ACRP Report 121: Innovative Revenue Strategies An Airport Guide

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- Airport Strategic Business Plans
- Revenue Development/Diversification
- Opportunity Assessments
- Tenant Retention
- Airport Activity & Financial Forecasts
- Other ACRP Reports & Syntheses
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Project Objective

Produce a guide that will help airport professionals identify, evaluate, and implement innovative strategies for generating revenues.

Further project guidance….
Logic Behind the Research
The New Normal for Airports Embraces (and Requires) Change

- Innovative technology and its adoption is occurring at an accelerating pace
  - Internet of Things, disruptive technologies, mobile apps
- Demand for change is coming from multiple directions, including:
  - management, customers, the airlines
  - other airport tenants, competing airports, & regulatory groups
- A steady stream of unexpected events contribute to an atmosphere of uncertainty
  - Weather events, multi-country epidemics, terrorism
  - Government funding levels & priorities
The Guide Presumes Airports Operate As a Diversified Business

- Airport is a business that generates revenue by providing to a captured customer base.
  - Airline Services
  - Traveler Services
  - Retail Services
  - Executive and General Aviation
  - Services to Non-Aeronautical

- Airports may need to reduce dependence on aeronautical revenue and Federal grants
Ways to Improve Revenues

Innovative Strategies

- Develop New Sources of Revenue
- Increase Airport Sponsor Revenue Participation
- Recover Costs & Achieve Operational Efficiencies in Existing Airport Businesses

Results in Improvements to Net Revenues for the Airport Sponsor
Report Organization

- Guide organizes revenue techniques into 5 strategies
  - Customer experience, needs, and wants
  - Airport provided services/shared services, facilities, & equipment
  - Revenue participation in real estate & mineral development
  - Value capture
  - Improvements to existing businesses

- Guide also presents interesting case studies that show how use of these revenue techniques.
How to Use the Guide

- All of the techniques (there are 96) are organized by strategy and by functional areas of the airport.
- At the beginning there is a list of all techniques discussed and at the back, an index with page numbers.
- Readers may want to read about a single strategy and all its elements, look up a case study, search for a particular technique, browse different ways to improve revenue within a functional area of the airport (such as parking or terminal operations).
- Every airport will have a unique set of solutions.
Revenue Strategies
Strategy 1 - Customer Focus

Customer Segmentation
- Know the Airport's Customers

Better Market Penetration
- Target Specific Customer Groups
- Build Customer Relationships
- Generate New & Incremental Revenue

Performance Measurement
- Track Customer Satisfaction & Airport Profitability

What do customers want?
- Suits on the Fly
- Experience Seekers
- Sufferers
- Gate Potatoes
- Open-minded Chillers
- Employees

Strategy Effectiveness – Priority ★

<table>
<thead>
<tr>
<th>Cost</th>
<th>Commercial Airports</th>
<th>General Aviation Airports</th>
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As part of the new Midfield Terminal Building, Indianapolis Airport Authority (IAA) took a new approach to its concession program.

- IAA directly recruited a mix of local and national concessionaires
- Manages the program with a few employees.
- Focus on customer experience first, not revenue
- Innovative approach to solicitation
- Individualized concession agreements
- Excellent and sustained results.
Strategy 2 – Airport Provided Services & Shared Use

Airport Provided Services

• Services provided to airport tenants and passengers by the airport for profit.

Shared Services

• Services shared through common providers to create critical mass and reduce the cost of services for all that participate.

Shared Facilities, Systems, & Equipment

• Sharing and cross-utilization to improve efficiency and reduce user cost
### Strategy 2 – Examples

#### Airport Provided Services

<table>
<thead>
<tr>
<th>Services</th>
</tr>
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<tbody>
<tr>
<td>Airport Tenants</td>
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<tr>
<td>Logistics Services &amp; Warehousing for Concessionaires</td>
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<tr>
<td>Trash Removal &amp; Recycling</td>
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<tr>
<td>Ground Handling</td>
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<tr>
<td>Above and Below the Wing</td>
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<td>Glycol Recovery and Recycling</td>
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#### Shared Services

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<tr>
<th>Services</th>
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<tbody>
<tr>
<td>Janitorial</td>
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<td>Joint Marketing &amp; Advertising</td>
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#### Shared Facilities, Systems, & Equipment

<table>
<thead>
<tr>
<th>Facilities</th>
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<tbody>
<tr>
<td>Communications Systems &amp; Cell Phone Towers</td>
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<tr>
<td>Consolidated Air Cargo Facility</td>
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<tr>
<td>Shared Gates</td>
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</tbody>
</table>
Case Study – Springfield-Branson Ground Handling Services

SGF owned and operated the FBO and fuel farm. Expanded to ground services when they could not secure a ground handling contractor.

- Airport purchased second hand equipment and cross-utilized airport staff
- Activity Results
  - More passengers
  - Air service retained
  - Charter activity
- Financial Results
  - Ground handling revenues
  - Increased landing fees
  - Into-plane charges
  - De-icing sales
  - Increased PFCs and CFCs, parking revenues, rental car, and concession revenues
Strategy 3 – Revenue Participation
Real Estate & Natural Resource Development

- Direct Ownership
- Participating Leases and Equity Participation
- Public Private Partnerships
- Joint Development
- Mineral Estate Participating Leases

<table>
<thead>
<tr>
<th>Extent of Airport Use</th>
<th>Revenue Potential</th>
<th>Airport Assumption of Risk</th>
<th>Capital Required</th>
<th>Complexity to Implement</th>
<th>Political &amp; Institutional Challenges</th>
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The Allegheny County Airport Authority (ACAA) faced a stagnant real estate market. By utilizing creating financing, ACAA was able to jumpstart development activity.

- ACAA entered into the risk sharing agreement with a developer to construct a building on spec.
- ACAA used Tax Increment Financing (TIF) to cover gaps in funding for needed infrastructure.
- The Authority offered low initial ground rent. Once the property was built and occupied, ACAA shared in the building rent.
Clark County officials acquired 5,226 acres of land transferred from the BLM, much of which was located in the airport’s noise abatement zone.

- The Department of Aviation identified opportunities to develop certain parcels of land for commercial purposes.
- Local ordinances allowed the Department to participate in real estate development in a manner similar to a joint venture.
- Several successful participatory leases were negotiated.
Strategy 4 – Value Capture

Off-Airport Beneficiaries
- Hotels and restaurants
- Rental cars
- Parking lots
- Travel plazas and gas stations
- Office buildings
- Wholesale trade
- Just-in-time manufacturing
- Trucking and logistics

Value Capture Mechanisms
- Access and privilege fees
- Fixed assessments
- Taxes or special allocations of tax receipts
- Business improvement districts
- Airport cities and foreign trade zones
Case Study - Boston Convention and Exhibition Center

Use of value capture techniques to help finance a large project

- Multiple sources of funding
  - Hotel room occupancy tax
  - Sales tax
  - Meal tax
  - Car rental fees
  - Parking taxes/fees
  - Land & water-based tour fee

- Special legislation required
- High level of cooperation from stakeholders who recognized a common purpose and benefits of the project.
Case Study - DFW Foreign Trade Zone

- Airport spans 18,000 acres and 5 municipalities.
- FTZ illustrates how DFW creates additional value for development in the vicinity of the airport.
- Example of how airport sponsor and municipalities can implement multi-party agreements to share tax revenues.
Strategy 5 – Improvements to Existing Airport Businesses

Elements of the Strategy

- Management alternatives
- Program planning, document preparation, solicitation & award
- Performance improvements
- Use of information technology
- Monitoring performance

Application of the Strategy to:

- Parking
- Rental Cars
- In-Terminal Concessions
Wrap Up
Concluding Thoughts

- Airports oversee a complex set of enterprises.
- Except at their largest connecting hubs, airlines are depending more on airport sponsors and third party contractors to provide ground support, passenger, processing, and baggage handling.
- Traditional sources of funding remain but levels are often insufficient or timing is uncertain.
- Revenue strategies offer additional/incremental $$ to pay for maintenance, day-to-day operations, and capital projects.
The Intention of Report 121 is to Inspire Innovation

- New net revenues can come from:
  - Cost savings
  - Improvements to existing airport businesses
  - Airport engagement in new services and activity.
- Revenue strategies can be effective in every functional area of an airport.
- Strategy effectiveness requires airports to recognize and respond nimbly to opportunities.
- Implementation is likely to be a continuous process of incremental improvements.
- Every airport will have a unique set of solutions.
Project Team

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ACRP Report 141: Renewable Energy as an Airport Revenue Source

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ACRP Report 141: *Renewable Energy as an Airport Revenue Source*

- Introduces renewable energy technologies to the aviation reader
- Summarizes opportunities for and obstacles to deploying renewable energy projects at airports
- Describes the typical renewable energy ownership scenarios and applicable financing options
- Reviews the airport decision-making process for evaluating and pursuing renewable energy
- Identifies key stakeholders and their roles
- Provides financial modeling tools to assess project cost-effectiveness
- Includes 21 Case Summaries of Airport Renewable Projects

- Published August 2015
Research Problem

Airports operate in a competitive environment; they need to be constantly looking for creative ways to increase revenues and decrease costs.

