

## 10th Administration and Management Committee

**10th AMC Meeting, 14th -15th November, 2019**

**45th GB Meeting, 9th - 10th December, 2019**

## Long Term Human Resources Plan

**The AMC is invited to note the F4E staff allocation until 2027  
The GB is invited to endorse the F4E staff allocation until 2027**

<i>Approval Process</i>			
	<i>Name</i>	<i>Action</i>	<i>Affiliation</i>
<i>Author</i>	<b>Akingbade-Taylor H.</b>	<b>31 October 2019:signed</b>	<b>ADM</b>
<i>Co-Authors</i>			
<i>Reviewers</i>	<b>Jahreiss H.</b>	<b>31 October 2019:recommended</b>	<b>ADM</b>
<i>Approver</i>	<b>F4E-Director S. J.</b>	<b>31-Oct-2019: approved</b>	<b>DIR</b>
<i>RO: Georges Caroline (F4E)</i>			
<i>Read Access</i>	<b>LG: AMC, AD: F4EN-ADM06, AD: HR_team, project administrator, RO, LG: GB Secretariat , AD: IDM_F4E, GG: IAC</b>		

# Long Term Human Resources Plan

## Executive Summary

### Purpose

This document describes the F4E Human Resources plan up to 2027. The projections reflect the overall project schedule (OPS) as approved by the ITER Council in November 2016 with a baseline date of December 2025 for first plasma.

### Background

The document responds to the AMC request of June 2019 for a consolidated overview of the Joint Undertaking's staffing requirements.

### Summary

The F4E staff allocation and evolution thereof until 2027 reflects a workforce total of 733 resources (in 2019) required to support the construction works and ancillary works of Commissioning and preparation of operations as foreseen in the baseline approved by the ITER Council of 2016.

Over the 2019-2027 period it is estimated that there will be a 20% reduction in the overall human resources used by F4E to implement its mandate.

The evolution in the number of F4E's human resources shall be accompanied by a continued effort to seek organisational, structural and performance enhancements towards offering best value for money and on time delivery of first of a kind systems.

### Recommendation

The AMC is invited to note the F4E staff allocation until 2027.

---

## **NOTE TO THE ADMINISTRATION AND MANAGEMENT COMMITTEE**

**Subject: Long Term Human Resources Plan**

### **1. Introduction**

This document describes the F4E human resources plan up to 2027. The staffing plan uses F4E's 2019 budget appropriations and an establishment plan total of 464 posts as a basis and forecast starting point.

The staff complement is made up by officials (51) and, so called, long term temporary agents (212) and contract agents (159) as well as a limited contingent of short term temporary agents (20) and contract agents (19) and Seconded National Experts<sup>1</sup> (3). Taken together, this constitutes F4E's statutory staff contingent which is contracted, managed and administered on the basis of the EU Staff Regulations (SR) and the Conditions of Employment of Other Servants of the European Union (CEOS).

The human resource requirements of the project exceed those of the establishment plan. F4E therefore supplements its statutory resources with insourced contractors (289). These contractors cannot be assimilated to staff and are subject to constraints on the tasks and responsibilities that they can carry out.

This mix of statutory and contracted resources, combined with evolving project requirements entails a dynamic and multi-layered approach to managing in 2019 the 753 human resources deployed by F4E to effectively accommodate the ever evolving needs of the ITER construction.

The projections and figures featured in the sections that follow are exclusive of the subcontracted resources relied on by F4E. This exclusion reflects the fact that unlike the insourced contractors mentioned earlier, F4E does not have a direct contractual relationship with its subcontractors who work on the project through third party intermediaries.

When considering these figures, it is important to recall that F4E's staff establishment plan was drawn up in 2016. Since that time, the overall project cost and schedule have been doubled and extended, respectively. Aside from the temporary reinforcement of 45 posts (21 ST TA and 24 ST CA) in 2015, the staff establishment plan was never adjusted in a commensurate way.

---

<sup>1</sup> Seconded National Experts are not statutory but subject to a specific GB Decision. However, they do feature on F4E's establishment plan and are therefore included in the statutory headcount for the purposes of this document.

## 2. F4E human resources plan overall strategy

The ITER project is organised in two main project typologies: PA's that start based on a functional specification and PA's that work with a built-to-print specification. Both of these are characterised by specific schedules and life cycles. While the time lines and technical characteristics of the various programmes vary, they typically share the same life cycle stages [(i) design and PA specification; (ii) manufacturing; (iii) assembly and installation; (iv) commissioning and (v) operation].

In keeping with this, F4E's resource management strategy involves leveraging the experience and knowledge acquired on the life cycle stages of programmes that are more advanced and transfer this onto the corresponding stages of programmes with later schedules. Stated differently, this involves knowledge sharing on a life-cycles basis and the exchange of functional knowledge between the teams.

In recognition of the budgetary, contractual and regulatory rigidities inherent to its statutory staff, and because this group has a key role in managing and supervising the contracted staff category, F4E's staffing strategy aims to stabilize the statutory complement and primarily rely on its non-statutory contingent to respond to the fluctuating resource needs of the project.

This strategy also accommodates the first-of-a-kind nature of the project and the risks this can have on the schedule forecasts. Under the approach, the statutory complement ensures effective interface planning, compliance assurance, budget and contract management as well as knowledge management. Among other things, the strategy addresses in particular the fact that under the F4E statutes and the EU regulatory framework, certain core financial, contractual and representation tasks can only be carried out by statutory staff. The approach also reflects the relatively long periods to hire new statutory staff and get them up to speed and productive.

Management's sustained effort to maintain the low [statutory] staff turnover level of 3.5% (historical average) is a manifestation of the strategy and allowing the Joint Undertaking to leverage its multidisciplinary and multi-layered workforce.

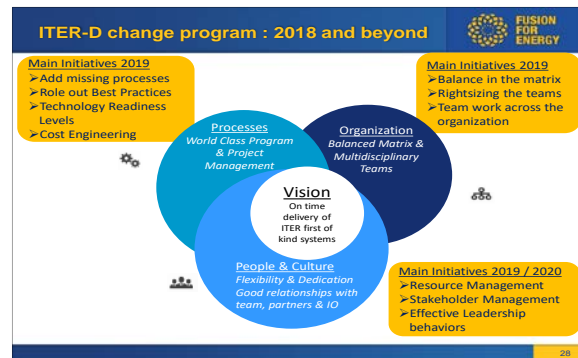
## 3. Staffing and organisational structure

Since its establishment in 2008, F4E has gone through various reorganisations. These have progressively evolved F4E from focussing on procurement activities to the project management centred structure it is at the time of writing and which is shown in Annex I.

Under F4E's present organization, 75% of statutory staff is active in operational activities [See Annex II for the detailed overview of overheads and Annex III, IV and V for breakdowns of statutory and non-statutory staff over the org structure. Having three out of every four of its statutory staff assigned to operational activities is regarded as creditable in terms of operational efficiency and resource allocation. F4E considers this achievement an endpoint by virtue of the administrative requirements and sound management standards prescribed under its statutes and operating rules.

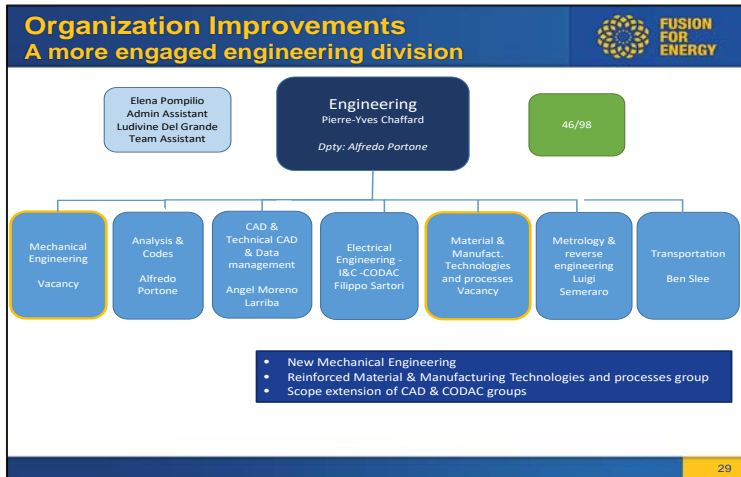
While F4E does not anticipate any meaningful reduction in the relative share of its overhead, and while it considers that the sizeable budget entrusted to the Joint Undertaking does not permit any meaningful reduction of administrative support staff without compromising the sound and controlled functioning of the Joint Undertaking, it will continue looking for ways benefiting its productivity and effectiveness. Annex VI features a benchmark of how F4E compares to its sister agencies and joint undertakings in terms of administrative overhead. In the same vein, Annex VII features a list of efficiency enhancing measures implemented in the ambit of F4E's administrative activities.

During 2019 F4E reached another important milestone on its self-improvement journey. This latest achievement saw the implementation of the reorganizing of its largest operational department (ITER-D). The main tenants of this change program are schematically represented in the adjacent figure. At its core the improvement involves the rightsizing of all programme teams to a core group ranging between seven and eleven statutory staff and providing all further technical resources on a matrix basis from a central engineering unit entrusted with dissemination of best practice, people management, technical expertise and insourcing responsibilities.



