

Portland International Airport

2010 Master Plan Executive Summary
Port of Portland



Airport Futures

Reinforcing Portland's Planning Legacy

Airport Futures was a collaborative process involving the Port of Portland (the Port), the City of Portland (the City), and the Portland-Vancouver metropolitan community to create a long-range (through 2035) master plan for Portland International Airport (PDX or the Airport) and a City land use plan governing the Airport and its environs. Beginning in fall 2007 and concluding in summer 2010, the 3-year process reinforced Portland's planning legacy and the Airport's reputation as one of the premier airports in the country, and emphasized sustainability as a core theme.



First meeting of the Planning Advisory Group, September 29, 2007

Comprehensive Public Involvement

The goal of the public involvement program was to provide an open, honest, and transparent process emphasizing early opportunities for the public to provide input to City and Port staff. The public involvement program included the following key components:

Planning Advisory Group (PAG)—The 30-member PAG, consisting of citizens, business owners, and environmental interests helped guide Airport Futures.

Early Outreach on Project Scope—Port and City staff met with the PDX Land Use Advisory Committee and other stakeholders to help define the project scope and public involvement program.

Ongoing Stakeholder Outreach—Port and City staff and PAG members attended over 200 meetings with neighborhood, business, and environmental groups to provide updates and solicit input on the planning process.

Public Meetings—Thirteen public meetings were held throughout the Portland-Vancouver metropolitan area, providing broad opportunities for information sharing and public comment.

Airport Futures Website—A continuously updated joint Port/City website provided accessible project information.

Guided by the Community's Vision

The PAG's vision was an Airport master plan and a City of Portland land use plan that:

- » Enabled the City to address the complex issues associated with PDX and its potential impacts.
- » Provided the community with a greater opportunity to influence PDX planning and development.
- » Provided the Port with the flexibility to respond to changing circumstances in Airport development.

Primary Outcomes

- » Certainty that PDX will continue to operate in its current location with the flexibility to respond to future needs.
- » Assurances that a third parallel runway or decentralized terminal will involve an appropriate review process and City Council approval.
- » Establishment of an ongoing and highly collaborative public involvement process related to PDX planning.

The 2010 Master Plan

Reflects Many Changes Since 2000

The 2000 PDX master plan was completed in a time of steady economic growth and with the expectation that the 2010 Master Plan would address significant Airport expansion, including a third parallel runway and new terminal.

Numerous events since completion of the 2000 master plan, including terrorist attacks on the United States, a severe economic recession, rising fuel costs, and climate change resulted in more modest expectations for the future. Although the 2010 Master Plan preserves the flexibility to accommodate higher levels of activity at PDX, it was recognized that many facilities envisioned in the 2000 master plan will not be needed within the 2035 planning period.

Sustainability, an Overarching Goal

Sustainability means meeting the region's air transportation needs without compromising the livability and quality of life for future generations. Airport Futures involved exploring requirements, alternatives, and solutions that fairly, realistically, and optimally balance economic, environmental, and social objectives. The desired balance was achieved through the application of sustainability criteria developed by the PAG.

Integration of Sustainability Principles

Sustainability was a core consideration in the 2010 Master Plan and resulted in a significantly better Plan, including:

- » Probabilistic forecasts of aviation demand and the identification of key issues and trends.
- » Future requirements that reflect the anticipated benefits of technology, changing processes, and common-use facilities. For example, increased gate use will enable the Airport's existing gates to meet demand forecast through 2035.
- » Development alternatives conceived and evaluated based on sustainability criteria.
- » A long-range development plan that will meet the region's aviation needs. The plan is flexible, enhances capacity by increasing operational efficiency, and favors reuse and redevelopment over new development.
- » An affordable implementation strategy that is based on demand.

Practical Long-Range Plan that Builds on Success

PDX development over the past 15 years included numerous projects that have contributed to the Airport's success, including terminal expansions, roadway improvements, the roadway canopy, an aircraft engine runup facility, award winning concessions, and two new parking garages.

Continuing demand-driven development at PDX will be required. However, the long-range plan is modest as a result of lower forecast demand, the quality of the Airport's existing facilities, the application of sustainability principles, and the notion that future changes will increase facility utilization and operational efficiency.

PDX is consistently rated among the top airports in the United States by *Condé Nast Traveler* magazine



Nike, Delta Air Lines, and the Port joined forces to install solar panels on the Airport's canopy



Planning Advisory Group subcommittees were an important part of Airport Futures

A Pragmatic Long-Range Development Plan — Sustainable, Flexible, and Affordable

The graphics illustrate the locations of projects and facilities included in the recommended long-range development plan. Although a third parallel runway, crossfield taxiways, and new terminal are not needed within the 2035 planning horizon, the plan reserves area for these facilities if they are needed and approved through the appropriate federal and local land use processes.

