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Converging Forces – The Future is Hybrid by Design



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The Future of Hospitality Is in a Fine-Tuned Blend of Humans and Technology

Human-less Service

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Max Starkov argues that guests are already comfortable with “human-less” service in accommodations, and hotels should respond by using AI, robotics, mobile, and cloud tools to do more with fewer staff while keeping a warm human face where it matters most. Using vacation rentals as proof that self-service works at scale, he links accelerated tech adoption to solving labor shortages and rising costs, and predicts a major staffing reduction by 2030 as automation moves from the back of house into core operations.

BACKGROUND

The classic philosophy in hospitality goes like this: customers - leisure, business, corporate group or SMERF members - require services provided by super nice, smiling, well-trained humans. Think the Ritz Carlton’s employees and their little “Gold Standards” handbook that ensures above-and-beyond customer service. After all, this is the reason why our industry is called “hospitality”, because our guests supposedly expect their hosts - the hotel staff themselves - to provide “human” services at all touchpoints of the guest experience.

I believe the notion that guests are demanding human-provided services is greatly exaggerated, especially today. A great example of why guests do not care about human-provided services as much as some in our industry think comes from the vacation rental sector.

WHAT CAN HOTELS LEARN FROM VACATION RENTALS?

In 2025, close to a quarter of roomnights in North America were consumed at vacation rentals/ short-term rentals: houses, villas, condos and apartments. A quarter! The vast majority of these short-term rental bookings were done online via Airbnb, Booking Holdings, Expedia, Vrbo, Vacasa, etc.

Just imagine the whole vacation rental experience: you book online, receive online confirmation and pre-arrival information (directions, keyless entry info, destination info, etc.); upon arrival enter the unit using the mobile key or keyless entry; enjoy your stay; pack your bags and leave on day of departure. All of this while having a completely HUMANLESS EXPERIENCE! All of the “behind the curtains” human involvement remains hidden from the actual guests: vacation rental management, IT and technology management, RM and distribution, marketing, housekeeping, utilities maintenance, etc.

The “gold standard” at short-term rentals is customer experience WITHOUT any human contact between guests and hosts, and yet guests are not only not complaining, but gobbling up this “human-less” service and loving it! Since the pandemic I have spent over 200 roomnights at short-term rentals without seeing any of my hosts in person even once!

This means that a quarter of travelers who consume accommodations have already experienced human-less hospitality and are prepared to do so at traditional accommodation types such as hotels, resorts, casinos, motels, etc.

WHY IS THE SUBJECT OF HUMAN-PROVIDED SERVICES IN HOSPITALITY SO IMPORTANT?

There are three extremely important issues plaguing the industry today that need immediate resolution: a) never-ending labor shortages, b) unsustainable labor costs and c) inability to provide adequate services to the exceedingly tech-savvy and DIY (do-it-yourself) customers.

According to the Bureau of Labor Statistics, in August 2025 the number of unfilled positions in the U.S. were 7.2 million open positions, “only” 1.1 million of which were in leisure and hospitality, which means that labor shortages are not a hospitality-native problem. We cannot simply “bribe” with higher wages and sign-up bonuses people to come and work in hospitality, since professional services, trades, retail, transportation, utilities, manufacturing, construction, education, health and other industries that pay much higher average wages are equally affected.

The increased cost of labor in hospitality due to labor shortages is not to be taken lightly. Total labor costs per available room (LPAR) in North America in 2024 was \$72.44, an increase of 11.2% from 2023. Similar is the situation in Europe and APAC. Higher labor costs led to significant decreases in all key profitability metrics, including gross operating profit (GOP).

Many of today’s travelers’ service expectations are around self-service, around do-it-yourself, from online planning and booking, to preferences for contactless check-in, mobile keys, voice assistants and communications with hotel staff via messaging. It is time for our industry to give the DIY-obsessed customers what they want! Accelerated Investments in technology are needed to “appease” these exceedingly tech-savvy guests and their exceedingly high technology expectations.

In my view, *only through accelerated investments in technology* - cloud, mobility, AI, robotics, IoT and other next gen technology applications and innovations - can the hospitality industry solve the three major industry issues outlined above.

THE FUTURE: DO MORE WITH LESS PERSONNEL

The ultimate goal imposed on hospitality by the marketplace is simple: do more with fewer employees by using technology and reduce the property’s staffing needs by a significant percentage.

Example: You can reduce your front desk staff by 50% or more by introducing mobile check-in and mobile keys, self-check in kiosks, chatbot on the website to handle service and information requests, email reservation assistant app to handle email requests, an issue resolution applications and voice assistants in the rooms to handle customer service for stay-in guests. All of this at a fraction of the payroll expenses.

Additionally, you can cut your housekeeping needs by half if you introduce housekeeping-on-demand as one of the steps during the mobile check-in or when checking in via the self-service kiosk in the lobby.

The arriving guest should be able to choose in advance the type of housekeeping they are comfortable with during their stay: daily, once every 3 days, weekly, etc. or no housekeeping, just leave fresh towels by the door. This allows better planning, scheduling and utilization of your housekeeping staff and results in significant reduction in labor costs.

