

FRMS Challenges of an On-demand Operator



1st September 2011

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AGENDA:

1. NetJets Europe Operational Environment
2. Challenges of an On-demand Operator
3. FRMS Implementation and Challenges at NetJets Europe
4. Lessons Learnt and Next Steps



Highlights – June 2011

10,161

Nr. Pax that flew NJE
(3.0 Pax per Rev flight)

147

Top requests flown in a
single day.

4,257

Nr. Reservations
(142- avg. per day)

1,840,472

Nautical miles flown by
NJE Fleet (Rev flights)

40

Top departures from a
city in a single day.
(London on 13th Jun)

5,790

Total Flights operated
in fleet

193

Avg. N.º Total Flights
per day

283

Nr. Long Range Flights

127

Nr. Rev, Flights outside
Europe (in fleet)

1.63

Avg. Rev. Flight Length
in fleet

8,096

Total Flights Hours
(in fleet)

154

Nr. Aircraft
(on AOC)

1,713

Total Headcount

112

Avg number of daily
revenue departures

384

Number destinations
(cities)

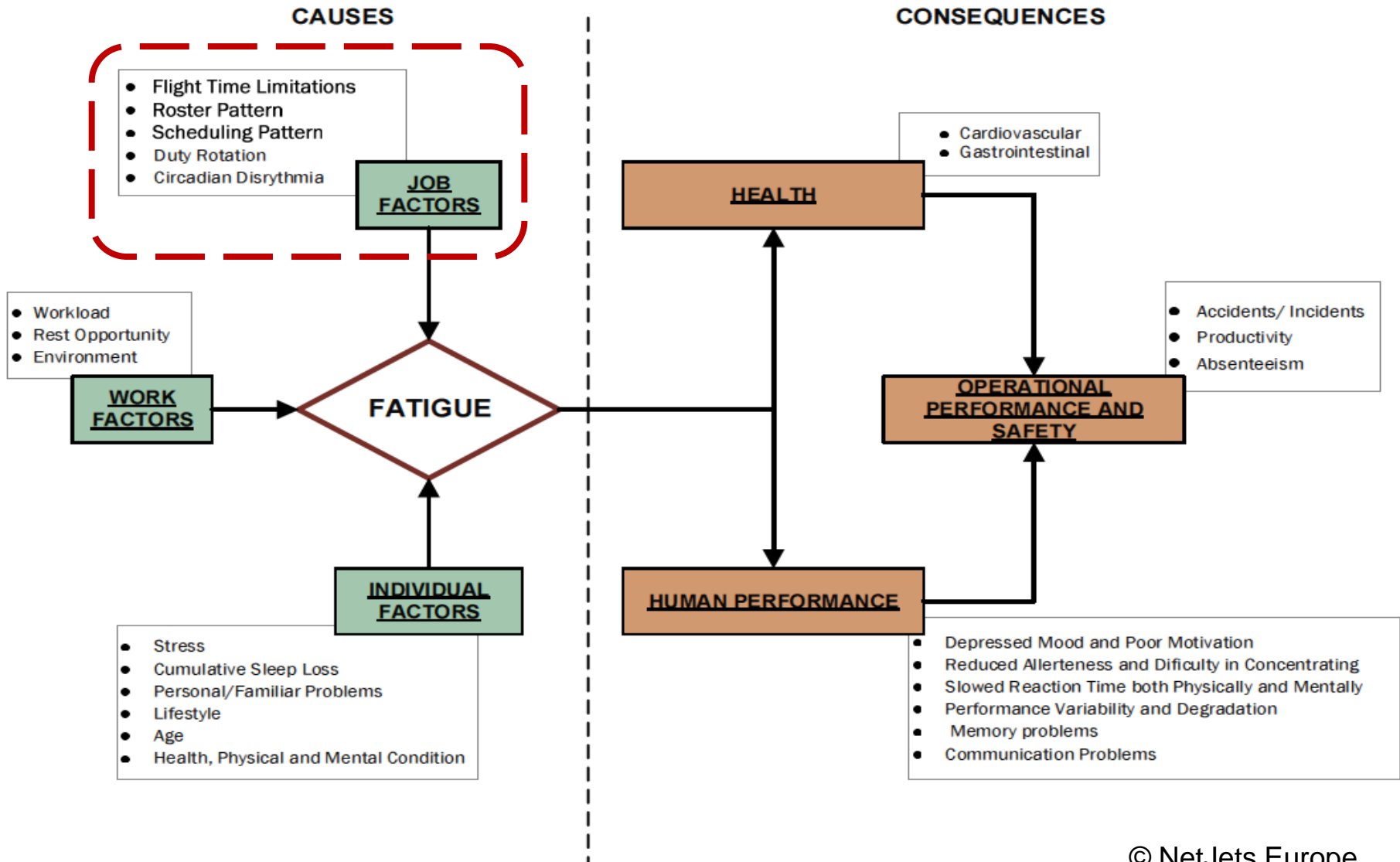
NetJets Europe Fleet

➤ Business Jet Aircraft (< 19 passengers): 154 aircraft

- Small Size:
 - 17 Citation Bravo
 - 27 Hawker 400
- Mid Size:
 - 39 Citation XL/XLS
 - 43 Hawker 800 XPC / 750
- Large Cabin:
 - 17 Falcon 2000 / 2000 Ex
 - 2 Falcon 7X
 - 9 Gulfstream GV-SP



