OHLA Innovation & Technology Committee

Integration of Technology in the Service Industry

SERVICE INDUSTRY OVERVIEW

As a people serving people business in a post-pandemic world, the service industry has had to evolve to meet the demands of the guests who are expecting a contactless environment, while improving the levels of service, strengthening financial positions for owners, and optimizing operational efficiencies. The integration of technology solutions to work alone or as a companion for our associates is a necessity for the industry. Low unemployment levels and limited availability of workers throughout the state and the country threaten the service industry capabilities to perform in a way that meets the expectations of our guests. A new generation of travelers, comfortable with technology, will see value in hotels that are adaptable with technology solutions in a fast-paced environment allowing self-service, mobility while creating a better guest experience. Transparency and accountability for cleanliness and the provision of safe solutions is the new standard that can only be had by continuing to innovate while integrating technology solutions, robotic or otherwise.

- **Vision –** This committee is being formed as a grass roots effort to help identify innovative technology solutions, forming unique partnerships to help evolve the service industry, specifically, hotels and ULO's, etc. throughout the state of Ohio. This is an earnest necessity because guests will demand a higher standard of cleanliness and safety, and will require transparency of services, faster touchless options, and mobility in a safe environment. Severe labor shortages throughout the state of Ohio threaten the opportunity to advance service levels without innovative technology solutions that can aid in repetitive task solutions, while creating improved morale and a safer environment for associates to perform at the highest level.

- **Industry characteristics –** The speed and adoption of technology is evolving faster now more than ever. The pandemic and the subsequent culture shift for the general public to touchless options, social distancing initiatives, labor shortages seen throughout the state, (and as recently noted by the 2020 census bureau an Ohio population growth of just 2.3% vs. the rest of the country at 7.4%), increase in overall cost of goods, all impacting profitability for small businesses. The shift in employment created by those experiencing layoffs in the service industry and the movement to either retirement or an exploration into new job markets made readily available by the pandemic has added to the decrease in service industry candidates.

- **Market growth and trends –** The hotel development in the state of Ohio is growing. The Cincinnati, Cleveland and Columbus MSAs have each seen at least 15 new hotels open since 2016, with more properties currently under construction or proposed. Hotel building projects continued during the pandemic. All major markets in the state boast strong pipelines heading into the future. Of the Ohio markets that Hotel and Leisure Advisors aggregates data for, Cincinnati, Cleveland and Columbus demonstrated the most robust growth. Cincinnati has the largest economy in Ohio, and with several major colleges and universities, also has two major national sports teams, is the third largest city in the state, and has an abundance of cultural attractions. Columbus, the state capitol, has the highest population of the three major cities, is home to OSU, one of the state's largest public universities in the country, and provides plenty of cultural and entertainment attractions. Cleveland, benefits from its location on Lake Erie and has the second highest population in Ohio. National attention was gained by hosting the Republican National Convention in 2016 and for its NBA and MLB teams making playoff runs. A robust healthcare industry resides in Cleveland with the Cleveland Clinic and University Hospital health systems and has several major public and private universities. Dayton, Ohio's sixth largest city benefits from its proximity to the Wright-Patterson Air Force Base and its association with aviation and defense. With this growth, it is important to note that the decline in leisure/hospitality jobs from October 2019 to October 2020 was 123,800, one of the largest sectors for job loss in the state.

- **Stability –** The industry is a very stable industry, accompanying both leisure, convention, sports and corporate travel, diversifying the purpose of accommodations necessary throughout the state and the nation.

Total Nonfarm Employment, 2011-2020

	Cincinnati MSA	% Change	Cleveland MSA	% Change	Columbua MSA	% Change	Dayton MSA	% Change
2011	992,900		1,001,108		941,375		365,433	
2012	1,009,400	1.63%	1,019,525	1.81%	968,025	2.75%	368,750	0.90%
2013	1,025,550	1.57%	1,029,641	0.98%	991,641	2.38%	368,316	-0.12%
2014	1,042,866	1.66%	1,036,608	0.67%	1,016,608	2.46%	372,541	1.13%
2015	1,061,841	1.79%	1,045,358	0.84%	1,040,625	2.31%	379,791	1.91%
2016	1,080,925	1.77%	1,055,308	0.94%	1,064,333	2.23%	384,775	1.30%
2017	1,095,791	1.36%	1,058,733	0.32%	1,085,400	1.94%	388,275	0.90%
2018	1,108,841	1.18%	1,069,941	1.05%	1,100,300	1.35%	390,150	0.48%
2019	1,119,766	0.98%	1,079,966	0.93%	1,113,925	1.22%	391,891	0.44%
2020	1,054,716	-6.17%	1,004,483	-7.51%	1,063,867	-4.71%	370,533	-5.76%

