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Price audit of obtaining a weapons systems

Abstract

The Spanish Ministry of Defence has achieved a saving of €429 million, as recorded in the last year's report presented by the Cost Evaluation Group (GEC). This amount has been obtained by auditing contracts whose economic volume amounts to €6,209 million. In the last 13 years, the total savings achieved by the GEC amounts to more than €1,300 million. This remarkable progression has been achieved thanks to the increase in its means, the professionalisation of his members and to the fact that the GEC has equipped itself with its own internationally recognized methodology, for which it has been congratulated, especially during 2020, by various entities.

The GEC was born in 1988 with the name of Cost Evaluation Working Group (GTEC), it is framed within the General Directorate of Economic Affairs of the Secretary of State for Defence and has carried out cost audits for international organisations such as NETMA (Nato Eurofighter and Tornado Management Agency) and OCCAR (Organisation for Joint Armament Cooperation, European intergovernmental organisation to facilitate and manage cooperative European Armament Programmes between France, German, Italy, United Kingdom and Spain) by having standards comparable to those of the most advanced countries of the European Union and NATO.

Key words

Cost Evaluation Group, GEC, Life Cycle Cost, CCV, Savings, Audit, Market Price, Offer, Cost Analysis, Procurement Process, Weapon Systems, Cost Estimation, Company Rate, Price investigation.

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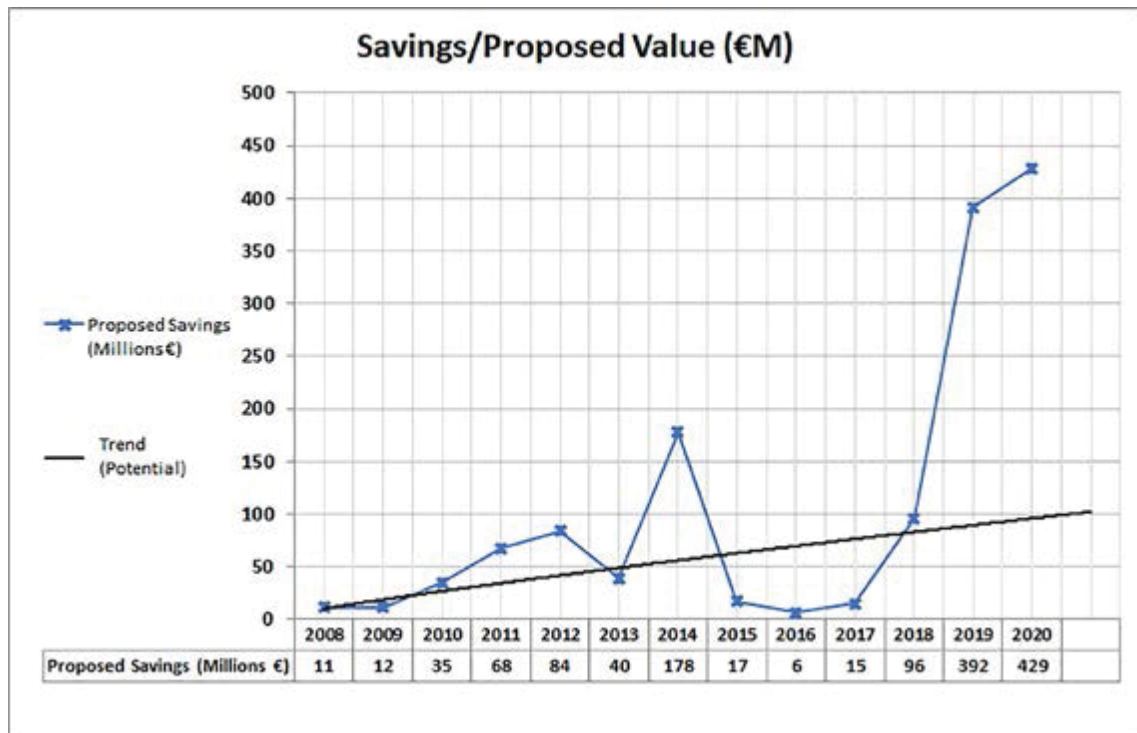
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The audits of the cost evaluation group (CEG), Ministry of Defence (MINISDEF), have achieved savings of €429 million in 2020.

The Ministry of Defence has proposed a saving of €429 million, as stated in the CEG’s report for the year 2020. This amount was obtained by auditing contracts with a financial volume of €6.21 billion.

As the unit responsible for cost and price analysis within MINISDEF, the CEG has managed to propose savings of €149 for every euro of direct cost invested in this unit, doubling its productivity, which has earned it several commendations. This high activity/savings multiplier indicates that it is still far from the optimum level of utilisation in its work and potential, and its methodology and results can even be extrapolated to other ministries that require it.

Over the last 13 years, the total savings achieved by this group amount to at least 1.38 billion euros. This remarkable progress has been achieved thanks to the growth, professionalism, dedication of its members and the fact that the CEG has developed its own internationally recognised methodology. It should be noted that there are other notable unquantified savings from price analyses and estimates in the procurement process and adjustments resulting from tariff audits that cannot be quantified at this stage.



Graph 1. Proposed savings in millions of euros

The responsibility for the estimation of the Life Cycle Cost (LCC) of material resources is assigned in MINISDEF to the Director General of Economic Affairs (DI-GENECO) who exercises it through the Sub-Directorate of Procurement, CEG. This group was created in 1988 under the name of the Working Group on Cost Evaluation

(WCEG) as a temporary group for a specific task. Later, after observing the results obtained, it became the permanent CEG¹, and was initially assigned the following functions:

1. Cost evaluation and price analysis of the Ministry of Defence's supplier companies or those participating in international programmes financed from the Department's budgets.
2. The analysis and evaluation of the costs of the Armed Forces Centres, Units and Organisations.
3. Carrying out of economic-financial analyses of MINISDEF supply companies; and participating in the design of methods and procedures for estimating, planning and controlling costs within MINISDEF.

The functions of DIGENECO, MINISDEF have evolved since its creation and its mission is to provide the cost and price analysis services defined in Annex I of Instruction 128/2007 of the SEDEF, which include:

1. Estimation of prices and costs of investment projects and programmes. To assess the procurement alternatives and the solution chosen as viable. Also necessary for programming the Material Resource Objectives (MROs)² and for drawing up the budgeting proposals that are produced in the material resource planning process.
2. Direct support to Programme Offices. During the preparation stage for implementation, updating the life-cycle cost estimate that was made when the feasible solution was decided upon, to bring it closer to the market price.
3. Evaluation of the prices submitted by the companies. Review the economic aspects of proposals made by the companies prior to the bid, with special attention to the prices quoted and their correspondence with the deliverables and other services of the contract.
4. Audit of the Bids submitted by the companies.
Its objective is to review the economic aspects of the bid, checking the correspondence of the prices offered with the deliverables, the criteria for calculating the profit, the valuation of the risks and contingencies that try to cover them in order to issue an opinion on the adequacy to NODECOS.³
5. Auditing of the prices and unit costs of the companies (Tariffs).
Hourly labour costs (hourly rates), the costs of using machinery per unit of time or product and the coefficients or surcharges calculated to allocate the in-

¹ SPAIN. Ministry of Defence. 1992. SEDEF Instruction 8/1992 of 22 January 1992. *BOD* no. 23/92 of 30 January 1992.