Fatigue Causes and Consequences



Flight Time Limitations Scheme

CURRENTLY:

Reg. (EC) No 8/2008 [EU-OPS] - Subpart Q - All types of commercial operations.
Equivalent to FAR Part 121

FUTURE:

- EASA NPA 2010-14: FTL scheme under development for different types of CAT operations.
- NetJets Europe → Air Taxi operations: Non-scheduled, on demand commercial operations with an aeroplane with a passenger seating configuration of 19 or less.
- *“After carefully reviewing possible requirements to manage fatigue for Air Taxi Operations, the Rulemaking Group concluded that the current provisions of Subpart Q were not adapted to this kind of operations. The Group consequently proposed that Air Taxi Operations needed to be addressed separately. This will be taken care of by Rulemaking Task OPS.071.” - NPA 2010-14 Page 18*

Expected date: ?

Duty Information

ROSTER

Duty Days:

- 6 duty days and 5 rest days;
- 7 duty days and 6 rest days;

Type of Duty

45 Days before the beginning of each month

Identical to the Airlines
(EU-OPS / FAR Part 121)

SCHEDULING

Start and end time.

Number of sectors.

Time zones.

Daily Communication

Day 1:

- 12hrs in advance;
- Can start at 01:01

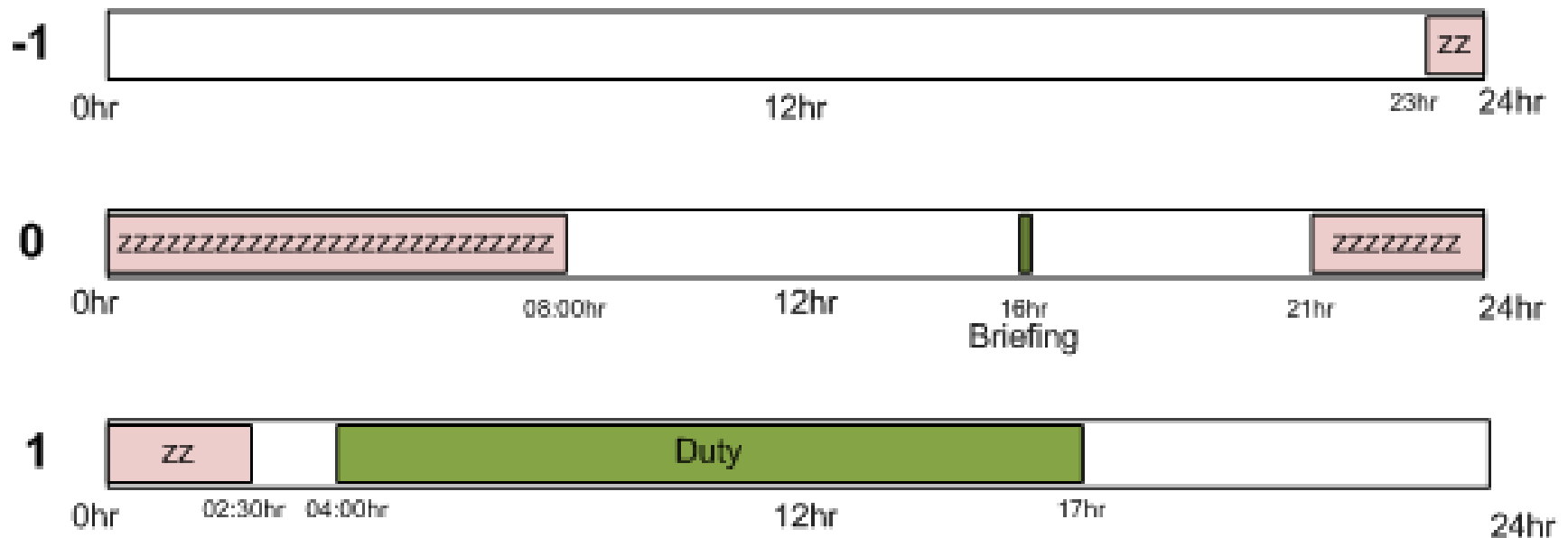
Unique to On-demand Operators

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Challenges of an On-Demand Operator

Usually Day 1 is the most difficult day of the tour:

Hard to plan sleep when you do not know when your duty will start and how long it will be.



Briefing:

Show-time at 04:00 at airport A.
45min ground transport from home to airport A.
Total duty time: 13hrs

Challenges of an On-Demand Operator



CHALLENGES:

- Operations are unpredictable and occur at short notice.
 - 10 hrs customer notice;
 - 11 hrs minimum rest period
- Each day's schedule is unique (shift rotation, crossing multiple time zones, specific operational needs, different airport requirements, etc.)
- Individual differences exist in response to workload, sleep loss and circadian disruption.
- Rest Planning and Management vs. Schedule Communication.



