D8.9 Feasibility and Impact Assessment Toolkit

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03	AIDIMME	15/12/2018	Validation and integration of KPIs
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1 Executive Summary

The objective of the Feasibility and Impact Assessment Toolkit is to provide a means of assessing the potential business impact that the NIMBLE platform is expected to have for the specific NIMBLE ecosystem of companies and other users.

The approach is to define a set of metrics and a methodology to measure NIMBLE platform instances. The methodology should nurture and make more effective the business cases deployment and to possibly extend the users adoption rate of the NIMBLE solution, as part of the SEED programme.

NIMBLE platform performance metrics have been selected on the basis of the back-ground information generated from three main activities performed in the NIMBLE project:

1. NIMBLE Consortium engaged with the partners dealing with the Furniture Manufacturing Platform (FMP), in order to better understand the expected business impacts to be measured.
2. NIMBLE Consortium built on past activities in the NIMBLE project where some metrics have been already investigated and selected.
3. NIMBLE Consortium carried out additional environmental scanning to check if specific sets of metrics are commonly used to assess digital platforms.

Following the above-mentioned activities, NIMBLE Consortium defined two initial dashboards - one assessing business impacts from end-user's perspective and one assessing business impacts from a platform owner perspective - which have been illustrated in Section 4.1 and Section 4.2.

The developed dashboards will be adopted as part of the validation activities of the project pilots and – more specifically-, starting from the FMP case, as it is expected to start engaging with end-users soon. The resulting insights are then integrated in the description of the project business cases, in order have more evidence and proof- of-concepts to engage with new potential platform owners, which are the main target of the SEED programme.

In fact, it should be pointed out that capturing qualitative and quantitative measurements data to assess business values is just a part of a more comprehensive strategy within the SEED programme. For example, the next step (D8.10) will be to release a Platform Launch Manuel to help potential new platform owners to deploy and start business by using the NIMBLE platform.

2 Introduction

The present activity is part of one of the two impact creation programmes of the NIMBLE project: while the AMBASSADOR programme aims at attracting manufacturers and suppliers to use a NIMBLE-based B2B platform, the SEED programme addressed in this deliverable aims to foster the creation of a federation of NIMBLE platforms owned/managed by distinct organisations and serving distinct sectors and/or geographical areas. Hence, the SEED programme is targeted at potential platform providers.

As detailed in D8.8 (SEED Programme: Manual and Materials Package), the target audience of this programme is represented by the following classes of stakeholder:

- *Manufacturing B2B service providers and intermediaries* - i.e. all organizations (profit and non-profit) that facilitate companies (particularly SMEs) in growing their business.
- *Digital platform and infrastructure providers* - i.e. companies and organizations that offer open or private digital solutions for many classes of applications (marketplaces, supply chain management, IoT, etc.), business models (B2C, B2B and B2B2C) and verticals (manufacturing, transportation/logistic, smart cities, etc.).
- *Technology and Service Providers* – i.e. companies that can develop software services and modules on top of the core services of the NIMBLE platform to implement a new tool for platform customers.

For these stakeholders (in particular, for the first 2 classes listed above), it is very relevant to understand how the platform works and, most importantly, what type of business benefits it can bring to them and their customers. Whilst demo, video tutorial, webinars, etc. can support organizations to understand how the platform works in practice, other tools need to be developed in order to demonstrate business benefits (in the short, medium and long term).

The NIMBLE Feasibility and Impact Assessment Toolkit is in fact the tool of the SEED programme that defines the metrics and the methodology to assess the business impacts of the NIMBLE platform. Therefore, the **main targets of this tool are potential new platform owners** that can evaluate the results of the NIMBLE platform assessments based on the identified metrics and, thus, decide to become providers of a specific platform, themselves then seeking manufacturing companies to join the platform and its services.

The devised metrics and methodology will be applied to the NIMBLE project demonstrators, as part of the project validation activities (WP7). The collected results can be then used to enrich the descriptions of the project business cases, by providing evidence of the stated business impacts. In this way, the interest and engagement from potential new NIMBLE platform providers can increase.