² Basic instrument for the programming and subsequent procurement of the material resources required to meet the needs arising from the Military Capability Objectives and other objectives of the Department.

³ SPAIN. Ministry of Defence. 1998. Ministerial Order 283/1998 of 28 October 1998. *BOD* no. 258

direct costs inherent to the production activity. The purpose of these audits is for MINISDEF to agree with the company the values that the company must use in general to calculate the prices of its bids for contracts awarded through the negotiated procedure.

6. Audit of the costs incurred in the execution of the contract. Review of the incurred costs declared by the contractor and, where applicable, those declared by subcontractors, in order to provide a professional opinion on the adequacy of their calculation to the NODECOS standards.
7. Analysis of contract execution costs and profit margins. Typification, analysis, parameterisation and statistical processing of the data corresponding to the estimated costs and the profit proposed by the companies in their prices and bids.
8. Analysis of the Cost of Public Services. Calculation and analysis of the costs assignable to the services provided to third parties by the units, centres and bodies of the Ministry of Defence and the public bodies attached to it, applying public prices and fees.
9. Analysis of the Cost of the Activities of the units, centres and bodies. Calculation and analysis of the costs assignable to the activities carried out by the units, centres and bodies of the MINISDEF and the public bodies attached to it.
10. Reports prior to the Orders to Proceed approved by the SEDEF. Reports issued by the CEG at the request of the Deputy Director General for Contracting in the process prior to the approval by the SSEDEF of the orders to proceed that initiate the files.

Although the estimation of prices and costs of investment projects and programmes has been formally introduced in 2012, the CEG started to perform cost estimates in 2005 with the estimation of the series of four Maritime Action Ships (first BAM series) for the Navy and it is from then on and observing the results obtained, when comparing the cost estimate with the company's budget and the audit of the bid, when the CEG started to prepare a specific methodology and an adequate training of its staff, so that at the end of 2011 and beginning of 2012, when the task of life cycle cost (LCC) estimation was assigned to DIGENECO, the CEG was already prepared to perform this type of work.

SEDEF Instruction 67/2011 has made this function essential in the Material Resources Procurement Process, especially in the phases and stages prior to the implementation of the Programmes, since the procurement process has been defined from the point of view of the complete life cycle of the alternatives that are proposed before deciding on their viability and the solution that is finally chosen. On the other hand, updated information on the life cycle costs of the systems, according to the most recent estimate of such costs, is a much-needed input to the financial and material resources planning process set out in SEDEF Instruction 2/2011, as the cost of ORMs and their components can be an essential factor for their programming.

As of today, the CEG continues to perform the aforementioned functions, except for the analysis and evaluation of the costs of the Armed Forces' Centres, Units and Organisations and the analysis of the cost of public services, which in 2012 was taken over by the Sub-Directorate General for Accounting. The CEG, which is part of the Directorate General for Economic Affairs –Subdirectorato General for Procurement–, is the unit responsible for carrying out cost and price analyses within the Ministry of Defence with standards comparable to those of the most advanced countries in the European Union and NATO.

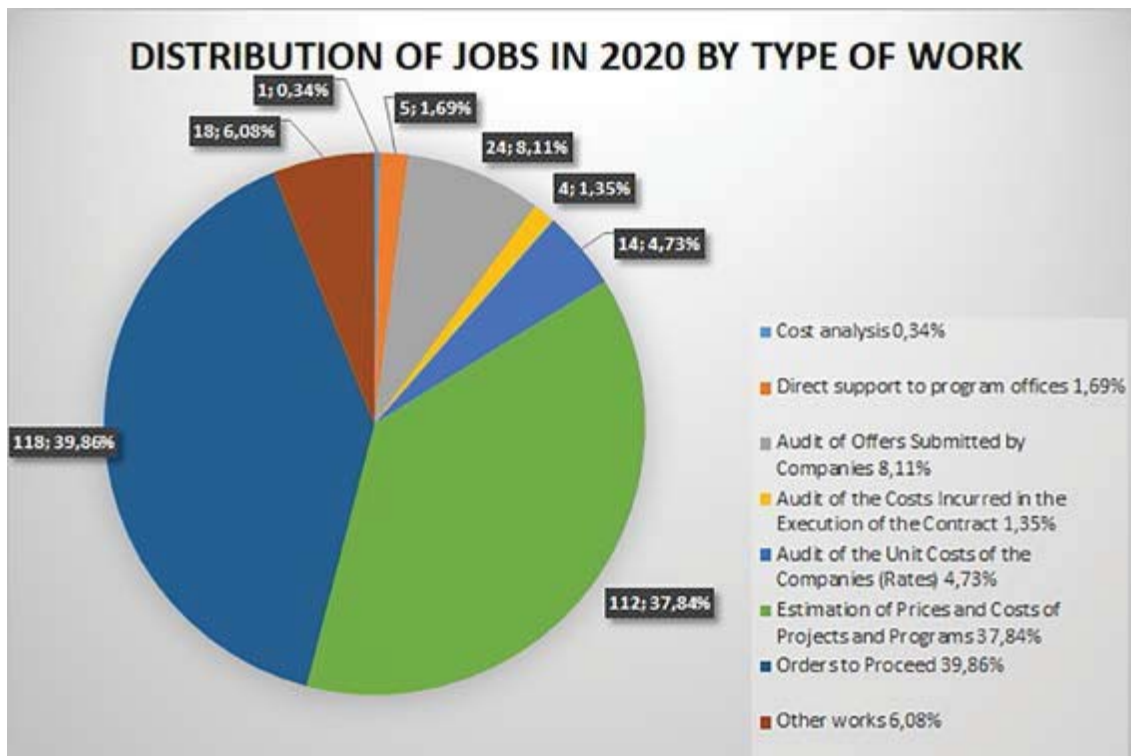
These analyses are very necessary when there is a single plaintiff and an absence of bidders as this leads to contracts not going through an open tender, the Public Sector Contracts Law (LCSP) calls this a negotiated procurement procedure and it happens very often in the procurement of weapons systems in Spain. With the estimate made by the Ministry of Defence and the comparison with the estimate presented by the future contractor, which will be based on the costs of this company, costs that can be evaluated by defence before (estimate, analysis of prices) during (audit of bids, rates) and after the execution of the contract (audit of costs incurred), we will try to replace this lack of references that occurs in the negotiation, a negotiation that takes place at a disadvantage, as the information available to the Administration is incomplete and asymmetrical. This asymmetry is corrected by investing the Administration in means of control, such as price capping, cost-based pricing, profit-based pricing and its standards (NODECOS order 283/1998)⁴, investment in parametric software tools, incorporation of estimation experts, etc.

