Lessons learnt from a large project

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Introduction.

Lessons learnt are the documented information that reflects both the positive and the negative experiences of a project. They represent the team's commitment to project management and the team members' opportunity to learn from the actual experiences of others. It is not necessary to wait until the end of the project for the learning to occur. Lessons can be identified at any step during the project. Furthermore, if the project review occurs only at the end of the project, some key lessons might be lost because of the time that has elapsed.

Here are discussed the main lessons learnt from a large project summarized by five statements.

Lesson one. No one knows everything.

At first, no team member knows everything both about coding and the topic to investigate. Then, sometimes there is no need to know it ex-ante. There is so much more to be a programmer than knowing by book, for example, the methods to reshape a tuple object in Phyton3: it is just about googling in case it is forgotten. On the contrary, the success of a team project depends on skills like problem-solving, communication, trust and the eagerness to learn.

Lesson two. Tasks management instead of to-do lists.

Teams are about collaboration among members, not work delegation. Collaborating during the Corona virus period has brought out that sometimes the best lessons come from challenging circumstances. The importance of not wasting time in meetings once or twice a week to have team members make their own to-do lists and work completely separately, and the importance to reduce the bureaucracy. Thus, having a collaborative digital system where tasks can be assigned, organized and tracked for the whole team is much more effective and smarter. Everyone sees exactly when their tasks are due and more over the reason why. Members are motivated to perform their best on teams when they recognize that their work is part of it.

Lesson three. Know your team-mates.

The outcome of a large project is the result of a multitude of tasks requiring a set of different knowledge and capabilities.

In this regard, knowing the team it's not just about getting in touch with the members on a personal level, but understanding which are the strengths and the weaknesses of each one in order to have everyone doing their utmost in what they are the best.

Lesson four. Programming is a process.

Programming is a process. In that process, there's constant revision. A large project is made up of asking questions, creating solutions, try and fail, and try again to reach a little masterpiece in implementations. Furthermore, sometimes it is important to stop and to try thinking rather than coding: the act of typing out the code is a short step. Anyone can write a code quickly that will be inefficient. Team's feedbacks, as well as criticisms, should lead to creativity and learning rather than discouraging. It's not just about revision, it's about reflection on what was wrong and how to improve it.

Lesson five. Reliable documentation is always a must.

Large projects take time and if the code lacks in documentation, what was clear one day may not be clear on another one. Having a reliable documentation helps keeping the track of all the aspects of a code and it improves on the whole quality. It aims to a better development, maintenance and know-how transfer among the team and those who will inspect it. Successful documentations will make information easily accessible, helping others to learn quickly. Focusing on writing clean efficient code requires time, but often the time spent trying to improve an undocumented one is longer.

Conclusion.

Project lessons are not just the tangible result of a project review about what went right, wrong, or could have been done better. Every project experience has lessons to offer and to be learnt from project failures as well as project successes. Not gaining lessons from project failures also means risking repeating the same mistakes. Not maximizing project successes also means missing out the opportunities to implement good processes and practices to successfully complete ongoing and future work. Lessons learnt are a fundamental resource if used for a continuous, incremental and stable improvement.

Furthermore, since it is a team project it should be a teamwork too. Group members should understand that the overall result depends on everyone's effort. A team win and lose as a team. There shouldn't be in any case a clash for the supremacy as well as the development of dangerous individualisms. Successful teams think and act as teams. Common goals need to be shared to reinforce the group. Team strength refers to the degree of agreement among members about the importance of specific values, both observable and not. Flexibility and adaptability drive learning and innovation during challenging times. Till members are listening to each other, looking for solutions, considering each other as a fundamental gear of this machinery and accepting criticism, revealing vulnerability rather than defending his/her ego, the target could be achieved.