



Lufthansa Technik

More mobility for the world



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**Western-built aircraft:
establishing local
maintenance capabilities**

Wings of Russia Aviation Forum
Moscow, 11th October 2007

Agenda

Challenges ahead

Factors of successful MRO

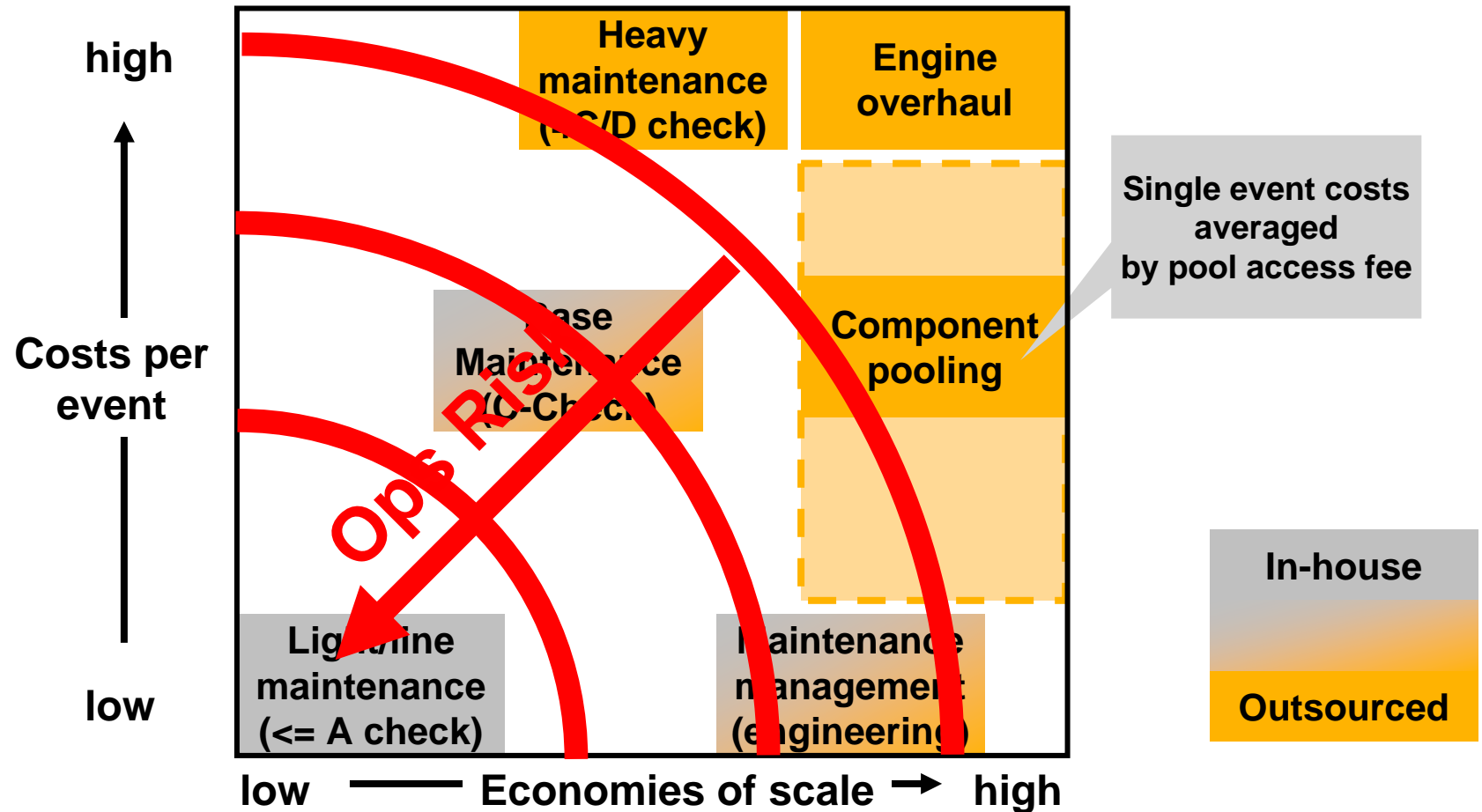
Approach to local capability set-up

Introduction of western-built aircraft - technical and organisational challenges for Russian operators