The CEG, as the body responsible for carrying out the aforementioned audits, in accordance with Instruction 128/2007, has developed a methodology based on the best international practices in the field of contract auditing, the effectiveness of which is proven by the experience and results achieved over the years of its application.

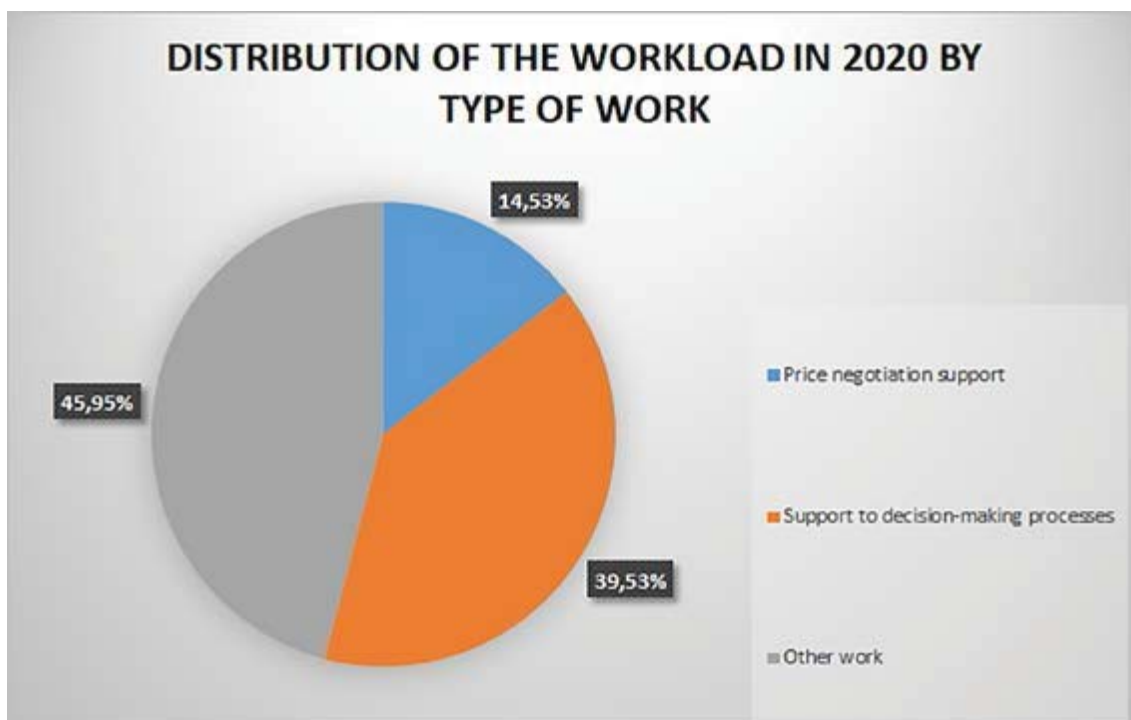
Summary of CEG 2020 results

The total workload of the CEG in 2020, as the sum of the work included in the CEG's annual work plan (PATCEG) 2020 plus the work that has been added during the year, not including orders to proceed, has meant the completion of a total of **296 jobs**, with the following distribution by type of work:

.....
⁴ The above-mentioned Order has established a procedure for the bid specifications to include clauses obliging companies to break down prices in bids, making costs and profit visible, and to apply specific rules on cost eligibility criteria (NODECOS). In addition, the bid documents include a clause determining MINISDEF's right to audit both the bids and the costs incurred in the execution of the contract.



Graph 2. Distribution of jobs by type of work.



Graph 3. Workload distribution by type.

Savings or value generated by audits

The results of the Bid audits and the Incurred Cost audits lead to adjustments in the contract prices by calculating lower costs when applying the rules on the criteria to be used in the calculation of costs in certain supply, consultancy and assistance

and service contracts (NODECOS), either in the costs incurred declared by the companies or those estimated in their bids, although most of the incurred cost audits do not lead to adjustments, they do provide very useful information for the CEG as they complete the CEG's historical databases. Such price adjustments usually result in budgetary savings or in obtaining more value for money from material resources for the price paid. In 2020, the results of expenditure savings have been as follows.

TYPE OF AUDIT	NUMBER OF JOBS	AUDITED VOLUME (millions €)	PROPOSED SAVINGS (millions €)	% SAVINGS
Audit of the Bids Submitted by the Companies	24	5,458.3	428.6	7.8%
Audit of the Costs Incurred in the Execution of the Contract	4	751.2	0.0	0.0%
Total	28	6,209.5	428.6	6.9%

Table 1. Percentage of savings per bid audit and incurred.

The other types of CEG work do not produce easily identifiable budget savings, however the cost estimates made in the resource mobilisation process, during the feasibility stage, feasibility document (DDV), where the procurement strategy is already aimed at a negotiated contract without advertising (single company), the CEG provides an alternative estimate to the one obtained in the market research (single company) which is normally used by the Secretary of State to determine the budget ceiling of that future programme (so initially and in the absence of the procurement file the positive difference between the company's price/estimate and the estimate made by the CEG should be analysed to verify if the price delta offered is reasonable and if not it would produce an adjustment which would result in a budget saving).

In the same way, the audits of tariffs that are carried out to the companies that have the highest annual contracting volume with the MINISDEF and those that the contracting body requests, yield results in tariff amounts that are included in an annual tariff agreement that is signed by DIGENECO and the COMPANY. In those tariff agreements where lower tariffs than those proposed by the companies are agreed due to the identification of non-allowable costs (NODECOS), these adjusted annual tariffs, when applied to the negotiated contracts signed with MINISDEF, produce annual savings that have not yet been quantified. The CEG is studying how to calculate them and incorporate them into the savings achieved.

Estimation of programme prices and costs

Cost obtained during 2020 in the estimates made in the DDV phase			
Procurement	Support	Leave	Total
€1,396.92 M	€1,332.16 M	€1.32 M	€2,650.40 M

Table 2. Estimation of life cycle costs at the DDV stage. Miscellaneous sources (Not CANOA)

- The reliability of the results obtained in the estimation of carrying costs is lower than in the case of acquisition costs, due to the following shortcomings:
- The lack of an information system that, in addition to supporting the management of the life cycle of the systems, is capable of adequately recording the costs that arise during their operational life. MINISDEF's analytical accounting system (CANOA) is currently unable to provide life-cycle costs for weapons systems.

