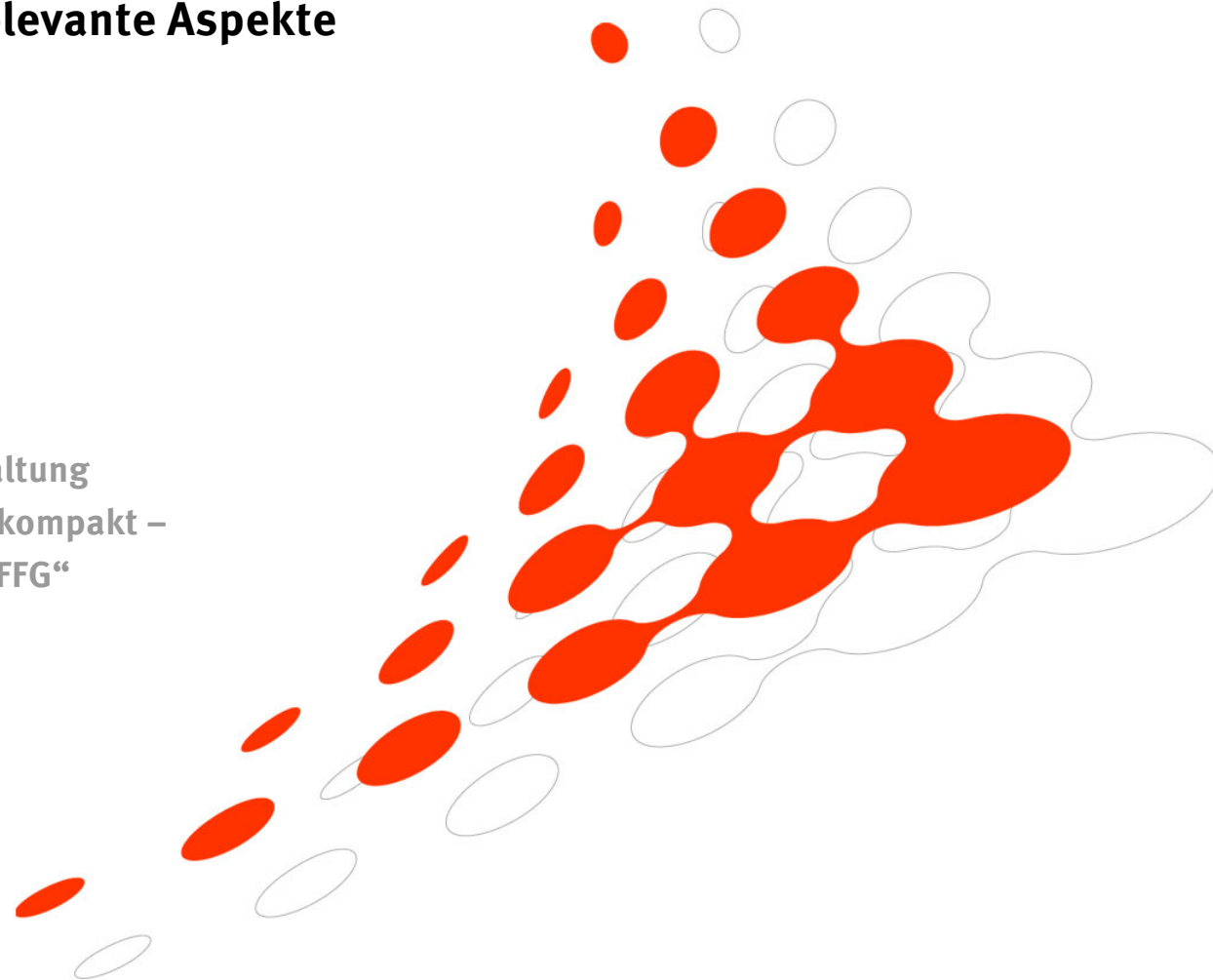


Portfolio & IKT-relevante Aspekte im Bereich ALR

Informationsveranstaltung
VITE inside FFG: "IKT kompakt –
Das IKT Portfolio der FFG"

