



## **COOPERATION** THEME 3

ICT - INFORMATION AND COMMUNICATIONS TECHNOLOGIES



## Analysis of Accelerators' Good Practices Report Annex to D.2.4

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### **Executive Summary**

This report is an Annex to the Deliverable 2.4 "Update of Impact Assessment and Forecast" due in June 2016. The objective of this report is to present the results of the FI-IMPACT analysis of the main practices implemented by Phase 3 Accelerators' projects and their correlation with the subgrantees' performance. The ultimate goal is to identify the good practices which most influenced the chances of success of subgrantees, in order to provide useful insights for the management of similar processes.

For the sake of this assessment we developed the following definitions:

- By good practice we mean an activity performed by one or more of the Accelerators' consortia according to their acceleration plans, which based on objective evidence is shown to have contributed to the good performance of subgrantees.
- By good performance of the subgrantees we mean first of all their market success (measured in terms of positive dynamics of revenue growth and customer growth); their ability to convince potential investors and collect additional funding ("traction"); if they are not yet on the market, their market readiness (measured by FI-IMPACT's KPIs scores).

To achieve this goal, FI-IMPACT has designed a suitable methodology, developed a database of 23 comparable indicators of accelerators practices, carried out face-to-face qualitative interviews with the A16 coordinators, and carried out a network analysis measuring the frequency of connections between all FI-PPP projects partnerships. To measure performance of the subgrantees, we have used the FI-IMPACT KPIs and the Mattermark scores. A statistical correlation analysis was carried out between all the quantitative indicators collected (based on the Spearman method), and the correlation between each practice (for example funnel or pipeline selection approach) and the distribution of performance scores was analysed.

After all this, we must recognize that the statistical approach to the correlation analysis has not provided very significant results, while the qualitative analysis based on the interaction with the accelerators has provided interesting insights about good practices.

Most correlations are not statistically significant, those that are have very low values (so they explain little of the variations in performance of the subgrantees). There are only some weak signals which, coherently with the results of the qualitative interviews, point to the positive role of professional accelerators within consortia, and positive impacts of practices such as workshops, matchmaking and providing gateways to further funding. This is probably due to the mixed dataset on the performance of subgrantees, which does not really measure market success but potential success.

Nevertheless, this analysis of the accelerator practices does provide interesting insights which may be of use. The most relevant are the following:

• The massive effort by the Commission to promote and sponsor the convergence of accelerators towards common practices was on the whole well accepted by the accelerators and led to positive mutual learning processes. It helped consortia which started the programme with a focus on SMEs rather than start-ups to

- upgrade their innovation and growth objectives and helped them to adapt to acceleration activities with which they were not familiar.
- While the size or geographical scope of the partnerships did not seem to make a
  major difference, the presence in the consortia of professional accelerators (with
  the right contacts with the investors community) and of technical partners able to
  guide selected proposals in the best use of FIWARE technologies, were key success
  factors underlined by many accelerators
- In the selection and evaluation process, it is relevant to organize a well-managed and wide-ranging communication campaign, to design a quick selection process based also on online tool and rely on experts for the final selection.
- The need to plan for personal and direct contact with each potential entrepreneur was underlined often.
- Good acceleration practices include good mentoring and coaching, teaching how
  to "pitch" to external investors or potential customers, strong networking,
  matchmaking and tutoring activities but with a very practical focus.
- These same practices are implemented and considered as key success factors by leading international accelerators and incubators, such as Y Combinator (the famous start-up home of Airbnb in the Silicon Valley), as confirmed by studies from various sources such as Cambridge University and the US Department of Commerce.
- Accelerators with good contacts in the venture capital community had a better chance to promote their subgrantees: in the sample of 74 subgrantees who collected additional funding, 55 received it from venture capitalists.
- For best FIWARE use, specific support by technical experts is required both during the selection and acceleration phases.

The most negative aspect was the difficulty to adapt the EU funding and management process designed for multi-year Framework Programme projects to the more flexible, rapidly evolving and shorter term acceleration process.

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#### 1. Introduction

#### 1.1. Scope of the Deliverable

This report is an Annex to the Deliverable 2.4 "Update of Impact Assessment and Forecast" due in June 2016.

The objective of this report is to present the results of the FI-IMPACT analysis of the main practices implemented by Phase 3 Accelerators' projects and their correlation with the performance of subgrantees. The ultimate goal is to identify good practices which most influenced the chances of success of subgrantees. This is expected to provide valuable insights about the lessons learned in Phase 3 to the European Commission and the evaluators, to feed into the design of future programs and initiatives similar to this programme and to complement the assessment of the Phase 3 impacts.

The FI-PPP Phase 3 is a new model for European RDI initiatives and has pioneered innovative and flexible approaches to implementation, as underlined by the Second Interim Programme Evaluation. The most innovative aspect of Phase 3 is the objective to pilot the transition of the FI-PPP from a top-down research programme to a selforganising, open ecosystem built around the FIWARE community, by supporting the market launch of several hundred start-ups and innovative SMEs. This flexibility is underscored by the variety of approaches undertaken by the 16 Accelerators consortia of Phase 3, which vary substantially in terms of strategic objectives, type of partners, geographical presence, innovation strategies and services provided to the subgrantees. Even if the frequent coordination activities of the programme encouraged sharing of experiences and resulted in some convergence towards clearly successful actions (for example providing additional FIWARE technical support), the differences between Accelerators' behavior have remained substantial. Therefore, it is relevant to investigate which impact, if any, different Accelerators' choices have had on the actual or potential market success of their subgrantees. Thanks to its in-depth analysis of subgrantees' profiles and performance, FI-IMPACT is in an excellent position to carry out this analysis and investigate emerging good practices.

It should be stated immediately that this report is not meant to evaluate the performance of any single Accelerator. Every Accelerator has success stories to show, as well as likely failures. As venture capitalists say, taking risks is the essence of the game and funding innovators means failing more often succeeding. However, as Phase 3 is a policy initiative rather than a venture capital fund, it is appropriate to look at the mix of activities experimented in the programme and analyse any available evidence about potential correlation of activities with a high frequency of good performers.

This analysis was not originally foreseen in the initial DoW of this project and was designed and implemented by the consortium team during Year 2.

#### 1.2. Intended Audience and Reading Suggestions

This document is mainly intended for the following categories of users:

• The European Commission officers dealing with Phase 3 and other similar programs;

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- FI-PPP Accelerator partners in order to gain understanding about their methods compared to each other;
- All the members of the FI-PPP community
- Any other organisation interested in learning about the results of an accelerators' programme.

#### 1.3. Structure of the Report

The report is structured as follows:

- Executive summary
- 1st chapter: Introduction, scope and methodological approach
- 2<sup>nd</sup> chapter: Accelerators' indicators
- 3d chapter: Subgrantees performance indicators
- 4th chapter: Results of the correlation analysis
- 5<sup>th</sup> chapter: Interpretation of results and conclusions

#### Annex:

• Statistical results of correlations

#### 1.4. Approach and Methodology

The starting point for this report was to clarify the following key concepts:

- The definition of good practice;
- The definition of good performance by subgrantees;
- The development of comparable indicators of accelerators practices

For the sake of this assessment we developed the following definitions:

- By good practice we mean an activity performed by one or more of the Accelerators' consortia according to their acceleration plans, which based on objective evidence is shown to have contributed to the good performance of subgrantees.
- By good performance of the subgrantees we mean first of all their market success (measured in terms of positive dynamics of revenue growth and customer growth); their ability to convince potential investors and collect additional funding ("traction"); if they are not yet on the market, their market readiness (measured by FI-IMPACT's KPIs scores).

The implementation of these concepts has proven difficult, as will be documented in this report. The main weakness of this assessment is that subgrantees are just now entering the market (the majority entered the market in 2015 and the remaining ones in 2016) so their actual success is still to be proven. All performance indicators are perforce preliminary, and those concerning actual market success (such as Mattermark's growth indicator) or data on additional funding concern small samples of subgrantees.

Therefore, the methodological approach is based on the following main steps:

1. Development of indicators describing the main Accelerators' approach and practices based on the data collected by FI-IMPACT, existing sources, and face-to-face interviews carried out in January 2016 with all Accelerators coordinators.

- 2. Selection of indicators measuring the level of performance of subgrantees, extracted from FI-IMPACT databases and from Mattermark;
- 3. Analysis of correlations between all practice indicators and all performance indicators;
- 4. Selection of most significant results in quantitative and qualitative terms, interpretation of results and conclusions about lessons learned and good practices.

More specifically each of the main steps was based on the following:

#### 1. Development of Accelerator's practices indicators

- Selection of key indicators describing the profile and structure of Accelerators' consortia based on the data collection carried out by FI-MPACT and presented in the mapping chapters of Deliverables 2.2 and 2.3;
- Face-to-face interviews with the 16 Accelerators' coordinators based on a standardised interview guide (annexed to this report) with a focus on the evolution of practices and opinions on the most effective/ineffective practices, carried out at the Milan meeting in January 2016;
- Development of a database summarizing the information collected and transforming it into qualitative indicators identifying each relevant practice or characteristic of the Accelerator.