Moreover, this information is scattered, not easily accessible and has not been stored on a single criterion. Deficiencies in information on the actual costs of sustaining the systems make it impossible to calculate parameters that can be extrapolated to future systems, based on data from industry and organic maintenance.

Therefore, in order to improve the reliability of future estimates, improvements in information systems and contract requirements are needed to provide consistent and relevant data on the actual costs of sustaining, using and decommissioning weapons systems. In addition, while the information systems are being implemented, it is very complicated and time-consuming for the CEG to obtain and calculate them.

CEG activity indicators

With the information on the financial results of the CEG's work during 2020 expressed and together with the data on equivalent staff on an annual basis below, the following indicators of the CEG's performance in 2020 are derived:

STAFF	CEG workforce	Covered	Equivalent staff*.	Audited volume year 2020 CEG	Proposed savings CEG	Volume reviewed per team (average 3.96 persons)	Proposed average savings per team (average 3.96 persons)	Revised volume per equivalent person	Proposed average savings per equivalent person*
Military staff	12	8	5.39	€6,209 M	€429 M	€896.3 M	€61.9 M	€230.2 M	€15.9 M
Civilian Staff	2	1	1.54						
Staff in charge of management	X	X	20.5						
Total	14	9	26.98						

Table 3. Indicators of CEG activity in 2020.

*Equivalent staff is that which results from taking into account the dates of incorporation and termination of staff, in addition to certain concepts such as dedication to courses or other military duties that are not specific to the functions assigned to the unit, etc.

CEG: MANAGEMENT INDICATORS				
DATA				
		2020	2019	
Total nominal CEG staff	A	13,0	14,0	troops
Equivalent CEG staff on an annual basis	B	6,93	8,14	troops
CEG* costs	C	2,88	3,03	millions €
Total number of jobs completed	d	178	97	jobs
Number of audits with potential savings	E	28	17	audits
Audited volume (with potential savings)	F	6.210	5.632	millions €
Savings generated	G	429	392	millions €
INDICATORS				
Completed works per team	D/B	25,7	11,9	jobs/person
Volume audited per team	F/B	896,3	691,9	millions €/person
Savings generated per team	G/B	61,9	48,1	millions €/person
Average audited volume per audit	F/E	221,8	331,3	millions €/audit
Average savings per audit	G/E	15,3	23,0	millions €/audit
% € saved per € audited	G/F	6,9%	7,0%	% € savings/€ audited
Net CEG Savings (Generated Savings - CEG Cost)	G-C	425,8	388,5	millions €
Net savings per equivalent team	(G-C) / B	61,5	47,7	millions €
€ saved per CEG for each € CEG cost	G/C	149,0	129,1	€ savings per € cost

The CEG costs are taken from the CANOA, with the exception of the 2020 data, which is an estimate made by the CEG on the basis of the data provided by the CANOA.

Table 4. Indicators of CEG management in 2020.

Evolution of CEG activity 2008-2020

Prior to 2008, the available data on CEG activity comprised different factors that prevent comparisons based on unified criteria.

Since 2008, the reporting structure on the CEG's activity and results has been homogeneous and allows the development of indicators based on comparable data, which is a valuable tool for setting targets, for assessing activity, results and continuous improvement in productivity and efficiency.

The data recorded for the period 2008-2020 are shown in the table below:

Cost Evaluation Group - ACTIVITY DEVELOPMENT-2008-2020															
Years	Global Activity						Savings or Value Generated				Activity and Performance Ratios				
	Human Resources (A)		Number of Jobs (B)				MILLIONS € (C)				Ratios per Job (D)		Ratios per Person (C) and (E)		
	Nominal Staff	Equivalent Troops	Planned	Survivors	Total Defendants	Carried out	With Potential Savings	Revised Volume	Savings/Value Generated	%	Reviewed per Job	Savings per Job	Jobs per Team	Reviewed per Team*	Savings per Team*
2008	13	10,75	10	23	33	23	15	141,36	11,45	8,1%	9,42	0,76	2,14	13,15	1,07
2009	15	9,65	10	36	46	36	18	445,53	11,93	2,7%	24,75	0,66	3,73	46,17	1,24
2010	15	9,86	11	36	47	36	18	289,70	35,25	12,2%	16,09	1,96	3,65	29,38	3,58
2011	16	10,48	15	37	52	37	19	1.502,69	67,89	4,5%	79,09	3,57	3,53	143,39	6,48
2012	16	7,71	50	45	95	55	18	1.318,74	83,77	6,4%	73,26	4,65	7,13	171,04	10,87
2013	16	9,99	85	54	139	63	25	964,24	39,69	4,1%	38,57	1,59	6,31	96,52	3,97
2014	15	9,73	97	51	148	67	14	2.511,76	177,91	7,1%	179,41	12,71	6,89	258,15	18,29
2015	14	10,20	154	60	214	115	28	249,35	17,04	6,8%	8,91	0,61	11,27	24,45	1,67
2016	13	9,78	90	86	176	111	14	210,47	6,38	3,0%	15,03	0,46	11,35	21,52	0,65
2017	13	9,02	75	70	145	95	10	1.557,96	14,92	1,0%	155,80	1,49	10,53	172,72	1,65
2018	13	9,43	84	85	169	96	17	1.442,65	95,80	6,6%	84,86	5,64	9,86	152,91	10,15
2019	14	8,14	97	111	208	97	17	5.631,76	391,52	7,0%	331,28	23,03	11,92	692,18	48,12
2020	13	6,93	238	147	385	178	28	6.209,54	428,64	6,9%	221,77	15,31	25,69	896,34	61,87
Total 2008-2019			1.016	841	1.857	1.009	241	22.475,75	1.382,21	6,1%					

NOTES: * A Team consists on average of a Team Leader and 2.95 ISDEFE staff.
 (A) The number of posts has increased by only 1 post during the period under review (13-14 posts).
 The number of equivalent staff has been calculated on the basis of the filled posts and taking into account the strict dedication to work.
 (B) Since 2012, work planning has become more rigorous. Since 2020 planning is consulted and negotiated with applicant bodies.
 (C) Revised Volume and Savings/Value Generated are only for Potential Savings Work (Bid and Incurred Cost Audits).
 The Savings Generated is the decrease in budgeted expenditure. The Value Generated is the greater benefits achieved with the same expenditure.
 (D) The Ratios per Job have been calculated considering only the jobs with potential savings (Bid and Incurred Cost Audits).
 (E) The Revised Volume per Person and Savings per Person Ratios refer to jobs with savings potential.
 The Jobs per Person have been calculated considering all completed jobs with or without saving potential.