Since, at this stage, the most advanced NIMBLE use case is the Furniture Manufacturing Platform (FMP), we have engaged them in the process of defining the toolkit and we will use it as the first pilot system for our impact assessment. The adoption metrics and adoption methodology explored in FMP has been generalized, compared and combined with other input coming from previous deliverables (specifically D4.4) and a literature review on metrics for platform assessments, and then also tested against the other use cases (Eco-Houses, Textile, White Goods Servicing). The obtained results can then be used to assess platform adoption for ecosystems that are outside the current scope of NIMBLE.

The remaining of this document details the main elements of the Feasibility and Impact Assessment Toolkit and is structured as follows:

Section 3 gives an overview of candidate metrics from the literature and also refers to related work in D4.4 (Validation from the platform manager's point of view).

Section 4 consolidates the metrics into the **Feasibility Assessment Matrix** as the main assessment tool and section 5 introduces the methodology for using it. Section 6 gives conclusions and points at further work.

3 Metrics to Assess Business Impacts

Measuring the effectiveness of digital platform tools and technology is a key task when users are seeking solutions to problems.

Problem definition and key performance indicators (KPIs) or other success factors are expected to measure the effectiveness of the solution through:

1. baseline statements during the pre-launch and
2. periodical revision of the figures to check engagement levels.

Assessing business impact is necessary to measure successful technology adoption. Therefore, when measuring digital platform tools' effectiveness, relevant KPIs for business impact should be designed to measure the ease of work for the users or the reduction of certain transaction costs for the users thanks to the platform. Further KPIs could measure how users add value to the business organization through the use of the platform.

The visible and measurable increase in productivity, the decrease in bottlenecks, the reduction of miscommunications or incorrect work will allow users to obtain real value from implementing the tool and improving satisfaction levels among users /employees. Therefore, productivity surveys measuring the qualitative and quantitative impact on the users' satisfaction before and during the platform rollout are very important to assure the impact of a digital workplace initiative.

As the NIMBLE platform considers establishing appropriate performance metrics of the business capabilities of the platform, we started this activity with an analysis of:

- *What are the business impacts to measure*? To this end we engaged with the owners of the FMP to better understand their expectations from this point of view. We decided to focus on this business case due to its advanced maturity stage and, thus, the possibility to perform some relevant validation activities of the toolkit within the project duration time.
- *How to measure the identified business impacts*? To this end we first analyzed what has been developed within the NIMBLE project. In particular, D4.4 (Platform User Experience – Platform Manager's Point of View) has already identified some metrics to support specific platform manager requirements. Some of these metrics could be also included in the Feasibility and Impact Assessment Toolkit. Then we completed our analysis with additional literature reviews about measuring B2B platforms' impacts.

The following subsections present the collected insights.

3.1 Business Values for the Furniture Manufacturing Platform

The Furniture Manufacturing Platform (FMP) is an instance of NIMBLE for the wood-furniture sector, to make contacts and possible new business with companies at a European level. FMP will allow companies to search for products, materials and / or services, according to their needs, being able to locate new potential suppliers and even arrange negotiations for specific supply chains. FMP is the ideal solution to find partners in the supply chain and negotiate with them even logistics services.

To do business on the platform, companies need to register and, after validation, they can publish their catalog of products and/or services, and thus begin to:

- Search for products and / or services
- Obtain immediate information about the products / services and their availability.
- Contact companies and initiate negotiation processes with the most appropriate suppliers.

During the year 2019, NIMBLE intends to attract 300 registrations from companies to evaluate

and consider the value of the platform. FMP will allow registered companies to make contact and negotiate supply chains using real data with real companies, supporting data security, privacy and monitoring throughout the negotiation process. Although during 2019 it will still be a testing platform (BETA testing), in 2020 FMP is planned to reach a mature and consistent stage, thus becoming a reference case for B2B activities in the furniture sector. Therefore, FMP is currently the best candidate to be used for implementing and validating the Feasibility and Impact Assessment Toolkit.