Off business hours: An AI-powered chatbot like Umni, Quicktext, Asjkuite with realtime availability, rates and inventory (ARI) interface can not only answer all questions and provide information to convince would be guests, but also handle immediate bookings at 2am, over the weekends and 24/7. A voice AI agent like Sesame can handle the same via the property phone.

The list goes on and on. Technologies that exist today can significantly reduce staffing needs and labor costs in all stages of service delivery, from pre-arrival customer engagements to on-property guest services and post-stay customer retention.

A few years back, Hilton CEO Chris Nassetta summarized nicely the direction the industry is moving toward: *“The work we’re doing right now in every one of our brands is about making them higher-margin businesses and creating more labor efficiencies, particularly in the areas of housekeeping, food and beverage, and other areas. Our brands will be higher margin and require less labor than they did pre-Covid.”*

IS HOSPITALITY READY FOR HUMAN-LESS SERVICES?

The digital transformation, driven by AI and technologies, is changing both customers and hospitality at an unprecedented rate and hoteliers are caught largely unprepared. What is stopping hospitality from adopting technologies like AI, mobility, robotics, IoT, cloud, etc. to rebuild the new hotel tech stack?

I believe at this time there are three main impediments to the accelerated adoption of next gen technologies in our industry: a) reluctance to invest in new technologies by the real-estate minded owners and operators, a mentality that has turned hospitality into one of the most technology-averse industries today, b) lack of understanding and fear of new technology: “Who will deal with it? I don’t have trained staff to deal with it. It makes operations very complex”, etc., and c) The labor unions in major metropolitan areas with highly-unionized hospitality labor force are dead set against any robotization and automation or any technology advancement that can reduce the number of paying members.

In my view, none of the above can stop the rapid adoption of AI, robotics and automation technologies in our industry, in the same manner as the Luddite movement in early 19th century England could not stop the Industrial Revolution.

CASE STUDY: THE ROBOTS ARE ALREADY HERE!

Amazon already has 1.5 million robots in its warehouses, plus 1.5 million human employees. The company is preparing to automate 75% of its operations by 2030, replacing around an additional 600,000 U.S. jobs in the process.

In hospitality, global brands like Hilton and Marriott have integrated robots in their service operations with companies like Pudu Robotics, deploying over 53,000 robots worldwide for hotels and restaurants.

Keenon Robotics has deployed globally over 100,000 commercial robots for restaurants and hotels.

Pudu Robotics has deployed over 100,000 robots worldwide, in its three product lines: service delivery robots, commercial cleaning robots, and industrial delivery robots.

Bear Robotics expects to deploy 10,000 of its restaurant robots in the U.S. by the end of 2025.

Tailos has deployed over 1,000 Rosie hotel housekeeping robots in 12 countries.

Miso Robotics and their Flippy 2 fry station robot has been deployed at hundreds of fast-food restaurants like White Castle.

The list goes on and on.

A legitimate question: How can hotels be able to afford robots? **Robots-as-a-Service (RaaS)** is a flexible and affordable way for companies to deploy robotics and get everything they need from specialized robotics companies, including hardware, engineering, remote monitoring and maintenance in one package.

HOW TO FINE-TUNE THE BLEND OF HUMANS AND TECHNOLOGY?

Unless your property’s business model is a fully self-service hotel like the Otonomus Hotel in Las Vegas or Omena Hotel in Helsinki, I believe full-service hotels, especially 3,4,5-star hotels, should still maintain a “human guest-facing facade” but automate all of the “behind the curtains” operations using AI, mobility, cloud, robots and cobots, IoT and other technologies. Naturally, enable smart guest communications and personalize every touch point with the customer. And sure, add well-trained, well-motivated and well-paid humans with a warm smile into the mix.

Now, the question is: what percentage of human employees in hospitality will be replaced by technology (AI, robotization and automation) by 2030?

Technologies like AI, robotics, automation, mobility and IoT are called upon to solve a number of issues in hospitality:

- Solve dull, repetitive, dirty or dangerous jobs.
- Solve high turnover of trained employees (30%!)
- Solve problems like poor discipline, lack of motivation, etc.
- Lower labor costs, which consume 1/3 of room revenue
- Increase productivity
- Solve persistent labor shortages plaguing the industry.

Who will be affected the most? Call centers and reservation departments, front desk receptionists, wait staff, kitchen staff and housekeepers where I see teams of 1 human+5 robots.

Technology will not be replacing anytime soon highly qualified hospitality jobs like highly skilled and educated hotel managers, revenue managers, digital marketers, AI specialists, technologists and IT managers, CRM experts, sales managers, etc., but all of these professions will have to become proficient in the use of AI tools and maximize AI implementations in their areas of expertise.

WHAT DOES THE FUTURE HOLD FOR HOSPITALITY?

Hospitality can no longer ignore technologies like Agentic AI and personal AI Agents able to plan and book travel, AI-powered chatbots and voice AI like Sesame AI able to handle 24/7 hour online reservations, customer service and guest communications. Or robots and cobots - collaborative robots working in teams with human employees.

In my view, by 2030, thanks to AI, robotization and automation, hoteliers will operate, on average, with human staffs at least 50% lower than the staffing levels of 2019. This percentage will differ between hotel categories: 75% and more for budget, economy, extended stay and lower mid scale properties and 25%- 35% for 5-star luxury hotels and resorts.

