Eurofighter Typhoon

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Eurofighter Typhoon

- The Product
- The Programme
- The Partnership
- The Market
- The Facts
Eurofighter Typhoon: The Product

Air to Air Combat
- Beyond Visual Range
- Close Combat

Air to Surface
- Close Air Support
- Counter Air Interdiction
- Maritime Attack
- Reconnaissance

Performance
- Mach 2, +9 g
- Unstable airframe - designed for extreme agility
- Brakes off to Mach 1.6 at 36,000ft in 150 seconds
- Carefree handling
- Highly integrated human/machine interface
Eurofighter Typhoon: The Product

Cockpit – Main Features

- Helmet Mounted Display
- Wide Field-of-View Head-Up Display
- Multi-function colour Head-Down Displays
- Hands-On-Throttle-And-Stick controls
- Direct Voice Input
- Multifunction Data Entry
- Reversionary Flight Instruments
- Integrated voice warnings and status system
# Eurofighter Typhoon: The Product

<table>
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<tr>
<th>Main Development Contract</th>
<th>Phase 1 Enhancements</th>
<th>Phase 2 Enhancements</th>
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<tbody>
<tr>
<td>Concluded</td>
<td>Work in Progress</td>
<td>Proposal Submitted</td>
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- **Combat Ready**
- **Air-to-Air/Air-to-Ground-Swing Role**
- Carefree handling
- Network Centric Operation

- Simultaneous Swing-Role
- Laser Designator Pod Enhanced GBU-16, Paveway IV

- More Reach
- Taurus, Storm Shadow, Meteor, Supersonic Paveway IV, Small Diameter Bomb, Brimstone
Eurofighter Typhoon: The Product

- F-5 (Air Surveillance)
- F-4 Phantom (Multi Role)
- MIG-29 (Air Superiority)
- F-104 Starfighter (Air Superiority)
- Mirage F1C (Multi Role)
- Tornado IDS (Air-to-Surface)
- Tornado ADV (Air Superiority)
- Jaguar (Air-to-Surface)
- F-16 (Air Superiority)
- F/A-18 (Multi Role)
- Draken (Air Superiority)

The Swing-Role Fighter
Air-to-Air & Air-to-Ground

➢ Eurofighter Typhoon replaces eleven aircraft types in Six Nations
Eurofighter Typhoon: The Programme

- Main Development Phase
- Development
- Capability Enhancements
- Umbrella Contract for 620 aircraft
  - Tranche 1 148 a/c
  - T2 236 a/c
  - T3 236 a/c
- Tranche Production
  - 15a/c Austria
  - 72 a/c Kingdom of Saudi Arabia
- Integrated Logistic Support (ILS)
  - InService Phase
Eurofighter Typhoon: The Programme

Recent achievements:

- Main Development Work concluded
- Basic Testing Helmet Assembly completed
- Tranche 2 Type Acceptance Test activities completed
- Tranche 2 Weapons and Radar testing underway
- Longest Eurofighter flight ever 6 hours 49 minutes (detachment to a new customer nation): snag free
- Microwave Landing System testing completed

6051 test flights performed totalling 5829 flight hours
Eurofighter Typhoon: The Programme

Production Status

- 148 production aircraft delivered
  - Austria 9
  - GE 38+2
  - IT 27+1
  - SP 18+1
  - UK 49+3
- Tranche 1 deliveries completed
- 38 Tranche 2 aircraft in final assembly
- First Tranche 2 aircraft delivered 1 Febr 2008
Eurofighter Typhoon: The Programme

Ten Air Force Units operate Eurofighter Typhoon

- Moron
- Grosseto
- Gioia del Colle
- Zeltweg
- Laage
- Neuburg
- No. 3, 11, 17 and 29 Sqdn, Coningsby

➢ Five Air Forces have accumulated over 40,000 flying hours

(June 2008)
The Eurofighter Typhoon: The Partnership

Ownership of Eurofighter GmbH

<table>
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<tr>
<th>Company</th>
<th>Percentage</th>
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<tr>
<td>Alenia</td>
<td>21%</td>
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<tr>
<td>BAE Systems</td>
<td>33%</td>
</tr>
<tr>
<td>EADS CASA</td>
<td>13%</td>
</tr>
<tr>
<td>EADS Deutschland</td>
<td>33%</td>
</tr>
</tbody>
</table>

Development Workshare – Major System Design Responsibilities

- **Alenia:** Utilities Control System, Wing design, Navigation Sub-System, Armament Integration
- **BAE Systems:** Avionics Integration, ECM, Lightning, Electrical & Fuel System
- **EADS CASA:** Structure Technology, Wing design, Environmental Control System
- **EADS Deutschland:** Flight Control System, Attack & Identification, Radar Signature
The Eurofighter Typhoon: The Partnership

Production Workshare

- Alenia: 19.5%
- BAE Systems: 37.5%
- EADS CASA: 13.0%
- EADS Deutschland: 30.0%
Eurofighter Typhoon: The Partnership

The Technology Challenge:
Maximum performance in intense combat scenarios demands complex leading-edge technology

Consequences:
- High risk
- High cost
- Time to Maturity
Eurofighter Typhoon: The Partnership

The Winning Formula:
Meet the Technology Challenge through real Partnership

- Integrated teams
- Technology transfer
- Single Source
  - System Design Responsibility
  - Equipment Design Responsibility
  - Major Unit Production
- Risk and Cost sharing

Sharing advanced aerospace technologies sustains Europe’s Technology Base and offers a Choice in Procurement
Eurofighter Typhoon: The Market

Highest Order Book in the Next Generation Fighter Competition

- 707 ordered by six Nations
  - 620 core programme
    - Tranche 1 deliveries concluded
    - Tranche 2 in production, deliveries start summer 2008
    - Tranche 3 in authorization process
  - 9 of 15 aircraft for Austria delivered
  - 72 aircraft for Saudi Arabia in production

➢ Eurofighter is Bestseller and Market Leader
Eurofighter Typhoon: The Market

The „Value Creator“

Total Five-Year Value of Production (2008-2012): $71.1 billion

Source: Forecast International/Aviation Week & Space Technology
All percentages and numbers rounded

Values (in billions of U.S. FY 08 dollars)
Eurofighter Typhoon: The Market

Requests For Proposal

▪ Responded to
  – India by EADS: up to 126 aircraft
  – Switzerland by EADS: up to 30 aircraft

▪ Expected from
  – Japan, to be responded by BAE Systems/Alenia: up to 50 aircraft
  – Romania, to be responded by Alenia: up to 48 aircraft

Request For Information

▪ Responded to
  – Bulgaria by EADS: Up to 15 aircraft
  – Croatia by Eurofighter GmbH: Up to 12 aircraft
  – Turkey by Alenia: Up to 40 aircraft
  – Romania by Alenia: Up to 48 aircraft

▪ Received from
  – Brazil, to be responded by Alenia: up to 30 aircraft

▪ Greece: Further decisions expected, up to 30 aircraft
Eurofighter Typhoon: The Facts

Pole Position
- Largest Order Book: 707 aircraft for 6 Nations
- In Service in five Nations‘ Air Forces
- Over 40,000 hours flown in ten units, 5,800 hours test fleet

Economic Significance
- 3.5 B € Revenues
- 19.1 B € Order Backlog
- 400 companies involved
- 100,000 jobs in eight nations

Proven Partnership
- Partnership means Ownership
- Transparency as a principle
- Technology access without constraints
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