The creation of a large central engineering unit (see below figure) from which to dispatch engineering expertise on a need to have basis is expected to deliver a number of important benefits. Foremost amongst these are: (i) mitigation of silo challenge; (ii) spread best practice among the different project teams; (iii) enhancement of flexibility and responsiveness to changes in resource requirements across projects; (iv) avoidance of staff 'hoarding' and (v) dynamic rightsizing of teams in reflection of changing priorities.

Annex VIII provides the basis for the stated rightsizing and allocation of engineering resources within ITER-D. The Annex clearly establishes programmes for which the level of activity clearly ramps down between 2019 and 2030n (Vacuum Vessel, Magnets, Diagnostics and SBPS); a second group of programmes (Remote Handling, Cryoplant and Engineering) will have a stable level of activity and staff requirements over the period; and a third trend group (In Vessel, Antennas, TBM and Neutral Beam) for whom the resources needs will fall after an initial spike during the 2019-2023 period.



In addition, the creation of ‘core’ programme teams is expected to allow for better knowledge management as well as the ability ensure seamless handovers to IO after assembly and installation of the components. It is for instance expected that where there is a need for

the transfer of knowledge to IO as part of integrated project teams, commissioning or assemblee, this will come from these core groups. The staff regulations allow to easily and rapidly accommodate such transfers which will be decided on a ‘need to be’ basis.

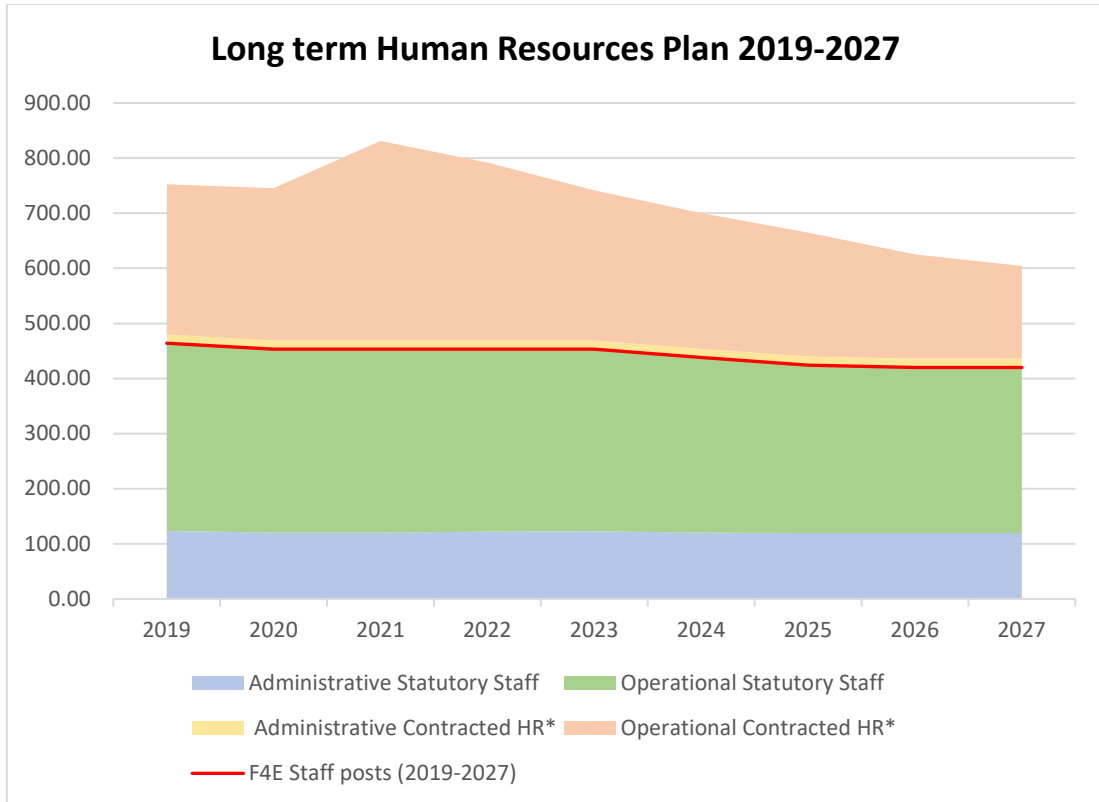
The aforementioned new ITER-D structure is part of a wider change program that will, on the one hand, include process improvements, technological adjustments and cost engineering. But also target enhancements in the ambit of people and culture related actions such as improved stakeholder management, leadership behaviours and work processes. Combined these changes will allow F4E to be more responsive, more flexibility and ultimately more successful in the attainment of on time delivery of the ITER first of a kind systems.

Another salient improvement relates to the intended rationalisation of market attributions so as to limit the amount of time and resources tied up in assisting manufacturers struggling with first-of-a-kind constructions. Among other things the envisaged rationalisation will aim for such assistance to be foreseen as part of wider consortiums.

**4. Evolution of staffing and skills**

A) Until 2027

The below chart summarizes the estimated evolution for statutory and contracted resources for the period ending in December 2027



<sup>2</sup>Over this eight year period, the level of statutory and non-statutory FTEs dedicated to the project by F4E will decrease by a total of 20%, i.e. from 753 in 2019 to 600 in 2027. Annex IX provides further details on this evolution. The respective percentages for the statutory and contracted categories are: 9,5% and 36%. These estimates are based on the ITER IO overall project schedule as approved during the November 2016 ITER Council.

B) Beyond 2027

Although the statutes of F4E , Article 1, include “to prepare and coordinate a programme of activities in preparation for the construction of a demonstration fusion reactor and related facilities including the International Fusion Materials Irradiation Facility (IFMIF)”, no specific staff provisions to that end (i.e. on DEMO) have been included in this document.

Notwithstanding, it is quite clear that the know-how of F4E staff acquired in the execution of the ITER and BA Projects represents an invaluable asset that should be maintained for the future for an effective implementation of DEMO. Therefore it is recommended that in a period of, say 3-5 years, and based on stakeholder’s requests; an evaluation will be carried out based on a realistic plan of the possible gradual involvement of F4E staff in the DEMO project.

5. Conclusion

---

\* Administrative contracted HR: those contracted resources working in ICT, Finance and CSU  
 Operational contracted HR: those contracted resources working in PM, ITER-P and ITER-D

The F4E staff allocation and evolution thereof until 2027 reflects a workforce total of 753 resources (in 2019) required to support the construction works and ancillary works of Commissioning and preparation of operations as foreseen in the baseline approved by the ITER Council of 2016.

Over this period it is estimated that there will be a 20% reduction in the overall human resources used by the F4E to implement its mandate.

The evolution in the number of F4E's human resources shall be accompanied by a continued effort to seek organisational, structural and performance enhancements towards offering best value for money and on time delivery of first of a kind systems.

In keeping with this objective, the F4E management will seek to maintain a leading overhead benchmark position vis-à-vis sister EU agencies and Joint Undertakings. In parallel, management will strive to sustain its strong record in terms of employee turnover and vacancy rate levels.

F4E's improvement steering committee will continue to play a central role in the above commitments as well as help leverage the benefits of the balanced matrix concept introduced in 2019.



