

Figure 1(a). ICCS/NTUA funding obtained via the European (blue), National (orange) and research service provision contracts (green) for the period 2006-2015.

In correspondence of the previous figure, Figure 1(b) presents the number of newly starting projects per year for the same time period.



Figure 1(b). Number of new projects starting per year: European projects (blue), national projects (orange) and for research service provision contracts (green).

The pie chart of figure 1(c) shows the total budget of research projects undertaken by ICCS/NTUA in the period 2006-2015, for each of the three categories (European, National, service provision contracts).

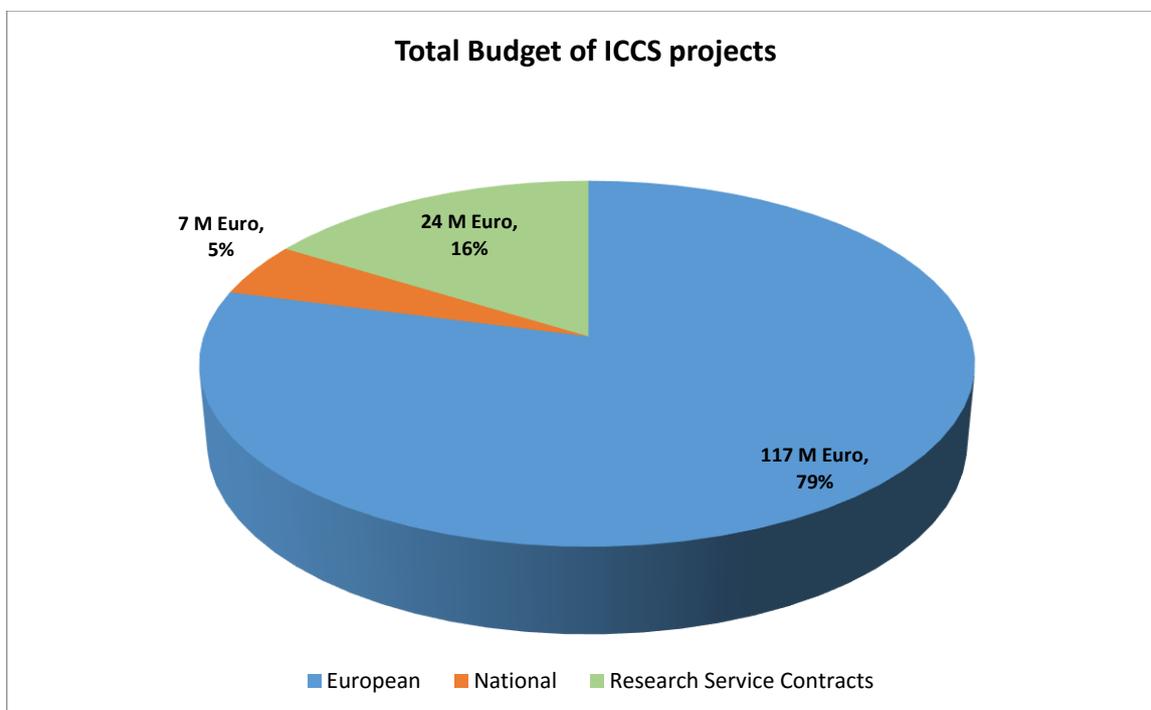


Figure 1(c). Project budget breakdown for ICCS/NTUA with respect to funding sources for the period 2006-2015

As seen in Figure 1(c), 79% of the projects' budget, with the participation of ICCS/NTUA, is related to projects resulted from the positive evaluation of competitive proposal applications during the calls of the various Framework Programmes of the European Commission. A percentage of 15% corresponds to the budgets of nationally funded projects by the GSRT, and finally 5% refers to contracted research assigned by Greek Public Bodies and Greek Industry.

Figure 1(d) focuses on the research projects of ICCS/NTUA funded by the European Commission for the period 2006-2015. EC funded projects represent the source of major contribution to the funding received by ICCS/NTUA and the bar chart of Figure 1(d) distinguishes between two major categories: projects that ICCS/NTUA participated as a regular contractor and project led by ICCS/NTUA as coordinator. Furthermore in the same graph the boundaries of the Framework Programmes (FPs) are drawn. Thus 2006 marks the closing of FP6 and the transition to FP7 that starts in 2007 and concludes in 2013. From 2014 and onwards it is the era of the deployment of Horizon 2020 Programme expected to conclude in year 2020.