WHAT IS NECESSARY ?

- Fatigue Mitigation Strategies.
- An approach that addresses operations on an individual basis while allowing for operational flexibility.



Systematic and objective process of managing the fatigue risks.

Fatigue Risk Management System

Fatigue Risk Management System

The building Blocks of the FRMS \equiv The Building Blocks of the SMS



Risk Management and Safety Assurance

However, as an integral part of the SMS or as a standalone system, the FRMS requires a unique set of tools and expertise.



Status of FRMS Implementation at NetJets Europe

IMPLEMENTED:

- Process for submitting Fatigue Reports:
 - Reactive - Any safety occurrence that may be attributable wholly or partially to fatigue.
 - Reactive - Any situation where the Flight or Cabin Crew felt fatigued and consequently unfit to perform his/her duties.
 - Proactive - Any general concern regarding potential fatigue contributing factors within NetJets policies, procedures, etc.
 - Available on any computer with internet access and Blackberry.
- Process for reporting, investigating and recording incidents that may be attributable wholly or partially to fatigue.
- Education Programme – as per EU-OPS requirements.



CHALLENGES:

- No data from accidents/incidents wholly or partially attributable to fatigue does not mean that current fatigue risk is acceptable.
- Concerns that fatigue is under-reported by crew members.
- Crew members tend to report sick rather than fatigued, when the latter is the case.
- Fatigue risks may be masked under human factors related incidents.
- Data from fatigue reports is insufficient to detect current and future risks.
- Poor knowledge of what fatigue is and rest management.

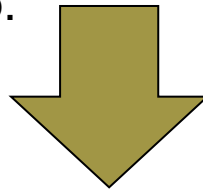
FRMS – Pending Questions

- Fatigue Policy: Stand alone or joint with Safety Policy?
- Should Fatigue reports be confidential?
- Crew member's belief in FRMS as a safety tool?
- When the schedule is constantly changing, how do we give visibility of fatigue risks to the scheduler?
- How should we count split duty towards cumulative fatigue?
 - Different types of rest facilities: lounge, hotel, etc.
 - Duration.

Lessons Learnt and Next Steps

Paramount for an effective FRMS – On-demand Operator:

- Dedicated fatigue training program and countermeasures awareness.
- A strong and effective reporting culture – importance of collaboration.
- Statistical and scientific data.
- Biomathematical model to support risk assessment of past and future schedules.
- Fatigue Safety Action Group.



Identify and assess current and future fatigue risks.

Develop and implement mitigation strategies.

Continue with the cycle...

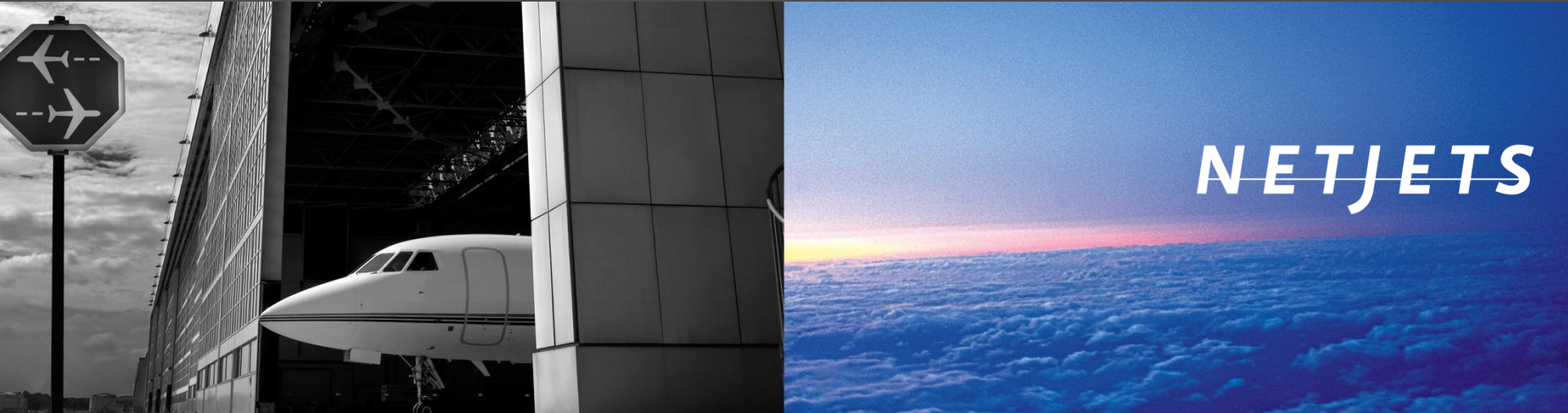
Discussion

- QUESTIONS?
- SUGGESTIONS?



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Thank you!



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