Technology and Innovation

Driving success by executing our goals
Technology Value Drivers

Pier Francesco Guarguaglini
Chairman and
Chief Executive Officer

Driving success by executing our goals
Technology as a value enabler

- Recognition and Reputation
- Processes & Products strengthened
- Entrance to new Markets
- Value for money
- Value Creation

Technology as a value enabler.
Finmeccanica invests in **strategic technologies**, anticipating proactively market needs & customer expectations, and enhancing industrial efficiency, with the objective of improving competitive advantage.
Focus on **Industrial Processes**

*key technologies improving design and manufacturing activities*

Focus on **Products**

*enabling technologies at component and/or integration level*
Main technologies for rotor / vertical flight

Tilt - Rotor

PROCESSSES
Integrated experimental design
Concurrent engineering
Wing stress testing
Validation & Certification

PRODUCT
Tilting Nacelle
Flight Controls (fly-by-wire)

extending well-established leadership in helicopters
to the emerging market of new transport aviation
(i.e. vertical take-off landing versatility with high-speed horizontal flight)
Main technologies for aerostructures

Carbon Fibre Composite

**PROCESS**
- One-piece Barrel
- Co-cured Box
- Co-cured Multispar
- Co-bonded Stringer
- Fibre Placement Panel

**PRODUCT**
- Horizontal Stabiliser
- Vertical Fin
- Wing Movable Components
- Wing Panels
- Fuselage Barrel

**improving competitiveness**

in the continuously growing market of commercial aviation through innovative proprietary manufacturing processes
Main technologies for integrated systems

Complex Electronic Systems for Defence & Security

PROCESS
Modular, Scalable, Open, Service Oriented Architecture
Software Capability Maturity Model
3D Simulation & Modeling
Synthetic Environment

PRODUCT
Track Sensor Fusion
Real-Time Data Fusion
Software Agent (large scale data processing) and architecture
Geo-referenced Awareness (shared operational picture)
Decision Support
Secure Comms

enhancing operational capabilities for:
Situation Awareness, Information Dominance & Superiority, Interoperability to meet increasing demand for Protection & Security
Main technologies for new generation radar

**AESA (Active Electronic Scanning Array)**

**PROCESS**
- Gallium Arsenide Wafer
- Miniaturised MMIC chipset
- Advanced Ceramics for interconnection and packing
- High-performant cooling

**PRODUCT**
- Wide / Narrow Band TRM (integrated Tx/Rx Module)
- Digital Waveform Generation
- Electronic Beam-forming and Scanning

strengthening competitiveness

as unique worldwide AESA radar player
for space-borne, airborne, land and naval platforms
Main technologies for pervasive comms

Ad-hoc Wireless Sensor Networks

**PROCESS**
- Nano-particles deposition through electronic beam
- Nano-structured metal-oxide thin films array

**PRODUCT**
- Biological - Chemical Sniffer Array
  - Smart nano-sensor integrated with artificial intelligence and wireless Tx capabilities
- TeraHertz spectrography sensors

enabling environmental monitoring & surveillance through:
- fast deployable, self-tuning, programmable and comms interoperable sensor network
Software is a large part of our systems and products, enabling their functionalities and superior performance.

Most of our software is embedded, real time and safety critical.

These features require a disciplined process over the whole Life Cycle.

Reference best practice across all the Group is CMMI applied along all the Software Life Cycle.

- From Software ...
  - Open Architectures
  - Modularity
  - Scalability
  - Reusability

- ... To Value
  - Thoroughly testing capabilities
  - Cost effective maintenance and upgrades
  - Growth potential for Through Life Capabilities Insertion
Capitalisation of Development Costs

Alessandro Pansa
Co-General Manager

Driving success by executing our goals
Capitalised development costs

Development costs capitalised in intangible assets at 30 Sep 2007*

989
Programmes
Fundable Through Government Grants

384
Self Funded Programmes

National Security and European Interest programmes
745

Other programmes
244

Total: €1,373 m

*All values in €m
How different development programmes are treated on our balance sheet

**National Security and European Interest programmes**

- These programmes (mostly military) are capitalised in intangible assets only for the annual amount which exceeds government grants and are depreciated according to our business plans.

- Royalties are paid according to number of units sold.

- The treatment of European Interest programmes could change in future.

**Other Programmes**

- These are primarily related to civil activities and are fully capitalised in intangible assets. The debt is recorded on the liability side of our balance sheet and will be reimbursed over a 10-15 year period according to a schedule pre-agreed with the Italian Ministry of Industry.

**Self Funded Programmes**

- These are entirely self funded since they are not eligible for government grant funding. They are depreciated according to the business plan related to each programme.
### Development costs capitalised in Intangible Assets at 9M 2007

<table>
<thead>
<tr>
<th></th>
<th>€ m</th>
<th>Fundable through government grants</th>
<th>Self Funded</th>
<th>Total</th>
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<tr>
<td>1 Jan 2007 Opening balance</td>
<td>693</td>
<td>284</td>
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<td>Other movements</td>
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<td>(2)</td>
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<td>30 Sept. closing balance</td>
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<td>384</td>
<td>1,373</td>
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R&D expensed: - 205

*Investments after depreciation

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<td>Depreciation</td>
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<td>300</td>
<td>98</td>
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## Development costs capitalised in Intangible Assets at 3Q 2007

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<td>384</td>
<td>1,373</td>
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### R&D expensed

- **-**
- **-**
- **67**

*Investments after depreciation*

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<td>133</td>
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