Projects will be implemented based on levels of activity, referred to as planning activity levels (PALs). The plan recommendations are based on five PALs, which are identified in the table below. If activity does not materialize as quickly as anticipated, the projects remain valid, although the timing of their implementation may change.

AIRFIELD

- 1 Reserve the area required for a third parallel runway to ensure flexibility if it is ever needed and approved.
- 2 Reserve the area required for crossfield connector taxiways, awaiting their need and approval (see smaller graphic).
- 3 Increase gate productivity by constructing an additional aircraft parking area north of NE Airport Way for aircraft that remain at the Airport overnight (PALs 1 through 3).
- 4 Further increase gate productivity by constructing an additional aircraft parking area west of Runway 3-21 for aircraft that remain at the Airport overnight (PALs 4 and 5).

PASSENGER TERMINAL

- 5 Reserve the area required for Terminal Expansion East, which will be needed for activity beyond PAL 5 (see smaller graphic).
- 6 Continuously modify passenger security screening areas as required by the Transportation Security Administration.

GROUND TRANSPORTATION AND PARKING

- 7 Increase capacity at selected roadway intersections (PALs 1 through 5).
- 8 Increase the productivity of rental car operations by providing low-cost, at-grade service facilities (PALs 1 through 3).
- 9 Provide additional on-Airport roadway lanes (PALs 1 through 4).
- 10 Construct a grade-separated interchange at the intersection of NE Airport Way and NE 82nd Avenue (PAL 2).
- 11 Provide additional structured parking (PALs 2 through 5).
- 12 Reorganize the commercial vehicle area to increase the capacity of the deplaning curbside and roadway (PAL 3).
- 13 Develop a consolidated rental car facility (PAL 4).

AVIATION SUPPORT

- 14 Provide additional fuel system capacity (PALs 1 through 5).

AIR CARGO

- 15 Improve undeveloped parcels or redevelop existing facilities within the AirTrans Cargo Center (PALs 1 through 3).
- 16 Provide additional cargo facilities in the Southwest Quadrant or in other nearby locations that may be available (PALs 4 and 5).

GENERAL AVIATION

- 17 Preserve land for interim general aviation expansion.
- 18 Preserve land to ultimately accommodate all general aviation facilities.