#### 2. Selection of Subgrantees' performance indicators

- Selection of relevant subgrantees' performance indicators, most closely associated with potential success, as follows:
  - Scores achieved in the 4 KPIs developed by FI-IMPACT (Innovation Focus Market Focus – Feasibility – Market Needs Understanding);
  - Scores measured by Mattermark (Growth score; Employment growth score; Indicators on the use of social media);
  - Number of subgrantees gaining additional funding (sourced from Mattermark plus data collected by the EC and the FIWARE community);
  - FIWARE Scores assigned by FIWARE technical partners to the use of FIWARE by the subgrantees in the process of the selection of the VIP database of subgrantees.

For all these scores the assumption is that the higher the score, the better the performance.

#### 3. Analysis of correlations:

A variety of potential methods were tested statistical experts from JSI and all possible combinations of correlations were measured. Eventually two different approaches were selected and used:

• Calculation of correlations based on the Spearman method for numerical indicators, such as the average amount of funding granted to subgrantees or the number of partners of each accelerator (to measure size). The coefficient of determination (square of correlation), is a number that indicates the proportion of the variance in the dependent variable that is predictable from the independent

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- variable. Spearman correlations were calculated for all the combinations of accelerators indicators and performance indicators.
- For dichotomous practice indicators (yes-no indicators, meaning that a subgrantee had access to a certain practice e.g. organization of workshops, or not) JSI calculated the distribution of scores for the population of subgrantees who used the practice, compared to the distribution of scores for subgrantees who did not. This is based on the density of scores with respect to a dichotomous practice. A positive number means that subgrantees with access to a practice performed better (had a higher score) compared to those without access to the practice. A negative number means the opposite: subgrantees without access to a practice performed better. Scores were plotted in box charts.
- Statistical tests about the significance of both types of correlations were performed for all variables.

#### 4. Selection of most significant results and conclusions on good practices;

- The multiple results were analysed and only the significant ones were retained.
- significant correlations were examined and discussed by the study team to identify potential explanations;
- Significant results were retained and interpreted in terms of potential causality relationship between the Accelerators actions and the performance results;
- Finally, an indicative identification of good practices was made based on which practices showed a positive correlation with which types of good performance indicators.

It should be noticed that the KPI indicators correspond to potential good performance since they are based on self-assessment surveys; the Mattermark indicators are based on data sourced from the subgrantees websites but each of them offers only a partial view of the actual market success and they concern only a subgroup of the subgrantees, not all of them. Based on this limited dataset, we can only draw conclusions about which Accelerators' practices lead to a greater chance of better performance for specific performance indicators, rather than for overall good performance.

#### 2. Accelerators' Indicators

#### 2.1. Accelerators' Database

The Accelerators' database (Table 1) included the following indicators segmented in 4 main groups with the rationale indicated below.

#### 2.1.1. Profile and partnership

We selected quantitative indicators representing the geographic footprint of the consortium, duration and size of the project (total EU funding), and the type of partnership. These indicators are objective characteristics of the Accelerators' consortia, which can be measured so it is possible to compare their influence on performance. Other characteristics (for example the type and intensity of their communication campaign to attract applicants) were too different and impossible to translate into indicators for a correlation analysis. The geographical footprint is a proxy of the attractiveness of Accelerators: there is a clear correlation between the location of partners and the nationality of subgrantees, while the correlation with the performance of subgrantees is more difficult to assess.

The key questions we wanted to answer were:

- Does the size or composition of accelerator consortia influence performance?
- Does the geographical location of accelerator partners influence performance?
- Does the amount of funding granted influence performance?
- Does the level of connections within the FI-PPP community (participation to Phase 1,2,3 projects) influence performance?

Concerning the composition of consortia, we were interested to test the correlation with success of the following elements:

- Relevance of involvement of incubators or accelerators in the partnership (possibly correlated with the quality of support to start-ups and capacity to introduce them to other sources of funding). One accelerator (IMPACT) has only incubator/accelerator partners, and another (CeedTech) has a majority of such partners. Two more (SpeedUp Europe and INCENSe) have incubators/accelerators representing half of the partnerships. For all the other consortia, professional accelerators/incubators represent 25% or less of the partnership.
- Presence of partners able to provide direct technical support on FIWARE technologies (assuming this may have helped the subgrantees): 5 accelerators include either Atos or Engineering in the consortium, who are also partners of the FIWARE Foundation.

#### 2.1.2. Evaluation and Selection Practices

As evaluation and selection practices for each accelerator were both similar and different in the type and implementation approach, these are very difficult to compare in a systematic way. We eventually focused on 2 main factors which represent clear differences between Accelerators and reflect their different approaches.

The first concerns whether or not they provided support to the potential applicants to draft the initial business idea (online/offline support to applicants). This was done by European Pioneers, Fabulous, Finish, Finodex and FrontierCities. Finish went further by requesting applicants to find a business partner as a potential customer as a qualification for making an application. The question is if this initial support led to better performing enterprises later.

The second concerns the selection approach used. Accelerators used a variety of methods to select and accelerate their subgrantees, which can be classified in 2 main approaches:

- A funnel approach, meaning that a group of enterprises is selected at the start of the programme, receive some initial funding, and then must undergo multiple check-points with increasing requirements at each stage to measure progress. If entrepreneurs achieve the expected results at the check-point, they receive additional funding; if they fail they do not receive further funding from the programme (in short, they are eliminated). The total number of subgrantees therefore diminishes from the start to the end of the Accelerator programme. The accelerators adopting this approach were FABulous, FICHe, FINODEX, SmartAgriFood2 and Speed-up Europe.
- A pipeline approach, meaning that the accelerator selects a certain number of
  entrepreneurs for each call and then accompanies them for a defined period. The
  funding is usually spread out over the project life with an advance, with additional
  payments due on achievement of certain milestones and a final payment
  distributed at the end of program. This model is followed by 11 accelerators
  (CEED-Tech, CREAtiFi, EuropeanPioneers, FI-Adopt, FI-C3, Finish, FRACTALS,
  FrontierCities, INCENSe, IMPACT, and SOUL-FI). Of course, these accelerators may
  decide to stop funding subgrantees if they find they are not up to the challenge.

As shown in Table 2 below, the "funnel" Accelerators dropped from funding between 40 and 60% of their initial subgrantees. The majority of "pipeline" accelerators eliminated a maximum of one enterprise, except for CeedTech and Creatifi which stopped funding 4 and 7 subgrantees respectively. This data has been difficult and time consuming to collect because accelerators had multiple check-points or could decide stopping funding a project in any moment.

		Indicator
	1	Number of countries covered by consortium
	2	Country of coordinator
	3	Duration (months)
	4	Total EU funding
Profile and partnership	5	Number of partners
	6	Presence of partners from Phase 1 or Phase 2 projects
	7	Presence of incubators or accelerator partners in the consortium (% on total consortium; number)
	8	Presence of partners active in FIWARE development or with specific FIWARE expertise
Evaluation and Selection	9	Proposal phase - online/offline support to applicants and communication activities
Practices	10	Funnel vs Pipeline approach
Funding	11	Average EC investment per subgrantee
	12	Average contribution to subgrantee
	13	Average contribution to subgrantees, minus those dropped after first funding (eliminated)
	14	Maximum funding per subgrantee

Table 1 Accelerators' Profile and Evaluation Indicators

Source: FI-IMPACT 2016

#### 2.1.3. Amount of Funding

We selected 4 indicators measuring the total EC investment per subgrantee (total funding divided by number of subgrantees). the average funding per subgrantee (overall and excluding those eliminated from further rounds of funding during the project), and the maximum funding available. They are obviously correlated but we wanted to test if there were any relevant differences.

As shown in the table below, a few accelerators, led by European Pioneers, granted funding of over 100,000 euro to their subgrantees, while most of them provided a lower sum. There is a clear difference for the funnel accelerators between the average funding and the funding provided to the best performers surviving all the check-points. Overall, the average funding for all 985 subgrantees was of €65,399, while the average funding for those surviving intermediate selections was €84,371. The highest funding per subgrantee was provided by European Pioneers while the lowest by Finodex.