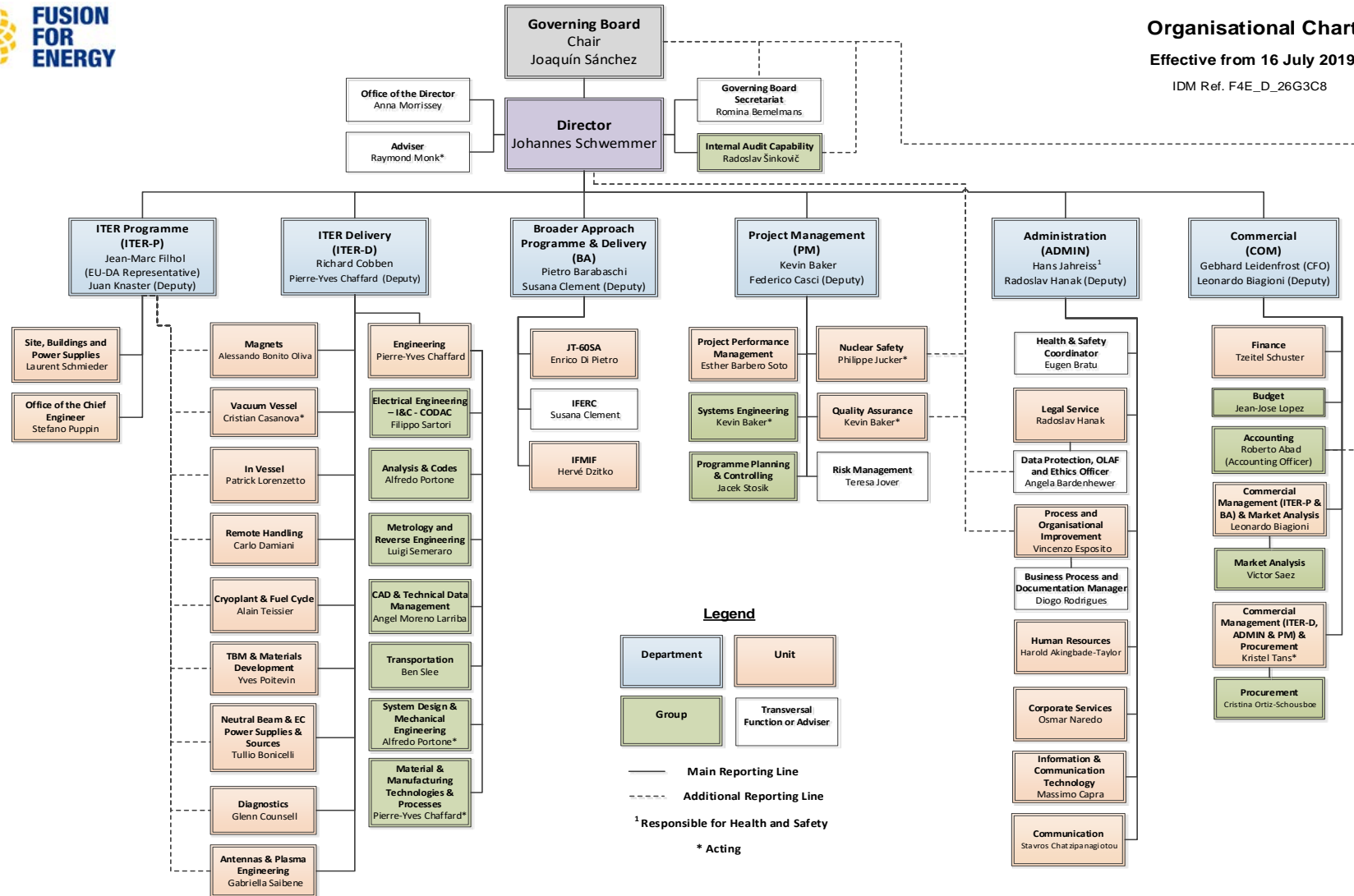
Annex I - F4E Organizational Chart



Organisational Chart

Effective from 16 July 2019

IDM Ref. F4E\_D\_26G3C8



## Annex II

Overview of overheads<sup>3</sup>

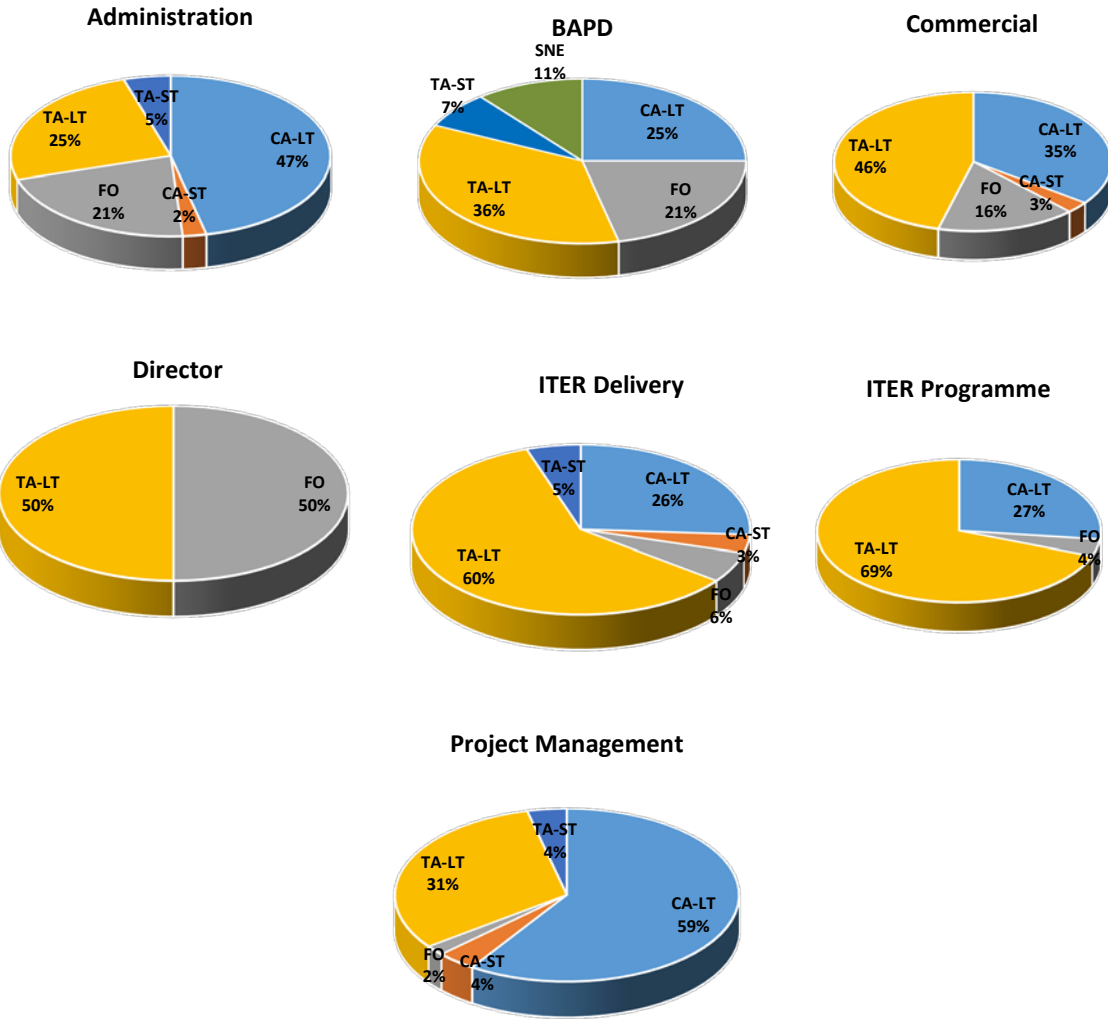
Screening type	Screening category	Description	Year 2018 (%)
Administrative Support and Coordination (overhead)	<b>Administrative support</b>		<b>12.42 %</b>
	DOC	Document management	0.00 %
	HR	Human resource management	4.28 %
	IA	Internal auditing and control (procedural aspects)	0.86 %
	ICT	Information and communication technologies	4.07 %
	LOG	Logistics, facilities management and security	2.78 %
	RES DIR/HoA	Head of Administration	0.43 %
	<b>Coordination</b>		<b>1.71 %</b>
	LEGAL	Legal (administrative matters, including DP)	0.43 %
	COMM	External communication & information	1.07 %
	GEN COORD	General coordination activities	0.21 %
		<b>Operational</b>	<b>74.95 %</b>
Operational	TOP COORD	Top operational coordination (Director/HoD)	5.57 %
	PGM M/IMP	Programme management and implementation	64.67 %
	EVAL	Evaluation and impact assessment	1.28 %
	GEN OPER	General operational activities	3.43 %
		<b>Neutral</b>	<b>10.92 %</b>
Neutral	FIN	Finance, accounting, contract management and administrative procurement	6.64 %
	CONT	Quality management and internal audit and control (with focus on financial aspects)	4.28 %

<sup>3</sup> Figures only statutory staff (i.e. excluding contracted staff) as per 2018 Annual Activity Report and related Commission classification methodology