n.d: Not available until the end of the year

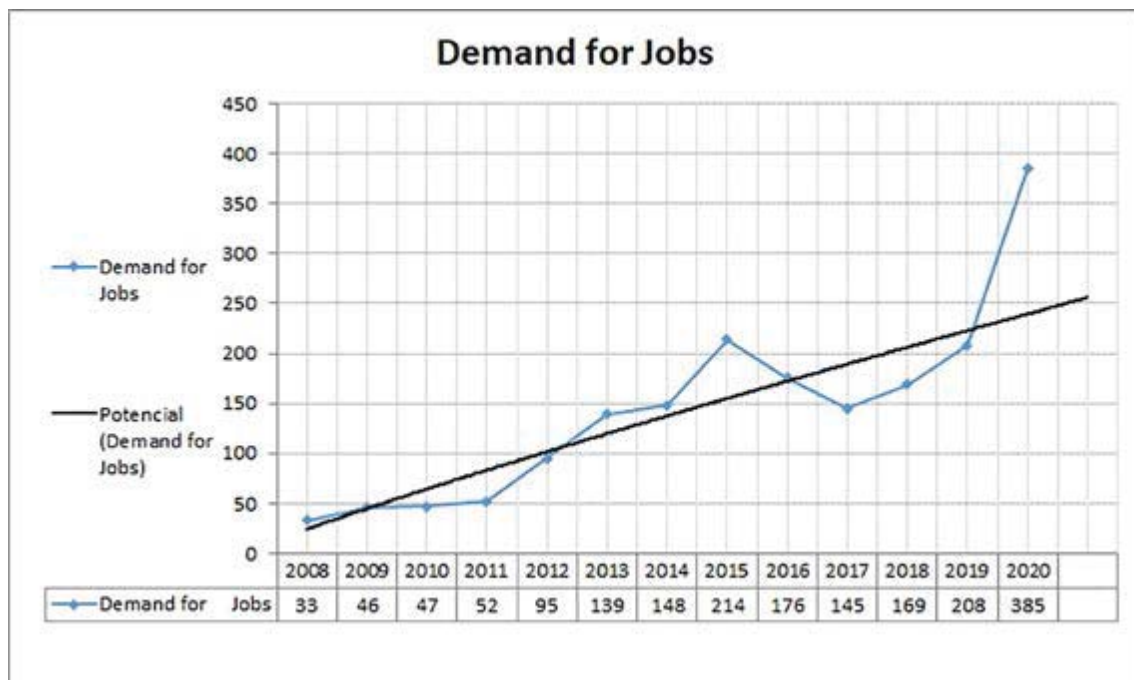
Table 5. Indicators of CEG management in 2020. Evolution of activity 2008 to 2020.

The work completed per team in 2020 was more than double the amount completed in 2019, with a significantly lower number of staff and without considering the effect of the COVID-19 pandemic which has not been reflected in the staffing data (equivalent staff), indicating the high commitment and dedication of the CEG members, as well as a change in the CEG leadership that has implemented the use of more efficient tools, which has led to these good results.

In order for the service requesters to appreciate the work and effort that each job originates in the CEG’s activity, from 2020 the cost invested by the CEG in each job has been incorporated in the issuance of reports.

The following sections present in graphical format an overview of the evolution of the main data in the table above.

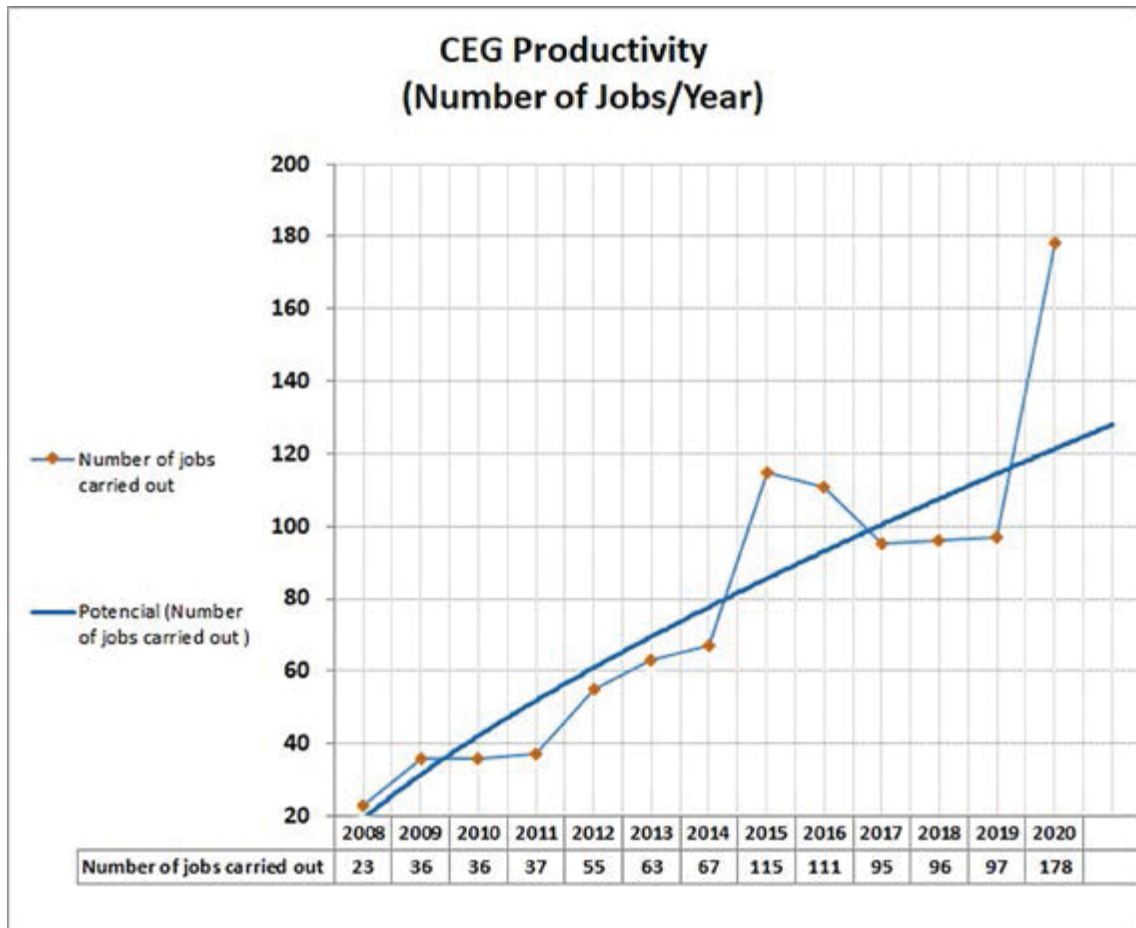
Evolution of the demand for jobs.



