MAKING OUR BUSINESS WITH ESA ECONOMICALLY VIABLE TO SUPPORT PROGRAMMES EFFICIENCY AND INNOVATION

MANIFESTO FOR A NEW ESA PROFITABILITY POLICY FOR SPACE PROCUREMENT ACTIVITIES

Preamble

The European space industry, brought together within Eurospace, welcomes ESA's initiative to improve its industrial policy to support industry competitiveness.

In this frame, Eurospace proposes its new Manifesto with Industry recommendations to restore fair levels of profitability, through a profit scheme linking risks exposure with profit.

It should nevertheless be borne in mind that the competitiveness of the European space manufacturing industry also relies on other contributing factors:

- Reimbursement of the costs of the major bids' costs;
- Adequacy of preparatory phase[1] budget to the required objectives[2];
- Principle of Cash Neutrality[3];
- Fair access to ESA procurements[4];

In addition, Covid-19 has and still continue to impact the industry and satisfactory compensation measures are strongly expected to restore competitiveness.

ESA' support for a new Profit Policy: an ambition shared by the European space industry

The executive of ESA is today recognising that adjustments of ESA industrial policy are necessary to preserve the competitiveness of the European space industry while concurring with the assessment that profitability is a key parameter for industry operational performance, since it allows industry to invest (and finally increase

[1] *0/A/B1 phase*
[2] *Early phases commensurate in budget and in time to the scope, including Consortium set up, and allowing at this early stage de-risking activities all through the contractual chain to the benefit of smooth transition to B2CD phase (Implementation phase) are expected.*
[3] *Balance and timely cash flow between payments and expenses throughout all the industrial chain all along the project life cycle*
[4] *Fair access granted to all economic operators independently from their links with other entities*

competitiveness for the benefit of both institutional and commercial markets) and encourage more competition when ESA is procuring products.

Profit is used for self-investment and innovation, which paves the way for the future of industry. Hence, the European industry sees the necessity for a new profit policy as an important contributor to one of the major objectives of ESA, which is to increase the competitiveness of European industry on the international market.

Eurospace members, which represents 70% of the total European manufacturing industry employment and 90% of the total turnover of the European Space Industry, fully support ESA's initiative to improve its industrial policy for the benefit of the entire value chain and supplier industry across Europe.[5] Eurospace members also wish to thank ESA for creating the dialogue and exchange opportunities to define together an improved profit policy; a necessity to ensure that its implementation is workable and practical and does not generate additional complexity.

A low profitability is endangering the competitiveness and sustainability of the European space industry, from SMEs to Midcaps and LSIs

Industry profitability is one of the key indicators, alongside cash generation, of its financial health, of the sustainability of its activities and of the ability to support growth since it supports its capability to invest in their future (e.g., creating innovation through R&D, and setting up new industrial infrastructures and processes) to be competitive on the global market, and, ultimately, to attract and/or sustain the motivation of investors and shareholders.

The European Space Agency (ESA), through its Industrial Policy, is aiming at improving the world-wide competitiveness of European industry by maintaining and developing space technology and by encouraging the rationalisation and development of an industrial structure appropriate to market requirements. One of the main tools that ESA has at its disposal to achieve this objective is of course its procurement.

It has however been identified that the profitability registered on ESA contracts by the European space industry, from Small and Medium-sized Enterprises (SMEs) to Midcaps and Large System Integrators (LSIs) has been low[6] for several years while the need for investment to support both commercial and institutional business lines is increasing[7]. Furthermore, higher risks in the execution of these contracts are occurring. This negative trend is visible in all space domains covered by ESA and throughout the entire supply chain.

Several factors are driving such a negative trend:

- The evolution of ESA procurement policy leads to growing requirements to allocate substantial workshares to subcontractors. Profit ration is calculated only on individual workshare. Profit is still currently allocated on the basis of the own share. The consequence is that all contract activities related to the management of subcontractor workshares do not generate profit in relative proportion

- The evolution of ESA industrial policy that requires more commitment to be borne by the European space industry in the procurement of these space systems: full consortium offer[8] (FCO) approach with increased share to subcontractors, instead of the step-wise "core team and best practices[9]";

[5] *On a side note, such an ambition is also shared by European SMEs and start-ups as reflected in the latest SME4SPACE Position Paper on ESA renewed Industrial Policy.*
[6] *Levels of profitability of several European companies have been assessed in full transparency by ESA over the years.*
[7] *The US space industry, the European space industry's main competitor on the global market, benefits from more favourable conditions e.g., cost reimbursement without ceiling. The European space industry would welcome getting the results of ESA benchmark on various profitability policies applicable outside ESA procurements.*
[8] *Full industrial organisation selected at the time of the contract execution.*
[9] *Industrial consortium selected during phase B2 until preliminary design review.*

- The increasing complexity of space systems to design, develop and deliver to ESA, and insufficient duration of preparation phases to analyse and mitigate potential risks;
- The increasing demand for investments or co-funding even in the institutional domain.

As a result, the nominally agreed level of profitability at contract signature is structurally low (for example, the current ESA scheme with 0% profit on subcontractors mechanically yields a 3.1%[10] profit on a total contract value, assuming a 40% own share at prime level, and does not reward the related risks). Ultimately, this undermines the European space industry's ability to compete both on domestic (institutional) and external (commercial and export) markets as well as its ability to continuously invest in e.g., research and innovation, modern infrastructures, IT solutions, industrial production systems, to sustain the competitiveness of the whole industrial chain (from LSIs to Midcaps and SMEs).

