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ARBEITSGRUPPE FÜR LUFT- UND RAUMFAHRT
GROUPE DE DEVELOPPEMENT DE PROJETS AEROSPATIAUX
AEROSPACE PROJECT DEVELOPMENT GROUP

Light Supersonic Advanced Training System (LSATS)

Feasibility Study Proposal

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Need for a New Advanced Training System

- The true successor of the T38/F5 does not exist yet
- Today‘s products do not fulfill the trainer requirements:

Hawk
- Old design (1970)
- Low performance
- Not transonic/supersonic
- High cost trainer / low performance combat a/c

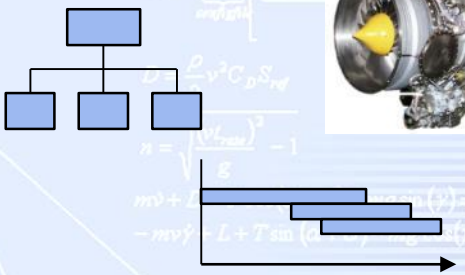
M-346
- Newer design (1990) Medium performance, but
- Not transonic/supersonic
- High cost trainer/ medium cost combat a/c
- Operational compromise

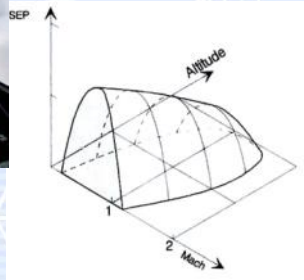
T-50
- F16 type, old design (1970)
- High performance
- Supersonic
- High-cost trainer / medium-cost combat a/c
- Expensive compromise

Expensive Compromise or Old Solutions, not satisfactory

New Conceptual Approach

- Size & layout optimized only for training
- Extensive use of embedded simulation
- Designed with existing / off-the-shelf powerplant & equipment
- Innovative industrial set-up, production in the client country
- Clear and simple management structures (quick decision routes, simple responsibility allocation)





To be investigated by a integrated team consisting of:

Customer/Concept Holder and Technical/Industrial Team

Study Process (1)

Phase

Situation Analysis

Solution comparison

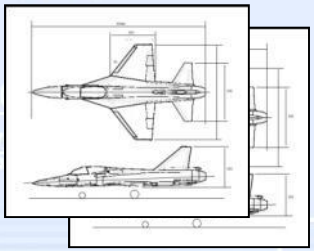
Solution pre-selection

I. Preparation Phase, Initiation

Training System

- Operational need & requirements

existing proposals



new concepts of training a/c

2 solutions (existing & new)

Industrialisation

- Investigation of industrial environment
- Analysis of industrial conditions

Study Process (2)