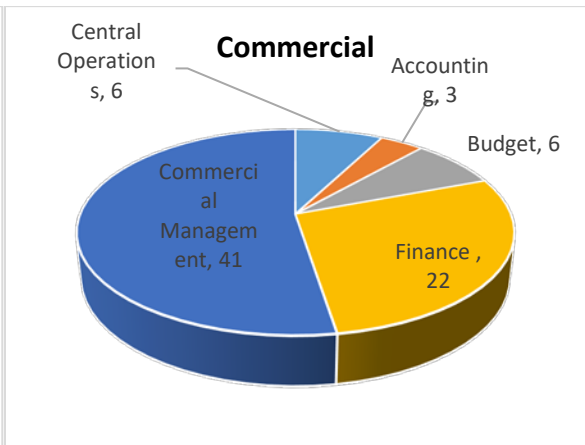
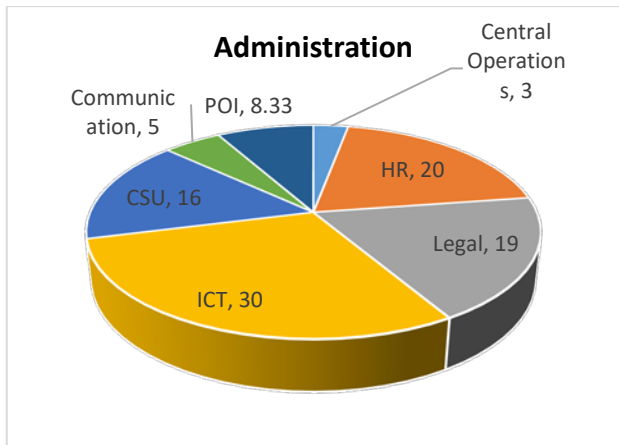
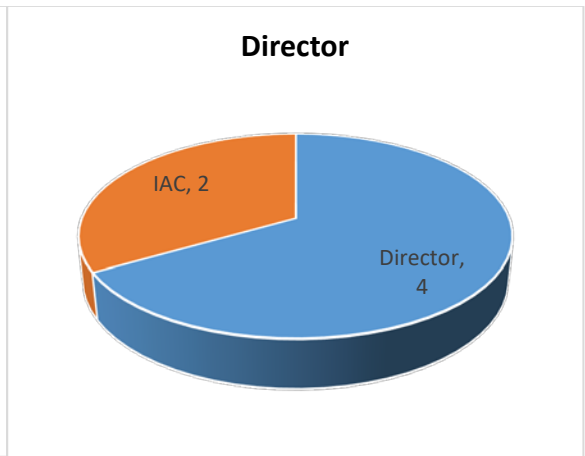
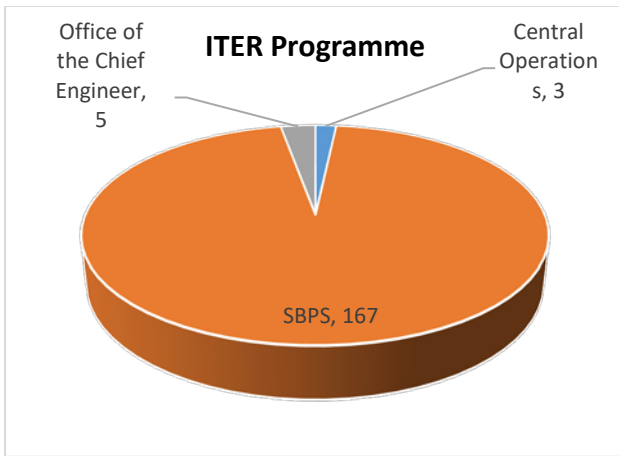
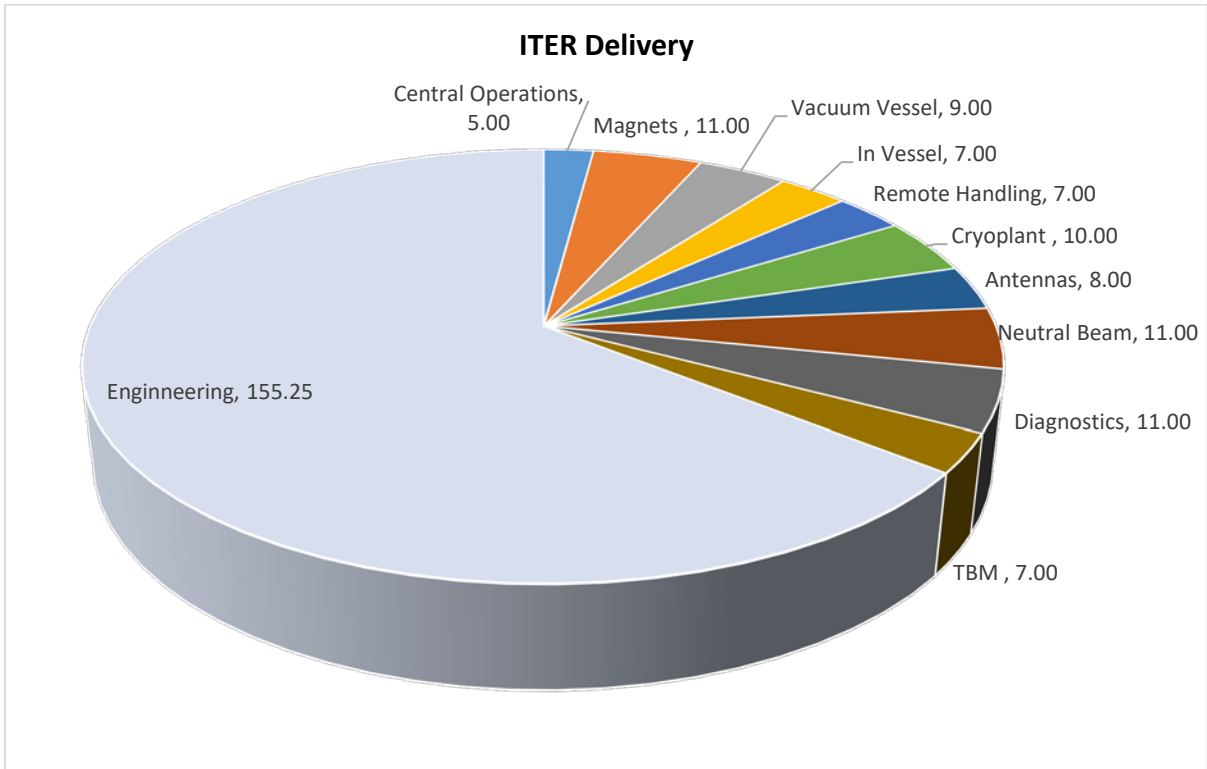
**Annex III**

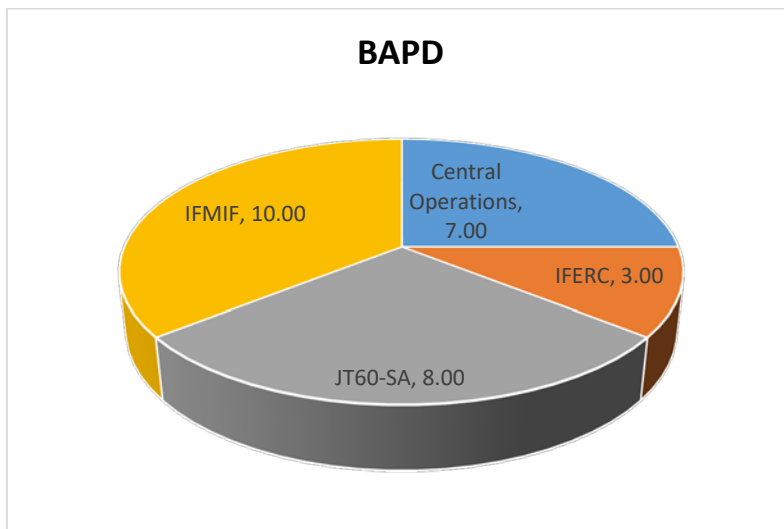
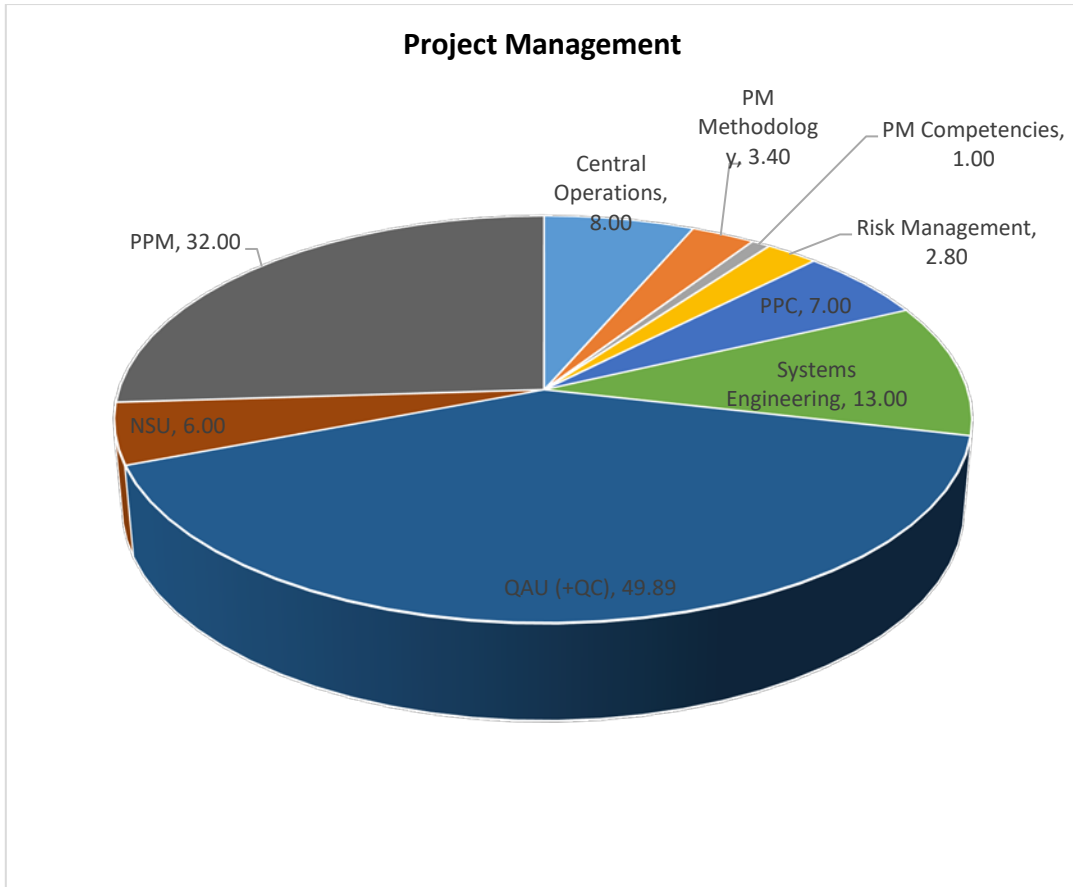
Breakdown of F4E staff: how this is organised over the organizational structure

