



New combat aircraft for Norway- The industrial perspective

**Torbjørn Svensgård
President**

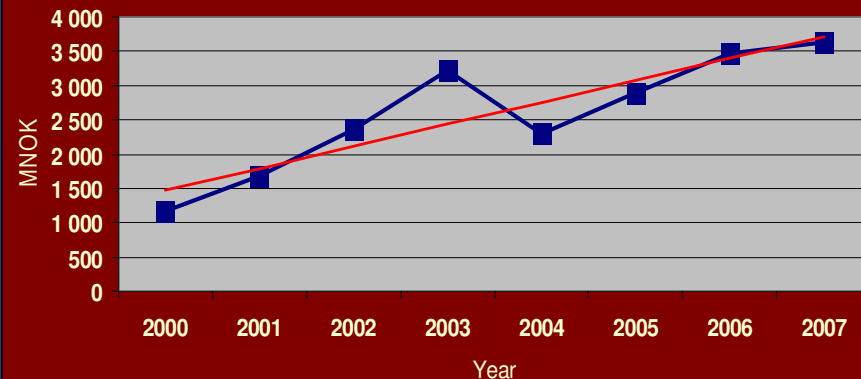
**Norwegian Defence and Security Industries Association (FSi)
The Norwegian Polytechnic Society
Oslo, 4 November 2008**

Overview

- 100 + companies
- Defence Sales (2007 estimates):
 - Total: 9 bn NOK
 - Export: 3.7 bn NOK (~40%)
- 25000 employees (6000 in defence)

Norwegian Defence Exports 2000-2007 +300%

Source: Norwegian Ministry of Foreign Affairs



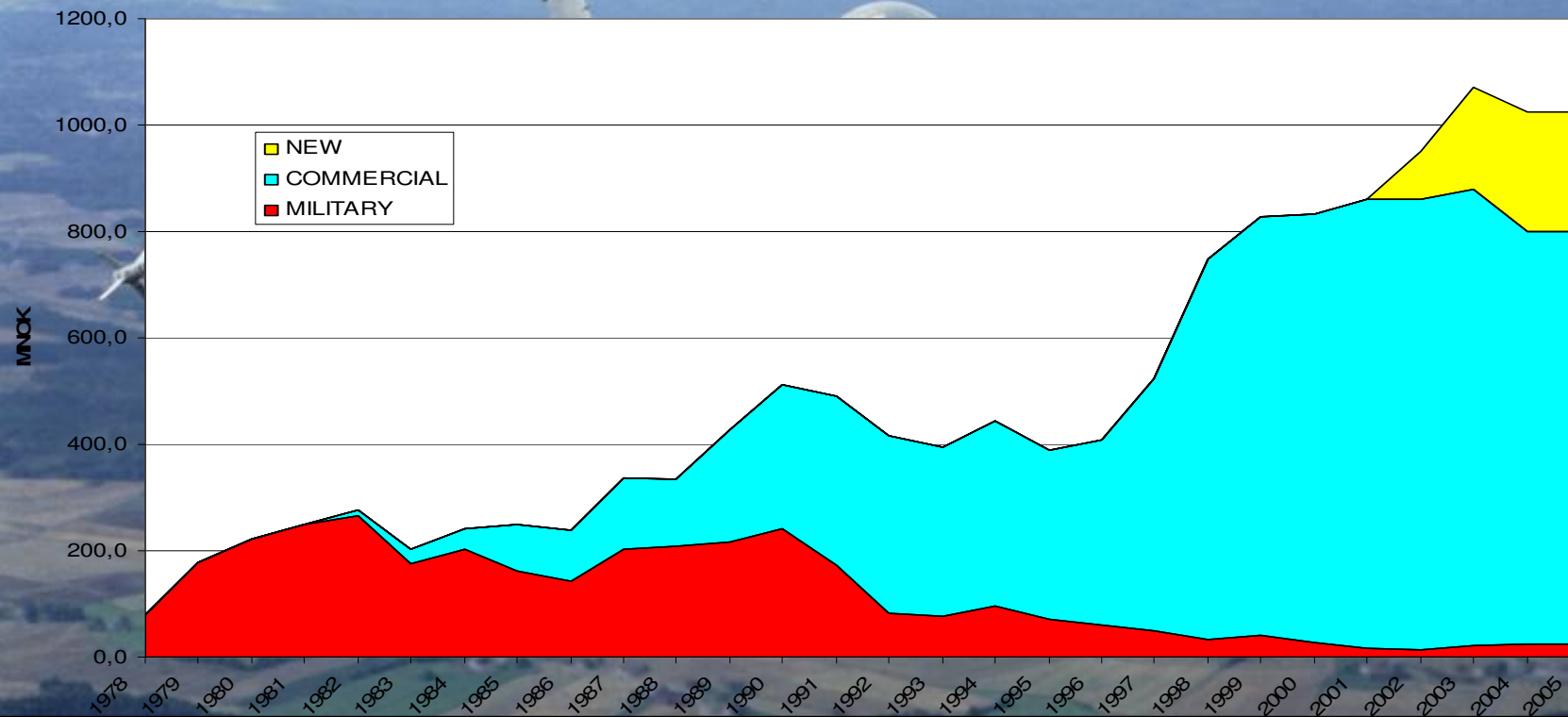
National defence technology priority areas