Uneployment Rates, 2011-2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cincinnati MSA	8.84	7.41	7.25	5.5	4.51	4.35	4.27	3.93	3.71	7
Cleveland MSA	7.35	6.57	6.84	6.03	5.04	5.37	5.57	4.7	4.11	9.7
Columbus MSA	7.83	6.45	6.49	4.92	4.2	4.2	4.09	3.85	3.6	7.05
Dayton MSA	9.31	7.79	7.85	5.85	4.83	4.75	4.64	4.33	4.06	7.91

Major Ohio MSA Hotel Supply Additions Since 2016

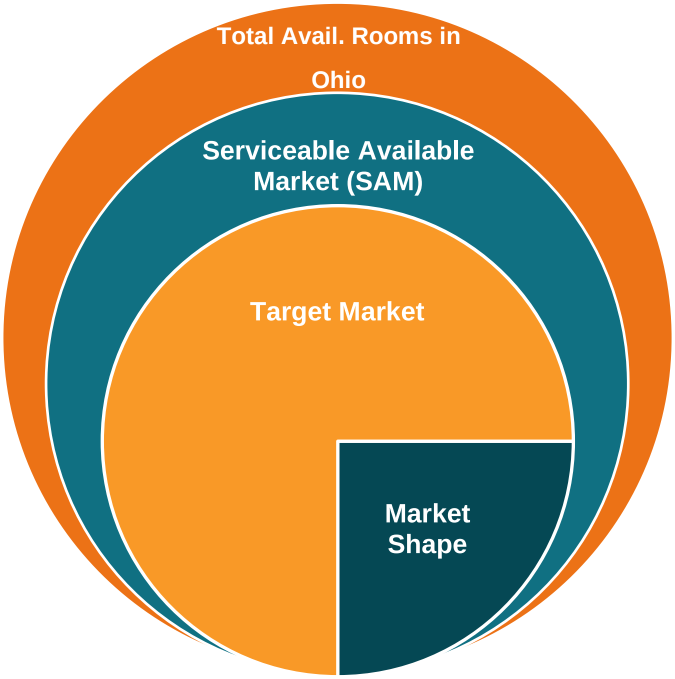
Cincinnati MSA		Cleveland MSA		Columbus MSA		Dayton MSA	
# of Hotels	# of Rooms	# of Hotels	# of Rooms	# of Hotels	# of Rooms	# of Hotels	# of Rooms
37	2601	27	2294	41	4309	13	1204

TECHNOLOGY MARKET FOCUS

A detailed description of the target market and its potential size are important indicators for our technology and innovation focus throughout the lodging industry in the state of Ohio include:

- Location of market is the state of Ohio
- Size of the market (are there enough customers to support the businesses?)
- Demographics (age, gender, ethnicity, etc.)
- Buyer characteristics (their likes and dislikes)
- Consumer needs (solutions the guests require)

Market segmentation involves looking at the entire market and then breaking it down into one or two target markets.



When segmenting the market, we will start by defining the Total Available Market (TAM), then Serviceable Available Market (SAM), and finally Target Market (TM).

- **Total Available Market –** This represents the entire industry the OHLA is operating in. It will also include all the different types of customers who are potentially interested in OHLA's services. For example, when operating a hotel, the TAM is everyone who is interested in buying a hotel product or service. Providing data on the number of prospects in the lodging industry, for example, businesses, households, etc.
- **Serviceable Available Market –** This is a subset of TAM and represents all customers that the lodging properties can effectively serve. As a lodging property in the state of Ohio, for example, it may not be possible to serve everyone in the country. Therefore, the SAM may need to be defined according to geography. It would be reasonable to sell products/services to people in nearby cities for local transient travel, while impacting a greater geography for product/service offerings nationally and internationally for groups visiting the state of Ohio for a variety of reasons.
- **Target Market –** This is a subset of SAM and represents the specific intended customers to serve. For example, it is possible to segment the target market according to criteria such as price (high-priced versus low-priced), quality, geography, occasion (wedding, meeting, convention, sporting event, leisure), and others.

- As the lodging industry grows throughout the state of Ohio, we will be able to further evaluate the percentage of the target market we are reaching. Market share or RevPar is our industry-wide indicator of value and growth. Using graphs and charts will help to illustrate the percentage of anticipated market share within the next 2 to 3 years.