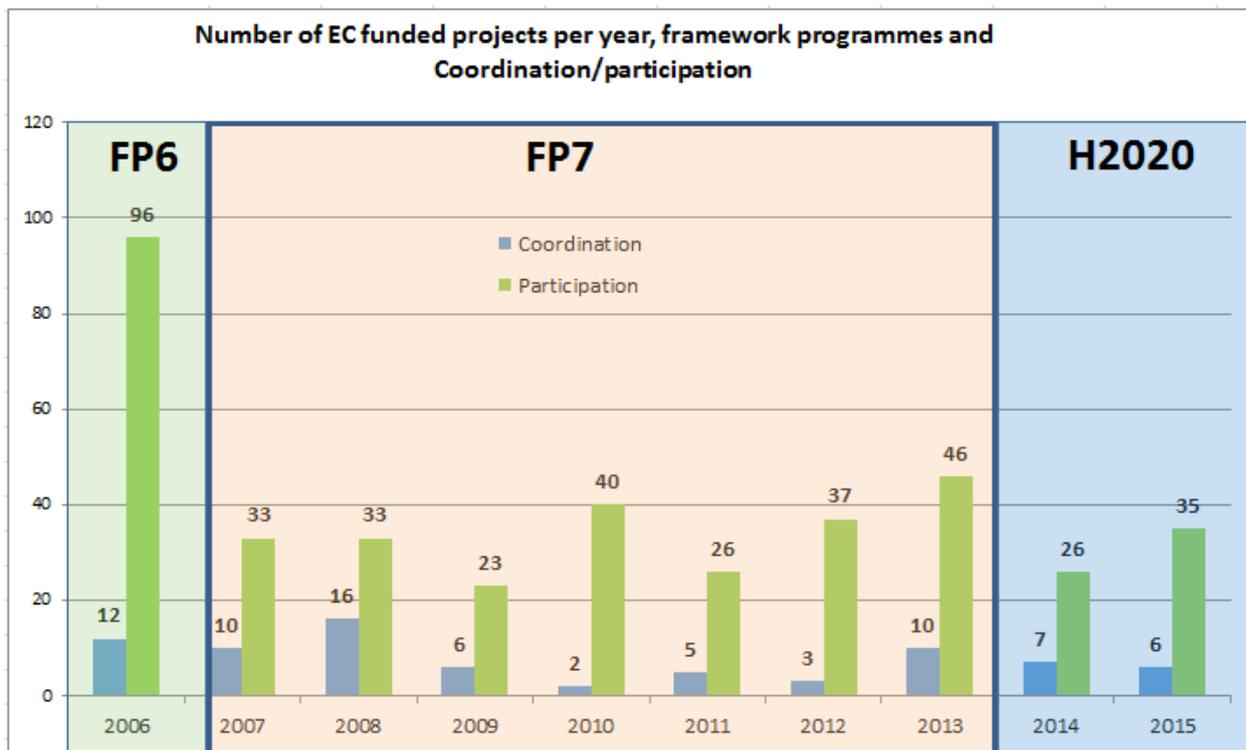


Figure 1(d). ICCS/NTUA EC funded project involvement, distinguishing between regular contractor participation (green) and project coordinator (blue).

On average ICCS/NTUA has coordinated approximately 16% of the projects that it has participated in during the reference period 2006 - 2015.

At this point the significance of the participation of ICCS/NTUA as coordinator in European research projects should be underlined. The task of project coordination lies far beyond the tedious process of administrating a multiplicity of participants towards the realization of a common goal. It is rather one of the key factors both for the successful selection of a competitive proposal, during the submission stage as well for the successful conclusion of the project at the implementation stage, since coordination competency is the result of: (a) effective leadership in proposal preparation and submission for evaluation (b) coordination capabilities closely related to broad technology understanding across the project domain as well as (c) sound and efficient project management skills.