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	Total EC funding (€M)	Total subgrant ees (n.)	Subgrant ees eliminate d (n.)	Average EC investment per subgrantee (€)	Average contribution per subgrantee (€)	Average contribution per subgrantee excluding eliminated (€)
European Pioneers	4.7	25	0	188,000	182,500	182,500
INCENSe	6.2	42	0	147,619	146,667	146,667
FrontierCities	3.9	28	0	139,286	136,248	136,248
FI-Adopt	4.2	32	0	131,250	132,500	132,500
Finish	4.8	32	1	150,000	130,873	130,349
FRACTALS	5.5	43	0	127,907	127,226	127,226
FI-C3	4.5	40	0	112,500	116,218	116,218
IMpaCT	6.4	61	1	104,918	96,625	96,625
CEED Tech	5	84	4	59,524	63,210	47,468
FICHe*	6.2	80	43	77,500	56,195	99,019
SpeedUp Europe*	5.5	95	38	57,895	50,000	53,495
CreatiFi	4.7	60	7	78,333	48,913	63,000
SmartAgriFood2*	4	50	32	80,000	39,323	99,148
SOUL-FI	5.1	136	0	37,500	36,229	36,229
FABulous*	5.4	76	41	71,053	18,000	66,727
FINODEX*	4.6	101	60	45,545	10,000	56,626
TOTAL	80.7	985	227	100,630	85,937	99,378

<sup>\*=</sup> Accelerators with Funnel selection approach

Table 2 Number of Subgrantees and Average funding by Accelerator

Source: FI-IMPACT 2016

## **2.1.4.** Acceleration and Support Practices

We grouped the main activities carried out to support the subgrantees in 9 practice indicators, listed in the Table below. All accelerators offered some kind of mentoring and coaching, with the support of experts dedicated to the start-up teams, but the implementation approach varied. A majority of accelerators organized workshops and

bootcamps, provided gateways to further funding and/or matchmaking and networking services with potential investors, and business development support. A few focused on business innovation support and 6 offered additional FIWARE technical support (beyond that provided by the Programme). Only 1 accelerator (Fabulous, focused on manufacturing) offered technical support and only 2 provided physical spaces to the subgrantees (CeedTech and Soul-FI).

Clearly the practices surveyed had many commonalities, but every accelerator was different in the way it combined and implemented the various activities. There was also some convergence as the programme progressed, as Accelerators teams learnt from each other, particularly in the mentoring approach adopted and helping subgrantees attract new investors. The different focus by vertical market also influenced the selection of the mentors, coaches and technical personnel involved. However, these differences are impossible to translate into indicators. All accelerators applied evaluation criteria to assess the evolution of their subgrantees at specific milestones or check-points, even if only the "funnel" accelerators also used them as a rationale to stop funding some subgrantees.

The qualitative interviews in the next paragraph provide a more articulated perspective about each accelerator's different approach.

		Indicator	Offered by (n. of accelerators)
Acceleration and Support	15	Mentoring, Training, Coaching	16
Practices	16	Business Innovation Support	4
	17	Organization of online/offline Workshops, Bootcamps, Living Labs Spaces (including Training Voucher, Welcoming Week, Demo Day)	11
	18	Gateways to further funding (Finance Support, Funding Services, Promoting to VCs)	11
	19	Matchmaking and Networking	11
	20	Business Development/ Marketing Support	12
	21	FIWARE Technologies Support	6
	22	Technical Support	1
	23	Provision of physical spaces	2

Table 3 Accelerators' Practices Indicators

#### 2.2. Network analysis of Accelerators' Partnerships

A very interesting aspect is the level of connectivity between the organizations composing the accelerators' consortia. Several A16 partners had already been active in FI-PPP Phase 1 or Phase 2 projects, especially Atos, Engineering, and iMinds. We wanted to investigate whether previous participation in Phase 1 and 2 and a close connection with the FIWARE community had any impact on the performance of subgrantees. To do so, we carried out a network analysis of all the partnerships of all projects active in Fi-PPP 3 phases (Figure 1): the detailed data is presented in the table below.

The figure shows clearly that 4 A16 accelerators (CeedTech, FICHe, IMPACT and Soul-FI) were not part of the FI-PPP community when they joined Phase 3. They all had a strong presence of professional accelerators or incubators, and no previous participation in Framework Programme projects. We counted 325 organizations for a total of 468 participations in A16 consortia. The number of organizational participations ranges from 1 to 7, with the majority participating only in 1 or 2 A16 Accelerators. From the network diagram below we can see that Phase 1 was highly concentrated with very strong links between projects, while Phase 2 projects show a less dense network, and Phase 3 projects even less. A number of Phase 2 projects specialized by vertical market generated Phase 3 accelerators with a similar focus, for example Smart Agrifood1 and 2, but also the media projects FI-Content 1 and 2 with Creatifi and FIC-3.

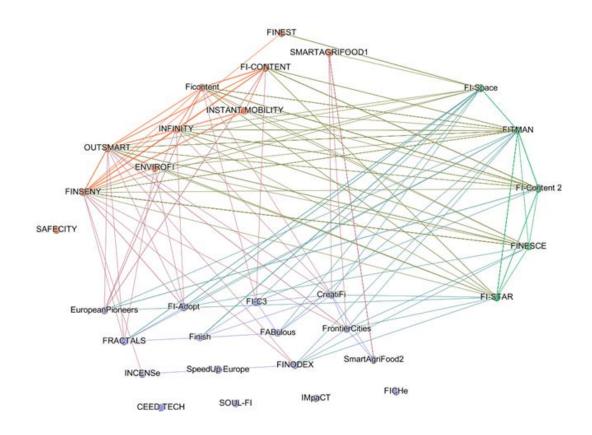


Figure 1 Network Analysis of FI-PPP Partnerships

Source JSI for FI-IMPACT 2016

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Legend: Purple nodes are projects from phase 3, green nodes are projects from phase 2 and orange nodes are projects from phase 1.

The table below presents data about the number of connections between 12 of the accelerators – the remaining 4 did not have any. The first two columns contain the number of accelerator partners which were also partners in projects from Phase 1 or Phase 2. Partners are counted as many times as there are projects they participated in. For example, if a single partner in an Accelerator participated in two projects from Phase 1, it is counted twice (and contributes 2 two the sum for Phase 1). The third column contains the numbers of partners which also participated in other Accelerators (again counted as many times as there are accelerators, similar to the first two columns). The fourth column contains the number of partners which participated in Phase 1 and Phase 2. Here, each such partner is counted only once. The last column is the sum of the first three.

Looking at the number of connections by Accelerator, we notice that Creatifi, European Pioneers, Fi-Adopt and FrontierCities had the highest number of connections, but they do not seem to have other elements in common. INCENSe and SpeedUp Europe instead had only 2 connections each, and they also do not seem to have other common characteristics.

Accelerator	Phase 1 connections	Phase 2 connections	Phase 3 connections	Partners in 1&2	All connections
CreatiFi	4	2	5	0	11
EuropeanPioneers	6	4	0	1	10
FI-Adopt	5	4	1	3	10
FrontierCities	4	3	3	1	10
Finish	0	5	4	0	9
FRACTALS	3	3	2	1	8
SmartAgriFood2	6	0	2	0	8
FINODEX	2	3	2	1	7
FI-C3	2	2	3	1	7
FABulous	0	2	3	0	5
INCENSe	1	0	1	0	2
SpeedUp_Europe	0	0	2	0	2

Table 4 Number of Partnership Connections by Accelerator

Source JSI for FI-IMPACT 2016

#### 2.3. Summary of Accelerators' Interviews

In January 2016, during the A16 meeting in Milan, FI-IMPACT partners carried out face-to-face interviews with the coordinators of each A16 Accelerator to discuss the most successful (or unsuccessful) practices and their opinion on lessons learned. We present here a brief summary, highlighting the main points of agreement or disagreement. Where possible we have also provided summary tables, when the variety of inputs allowed aggregation in a few common concepts.

#### 2.3.1. Activities most helpful for subgrantees

When asked about the activities most helpful for the chances of success of their subgrantees, the majority of coordinators indicated both mentoring/coaching and the

organization of networking events, bootcamps and pitching days (to present their business idea to potential investors), with the mentoring and coaching support. A few (3 accelerators) did not want to isolate specific activities but underlined the value of the comprehensive acceleration programme.

Q.1 In your opinion, which of your activities with subgrantees were most helpful for their potential success?								
	Workshops, Bootcamps, Networking	Mentoring and coaching (including FIWARE)	General support of the acceleration programme	Funding	Pre-call support			
CEED Tech	Х	X	X					
CreatiFi		X		Х				
European Pioneers			x					
FABulous	х							
FI-Adopt		X						
FI-C3	X			X				
FICHe		X						
Finish	x		X		X			
FINODEX	X	X			X			
FRACTALS	x	X						
FrontierCities	х				X			
IMpaCT	x	X						
INCENSe	X	X		x				
SmartAgriFood2	X	X		X				
SOUL-FI			X					
SpeedUp_Europe	X	X						

Table 5 - Most Successful Actions - Edited summary of Accelerators' opinions

Source: FI-IMPACT 2016

Finish, Finodex and FrontierCities emphasized the importance of providing feedback before application submission, underlining how this helped the potential entrepreneurs to improve their business ideas and helped them pre-select potential subgrantees. The 3

accelerators oriented to the agrifood sector (Finish, Fractals and Smart Agrifood2) were particularly focused on helping their subgrantees fit into an ecosystem and helped them meet business partners, potential customers, and support their go-to-market activities. FICHe, focused on e-health, implemented a "living lab" approach making subgrantees meet and interact with potential end-users. On the other hand, European Pioneers and Creatifi (addressing the media sector and creative industries), and IMPACT, and CeedTech (more focused on the type of technology used by their applicants), considered that helping their subgrantees developing cutting-edge business skills and the ability to attract new investors their most important activity. Creatifi specifically credited the Living Lab approach to help refine thinking about design.

Four accelerators mentioned funding as being particularly important. Creatifi, FIC3, and INCENSe mentioned that funding was critical to give a start to the start-ups, while Smartagrifood focused on the value of available funds to make professional pitching videos and pay for other relevant services such as innovation vouchers from BICs (Business Innovation Centres).

#### 2.3.2. Financial control, legal management and technical overview

The accelerators were asked about the most positive/negative aspects of their relationships with subgrantees in terms of financial control, legal issues and technical overview (see annex).

#### Financial control

A slight majority of accelerators (7 out of 16) found no issue with financial control. On the other hand, 6 accelerators complained that the FC contract based on cost statements was out of synch with their programme, since their cash payments mainly occurred after the 1<sup>st</sup> period cost statements and therefore they were forced to anticipate a large amount of cash to the subgrantees. 4 accelerators noticed that the ability to provide fixed amount of funding in instalments to the subgrantees, without presenting a specific financial document, was positive for them as it reduced uncertainty and helped to launch their start-up. The correspondence of funding instalments with check-points and deliverables was another plus.

#### Legal Management

While 2 accelerators found no issue with the EU Framework Programme contractual rules, 7 found the process challenging and time consuming, focusing in particular on the reporting requirements for start-ups and the lengthy claim justification processes required for advance payments, reimbursement and final payments. On the other hand, 4 accelerators solved the problem by leveraging the legal departments of partners' which significantly reduced problems. Specifically, FICHe mentioned that FI-Adopt legal department gave them draft legal agreements, which were extremely useful.

#### Technical Overview

This aspect is critical for the subgrantees and received a more articulated answer. Only 3 accelerators denied having any associated problems. According to 5 accelerators, their subgrantees had problems applying FIWARE technologies, and 4 more complained of insufficient technical support being available from FIWARE when required. Only 2 accelerators claimed to have received good support from FIWARE, while 3 praised the

support available from their own internal technical teams. 1 accelerator (IMPACT) developed a measurement tool of the achievement of KPIs which was shared with other accelerators at the A16 meeting in Paris.

### 2.3.1. Mentoring approach

Given the relevance of mentoring, we investigated how it was provided and which approaches worked best, as illustrated in the table in annex. Mentoring provide ranged from online to face-to-face, market oriented, business development oriented, or investor focused. Most interesting is that 7 accelerators mentioning coaching rather than mentoring, meaning that coaches had a more direct training role of the start-ups while mentors are considered to provide advice.

#### 2.3.1. Lessons Learned

The lessons learned by accelerators are a very important aspect of this very innovative programme. They have been divided in 3 clusters as follows.

#### Lessons learned on approaches

Accelerators focused mainly on ways in which the selection and evaluation process could be fine-tuned, and several mentioned learning from peer accelerators. Based on general opinions, an "ideal" approach to selection and evaluation would have the following features:

- Strong, wide ranged communication campaign;
- First phase of selection process based on online tools, with clear and short, nonbureaucratic application forms (the one eventually used by the A16 was considered too long);
- Second phase of selection including also 1-to-1 meetings, physical or virtual to reduce costs;
- Careful management of the number of applicants selected to allow personal support and interaction with all subgrantees during the acceleration process;
- Ongoing monitoring and measurement of the process to insure transparency and objectivity;
- If the goal is to encourage start-ups more than SMEs, companies with professional acceleration and incubation experience should lead accelerator projects and shape the process;
- For effectiveness, consortium partnerships should agree on methods and processes beforehand (some of the most effective accelerators had only 4-5 partners): the acceleration process requires partners to act in a consistent and coherent way, more than traditional R&D projects.

#### Lessons learned about decision making processes and ways of working from peer accelerators

The main focus was on the process of evaluating applicants and subgrantees. Several accelerators noticed the inherent difficulty to balance an approach based on objective criteria (risking to be rigid) and an approach based on more qualitative, flexible criteria (risking different decisions by different evaluators). Several mentioned the difficulty of manage the external evaluators, who sometimes were not aligned with the priorities

pursued by the accelerator (problems with briefing). The positive impact of collaboration was mentioned by many.

Overall, the lessons learned on which the accelerator agree are the following:

- Positive impact of the experience sharing and collaboration between accelerators.
   Some worked together closely, for example CeedTech, Soul-Fi, European Pioneers and FI-C3 shared processes for selection and granting;
- Accelerators whose partnership did not include professional incubators learnt about mentoring and coaching from those who did.
- Develop a clear and possibly simple selection process (some were needlessly complicated and overly ambitious);
- Make sure to include FIWARE experts from the start in the selection teams (since the use of FIWARE was a pre-condition). Not all accelerator had enough experts at hand to help with the initial screening.
- Keep under control the number of selected proposals, to be able to manage direct interaction and support with all.
- The following approaches were specifically mentioned as good practices and emulated by others:
  - o Legal management by FI-Adopt
  - o Communication campaign by Finodex
  - o Access to investors by IMPACT.

#### 2.3.2. Unexpected events

There was no major event which caused accelerators to drastically change their plans. Adjustments by accelerator coordinators were mainly due to delays in some phase of the process, contract amendments, management of calls, the formalization of the sub-grants, the geographical scope of activity. A few of the unexpected difficulties deserve to be mentioned, as they can be useful as "lessons learned":

- CeedTech had not planned for the differences in process and time required to established new companies in different EU countries.
- A few accelerators mentioned the learning curve involved in implementing FIWARE: in the first call those accelerators without FIWARE experts in the management teams had difficulties evaluating how the subgrantees were using FIWARE and providing necessary support. Also, the FIWARE technical support system took some time to be launched and be available.
- Fractals initially used volunteers for mentoring and found it inefficient. Only paid mentors provide the professional support needed by subgrantees.
- Finish, initially focused only on SMEs, added start-up specific support and mentoring activities.

On the positive unexpected side, Fractals, Soul-FI and SpeedUp Europe mentioned the support provided by the FIWARE ecosystem. Fractals mentioned that the FIWARE ecosystem created opportunities and opened doors for the SMEs . Since Fractals was focused on the food-agriculture ecosystem in small countries such as Croatia and Greece, this is particularly meaningful.

#### 2.3.3. Useful and inefficient practices

The identification of useful practices by accelerators is coherent with the lessons learned. As shown by Table 12 in annex, the coordinators pointed out different steps of the process as successful. In summary, the following elements deserve specific mention:

- The common approach to the application and evaluation process, including tools to manage the applicants' projects;
- The usefulness of the common platform for publishing calls and managing selection (F6S); only 1 accelerator complained that it did not work well (Table 10).
- Intensive communication efforts to attract the attention of innovative SMEs or potential entrepreneurs: Fractals for example ran 27 roadshows in several different countries.
- Provide sufficient time for each step of the process, starting with communication before calls, evaluation by experts, and the following check-points when start-ups needed the time to set-up a company or extend their teams.

Fewer accelerators underlined practices which did not work out as well as expected. The most relevant elements are the following:

- The EU grant funding rules created some problems in the definition of contracts and the management of funding schemes; the common application questionnaire was seen as too long by some;
- The need to check multiple submissions of the same project to various accelerators was time consuming and a nuisance. While double funding was in principle to be avoided, FI-IMPACT was the only stakeholder with a common database able to cross-check potential double funding in real time. Even then it was not sufficient to completely eliminated potential risks of double funding.
- A few accelerators made mistakes in allocating the right amount of time for the main process steps;
- 1 accelerator complained of insufficient exchange of good practices between the A16 (while many mentioned collaboration as a strong point of the programme).
- An accelerator considered it a mistake to have run a general communication campaign without sufficient explanation of the potential of the FIWARE technologies.

## 3. Subgrantees Performance Indicators

### 3.1. Description

The performance of subgrantees was measured on the basis of 3 sets of indicators as follows:

- FI-IMPACT Key Performance Indicators, which measure the market readiness and success potential of subgrantees, based on a structured questionnaire. These indicators are measured with a quantitative scoring scale from 1 (very low) to 5 (very high) performance. The data was available for 650 subgrantees. The KPIs are explained and commented in chapter 3 of D.2.4.
- Mattermark Growth indicator. It was decided to use only the Growth indicator, which is about traction, for the correlation analysis. Other indicators (such as the number of employees) had wild fluctuations over time and were difficult to normalize for a comparison across the sample of subgrantees.
- FIWARE Technical score: this is an indicator measured by the FIWARE technical experts in view of the evaluation and selection of the VIP programme, with 368 usable cases.

All the correlations were calculated both for the whole population of subgrantees and only for the top 30% of performers for each score, to check for potentially meaningful correlations.

Indicators	Source	Metrics	Sample Size
KPI Market Focus	FI-IMPACT, Self-assessment survey	Score 1 to 5	650
KPI Innovation Focus	FI-IMPACT, Self-assessment survey	Score 1 to 5	650
KPI Feasibility	FI-IMPACT, Self-assessment survey	Score 1 to 5	650
KPI Market Needs (average between Business and Consumer Market Needs scores)	FI-IMPACT, Self-assessment survey	Score 1 to 5	635
Mattermark Growth score	Mattermark	N.A.	340
FIWARE Technical Score	VIP2 database, FIWARE experts' assessment		368
Subgrantees with additional funding	FI-IMPACT elaboration on Mattermark and FIWARE community data, updated 19/05/2016	Amount of funding	65

Table 6 - Subgrantees' Performance Indicators

## 4. Results of the Correlation Analysis

### **4.1.** Correlation Analysis of quantitative indicators

The next step was to calculate the correlation between the accelerators' indicators (independent variables) and the subgrantees performance indicators (dependent variables). Basically, the objective was to find out what was the impact of variations in the accelerators' profile and practices on the performance scores of subgrantees. As anticipated in the methodology approach, we differentiated the computation method based on the type of indicators. The first group of indicators are quantitative (the indicator has a different numerical value for each accelerator). All the subgrantees indicators are numerical because they are scores assigned to each subgrantee.

Accele	erator Indicators (Independent Variables)	Action	Rationale	
N.	Description			
Indicator 1	Number of countries covered	dropped	Indicators correlated	
indicator 3	Duration Max (MONTHS)	dropped	and equivalent to the number of partners	
indicator 4	Total EU funding (€M)	dropped	number of partiers	
Indicator 5	Number of partners	OK		
Indicator 6	% of partners coming from phase 1/ phase 2 projects on partnership			
6.1	Phase 1 (number of connections of accelerator with projects from Phase 1)	dropped		
6.2	Phase 2 (number of connections of accelerator with projects from Phase 2)	dropped	Indicators correlated and equivalent to the	
6.3	Phase 3 (number of connections of accelerator with other accelerators)	dropped	total number of connections	
6.4	Phase 1 and 2 (number of partners which were part of Phase 1 and Phase 2)	OK		
6.5	Phase 1 or 2 (number of partners which were part of Phase 1 or Phase 2)	dropped		
6.6	All phases (number of connections of accelerator with all phases, sum of 1-3)	ОК		
Indicator 7	% of professional accelerators in partnership	OK		
Indicator 8	Partner with FIWARE competence or FIWARE coaches in consortium	ОК		
Indicator 11	Average EC investment per subgrantee (€)	OK		
Indicator 12	Average contribution per subgrantee (€)	dropped	Correlated and	
Indicator 13	Average contribution per subgrantee excluding eliminated (€)	dropped	equivalent to average EC investment	
Indicator 14	Max contribution per subgrantee (€)	OK		
Indicator 24	Number of subgrantees with additional funding	dropped	Equivalent to % of subgrantees	
Indicator 25	% of subgrantees with additional funding on total subgrantees	ОК		

Table 7 - Selection of relevant quantitative indicators

To compute correlations, the study team used the Spearman method. For a chosen pair of an accelerator indicator and a score, we subset all subgrantees for which we have information about both the indicator and the score. Finally, we compute the area between the cumulative density graphs for the two sets and normalise. The minimum and maximum possible scores are +1 and -1. The closest the indicator is to 1, the more meaningful it is. A positive correlation means that the 2 variables vary in the same way (for example when the independent variable increases, the dependent variable decreases too). A negative correlation means that they vary in opposite way (when the independent variable increases, the dependent variable decreases). We found that several indicators were correlated and equivalent to each other, in these cases we dropped them and kept only one of them as a proxy for the whole group. The results are shown in the table below.

The correlation was computed twice: once for all the subgrantees (presented in annex) and once for the top 30% performers for each performance indicator, the results for this second group are more significant for our goals.

The main results are shown in the table above and the Figure (heatmap, where red means positive correlation and blue negative correlation). Unfortunately, very few indicators resulted in somewhat significant correlations and only one is around 0.3 which we could consider a medium level correlation. The results are also difficult to comment; however, we make the following remarks:

- The size of accelerator projects (number of partners) has a very weak negative correlation with the feasibility and market focus KPIs, a weak negative correlation with KPI market needs and Mattermark growth score and instead a weak positive correlation with the FIWARE technical score. Perhaps the higher number of partners insured better FIWARE support. But in general size does not seem a strong differentiating factor.
- The presence of partners from the FIWARE community (active in phase 1 and 2) has also influenced positively the FIWARE score.
- The presence of professional accelerators in the consortium has a positive effect on the KPI market focus (measuring market readiness) and on the Mattermark growth score (traction).
- Higher average EC investments lead to slightly better KPI feasibility and innovation scores.
- Finally, the % of subgrantees with additional funding on total subgrantee by accelerator is coordinated weakly with KPIs feasibility and innovation and more strongly with the KPI market needs, they all indicate a better market readiness. Surprisingly this is correlated negatively with the Mattermark growth score.

N.	Indicator	KPI Feasibility	KPI Innovation	KPI Market Focus	KPI Market needs	Mattermark Growth score	FIWARE Technical Score
Indicator 5	Number of partners	-		-			++
Indicator 6	All phases connections			-			
Indicator 6.4	Partners in phase 1 and 2	+	-				++
Indicator 7	% of professional accelerators		+	++		++	
Indicator 11	Average EC investment per subgrantee (€)	++	++				
Indicator 25	% of subgrantees with additional funding	+	+		++		

Table 8 Significant correlations for top 30% subgrantees

Legenda: - or + = very weak correlation, below 0.0; --- or +++ = medium correlation from 0.3 upwards

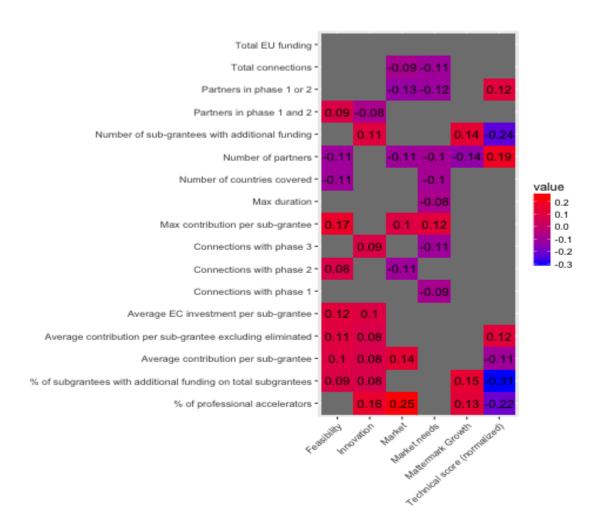


Figure 2 Matrix of Correlations, top 30% of subgrantees

Source: FI-IMPACT 2016

Based on these data, it is difficult to draw any meaningful conclusion, apart from the confirmation of a positive role of the presence of professional accelerators in consortia, and a link between the presence of partners from the FIWARE community and the ability to exploit FIWARE.

#### 4.2. Correlation of practice indicators

The practice indicators are dichotomous (subgrantees have used a practice, yes or no). In this case the statistical team calculated the distribution of scores for the population of subgrantees who used the practice, compared to the distribution of scores for the subgrantees who did not and checked whether using the practice resulted in better scores or not.

The table 9 below shows a summary assessment of the most significant correlations emerging from our analysis for the top 30% performers, while the actual scores and the size of the sample are presented in the tables 10 and 11.

Unfortunately, we were unable to measure the correlation between the mentoring practice and the performance scores, because all accelerators offer it so we cannot compare performances.

		KPI Feasibility	KPI Innovation	KPI Market Focus	KPI Market needs	Mattermark Growth score	FIWARE Technical Score
Indicator 8	Partner with FIWARE coaches		-	+	+		
Indicator 9	Proposal phase - online/offline support to applicants and communication activities						+
indicator 10	Selection approach/ Funnel- Pipeline						
	Pipeline	+	+				-
	Funnel	-	-				+
Indicator 16	Business Innovation Support	-	-	-			+
Indicator 18	Gateways to further funding (Finance Support, Funding Services, Promoting to VCs)		+		+		
Indicator 19	Matchmaking and Networking		+	+			-

#### Table 9 Summary of Correlations for top 30% performers

Legenda: - or + = very weak correlation, below 0.0; -- or ++ weak correlation between 0.1 and 0.3; --- or +++ = medium correlation from 0.3 upwards

The practice with the more widespread positive correlations is the organization of workshops and Living labs spaces, linked with positive results for KPIs feasibility, innovation, market focus and market needs as well as the FIWARE technical score. There is no correlation though with the Mattermark technical score.

Strangely enough, the presence of FIWARE coaches in the partnership is correlated with better scores for KPIs on market focus and market needs but not for the FIWARE technical score.

The provision of gateways to further funding is correlated with the KPIs on innovation and Market needs, while Matchmaking and networking is also correlated with innovation and market focus.

The FIWARE technical score is positively correlated with practices on proposal phase support, business innovation support and the funnel selection approach.

The Pipeline selection approach is positively correlated with KPIs scores on innovation and feasibility, which are negative correlations for the Funnel (they are mirror images of each other).

Finally, business innovation support appears to have a weak negative correlation with the KPI scores on innovation, feasibility and market focus, which have to do with market readiness.

It is difficult to draw significant considerations from these data, beyond the conclusion that practices leading to interaction and access to further funding (gateways, matchmaking, workshops) overall seems to have a broad positive correlation with performance scores.

There are no significant results for the Mattermark score. But this may have more to do with the limited number of cases relevant for the analysis for each practice.

Top 30% Subgrantees With Respect To The Score						All Sub Grantees			
Selection approach	Performance indicator	Practice Score	N	Fu n	Pip	Practice Score	N	Fun	Pip
	Indicator Feasibility	-0.08	204	77	127	-0.05	655	264	391
Funnel	Indicator Innovation	-0.03	233	88	145	0	655	264	391
	Technical Score	0.07	110	50	60	0.06	368	154	214
	Indicator Feasibility	0.08	204	77	127	0.05	655	264	391
Pipeline	Indicator Innovation	0.03	233	88	145	0	655	264	391
	Technical Score	-0.07	110	50	60	-0.06	368	154	214

**Table 10 Selection Approach Correlation scores** 

**FIMPACT**— Future Internet Impact Assurance - Project number 632840 Accelerators' Benchmarking Report

	top 30% subgrantees with respect to the score				all sub grantees				
Practice	КРІ	practice score	n	yes	no	practice score	n	yes	no
B :	Technical Score	0.09	110	44	66	0.06	368	143	225
Business Innovation	Innovation	-0.05	233	80	153	-0.01	655	243	412
Support (offered by 4	Feasibility	-0.06	204	68	136	-0.06	655	243	412
accelerators)	Market	-0.11	197	67	130	-0.04	655	243	412
	Market	0.11	197	121	76	0.03	655	399	256
Mowkah ana	Innovation	0.09	233	155	78	0.04	655	399	256
Workshops (offered by 11 accelerators)	Market Needs	0.05	192	131	61	0.05	639	390	249
accelerators	Feasibility	0.03	204	141	63	0.05	655	399	256
	Growth Score	0	102	68	34	0.07	340	231	109
Proposal phase support (5 accelerators)	Technical Score	0.08	110	22	88	0.01	368	83	285
	Innovation	0.06	233	171	62	-0.04	655	501	154
Matchmaking and Networking	Market	0.03	197	135	62	-0.09	655	501	154
(offered by 11 accelerators)	Growth Score	0	102	74	28	-0.07	340	264	76
	Technical Score	-0.06	110	77	33	-0.03	368	281	87
Partner with	Market	0.04	197	57	140	-0.07	655	233	422
FIWARE coaches (6 accelerators)	Market Needs	0.04	192	77	115	0.03	639	228	411
(o accelerators)	Innovation	-0.04	233	65	168	-0.05	655	233	422
	Innovation	0.04	233	158	75	0.05	655	418	237
Gateways	Market Needs	0.03	192	136	56	0	639	406	233
	Technical Score	0	110	52	58	-0.11	368	258	110

**Table 11 Practices Correlation scores** 

#### 5. Main Conclusions

#### 5.1. Results of the analysis

The main objective of this report was to identify the good practices which most influenced the chances of success of subgrantees. The Accelerator Programme of Phase 3 is an innovative initiative with an original approach and the lessons learned in this programme can provide valuable insights and les learned.

The FI-IMPACT team has dedicated a substantial amount of time and considerable effort to design a suitable methodology, develop comparable indicators, test and calculate the potential correlations between good performance and practices. We have explored:

- The potential correlation between the approach to FIWARE use and performance, through the technical FIWARE score;
- The potential correlation between the accelerator consortia partnerships and their connections with the wider FIWARE community, through a partnership networking analysis;
- The potential correlation between the practices of accelerators and performance scores:
- We have collected all publically available data about follow-up funding won by the subgrantees through direct engagement and explored the correlation between these subgrantees and the practices implemented by their accelerators;
- Finally, we have discussed with the accelerators their views about lessons learnt and successful or unsuccessful practices.

The correlation analysis has not provided statistically significant results. However, the qualitative analysis based on the interaction with the accelerators has provided interesting insights about good practices.

The results of the statistical analysis have been thoroughly examined in the previous chapters: most correlations are not statistically significant, and explain little of the variations in performance of the subgrantees. There are only some weak signals which, coherently with the results of the qualitative interviews, point to the positive role of professional accelerators within consortia, and positive impacts of practices such as workshops, matchmaking and providing gateways to further funding.

In our opinion, the main weakness of the statistical correlation analysis was the very limited available data on actual market performance. As almost all subgrantees have only entered the market in the last 24 months, we do not have sufficient objective results about their success and (according to our market model) we still expect more than half of them to disappear in the next few years. The KPI indicators used have measured market readiness and potential good performance. As the Mattermark dataset is entirely dynamic, while it provides good information on traction and dynamics, the quality of data is questionable for this kind of analysis. The information on additional funding from external investors, possibly the most relevant indicator of objective market success, was limited to a small group of initiatives (65 at last count on May 2016). Perhaps in a couple of years, with up to date data on actual market results of the subgrantees population, this analysis could be repeated with better results.

However, selecting and accelerating new enterprises is a complex process and more of an art than a science. It is also possible that quantitative comparable indicators cannot adequately capture the combination of activities that make the difference for start-up performance. Good accelerators will mix and match the types of support provided by different candidate start-ups and adapt their strategies to the specific case and personalities they are dealing with.

Nevertheless, the assessment of accelerator practices does provide interesting insights.

First of all, there was a massive effort by the Commission to promote and sponsor the convergence of accelerators towards common practices. The frequent interaction process led the consortia to learn from each other and considering the often quite different starting points, quickly identify some (if sometimes limited) common ground. A critical areas of convergence focused on coaching and mentoring start-ups and proving access to a wider pool of angel, seed fund and early stage investors. Mentoring and coaching which is a primary component of professional accelerators practices was quickly widely adopted and used in a more systematic and continuous way. Some A16 partners did not realize that a direct, personal relationship with entrepreneurs is a must in the acceleration process and had to adjust to allow for the necessary time and resources to adequately manage this process.

#### 5.2. Comparison of good practices

This section provides a top-level comparative analysis between the good practices identified by FI-IMPACT within the Phase 3 Acceleration Programme, and international accelerators' and incubators good practices extracted from public sources.

To carry out this comparison, we selected four public sources:

- Measuring value created by Impact Incubators & Accelerators, 2014, I-DEV International, Aspen Network of Development Entrepreneurs and Agora Partnerships: this report was set out to evaluate at worldwide level the value created by impact incubators and accelerators for social enterprises and impact investors they seek to support.
- Business Accelerators. The Evolution of a Rapidly Growing Industry, Cambridge University: this report analyses how accelerator programmes have developed over time and what value they create for different parties within the ecosystem, including founders, angel investors and venture capital funds. Its focus is on US and UK accelerator programmes.
- **Y Combinator** The X Factor of Tech: an article by The Economist about one of the most successful start-up incubator in the Silicon Valley, which highlights the key success factors of the formula developed by this start-up school.
- Incubating success. Incubation Best Practices That Lead to Successful New Ventures, US Department of Commerce: the purpose of this report was to test whether there is a causal relationship between business incubation practices and client firm success, particularly after these firms have moved out of –or graduated from the incubation program.

In the following Figure 3, the accelerators good practices are presented in ranking by relevance and compared with similar rankings of success factors by the four identified

studies. The results of the comparative analysis represent a validation of the conclusions of FI-IMPACT analysis and of the Accelerators' own opinions. More specifically:

- Most of the valuable support to the sub-grantees came from mentoring and coaching activities, especially through one-to-one sessions. The A16 considered these practices to be particularly beneficial for their startups, and we found that this is consistent with analyses carried out by the other accelerators and incubators, as shown below. In fact, providing access to coaching services, and investing in the quality of the mentors are key success factors and sources of value of the acceleration programmes. This also includes the involvement of alumni as peer-mentors, when they are invited back into the programmes to share their experience.
- Workshops and boot-camps: these practices are not mentioned as such in other sources we analyzed, but when they are considered more generally as practical training and learning sessions (both physical and online events), several accelerators and startups recognize them as valuable opportunities. The Phase 3 Accelerators offered multi-thematic trainings, from pure technological (FIWARE) support to marketing, business development, and legal support. This is coherent with a range of successful services provided in different acceleration programmes, which are highlighted in the analyses we took into consideration.
- We found a widespread agreement that **matchmaking and networking** are good practices to support the entrepreneurial potential of startups. Accelerators encourage networking among their startups (internal networking), as well as with the overall business community. On the other side, an emerging success factor of the seed accelerator Y Combinator is their approach to foster the competition between their startups, encouraging them to accomplish in less time than expected.
- The Phase 3 also focused on providing the maximum exposure to potential investors through pitching opportunities and showcase events targeting the (early stage) investors community (gateways to further funding). According to the sources we analysed, opportunities of follow-on funding are one of the key success metrics of the accelerators performance.

	FIWARE Accelerators good practices	Measuring value created by Incubators & Accelerators	Business Accelerators. The Evolution of a Rapidly Growing Industry		Y Combinator	Incubating success	
Source and Metric	FI-IMPACT assessment	Sources of value (Post-Program questionnaire)	Sources of value - Perceived by entrepreneurs	Sources of value - Perceived by investors	Success factors of Y Combinator furmula	Services correlated to success	
1 <sup>st</sup> ranked	Mentoring and coaching	Peer Mentoring	Quality of mentoring	Investment opportunities received	Class approach	Linkages to educational resources	
2 <sup>nd</sup> ranked	Workshops and boot-camps	Business Strategy and development support	Reputation of the programme	Visibility of new technology trends	Coaching	Networking	
3 <sup>rd</sup> ranked	Matchmaking and networking	Pitching	Networking	Business development support	Startups in competition	Legal services	
4 <sup>th</sup> ranked	Gateways to funding opportunities	Business Etiquette, Presentation Skills Training		Early customer validation	Pitching	Marketing assistance	
5 <sup>th</sup> ranked					Networking	Support to set a management team	

Figure 3 Comparative Analysis of Good Practices

#### **5.3. Fiware Accelerate and Venture Capital**

An important consideration results from the analysis of the sources of additional funding received by the sample of 74 subgrantees on which we have this information. The sample is small, but, as shown in the following table, it is clear that most of them received follow-up development funding from venture capitalists. This confirms that those Accelerators with good contacts in the venture capital community had a better chance to promote their subgrantees, and conversely, networking with venture capitalists is a good practice and a key success factor for accelerators.

These data confirm also that Fiware Accelerate was focused on early phase funding of innovative business ideas and played an important role in bringing budding entrepreneurs to the level of maturity where they could interest venture capitalists. It is also interesting that several of them (7) profited from crowdfunding platforms such as Kickstarter, an innovative source of financial support for these companies.

Source of investment	N of subgrantees	Definition
Ventur Capital (VC) Investment	55	Subgrantees raised private equity funding
Funding from national programme	8	Subgrantees raised funding from national initiatives promoting startups, or generally innovation (like Innovate UK)
Crowdfunding	7	Subgrantees raised funding from crowdfunding platforms, like Kickstarter
Funding from startup programme	3	Subgrantees raised funding from accelerators, or other startup-focused programme (like Google Launch Startup)
Additional EU funding	1	Subgrantees received funding from EU initiatives, outside the Phase 3 Programme

Table 12 List of Subgrantees' additional funding sources

Note: Subgrantees may have received funding from multiple sources

Source: FI-IMPACT elaboration on Mattermark and SME Info online database

#### 5.4. Lessons learned

#### Profile and partnership

The size or geographical scope of the partnerships did not seem to make a major difference, but the presence in the consortia of professional accelerators (with the right contacts with the investors community) and of technical partners able to guide selected proposals in the best use of FIWARE technologies were key success factors underlined by many accelerators.

#### Selection and evaluation process

The initial phase is clearly critical in attracting and selecting those entrepreneurs with the most potential. Good practices in this phase were:

• Strong, wide ranged communication campaign;

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- First phase of selection process based on online tools, with clear and short, non-bureaucratic application forms;
- Second phase of selection including also 1-to-1 meetings, physical or virtual to reduce costs; the personal relationship with potential entrepreneurs;
- Ongoing monitoring and measurement of the process to insure transparency and objectivity;
- If external experts are used to help with the selection, make sure that the criteria of selection are clearly spelled out, that the experts are well briefed and that the same criteria are applied to all applicants. This selection process is very different from the FP projects technical evaluations.

#### Management of the acceleration process

In this phase, good practices proved to be:

- Good mentoring and coaching of the applicants
- Capability to teach how to "pitch" to external investors or potential customers
- Strong networking, matchmaking and tutoring activities
- Very practical focus of bootcamps and workshop interactions (avoid "concertation" meetings focused just on getting to know one other)
- Careful management of the acceleration process taking into account time planning and resources to allow the necessary level of personal interaction with and support to entrepreneurs

Overall, the lessons learned on which the accelerator agree are the following:

- Positive impact of sharing experiences and collaboration between accelerators.
   Some worked together closely, for example Ceed-tech, Soul.Fi, European Pioneers and FI3C shared processes for selection and granting;
- Accelerators whose partnership did not include professional incubators learnt about mentoring and coaching from those who did.
- Develop a clear, simple and well understood selection process (some were needlessly complicated and overly ambitious);
- Make sure to include FIWARE experts in the selection teams from the start (as the use of FIWARE was a pre-condition). Not all accelerator had enough experts available to help with the initial screening.

The following negative aspects instead should be avoided:

- The nature of EU grant funding rules created some problems in the definition of contracts and the management of funding schemes.
- The timing of funding typical of multi-year Framework Programme projects in some cases requires accelerators to front-load the timing of providing substantial funding to the subgrantees. The process should be fine-tuned.
- The need to check multiple submission of the same project to various accelerators, which not illegal, requires some coordination.
- In the first phase of the programme insufficient technical support on FIWARE and limited resources to experiment on the FIWARE platform.

In conclusion, the positive aspects appear to more than compensate for any challenges associated with successful delivery of the A16 Acceleration programme.

#### 6. Annexes

**6.1.Summary Table of Accelerators' qualitative interviews** 

#### Q. 2 When considering the relationship with the subgrantees, What is most positive/negative about your: Financial control Legal management Technical overview No No No Negative Positive Negative Negative Positive Positive issue issue issue Strict EU Cash Payment after Internal Legal Subgrantees' contractual flow submission of KPI Good team for departments rules and difficulties Insufficient financial technical issue/ measurement support with of the reporting support from documentation/ to support support in from no procedure **FIWARE** FIWARE consortium **FIWARE** advance after mentoring the involved technologies for startdeliverable payment consortium ups **CEED Tech** X X CreatiFi X X X European X X X X X **Pioneers FABulous** X X FI-Adopt X X X X FI-C3 Х X FICHe X X X Finish FINODEX X X X X X FRACTALS X **FrontierCities** X X X X X **IMpaCT** Х INCENSe X X X X SmartAgriFood2 X X X **SOUL-FI** Х X Х SpeedUp\_Europe X X X

Table 13 Positive/Negative actions - Edited summary of Accelerators' opinions

Q. 3 What types of mentoring did your accelerator provide, through which channels? Which were most positive?												
	1 to 1	online meetings	physical meetings	events speed dating	internal mentoring	external mentoring	market mentoring	investor mentoring	business mentoring	technology FIWARE mentoring	general	coaching vs mentoring
CEED Tech		х		х								
CreatiFi			х	х			х	х				
EuropeanPioneers				Х		x						
FABulous			х		x							
FI-Adopt				Х					x	x		
FI-C3	Х			х								x
FICHe		Х							x	x		х
Finish	Х								Х	х		
FINODEX											Х	х
FRACTALS	Х											х
FrontierCities											Х	х
IMpaCT					х							
INCENSe		Х	Х							х		
SmartAgriFood2	Х						х					
SOUL-FI			Х									x
SpeedUp_Europe		х										х

Table 14 Approach to Mentoring – Edited summary of Accelerators' opinions

	Q.4 What lessons did you and your colleagues learn in term of: approaches								
	Better promotion of calls	Different evaluation process/more face-to-face support	Different selection process / more online	Different support tools / more online	Improve pre- selection activities to increase quality of projects	Change selection procedure, shorter process, more calls	Involve more professional accelerators in the consortium	Make sure partners agree on methods and processes	Revise the EU requirements for the startups
CEED Tech		Х							
CreatiFi							x		
European Pioneers						X			
FABulous				x					
FI-Adopt			х						
FI-C3						X			
FICHe									x
Finish									
FINODEX									
FRACTALS									
FrontierCities	x								
IMpaCT								Х	
INCENSe								x	
SmartAgriFood2		Х							
SOUL-FI						x			
SpeedUp_Europe					X				

Table 15 Lessons Learned - Edited summary of Accelerators' opinions

	Q. 4 What lessons did you and your colleagues learn from this process in terms of:										
			Decision	making processes	5		Ways of working from peer accelerators				
	Experie nce sharing	Use of good evaluat ion tools	Better physical than virtual meetings for evaluation	Consortium partnership's influence	Increase control of external evaluators	Selection process too formalized and rigid	Shared selection and granting process	Good practices:legal from Fi-adopt, communication from Finodex, access to investors from Impact	Learnt from mentoring and coaching practices	A16 networking meetings	
CEED Tech	х						х				
CreatiFi		х						х			
EuropeanPioneer											
S											
FABulous											
FI-Adopt											
FI-C3					х			Х			
FICHe										Х	
Finish											
FINODEX			Х								
FRACTALS			x	x					х		
FrontierCities						x					
IMpaCT											
INCENSe				x						x	
SmartAgriFood2											
SOUL-FI					х						
SpeedUp Europe											

Table 16 Lessons Learned - Edited summary of Accelerators' opinions

Q.6 During your call and selection process were there any particularly useful practices?									
	Selection platform F6S	Events, communication, promotion	Application/ selection process	Tool for subgrantees project management	Funding approach and dissemination	Pre-proposal support	Startups helping to mentor		
CEED Tech		X	X						
CreatiFi			X						
European Pioneers			X						
FABulous			X						
FI-Adopt	X			Х					
FI-C3		Х			X				
FICHe	X								
Finish									
FINODEX			X						
FRACTALS		X	X						
FrontierCities						X			
IMpaCT		X					X		
INCENSe		X	X						
SmartAgriFood2						X			
SOUL-FI	X								
SpeedUp_Europe									

**Table 17 Useful Practices - Edited summary of Accelerators' opinions** 

	Q 6 During your call and selection process were there things that did not work well?									
	EU rules rigidity (contracts, funding schemes, application process)	Multiple submission to different accelerators	Insufficient time for process steps	Insufficient exchange of good practices between the A16	Problems with F6S platform	Lack of a campaign on FIWARE technologies potential				
CEED Tech			X							
CreatiFi			X							
EuropeanPioneers										
FABulous		X								
FI-Adopt	X									
FI-C3	X			X						
FICHe	X									
Finish			X							
FINODEX										
FRACTALS										
FrontierCities					X	X				
IMpaCT										
INCENSe										
SmartAgriFood2										
SOUL-FI	X									
SpeedUp_Europe										

Table 18 - Inefficient Practices - Edited summary of Accelerators' opinions

#### 6.2. Correlation Results on all subgrantees

The Figure below shows the results of the correlation analysis of the identified set of indicators for the 650 subgrantees. The minimum and maximum possible scores are +1 and -1. The closest the indicator is to 1, the more meaningful it is. A positive correlation means that the 2 variables vary in the same way (for example when the independent variable increases, the dependent variable decreases too). The gray squares indicate results which were not statistically significant.

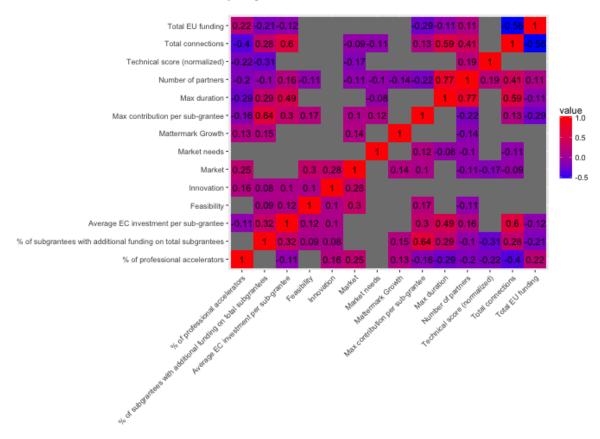


Figure 4 Matrix of Correlations, all Subgrantees

#### 6.3. Subgrantees with additional funding

The table below presents the list of subgrantees and the amount of additional funding they received, aggregated from Mattermark and the SME Info database, as of September  $7^{\rm th}\,2016$ .

Identifier	Name	Data on Funding (source Mattermark)	Data on Funding (source SME Info DB)		Total by accelerator
CEED241	Budgetbakers		1,000,000	VC Investment	
CEED260	sorryasaservice.com	110,000		VC Investment	
CEED444	Branchtrack		250,000	Funding from startup programme	
CEED403	Aykiro		600,000	VC Investment	
CEED421	callpage		500,000	VC Investment	
CEED451	Klear		150000	VC Investment	
CEED298	Hashtago	200,000		VC Investment	
CEED367	TeskaLabs	110,000	337,000	VC Investment	14
CEED397	Veleza	240,000		VC Investment	
CEED402	Cloudo	110,000	100	VC Investment	
CEED407	Parko	1,100,000	1,500,000	Funding from startup and national programmes	
CEED424	PUBLICFAST	300,000	263,000	Crowdfunding	
CEED426	ResultsOnAir	100,000	88,000	VC Investment	
CEED427	Shipitwise	32,725		VC Investment	
CREA107	GiPStech	453,000	400,000	VC Investment	
CREA3	Artomatix		160,000	VC Investment	
CREA33	treev	110,000		VC Investment	
CREA34	LIMECRAFT (RUSH)		470,000	Crowdfunding	
CREA41	Graphystories			No information available	
CREA47	Small Town Heroes (quizshow)			No information available	10
CREA68	UXprobe	111,930		VC Investment	
CREA69	Vicancy		170,000	Funding from national programme	
CREA70	Videobot		110,000	Funding from startup programme	
CREA9	SmartOcto (CleverLions)		175,000	VC Investment	
Euro110	Livecoding.tv	120,000		VC Investment	
Euro164	Tobyrich		100,000	VC Investment	6
Euro251	FitFully	50,000		VC Investment	O
Euro253	Lingua.ly	1,000,000	892,000	VC Investment	

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Euro256	Rezguru TableGrabber		250	Crowdfunding	
Euro61	Appscend	40,000		VC Investment	
FABu35	Love & Robots	250,000	335	VC Investment	1
FIAd122	My documenta- BRAIM		73,880	Funding from national programme	
FIAd90	Legend (miLeyenda Entertainment SL)		50,000	VC Investment	
FIAd125	Speaky		350,000	VC Investment	5
FIAd95	Rowanalytics		31,000	Funding from national programme	
FIAd118	Pharmawizard		1,959,563	VC Investment	
FICH10	Horus Technology	900,000	838,000	VC Investment	
FICH41	Andaman7	1,460,000	1,300,000	Crowdfunding	4
FICH46	Mint labs		200,000	VC Investment	1
FICH53	Psious	1,180,000	940,000	VC Investment	
FI-C3	voiceitt		457,830	Crowdfunding	2
FICO83	Guide Me Right	100,000	10,000	Crowdfunding	Z
FINO28	sensewaves - Hupp		489,000	NA	1
FRAC	Warply	500,000	439	VC Investment	2
Frac5	Agrivi	85,000		VC Investment	Δ.
IMpa131	Quizlyse	200,000	175	Funding from startup programme	
IMpa245	Revisely _ Mobile text		75,000	VC Investment	
IMpa331	Notegraphy	260,000	500,000	VC Investment	
IMpa349	Onomondo		1,200,000	VC Investment	
IMpa413	8fit	2,500,000	2,700,000	VC Investment	
IMpa516	AppAnalytics	300,000	263,000	VC Investment	12
IMpa519	Glamping Hub	1,000,000	878	VC Investment	
IMpa527	Sellf	1,000,000		VC Investment	
IMpa528	Dnaphone	224,826	400	VC Investment	
IMpa533	Antlos		500	VC Investment	
IMpa534	Atooma	600,000	600	VC Investment	
IMpa8	Goalshouter		200,000	VC Investment	
INCE122	N-Join		893,000	VC Investment	
INCE234	Nnergix	1,541,195		VC Investment	3
INCE26	Snapback	491,400	450,000	Funding from national programme	
SOUL18	Findster		87,000	VC Investment	
SOUL209	ususty	35,000		VC Investment	6
SOUL210	Cloudesire		600	VC Investment	6
SOUL245	Solenco Power		500	VC Investment	

SOUL249	Muzeums (FI_Heritage)		88,000	Funding from national programme	
SOUL50	AirDonkey		100,000	Crowdfunding, additional EU funding	
SOUL34	Kiunsys	505,000		Crowdfunding	
Spee118	Pycno	40,000		VC Investment	
Spee148	sponsoo.de	56,732		VC Investment	
Spee16	bentekk - bencloud		250,000	VC Investment	
Spee176	worldfavor		500,000	VC Investment, additional EU funding	7
Spee52	EDqu		633	VC Investment	
Spee63	Wantr (FI-WARE)	600,000	527	VC Investment	
SpeedUP	Fashion Cloud		175,000	VC Investment	
total		18,016,808	21,351,210		74

Note: Sort in alphabetical order by Identifier

Table 19 Subgrantees with additional funding, September 2016

Source: FI-IMPACT elaboration on Mattermark and SME Info online database