Following some interviews/interactions with the FMP owners (partners: AIDIMME and FEVAMA) we firstly tried to address the main business impacts to be assessed. According to platform users, these business values are:

- Increasing company visibility through the network;
- Creating new business opportunities, by finding new customers and expanding their network of suppliers;
- Partnership building, by taking advantage of digital services that allow creating and maintaining effective partnerships and commercial collaborations;
- Reducing costs.

In addition, we have also investigated business values for the platform owners. From this perspective, the values are mainly related to the availability of means to assess and sustain the vitality of the ecosystem and the effectiveness/efficiency of the platform, such as:

- Analytics about platform use (effectiveness)
- Platform monitoring (efficiency)
- User support (feedbacks, suggestion, reaction to bug notification, etc.)

Based on the identified business values, we, together with AIDIMME and FEVAMA, defined a preliminary set of classes of metrics that could be relevant to measure. Results are shown in the table 1 below. For example, traffic volume metrics can be good indicators of visibility and business opportunities (companies spend time on the platform because they find it effective), while usability and number of interactions can be better candidates for assessing partnership building, .

However, as detailed in the next sections, further investigations have been necessary to check what are the most critical and used data that can be used for assessing such business values.

Table 1 – Mapping business values and possible classes of metrics

Platform business values		*Classes of Metrics*						
		Traffic Volume	Usability	Number of interactions	Response times	Platform Assistance	Platform Analytics	Platform Feedbacks
Users	Visibility	X	X					
	Business and partnership opportunity	X		X	X			
	Cost reduction	X		X	X			
Owners	Platform use	X		X			X	
	User support		X			X		X
	Platform monitoring				X		X	

3.2 Possible Metrics for Assessing Business Values from D4.4

In order to identify the best metrics to be included in our toolkit, we started by considering the work that has been already performed in the NIMBLE project. Specifically, we considered deliverable D4.4 (Platform User Experience – Platform Manager's Point of View) where specific requirements for platform managers were identified and KPIs to meet them were presented. In the scope of the present deliverable, we found the following aspects relevant:

1) Viral Growth Metrics

In order to assess the viral growth of the NIMBLE platform we should look at interactions that make the use of the platform attractive to manufacturing SMEs. This includes, for example, the business values for users identified for the FMP case in the previous section, but also incentives for companies to join NIMBLE.

Choudary (2015, p272) reduces viral growth to four fundamental questions which should be addressed by the design of the platform and its interactions:

- *Sender incentives* – why will users spread the word about the platform? The underlying design question is how users can send units of value out of the platform, to other networks?
- *Spreadable core value unit* – what is the minimal transferable unit that can be moved to an external network?
- *External network* – where will the unit of value from the platform meet current non-users outside the platform?
- *Recipient incentives* – why will a non-user on an external network convert to a user on the platform?

At present, planned-for minimal transferable units in NIMBLE are the product/service descriptions published as company catalogues; manufacturing capabilities described in the company profile; compliance with standards and best practice (e.g. certificates of origin or PPAP level compliance) and quality and trust assessments given by customers and by the platform if it acts as an objective critic of all participants.

Therefore, metrics should capture these aspects:

- If and how many times, NIMBLE product and service catalogue items have been accessed by public URLs coming from outside the NIMBLE platform;
- If and how many times, company descriptions have been accessed by public URLs coming from outside the NIMBLE platform;
- If and how many times, tenders addressed to players in specific supply chains have been placed.