Under that prism the percentage of 16% with regarding the European projects coordinated by ICCS/NTUA is close or even better to the respective percentage of major European leaders, in terms of participation in funded EC projects. As an example one could mention the following research-leading European institutions¹:

- i. FRAUNHOFER from Germany (overall rank in 2014: 1): coordinated 20% of the acquired EC funded projects
- ii. Katholieke Universiteit LEUVEN from Belgium (overall rank in 2014: 11): coordinated 12% of the acquired EC funded projects

¹ Source: European Research Ranking (<http://www.researchranking.org>)

- iii. Technische Universiteit DELFT from The Netherlands (overall rank in 2014: 14): coordinated 8% of the acquired EC funded projects
- iv. KARLSRUHER INSTITUT FUER TECHNOLOGIE (KIT) from Germany (overall rank in 2014: 23): coordinated 5 % of the acquired EC funded projects

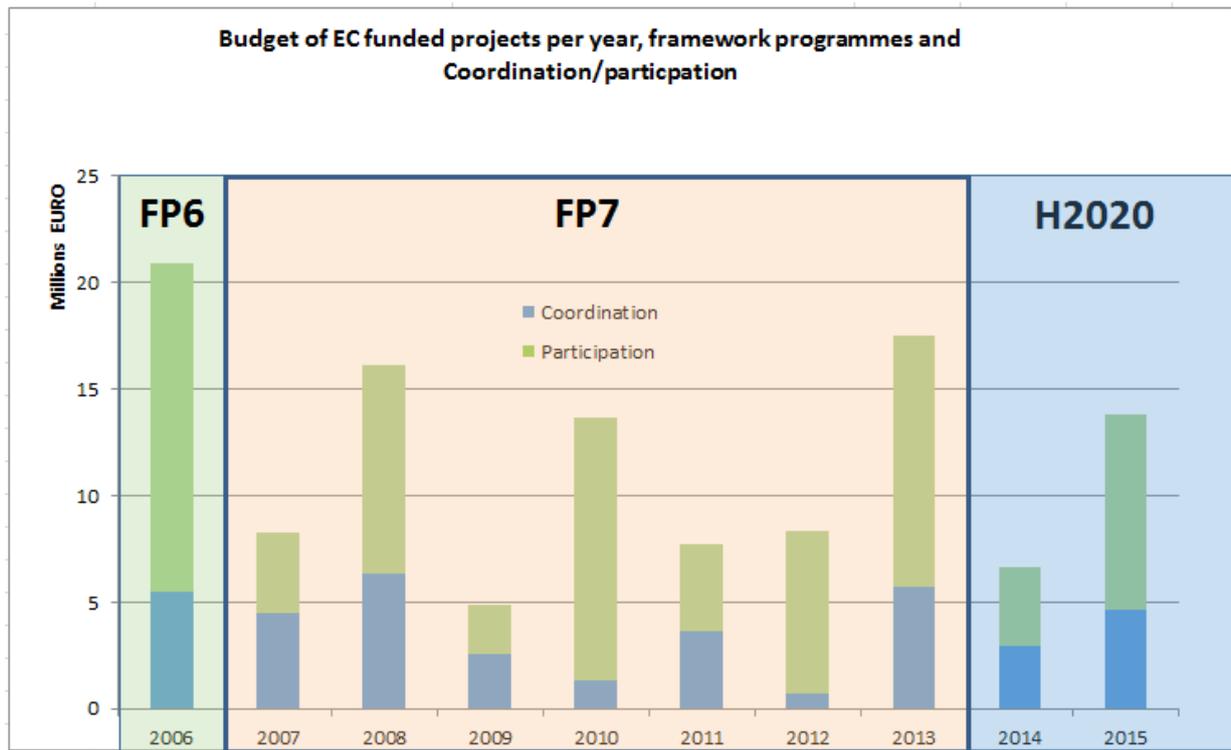


Figure 1(e). Yearly budgets for new EC projects attained by ICCS/NTUA, distinguishing between regular contractor participation (green) and project coordinator (blue).

Figure 1(e) shows the yearly comparison between the budgets that ICCS/NTUA has attained in EC funded projects that it has coordinated, versus the budgets in projects that it has participated as ordinary participant for the period 2006-2015 and in equivalence to figure 1(d).