COMPETITION

The primary sectors where service technology has been readily adopted are manufacturing, warehousing, hospitals, and indirect competitors. In a post-Covid-19 world, the acceleration of technology will continue in these segments and many others. These trends will continue to change the way we work, live, learn and relax long after the pandemic subsides.

- **Direct competitors -** The biggest challenge for the lodging industry will come from indirect competitors like Airbnb, Sonder and others like them, including short term and vacation rentals that will leverage their global presence and steal away profit from incumbents. On-line resellers continue to challenge the industry (Expedia, Priceline), media companies (Google, Trivago, Kayak), and food delivery services (Door Dash, Grubhub, Uber Eats, Postmates). In a post-pandemic environment, travelers may choose day trips and shorter excursions to alternative venues. With digital technology well in place, only enhanced by the pandemic, helping customers develop new habits at a quicker pace, there is a level of urgency needed throughout the lodging sector for technology solutions. If executed well, the industry maintains enhanced opportunities to transform itself for the next phase of growth, and for those not adapting they will struggle to survive over time.

- **Current State -** In its current state, capital investments for hotels have primarily been allotted for major renovations and structural repairs, with very little funding set aside for technology procurement. This current capital philosophy will be changing rapidly, while innovative products and services will infiltrate the service sector providing more readily adaptable and available technology solutions. As the cost of labor increases, associate safety and awareness demands increase, and operational efficiencies and transparencies are required, technology solutions and capabilities will become more urgent for owners/operators, and other key stakeholders.

- **Uniqueness -** There are a unique set of standards currently expected within the service sector. The primary advantage of the industry is personalization, which sets the industry apart from others and challenges technology companies to think about how to aggregate data to incorporate into the personalization required for hotel guests and the unique experiences that are created.

SWOT ANALYSIS

A SWOT analysis of the current industry trends relative to technology and innovation is exhibited below:

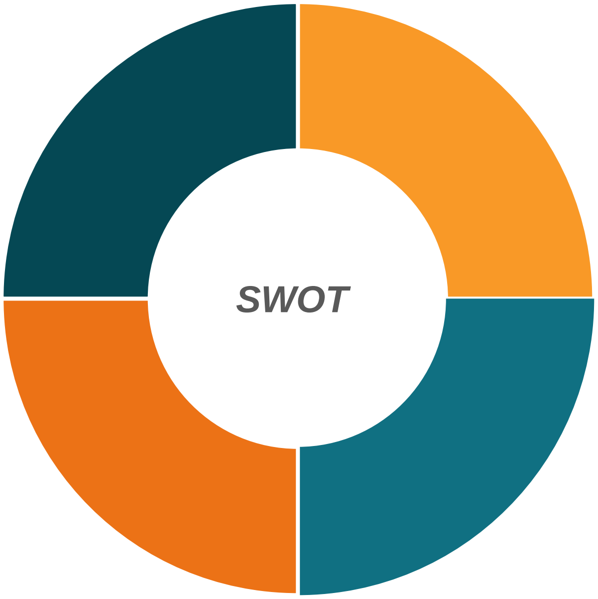
- **Strengths –** A strong development pipeline for hotels exists with 1500+ hotels and 140,000+ rooms in the state of Ohio and growing. This data does not include Unique Lodging properties and rentals which number in the hundreds. The industry boasts a diverse supply of unique lodging properties, major brands, villas and resorts, and growing nationally and internationally alike, affording more and more opportunities for the industry.
- **Weaknesses –** The adoption of technology to date has not accelerated to the degree necessary to maintain the levels of service and security the guest has come to expect. Enter pandemic, and the luxury of person-to-person interaction has been brought to its knees. These trends are anticipated to persist long after the pandemic subsides. Some lodging property owners may not have the capital to aid them in advancing technology and will struggle to meet the new expectations of the customer. The potential for a fractured or disparate industry exists.
- **Opportunities –** This industry can leverage partnerships with technology companies, building use cases for the service industry that are fun, entertaining, and can become a companion for associates, boosting morale. There are opportunities to decrease injuries while expediting service levels and improve security offerings for guests and associates. The industry boasts employing 1 in 20 workers throughout the country and is an industry where hourly level entry provides opportunities to pursue management positions while entertaining cross-functional educational. The industry would be proud to employ technology experts as another sector of service. A tech tune-up is in order.
- **Threats –** The primary threats are capital costs for implementation of robotics and technology solutions when this sector has been extremely battered by economic losses. Additionally, as technology solutions are created, a mindfulness of personalization will have to be considered while protecting the service industry foundation. Early adopters will be rewarded, increasing revenue while retaining value perception on behalf of the consumer. Those not able to adapt, may struggle enough to become extinct, decreasing lodging capacity. The labor shortage is an immediate threat to the industry. The need for jobs in the accommodation sector according to the Bureau of Labor Statistics decreased from an April 2020 number of 1,158M to April 2021 of 1,495.4M. However, the increase from March 2021 to April 2021 is 54.4%, illustrating the layoffs that took place during the pandemic and the growing need for jobs in the accommodation sector post pandemic providing the services required by guests.