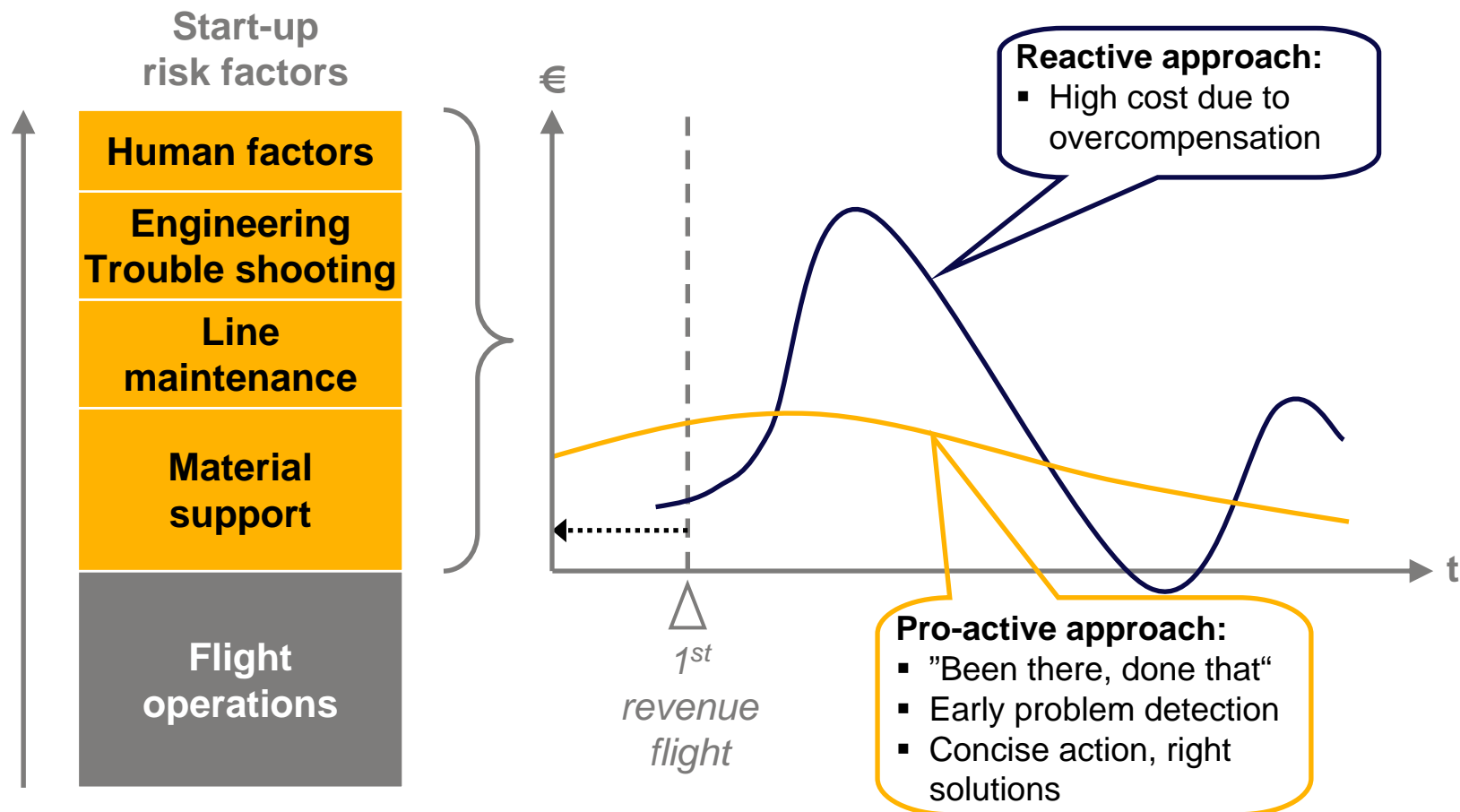


- **Fly-by-wire** flight control system
- **Glass cockpit**
- **Digital** avionics
- **On-condition** maintenance concepts
- **Real-time monitoring** of aircraft systems
- **Air-to-ground communications**
- **Digital cabin management** and **IFE** systems
- **Composite** primary structures
- **Training** of maintenance staff
- **English** as universal working and documentation **language**
- Import of spare material (**customs clearance**)

MRO key components – cost, scale and risk of operation



Reduction of start-up risk through early service integration



Sample EIS project

A320 fleet phase-in and roll-over at Spanair (JKK)