On average and over the period 2006-2015, the budget of European projects that ICCS/NTUA has coordinated is approximately 32% of the total budget and the budget of the projects it has participated is 68% of the total budget in during the reference period 2006 – 2015.

Figure 1(f) concentrates to projects that ICCS/NTUA has lead as coordinator. For the period 2006-2015 it presents on a yearly basis the budget that ICCS/NTUA has had for its participation as coordinator against the total budget of these projects. Over the 10 year period according to the information shown in figure 1(f), ICCS/NTUA has lead 77 EC funded projects with a total budget of 132 M EURO. This makes for an average project budget of 1,7 M EURO and for an average ICCS/NTUA budget of 475 K EURO, indicating that the average contribution of the individual budget of ICCS/NTUA to the overall project budget is approximately 28%.

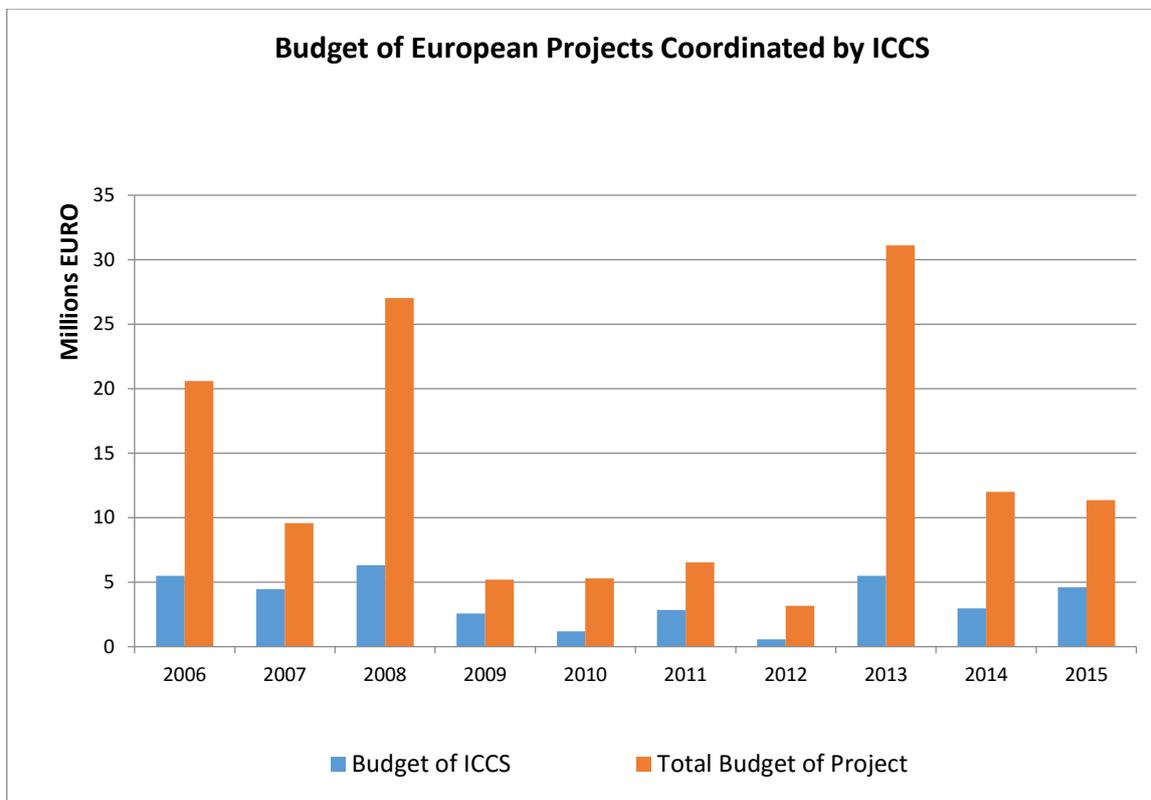


Figure 1(f). ICCS/NTUA yearly project coordination. ICCS/NTUA budget (blue) versus total project budget (orange) for projects that ICCS/NTUA has led as coordinator.