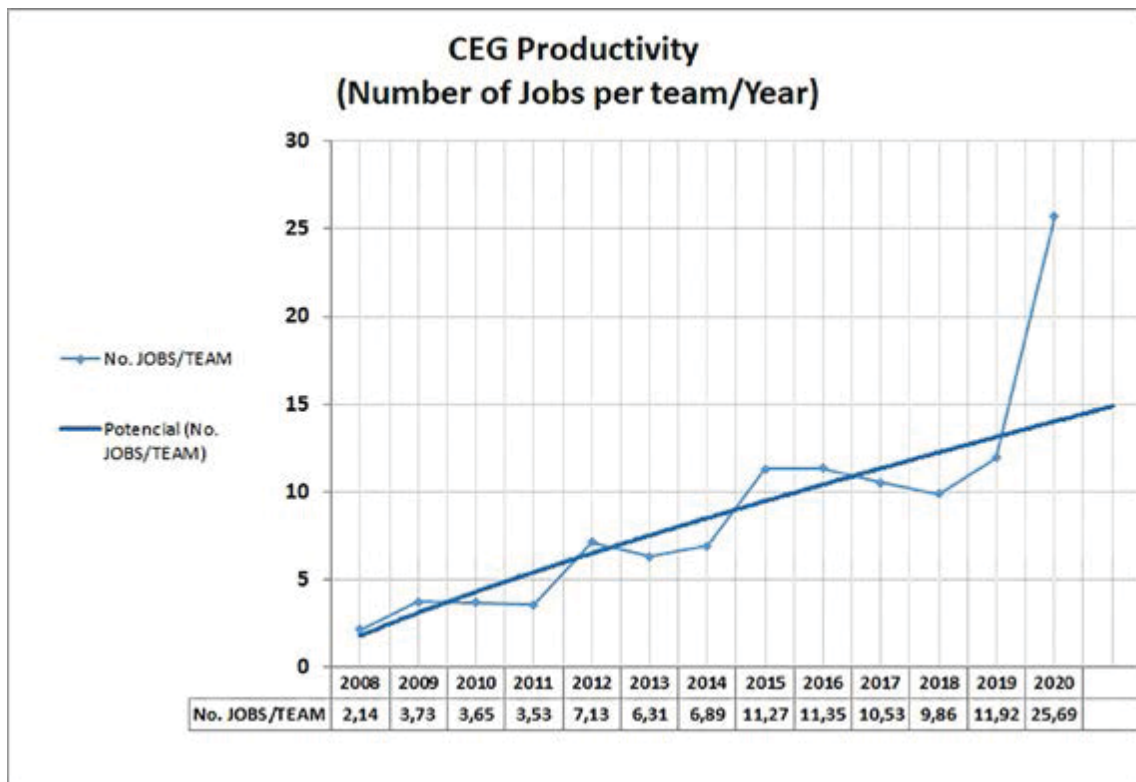
Graph 4. Demand for jobs 2008 to 2020

Evolution of the number of works carried out

As can be seen in the graph below, the CEG has increased its productivity every year, a relevant aspect considering that human resources have remained stable, and their occupation has decreased.



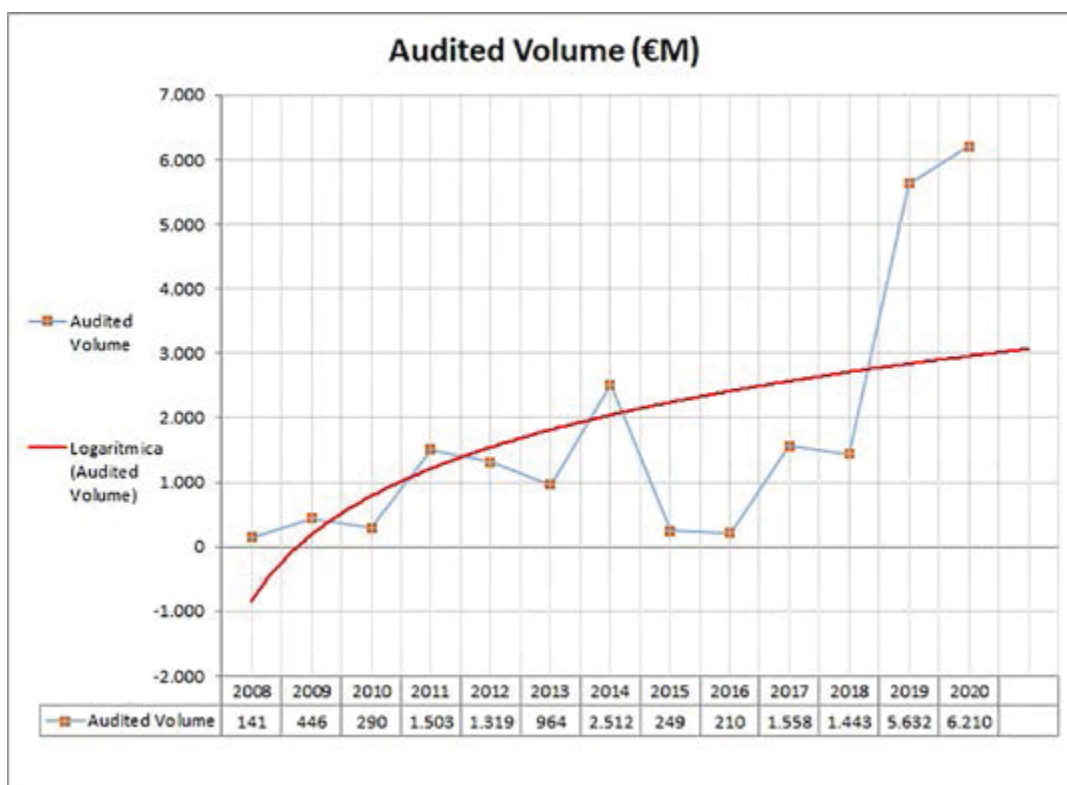
Graph 5. Productivity of the CEG from 2008 to 2020.



Graph 6. Productivity of the CEG teams in the period 2008 – 2020

Amount of audited contracts.

Over the last 13 years as a whole, the total audited volume amounts to €22.48 billion.



Graph 7. Volume audited by the CEG from 2008 to 2020

Savings achieved/value generated.