■ Project briefs

- ➔ Ops start in Oct 2000
- ➔ 2ea A320 + 3ea A321 in service

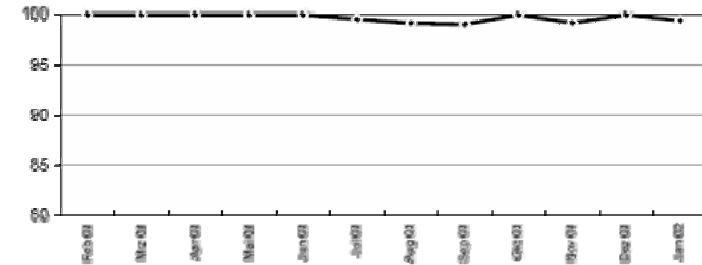
■ Integrated services by LHT

- ➔ Engineering & maintenance, MCC
- ➔ Material, logistics & store management
- ➔ Tools & equipment
- ➔ Initial provisioning

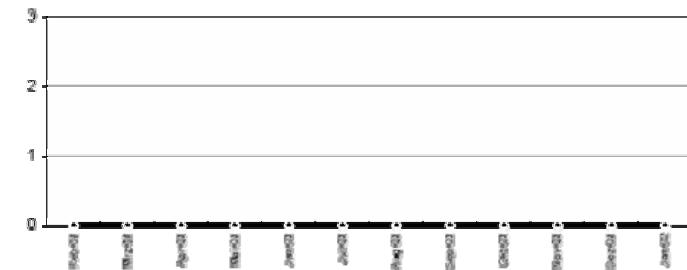
■ Cross-functional on-site team

- ➔ Engineering, planning and production
- ➔ Sep 2000 to Oct 2001
- ➔ Team capacity approx. 15 FTE

