RNP

Briefing for David Grizzle

July 31, 2012

Destination **RNP**
AUTOMATION EVOLUTION
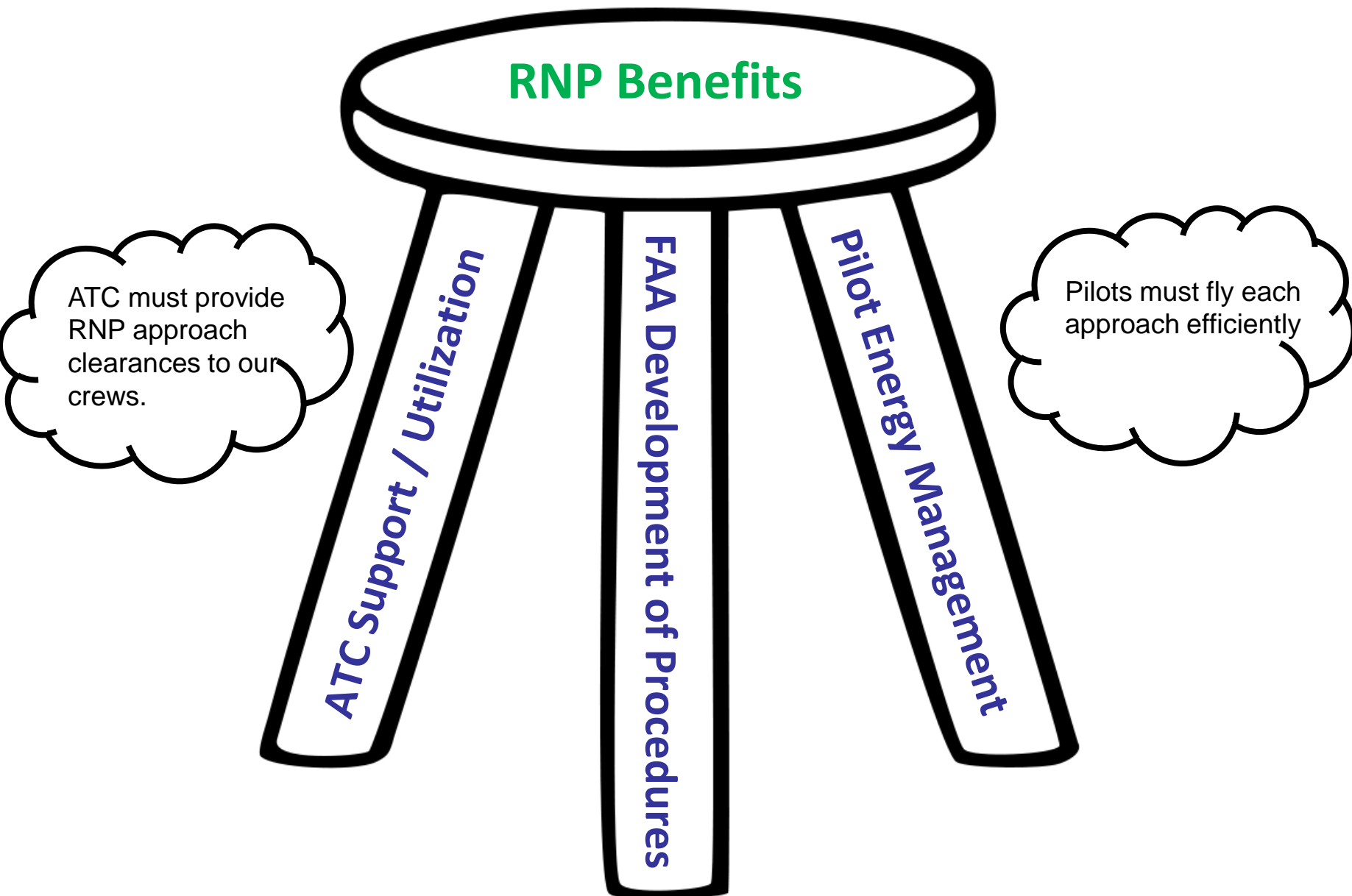TRANSFORMING SOUTHWEST

- January 11, 2011 **– RNP Approaches Implemented at SWA**
  - "Restricted Visual Meteorological Conditions" –
    - 1,500' ceiling / 3 miles visibility
  - 11 Airports with Efficient RNP procedures

- February 24, 2011 – **FAA approves next implementation phase for SWA RNP**
  - "Limited Instrument Meteorological Conditions" –
    - 500' ceiling / 1 mile visibility
    ----------------- Since Last Update in May 2011 ------------

- January 2012 – **FAA approves Simultaneous Dependent Approach Rule**
  - ATC can now use "ILS" separation criteria for RNP Approaches
    - Permits practical application of RNP at airports with parallel runways (e.g. DAL)

- March 2012 – **Implemented additional ACARS reporting of ATC failures.**
  - Retained until all Pilots completed recurrent training.

- April 2012 – **Removed RNP "straight-in" procedures from SWA operations**
  - Retained until all Pilots completed recurrent training. No further need for these.

