

OEIA Challenges

CAFT OEIA

27 - 28 January 2000

Overview

- OEIA Objectives
- European approach
 - Objectives and use of Strategic Performance Framework
 - Approach & Status & Issues
- Next steps

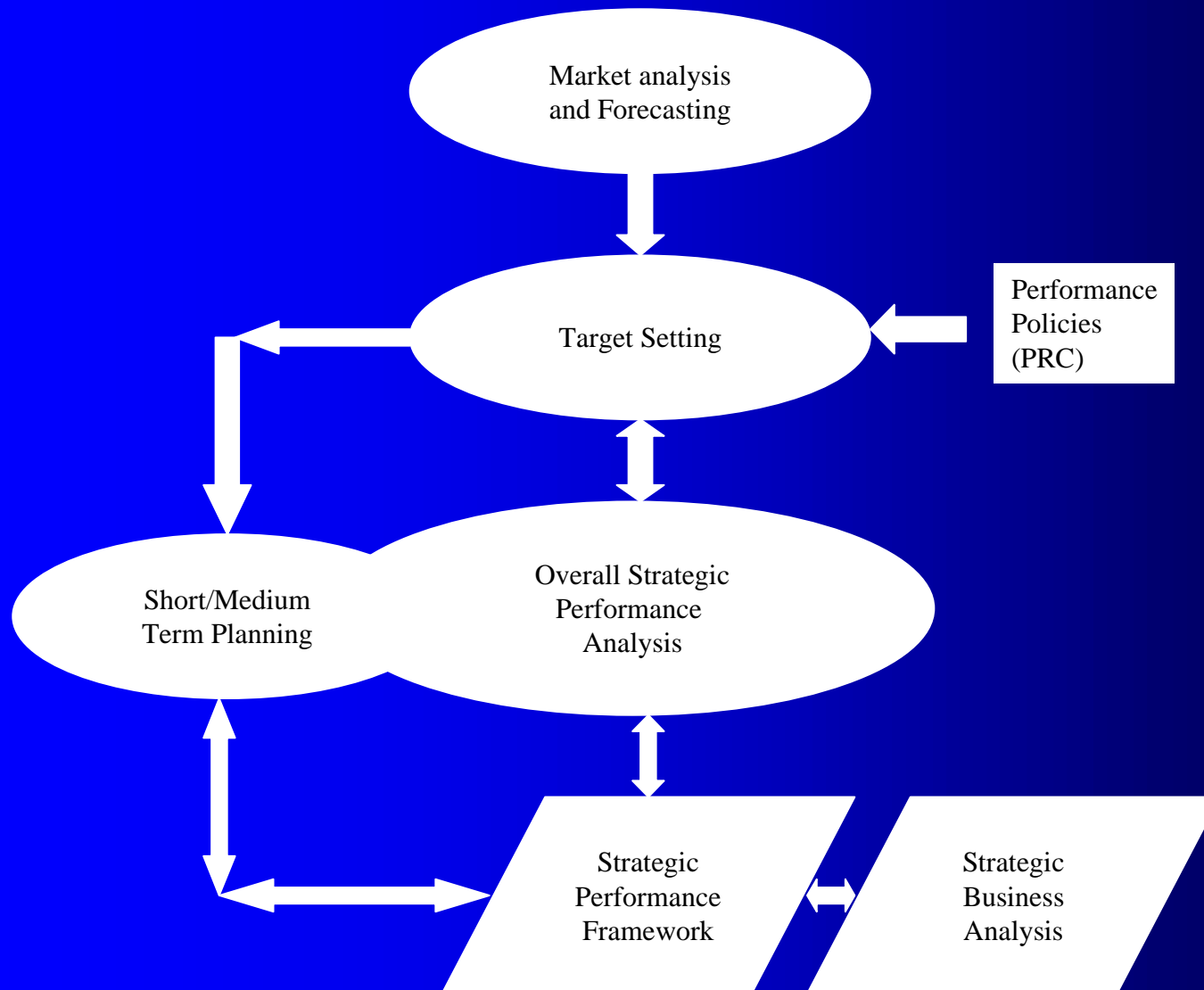
OEIA Objective

- Aircraft: The place where global plans are aggregated
- Operational enhancements need to be linked to performance targets
- OEIA Objective:
 - Develop an Integrated Performance Driven Global Operational Enhancement Plan (from an a/c perspective) to:
 - reduce retrofit cycles
 - reduce (expensive) global proliferation
 - link improvements to performance targets

