmap for successful deployment

To successfully deploy generative AI in the hotel industry, it is absolutely essential to develop a strategy first, which should both outline objectives and detail priorities. Not everything needs to be transformed, but some areas of the business model will require rapid action. To build and implement this strategy, we recommend the following steps:

- 1. Identify business problems:** The first step in deploying generative AI is to identify the specific business problems you want to solve. This could include personalizing the guest experience and increasing satisfaction, providing virtual or phone-based assistance, optimizing pricing, or automating repetitive tasks and improving operational efficiency.
- 2. Develop strawman solutions:** The next step is to think carefully through which aspects of the business process could be eliminated or enabled with AI assistance. This requires not only a careful review of which capabilities can be readily plugged in but also an open-minded approach to clean-sheeting standard operating procedures given newfound sources of leverage.
- 3. Prioritize critical actions:** It is important to carefully evaluate which actions are most valuable from the perspective of cost savings, speed of service or overall service quality. The trade-offs must be weighed, and the second-order effects of implementation must be predicted and planned. Then the highest-value items can be teed up to test AI solutions.
- 4. Collect and prepare data:** The next step is to collect and prepare the data needed to train the generative AI model. This may include structured data, such as booking and sales data, as well as unstructured data, such as guest feedback and social media posts. It is important to ensure that the data is high quality, accurate, well organized and consistent across all the different systems.
- 5. Train the AI model:** Once you have collected and prepared your data, you can begin training the generative AI model. This involves using machine learning algorithms to analyze the data and generate insights. It may require iterative testing and adjustment to refine the model and ensure accuracy.
- 6. Integrate the AI model:** Next, you can integrate the model into your business operations. This may involve creating custom software or application programming interfaces or integrating it with existing systems to automate tasks and generate insights.

7. Monitor and refine the AI model: After deployment, it is important to monitor the AI model to ensure that it is generating accurate and useful insights. You may need to refine the model or adjust your data collection and preparation processes to improve accuracy. AI technology is not a "set it and forget it" tool; it must be continually trained and optimized.

Conclusion

Generative AI has the potential to create a competitive advantage for hotels by improving guest experiences, optimizing pricing and increasing operational efficiency. However, hotels should be selective in their use of this technology rather than deploying AI for AI's sake.

Incorporating generative AI requires careful planning and execution. It is important to identify the specific business problems you want to solve, develop strawman solutions, prioritize critical actions, collect and prepare high-quality data, train the AI model, integrate it into your operations, and monitor and refine it. These activities should be carefully considered by hotel brands, owners and management companies alike.

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