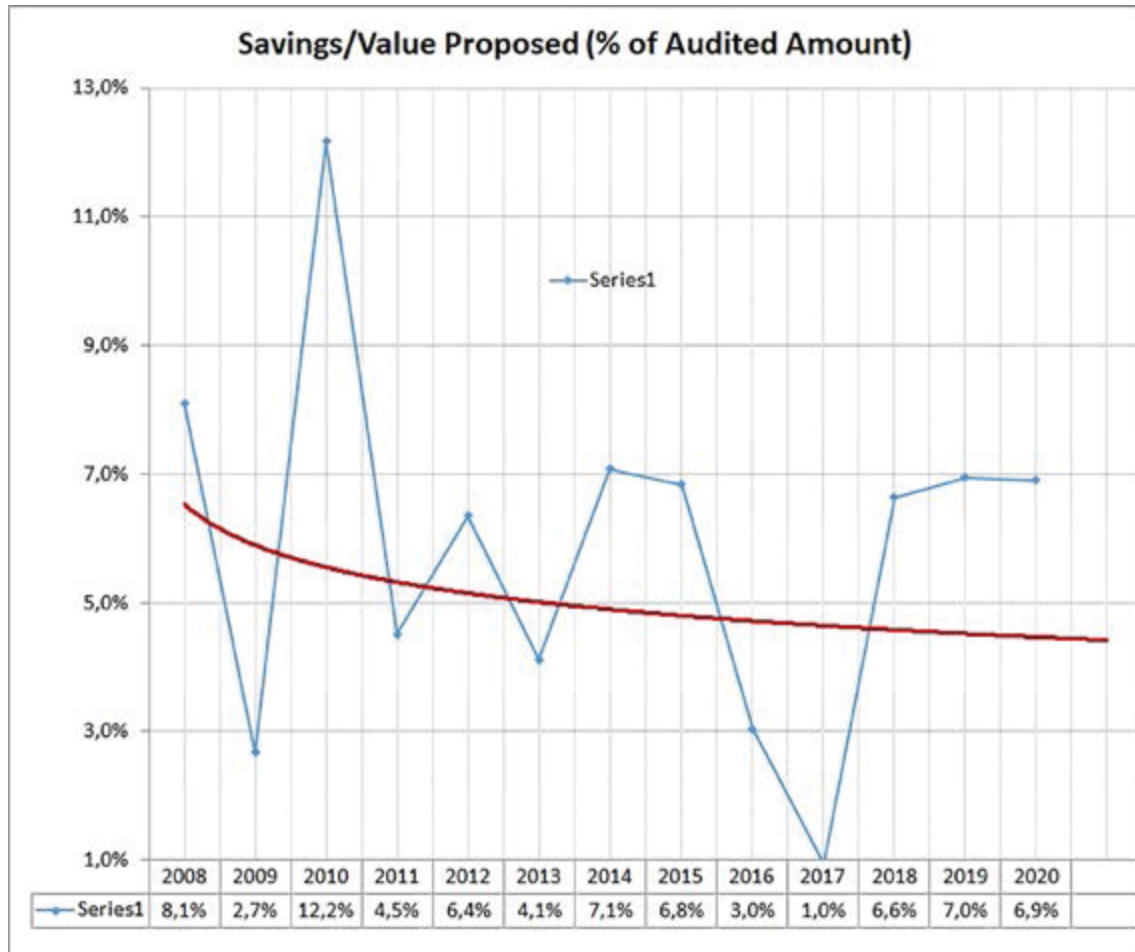
Years	Amount of Audited Contracts (Millions €)	Savings Achieved (Millions €)	Savings/Audited Amount Ratio
2008	141,4	11,5	8,1%
2009	445,5	11,9	2,7%
2010	289,7	35,3	12,2%
2011	1.502,7	67,9	4,5%
2012	1.318,7	83,8	6,4%
2013	964,2	39,7	4,1%
2014	2.511,8	177,9	7,1%
2015	249,4	17,0	6,8%
2016	210,5	6,4	3,0%
2017	1.558,0	14,9	1,0%
2018	1.442,6	95,8	6,6%
2019	5.631,8	391,5	7,0%
2020	6.209,5	428,6	6,9%
TOTAL	22.475,8	1.382,2	6,1%

Table 6. Ratio savings / audited amount period 2008 / 2020

Over the last 13 years as a whole, the total savings achieved amount to 1.38 billion euros.

Savings/audited amount ratio

The table below details the historical data on audited contract amounts and savings achieved. The potential savings (ratio of savings to audited amount) **is very stable at 6.1 per cent** of the budget of the contracts reviewed by the CEG.



Graph 8. Savings as a percentage of the audited amount from 2008 to 2020

Summary of work carried out by the CEG for the OCCAR agency in the last ten years

For the past ten years, the CEG has been working closely with the OCCAR armaments agency on price investigations for programmes in which Spain is involved, stressing the importance of these investigations and price audits in order to achieve a fair economic valuation for these joint defence programmes. Specifically, the audits carried out in this period pertain to the A400M programme with the number of price investigations per year as follows:

Year	SP NPA Completed audits
2011	2
2012	2
2013	3
2014	2
2015	7
2016	3
2017	2
2018	11
2019	7
2020*	3*

Table 7. Number of audits carried out for the OCCAR agency in the period 2011 to 2020.

These audits commissioned by OCCAR to each national pricing authority (in our case DIGENECO) respond to Spain’s participation in a multinational programme under the auspices of the OCCAR agency, where each nation is assigned a workshare⁵ that usually coincides with its economic contribution to the programme. The problem with these audits is that each country audits its part of the programme without having visibility over the rest, which is audited individually by the other participating countries. As there are common parts of the programme and the relations between the companies of the participating countries are complicated, as there is no management and control of the audit as a whole and each country has no visibility of what the others have done, this generates a lack of confidence that makes one wonder whether any of the countries is being very rigorous with its industry in comparison with the rest. This is the case of Spain, which in the execution of the audits entrusted by OCCAR follows the same procedure and dedication of resources as in the national audits, producing important adjustments in each of the bids analysed.

The workload that OCCAR has entrusted to the Cost Assessment Group in the last ten years has been on average ten per cent of its total workload, consuming in addition ten per cent of the assignment with ISDEFE, however, as suggested by the OCCAR Management Procedure number six (OMP6) they are carried out at no cost to OCCAR and are paid by each of the pricing authorities of the country concerned.

⁵ In programmes developed within a business consortium, usually multinational, it is necessary to distribute the projects or parts of them among the partners. Worksharing is a way of ensuring that the investment made by the governments involved in these multinational programmes is allocated in the form of work to industries in their country.

The CEG is considering that these audits commissioned by OCCAR be paid by OCCAR, as the OMP6 gives this possibility as long as it is justified and reported before the work is carried out. Furthermore, the CEG is of the opinion that the savings derived from the audits carried out on the participating Spanish industry should revert in an increase of workshare to this industry that balances the final participations in the programme.

In the CEG's opinion, the fact that each country audits a part of the programme (its industry) without visibility of the rest is a practice that should be avoided as the audit will always be limited and without visibility of the common parts, this problem should be solved by OCCAR having the capacity to carry out price investigations as it has enough staff to develop such a unit or if it could not do so in the short term, in the meantime, it should appoint in each price investigation one of the countries participating in the programme as coordinator/director, so the rest of the countries could observe the results of their counterparts, the means and methodology used and the common guidelines to be applied.