As mentioned earlier, the founding 'charta' for ICCS/NTUA has been to progressively and constantly develop a sustainable research ecosystem in the SECE of NTUA, building up a research community of young researchers alongside the SECE faculty. In turn this growing community could offer itself the option to make SECE their alma mater for their PhD studies and from then on to create a stimulating and intellectually rewarding with the capacity and the momentum to support and sustain their long-term research ambitions as junior and senior researchers.

At present this research ecosystem of ICCS/NTUA involves the following categories of employees, depending on their academic degree and research experience after their graduation: (i) the faculty members of SECE; (ii) the researchers appointed by ICCS/NTUA (a small group of researchers that were the critical mass for the kick-start of the Institute with their names appearing in the foundation statute of 1993); (iii) senior researchers (holding a science or engineering degree with more than 12 years experience after graduation OR holding a PhD degree and 9 or more years of research experience); (iv) associate researchers (holding a science or engineering degree with research experience of at least 7 years after graduation OR holding a PhD degree and 4 or more years of experience); (v) assistant researchers (holding a science or engineering degree and at least 3 years of research experience after graduation OR holding a PhD degree); (vi) junior researchers (holding a science or engineering degree) and (vii) technicians and administrative staff.

It is noted that before 2009 there was no clear distinction between assistant and junior researchers. In practice the capability of ICCS/NTUA for tracking its operational statistics, including the metrics presented below has been slowly evolving over time and it has reached a reasonable degree of stability after 2009. Figure 2(a) presents a bar chart of the evolution of the abovementioned staff categories in time.