2) Platform management Metrics

According to Parker et al (2016) platforms in the start-up phase need to focus on a high rate of high quality interactions between growing numbers of participants. The relevant metrics are:

- **Liquidity** – possibly still with a small number of participants, but with a high interaction rate; We can consider the "Liquidity" of the platform as a metric comprising the following figures:
  - Number of participants (companies)
  - Number of successfully agreed contracts
  - Number of successfully fulfilled contracts
  - Number of companies not having taken part in any contracts
  - Ranking of interaction pairs according to frequency, trading volume, satisfaction level.
- **Matching quality** – which needs excellence in product/service curation. We can assess the matching quality of the platform as a metric comprising the following figures:
  - Number of successfully agreed contracts
  - Number of successfully fulfilled contracts
  - Number of unsuccessful negotiations with no follow-up
  - Number of unsuccessful negotiations vs agreed contracts
  - Number of fulfilled contracts with quality complaints

In following stages of the platform (growth and maturity phase) additional and more refined metrics could be included, such as:

- Assess participation trends on the platform through metrics comprising the following figures:
  - Number of products offered on the platform
  - Coverage of eClass and distribution of sales over eClass items
  - Number and kind of products offered but not sold
  - Number and kind of products sought but not offered
  - Size of companies joining over time (maturity stage only)
  - Number of companies joining over time (maturity stage only)
- Search for root causes of interaction failures through metrics comprising the following information:
  - For stopped negotiations: which side stopped the negotiation?
  - For stopped negotiations: what caused the stopping of the negotiation?
  - For unfulfilled contracts: which side complained about what?

  - For unfulfilled contracts: what caused the transaction to fail?

  The above must be supported by questionnaires to the parties, with “closed” questions (selectable standard options) and “open” questions for analysis by humans or AI techniques.
- Assess participation intensity on the platform through metrics collected per company:
  - Number of published catalogue items, over time
  - Number of initiated product or service searches, over time
  - Trading volume as supplier, over time
  - Trading volume as buyer, over time

  Aggregated figures can be used to derive participation intensity vs. platform growth, either in terms of participation or trading volume.
- Assess behaviour changes on the platform through metrics comprising the following figures (maturity stage only):
  - Hot-spots: changes in transactional behaviour of groups
  - Requests for changes, improvements of the platform
  - Interaction types falling into disuse
  - Companies leaving the platform
  - Companies reducing activity on the platform
  - Companies strengthening activities outside the platform

3.3 Possible Metrics for assessing Business Values from literature review

Almquist et al (2018) has developed a framework that gathers value-bringing elements in a B2B context. Initially they worked out the framework for consumers (Almquist et al, 2016) and later they developed it for B2B situations. They identified 40 fundamental elements of value, which are divided into five categories: table stakes, functional, ease of doing business, individual and inspirational. At the bottom of the pyramid framework (see Figure 1 below) are the basic criteria for B2B sellers; the need to optimize prices, meet specifications, comply with regulations, and follow ethical practices, i.e. the *table stakes*.