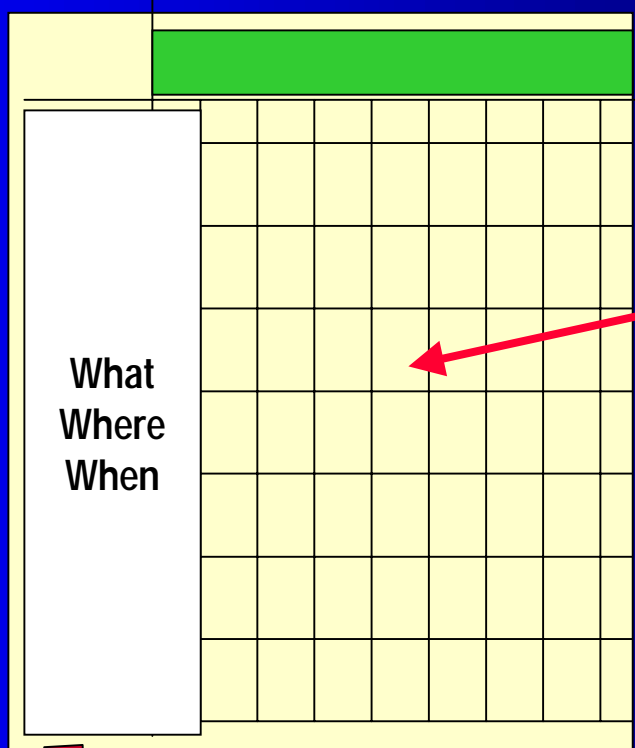
Objectives and use of Strategic Performance Framework

- Linking Operational Improvements to Performance Targets
- Starting point of a performance driven approach
- “Leading edge” document in combination with Strategic Business Analysis
- Information used to assess programmes

Context

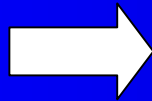


TARGETS

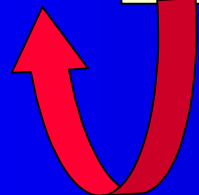


capacity gains

OIs



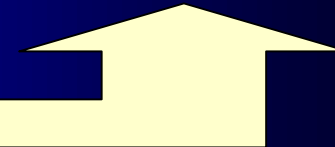
OPTIONS &
Consistency Checking



AGGREGATION

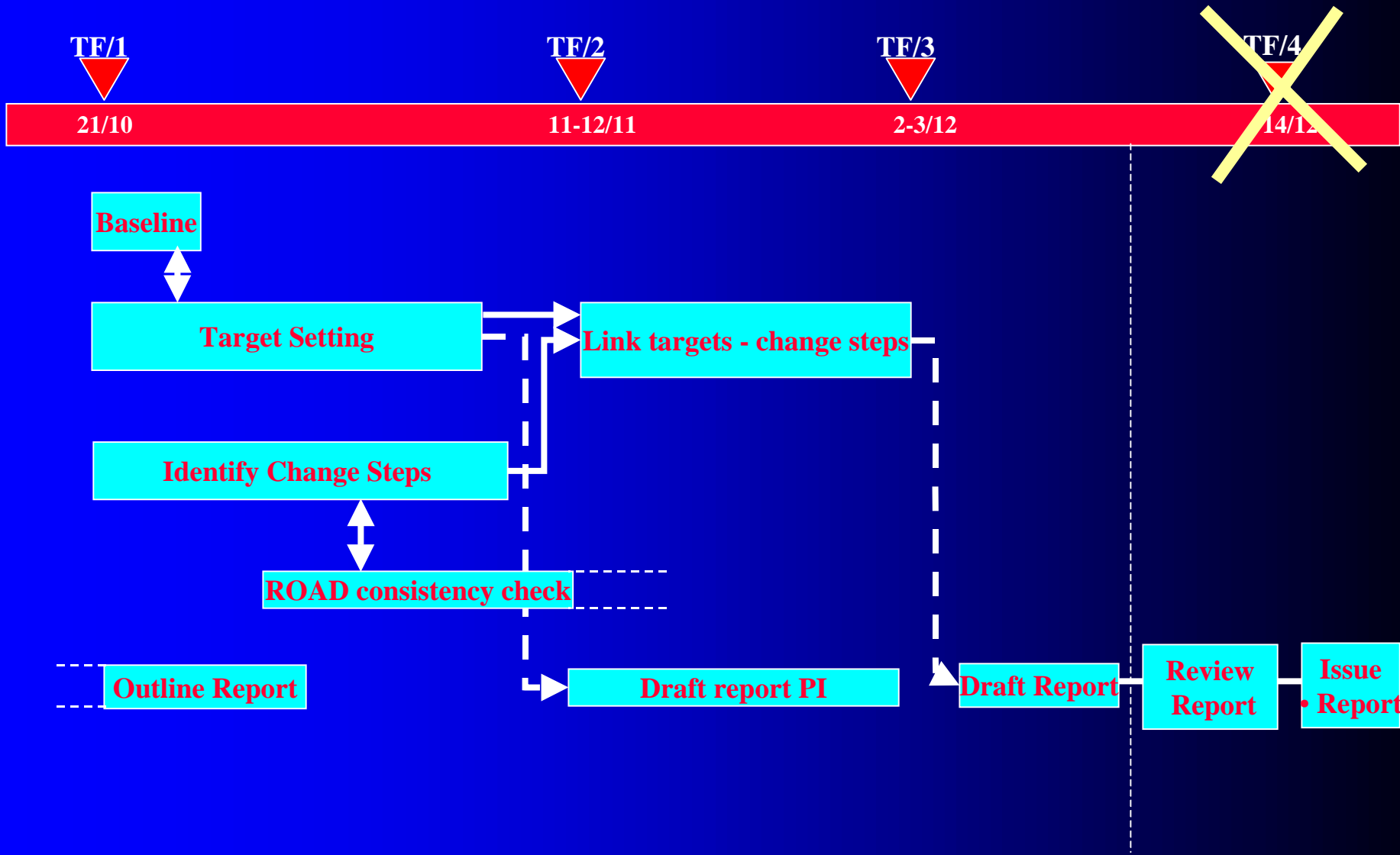
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ITERATION