- | | |
|--|---|
| <ul style="list-style-type: none"> • Information and communications technology • Systems integration and architecture • Missile technology and autonomous weapons- and sensor systems | <ul style="list-style-type: none"> • Underwater technology and sensors • Simulation technology • Weapons, rocket propulsion, ammunition and military explosives • Advanced materials • Maritime technology |
|--|---|

Jointly determined by the MOD, the armed forces and industry. Endorsed by parliament.

Volvo Aero Norge AS

Military/Civilian Turnover 1978-2005



Industrial Cooperation generate new industrial capabilities



Industrial Cooperation – Past experience

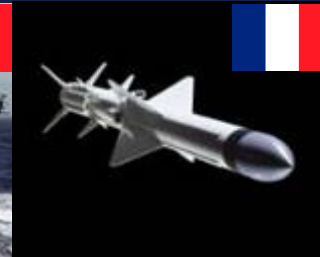


AMRAAM for F-16

Raytheon



NH-90



Frigates



LOCKHEED MARTIN
We never forget who we're working for®



Industrial Cooperation secure market access



New Combat Aircraft – Relevance for Industry

Key Issue

Potential Impact

Magnitude - Timeframe

- Largest Norwegian defence program ever
- Potential scope - one annual defence budget
- 4-5 annual investment budgets
- 3-4 annual turnovers in industry
- 30-40 years system life

- Establish new industrial capabilities
- Volume production
- Long-term strategic alliances and partnerships
- **Budget drain**
- **Reduced home market**

Technology

- Technology at the front end of development
- Key technology areas for Norwegian Industry embedded in both programs

- Strengthen competitiveness through technology cooperation
- Further development and strengthening of technology priority areas

Market

- Integration into in the global supply chain supporting the aircraft
- Contractors have a dominating position in their home markets
- Global footprint and world-wide market access

- System life opportunities
- Access to home market of selected candidate
- Market assistance and co-operation in the global marketplace



Industrial co-operation - Political intent

” ...my Government put great emphasis on the importance of ensuring a **high level of industrial participation** for the Norwegian defence- and security related industry.”

“The question here is not the label put on the industrial component – “classical offset” or “best value industrial participation” – **but what it delivers in quality and quantity to Norwegian industry.**”

It should be remembered that in the years during which we will pay for the new combat aircraft, this will bind such a large proportion of our investment budget that **without sound industrial participation, Norwegian defence and security industry will have few opportunities in their interaction with us and**, together, for positioning itself on the global market.

In a country largely living on the export of fossil fuels, this would not be a sound strategy for the future transformation and further modernization of our technology-intensive industry.”



*Minister of Defence
Anne-Grethe Strøm-
Erichsen receiving
contractors’
responses to the
Request for Binding
Information 28. april
2008*

- **100% industrial cooperation.**
 - Credible and realistic opportunities
 - Scope, Time frame, Identified partner, commitment
- **Integration of Norwegian systems and subsystems to enhance the operational capabilities of the aircraft**
 - Integration in the global supply chain
- **Market access for Norwegian defence industry in the home market of the aircraft provider**
- **Strategic technology cooperation between Norwegian Industry and the contractor and his primary subcontractors.**
 - Design, development, production, sales, marketing and future upgrades and overall support.