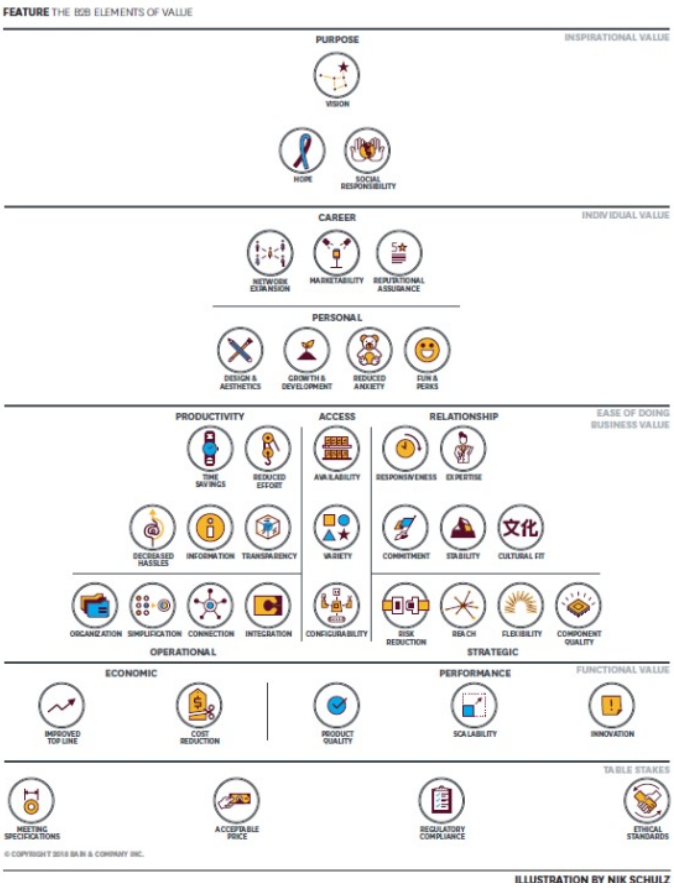

Figure 1 - The B2B elements of value (Almquist et al, 2018, p. 76)

Table stakes are followed by *functional* elements that concern the companies' economic and product performance needs, e.g. cost reduction and scalability. The third level consists of elements related to *ease of doing business*, of which the more objective values are those increasing productivity e.g. time savings, and reduced effort, or improving operational performance, such as simplification and organisation. The emotional values at this level relate to e.g. cultural fit and buyers' commitment. At the *individual* level additional subjective values can be found, which can be either personal (design and aesthetics) or related to an individual's career.

NIMBLE platform users' business values (see Section 3.1) are found at the functional level (e.g. cost reduction) and ease of doing business level (productivity, access and relationship) however slightly different expressed as visibility, business opportunity and partnership building in Table 1.

The most critical and used data for measuring platform functionalities and ease of doing business level are the usage data. Normally, the two main dimensions are:

- *How much the Platform is being used:* volume of overall usage, how many viewed pages, how often functionalities are used.
- *Number of unique users*: what percentage of the users is profitably using the platform and what is their frequency of use.

A high usage, associated to a low percentage of unique users, may show that only a minority of the end-users appreciate the new platform, while a low usage but a lot of end- users may be interpreted as a good sign (if the growth trend indicates a positive traction).

In addition to that we should consider that NIMBLE is meant to be an open, multi-tier B2B platform, where new collaborative business models could emerge. In this respect, one of the most significant topics in research is the definition of indicators to assess the performance of

the collaborative frameworks. According to the literature, collaboration usually improves business performance and efficiency (Baiden and Price, 2011; El Asmar, Hanna, and Loh, 2013) while Ertel, Weiss, and Visioni (2001) confirm the importance of collaboration in multi-party agreements by stating that poor collaboration is the most important reason of failure in project alliances (Gerschman and Schauder, 2006).

From the literature, several metrics could be adopted. Lee, Jung, Kim, and Jung (2011) developed some collaborative KPIs for the manufacturing industry. They introduced number of change requests, number of change approvals and loss cost of design changes as KPIs.

Technical aspects and human aspects (Natter, Ockerman, and Baumgart 2010) could be used to (1) analyze the inter-connectivity of company members to information sources, meaning the ability to get required information via communication channels, and (2) inter-connectivity of company members to each other. They suggested simple metrics to assess human aspects of collaboration, including (1) how much time is spent collaborating, (2) how often various modes of communication are used to collaborate, and (3) the frequency of collaboration. In other words, the available literature also shows that effective communication, trust and respect among business parties are among the most important KPIs success factors.

After collecting metrics, a framework of metrics can be developed by linking metrics with respective collaboration traits. To interpret measurements meaningfully, some of the leading KPIs should be monitored periodically (e.g. monthly). For some KPIs, not only can a measurement itself be meaningful, but trends of its change over time should also be interpreted (Kerzner 2012).

Lastly, even if a B2B platform can fill a range of needs and add value to its member companies, manufacturer performance on B2B electronic marketplaces are affected by different in-house capabilities, namely capability (Wang & Cavusoglu 2014) in: IT, online marketing, flexible manufacturing, content management, as well as capability in performance on the platform. It is worth mentioning that NIMBLE also provides some of these capabilities integrated as services, in the platform.

