Land Use Policy Considerations
Challenges to Implementing Successful Land Use Strategies at Airports

ACRP Insight Event: Washington DC

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Land Use Policy Considerations

*What needs and projects are driving changes in how airports are using land? What can airports, policymakers and regulators do to balance infrastructure?*

- **The Changing Aviation Business Requires a New Focus for Land Use**
  - Growth: where and what kind
  - The Diversity of Airport Models: DEN, GSP, BOS
  - Airport Finance: Infrastructure and PPPs

- **Airport Ground Transportation:**
  - Congestion 2018-style
  - Parking, rental cars and TNCs
  - Future thoughts: APMs and CAVs

- **Policy Reset? More Flexibility, New Funding, Commercial Considerations**
  - Airside focus
  - Airport flexibility
  - Commercial considerations

- **Discussion**

Only SIX have more operations today than they did 10 years ago

Source: FAA Aerospace Forecast, 2015

Enplanement growth hitting terminals and ground transportation

Enplanements up **15.5%**, Operations up **4.1%**
Denver International and Land

- Airside: No issues
- Terminal: 30 new gates
- Ground Transportation: Parking, rail, size

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GSP: Small hub with big land issues

- Airside
- Cargo
- Apron

- Terminal
  Redone, room to grow

- Ground Transportation
  New parking capacity

- BMW HQ
Boston Logan and “Land”

Airfield
RON, movements

Terminals
more gates connectivity

Ground Transportation
Gateways, roadways, and curbs
Airport Finance: Challenges and Issues Today

- **Top Airports:** Gateway and large O&D airports share problems with terminal space (i.e., gates, size of holdrooms, space for concessions) and ground transportation (i.e., gateways, roadways, curbs).
  
  *The days of “30 miles of runway” to relieve congestion mostly over.*

- **Costs:** Passenger revenues come in linearly, costs come exponentially (e.g., constrained airport footprints). *Balancing investment risk (spending too much) and service risk (poor customer service) getting even more challenging.*

- **Lack of Independent Funding Source:** Lack of a PFC increase encouraging PPPs and/or long-term agreements with airlines. *We need new strategies & models!*

- **Airside lands:** Some airside current taxiways and runways, and land set aside for future growth that either won’t materialize or may take years to be put on-line. *Should airports put infrastructure to better use (at least for a time—will the FAA cooperate)?*

- **Commercial vs. Public Use:** New private equity players calling into question airport “over-built” infrastructure for users who don’t adequately contribute to the upkeep of the infrastructure and/or foreclose better use. *Business models being stressed...*
Airport Master Plans with Ground Transportation Strategies: “Rip ‘Em Up”

- **Ground transportation** continues to change, today representing the most common, unmet congestion problem for many airports.

- **Roadways, transit and rail tracks/stations, rental car centers and parking** take up huge amount of land—what of is really necessary going forward? Is this risk/reward what it used to be? What do we know and what don’t we know?

- **Off-airport intermodal connections are highly regulated**, if not overly regulated by U.S. DOT/FAA (there is “pending” guidance). There is also little ability to pay for ground transportation with anything but non-aeronautical revenues, or as wrapped into PPPs.

- **“All you can eat” roadways and curbs by users (especially TNCs) and PUDOs, not possible.** Solutions required (garage pickup, 2 seat rides required, fees).

- **Connected Automated Vehicles** offer new possibilities for on-airport movements—more flexible and scalable than traditional solutions (e.g., APMs).

- **Remote Terminals** on and off airports may be required. Can we figure out how to bring passengers airside?
Transportation Network Companies (SFO and BOS) Disruption to Airport Ground Transportation Planning

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<thead>
<tr>
<th></th>
<th>SFO</th>
<th>BOS</th>
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<tbody>
<tr>
<td>Total Pax</td>
<td>55.8 million</td>
<td>38.4 million</td>
</tr>
<tr>
<td>Access Fee</td>
<td>$3.80 pick up and drop off</td>
<td>$3.25 pick up</td>
</tr>
<tr>
<td>Peak Month</td>
<td>692k</td>
<td>543k</td>
</tr>
<tr>
<td>Mode Share</td>
<td>34%</td>
<td>25%</td>
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TNCs provide door-to-door service for passengers, creating a demand responsive, affordable way to access the airport. While positive for customer service, the addition in single passenger vehicles is stressing airport gateways, roadways and curbs.
Parking: Don’t give up on it yet!

- **Daily pricing part of a supply-centric era** in which there was lower competition for the airport access market (e.g., no TNCs) and vehicle miles traveled was steadily increasing. Airports responded to the market by building additional lots to accommodate demand.

- **Customer have more choices today** and airports must provide ground transportation services and price access/parking in way to attract customers. Airports must also sort demand by day/time to improve utilization of their infrastructure in the shoulder and off-peak times.

- **Daily prices of $35, for example, are only competitive for short-stay trips** typically at peak (Tu-Th), while the price would normally uncompetitive for the shoulders (M/F) and especially for off-peak.

- **Pricing by transaction** looks at total revenue generated by the trip and discounts those times that are underutilized and, even at peak, if it results in incremental revenue for the airport (and additional market share). At airports with transaction pricing, average stays increase from 2-3 days to 4-5 days.

- **The result is increased revenue and improved utilization**, potentially obviating the need for additional capital expenditures and/or reducing the size of parking projects (especially if combined with new products such as long-term valet).
Discount Pricing Premise: Daily Rate vs. Utilization

Revenue Maximized
Depending on elasticity

Daily Rate @ $35

Parking Occupancy

Foregone Revenue

Foregone Revenue

Su  M  T  W  Th  F  Sa

0%  20%  40%  60%  80%  100%  120%

Business, paid by employer, competitive

Leisure, paid by customer, uncompetitive
21. **Compatible Land Use.** It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.
Airport Capacity: New Inclusive Balance of Airside, Terminal and Landside Needs

- **Examine FAA eligibilities, funding and regulations.** Future challenges are most likely to be with terminals and ground transportation. More flexibility for interim use (short-term and medium-use) of airport lands should be encouraged, not “walled off” or made practically impossible to do.

- **Obtain airport industry consensus on future needs.** Congress and FAA unlikely to move without clear airport (and aviation industry) guidance. Engage airlines on agreeable strategies.

- **Consider new intermodal, multi-agency ground transportation policies and funding strategies.** Airports’ customers must get to the airport, but much of our policy regime is artificially constructed around the airport boundary.

- **Use technology and consult with TSA about new ways of getting the airport.** Direct airside access from off-airport? New terminals on airport linked by CAVs and/or APMs to the airside? Goal at many airports must be to reduce loading on gateways, roadways and curbs.

- **New commercial players (e.g., equity and developers) have innovative and different perspectives.** How can we tap into their knowledge to help solve problems and improve airport bottom lines?
Steer Davies Gleave

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