The Pomodoro Technique for Sustainable Pace in Extreme Programming Teams

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Abstract. One of the common challenges of an Extreme Programming (XP) team is to find strategies so to reinforce practices and increase velocity. Most practices have found at least one optimal strategy tested and approved practically by the community, while ‘sustainable pace’ is core tenet missing a clear strategy. The aim of the Pomodoro Technique (PT) is exactly to fill this gap. The PT is a timeboxing strategy originally meant for optimizing personal work and study and then applied to XP. The PT is widely applied by Italian Agile teams, but is still little known elsewhere. This paper examines how the PT is applied by them and how it integrates with XP.

1 Introduction

Starting an Extreme Programming (XP) team from scratch is always a challenge, just as it is to transform an “ordinary” software team in a genuinely XP one. One of the key point in enhancing an XP team is promoting team velocity, i.e. its productivity measured in story points completed in a given iteration. Team pressure in individual programmers’ experience is well-known in XP literature and the use of Yesterday’s Weather is the suggested practice so to manage the fear of censure and the risk of overwhelming\textsuperscript{[2]}. Nevertheless, one of the known common errors in mentoring an XP team is to put too much attention to velocity too early, with unuseful stress. In other words, the risk in focusing on velocity is to reduce enthusiasm among team members: this risk should be addressed more clearly – after all, agile software developers’ main mantra is ‘coding as fun’, and if this becomes untrue the whole process collapses. In our experience, achieving an equilibrium between team velocity and individual satisfaction is much more difficult for XP teams than “ordinary” ones, because of the very characteristics of this lightweight methodology. Usually the impact of (un)sustainable pace in a XP team’s daily work so to achieve this equilibrium is underestimated. We found out that an unstressful – as well as efficient – way to help teams find their ‘natural’ rythm in daily work, in other words a sustainable pace, is the most direct way to achieve the necessary equilibrium between team and individual needs. The Pomodoro Technique (PT) can be used fruitfully in this sense.
2  Pomodori for Time Boxing

The PT is a time boxing strategy people can apply in any situation, e.g., homework, study, cleaning house, and indeed software development, spread out from the psychological notions of time elaborated by Bergson and Minkowski [3]. It was invented initially for individual work, but it was then applied especially by XP teams. This paper covers only this last case. The goal of the technique is to perceive time as a value (“I’m doing my best at a right rhythm”), instead of an enemy (“I have not enough time; I’m late”). When the PT is applied, we observe that wasted time and overwork are drastically reduced, while the distinction between free time and work time becomes clearer. The individual comes to respect the value of time more, both free time and work time. The heart of the PT is to start a 25-minutes timer and then focus completely on one task until it rings; no email, instant messaging or any other distraction is allowed. When the timer rings, people relax, push away the keyboard and rest for five minutes. This is a ‘pomodoro’: 25 minutes of focused, uninterrupted work on one task. The “pomodoro” name comes from the use of a common kitchen timer in the shape of a tomato (pomodoro in Italian). The 5 minutes break permits the performer to keep his or her own attention curve at its best, enhancing the rising points and at the same time minimizing the lowest ones. To improve this effect, every four subsequent successful pomodoros a longer pause is recommended, usually 15 minutes long. This combination of breaks and pauses permit people not to work in overtime, being less efficient because of overtime work. This alternance of working time and breaks and pauses give the pace to the day, both to individuals and teams, and hopefully helps people adjust the rhythm in order to reach a real sustainable pace.

There are two important rules in the PT: the Zero Pomodoro Rule and the Fundamental Rule. The Zero Pomodoro Rule states that if the pomodoro is interrupted, that pomodoro counts for nothing. This is a corollary of the Fundamental Rule: a pomodoro is indivisible. Practitioners become soon aware that there are two kinds of interruptions: the internal ones (“I should check email; I’ll get me a coffee”), due to fear of being unsuccessful or to the difficulty of focusing on a single task for even as little as 25 minutes; and the external ones (a phone call, a request from a colleague), which are more difficult to manage. In fact, giving in to all sorts of unplanned and apparently urgent tasks can literally destroy all planning activity. This is made more visible in XP team, as the velocity is drastically reduced: “protecting the pomodoro” leads to fewer interruptions. The PT is also a valid tool for XP coaches, who want to protect the team members from external influences during their daily iterations. An Italian coach even introduces XP at the first glance by only retrospectives and the PT as the practices: the first practice tells which other practices are needed, while the PT get the team aware how much their daily work is really focused [7].

3  Applying the Pomodoro Technique in XP

During development, for every pair of developers there is a timer. The owner of the card is responsible for loading the timer, while recording is made on the card itself. During a meeting with people external to the team, the pomodoro may also be used to