4 The Feasibility and Impact Assessment Matrix

This section introduces the proposed KPI scheme for NIMBLE. It builds on the analysis briefly reported in Section 3 and integrates vertical and tailor made approaches that can make significant improvements within the four industry verticals addressed by the project, from two main perspectives:

- From the *Platform User* stand-point: successful NIMBLE use and collaboration indicators must be measured to report quantitative benefits for the users. They have been classified in three main categories:
  - Analytics
  - Business opportunities
  - Usability
- From the *Platform Management* stand-point: the performance metrics are supposed to provide information to the platform owner, in order to quantify the benefits of what is being built in terms of three major categories:
  - Analytics
  - Traffic Volume
  - Impact

It is worth to highlight that both sets of metrics are relevant for any potential new platform owner (main target of the feasibility and impact assessment tool), in order assess whether to adopt NIMBLE for its business or not.

The tables reported below matches between (key) business values expected by platform users (see Section 3.1) and a set of metrics (quantitative and qualitative) that can be used to “measure” the impact of the platform from the platform administrator standpoint (derived by combining the main finding from our analysis reported in Sections 3.2 and 3.3).

We selected metrics that, in most cases, can be automatically collected by the platform. In some cases, questionnaire and/or interviews to platform users will be necessary to derive the necessary information.

As also mentioned in Section 3.3, it is important to assess trends of the devised metrics. Therefore, the devised matrixes expect to report assessments at bi-monthly basis.

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4.1 The Platform Users KPIs

Table 2 – NIMBLE Platform Users Indicators

Platform End-users Metrics	***Automatic Collection***	***Period: bi–monthly***						
		T1	T2	T3	T4	T5	T6	T7
ANALYTICS								
Growth of registered Companies	Y							
Number of accesses of the company (login)	Y							
Number of accesses (login) by company members	Y							
Average time spent in the Platform by the Company in a given period	Y							
Total number of contacts / interactions among members of the Company with other parties	Y							

BUSINESS OPPORTUNITY								
Total number of on-going negotiations of the Company	Y							
Total number of accomplished successful business transactions(self declaration)	Y							
Ratio between on-going negotiations/ completed transactions	Y							
Average amount of turnover generated in the period	Y							
Number of products /services published in the platform by the Company	Y							
Average number of queries received by each user about the offered products /services	Y							

USABILITY								
Average Rating of the Company about the platform performance	Y							
Average time between request and response from interested parties	Y							

4.2 The NIMBLE Platform Owner KPIs

Table 3 – NIMBLE Platform Owners Indicators

Platform Owner Metrics	***Automatic Collection***	***Period: bi–monthly***						
		T1	T2	T3	T4	T5	T6	T7
ANALYTICS								
Number of companies which have never participated in any negotiation	Y							
Number of companies that have left the platform	Y							

Number of weekly/monthly accesses to the Platform (total accesses)	Y							
Number of weekly/monthly accesses to the Platform (unique accesses)	Y							
Number of registered users per company	Y							
Average time spent in the Platform by a user	Y							
Total number of contacts / interactions of a Company with other parties	Y							
Average of company profile completeness in the platform	Y							
Average number of products in catalogue	Y							
Number of incidents on the platform reported by users	Y							

BUSINESS OPPORTUNITY								
Average of number of products /services published in the platform by companies	Y							
TRAFFIC Volume								
Scalability : ability of the Platform to support a defined growth scenario(a theoretical number of users).	Y (through simulations)							
Number of queries made (weekly / monthly).	Y							
Average throughput (Data transmission rate, eg Megabyte /second)	Y (by cloud service)							
Capacity requirements (tracking average utilization over time of workloads).	Y (via timestamp analytics)							