1. Breakdown of the F4Es statutory staff per department and type of contract



2. Breakdown of statutory and contracted staff per department and team





**Annex IV** Breakdown of operational and administrative human resources per department and team for both statutory and contracted resources (figures in 2019)<sup>4</sup>

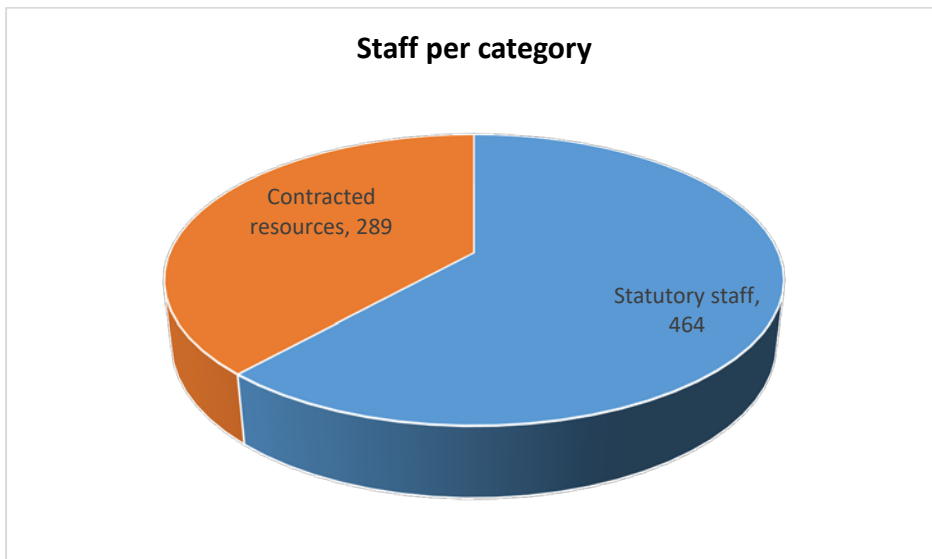
Department	Unit/Group/Cell	Operational HR	Administrative HR
ITER DELIVERY	Central Operations	-	5
	Magnets	11	-
	Vacuum Vessel	9	-
	In Vessel	7	-
	Remote Handling	7	-
	Cryoplant	10	-
	Antennas	8	-
	Neutral Beam	11	-
	Diagnostics	11	-
	TBM	7	-
	Engineering	155.25	-
Total Department		236.25	5
ITER PROGRAMME	Central Operations	-	3
	SBPS	167	-
	Office of the Chief Engineer	5	-
	Total Department		172
BAPD	Central Operations	7	-
	IFERC	3	-
	JT60-SA	8	-
	IFMIF	10	-
	Total Department		28
PROJECT MANAGEMENT	Central Operations	2	6
	PM Methodology	3.4	-
	PM Competencies	1	-
	Risk Management	2.8	-
	PPC	7	-
	Systems Engineering	13	-
	QAU (+QC)	49.89	-
	NSU	6	-
	PPM	32	-
	Total Department		117.09
COMMERCIAL	Central Operations	-	6
	Accounting	-	3
	Budget	-	6
	Finance	10.2	11.8
	Commercial Management	37	4
	Total Department		47.2
ADMINISTRATION	Central Operations	-	3
	HR	-	20
	Legal	11.6	7.4
	ICT	-	30
	CSU	-	16
	Communication	-	5
	POI	1.33	7
	Total Department		12.93
DIRECTOR	Director	-	4
	IAC	-	2
	Total Department		0
<b>Subtotal</b>		<b>613.47</b>	<b>139.20</b>

NB: Different from MAPD by virtue of: new ITER-D structure, both statutory and contracted resources, and representation by department exclusive of matrix

<sup>4</sup> As per new ITER-D structure that entered into force last summer

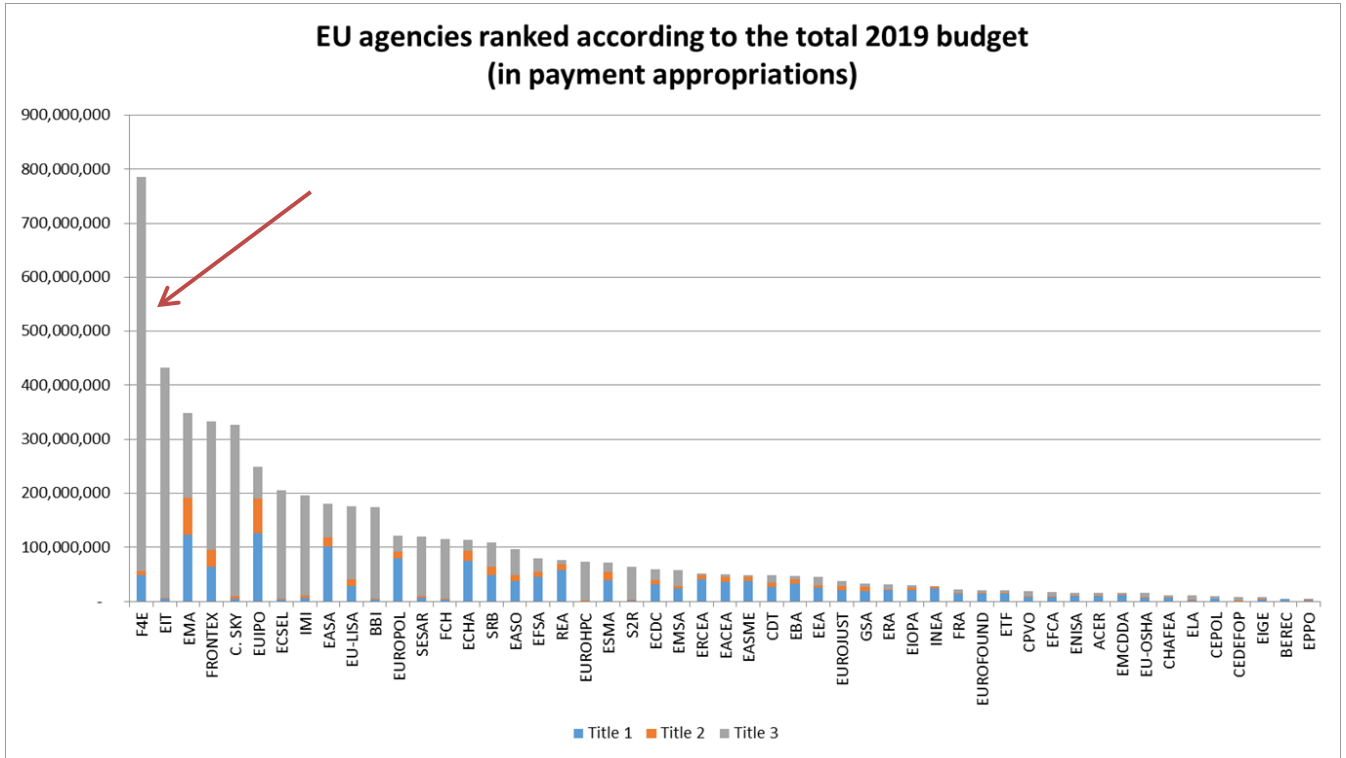
**Annex V**

Breakdown of human resources per category: statutory staff and contracted resources