The earmarked level by ESA of 5-6% for a reasonable profit is still too low, hampering the capability to invest. The European space industry therefore recommends a target level of at least 8% profit for all actors of the ESA programmes supply chain company of the European space manufacturing industry (from LSIs to Midcaps and SMEs).

Such a target, beyond benefiting *stricto sensu* the whole European space manufacturing industry, would also represent undeniable benefits to ESA Member States, ESA programmes funding entities i.e., more adequate sizing of programme budgets and reduced cost overrun and delays, more competitiveness of their national industry, more innovation, and more ability to make bids to institutional (national, European) and commercial markets.

Rewarding at fair levels the risks borne by the European space industry

The European space industry, gathered within Eurospace, has therefore been investigating a better scheme to sustain industry's competitiveness at all levels, and provide the means to invest in research and innovation for the benefit of both institutional and commercial markets.

The European space industry further believes that what really counts is the "cost at completion" of ESA Programmes and that a financially healthier space industry will invest more (e.g., in R&D, industrial processes) to improve its efficiency, which will ultimately contribute to compensate the impact of increased profits on the Programmes' cost at completion.

In this regard, we therefore believe that two key measures need to be considered:

1. Better link profit with risks on ESA programmes;
2. Reward subcontracting in order to incentivise the involvement of the whole supply chain when conducting ESA procurements.

1. Better link profit with risks on ESA programmes

A scheme based on risks that can be more rewarding is best suited to restore a viable level of profitability. Low levels of uncertainty/risk are associated with lower profits, and high levels of uncertainty/risk with higher profits.

[10] *Example: 100 € cost with 40€ internal share plus a profit fee of 8% on internal share leads to 103.2 € contract value. 3.2 € profit divided by 103.2 € equals to 3.1% profit / sales ratio.*

In this regard, the European space industry is aligned with ESA's intention to better link profit to all kind of risks and move away from a profit policy implemented up to now with a fixed rate (0%-8%), applicable at the level of each work share.

We propose a new ESA risk scheme that would rely on a varying profit level, depending on the specific risks, articulated around a formula combining three parameters, each setting a range of allowed % of profit on total contract value, all summed:

1. Contractual risks according to fixed price, ceiling price or cost reimbursement price;
2. Complexity risk according to the overall complexity of the mission and Technological Readiness Levels (coverage under management reserve mechanism still applies);
3. Consortium/Supply chain risks reflecting the industrial and technical maturity of the supply chain.

In case the application of risks based on profit rates leads to different applicable rates for individual bidders or consortia, e.g., through exclusion of profit on subcontracts within the own group of companies of a bidder, a level playing field for the price assessment needs to be assured.

The risk assessment and the associated profit formula shall be fixed by ESA at latest at ITT release for all risks and shall remain valid all through the execution of the relating contract. Fixing the risk assessment with the ITT minimises the administrative effort of evaluation and will avoid a distorted competition with advantages for bidders that underestimate intentionally their risk position.

With such a scheme, the nominal profit can be lifted up to reach a fair level of profitability higher than today for all types of industry (from SMEs, to Midcaps and LSIs) and more in line with the standards of the aerospace and defence industry in Europe and worldwide (at least 8% to cope with the high level of investment required in the space business).

The European Space Industry is confident this new scheme does not add unnecessary levels of complexity in ESA procurements, to the extent that the risk parameters are well defined as principles.

As stated in ESA/IPC(2021)83, it is to be emphasised again that although the Profit Policy is expected to be based on risks, it does not replace other contractual/programmatic mechanisms (e.g. programme phasing, contingencies and management reserves[11], risk sharing provisions etc.) which clearly remain essential programme risk management tools.

Finally, next to the above elements for a profit policy, there is further room for improving industrial profitability without impacting the cost of ESA programmes. In this regard, the possibility to complement such profit with incentives or having recourse to co-prime contractorship are options to be assessed and implemented on some cases while not increasing the risk of ESA as contracting authority.

2. Reward subcontracting in order to incentivise the involvement of the whole supply chain when conducting ESA procurements

ESA's nominal profit scheme together with its increased array of constraint and requirements on subcontracting have slowly become counter-effective**.** The growing ESA requirements to allocate larger shares of the total contract to a wider subcontractor base and/or targeting specific supply chain categories, increase the overall management and technical cost/risk of the projects. Without a suitable reward, this situation disincentivises the interest to bid, particularly at prime level

[11] *The management reserve is the amount of the project budget reserved for identified risks which materialise during project execution*

On Fixed Priced contracts (i.e., the majority of ESA business contracts), ESA nominal profit scheme does not allow any of the lead contractors on subcontractors' workshare. This generates an effect opposed to the willingness of ESA to increase the workshare of non-LSIs and of SMEs. As a matter of fact, lead contractors get a structural incentive to maximise their own share in order to maximize their overall profit. Indeed, due to the 0% profit on sub-contractors, the current ESA scheme brings profit structurally below the standard profitability of this industry and incentivises vertical integration instead of a healthy subcontracting approach that would "irrigate" the supply chain. The Return on Sales, which is measuring industry financial health, is significantly diluted for lead contractors, leading to too low profit levels (a few % only) on current ESA contracts.

In this regard, the introduction of a specific fee on external subcontractors (i.e., not affiliated to the lead contractor), as promoted by ESA Executive, is very welcome, in fair recognition of the consortium/ supply chain risks associated to subcontracting and borne by the lead contractors. This evolution would be a concrete incentive for lead contractors to further develop international cooperation and subcontracting.