IMPACT								
Number of registered companies by Country of the Company	Y							
Number of registered companies by category (BusinessType)	Y							
Number of registered companies by sector (ActivitySector)	Y							
Percentage of negotiations closed with success	Y							
Percentage of negotiations closed without success	Y							
Percentage of cancelled negotiations	Y							
Names of custom properties added by publishers	Y							
Total number of registered end	Y							

user profiles (according to Roles in NIMBLE).								
Help desk. This metric tracks the assistance provided, how many calls are received per week, as well as the duration of the support instance	Y							

5 Application of the Feasibility and Impact Assessment Matrix

As introduced in Section 2, the developed Feasibility and Impact Assessment matrix will be used within the project to collect evidence about the possible platform impacts and will thus be presented in the SEED programme activities.

It will be firstly applied to the FMP case in WP10, and also as part of the validation activities for the other three use cases (WP7). The target of these activities will be to involve real users using the platform, achieving their goals, and becoming more engaged.

By June 2019, it is expected to have collect evidence from the first batch of selected 50 users using the platform. Results will be analyzed and deriving insights included in FMP business case description. In addition, NIMBLE team will capitalize on this knowledge and, in particular, results will be used to fine tune the matrix by replacing and/or integrating metrics. This will further sustain the assessment and find new ways to improve.

The analysis will continue throughout the whole project and evidence / insights about the FMP business case will be updated accordingly.

In parallel, the applicability of the Feasibility and Impact Assessment toolkit will be investigated and discussed with the respective partners of the other project use cases, as soon as they are ready to engage with real users.

As introduced in the previous section, the collection of data for the metrics will be mainly performed automatically. In any case the exact procedure will be agreed with WP7 (validation) partners.

The following tables report a summary of the key indicators that will be included in the business case descriptions. The aim is to provide a quick glance of the NIMBLE potential; therefore, it is a subset of the metrics reported in Section 3.

Table 4 - Target definition per Platform Users Metrics

Platform *End-users* *Metrics*	*End-Users* *Metrics* *Target*
ANALYTICS	
Growth of number of registered companies and of users per company	Number
Average time spent in the Platform	Time
Total number of contacts / interactions among users	Ratio
BUSINESS OPPORTUNITY	BUSINESS OPPORTUNITY

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Total number of accomplished successful business transactions	Number
Average amount of turnover generated in the period	Number
Total number of product /services displayed	Number
USABILITY	USABILITY
Average Rating assigned to the platform by users	Number
Number of comments or suggestions made by users à	Number
Time for the Platform to respond to a request	Time for the Platform to respond to a request

Table 5 - Target definition per Platform Owner Metrics

NIMBLE Platform Central Administrator	***Central Administrator Metrics Targets***
ANALYTICS	ANALYTICS
Number of companies which have never participated in any negotiation	Number
Number of companies that have left the platform	Number
Number of weekly/monthly accesses to the Platform (unique accesses)	Number
Average of company profile completeness in the platform	Number
Number of incidents on the platform reported by users	Number
BUSINESS OPPORTUNITY	BUSINESS OPPORTUNITY
Average of number of products /services published in the platform by companies	Number

TRAFFIC Volume	TRAFFIC Volume
Scalability: ability of the Platform to support a defined growth scenario (a theoretical number of users).	Y/N
Number of queries made (weekly / monthly).	Number
Capacity requirements (tracking average utilization over time of workloads).	Number
IMPACT	IMPACT
Number of registered companies by Country of the Company	Number
Number of registered companies by category (BusinessType)	Number
Number of registered companies by sector (ActivitySector)	Number
Percentage of negotiations closed with success	Number
Help desk. This metric tracks the assistance provided, how many calls are received per week, as well as the duration of the support instance	Number

6 Conclusions

A high user adoption rate is an efficiency and effectiveness indicator showing that individuals who are adopting the product/service are more numerous than those abandoning it. The NIMBLE Platform user adoption strategy is to help end users to achieve the expected benefits, their goals. The major implication is that a very critical task is to ensure that at the very early stage of testing the end users' motivations, needs, environments, beliefs, complaints, and, most important, all the reasons why the end users may not adopt the platform are well known and dealt with. This is the reason why an early involvement from the end-users associations and candidate platform owners (i.e. FEVAMA and AIDIMME) has been necessary to fine-tune and start the definition of the Feasibility and Impact Assessment toolkit.