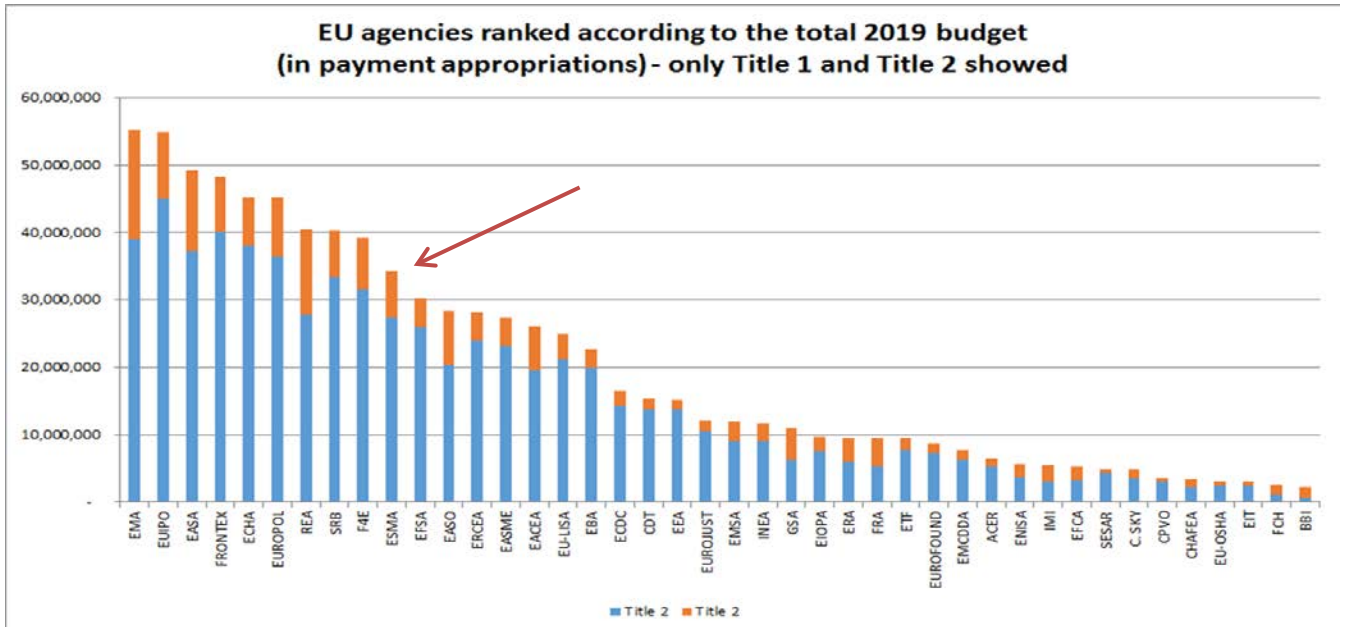


Annex VI

Administrative overhead benchmark

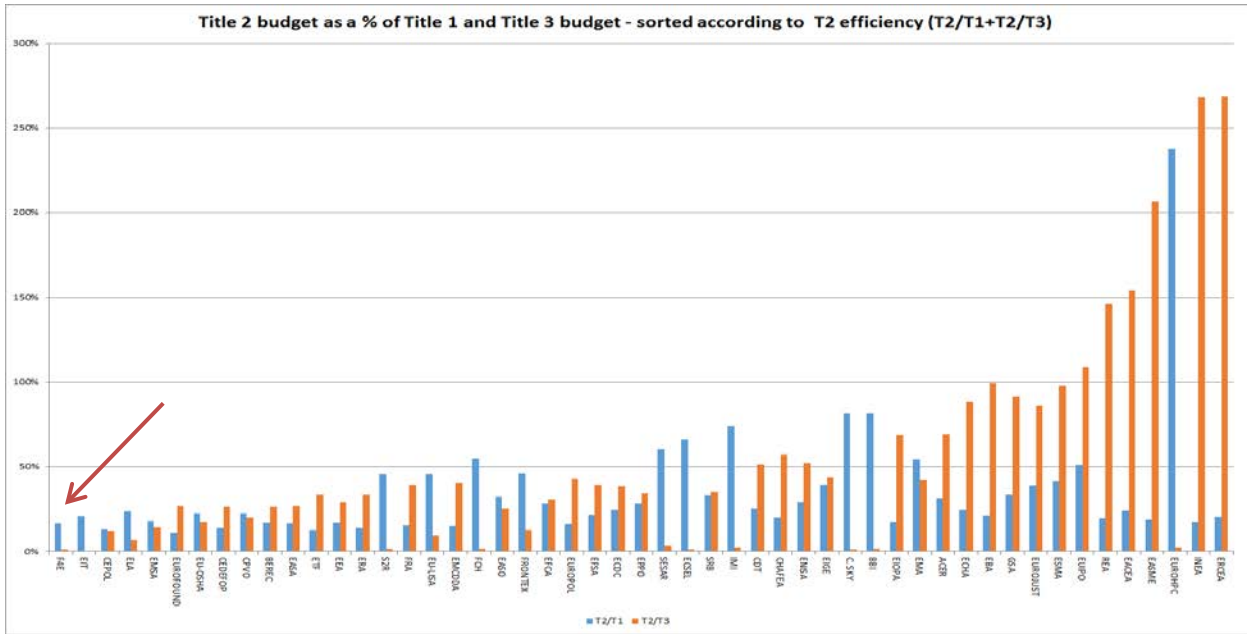


F4E has the largest overall budget and operational budget among the EU agencies

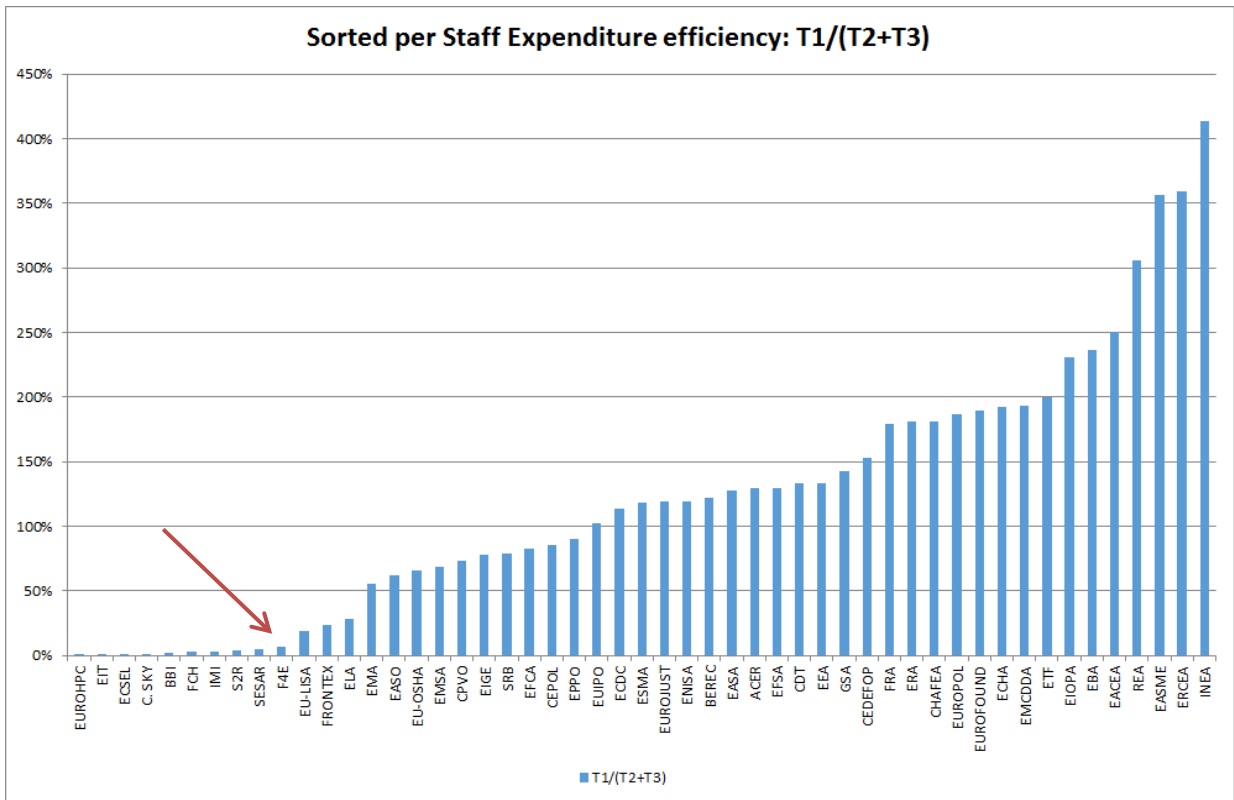


F4E ranks 9<sup>th</sup> in terms of size of the administrative budget (T1+T2)





F4E is ranks first in terms of relative efficiency of Title 2 compared to Title 1 and Title 3



F4E ranks 10<sup>th</sup> in terms of % of Title 1 budget compared to sum of Title 2 + Title 3 budgets (7%)