Study of the need for the CEG.

From all of the above it can be deduced that the CEG is a highly specialised and unique technical service, not only in MINISDEF, but also in the General State Administration as a whole and in the private sector, and that it is necessary for the following reasons:

- Spain's Ministry of Defence can be homologated with the most advanced states of the European Union and NATO, which have bodies or agencies with functions, characteristics and working methodology similar to those of the CEG. This facilitates the negotiation of Memoranda of Understanding (MOUs) for international programmes and the achievement of satisfactory agreements on the economic, financial and contractual aspects of these programmes.
- The CEG's thirty years of activity results in significant savings in the department's investment expenditure and contributes to the continuous improvement of management procedures and practices, especially in the area of defence procurement and sustainment programmes, whose complexity and long duration require effective instruments for efficient spending and contracting.
- The methodology applied by the CEG contributes effectively to the MINISDEF acting as a single client for the companies that participate in defence programmes, as well as to improving their collaboration and transparency, enabling the MINISDEF to have the information it needs for the proper management of these programmes and the corresponding contracts.
- The numerous lessons learned from the performance of the CEG as a technical service position it as a suitable body to actively participate in the design of methods and procedures for the estimation, planning and control of the costs

generated by MINISDEF investments, which are necessary for DIGENECO to exercise its competence to control this type of expenditure, which usually goes beyond the short term and frequently compromises the financial capacity of MINISDEF in the medium and long term. The CEG is developing its own computerised management tool that will significantly speed up its work and provide very useful information for data analysis (two of the three/four modules that the tool will have in the future are already in operation).

The need to maintain and strengthen the CEG has been expressed on several occasions over the last ten years, with initiatives aimed at improving efficiency and economy of expenditure and streamlining recruitment, but so far they have not had a direct effect on the increase in staffing levels / commissioning so necessary to cover the annual work plan of the CEG (PATCEG).

Conclusions

- The functions assigned to the CEG make it a unique specialised technical service, necessary to support key decision-making in MINISDEF's investment planning and decision-making processes, especially those related to armaments and materiel, as well as to support contract management in the same context. This service is not exclusive to one army, but is common to the whole of MINISDEF.
- Of the functions assigned to the CEG, the one with the greatest methodological development and accumulated experience is that related to audits and analysis of contractors' costs and prices, which achieves substantial savings in expenditure by applying NODECOS.
- Since 2012, the estimation of the life-cycle costs of weapon systems during the procurement process has become very important⁶, where sufficient experience has been gained to establish a robust methodology⁷ and which produces and will produce very significant savings that are quantifiable at pre-procurement points in time. Both instructions are currently under review as the aim is to amend the existing ones in the light of the experience gained during the nine years of implementation.
- The experience accumulated by the CEG in the development of the above-mentioned functions is very useful for it to effectively develop the function of participating in the design of the methods and procedures for the planning and control of the costs derived from the investments, thus providing support to

6 Instruction 67/2011, of 15 September, of the Secretary of State for Defence, which regulates the Process of Obtaining Material Resources. BOD number 189 of 27 September 2011.

7 Instruction 72/2012, of 2 October, of the Secretary of State for Defence, which regulates the process of obtaining armaments and materiel and the management of its programmes. BOD number 202 of 16 October 2012.

the DIGENECO management body that in the future will be assigned this responsibility.

- Despite the fact that the staff has been understaffed since its creation, the number of jobs the CEG is able to carry out has been increasing every year. Due to the continuous improvement of its working methodology, the number of jobs has increased tenfold in the last twelve years. However, its coverage hampers the supervision tasks, which cannot be renounced because of the need for adequate quality in the work of the CEG, which is why it is very necessary to increase its resources, as without them the number of works will tend to decrease and only partial results will be achieved. The work carried out in the CEG is very complex and requires training for which the military staff are not prepared, neither the training nor the advanced training prepares them for it, which means that the military staff assigned to the CEG are required to make a considerable extra effort, and they also need at least two years of specific training to begin to perform in their job, a matter that must be taken into account if there is to be stability in the job. There is a strong need to strengthen the military part of the CEG's staff, as the commissioning part, although the resources allocated need to remain stable, could be more easily covered with more budget and training. In order to encourage military staff to stay in the service, consideration should be given to improving their career paths, for example by giving them higher posting points, rewards for work performed and higher productivity bonuses. The current job descriptions of the CEG, both for military and civil servant staff, are insufficient to cover its normal workload and need to be expanded as soon as possible to cover these human resources. Until this is done, it will not be possible to generalise the services of the CEG and achieve the highest levels of efficiency in the expenditure of the MINISDEF as a whole. Moreover, if we do not do so soon, these services will be left in the hands of external companies (currently ISDEFE) which, under their own criteria, will show results that the MINISDEF will not be able to question or to settle differences of criteria between the Industry and the company that audits the service. Currently, and due to a lack of resources, the CEG only covers 60% of the services it is requested to provide, and this considering that it has not carried out an extensive dissemination of the services it provides. If this were done, we estimate that the request for these services would increase by at least 50%, which would lead to an even more notable decrease in its coverage. In this case we estimate that a maximum coverage of 40% of the requests for cost and price analysis could be provided and progressively decreasing. In addition, as I have already mentioned, since 2006 the CEG has had a commission, currently covered by the company ISDEFE, which provides support for the determination, control and verification of the technical part of each job and its impact on the economic part. ISDEFE staff are integrated into military-led teams that are well structured, sized and trained. It is intended that the commissioned staff stay as long as possible in the CEG, as they have to undergo training prior to providing services in the CEG, and this training

requires a long period of time, the cost of which the CEG has to assume, as these services are not offered by any private company and are specific to the Ministries of Defence of the most advanced countries.

In order to achieve the incorporation and retention of the staff of the current contractor (ISDEFE) in the CEG, this company must use incentives to recruit specific staff to be incorporated in the provision of services in the CEG, promote motivation and retention policies for this staff and develop specific procedures, outside its rigid structure, so that this staff has sufficient motivation to remain in this assignment and in the company itself.

- Spain, the Ministry of Defence, the armies and the navy should give more importance to this specialised group, which is providing such good results in its annual reports. These results are mainly due to the dedication and personal challenge of its components, as the military staff are not compensated for it, being most often penalised for their lengthy time in this unit, and the commissioning staff are not incentivised by their company either, resulting in casualties that significantly impair the work.
- In order for the unit not to be left in the hands of external companies in the future, where MINISDEF does not have its own criteria, it is necessary to undertake the aforementioned incentives for its military staff.
- This action should become an institutional challenge as one of the most valuable units of MINISDEF and therefore one of the most highly valued, and SEDEF should consider addressing these shortcomings.

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