

HLF Round Table „ESA Transformation“

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Remark: This paper has been created AFTER the HLF-event,
taking my handwritten notes prepared BEFORE the event.
Sorry, that many points might not be formulated in detail.

Question I: WHY do we need an ESA Transformation?

1. Increased ESA Activities:

- higher budget CM19/22)
- 6 new Copernicus Sats
- return to the Moon
- IRIS²
- 3rd party programs (e.g. EU recovery funds).

plus

2. High Expectations:

- in ESA missions
- technically challenging
- in parallel: low risk-acceptance by Member States
- competition ESA-EC.

in parallel

3. Force Majeur:

- Corona
- low birth rates
- high retirement rate
- staff shortage
- wars
- inflation.

Change of mindset & working culture, high salary demands.

Danger for decrease of public budget.

in addition

4. EU-Regulations:

to be introduced in space (LCA, CSR, REACH, etc.)
=> decreasing efficiency.

5. Process Diversity Needs:

- Classic Space
- New Space
=> Increasing discussions.

6. Public Debates:

- questioning ESA geo-return
- promoting only anchor customership
=> Not healthy for ESA image.

7. Global Competition: very high ambitions with also extreme high space budgets in Asia, Arabia, Amerika
=> increased attractivity to move companies and talents outside Europe, decrease of prices, need for increase of velocity
=> decrease of European competitiveness!



conflict



8. Europe's Top Priority Goal MUST be:

- Sovereignty & Non-dependence
- Self-confident space nations
- being an acknowledged partner
- ESA in the group of leaders, not followers!

9. But European Space Industry is AT RISK:

- We have achieved a great space industry ecosystem!
- VERY FRAGILE due to low profitability / low resilience:
 - either many will die,
 - or many will be bought by Non-European entities!

Question II: WHAT should be done within ESA Transformation? (1/5)

All „7 Points“ suggested must be taken under the following umbrella-targets:

- › **Technical Excellence**
 - › **Velocity**
 - › **Profitability**
 - › **Attractivity.**

Question II: WHAT should be done within ESA Transformation? (2/5)

My statements: ESA is a great institution, not much has to be changed, but a little bit!

ESA - with the acceptance of the Member States – has already introduced and partly implemented excellent transformation-measures:

- › Advance payments for SME (35% without discussion!)
- › Quick payment after invoicing (down to within days!)
- › Minimum shares for SME in ESA missions (role model Copernicus-HPCM, E3P, but since 2024 to be revised)
- › Profit Policy (which will start to materialise in 1-2 years)
- › Continuous reduction of Time-to-Contract (but still too much)
- › Training courses for SME (organised by ESA SME-Office)
- › ESA Industrial Space Days for networking (next: 18./19.9.2024 at ESTEC)
- › Compensation for hyperinflation in running ESA contracts
(side note mentioned: It is a SHAME for European Commission, that EC has refused in 2024 to contribute to the inflation compensation within Copernicus, leaving a part not compensated, leaving industry alone. And in parallel, the Commission claims the importance and advertises its support of industry, especially SME. This makes EC as Customer NEITHER attractive NOR trustful.)
- › Cooperation Agreement for co-funded, industry-initiated Technology Projects
- › Vitalisation of the New Space Advisory Board with industry
- › New Working Group for ECSS tailoring together with industry

On this occasion, it has to be mentioned a big advantage to do business with ESA:

ESA as customer does not become bankrupt and will always pay its supply chain down to the lowest tier!!!

Question II: WHAT should be done within ESA Transformation? (3/5)

(1) Increase Management Efficiency at ESA

- Less signature loops for contracts and CCNs (esp. in Technology Studies)
- Identify weak points in the signature chain (e.g. via a group under the Inspector General)
- Hire NewSpace experts with heritage in NewSpace companies
- 30% less subprograms at CM25 (leaving a bit more flexibility).

(2) Foster Development Efficiency at Industry

- „Less bureaucracy“ from ESA to Industry (reviews/documentation/form sheets/etc)
- Back to: „Technic First“ and THEN documentation follows, not vice versa
- More „Responsibility to Industry“, especially in Technology Studies
- Back to: „PDR = PDR“ (often meanwhile: PDR looks like a CDR)
- „Early testing“ (often: every detail must be 100% defined before).

(3) Maintain a Resilient Industry Ecosystem

- Ensure competition on Prime side, develop new players to be Prime
- Maintain „Minimum Shares for SME“ and create a competition room also for non-dependant Midcaps
- „Incentives for Investments“ of industry
- Increase budget for Technology Programs
- Implement the planned ESA/EU IOV/IOD program effectively
- Create for CM25 a program for „International Cooperstions“ in order to foster commercial business afterwards, via experience & network (e.g. with India, South Korea, Emirates, Saudi Arabia, Egypt, Turkey, Japan)
- Give Industry a better perspective of continuity (e.g. big CMs only every 4 years with just small CMs in between).