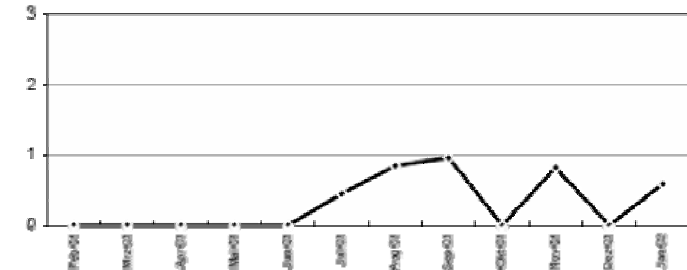
Technical Dispatch Reliability



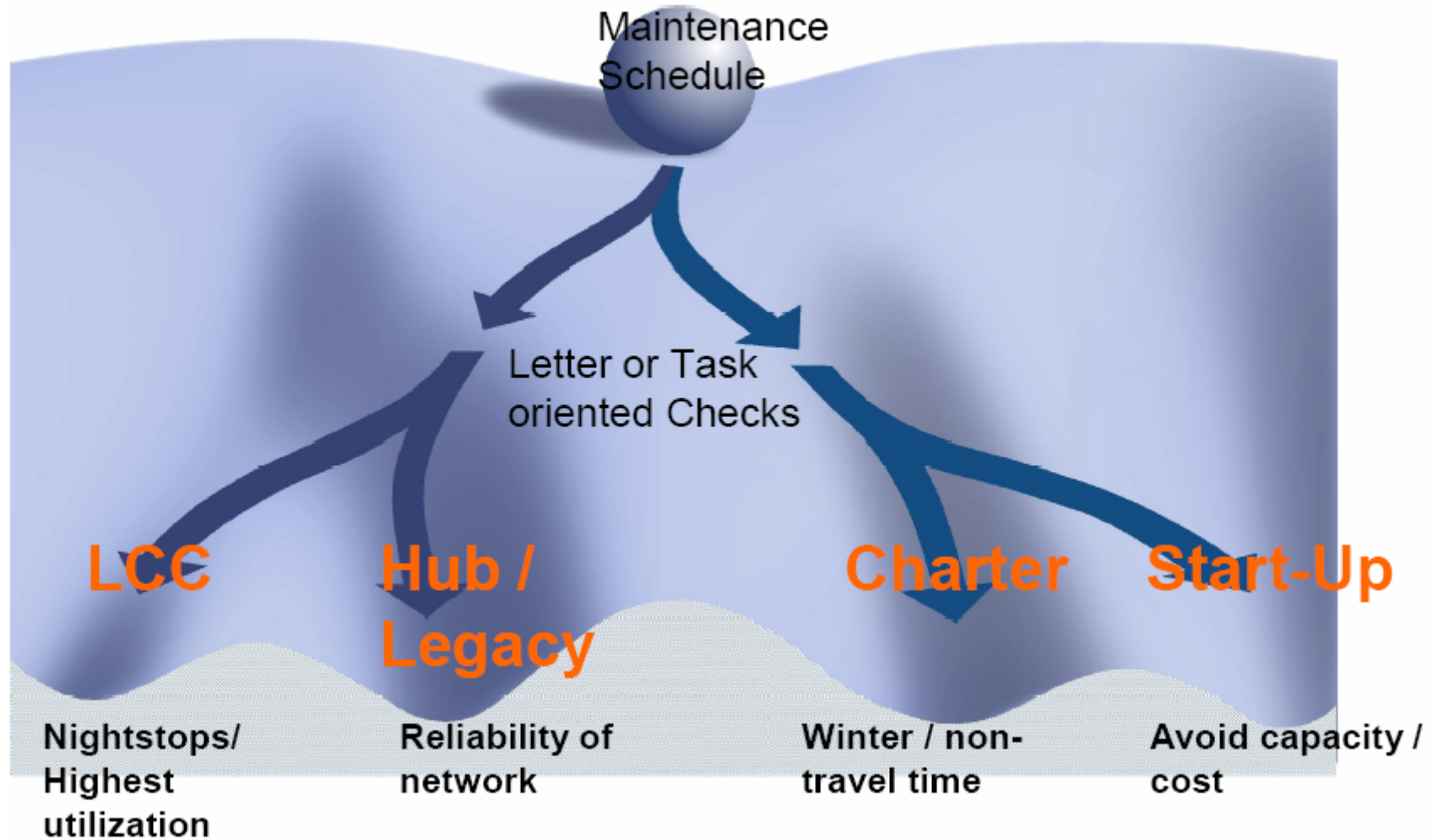
Cancellations per 100 Revenue Take-Offs



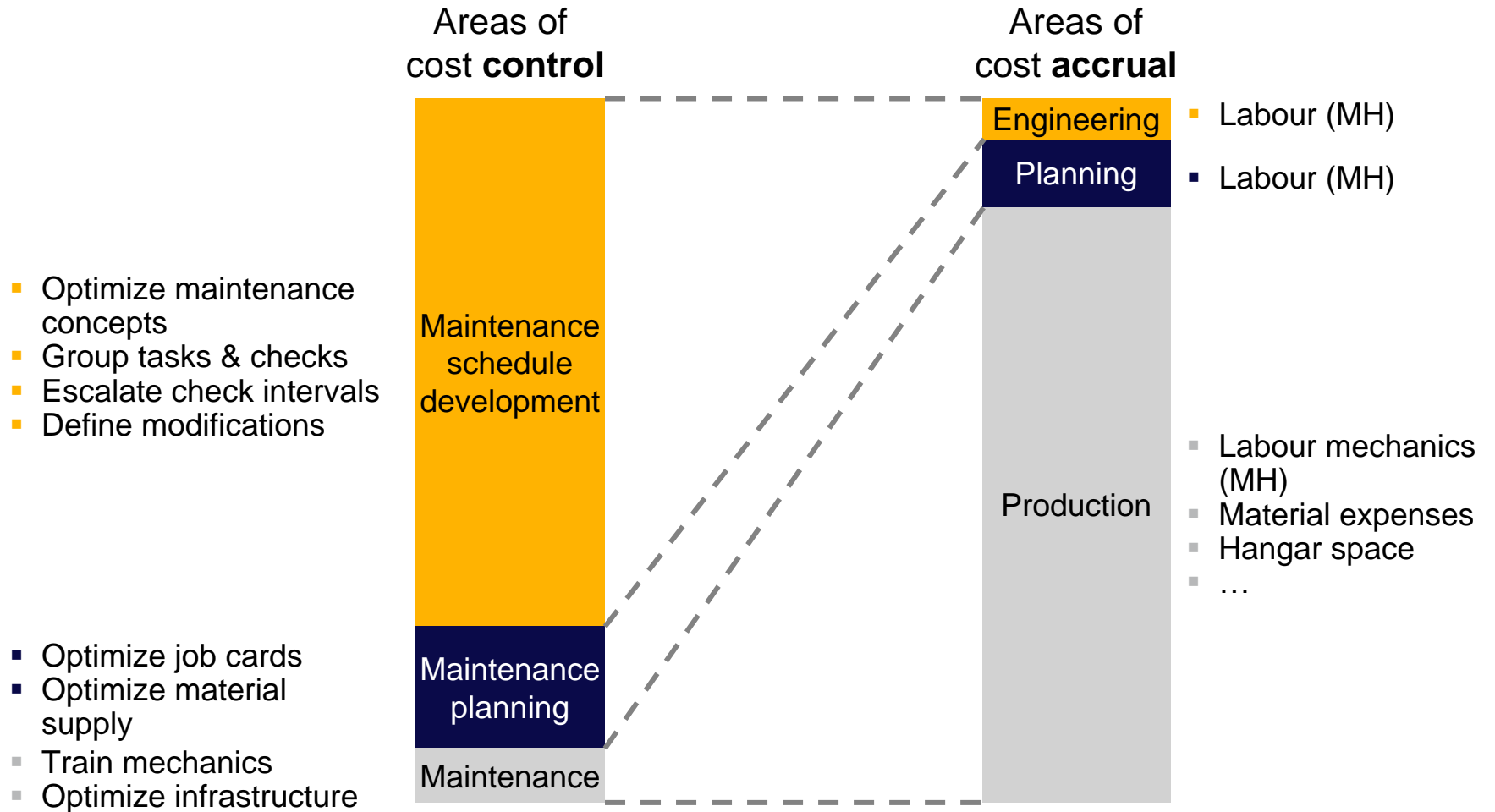
Delays per 100 Revenue Take-Offs
(Delays > 15 min)