03.12.2010

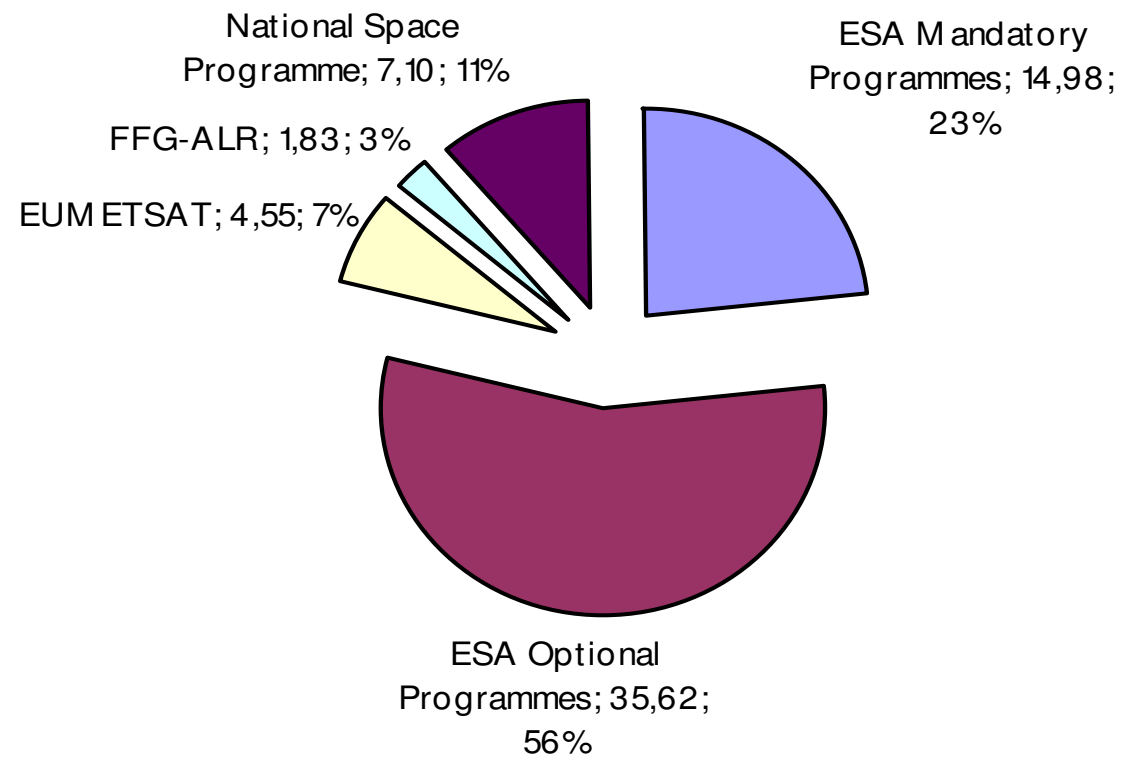


Der Bereich ALR in 60 Sekunden



- 10 Mitarbeiter
- Zentraler Ansprechpartner zur Koordination der österreichischen Weltraumaktivitäten (Weltraumbudget ~ 60M€/Jahr)
- Management der Beiträge der Republik Österreich zur ESA
- Vertretung Österreichs in Gremien der ESA, EU, EUMETSAT, UNO
- Durchführung des österreichischen Weltraumprogramms ASAP
- Organisation von luft- und raumfahrtrelevanten Events
- Ausbildungs- und Trainingsaktivität

Weltraumbudget Österreichs für 2010 in M€ (Gesamt 64,08)



IKT-relevante Programme & Portfolio ASAP (ca. 7M€/Jahr)



- Wissenschaft
 - Weltraumwissenschaften
 - Erdbeobachtung
 - Forschung unter Schwerelosigkeit
- Internationale Programme – Bilaterale Kooperationen
- Technologieentwicklung
- Weltraumtechnologietransfer
- Anwendungen von Weltraumtechnologie
 - Telekommunikation (~2M€/Jahr)
 - Erbebeobachtung
 - Navigation
 - Integrierte Anwendungen

