

Table. Scrum implementation degree in assessment in case studies EOne and ETwo.

#	Phases	#	Activity name in Mr. Scrum	Questions proposed in EvaScrum	Enterprise One Activity value	Enterprise One Phase value	Enterprise Two Activity value	Enterprise Two Phase value
1	Start Phase	1	Defining Scrum team.	Do you identify and choose a person who is responsible for exercising as a Product Owner?	91,66		83,33	
				Do you identify and choose a person who is responsible for exercising as a Scrum Master?				
				Are the people responsible for exercising as development team identified and chosen?				
		2	Create the vision of the project.	Is the Scrum team composed of a maximum of 9 people?	100		83,33	
				Is there a meeting with the customer or a representative of the customer to obtain the general description of the project?				
		3	Identify the requirements from the customer's point of view.	From the meeting held to obtain the general description of the project, is there an artefact containing the description generated?	91,66		83,33	
				Do you use a tool or strategy to identify the requirements at a high-level of abstraction?				
		4	Identify all interested (partners, sponsors, stakeholders) related to the Project.	Is there a meeting with the customer or a representative of the customer, where a general description of the project requirements is made?	100	89.6 (FA)	100	87.0 (FA)
				Do the attendees at the requirements gathering meeting actively participate in that meeting?				
		5	Formalize the creation of the Project through a constitutive act of the project and budget.	Are the requirements obtained described in a wish list?	66,66		100	
				Is an analysis carried out to determine the end users, as well as all possible interested parties and their participation in the project?				
2	Planning and estimation Phase	6	Prioritize the elements of the wish list according to the needs of the customer.	Is a method (record, document, mail, etc.) used to start a project?	100		83,33	
				Is a formal document presented where the project begins?				
		7	Ensure that resources are available for the proper functioning of the project.	Is the customer or a representative responsible for prioritizing the requirements according to their need?	83,33		83,33	
				Is the wish list organized according to customer priority?				
		8	Validation and / or re-selection of the development tool.	Is it verified that there are sufficient resources (economic, personal, space) to carry out the project?	83,33		66,66	
				Do members of the scrum team have timely access to the information regarding the project?				
		9	Detail the customer's wishes and generate a list in the form of requirements that allow to have detailed information of what should be done in the project.	Is the development team clear about what work tools are going to be used in the project?	83,33		100	
				Does everyone involved in the project have access to established work tools?				
		10	Define criteria that allow the Scrum team to know clearly and unanimously when an activity / task is ready or finished to be entered / updated in the sprint backlog (Definition of Ready (DoR) and Definition of Done (DoD)).	Does everyone involved in the project know how to use the established work tools?	66,66		83,33	
				Are the requirements written at a high-level of abstraction?				
		11	Evaluate and control the possible risks that may occur during a Sprint.	Do all Scrum team members have a clear understanding of the requirements?	100		100	
				Is the product backlog generated from the customer's requirements?				
		12	Analyse the changes that are received for each Sprint in order to socialize and verify requirements and other circumstances that are affected by change requests.	Is it verified that each requirement is sufficiently decomposed?	100		88.3 (FA)	
				Is the ready criterion (DoR) generated?				
		13	Adapt and / or refine the structure used in the project to adapt to changes that arise in the development of the plan.	Is it clear on the part of the team when a task is ready to be developed?	93,33	86.5 (FA)	86,66	
				Is the done criterion (DoD) generated?				
		14	Define the objective of the sprint that will be carried out in such a way that it is related to the activities / tasks that will be developed in it.	Is it clear to the team when a task is finished and ready to be integrated into the project (DoD)?	73,33		73,33	
				When starting a new sprint, are the risks that may arise throughout the sprint evaluated?				
				Do you have a guide, act or instrument that allows you to have a route to lessen the risks that may arise along the sprint?				
				Is there a meeting to analyse and socialize the changes in the project?				
				Is the estimation of the changes made and how these affect the rest of the tasks?				
				Is the cost and impact of changes in the project socialized to senior management or the Scrum team?				
				If a change is necessary, is the respective adaptation made in the project?				
				Are strategies established to maximize the product increase?				

