The Netherlands aeronautics innovation approach

Creation of a strategic Knowledge and Innovation Agenda in the Netherlands

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March, 30th 2011

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NL Agency

- NL Agency Innovation / Aerospace (formerly NIVR)
  - under direct responsibility of the Minister of Economic Affairs, Agriculture and Innovation.
  - Is a professional and efficient executor of Dutch Government innovation and research policy.
  - Employees are civil servants, bound by governmental law

- Manages the national aeronautical programs:
  - Basic Research by research establishments and universities (civil R&D only)
  - Technology development by industry (civil and military aeronautics)
  - Launch aid credits for industry for product development (civil)
  - Represents the Netherlands in international fora (o.a. ACARE)
Brief overview of Dutch Aeronautics industry

- The Netherlands has been involved in aviation from the early beginnings
- Up until 1996 Fokker played an important role in the Dutch aviation industry
- Dutch industry is now mainly a supplier of components worldwide
- In 2010 a restart of the Fokker 100 took place: NG Aircraft
Netherlands AAT Landscape

125,000 employees
€ 15 Billion turnover

Research Est.
Engineering Companies (7)
Industry (50)
Transport (10)
Maintenance (30)

Education & Research
TU Delft
Universiteit Twente

Netherlands AAT
Landscape
Dutch Innovations are ‘First class’

- Thermoplastic CFRP J-Nose
- GLARE® Partially in Upper Fuselage
- Advanced Cabin Interior
- CFRP-Floor Crossbeams
- Thermoplastic Ribs in CFRP Fin
- CFRP- Pressure Bulkhead
- Laser Beam Welding in Lower Fuselage
- CFRP- Center Wing Box
- High Performance Cutting Machined Parts
- Noise reducing Linings
- Finite-Element Analysis
- Global Load Behavior
- Knowledge Based Engineering
- Thermoplastic CFRP J-Nose
- Thermoplastic Ribs in CFRP Fin

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How it started

- The Minister of Transport, Public Works and Water Management, invited the Netherlands Aeronautics and Air Transport industry to develop a Knowledge and Innovation Agenda (KIA)
  - request also on behalf of the Ministers of Economic Affairs, for Housing, Spatial Planning and the Environment and the State Secretary for Defence.

- The Ministry of Economic Affairs has evaluated the current Aeronautical policy. This KIA is one of the inputs for future Aeronautical policy.

- The Ministry of Transport released a White Paper on Dutch Aviation in which a public-private partnership is requested. The KIA is the crystallized ambition of the AAT sector.

- The Ministry of Defense is looking for civil – military cooperation

- Aim: create a sustainable and competitive Aeronautics and Air Transport industry
Organisation

Air transport & users

Suppliers

MRO

Air transport & users

Suppliers

MRO

Als het gaat om innovatie
Aim: the Netherlands is consolidating its position as a trendsetter in the field of sustainable technologies and concepts, so that the aviation industry in the Netherlands can develop in a way that lies well within socially acceptable frameworks (the so-called ‘license to operate’).

Aim: to create seamless interconnections between all baggage, transit, cargo, maintenance and air traffic processes in a way that helps to make main port Schiphol a key hub with an international competitive edge when it comes to efficiency, quality and comfort.

Aim: to create new jobs and new export value through the international marketing of developed technologies and concepts.

Ambition 2020
- Greater contribution to GDP
- Create new export value
- Optimum accessibility
- Greater economic spin-off
- Reduce environmental impact and noise disturbance
- To help make Schiphol a more peaceful, even safer place and to help with the provision of assistance.

Ambition 2040
To make Dutch air travel climate-neutral

Research  Develop  Market  Research  Develop  Market
Sustainability issues

- Sustainable air traffic
  - Alternative fuels
  - Weight savings in aircrafts and interiors
  - Fuel-efficient operations
  - Creation of a single European airspace
  - More efficient partitioning and a joint civil-military airspace management

- Sustainable aircraft
  - New materials and coatings
  - High tech systems
  - Intelligent design systems
Sustainability issues

- Sustainable Maintenance
  - Life cycle management
  - New repair and inspection methods
  - Rapid diagnostics and logistics

- Sustainable Ground Infrastructure
  - Reducing energy consumption
  - Green zone
  - Deployment of sustainable sources
Seamless issues

- Seamless flow of passengers and baggage
  - Security
  - Accessibility

- Seamless flow of air cargo
  - Accessibility
  - Fast, secure and reliable air cargo processes

- Seamless flow of air traffic
  - Broadband data connections between control centers and aircraft
  - New cockpit and aircraft systems
Synergy issues

- Designing the Knowledge Infrastructure

- Supporting a climate of innovation
  - Education
  - Adjusting administrative rules
  - Create a level playing field

- Synergy with other Innovative initiatives
  - Dutch innovation programs
  - EU initiatives
Current situation

- KIA was handed over to Minister on September 7th 2009
- Fall of the Dutch government and economical crisis are reasons for delay
- A Steering Committee has been formed to implement the KIA
- Proposals for projects have been made late 2010
Results until now

- Cooperation between industrial parties is improved
- A mutual ambition has been formulated
- Cooperation between different ministries has started on AAT subjects

The public – private dialog has been started. All parties are willing, but the means are uncertain. Help from the government is more than €.
The new Governmental setting

- The New governmental policy focuses on Top Areas for Dutch Economy
- Nine overall sectors have been selected
  - Aeronautics and MRO have been included under *High Tech*
  - Air Transport is linked to *logistics*
- Each Top Areas is now defining its Business Plan
- This will include an innovation strategy combining
  - National frameworks
  - Position towards a European support strategy
Follow up

- Links will be established by the sector to the Top Area identified by the government
- KIA to used as an input for future business plans
- Three sub sectors have formulating their innovation needs
  - Aeronautics: manufacturing of structures and components
  - Aircraft sustainment (MRO)
  - Air Transport
- Each sub sector lead by industrial champion and charged to involve stakeholders
- In June 2011 delivery of action plan

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