



Embracing the Future

Major Trends, Changes, and Innovations to Travel in 2015



The global transportation infrastructure is an extremely important resource for managing the movement of goods and people within and between urban areas.

Accordingly, transportation hubs feature intelligent networks of various transportation systems that ensure the transport of people and goods in a safe, efficient, and environmentally friendly manner. However, growing passenger numbers are exerting increasing pressure on the air transport industry.

The International Air Transport Association (IATA) estimates that passenger numbers will reach 3.6 billion in 2016, an increase of approximately 800 million compared with 2011. For transportation hubs - due to the added complexity of shuttle, train, shopping, hotel, and taxi facilities - the management of passenger volumes and traveler expectations can be extremely challenging. Fortunately, the transportation industry is already planning IT investment programs to address issues related to capacity. The industry is also embracing the "Travel 3.0" concept. This refers to a third wave of innovation based on traveler satisfaction, self-service engagement, and the "always-connected" vision enabled by mobile technologies. Such trends are shaping customer expectations and radically changing the passenger experience. Self-service functions and connection via mobile devices will place control in the hands of travelers, which promises to be the single greatest development influencing the travel experience in the future.





What do People Enjoy About Traveling and Transportation Hubs?

Traveler satisfaction is driving this third wave of transportation innovation, and the key areas of focus with Travel 3.0 are traveler experience and sustainability.

- 1. Empowered travel
- □ Keeping travelers connected and informed.
- 2. Greater control and choice

□ Self-service functions enable travelers to control the services they use and how they are delivered. By implementing traveler-centric operations, travelers can control every aspect of their trip.

3. Individual and personalized service

□ Nowadays, transportation hubs offer more than just transportation. Instead, they can be considered hospitality centers, where every aspect is related to service.

4. Increased convenience within transportation hubs

□ Seamless services and real-time mobile device connectivity are vital for enhancing traveller satisfaction.

Advantech Products

Advantech's all-in-one, self-service, ubiquitous touch computer (UTC) devices are ideal for use as interactive and informational kiosks and can accommodate a range of service applications.

Equipped with $10 \sim 21.5$ " multi-touch screens, the self-service kiosks can be used as digital signage di kiosks can be used as digital signage displays, interactive information systems, multimedia advertisement devices, as well as infotainment terminals

The advantages of Advantech's UTC devices include the ease of cleaning, IP65 compliance, and the slim flat panel design.

Programmable touch hotkey and rich I/O options for a handset, smart card reader, barcode reader and /or MSR module enable them to be customized according to user requirements.

IoT Technology is Pivotal

IoT technology has a pivotal role in achieving the ideal future travel experience. The air transport industry is committed to investing in the communication technologies and systems



Whitepaper

necessary for realizing the Travel 3.0 environment, enhancing the traveler experience, and meeting the increasing expectations of transportation hospitality.

FUTURE TRENDS

The future of travel

What are traveler expectations for the future? Do the transportation industry's current or planned operations align with traveler demands? Are comprehensive services offered at transportation hubs? Travelers yearn to experience the simplicity and convenience they enjoy in their everyday lives at an airport, where amenities and other items are only a click away. With airlines and airports aiming to increase revenue with the sale of additional amenities, enhancing their retail strategy with the integration of technology may be the key to satisfying passengers and promoting industry growth.

Technologies can be implemented to automate or semi-automate the processes from check-in to aircraft boarding, thereby reducing queuing time and inconvenience. Without a doubt, the way people travel is expected to change significantly by the end of 2015. The changes in travel behavior will be influenced by the following four major trends

1. Self-service operations widely implemented



□ Travelers have become increasingly accustomed to online shopping and mobile payments and demand the same convenience at airports. The ability to purchase airport items (such as parking tickets, meals, souvenirs, reading materials, etc.) using mobile devices or self-service kiosks offers travelers greater control over their travel experience, thereby enhancing their satisfaction and loyalty. Self-service operations such as airline check-in, eGating, self-check-in luggage systems, car-rental and insurance service kiosks, as well as transport ticketing terminals are just a few of the cutting-edge services expected in the Travel 3.0 Era. When fully implemented, these services are expected to streamline travel operations and increase traveler satisfaction.





Car Rental

- Reduce agency personnel cost
- Facilitate peronalized specific needs
- Enhance customer experience
- Around-the-clock conveniency
- Expand customer base beyond boarder



2. Customer services become mobile

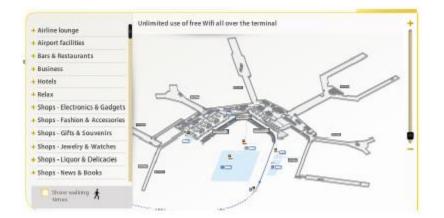
□ Airlines can meet demands for self-service operations by expanding their self-service platforms to incorporate relevant merchandising strategies. For connectivity using personal mobile devices, iBeacon technology offers the ideal solution for delivering real-time customer services to travelers moving rapidly through transportation hubs. Examples services that can be provided are as follows:

i. Way-finding/navigation services by "pushing" messages into travelers' mobile devices

ii. Boarding terminal/gate information, shuttle and train times, maps, and best route suggestion services

iii. Bus and train onboard information terminals and connectivity services for informing and updating passengers

□ Real-time location tracking technology can enhance control of transportation hub traffic.







3. Changes in traveler purchase behaviors

□ The virtual shopping trend is not exclusive to department stores. Many airports are implementing virtual shopping and the "Endless Aisle" concept to provide travelers with greater convenience and improved shopping experiences. Technology can also make duty-free shopping more inviting for passengers. For example, instead of carrying additional packages from airport to airport when transferring between flights, travellers can simply collect their purchases at their final destination. Thus, technology that provides travelers with greater access to available inventory, as well as more ways to pay for goods and services can generate new partnerships and revenue streams for airports.

□ For many travelers, returning home after a trip and needing to restock the fridge presents yet another inconvenient chore. To address this issue, Tesco has established a virtual grocery store service at airports. Using their mobile devices, travellers can shop for groceries online and have them delivered upon their return.



4. Customer intelligence essential for developing business

□ Customer intelligence, traffic control, traveler locations, and passenger flow management are core areas of transportation hub business. As the collection of customer intelligence increases, businesses will be better able to respond to market changes and customer demands. By delivering a more information-driven airport experience and implementing technology to make travel-related purchases personal, simple and convenient at any point throughout the journey, airlines and airports can increase customer loyalty and revenue.





About Advantech

Founded in 1983, Advantech is a leading provider of trusted, innovative products, services, and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, embedded systems, automation products, and global logistics support. We cooperate closely with our partners to provide complete solutions for a wide array of applications across diverse industries. Our mission is to enable an intelligent planet with Automation and Embedded Computing products and solutions that facilitate smarter working and living. With Advantech products, there is no limit to the number of applications and innovations made possible.

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