Detailed analysis

Assessment & Recomendation

II. Main Feasibility Phase

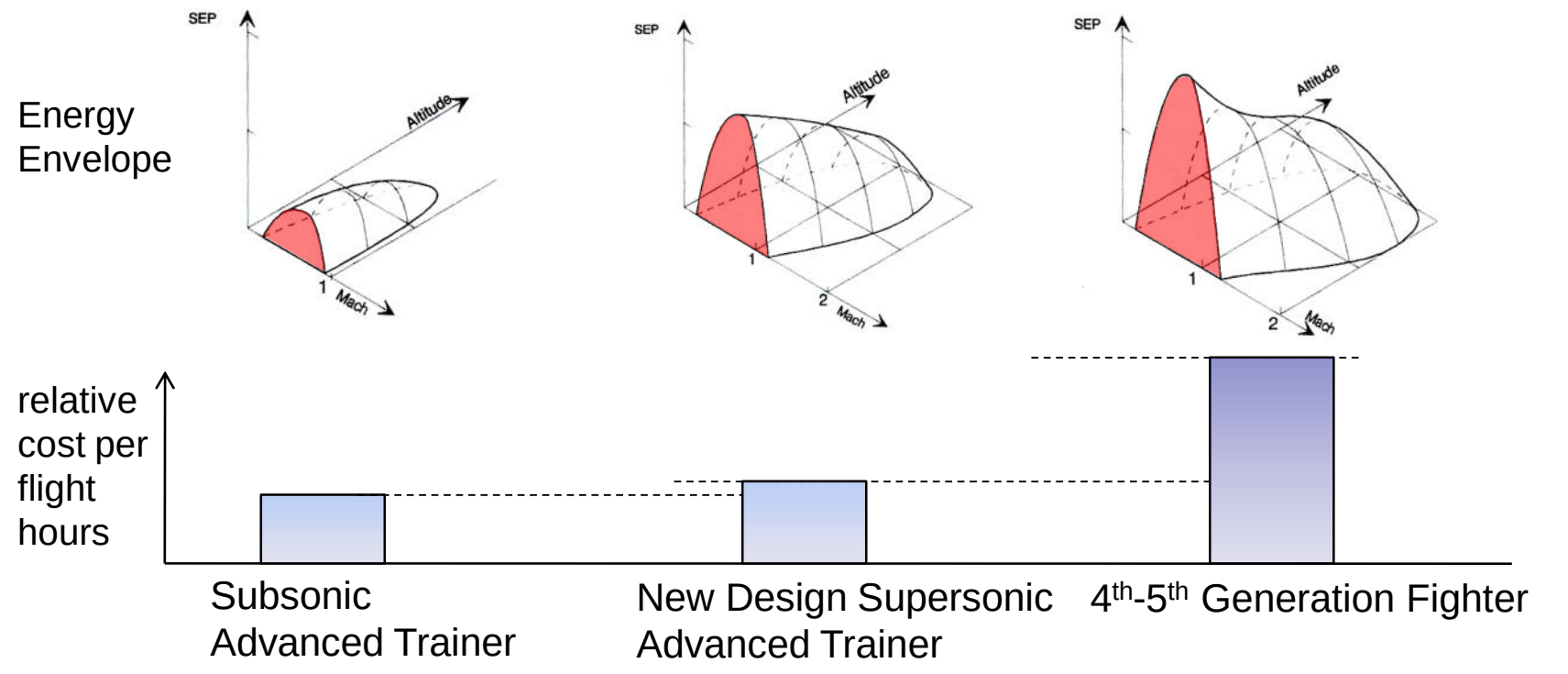
- Aircraft Concepts (technical, performance, operational)
- Production concept
- Industrial requirements
- Overall training system
- Cost & time (development, industrialization, operational)
- Management
- Summary report

III. Evaluation & Recommendation

- Assessment (customer representatives / „red-team“)
- Down-selection of solutions
- Recommendation
- Planning of next phase

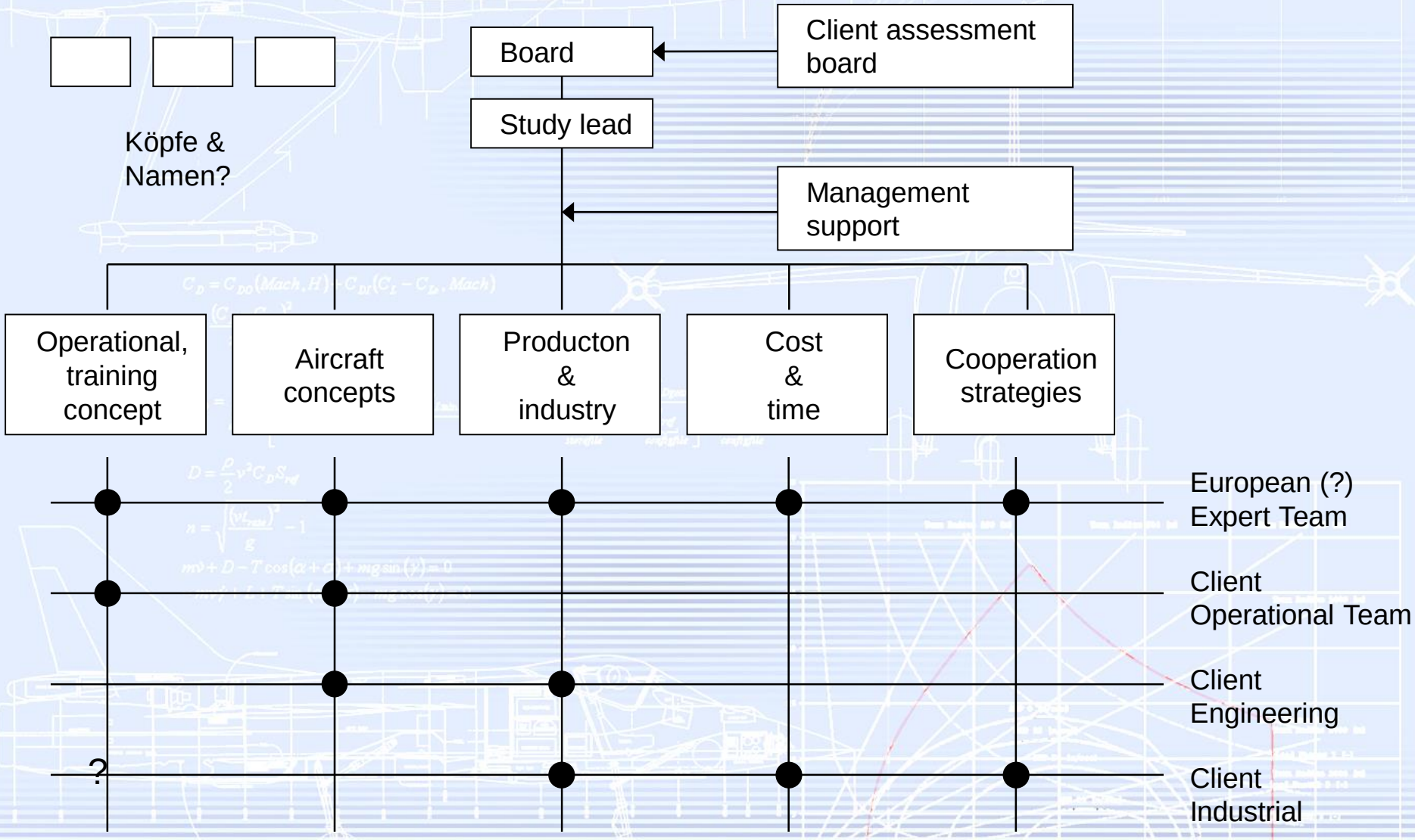
Why a New Supersonic Light Trainer?