Advances in renewable energy technology present opportunities to generate revenue and achieve cost savings.

There are many airport renewable energy projects that demonstrate this opportunity, but the functional and financial information behind their success has not been documented for the industry.
Research Approach

Develop general information on technical and financial aspects of renewable energy.

Integrate that information into a familiar airport decision-making process.

Research and summarize experience of specific airport renewable energy projects to demonstrate practice.

Provide practical reference materials for airports to use for evaluating and implementing their own projects.
Results – Technologies

[Diagram showing solar panels and wind turbine interconnected with a grid, illustrating energy flow from DC to AC power through an inverter and meter.]
Results – Economic Value

State Incentives

REC Value

Stable Energy Costs

Source: U.S. Energy Information Administration
Results – Business Structure

Airport Owned

- Grants
- Bonds

Third Party Owned

- Private capital
- Tax equity
- Land, Building

Government Cannot Monetize Tax Credits, Must Fund with Grants

Tax Credits available to private parties, Savings passed to Airport and Electricity Buyer

Energy savings

Return on Investment from PPA

Discounted energy or annual lease payment
Results – Projects at Airports
# Results – Case Summaries

<table>
<thead>
<tr>
<th></th>
<th>Airport</th>
<th>State/Country</th>
<th>Renewable Energy Technology</th>
<th>Ownership</th>
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<tbody>
<tr>
<td>1</td>
<td>Barnstable (HYA)</td>
<td>MA</td>
<td>Solar PV</td>
<td>Third Party</td>
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<td>2</td>
<td>Boston – Logan (BOS)</td>
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<td>Solar PV</td>
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<tr>
<td>3</td>
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<td>MA</td>
<td>Wind</td>
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<td>4</td>
<td>Brainerd Lakes (BRD)</td>
<td>MN</td>
<td>Solar Thermal</td>
<td>Airport</td>
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<tr>
<td>5</td>
<td>Burlington (BTV)</td>
<td>VT</td>
<td>Wind</td>
<td>Tenant</td>
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<td>6</td>
<td>Chicago-Rockford (RFD)</td>
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<td>7</td>
<td>Denver (DEN)</td>
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<td>8</td>
<td>East Midlands (EMA)</td>
<td>United Kingdom</td>
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<td>9</td>
<td>Grant County (JDA)</td>
<td>OR</td>
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<td>10</td>
<td>Indianapolis (IND)</td>
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<td>11</td>
<td>Juneau (JNU)</td>
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<td>San Diego (SAN)</td>
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<td>21</td>
<td>University Park (UNV)</td>
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<td>Geothermal</td>
<td>Airport</td>
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</tbody>
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Action – State Project Goal

Lower existing energy costs

Diversify revenues

Diversify energy supply

Enhance energy reliability

Promote sustainability policy
Action – Identify Appropriate Renewable Resource
Action – Determine Most Cost-Effective Business Model

Are you in a state with incentives?

Can you consume all power produced?

Is power cheap or expensive?

Is the project grant eligible?
Action – Locate Appropriate Site

Close to electrical infrastructure

Avoid rare species

Consistent with ALP

No impact to radar

Avoid causing glare
Action – Prepare Cost Benefit

Estimate installed cost of project
Estimate annual operations and maintenance for life of the project

Airport owned project
• Build in financing costs
• Identify funds to construct
• Estimate annual savings to determine break even

Third party project
• Decrease project costs by value of available tax credit
• Incorporate investor rate of return to project cost
• Determine price of electricity that is economical
Action – Implementation

Coordinate with internal and external stakeholders

Apply for grants

Issue RFP for renewable energy

Permits and Approvals

Interconnection Process with Utility

Project Management
Example 1 – San Diego

Solar PV on Terminal and over parking

Owned by Third Party

Airport buys all electricity

20 year contract

Price level for term

Part of GreenBuild Terminal

Energy generation for microgrid
Example 2 – Portland (ME)

Ground source heat pump

Part of Terminal Expansion Project

Owned by the Airport

Vale grants paid for 81% of project cost

Annual net cost savings of $160,000

Airport’s share payback in 3.6 years

Monitoring system
For additional information:

ACRP Report 141: Renewable Energy as an Airport Revenue Source

http://www.trb.org/Main/Blurbs/172634.aspx

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