Question II: WHAT should be done within ESA Transformation? (4/5)

(4) Introduce Risk Classification & Compensation Tools

- Implement the planned „Mission Classification“ (alpha, beta...)
- Tailoring ECSS accordingly (with involvement of industry)
- More „COST PLUS“ contracts, e.g. in missions for CCNs for trouble shooting or a Delta Phase B2 (to avoid monthly negotiations which just delays missions and occupy staff)
- Higher Management Reserve in missions
- Higher mission budgets (yes, even if less missions at CM25)
- Financial compensation for implementation of regulations (LCA, REACH, CSR, ect.).

(5) Intensify Staff Mindset Management

- Motivation for more popular „Walking the Extra Mile“ (at ESA, MS, Industry)
- Increase trust in industry’s capabilities (especially in Technology Studies)
- Foster more pragmatism in decisions
- Activate retired Senior Experts for mind set transfer, for technical decisions and for more accurate cost/schedule planning
- More „Courage by Heritage“
- Introduce „Motivation by Rating“ (rating of ESA-staff by Industry and vice versa)
- „Weak Point Identification“ (implement a team allocated at Inspector General in order to find the single weak points, there are just a few)
- Increase reachability/availability of ESA staff (phone numbers, email response periods, onsite meetings, less mobile office).

(6) Introduce Diverse Procurement Approaches

- Increase awareness for: “NO single approach fits to ALL ESA programs”: neither Best Practice nor Anchor Customer is the best solution for all (e.g. a science mission will never work via Anchor Customer contracts)
- To industry: do promote your preferred approach ONLY for your specific program
- Introduction of more FPV-contracts (but attention to countries and materials with specific exchange rates and higher inflation rates)
- Decision for Full Consortium Offers (FCO) versus Best Practice Offers (BP) must be assessed carefully before procurement phase
- „Geo-return“ for ESA programs must be maintained in order to a) safeguard financial contributions by Member States, b) foster “without envy” European Collaboration c) develop space capacities all over Europe and not only in some countries.

Question II: WHAT should be done within ESA Transformation? (5/5)

(7) Fascinate by Public Relation

O via Media

- launches of new launchers and high end satellites must be live-streamed / broadcasted as an action thriller and not as a boring engineering conference (-> hire professional movie-companies for that)
- fascinate with pictures of technology inside a satellite
- promote the space-sovereignty and its importance of Europe
- target group shall be all, from children to seniors
- publish concentrated on ONE account per social networks (Instagram, facebook, X, LinkedIn) only KEY events with short and EASY-to-UNDERSTAND content (ESA-accounts must be a „must“ for all handy users)
- work out a media plan
- increase budget at ESA for media
- implement budget for Industry in missions and technology studies for media activities, movies, animations.

O via Onboard cameras

- place HD-cameras on key missions (e.g. CIMR, RAMSES, GATEWAY), best example was the JUICE fly-by, which has been seen by many non-space people
- increase mission budgets accordingly
- pictures are best promotion.

O Joint ESA/Industry CM-Budget “15 Euro Campaign”:

Start a 15 Euro campaign at ESA and Industry (15 EUR x 450 Mio Europeans = 6.7 BEUR/year = 20 BEUR/3 years CM25)

„15 Euro for European Independence in Space“

„15 Euro for ESA“

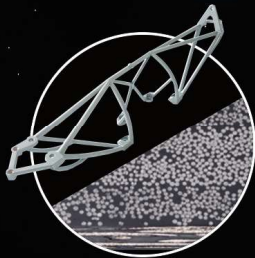
„15 Euro for ESA-space activities for European Resilience“

„It’s just a Caipirinha on a music festival“.

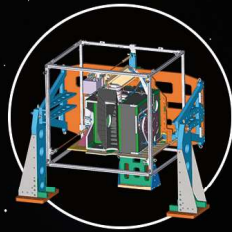
Thank you for your interest and stay ambitious 😊! Yours, Ernst.



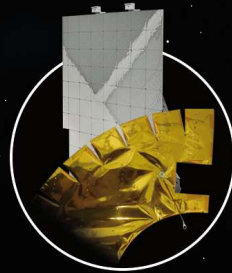
Engineering &
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New Materials &
Processes



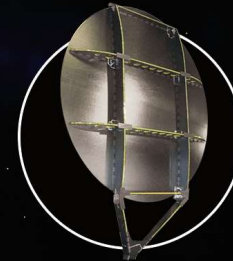
MGSE



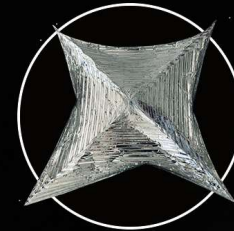
Thermal
Hardware



Lightweight
Structures



Reflector
Antennas



Deployable
Deorbit Sails



Large Deploy.
Reflector/
Boom Subsystems