Industry's evaluation of the industrial opportunities

- Comparison of the candidates' industrial opportunities that the Norwegian defence industries are aware of
 - 50 Norwegian companies have provided input
 - Collaborative effort LO, NITO and FSi
- Evaluation is restricted to defence and defence related opportunities (incl. aerospace)
- All figures are based on input from Norwegian industry
 - Supplemented by information from contractors
- Evaluation methodology similar to the methodology applied by the MOD
- No evaluation against requirements as industry does not have access to detailed information

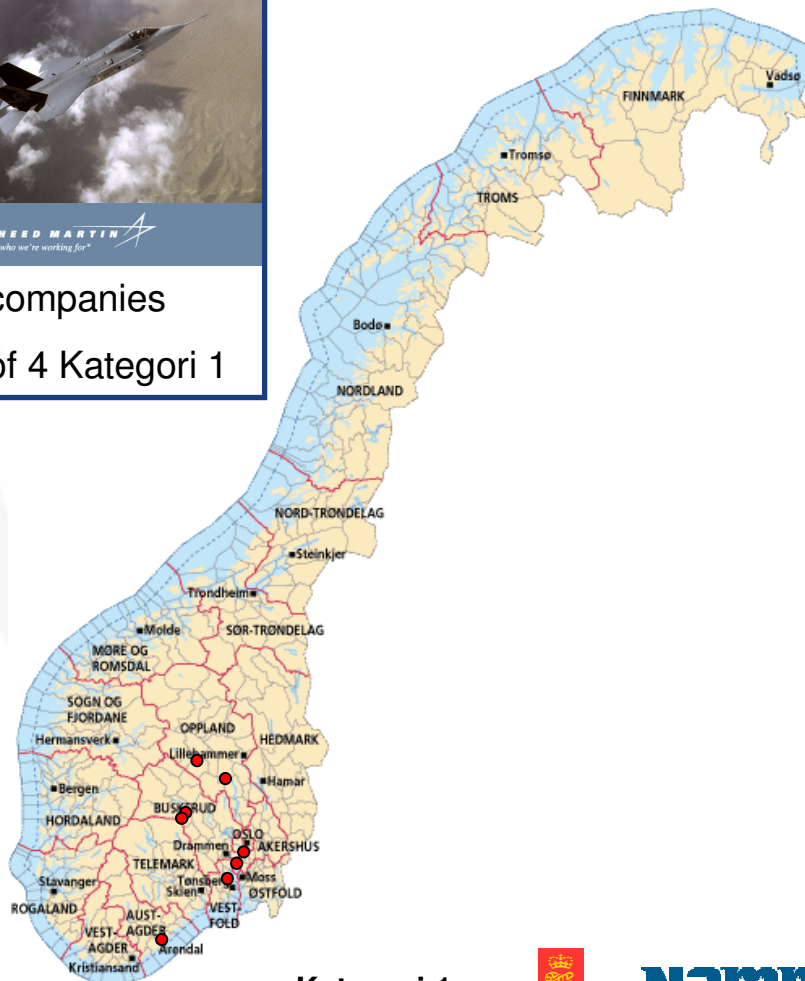




- 8 companies
- 2 of 4 Kategori 1

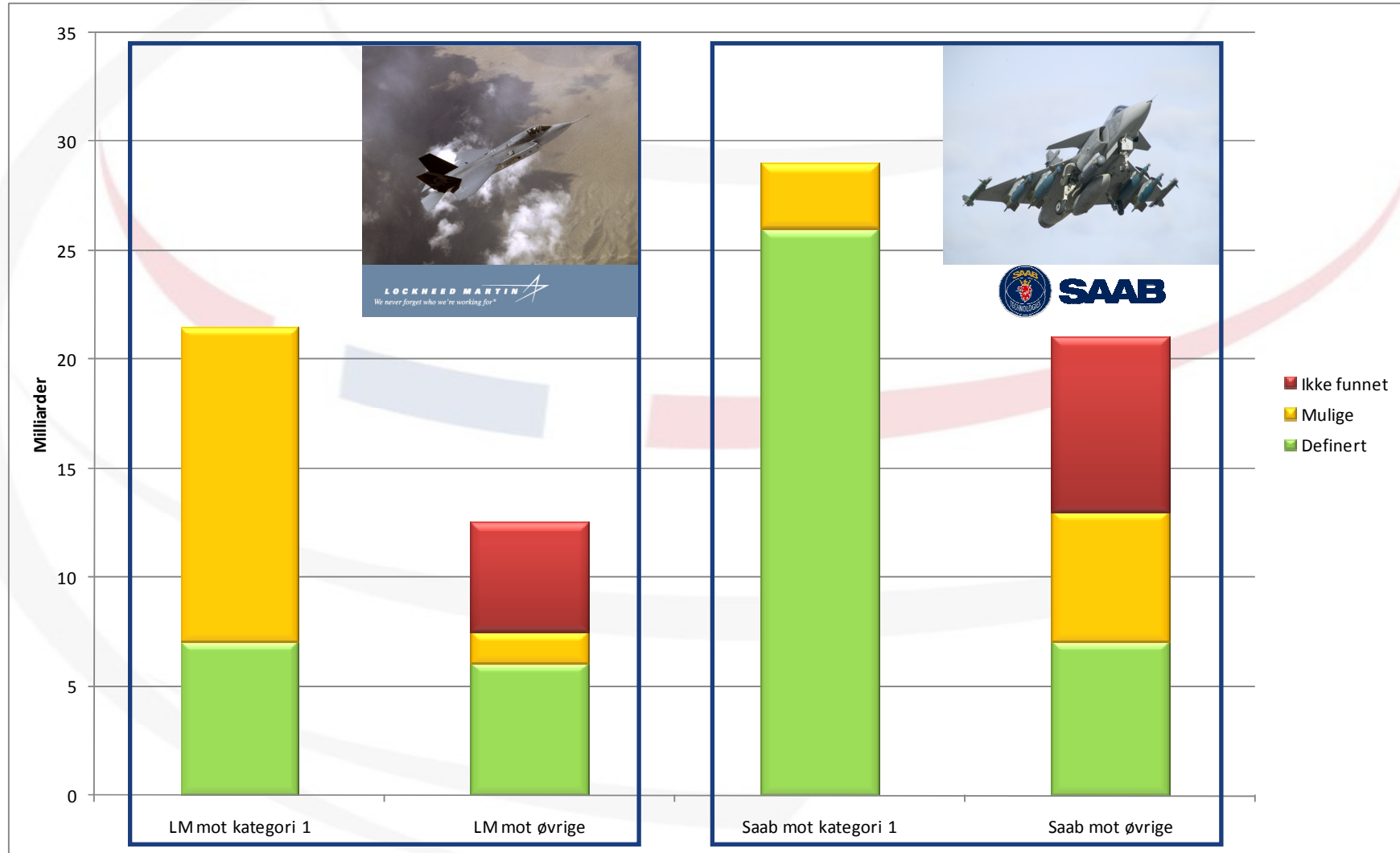


- 25 companies
- 4 of 4 Kategori 1



Kategori 1:





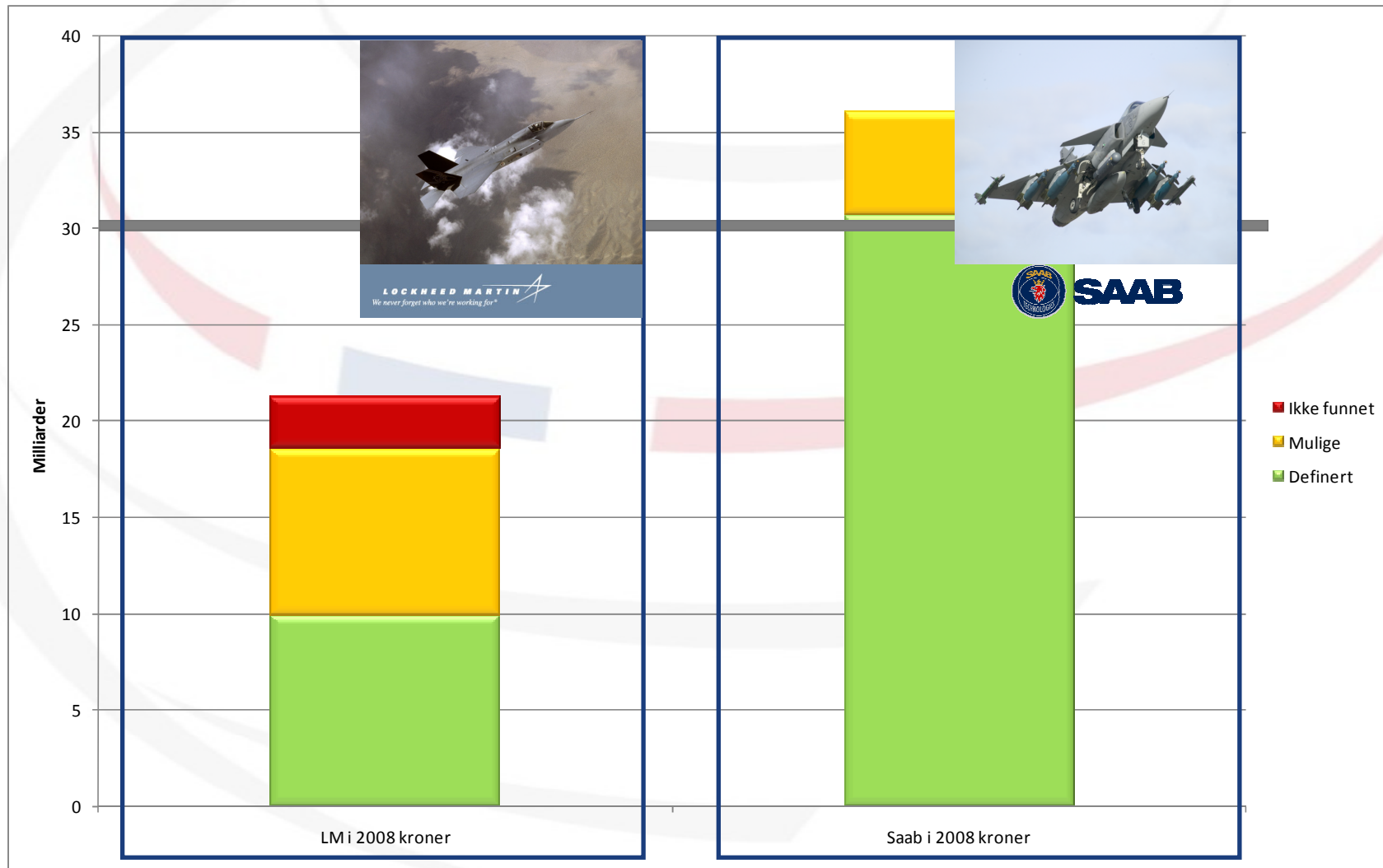
Kategori 1:

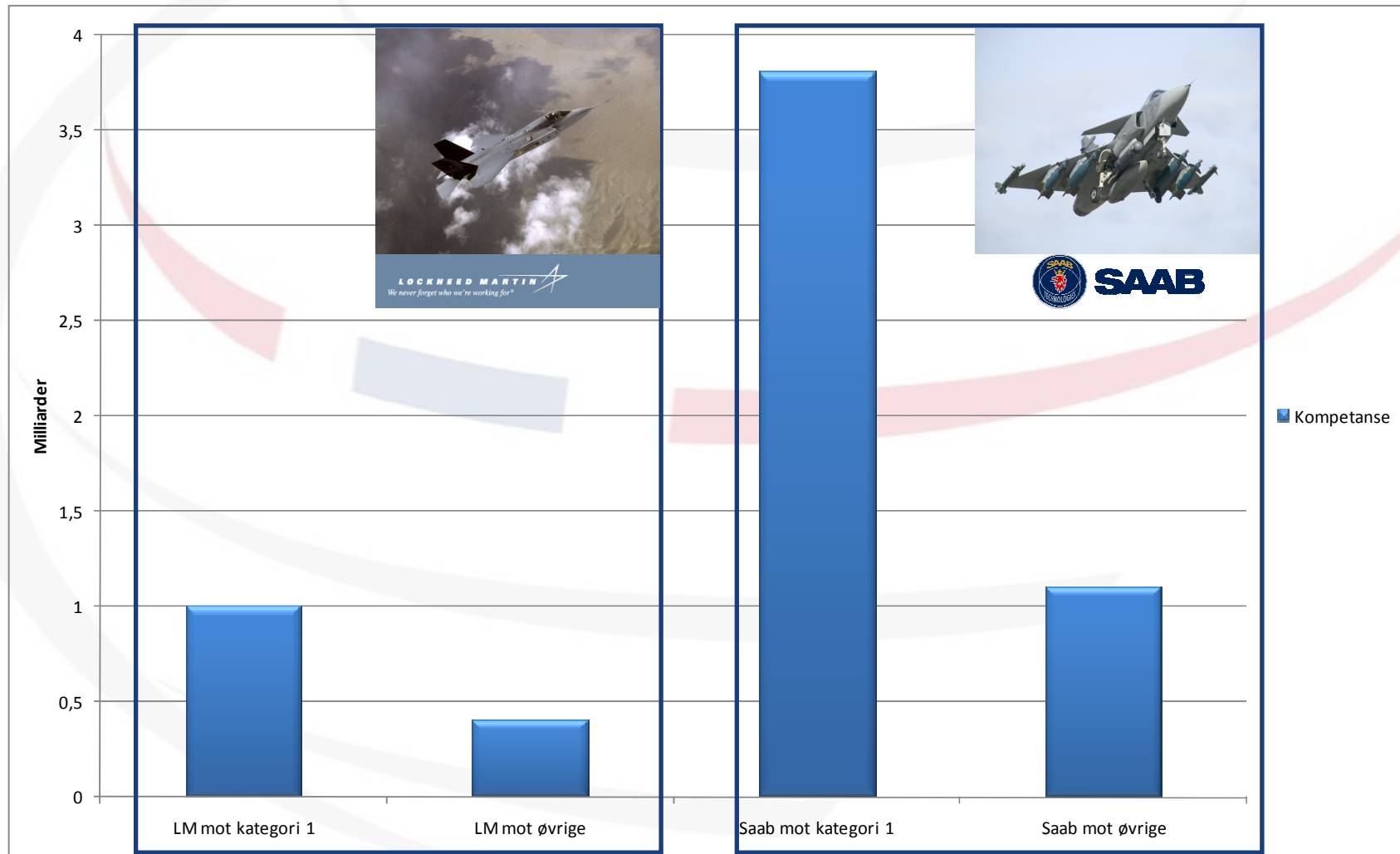


Nammo
www.fsi.no

THALES







Kategori 1:



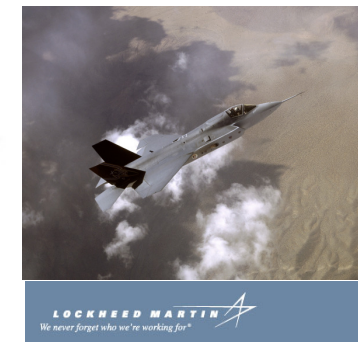
Nammo
www.fsi.no

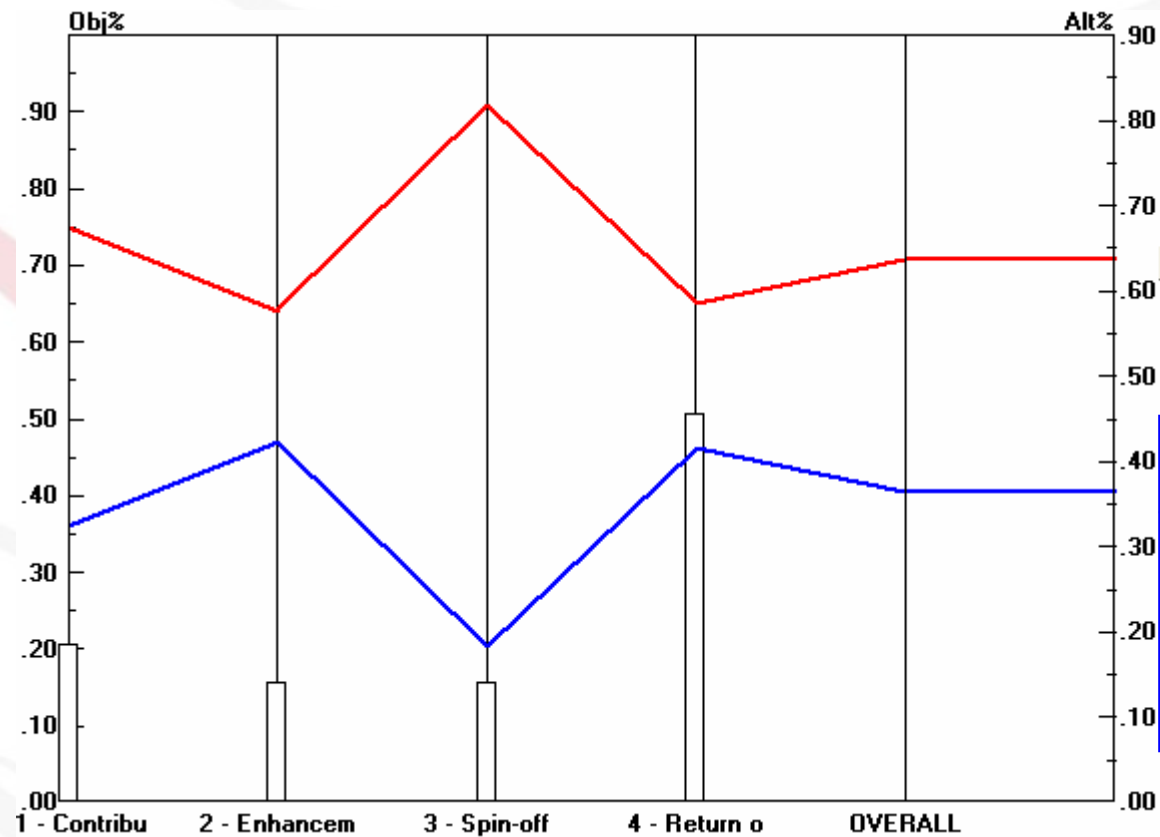
THALES



Evaluation criteria:

- Contribution to strengthen the competitiveness of Norwegian industry
- Contribution to enhancement and strengthening of the Norwegian industrial technology base
- Spin-off to other sectors.
- Estimated value added in proportion to the investment (100%)





- Gripen has the highest score in most areas
 - Potential volume
 - Committed volume
 - Distribution of technology areas
 - Contribution to technology and product development
 - Number of companies and clusters involved
 - Spin-off beyond defence activities
- JSF is superior in a few areas
 - Market potential for the involved companies may be huge
 - Large production volumes
 - Prestigious program



•JSF is an excellent choice for a few companies but does not:

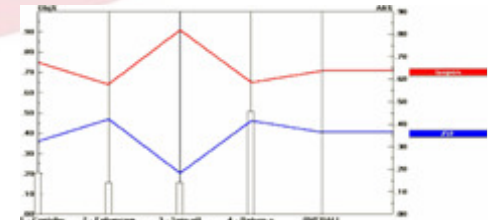
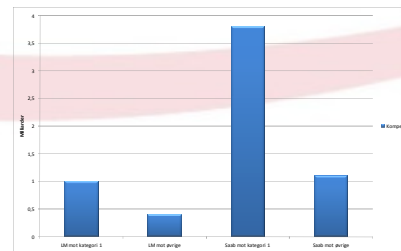
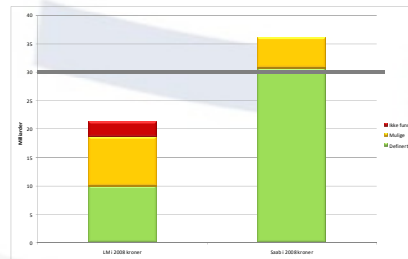
- cater for the Norwegian defence industry at large
- offer research and development opportunities that broadly strengthen the industry's core capabilities
- guarantee industrial cooperation

•Gripen offers guaranteed opportunities that:

- contribute significantly to strengthen and develop further core capabilities in the Norwegian Defence industry
- create strategic partnerships that may facilitate an industrial restructuring in a Nordic context.
 - The combat aircraft program is a unique opportunity to accelerate Nordic defence cooperation and thus enhanced Nordic industrial cooperation



Gripen has the highest score on vital criteria for the Norwegian Defence Industry



Distribution of projects and companies involved

Guaranteed Value Added

Research, development and upgrading of skills

Overall quality