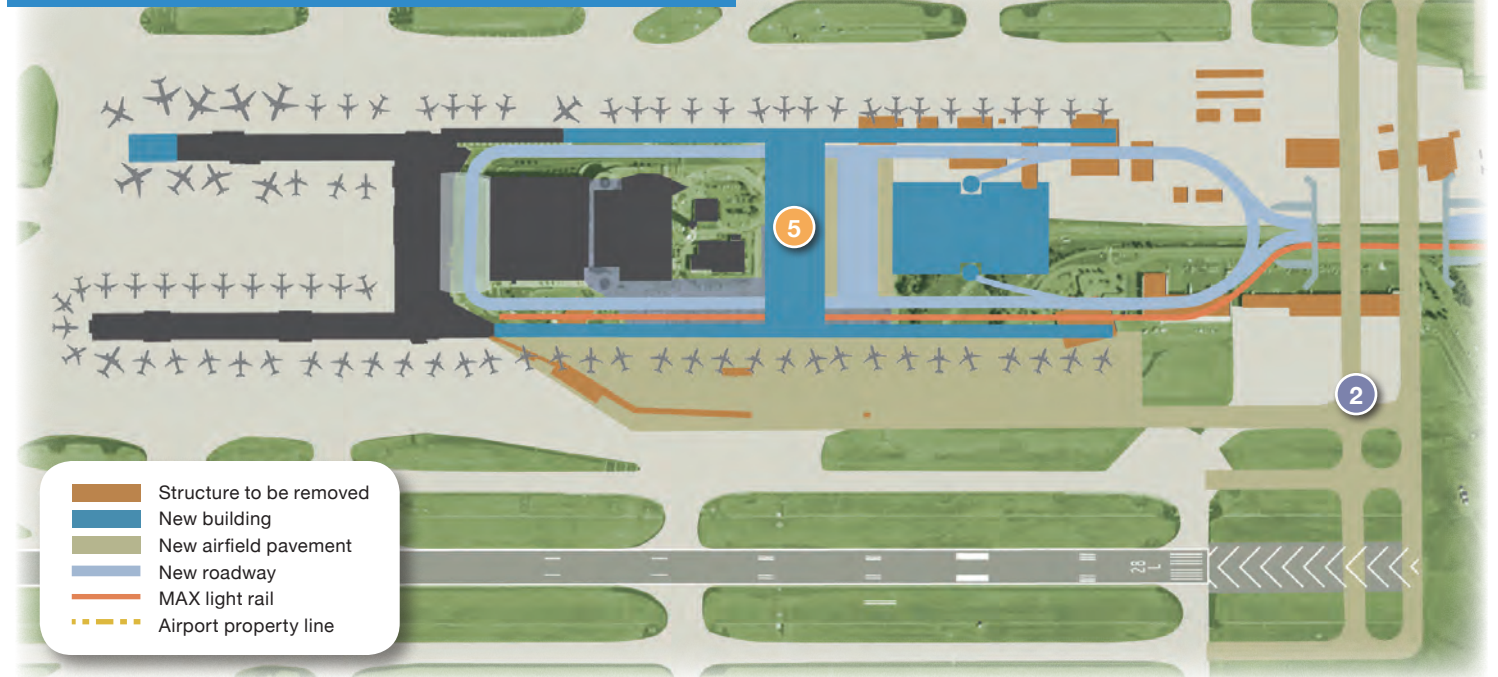
RELATIONSHIP BETWEEN PALs AND AVIATION DEMAND FORECASTS

	2007 Actual	2012 PAL 1	2017 PAL 2	2022 PAL 3	2027 PAL 4	2035 PAL 5
Passengers (a)	14.7	15	18	20.6	23.7	26.8
Cargo (b)	280	322	414	496	594	732
Aircraft operations (c)	265	258	292	318	347	378

(a) millions (b) thousands of metric tons (c) thousands
PAL = Planning activity level



ULTIMATE PASSENGER TERMINAL BUILDOUT CONCEPT





Aviation Demand Forecasts

An Innovative Approach

A Collaborative Process

The forecast process included:

- » Coordinating with the PAG Forecast Subcommittee, the Federal Aviation Administration (FAA), and the City's peer reviewer.
- » Reviewing the 2000 PDX master plan and FAA forecasts for the Airport.
- » Identifying key issues and trends affecting future aviation demand at PDX.
- » Conducting supplemental analyses to address stakeholder input.
- » Developing appropriate statistical models and probabilistic demand forecasts.

Range of Potential Demand through 2035

Probabilistic forecasts express the likelihood of realizing a specific demand in a future year. The graph below indicates future passenger demand that can be expected at PDX, with probabilities ranging from 10% to 90%. The long-range plan is based on the 50th percentile forecasts, but has the flexibility to accommodate the higher-growth (90th percentile) or lower-growth (10th percentile) forecasts.



A trend toward larger aircraft has affected the number of aircraft operations nationwide

Valid Forecasts Despite Uncertain Times

The demand forecasts were completed in spring 2008 and approved by the PAG and the FAA. Subsequently, factors such as the credit crisis in October 2008, airline industry seating capacity reductions, and volatility in the price of oil continued to affect demand at PDX and other airports. Accordingly, the demand forecasts were reviewed in fall 2009. It was concluded that the forecasts were still valid.

E-ticketing has reduced the space needed for ticket counters and agents

PDX Planning and Development

An Adaptive Process

The Port's partnership with the City and the Portland-Vancouver metropolitan community encompasses an adaptive process for planning and developing PDX. The adaptive process involves understanding the Port's long-range development objectives, continuously evaluating development options, implementing projects, and monitoring results.

Follow-on Studies

The 2010 Master Plan resulted in alternatives, strategies, and recommended projects for Airport development through 2035. Equally important, it resulted in the identification of follow-on studies to address issues raised by PAG members and to develop the technical details required for development decisions. Those studies will address specific facilities and issues ranging from aircraft parking to connectivity between PDX and a future regional high-speed rail system.

New Opportunities to Reduce Noise Impacts

The FAA, U.S. Environmental Protection Agency, and Oregon Department of Environmental Quality define the threshold of noise significance as day-night level (DNL) 65. Airport Futures resulted in the establishment of a temporary working group that explores aircraft noise in communities located beyond the area exposed to DNL 65.

The working group developed key recommendations that built upon the successes of the PDX Citizen Noise Advisory Committee, the PAG, the Port, and the City to continue providing leadership in addressing community noise impacts.

Improvement of Airport's Natural Resources

The City updated its Environmental Program to ensure compliance with regional, State, and federal requirements. The Environmental Program incorporates a comprehensive natural resources package that reflects the following principles:

- » Avoid, minimize, mitigate, and restore.
- » Ensure impacts are fully mitigated.
- » Contribute to the overall improvement of wildlife habitat quality, quantity, and connectivity within the Columbia Slough Watershed.

The natural resources package includes grassland mitigation on Government Island, enhancements to the Columbia Slough Watershed, and enhancements to the urban tree canopy.