- Energy & Maneuverability closer to Operational Aircraft
- Generic Cost Relations
- Dedicated Design / no Compromise: an Advantage!



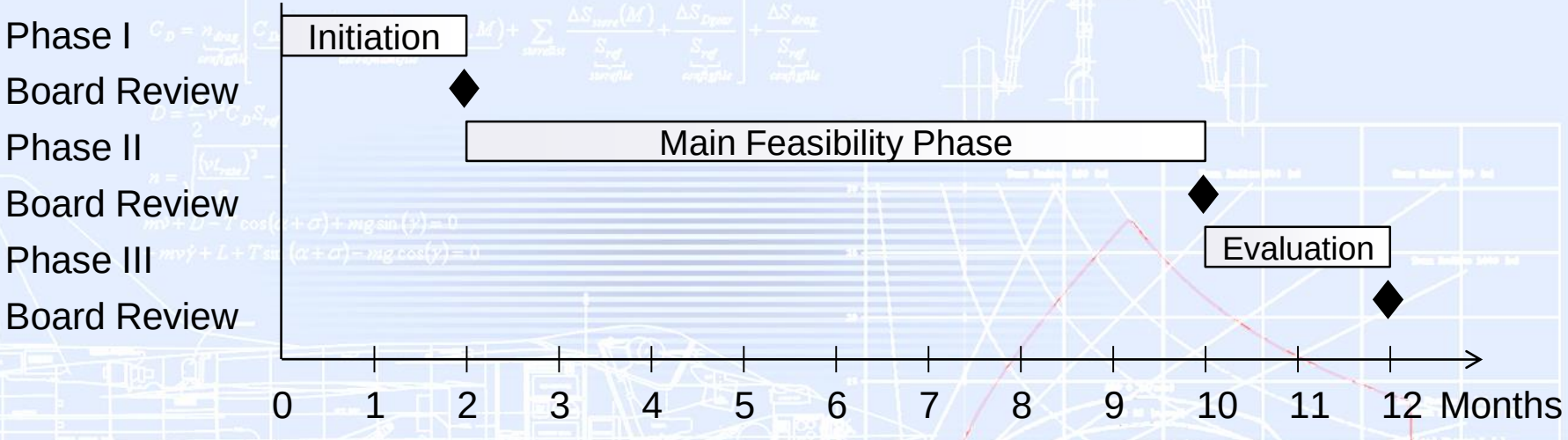
High Performance-Increase at Modest Cost
Dedicated Design and not Compromise is an Advantage!

Study Organisation



Study Duration, Cost & Principles

- Integrated Team, strong client participation
- 15 international experts plus client experts
- Duration 1 year
- Cost 7 M€*
- Main area of activity: Munich & Zurich region
- Main phases concluded with Board Review



* Details in the appendix

Summary

- The LSATS project offers an exclusive opportunity to all parties involved
- The optimized Advanced Trainer System has not been realized yet
- Airframe solutions are already existing, or…
- New, optimized airframes to be shown as well, several off-the-shelf powerplant and system solutions are available
- The know-how to rapidly develop the advanced training system is available (experts, industrial experience, system)

Decisive Issue for the feasibility study: