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## **D3.6.2**

### **Final report on the outcome of the experiments**

Start date of project: 01/10/2013

Duration: 64 months

Organisation name of lead contractor for this deliverable: SSSA

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## 1. Executive summary

The aim of the document is to present the collection of information about the final outcomes from Experiments of Call 2. It is worth to say, that more than half of the running experiments asked for an extension of the duration. This brought to a shift of the final reviews on site, the relative collection of results and thus the submission of the present deliverable.

The process of the final evaluation will be described as well as the information obtained. An analysis of the Experiments outcome in terms of lesson learned about the instrument methods and processes, funding and Follow-up research and innovation aspects will be reported.

## 2. Final Review On site

The Consortium agreed on developing a Final Review Onsite for each experiment of Call 2. For each Review, two experts evaluated the project: one Internal Expert from the E++ Core Partners (usually the technical moderator of the experiment) and one External evaluator, expert in the field of the experiment. For the external experts, contracts have been developed as the ones used for the experts that evaluated the proposals in Call 1 and Call 2.

Prior the onsite review, every experiment had to develop a final report called “KPI Summary”, improved with respect to Call 1 templates, structured as follows:

- Section 1: Executive summary
- Section 2: Deliverables
- Section 3: Milestones
- Section 4: Technical KPIs
- Section 5: Impact KPIs
- Section 6: Dissemination Milestones
- Section 7: Concluding Remarks

The evaluators were in charge to prepare and submit the following documents:

- Comments and recommendations
- On site Evaluation Template
- INNOVATION QUESTIONNAIRE

The typical agenda of an onsite review is the following:

- Short presentation of current status of the project
- Overall check of KPIs, Milestones and Deliverables
- Live demonstration
- Q&A
- Internal reviewer's meeting
- Wrap up and Conclusions

In Fig. 1 the list of experiment with the assigned External evaluator, the chosen Visiting Site, the internal evaluator and the date of the review.

Acronym	End Experiment	Review Dates	Location	External Evaluator	Internal Evaluator
AAWSBE1	feb-18	5 June	Odense	Nicola Pedrocchi	Manuele Bonaccorsi
CATCH	apr-18	4 May	Berlin	Jordi Palacin (Skype Call)	Herminio Martínez García
CoCoMaps	mar-18	3 May	Reykjavik	Patrick van der Smagt	Adam Schmidt
DUALARMWORKER	nov-17	6 February	San Sebastian	Stefania Pellegrinelli	Fabio Bonsignorio
FASTKIT	feb-18	28 March	Bouguenais	Andreas Pott	Yannick Morel
FlexSight	jun-18	18 October	Padova	Lorenzo Marconi	Raffaele Limosani/Giovanni Lacava
GRAPE	feb-18	21 March	Barcelona	Prof Jordi Palacin/David Bisset	Antoni Grau
HOMERHAB	feb-18	22 June	Elche	Keller, Thierry	Adam Schmidt
HyQ-REAL	jun-18	28 June	Alessandria	Alexander Sprowitz	Yannick Morel
INJEROBOT	nov-17	12 February	Almería	Jordi Palacin	Antoni Grau
Keraal	jun-18	19 July	Brest	Domenico Formica/Malcom F	Yannick Morel
MAX ES	giu-18	14 November	Toulon	Maximo Roa	Adam Schmidt
RadioRoSo	feb-18	20 April	Prague	Sotiris Makris	Yannick Morel/Antoni Grau
SAFERUN	nov-17	16 May	Reggio Emilia	Lorenzo Marconi	Yannick Morel
SAGA	mar-18	27 July	Eindhoven	Andreas Muller	Yannick Morel
WIRES	giu-18	26 October	Bologna	Nicola Pedrocchi	Adam Schmidt

**Fig. 1 List of Experiments and relative information on the review onsite. The Figure reports the assigned External, the chosen Visiting Site, the internal evaluator and the date of the review.**

### 3. Outcome of the Experiments of Call 2

A six-monthly overview of the current status of the Experiments was reported in D356 where both technical and managerial moderators reported the status of project outcomes (KPIs). The outcome of the final evaluation process is provided in the form of traffic-light overview. A traffic light value descriptive of status (good, acceptable, poor) was assigned to each tracked category (Technical KPIs, Impact KPIs, deliverables, etc.). In Fig. 2 it is possible to have a clear picture on the final evaluation provided for each experiments by the evaluators.

Call 2 Experiments	Milestone	Deliverable	Technical KPIs	Impact KPIs	Dissemination KPIS
DUALARMWORKER					
INJEROBOT					
SAGA					
FlexSight					
MAX ES					
AAWSBE1					
WIRES					
Keraal					
SAFERUN					
RadioRoSo					
HOMEREHAB					
FASTKIT					
CoCoMaps					
GRAPE					
CATCH					
HyQ-REAL					

*Fig. 2. Global figure of the Experiments outcome. Green light means a successful evaluation, an orange traffic light refers to an outcome slightly under the expectations (for example, Experiments that faced some problems but where the overall task is not negative) and a red light is for results significantly under the expectations (such as Experiments that faced major problems, delays and they did not manage to achieve some specific task). The evaluation of each parameter is based on the average of each voice, so that a green is obtained when the majority of the evaluation of each parameter is green, thus an orange and a red light.*

## 4. Results of the Experiments

This section reports data collected with online surveys purposively developed and filled in by the involved Experimenters during the final year of the Echord++ project. Almost all partners involved in each Experiments answered the surveys.

The Tab. 1 showed the number of collected answers:

Tab. 1. Call 1 and Call 2 answers collected with on online surveys

	Number of Experiments	Number of answers	Total
Call 1	15	33	79
Call 2	16	46	

The following sections report the results about:

- Lesson learned about Experiment instrument methods.
- Funding and Follow-up research.
- Innovation aspects.

### 4.1. Lessons learned

A first section is devoted to the analysis of the E++ Experiment instruments procedures in order to evaluate:

- Level of satisfaction of management and monitoring process,
- Duration of the experiment,
- Appropriateness of budget,
- Alignment to the workplan,
- Use of RIFs

Experimenters were asked to express their level of satisfaction about **management and monitoring process**. Results (Fig. 1Fig. 3) showed that the process have been improved in Call 2 by the following tools:

- two moderators (technical and managerial) for improving the monitoring of technical aspects and reporting aspects,
- frequent Skype calls for Experiments status updates,
- internal call among moderator for making evaluation aspects uniform.

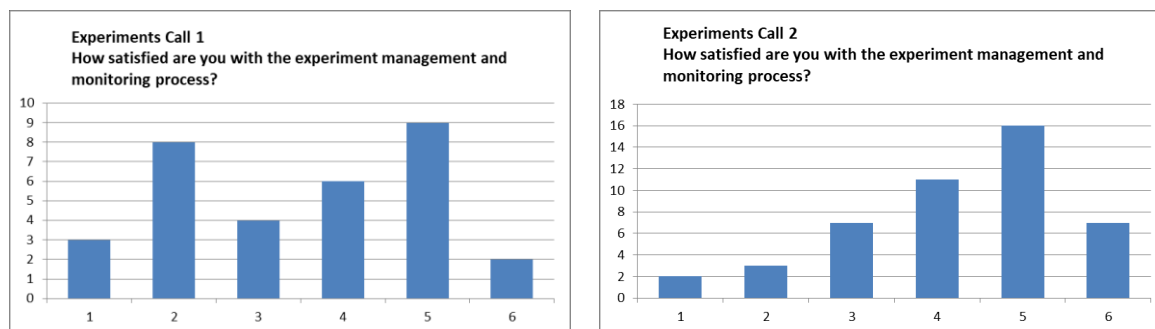


Fig. 3. Management and monitoring process: answers for Call 1 (left) and Call 2 (right) Experiments (1 not satisfied – 6 very satisfied)

Experimenters were asked to express if the **duration** of the Experiment was sufficient with respect to the experiment goals.

Results (Fig. 4) showed that the majority of the Experiments was satisfied. It is worth to say that the majority of Call 2 Experiments asked for an extension and this may affected the results.

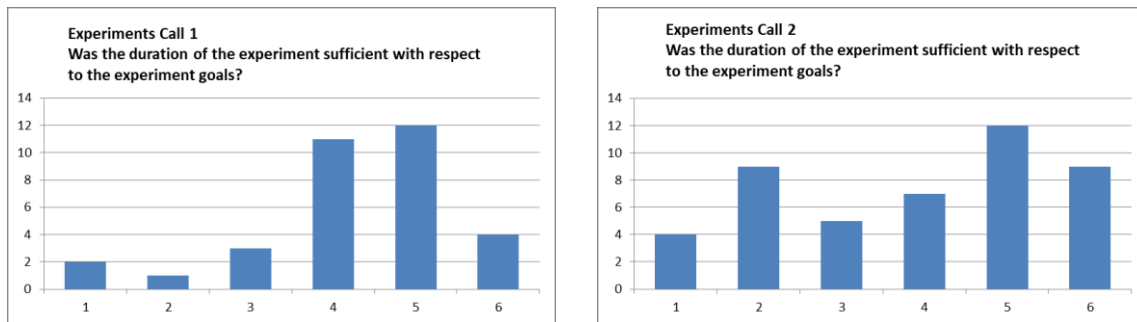


Fig. 4. Duration of the Experiments: answers for Call 1 (left) and Call 2 (right) Experiments (1 not sufficient – 6 sufficient)

Experimenters were asked to express if the **budget** was sufficient with respect to the experiment goals.

Results (Fig. 5) showed that the majority of the Experiments was satisfied (Call 1 Experiments more satisfied).

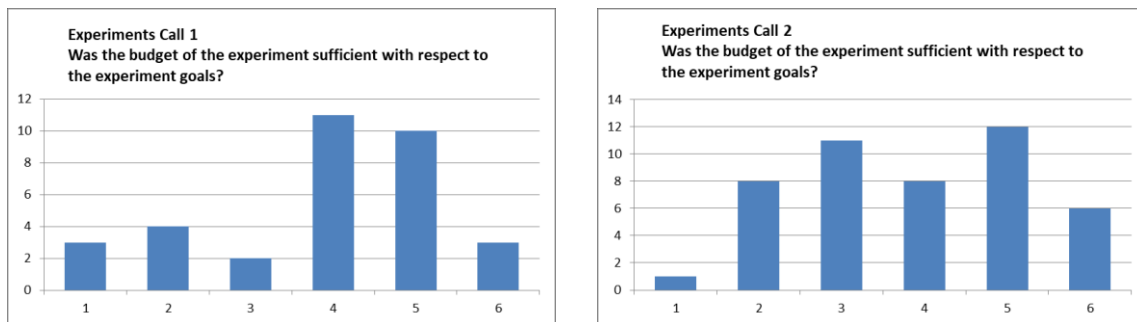


Fig. 5. Appropriateness of budget: answers for Call 1 (left) and Call 2 (right) Experiments (1 not sufficient – 6 sufficient)

Moreover, experimenters were asked to express if they followed the initial **workplan** as described in the proposal or if any deviations occurred.

Results (Fig. 6) showed that the majority of the Experiments was satisfied (Call 2 Experiments more satisfied).

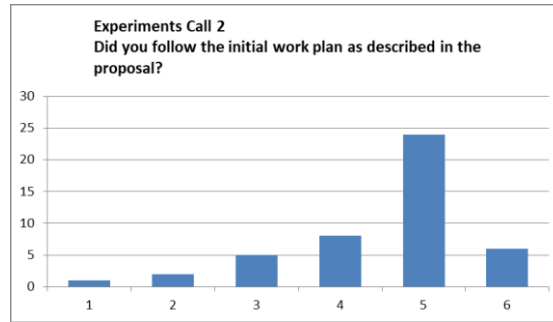
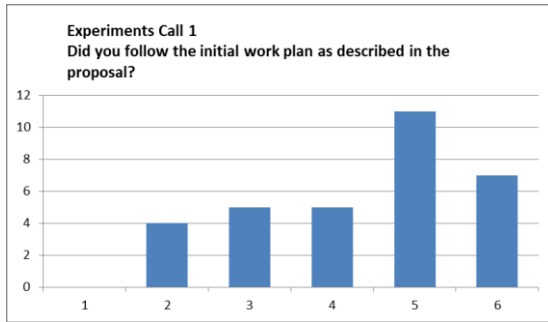


Fig. 6. Compliance with the work plan: answers for Call 1 (left) and Call 2 (right) Experiments (1 not able to follow – 6 followed completely)

Experimenters were asked to express if they used any E++ **RIFs** (Bristol, Peccioli, Saclay). Results (Fig. 7) showed that RIFs were more exploited by Call 1 Experiments with a good level of satisfaction.

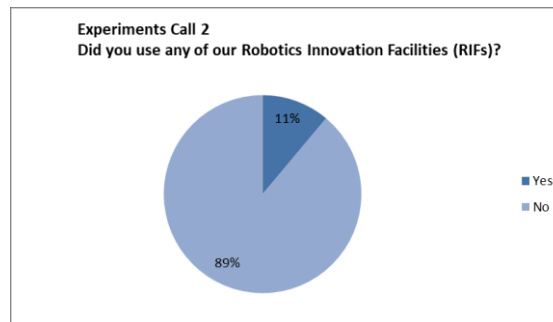
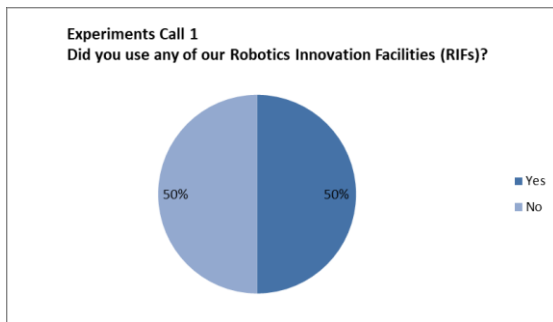


Fig. 7. Use of RIFs: answers for Call 1 (left) and Call 2 (right) Experiments.

Finally, Experimenters were asked to express if they would participate in similar cascade funding project in the future. Results showed that both Call 1 and Call 2 E++ Experiments are very interested in similar cascade (Fig. 8) funding projects. Call 2 Experiments were more involved in similar initiatives (Fig. 9).

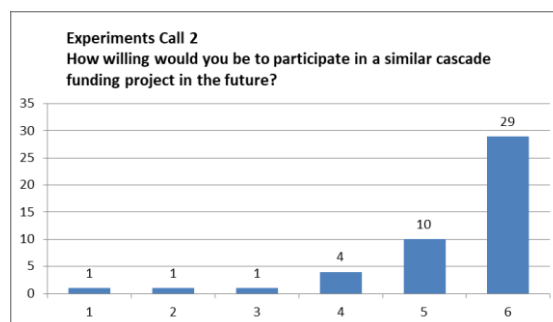
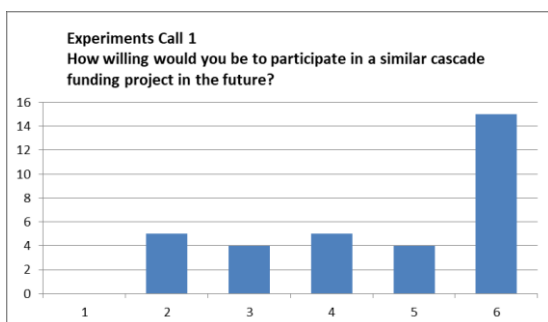


Fig. 8. Cascade funding: answers for Call 1 (left) and Call 2 (right) Experiments (1 unwilling to participate; 5 very interested)

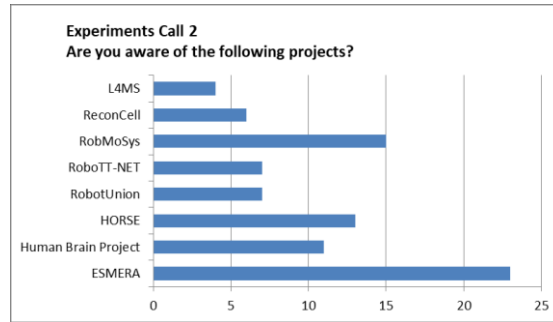
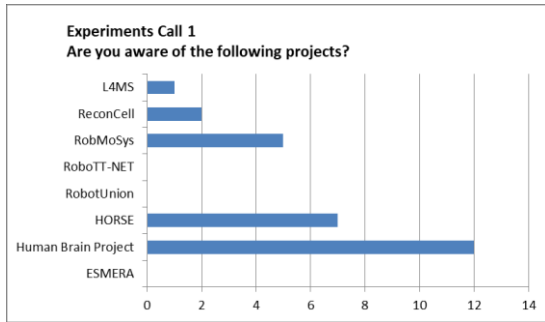


Fig. 9. Awareness of new cascade funding projects: answers for Call 1 (left) and Call 2 (right) Experiments

## 4.2. Funding and Follow-up

This section is devoted to the analysis of the E++ Experiment future in terms of secure funding to bring the results to market and to develop further research. Results showed that Call 2 Experiments have better results in terms of both new funding (Fig. 10) and new research projects (Fig. 11).

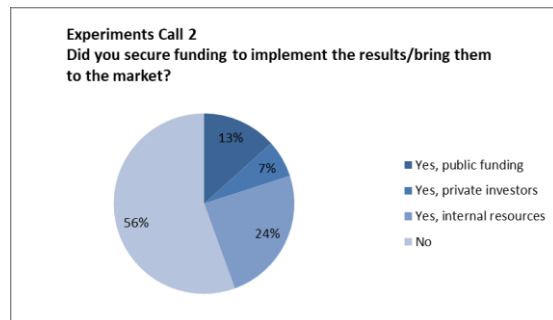
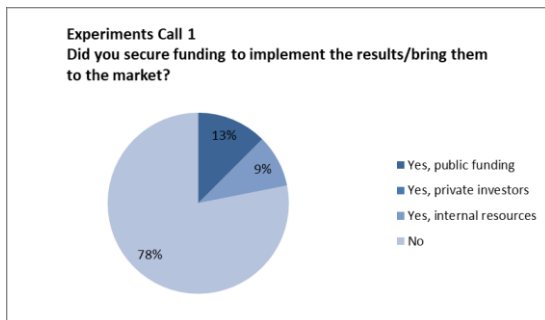


Fig. 10. New funding: answers for Call 1 (left) and Call 2 (right) Experiments

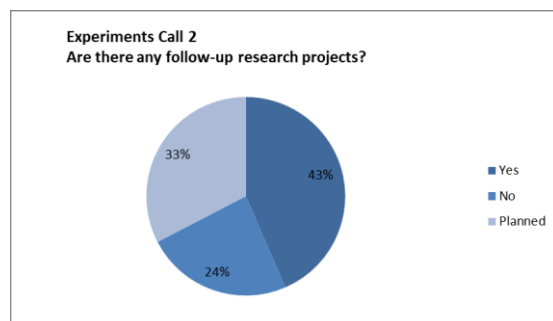
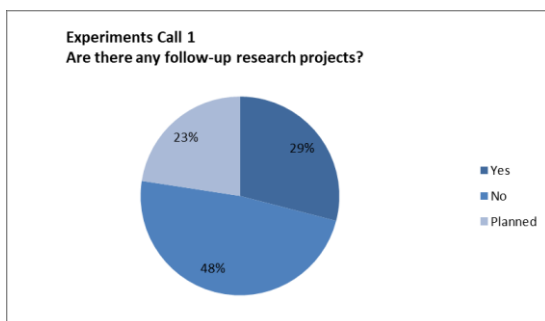


Fig. 11. Follow-up projects: answers for Call 1 (left) and Call 2 (right) Experiments

## 4.3. Innovation aspects

A careful analysis was devoted the innovation aspects, more specifically:

- level of exploitation of the innovation developed,
- type of innovation,
- pathway to the market,
- market identification and competitors.



Experimenters were asked to express if the innovation developed within the project is under development or already exploited.

Results (Fig. 12) showed that while Call 2 Experimenters have still to exploit their innovation, the 25% of Call 1 Experimenters are a step forward in this process and these results is consistent with the timeline of the E++ calls.

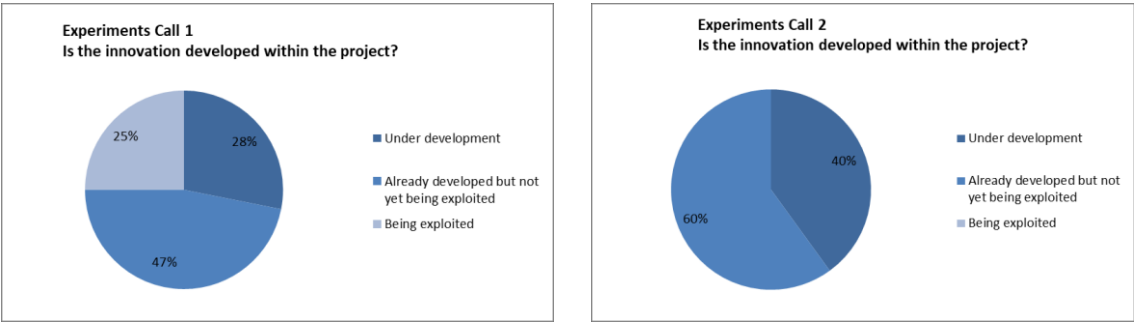


Fig. 12. Level of exploitation: answers for Call 1 (left) and Call 2 (right) Experiments

By focusing on the steps needed to reach the market, results (Fig. 13) confirmed the previous data showing that Call2 Experimenters are still involved in technology transfer aspects while Call 1 Experimenters are focusing on aspects closer to the market such as certification and standardization or search for investors.

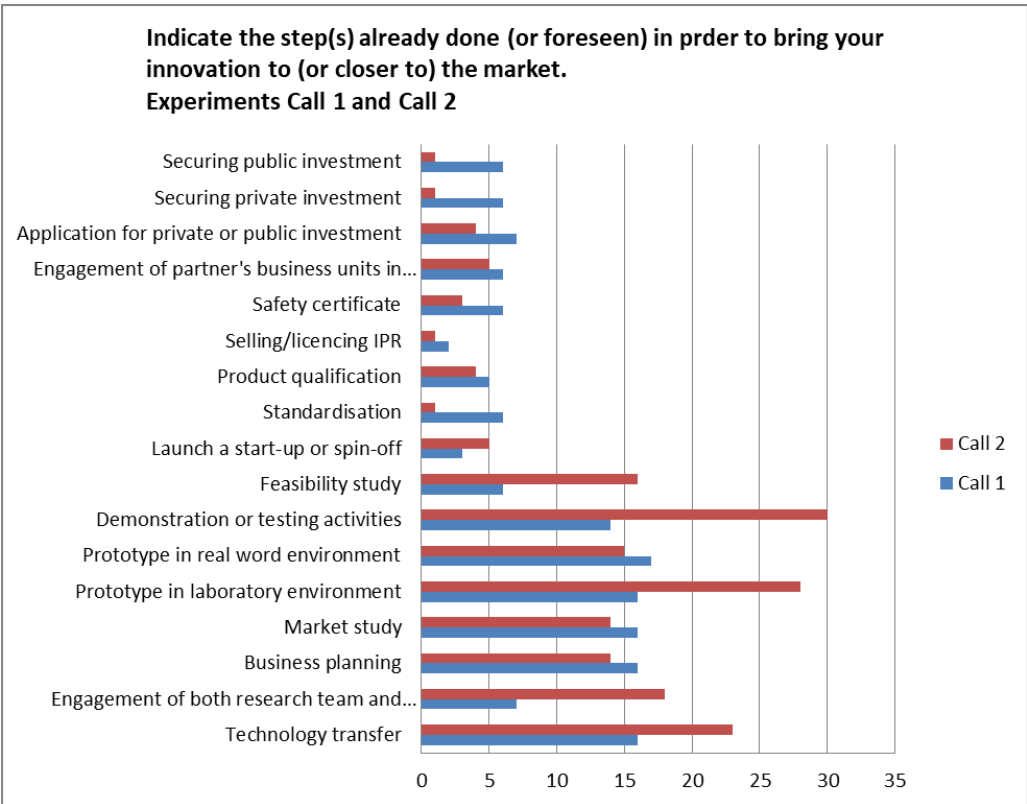
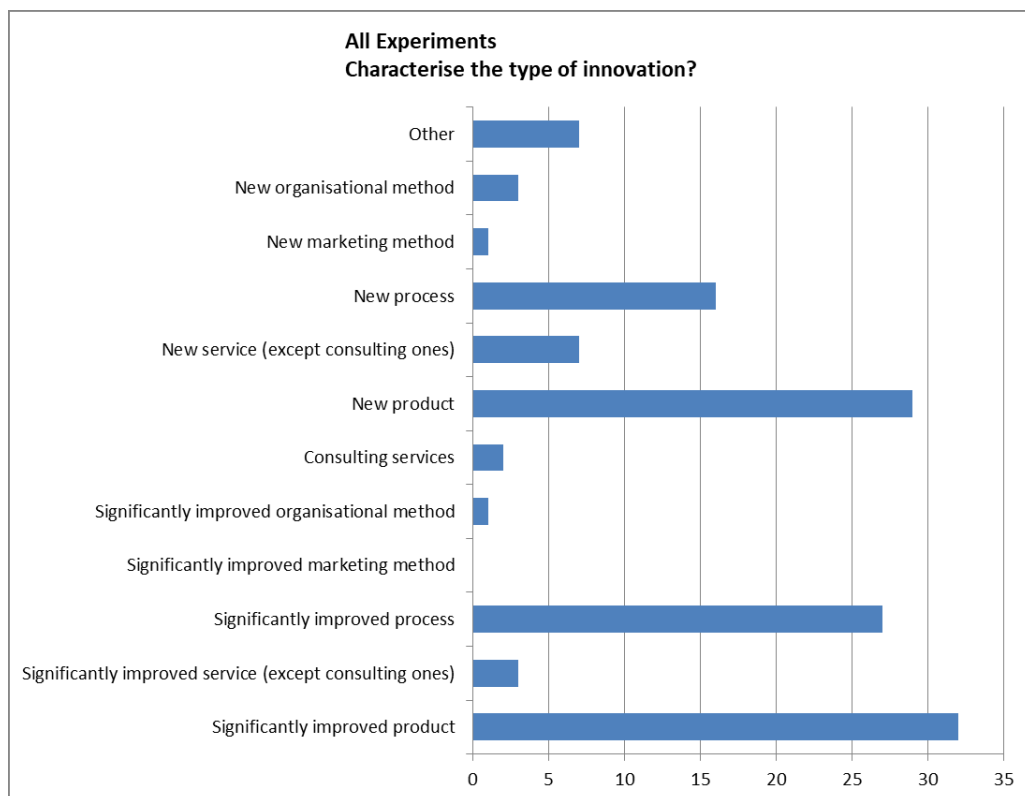


Fig. 13. Steps toward the market: answers for Call 1 and Call 2 Experiments

This section is devoted to the analysis of the E++ Experiment outcome in order to evaluate what was the **type of innovation** of the experiment and if a **new Start-up or Spin-off** was created thanks to that outcome.

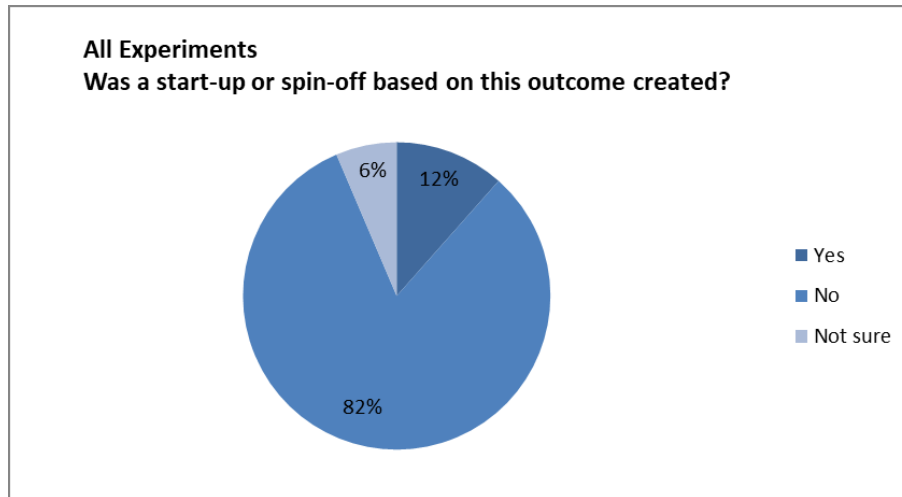
Both Call 1 and Call 2 Experiments main outcomes (Fig. 14) were:

- the development of a new product,
- the improvement of an already existing product,
- the improvement of a process.



*Fig. 14. Type of innovation: answers for Call 1 and Call 2 Experiments*

The 82% of Experiments did not bring to the creation of a new company (Fig. 15).

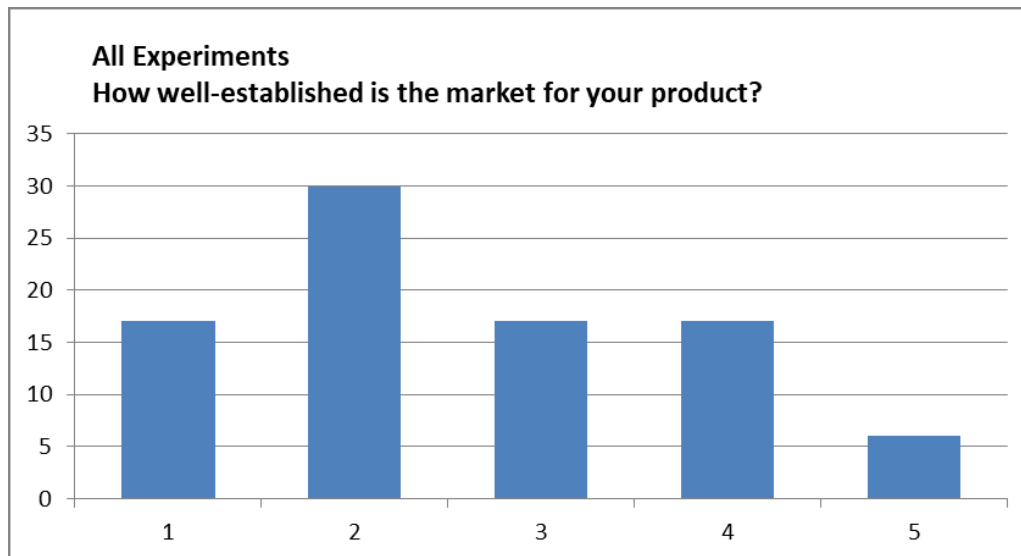


**Fig. 15. Creation of new Start-ups: answers for both Call 1 and Call 2 Experiments**

A final analysis was devoted to the market analysis, in particular:

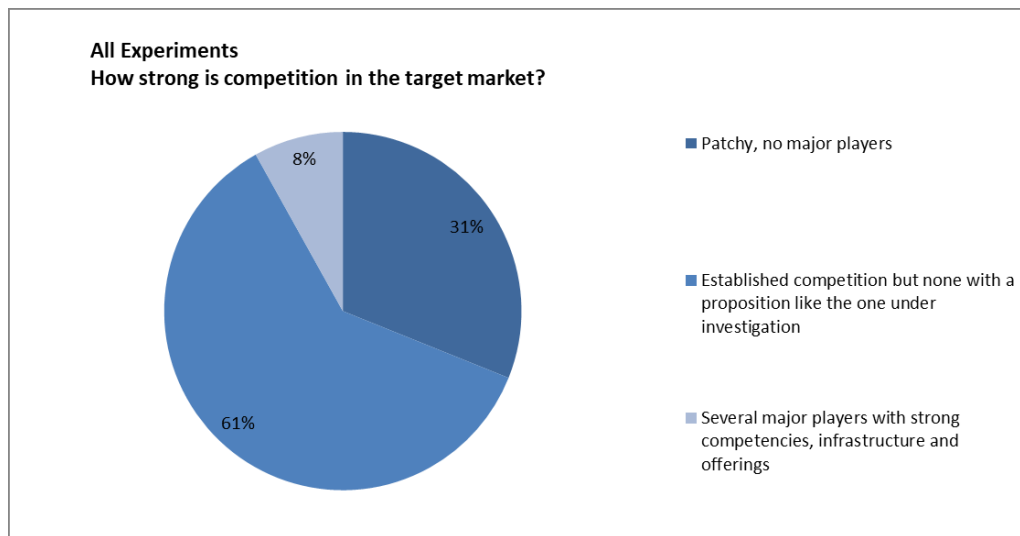
- reference market,
- the market size,
- time to market.

Experimenters were asked to indicate how well-established is the market for their product. Results (Fig. 16) showed that the majority of the products have not a well-established market but Experimenters declared that their value proposition is clear and could be easily appreciated by the customers.



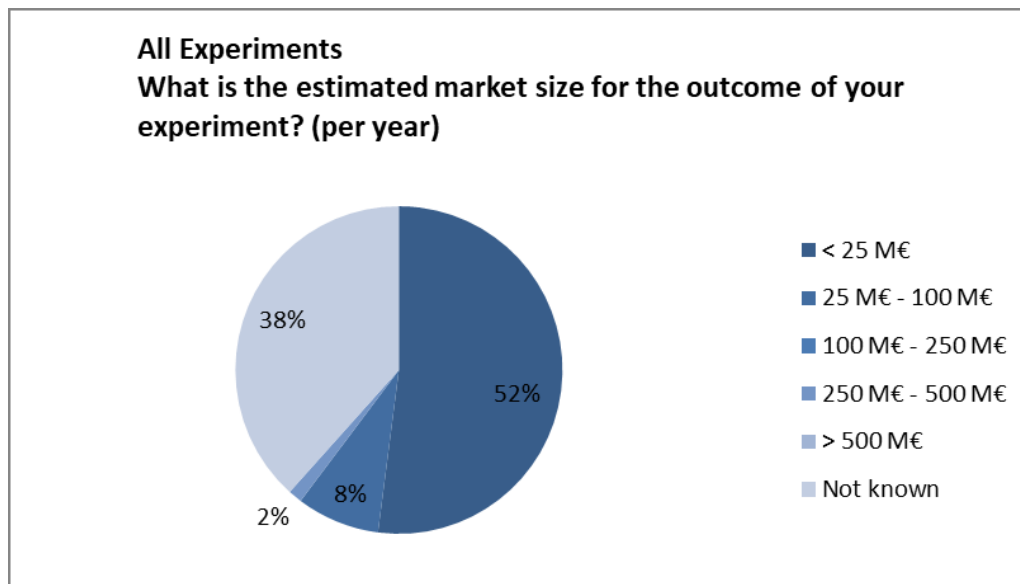
**Fig. 16. Market positioning: answers for both Call 1 and Call 2 Experiments (1 not existing, 5 well-established)**

With respect to the market competitors, even if there is an established competition, no major players are present in the interested fields (Fig. 17).



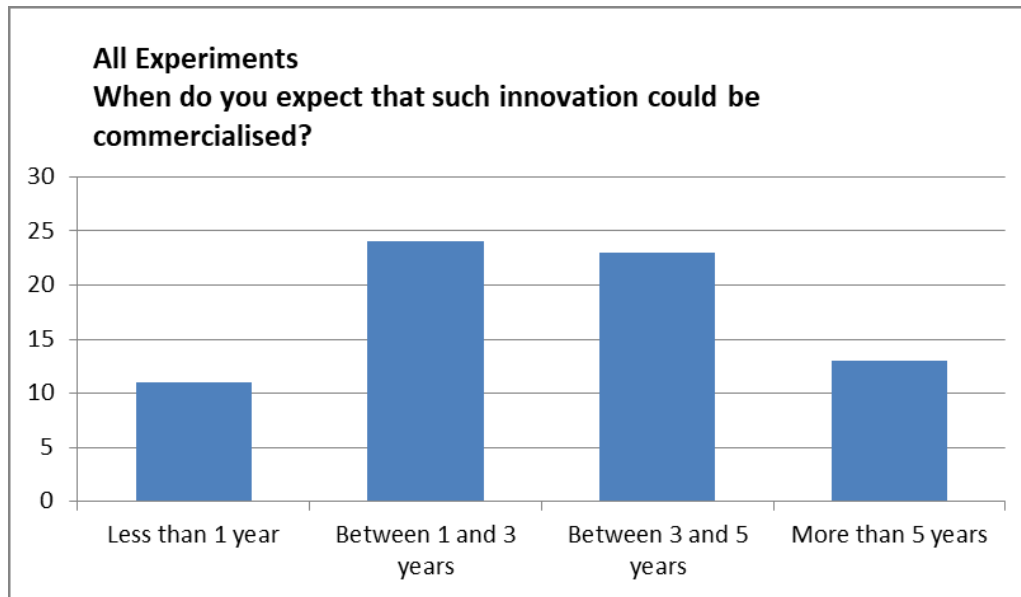
**Fig. 17. Market competition: answers for both Call 1 and Call 2 Experiments**

Regarding the market size, 52% of Experimenters declared that their market size is lower than 25M€ (Fig. 18).



**Fig. 18. Market size: answers for both Call 1 and Call 2 Experiments**

Finally, the expected time to market is between 1 and 5 years from now (Fig. 19).



*Fig. 19. Time to market: answers for both Call 1 and Call 2 Experiments*

## 5. Conclusions

The results showed two important aspects:

- **IMPROVEMENT OF THE EXPERIMENTS MANAGEMENT AND MONITORING PROCESS.** The management and monitoring processes have been improved in Call 2 compared to Call 1 thanks to the presence of two moderators (technical and managerial) improving the monitoring of technical aspects and reporting aspects.
- **INNOVATION.** E++ Experiments foster the development of a new product, the improvement of an already existing product or the improvement of a process. Market size is lower than 25M€ with the presence of some competitors but value proposition is clear and could be easily appreciated by the potential customers. Finally, steps to the market are well identified and the expected time to market is between 1 and 5 years.