STRENGTHS

- Improved service
- Operational efficiencies
- Associate injury reduction
- Insurance savings
- Experience enhancement
- Reduction in repetitive tasks
- Improved associate morale
- Accountability and transparency for key stakeholder
- Security
- Sustainability impact
- Green technologies
- Improved productivity

WEAKNESSES

- Financial Capital solutions
- Industry adoption
- Technology procurement
- Education
- Lack of current product solutions for the service industry
- Speed to market for tech companies moving to commercialization of consumer entrusted products
- Widening inequalities
- Volatility of Lodging Cap rates



OPPORTUNITIES

- New products
- Enhanced experience
- Improved service
- Mitigation of injury risk
- Expense reduction
- Consistency, Accountability, and transparency
- Improved value perception
- Job creation in the technology industry
- Training opportunities
- Additional job creation in the service industry
- Solutions for booking direct
- Digital transformation
- Cyber security protection
- API integration
- New alliances and partnerships
- New business opportunities gained
- Modernize legacy systems
- Operationalize and track performance Improvements
- Real estate tax appeal
- Further stimulus
- Renegotiation of loans
- Service sector tech adoption (aviation)

THREATS

- Lack of enterprise-wide solutions
- Product availability
- R&D timing
- Lack of Capital
- Implementation strategies due to varying needs and personalization
- Supply chain obstacles
- Capacity concerns for early adopters
- Extinction for those not able to fund a technology infrastructure
- Cost of entry
- Cyber security hacks
- Labor shortage
- Lack of resources for pilot projects
- Property tax, insurance and operational expense growing faster than RevPar
- Muted growth as construction costs rise

What problem are we solving and Why?

- The labor shortage was present pre-pandemic and has now been exposed to a greater degree. There has been a shift of employment and employability to sectors with fully developed automation leaving the lodging industry struggling to fill important service positions.
- For the hotel and lodging sector to continue its long-term viability and subsequent positive economic impact for cities and counties throughout the state, technology advancements must be not only be entertained but adopted at a much quicker pace.
- The consumer has adopted technology solutions throughout the pandemic, and the growing demand for technology is an expectation for guests now and into the future throughout the customer journey.
- The next generation business traveler has grown up with technology and the expectations for mobility are far greater.
- The associates will be looking for solutions to aid them as more tasks across the broad spectrum of jobs within a hotel will be assigned. Technology solutions can help to create a seamless guest experience, while building operational efficiencies, improving productivity, adding security functionality, and mitigating workplace injuries.
- There is a terrific opportunity to continue to expand an industry that provides great opportunity for diversity and inclusion by integrating and engaging technology training at a younger age to accommodate a career path with upward mobility.
- There is a severe gap in the lodging industry between the new expectations of the guest, in large part being brought on by the pandemic, and services currently being offered. There is a level of urgency to fill this gap with innovative solutions building momentum for the lodging industry.
- Cleanliness and security are primary key areas for adoption of technology solutions as the guest today demands transparency and accountability for these services. Guests want and need to experience a higher level of safety and cleanliness offering a sense of comfort.
- If the lodging industry does not readily adapt to innovative solutions, including technology, there is a deep risk of extinction for those not being able to afford necessary technology upgrades, widening the gap between big hotel chains and smaller unique lodging properties.

- Use cases will be developed by the committee enabling a thoughtful and considerate approach for application of the highest and best opportunities for the advancement of technology in the lodging industry.
- There will be a need to identify options considering mechanisms for pilot projects, building of alliances with technology institutions, and creating partnerships/alliances with organizations that specialize in attracting and engaging new technologies. These items will be a committee focus area.
- Types of technology innovation will be considered by the committee as well. This can include iterations of current state lodging operations, slight expansions enabling the addition of service offerings, and new customers, and lastly, more radical changes that result in the building of new business models, while disrupting the industry.

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