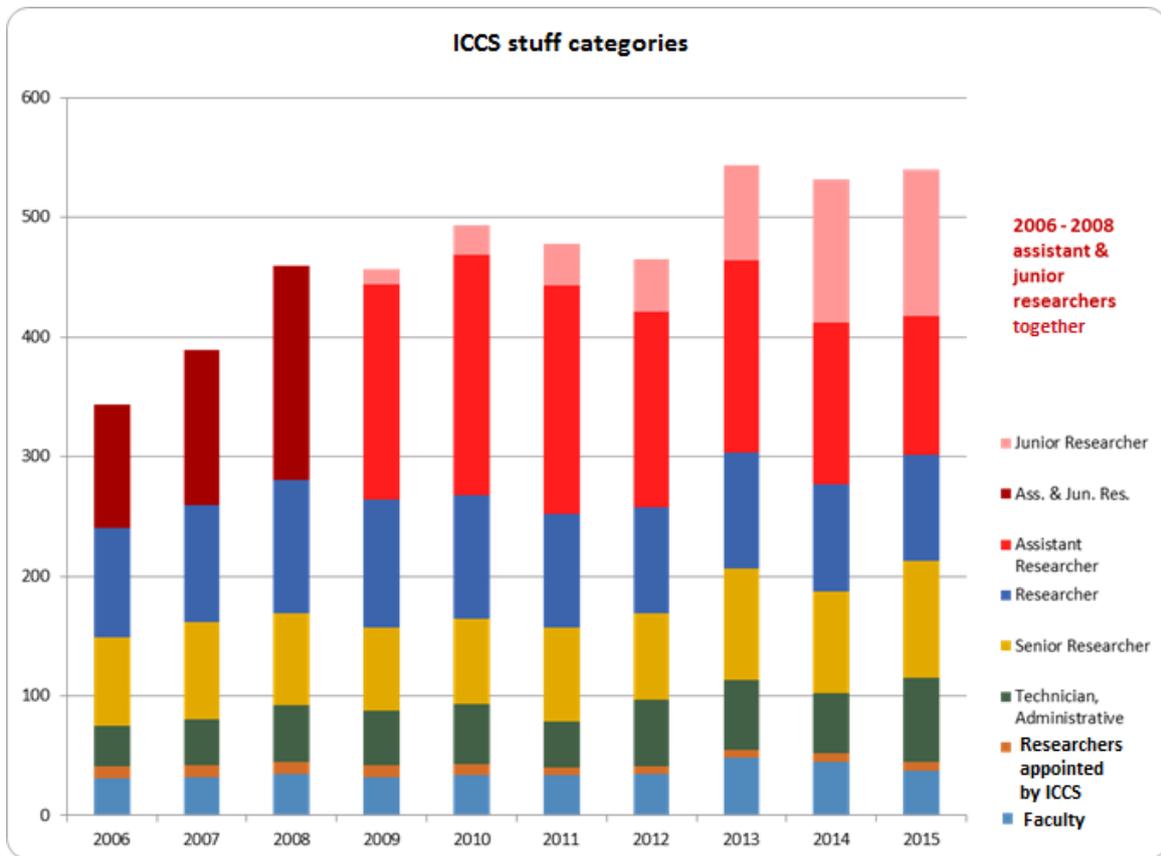


Figure 2(a). Composition and evolution of ICCS/NTUA research community over the years 2006-2015.

It is important to note the following: (a) a large number (in excess of 500/year) of highly educated and capable personnel are being supported every year to perform their research; (b) 8% out of that personnel corresponds to the SECE faculty members; (c) the smallest category is that of the founding ICCS/NTUA researchers; (d) there has been a gradual growth of the category of junior researchers over the population of the category of assistant researchers, leading to the present situation in which all researcher categories are approximately equal in size (e) on average, almost 82% of the personnel supported belong to the categories (ii)-(vi) indicated above.

It is very important to stress that in the statistics of the research stuff of ICCS/NTUA are reflected neither the yearly variations in the received funding, as presented in the earlier graphs, nor the transient fluctuations related with the periodic effect of the starting/closing of the European Framework Programmes.

Finally the most remarkable observation is related to the fact that despite the 6-year long and devastating recession in Greece, the research community of ICCS/NTUA is managing to withstand the storm and to retain its research ecosystem intact so far.

Figure 2(b) shows a pie chart with the age groups of the total research community supported by ICCS/NTUA (including faculty members and ICCS/NTUA appointed researchers) over the 10 year period of 2006-2015. 37,4% of the personnel belong to the age group between 20-29 year old, 34,7% between 30-39 years old, 14,2% between 40-49 and 13,7% older than 50 years.

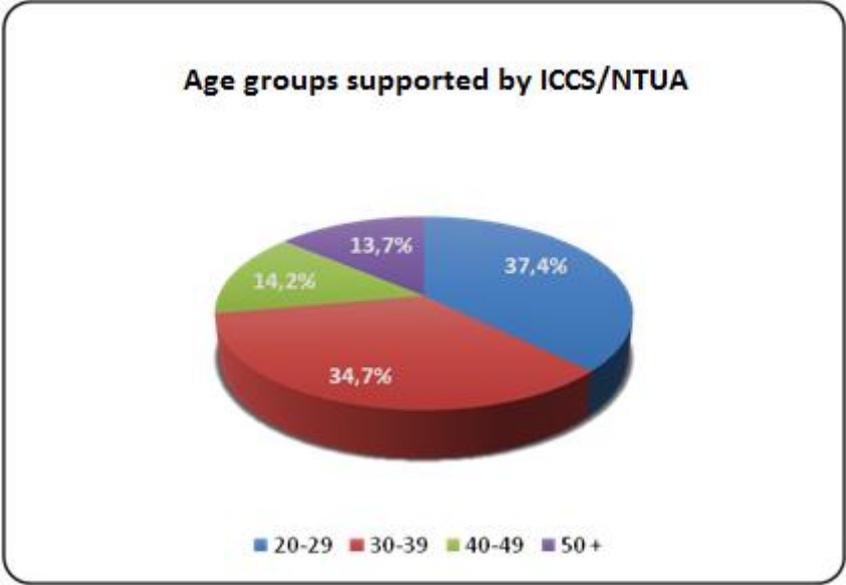


Figure 2(b). Age distribution of the research staff of ICCS/NTUA.

Overall and over the 10 year period spanning 2006 to 2015, in excess of 70% of the budget competitively secured by ICCS/NTUA has been utilized for the support of research activities of its personnel (PhD students, post-doctoral researchers, technicians, administrative staff and members of faculty). Out of the budget that has been dedicated to personnel support, less than 10% has been used for the support of faculty and in excess of 60% has been used for the support of PhD students and post-doctoral researchers.