



TORCH

PRESENTATION TO THE C/AFT ALL AIRLINE TOULOUSE MEETING

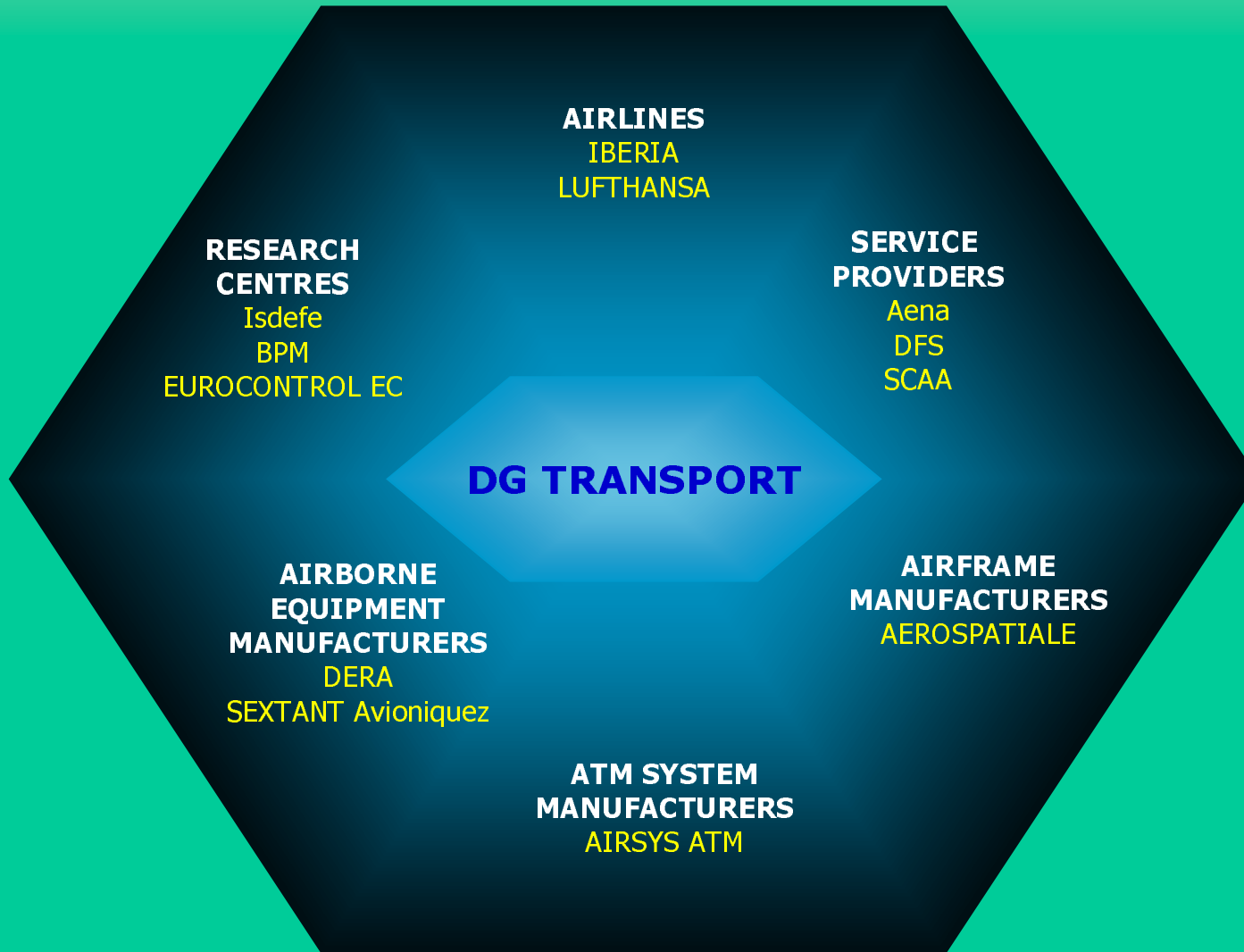
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Consortium



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Introduction



- "BIG PICTURE" SYSTEM DESIGN
- WHAT IS TORCH TARGETED AT?
 - INCREASING THROUGHPUT SUFFICIENTLY
 - NEED TO IMPROVE THE ATM SYSTEM FAST
- PRACTICAL APPROACH