The Port embraces an adaptive process for developing PDX



Portland is one of 12 major U.S. cities with public rail service from the city center to the airport

Development According to City's Land Use Plan

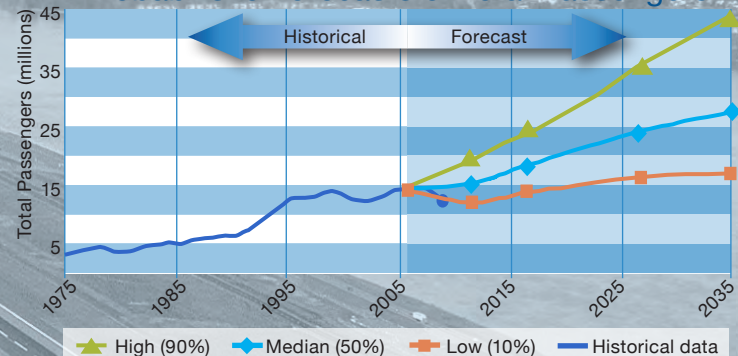
The City's land use plan recognizes that the Airport is a unique land use and eliminates the need for the Port to periodically reapply for a permit to continue operating the Airport. Mitigation of impacts will still be required as the Airport grows, but the triggers for City review will be based on the impacts rather than a rigid timeframe. The land use plan provides the Port with the flexibility to respond to changing circumstances, while allowing the City to examine increasingly complex issues related to the Airport. Also, the land use plan affords the community a greater opportunity to influence decisions related to Airport development.

Aviation Demand Forecasts

	2007 Actual	2012 PAL 1	2017 PAL 2	2022 PAL 3	2027 PAL 4	2035 PAL 5
Passengers (a)	14.7	15	18	20.6	23.7	26.8
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PAL = Planning activity level
Sources:
Historical: Port of Portland
Forecasts: Jacobs Consultancy and NEXTOR, April 2008

Probabilistic Forecasts of Total Passengers



The Environmental Program is proactive in addressing natural resource issues such as those involving the Columbia Slough, shown below along NE Cornfoot Road



The Port's Commitment

Development Decisions that Seek a Balance among Economic, Environmental, and Social Values

The Port of Portland will develop PDX to meet the region's air transportation needs in a manner that contributes to the long-term economic, environmental, and social health of the region. Development will be accomplished in partnership with the City and the Portland-Vancouver metropolitan community.

Realistic Financial Strategy

Airport development will be driven by numerous objectives, including those related to project timing and financing. Project timing is related to demand—projects will be implemented only when needed. The project financing plan will ensure that:

- » Projects are economically feasible.
- » Competitive rates are maintained for the airlines and reasonable charges are maintained for passengers.
- » Debt remains within practical limits.
- » Sufficient financing capacity remains available to meet other requirements.

The Port has the ability to finance the recommended projects and meet its objectives.

Commitment to the Environment

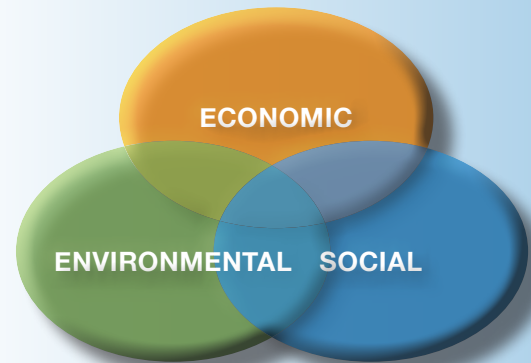
The PAG shared the Port's and City's commitment to the environment and made recommendations that stressed the importance of protecting the environment for future generations. PAG's recommendations include the following key elements:

- » Establish and track clear, measurable goals that are linked to those of the governmental partners.
- » Decision making should consider individual and cumulative economic, environmental, and social impacts.
- » Reduce, reuse, and recycle.
- » Minimize impacts and enhance natural resources.
- » Accelerate, support, and implement innovative programs, projects, and initiatives to maintain and increase our collective leadership in sustainability.



Buses operating on compressed natural gas and recycling exemplify the Port's commitment to protecting the environment for future generations

The Sustainability Framework



In planning, developing, and operating PDX, the Port strives to balance economic, environmental, and social values.

Ongoing Public Involvement

The Port, the City, and the City of Vancouver have agreed to sponsor the PDX Community Advisory Committee (CAC). Advice from the PDX CAC will be primarily to the Port, which owns and operates PDX, and the City, which has land use jurisdiction over PDX and surrounding lands.

The mission of the PDX CAC will be to:

- » Support meaningful public dialogue related to PDX planning and development.
- » Provide an opportunity for the public to inform decision-making related to PDX.
- » Increase public awareness about PDX and affected communities.

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