Approach & Status & Issues

SPAF SPF Strawman Task Force - Schedule



Task Force Deliverable

- Strategic Performance Framework Strawman
 - Attachment 1:
 - SPF Strawman Capacity Targets and Initiatives
 - Attachment 2:
 - Consolidated list of Operational Improvements
 - Attachment 3:
 - List of Operational Improvements Dependencies

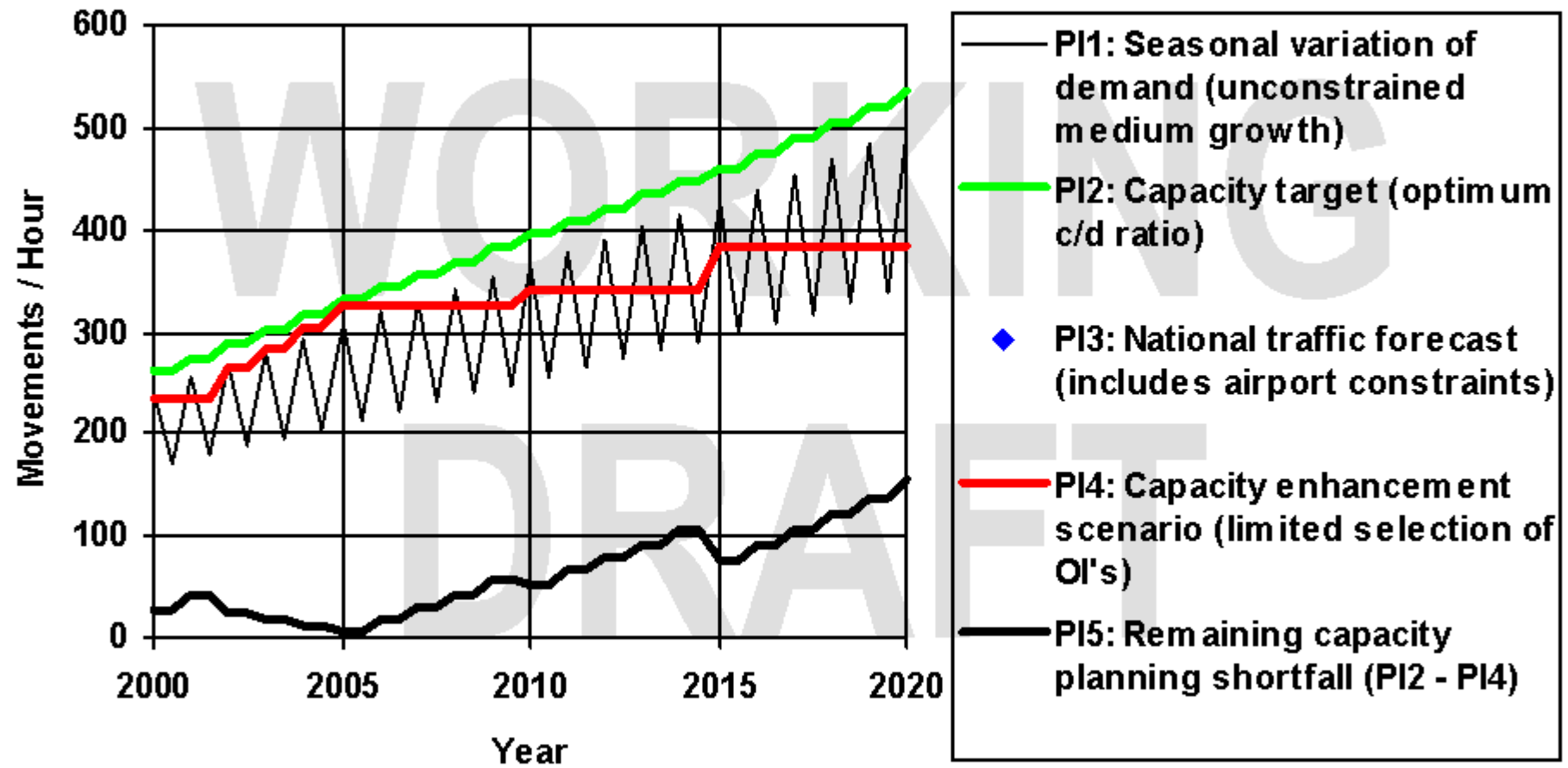
Target Setting Approach

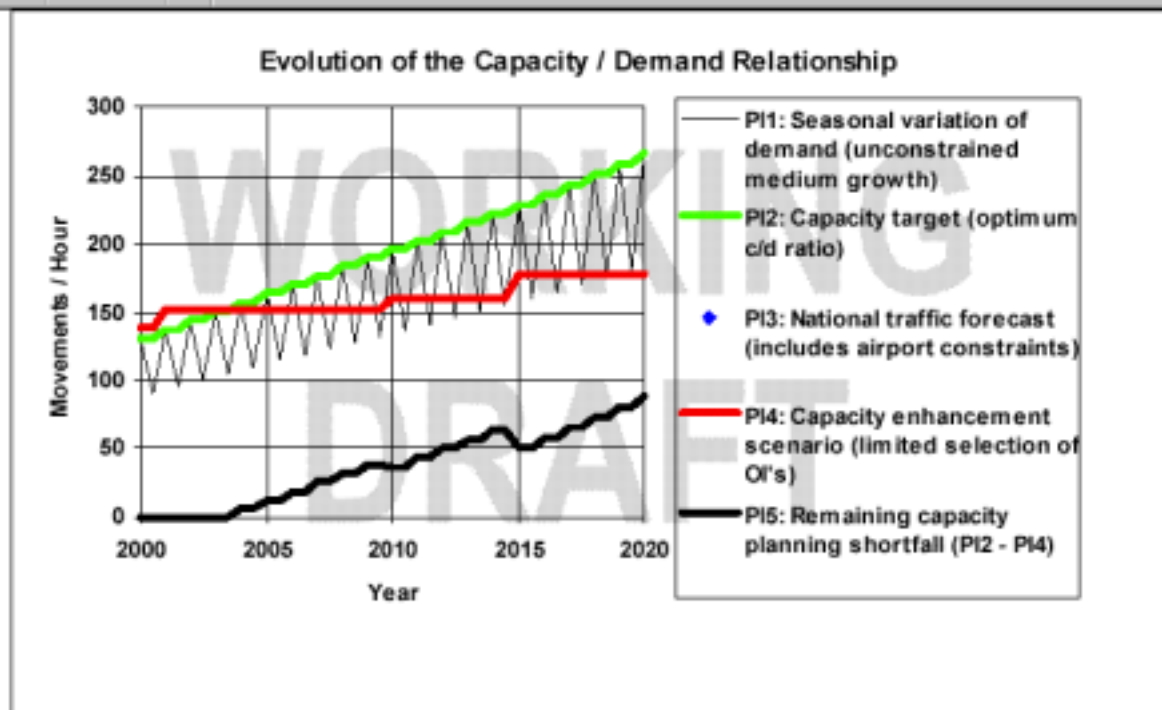
- Capacity targets only
- Objective:
 - to set meaningful and interpretable targets (enabling linking to Operational Improvements)
 - integrate Medium Term Planning results (ie capacity figures from States)

