




CITY OF PORTLAND, OREGON
BUREAU OF
Planning

 **PORT OF PORTLAND**
Possibility. In every direction.

FACILITIES REQUIREMENTS

Planning Advisory Committee Meeting #10

October 21, 2008



AIRPORT FUTURES

CHARTING A COURSE FOR PDX

TODAY'S DISCUSSION

Action will be requested at the conclusion of this briefing

PAG will be asked to concur:

- **Approach is appropriate**
- **Sustainability principles have been applied**
- **Key assumptions appear to be reasonable**
- **Requirements are appropriate for subsequent analysis**

TODAY'S DISCUSSION (continued)

Briefing objective is to provide information related to action requested

- **Introduction**
- **Review of previous presentation**
 - Significant conclusions
 - Requirements and assumptions changed from last master plan update
 - Approach
- **Additional facilities requirements information**
 - Cargo
 - General aviation
- **Key assumptions**
- **Questions and answers**

INTRODUCTION

Objectives of facility requirements element of master plan

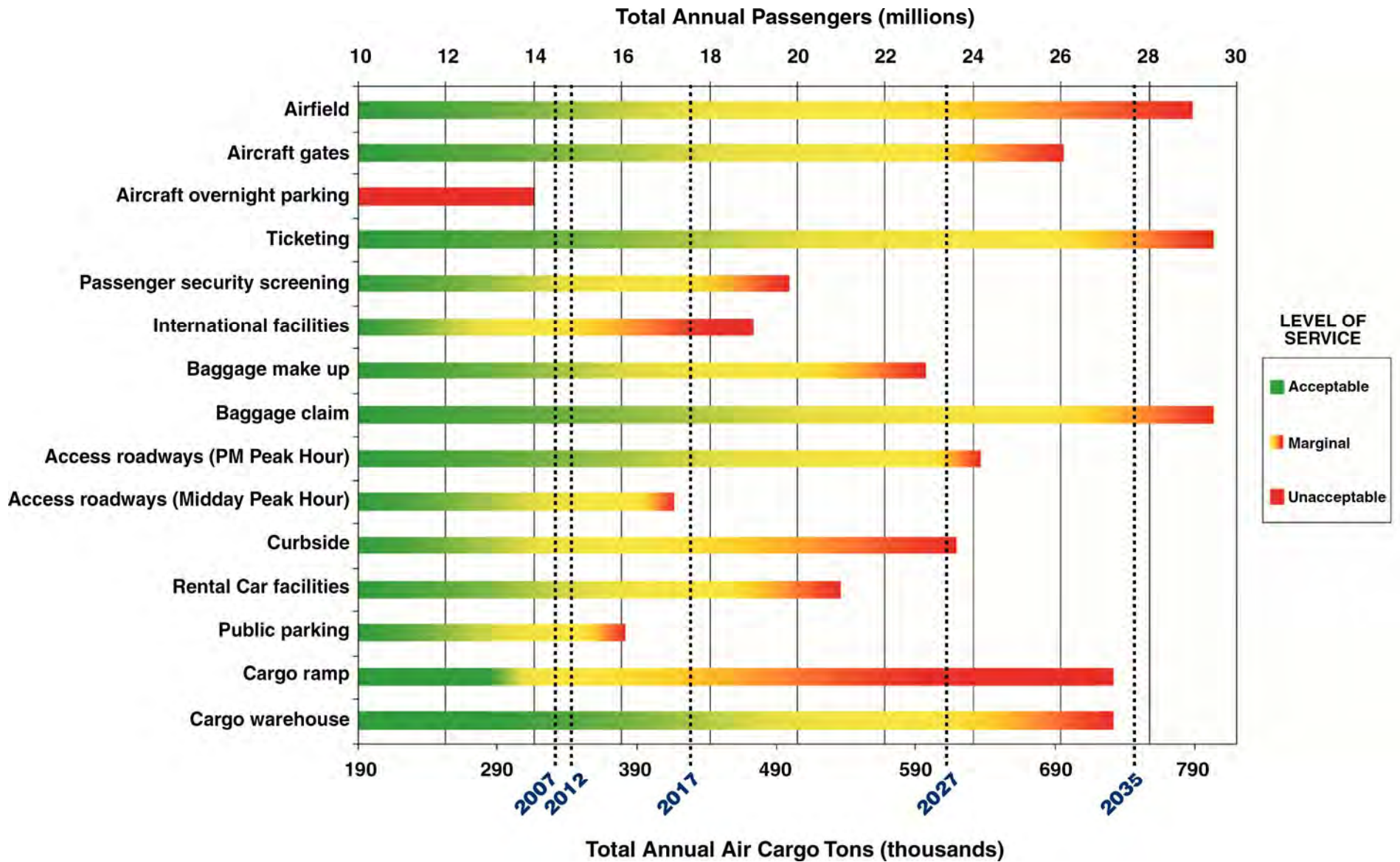
- **Understand performance capabilities of PDX facilities**
- **Determine facilities required to meet forecast demand**
 - Utilize existing facilities to the greatest extent possible
 - Maximize use of technology and industry best practices
 - Incorporate principles of sustainability
- **Establish basis for subsequent analysis**

INTRODUCTION (continued)

Scope of work included ten functional areas

- **Airfield**
- **Passenger terminal complex**
- **Ground transportation & parking**
- **Air cargo**
- **General aviation**
- **Military**
- **Airline support**
- **Airport support and administration**
- **Security**
- **Utilities, buildings and pavement**