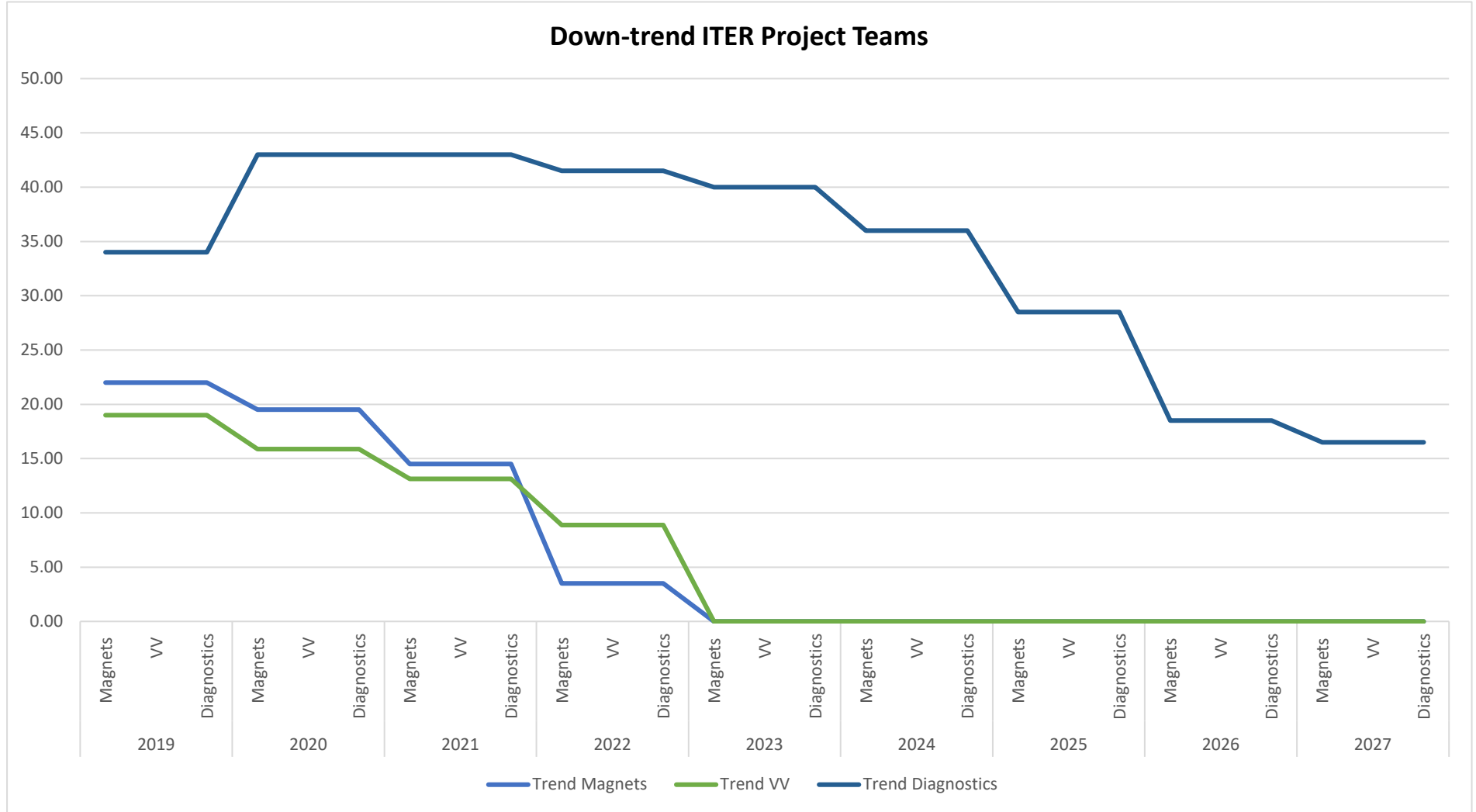
**Annex VII**

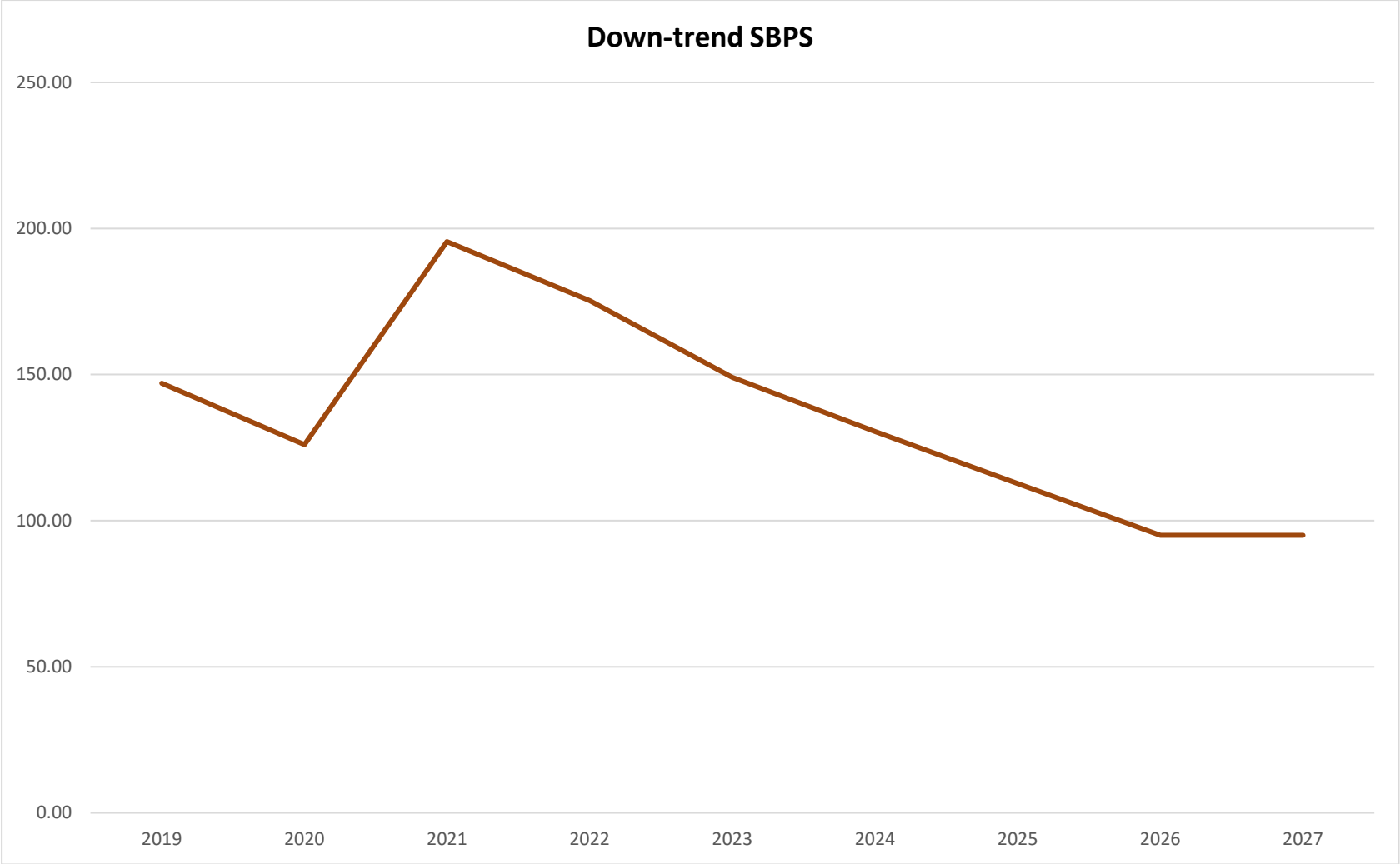
List of efficiency enhancing measures implemented in the ambit of F4Es administrative support services

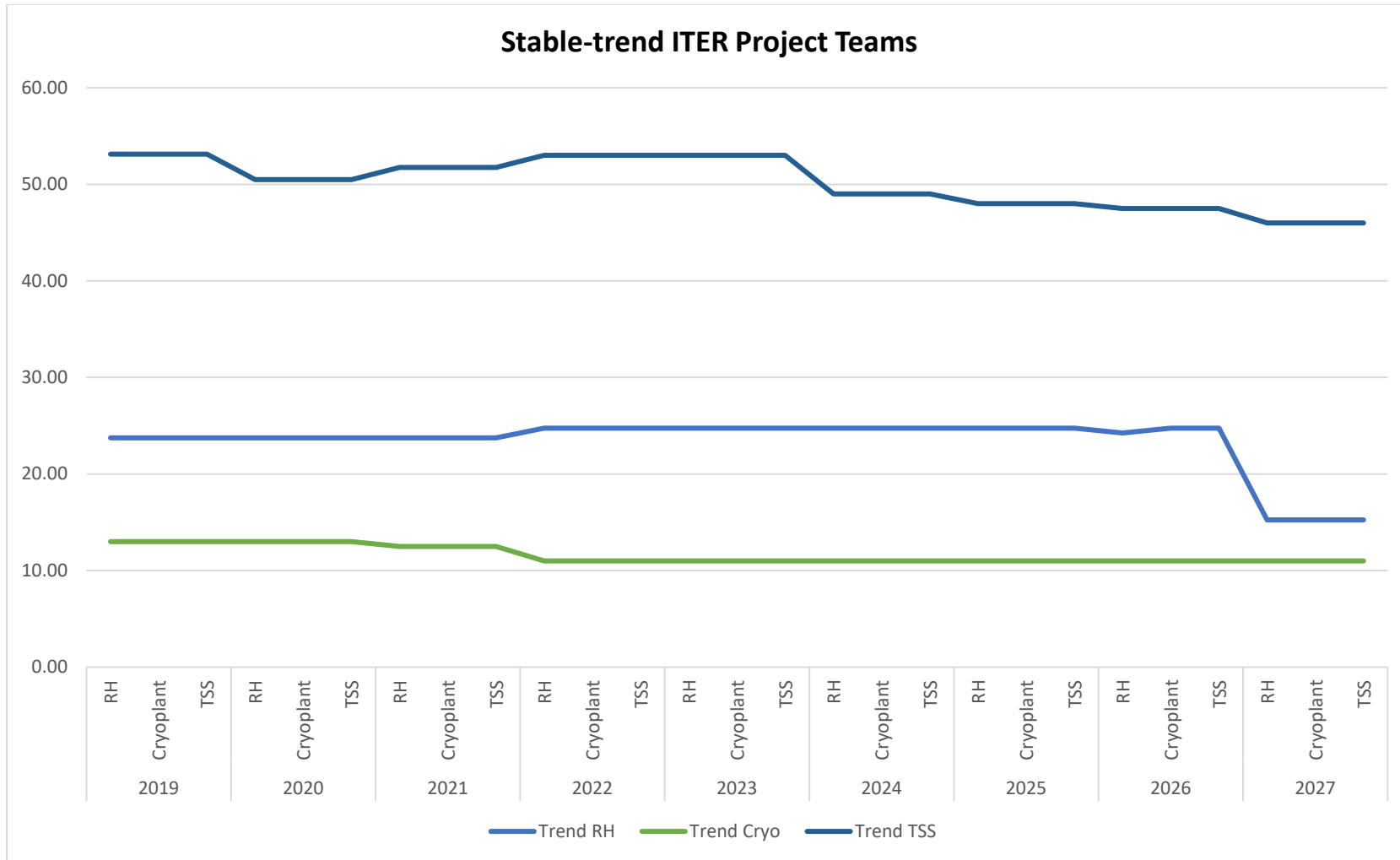
<b>OUTSOURCING INITIATIVES</b>	<b>ICT SYSTEM INITIATIVES</b>
<ul style="list-style-type: none"> <li>• Determination of rights &amp; benefits done by PMO</li> <li>• Reimbursement of duty travel (missions) done by PMO</li> <li>• Mail sorting and distribution services no longer done by F4E staff</li> <li>• Reception and logistical management support no longer done by F4E staff</li> </ul>	<ul style="list-style-type: none"> <li>• Replacement of electronic HR tools by Commission's integrated system</li> <li>• DACC – digitalised contract change management</li> <li>• CAPS – Centralised contract management</li> <li>• RAPID – centralisation of audits and follow up initiatives</li> <li>• E-Procurement (in pilot)</li> <li>• E-Recruitment (in pilot)</li> <li>• Automation of software deployment processes</li> <li>• Disaster recovery data centre</li> <li>• Virtualization of CAD and Analysis workstations with 24x7 availability</li> </ul>
<b>RATIONALIZATION INITIATIVES</b>	<b>KNOWLEDGE SHARING INITIATIVES</b>
<ul style="list-style-type: none"> <li>• Digitalized batching of payments and reimbursements (no more low value transactions)</li> <li>• Joint inter-agency procurements</li> <li>• Reliance on host agreement for provision of most facility management services</li> <li>• Creation of centralised improvement steering committee</li> <li>• Inter-agency framework contract on support to IAC</li> <li>• Optimization of procurement, contract managing and payment processes (removing duplicate tasks and taking measures to ensure compliance with the processes)</li> </ul>	<ul style="list-style-type: none"> <li>• Inter-agency knowledge sharing initiatives AND GROUPS(Legal, HR, ICT)</li> </ul>