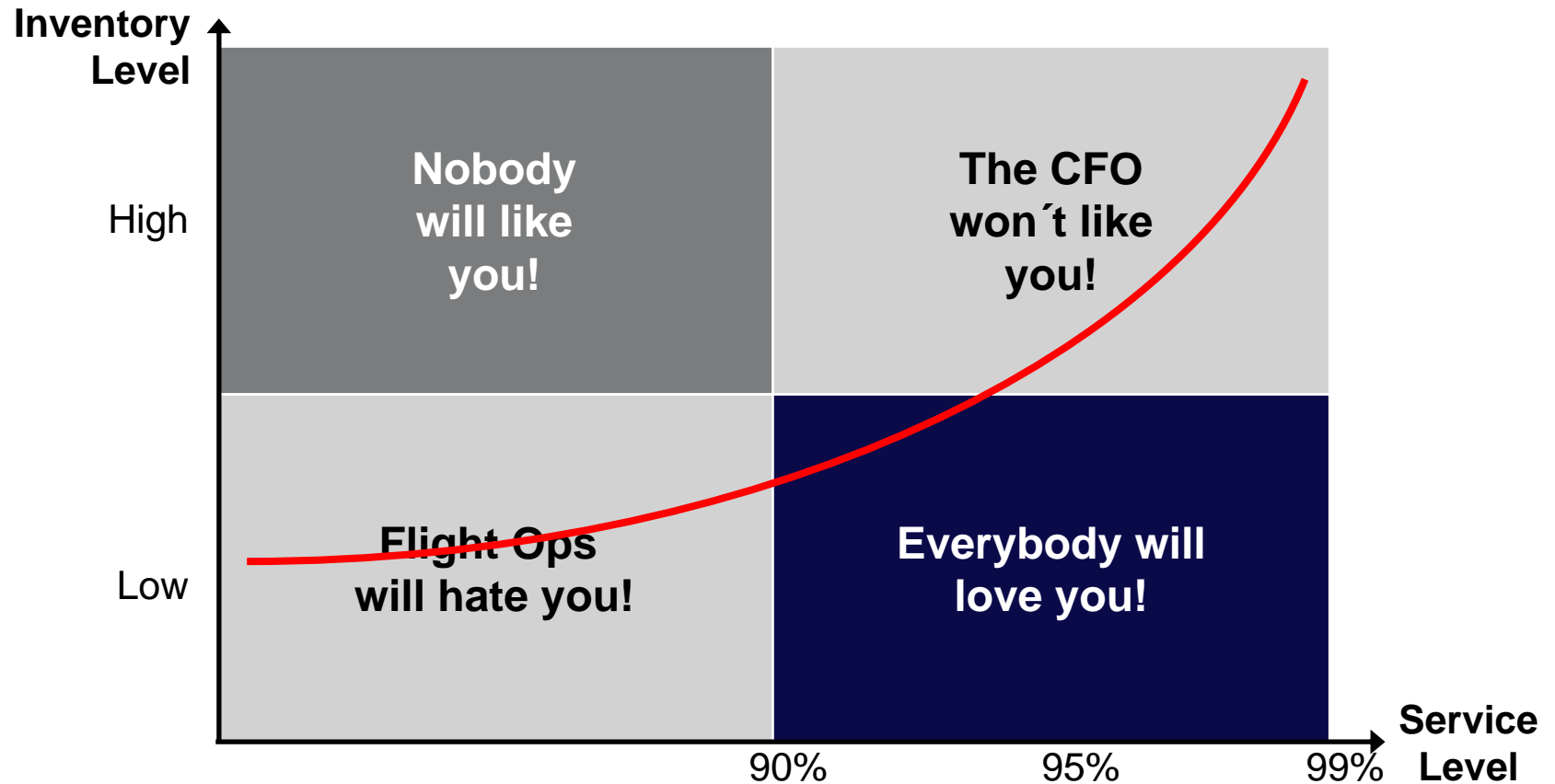
Maintenance schedule key to minimize maintenance cost – “No one size fits all“