In fact, in this deliverable we (i) described the expected business values that NIMBLE is expected to generate, (ii) conducted some analysis to identify the best metrics to be used to assess such values (iii) defined a matrix matching between identified business values and the selected metrics.

The definition of such a toolkit is the basis to start a continuous assessment exercise, initially integrated with the validation activities of the project (WP7) and in particular starting from the FMP use case which is the most mature. The resulting insights will then be integrated in the description of the project business cases, in order to have more convincing arguments for engaging with new potential platform owners, which are the main target of the SEED programme.

In fact, it should be pointed out that capturing qualitative and quantitative measurements data to assess business values is just one part of a more comprehensive strategy within the SEED programme. For example, the next step (D8.10) will be to release a Platform Launch Manual to help potential new platform owners to deploy and start doing business by using the NIMBLE platform.

7 References

(Almquist 2016) Almquist E, Senior J, Bloch N. The Elements of Value. (2016). Harvard Business Review. 94(9), pp. 46-92.

(Almquist 20168) ALMQUIST E, CLEGHORN J, SHERER L. (2018) The B2b Elements of Value. Harvard Business Review. 96(2), pp. 72-81.

(Baiden and Price 2011) Baiden, B. K., & Price, A. D. F. (2011). The effect of integration on project delivery team effectiveness. International Journal of Project Management, 29(2), 129-136. doi: http://dx.doi.org/10.1016/j.ijproman.2010.01.016

(El Asmar and Loh 2013) El Asmar, M., Hanna, A., & Loh, W. (2013). Quantifying Performance for the Integrated Project Delivery System as Compared to Established Delivery Systems. Journal of Construction Engineering and Management, 04013012. doi: 10.1061/(ASCE)CO.1943-7862.0000744

(Cho 2015) Choudary 2015, Platform Scale –

(Erte Weiss Visioni 2001l) Ertel, D., Weiss, J., & Visioni, L. J. (2001). Managing Alliance Relationships: A Cross Industry Study of How to Build and Manage Successful Alliances. Massachusetts, US: Vantage Partners.

(GARTNER 2018) GARTNER, Magic Quadrant for Enterprise High-Productivity Application Platform as a Service Published 26 April 2018 - ID G00331975

(Gerschman and Schauder 2006) Gerschman, J., & Schauder, J. (2006). Infrastructure alliances: A two-edged sword. http://www.cmalearning.com.au/images/stories/pdf/InfrastructureAlliances.pdf

(Kezner 2012) Kerzner, H. R. (2012). The Changing Role of Stakeholder Involvement in Projects: The Quest for Better Metrics. Project Perspectives, XXXIV, 6-9.

(Lee, Jung, Kim 2011) Lee, J., Jung, J. W., Kim, S., & Jung, J. (2011). Developing Collaborative Key Performance Indicators for Manufacturing Collaboration. Paper presented at the International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia.

(Natter, Ockerman, Baumgartn 2010) Natter, M., Ockerman, J., & Baumgart, L. (2010). Review of Cognitive Metrics for C2. ITEA Journal of Test & Evaluation, 31(2), 179.

(McDonald 2018) Dennis D.McDonald, “Collaboration management”, World Bank, 2018

(ParAlsCho 2016) Parker G. G., Van Alstyne M.W. , Choudary S.P. (2016), Platform Revolution - How networked markets are transforming the economy and how to make them work for you, Norton Publishers, 336 pages.

(Wand 2015) Wang, S., & Cavusoglu, H. (2015). Small and medium sized manufacturer performance on third party B2B electronic marketplaces: The role of enabling and IT capabilities. DECISION SUPPORT SYSTEMS, 79, pp. 184–194.