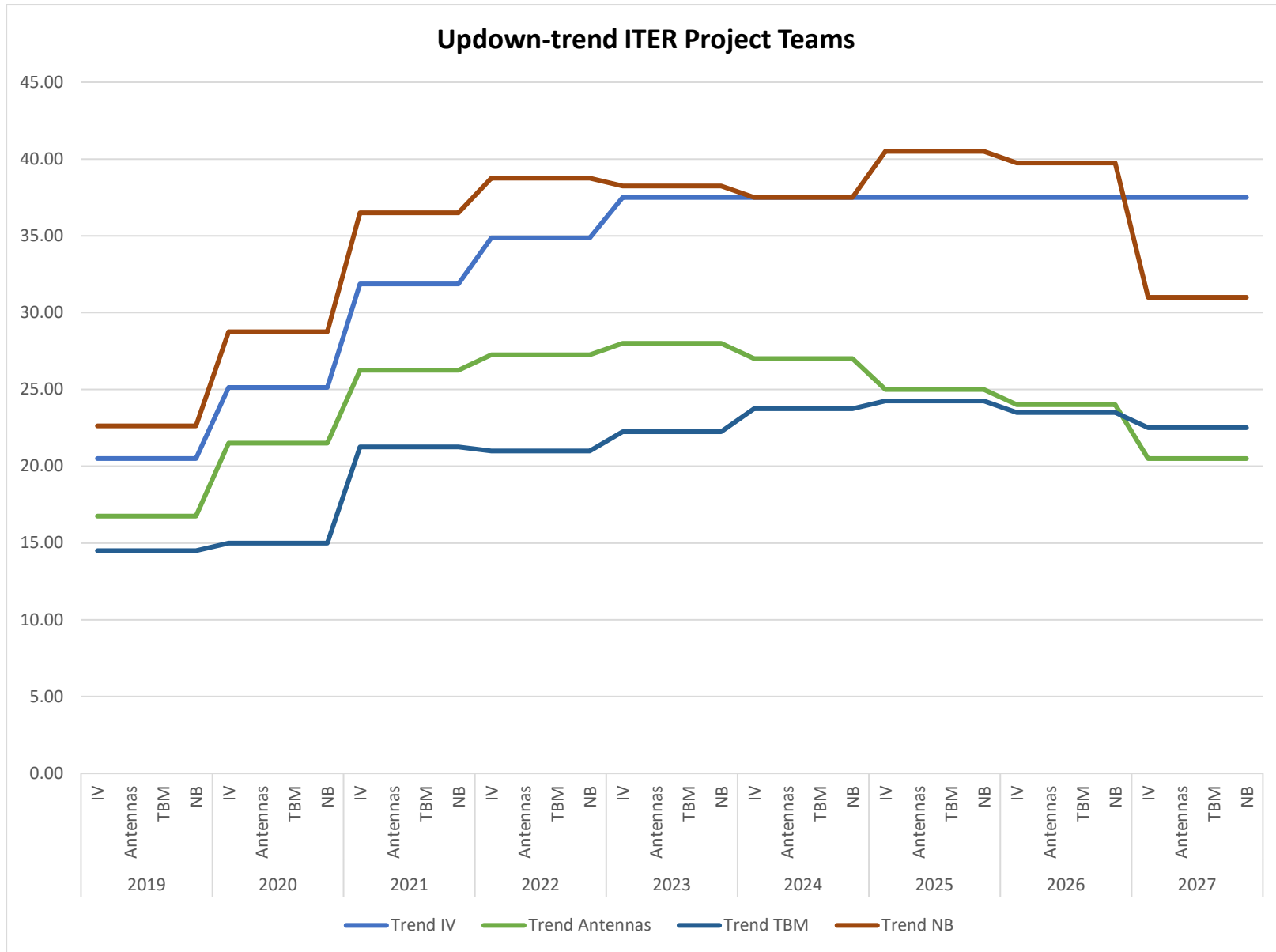
**Annex VIII**

Evolution of statutory staff requirements within ITER-D and ITER-P





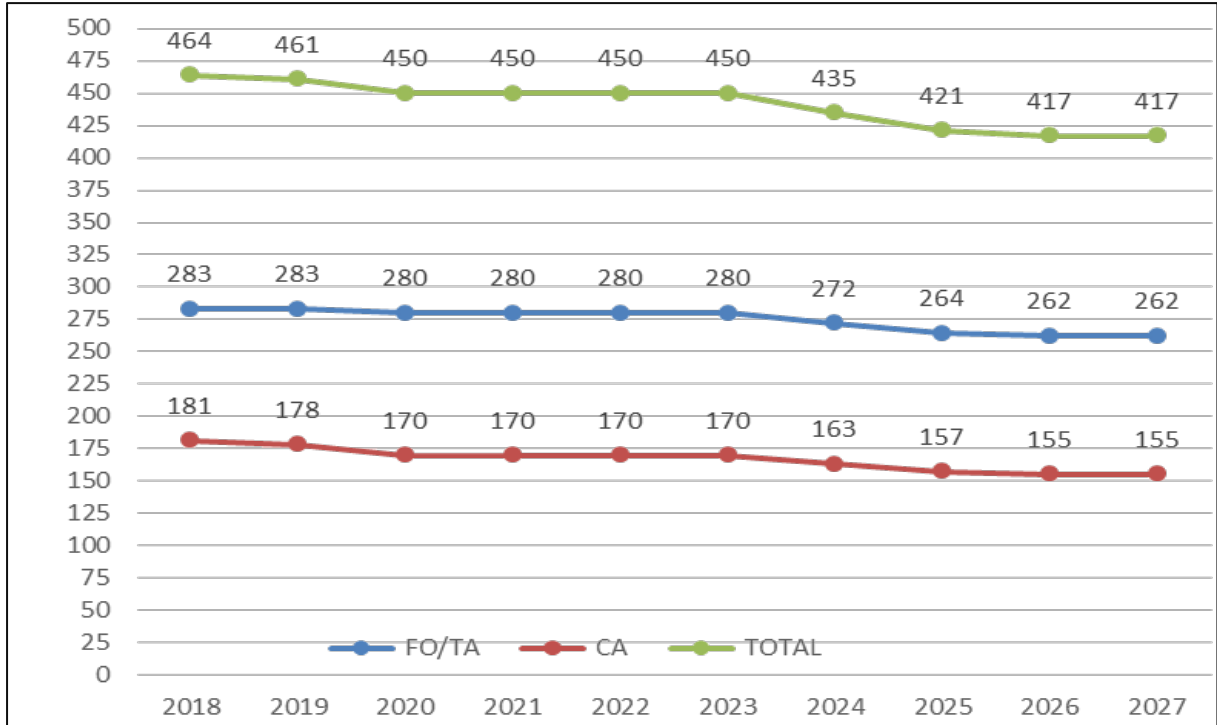




**Annex IX**

Break down of staff evolution for statutory and contracted complements

1- Evolution of statutory staff



2- Evolution of contracted resources