IKT-relevante Programme & Portfolio ESA (~40M€/Jahr)



ESA Pflichtprogramm (Technologie- und Wissenschaftsprogramm)

ESA Wahlprogramme

- Telekommunikation/ARTES (~5M€/Jahr)
- Erdbeobachtung
- Navigation
- Weltraumtransportsysteme – Trägerraketen
- Technologieentwicklung
- Erforschung des Weltraums

ESA - ARTES

- | | MK'08 |
|---------------------|------------|
| • ARTES 1 | -> 0,33M€ |
| • ARTES 3 & 4 | -> 4M€ |
| • ARTES 5 | -> 3M€ |
| • ARTES 7 (EDRS) | -> 0,50M€ |
| • ARTES 10 (ATM) | -> 2M€ |
| • ARTES 20 (IAP) | -> 1M€ |
| • „to be allocated“ | -> 10,17M€ |

Total: 21M€



ARTES 1: Preliminary Studies and Investigations



FFG

The particular objectives of Element 1 (~70M€) are to:

1. Perform mission, system, general configuration **studies** and other activities to prepare and continuously update the medium and longterm programme of ESA in the field of Telecommunication.
2. **Define** the technology developments necessary for the execution of the telecommunication programme and their timing and provide these requirements as inputs for the technology programmes definition to be undertaken in other elements of ARTES.

ARTES 34: ESA Telecom - Products



The core objective is to maintain and improve the capability and competitiveness of the industry of the Participating States in the world satellite telecommunication market (~550M€).

- The activities shall aim at resulting in a **product** ready for commercial exploitation.
- Activities are to be related to one or more of the following topics:
 - a. improvement or development of **satellite platform** and payload system and equipment designs up to and including qualification,
 - b. improvement or development of **ground and user segment system** and equipment designs up to and including industrialisation,
 - c. development and demonstration of **satellite communications applications**,
 - d. study, development and demonstration of **satellite communication systems** including space, ground and user segments.

ARTES 5: ESA Telecom - Technology



FFG

The ARTES 5 is to support the industry in the introduction of new technologies and techniques.

Activities will be related to one or more of the following topics:

- a. study or development of **satellite platform** and **payload system** and **equipment** excluding formal qualification;
- b. study or development of **ground and user segment system** and **equipment** excluding industrialisation;
- c. study, design or demonstration of **satellite end-to-end communication systems** including space, ground and user segments.