Maintenance schedule development pays back

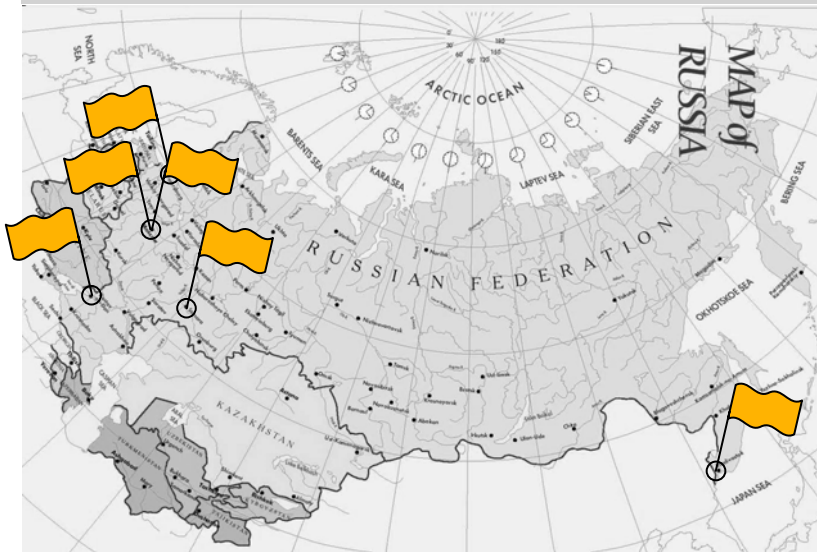


The material management dilemma



Provide right parts at right quantity to right location

LHT presence in Russia



- **Fleet support** for most aircraft operators in Russia
- Permanent **on-site teams** in various stations across the Russian Federation
 - DME
 - SVO
 - LED
 - ROV
 - VVO
 - KUF
- Establishment of **LHT Vostok** (2007)

LHT Vostok - aircraft component services concept to support the Russian market

Goal: Regionalization to fulfill local requirements

Overcome the barrier of distance: Proximity to the customer

Direct point of contact in regional market: One face to the customer in the region; no time difference

Direct customer feedback: Gain better market information and design services according to individual needs

One-stop shop: Services customized as requested by customers

Performance improvement: Speed-up logistic processes

Step 1 (III/2007)

Local customer service / Material service center

- Material service incl. AOG desk functions
- Management of closed loop items

Local supply of expendables

- Expendables stored in Moscow warehouse, customs cleared and ready for sale / AOG support

Step 2 (2009)