Benefits of an optimised plan: JANE Results



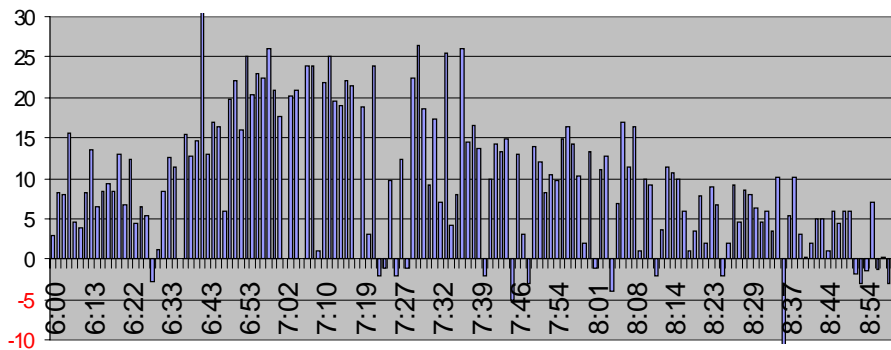
- **BEFORE**

- DATA OBTAINED FROM DFS STANLEY SYSTEM
- FRANKFURT 3 HOUR PERIOD
- 1365 MINUTES DELAY

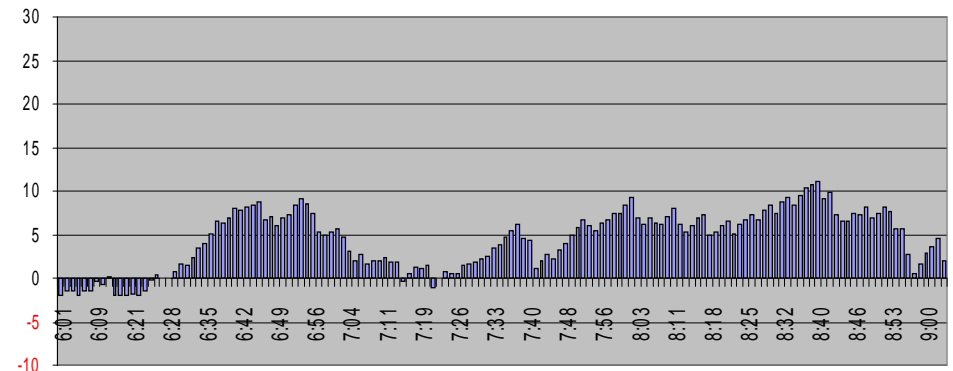
- **OPTIMISED PLAN**

- IMPROVED PLANNING AND OPTIMUM UTILISATION OF THE RUNWAY
- SAME INPUT DATA
- 649 MINUTES OF DELAY

Arrival/Departure Delay according DFS ETA/EOBT
vs. ATA/ ATD Times



Arrival/Departure Delay according DFS ETA/EOBT
when applying Calculated Runway Times, Min Separation 2,7 NM





TORCH Approach



- FOCUS ON THREE AREAS:
 - DEMAND & CAPACITY DETERMINATION
 - CENTRAL RE-PLANNING / LOCAL OPTIMISATION
 - EN-ROUTE METERING



Improving Throughput



- TRAFFIC LOAD USED TO IDENTIFY AREAS OF TRAFFIC CONGESTION
- DEMAND & CAPACITY IMPROVED WITH CONTINUOUS UPDATES
- CAPACITY BALANCED TO ACTUAL USER DEMAND
- ALLOW EARLY REACTION OF INVOLVED STAKEHOLDERS
- ACTIVE COLLABORATION



Improving Planning and Predictability



- FILL THE GAP BETWEEN ATFM & ATC
- SUPPORT GATE-TO-GATE OPERATIONS
- INTEGRATED ARRIVAL, DEPARTURE AND GROUND MOVEMENT MANAGEMENT FOR A CLUSTER OF AIRPORTS



TORCH Strategy



- DAILY OPERATIONAL PLAN (DOP)
- ROLLING PLANNING PARADIGM



Essential Aspects of a Daily Operational Plan



- BASED ON CONTINUOUSLY UPDATED AIRSPACE AND TRAFFIC DEMAND
- BASED ON REQUIRED AND ALLOCATED ATM CAPACITY
- COLLABORATIVE DECISION MAKING
 - ALL USERS ARE INVOLVED



Essential Aspects of the Rolling Planning Paradigm



- IMPROVED FEEDBACK OF:
 - RESOURCE USAGE
 - RESOURCE AVAILABILITY
 - CENTRAL PLANNING BALANCED BY LOCAL OPTIMISATION



What benefits can be expected



- EFFICIENCY INCREASE
 - BRIDGE THE GAP BETWEEN CFMU AND TACTICAL OPERATIONS
 - LINK BETWEEN TMA AND AIRPORT OPERATIONS
- CAPACITY INCREASE THROUGH INCREASED EFFICIENCY



Summary



- ROLLING PLANNING TO INCREASE EFFICIENCY/CAPACITY
 - OPTIMISED USE OF RESOURCES
 - USERS HAVE ACCESS TO ALL INFORMATION
- TORCH APPROACH ENSURES:
 - CONCEPTS ARE TAILORED TO SPECIFIC ATM NEEDS
 - CONCEPTS MEET THE EXPECTATIONS



Next Steps — User Feedback



- USER FORUM SPRING 2000
- RESULTS OF ASSESSMENT PACKAGES NEED TO BE REVIEWED
- OUTPUT OF TORCH IS CENTRAL TO 5th FRAMEWORK R&D