CAPACITY ASSESSMENT OF SELECTED PASSENGER AND CARGO FACILITIES



COMPARISON WITH PREVIOUS MASTER PLAN

Some requirements and assumptions have changed

BASIS OF REQUIREMENTS	Existing Conditions	Requirements from	
		Previous Master Plan (2020)	Current Master Plan (2035)
Total annual passengers (million)	14.7	27	27
Aircraft operations	265,000	485,000	378,000
Total cargo (annual tons)	280,000	958,000	732,000
AIRFIELD			
Capacity (annual operations; current procedures)	-	410,000	425,000
Number of parallel runways	2	3	2
Critical aircraft		A380-200	B747-400
TERMINAL			
Gates	67	107	67
Increased building area	-	50%	-
GROUND TRANSPORTATION AND PARKING			
Public parking spaces (on-Airport)	15,000	25,000	28,000
Employee parking spaces	2,500	3,000	3,100
Enplaning, curbside (linear feet)	930	1,035	1,200
Deplaning, curbside (linear feet)	500	2,240	730
AIR CARGO			
Building area (square feet)	649,000	823,000	1,100,000
Ramp (square yards)	256,000	336,000	565,000

APPROACH

Our approach included eight key elements

- **Sustainability**
- **Forecasts and flight schedules**
- **Airport terminal evolution (technology and processes)**
- **Future security environment**
- **Level of service**
- **Benchmarking**
- **Follow-on studies from 2000 master plan**
- **Experience, judgment and analytical tools**

CARGO

The air cargo requirements assessment has been refined

- **Utilization of warehouse space at PDX**
 - Varies significantly among facilities and tenants
 - Is low in aggregate; due to lack of demand and some poorly configured facilities
- **Requirements are driven by space utilization**
- **A 35% improvement in future space utilization is assumed**

GENERAL AVIATION

Additional land should be reserved for general aviation development

- **Existing facilities occupy approximately 30 acres**
- **Requirements for additional facilities are driven by**
 - Regional growth and geography
 - Location and types of other airports
 - Policy
 - FAA grant assurances
- **Recommendation is to reserve an additional 10 - 20 acres for future GA facilities development**

GENERAL AVIATION (continued)

Fixed base operator areas at other airports

Airport	FBO 1	FBO 2	Total	Minimum Standards
Portland International Airport	30	--	30	8.0
Tampa International Airport	18	21	39	--
San Francisco International Airport	14	--	14	13.0
Memphis International Airport	11	19	30	--

KEY ASSUMPTIONS

Airfield capacity is adequate for the foreseeable future

- **Annual Service Volume (ASV) of airfield is 425,000 aircraft operations (based on 2004 FAA Baseline Capacities)**
- **ASV is not a hard upper limit on annual aircraft operations**
- **Delay levels at PDX will remain low to moderate through 2035 (378,000 operations forecast)**
- **No immediate need for significant capacity enhancements**

KEY ASSUMPTIONS (continued)

Existing gates will meet future needs through increased productivity

- **Existing domestic gates**
 - Are utilized at rate of 4.3 turns per gate per day
 - By increasing utilization to 6 turns per gate per day, the number of existing gates will be adequate through 2035
- **Adding international capability to domestic gates (i.e., connection to international facilities) need not increase gate count**
- **Increased gate utilization will allow passenger facilities to remain within the existing terminal envelope longer**

KEY ASSUMPTIONS (continued)

Aircraft overnight (RON) parking positions are essential for productivity

- **By 2035, RON requirements will increase to 28 positions**
- **There are only 8 existing RON positions that do not require crossing a runway**
- **The availability of RON parking positions reduces the number of contact gates (i.e., gates with loading bridges located at the terminal) needed**

KEY ASSUMPTIONS (continued)

Federal Inspection Services (FIS) facilities

- **FIS facilities will remain on the “airside”**
- **FIS facilities capacity**
 - Available in off-peak periods
 - Not available in peak periods
- **The need for increased capacity will be driven by the need to accommodate increased peak period demand**

KEY ASSUMPTIONS (continued)

Roadways and curbsides planned to higher LOS than regional roads

- **Implications of delay on airport roadway system are significantly greater than on regional roadways**
- **Objectives**
 - Facilitate passenger loading and unloading
 - Minimize vehicle queues
- **Approach results in earlier need for additional lanes on certain roadways and ramps**
- **Dwell time assumption for deplaning roadway is aggressive (1 ½ minutes) compared with previous master plan (6 minutes) and results in significantly reduced curbside requirements**

KEY ASSUMPTIONS (continued)

Public parking facilities requirements are based on existing mode choices

- **Requirements are for midday need during 30th busiest day of year**
- **Planned increase in public parking facilities is significant**
- **Strategy for providing public parking is closely linked with**
 - Demand on other facilities (e.g., curbsides)
 - Revenue strategy
 - Assumptions related to off-Airport parking

KEY ASSUMPTIONS (continued)

Rental car facilities driven by desire to provide high LOS

- **On-Airport facilities deliver higher level of service**
- **Rental car market share planned to be accommodated on-Airport**
 - 80% through 2022
 - 100% for 2027 and beyond

NEXT STEPS

We conclude that requirements are appropriate for subsequent analysis

Does the PAG concur that:

- **Approach is appropriate**
- **Sustainability principles of have been applied**
- **Key assumptions appear to be reasonable**
- **Requirements are appropriate for subsequent analysis**

NEXT STEPS (continued)

The alternatives elements will be initiated in November


- **The work will involve**

- Evaluating alternative Airport development concepts
- Refining the selected development concept
- Preparing phasing plans

- **The work plan is being developed**



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QUESTIONS?



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