- May 2012 – **Final RNP OpSpec submitted for FAA Approval**
  - "Instrument Meteorological Conditions" –
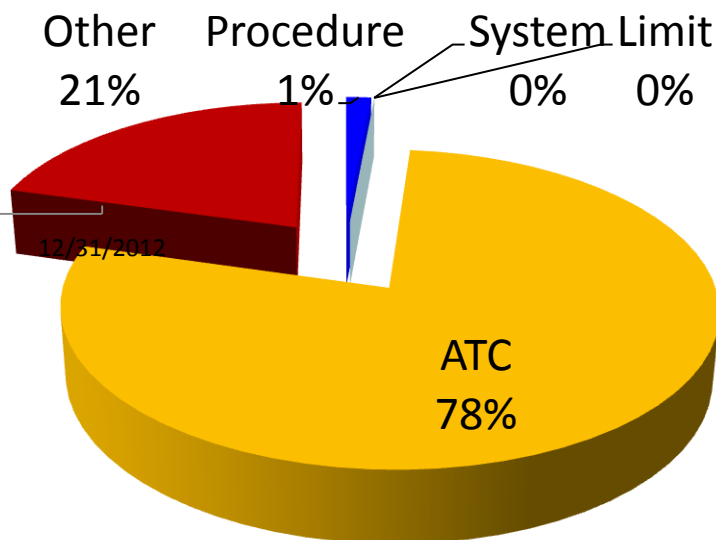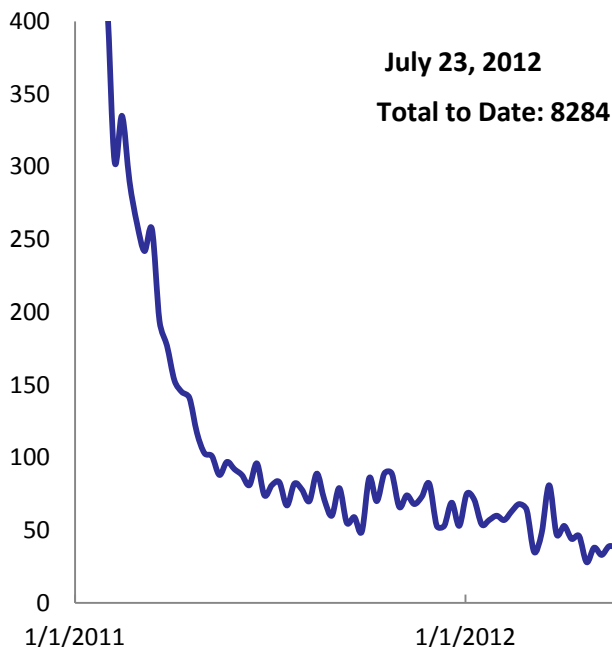   - Charted Minima (nominally 300' ceiling, ¾ mile vis)

RNP Benefits

ATC must provide RNP approach clearances to our crews.

Pilots must fly each approach efficiently

ATC Support / Utilization

FAA Development of Procedures

Pilot Energy Management

Weekly RNP AR PostFlight Reports

July 23, 2012

Total to Date: 8284

Other 21% Procedure 1% System 0% Limit 0%

ATC 78%

Procedure
System
Limit
ATC

Pilots Report 5% of our 1,347 RNP Approaches as Unsatisfactory *

Procedure: Crew Procedure Issue
System: Equipment Failure, MEL, etc.
Limit: Temperature, Wind, RAIM
ATC: ATC denied or vectored-off.
Other: Cannot Determine from Pilot Comments

* 2012 ACARS Report s - as of June 30, 2012

Southwest Airlines

July 2012

SWA Airports with efficient or useful RNP Approaches:

ALB (Runways 1, 19)
AMA (Runways 4, 22, 31)
BHM (Runways 6, 24)
BUR (Runway 8)
BOI (Runways 10L, 10R, 28L, 28R)
CHS (Runways 3, 15, 21, 33)
CRP (Runways 13, 31, 35)
DCA (Runways 1, 19)
ELP (Runway 22)
GEG (Runways 3, 7, 21, 25)
LAX (Runways 24L, 24R, 25L, 25R)
MDW (Runway 13C)
OAK (Runways 11, 29)
OKC (Runways 17L, 17R, 35L, 35R)
PBI (Runways 10L, 14, 28R, 32)
RDU (Runways 5L, 5R, 23L, 23R)
RNO (Runway 16R, 16L)
SAT (Runways 3, 12R, 21, 30L)
SJC (Runways 12L, 12R, 30L, 30R)

Scheduled for late 2012: ABQ, PDX, SMF, STL, PVD, OMA, HRL, DEN, BNA, JAX
Scheduled for early 2013: BWI, SEA

- **Increase the frequency of RNP Approach Clearances**
  - Increase Controller education of RNP operations and clearances
  - Decision support tools for mixing RNP and non-RNP aircraft
  - Pilot/Controller verbiage for conducting RNP approach paths on Visual Approach Clearances
  - Advertise the availability of RNP approaches (ATIS, etc.)

- **Develop more RNP AR Approach Procedures**
  - RNP Procedures should be connected to arrival routes (seamless "path")
  - RNP procedural development should be considered in all OAPM projects.
  - Increase the coordination of procedure changes as they near publication – Last minute changes from agreed to designs results in delays and/or flyability issues.
  - Resources dedicated to RNP should be managed to insure support of non-OAPM efforts.

* OAPM – Optimization of Airspace Procedures for the Metroplex