Status Target Setting

- Working draft of SPF Strawman Capacity Targets and Initiatives available
- Integration of Medium Term Planning information
- Visualised information for all ACCs
- Initial link with Operational Improvements
- Contents requires more analysis to be of use for conclusions and linking to OI

Evolution of the Capacity / Demand Relationship





FAP assumptions (Movements / Hour in 1999): Capacity = 138 Demand = 124 Confidence = M Optimum c/d Ratio = 1.00

PI2: Capacity target (optimum c/d ratio)

Year	Baseline	Target	Factor
2000	124	131	1.06
2005	124	164	1.33
2010	124	196	1.59
2015	124	228	1.84
2020	124	267	2.15

PI4: Preliminary Capacity Enhancement Scenario based on a provisional selection of operational improvements

Percentages refer to a capacity increase with respect to the previous year, as declared in the MTCEP (2000-2005) or tentatively defined by the SPF Task Force (2006-2015)
 OI numbers refer to the numbering on the Strawman Spreadsheet "OI's to Increasing European ATC Capacity"

Improvement	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MTCEP		10%														
OI#5																5%
OI#6																5%
OI#10																2%
OI#11											5%					
Combined		10%									5%					12%

Operational Improvement Approach/1

- Objective:
 - to identify Improvements that distinctively provide a capacity benefit
 - to make maximum use of Domain Strategies and CFMU Development Plan

Operational Improvement Approach/2

- Information per Operational Improvement:
 - improvement area and dimension
 - description
 - cross-reference to strategy documents
 - OI timing:
 - date at which OI is first implemented and starts delivering benefits
 - not (yet) target driven
 - deployment is target driven
 - applicability
 - benefit assessment

Operational Improvement Approach/3

- Operational Improvement E&S information
- Enabled by
- Supported by

Operational Improvement Status

- Operational Improvement spreadsheet available
 - focussed on capacity however, implicitly also covering efficiency, environment
 - stable enough for strawman
- E&S spreadsheet available
 - requires more review
- Information under change control

Linking Performance Targets with Operational Improvements

- Initial assessment of OI capacity gain (expressed in High, Medium, Low for ACCs and Airports)
- Categorisation of ACCs in three maturity categories based on:
 - traffic density
 - sector transit time
- 2000 - 2005 input for Medium Term Planning (OI not specified)
- Link between ACC maturity categories and OI for ECAC-wide OI

Main Issues

Overview of main issues

- Airports
- Benefit Assessment of Operational Improvements
- Approach for linking targets with operational improvements

Airports

- Potential high sensitivity of airport constraints on (long term) target setting
- Spreading and/or reduction of demand due to airport constraints not well known

Benefit Assessment of Operational Improvements

- Benefit assessments of improvements are difficult to make
- Target driven approach is alternative
 - select (cluster) of Improvements
 - set target (= demand)
 - validate through R&D and provide feedback
 - if necessary change plans

Approach for linking targets with operational improvements

- Shortcomings current approach:
 - large variation between ACCs
 - need to do the linking exercise per individual ACC
 - % values can not be applied in an uniform way
 - example: 10% on 100 mov/hr is different from 10% on 7 mov/hr
 - need to always work with absolute values rather than percentages
- Linking requires homogeneous categories

Alternative approach for linking targets with operational improvements

- Airspace oriented approach:
 - subdivide the airspace of each ATC unit into airspace layers
 - within each layer, subdivide traffic into 2 elementary segments
 - level (cruising)
 - climbing/descending traffic
 - set targets and link OI's at the level of these most elementary traffic segments
 - based on airspace, map OI's to ATC Units

OEIA next steps

- Inputs:
 - Analysis of the results of the CAFT groups
 - Analysis of Regional/national “Strategic Performance Framework”
- Define optimum clustering of OI’s based on analysis of:
 - enablers
 - costs
 - timing
- Develop Global Operational Enhancement Plan