3	Implementation Phase	15	Obtain information about the events that occur in the team to resolve any impediment that affects the normal development of the project.	Is there a daily meeting that allows to know the events of the development team? Does the daily meeting last a maximum of 15 minutes? Is the team's work known for the next 24 hours? Are you looking to solve all the problems that are exposed in the daily meeting or its equivalent? Are the impediments recorded by the Scrum team recorded? Are designs of diagrams, databases or elements required by the project generated for each project?	91,66		100	
		16	Develop the client's requirements.	Does the increase take place according to customer needs? Is documentation of the process being carried out? Are sprint backlog elements updated? Do you have artefacts (kanban, boards, post it, etc.) or software tools (taiga, trello, etc.) that allow the team to know the status of the project?	77,77	80.9 (LA)	55,55	76.3 (LA)
		17	Update the Scrum dashboard and the impediments log.	Are the tools updated (Scrum board, post it, taiga, trello, etc.) that are used to know the work of the team? Is the impairment record updated? Is there a review meeting to review and verify the tasks performed in the sprint? Does the Sprint review meeting have a duration that does not exceed 4 hours?	80,95		71,42	
4	Retrospective and review Phase	18	Review and verify with DoD criteria the tasks that have been completed in the sprint.	At the end of a Sprint is the presentation of the tasks developed? When a Sprint is finished, is a functional review carried out verifying the Sprint objectives? Are the functionalities terminated in the sprint verified under the DoD criteria? Is a list generated with the functionalities that do not meet the DoD criteria? Are the tasks that meet the criteria for completion (DoD) integrated into the rest of the product?	66,66		55,55	
		19	Update the launch plan and the prioritized list of pending products.	When not all the tasks defined for the Sprint can be performed, is the product backlog updated with the tasks that have been pending? Is the product backlog prioritized with tasks that were not completed in the finished sprint? Is a report made justifying the rejection of activities that were not approved? At the end of a sprint, a feedback meeting is held to collect experiences obtained by the Scrum team? Are problems that affect the equipment solved? Are facts and experiences obtained by the team documented during the sprint?	86,66	78.1 (LA)	100	75.7 (LA)
		20	Sprint Retrospective. Post-mortem analysis of what has been done, learned, obstacles, improvement actions, lessons learned, among others.	According to the facts and experiences obtained by the team during sprint, is a proposal for improvement defined? Does the development team receive support from the Product Owner and the Scrum Master in the creation of the deliverables agreed upon for the Sprint?	100		100	
5	Closure Phase	21	Help with the launch of the project: In this activity it is prepared what is necessary to release the final product.	Is a strategy defined (Customer training, server deployment, space adaptation, etc.) for the project launch?	100		100	
		22	Implementation tests.	Are system tests performed in the environment for which it was designed?	100	100 (FA)	100	95.8 (FA)
		23	Delivery of the product.	Is formal delivery of the finished product made to the customer?	100		66,66	
6	Transverse Phase	24	Launch meeting.	At the end of the project process, is a feedback meeting held to discuss lessons learned?	100		77,77	
		25	Facilitate Scrum events as required or needed throughout the process.	Is there a person or group of people to whom you can go if you have any questions about the Scrum? Is there a person or people in charge of informing about the events, activities and artefacts that Scrum proposes? Do all Scrum team members actively participate in the events that Scrum contemplates?	83,33		83,33	
		26	Monitoring progress.	Is control of the activities carried out by the team throughout the project? Is the utility and need to comply with the Scrum guidelines clear to all Scrum team members?	100		100	
		27	Help to develop the team plan with the Scrum Master.	Is there a proposed work plan? Do team members and the Scrum Master contribute to the creation of the work plan?	91,66	89.0 (FA)	83,33	84.8 (LA)
		28	Ensure that there is an ideal environment for the Scrum team during Sprints.	Does the team have an environment and space conducive to develop the different activities it must face? Does the team manage to be motivated and deliver the maximum possible value to the customer?	100		83,33	
		29	Help the owner of the product in the creation of the prioritized list of outstanding products.	Does the product owner know how the product backlog should be ordered? Are the elements of the product backlog constantly reviewed avoiding obsolete items? Are you constantly interacting with the customer to agree on the delivery that best suits your needs?	66,66		88,88	
					Degree of implementation of Scrum (dS) 87 (FA) 85 (LA)			

Discrete scale used in EvaScrum, see Table 6: NA, Not Achieved, 0%. PA, Partially Achieved, 16% - 50%. LA, Largely Achieved, 51% - 85% and FA, Fully Achieved, 86% - 100%.