ARTES 5: ESA Telecom - Technology



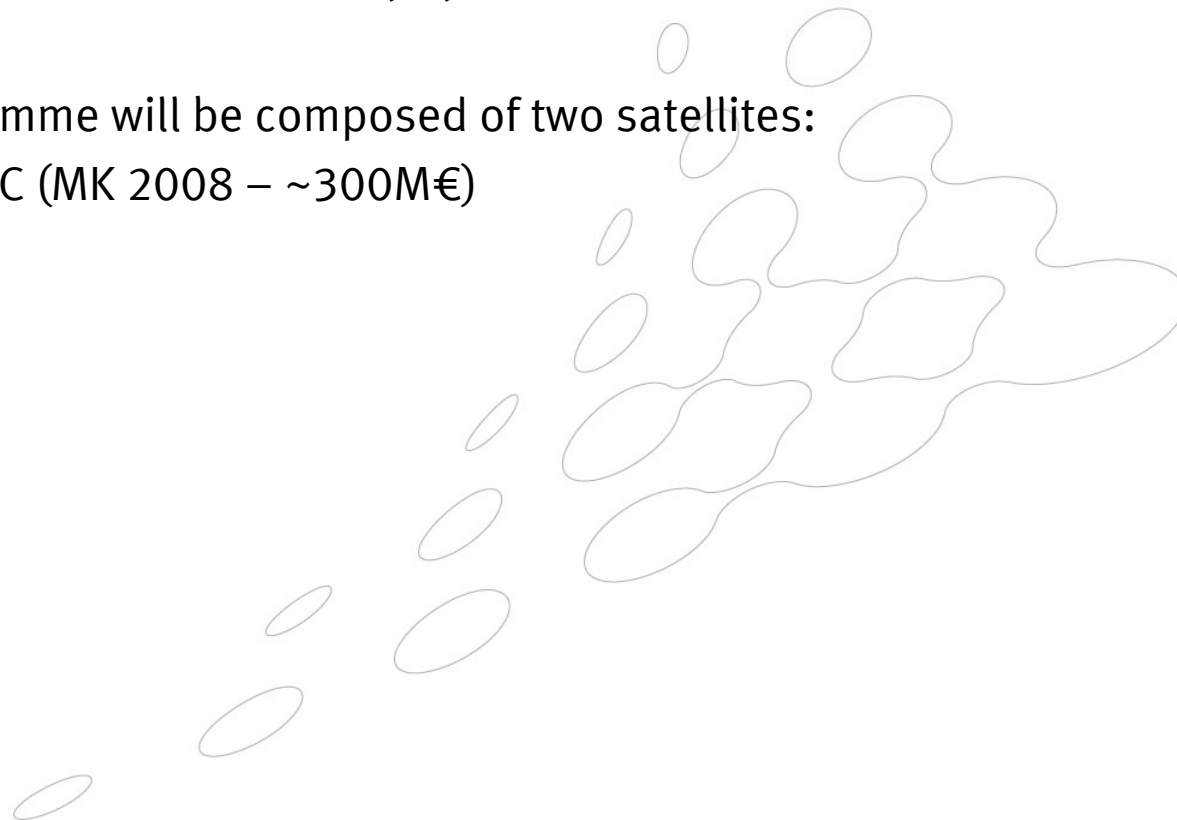
- Two sub-elements with:
 - o [sub-element 5.1](#) offering full funding of activities subjected to competitive procurement with ESA issuing a detailed definition of the work according to a yearly Workplan (~75M€) and
 - o [sub-element 5.2](#) offering at most 75% funding of activities in direct negotiation on the initiative of the industry and the work defined by the industry. Universities and research organisations may be funded at most 100% when they are sub-contractors and for a limited percentage (30%) of the cost of the activity. The industry shall provide a plan for continuing the development to a product (~75M€).

ARTES 7: European Data Relay Service (EDRS)



FFG

- The objective of the European Data Relay Satellite System (EDRS) initiative is to improve the service quality and to enhance the reliability and **independency** of European and Canadian space infrastructures as **GMES**, Galileo, Launchers and also many national space assets by providing a space based telecommunication data relay system.
- The EDRS programme will be composed of two satellites:
 - EDRS A and C (MK 2008 – ~300M€)



ARTES 10: Satellite Communication for ATM



- Aims at supplying a validated satellite-based communication solution for the European Air Traffic Management System (EATMS).
- The use of satellite communications should be analysed and assessed, including the service, operational, financial and commercial perspectives, in **close relation with** the exiting framework of ATM in Europe, namely the Single European Sky Air Traffic Management Research (**SESAR**) programme launched in 2006, by the European Community and EUROCONTROL.
- ARTES Element 10 Phase II shall be carried out in two sub-phases:
 - Phase II.1 dedicated to Phase B of the project and (MK 2008 ->35M€)
 - Phase II.2 dedicated to Phase C/D/E1 of the project. (MK'11 -> 157M€)

ARTES 20: Integrated Application Promotion



FFG

The main objectives are to promote the services provided by space technologies beyond the areas explored up to now and, as a result, to attract new, wider user communities (150M€).

- The “**Basic Activities**” (30-38M€), which form the basis for all Demonstration Activities and which aim at raising the level of awareness of the potential users and at generating and assessing ideas for projects. This part comprises two steps: **awareness** and **feasibility**.
- The “**Demonstration Activities**” (112-120M€), composed of a set of representative projects rising to pre-operational activities when successful, which aim at demonstrating the ideas generated in the Basic Activities and other spontaneous and mature concepts submitted to the IAP Element. The Demonstration Activities aim at providing a transition to operational activities.

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