Local component pool in Moscow

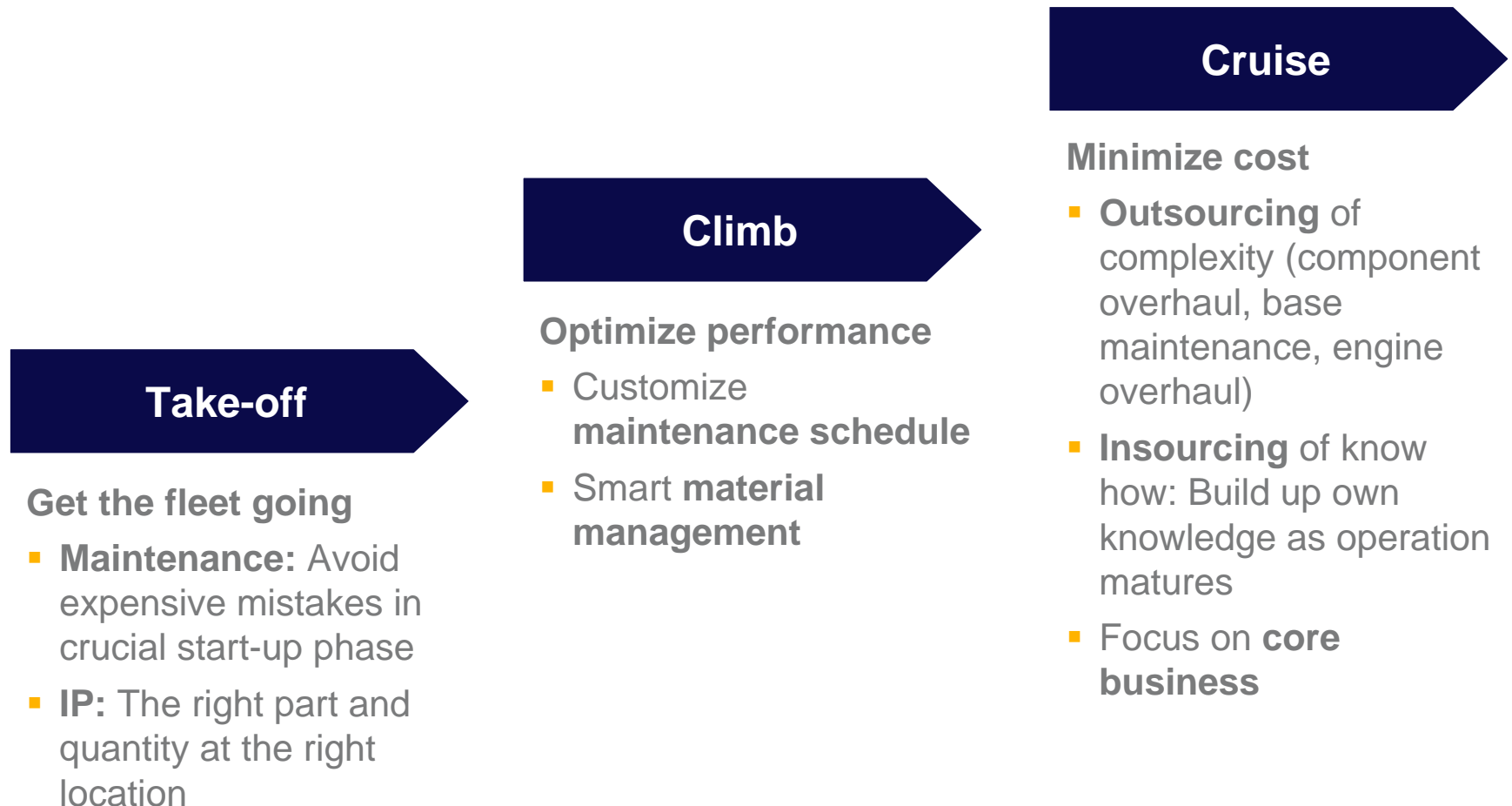
Pool components in Moscow warehouse

- First approach: Components for B 737 CI

Goal

- Minimize lead times
- Avoid long customs clearance processes

Typical phases of fleet introduction



Efficiency factors

- Experienced personnel / training
- Back office functions
 - Planning
 - Trouble shooting
 - Product engineering
 - ...
- Integrated IT suite manage/m®

“How to do maintenance”

- Customer specific maintenance schedule adaption based on operating profile and reliability analysis

“What to do for maintenance”

- Worldwide network of first class maintenance facilities

“Where to do maintenance”

Thank you for your attention.

