# Effective Implementation of Continuous Planning

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***Abstract:***    *From a perspective of lean development organisation and agile, Continuous planning is a new and partially studied field of research. This paper gives an overview of literature review and findings from these three case studies as reference to show how companies conduct continuous planning. The findings and results conclude that continuous planning is not adopted or applied throughout all levels of the organizations and currently only employ a single type of planning. This paper also discusses how it could have been beneficial to the organizations had they employed continuous planning throughout the organizational level. The importance of continuous planning will only increase dramatically in turbulent business environments that include ever shorter planning cycles and the need to improve transparency and knowledge-sharing in organisations.*

***Key Words:*** *Continuous planning, Organizational planning, Strategic Planning, Business Planning, Lean, Agile, Leagile, Planning Cycles, Scrum, Planning onion.*

## 1. INTRODUCTION:

Continuous planning involves the continuous implementation of planning practices in parallel and rapid cycles instead of pre-defined and regular planning occasions. Continuous planning reacts to environmental changes, with internal and external changes triggering planning additionally to a predefined planning rhythm. Continuous planning is tightly linked with the implementation of Leagile methodologies, which both advocate short, flexible plans that can be adapted to changing circumstances. Although most studies specialise in the team level, continuous planning has benefits in the least levels of the organization, including the portfolio, strategic and merchandise levels. The main elements of continuous planning are as follows: defining the organisational level and timeframes of a plan, strategic planning to form an overall plan of an organisation and business planning to establish a budgeting frame for a plan, strategic planning to form an overall plan of an organisation and business planning to establish a budgeting frame for a plan.

### 1.1. ORGANIZATIONAL PLANNING:

Organizational planning is the process of defining a company's reason for existing, setting goals aimed towards realizing full potential and creating increasingly discrete tasks to satisfy those goals. Agile at enterprise level requires examining an organisation's entire management, value stream and delivery team planning levels (Shalloway et al., 2009). Cohn (2006) had presented an agile approach to planning called the 'planning onion' that describes the hierarchical relationships between different facets of planning which consists of the following levels of planning: portfolio, product and strategy, release, iteration and day. According to Cohn (2006), planning must not extend beyond a planner's horizon. Rather, it should allow time for a planner to pause, examine a changing horizon and make adjustments with a progressively evolving plan. Agile teams achieve this by planning for 3 distinct horizons: the release, the iteration and daily planning. Release planning considers user stories or themes in reference to a replacement release with the goal of determining the scope, schedule and required resources for a project. A release plan should be updated throughout a project in order that it'll always reflect the present expectations on what is going to be included within the release. In iteration planning, which takes place at the start of each product iteration, a product owner identifies the work that a team should address for a new product iteration. Daily planning meetings are meant to organise work and synchronise daily efforts. Cohn (2006) explains, portfolio, product and strategic planning commonly exist outside of the concern of most agile teams. While product planning involves looking further ahead than the immediate release and planning for the evolution of are leased product or system, portfolio planning involves the election of products that best implement the vision of company's strategy. In terms of daily and operational planning, Ruhe (2010) has said that both can become difficult without a proper release plan that is well-aligned with the product and portfolio strategy of a company.

### 1.2. STRATEGIC PLANNING:

A generic strategy process is often divided into four stages: analysis, development, planning and implementation (Eppler and Platts, 2009). Bryson [2011] defined strategic planning as: "deliberative, disciplined approach to producing fundamental decisions and actions that shape and guide what an organisation (or other entity)

is, what it does, and why". Strategic planning means accounting for currently where you are, where you would like to be, the way to get there and the way these are connected (Bryson, 2011). It also includes the event of timelines, resource allocations, responsibilities and deliverables (Eppler and Platts, 2009). Many similarities are recognised between strategic planning and road mapping. For instance, the definition of road mapping is almost like that of strategic planning (Kappel, 2001) together element of a strategic planning process (Cosner et al., 2007). Strategic process varies from different companies, but at the group level, are commonly continuous and issue-driven (Bogsnes, 2008). The various components of a given strategy commonly contains specific routines and work patterns that change from firm to firm and between differing types of firms (Nordqvist and Melin, 2010). Te Brömmelstroet (2013) states, strategic planning phases vary widely in terms of how they are organised, be they bottom-up or top-down. However, all strategic planning processes are often seen as a part of a multilevel group process during which planning actors work together toward a shared outcome. Furthermore, Bogsnes (2008) states that in the strategy process, strategic objectives are often defined in what's referred to as a technique map. Strategic themes are then commonly addressed as required, or bi-annual executive committee strategy sessions are going to be held. When there is a crucial change in an organisation's strategic direction, its strategic objectives are often renewed or revised. From a Leagile organisation's perspective, Mavengere (2013) discusses strategic agility, which he deems especially important during a competitive business environment. He states that provide chain participants should have their own strategic plans that relate to a whole supply chain's plan, yet he doesn't enter detail on how such plans are created (i.e., the planning process in detail). Koenigsaecker (2009) details a lean strategic organisational process during which strategic planning is usually done once per annum and is meant as a learning experience. Additionally, monthly strategy deployment meetings are held to review progress and create opportunities to share knowledge about lessons learned. The existence of monthly strategy-deployment reviews helps to urge a corporation thinking about the way to make its work fundamentally better with each passing month.

## 1.3. BUSINESS PLANNING:

All businesses should have clearly defined objectives and parameters within which to operate. The business planning process provides a chance to assess the range of skills needed for a business to succeed and to spot potential gaps within this range. Financial planning and the preparation of marketing plans help to determine whether objectives are being achieved. Wareham and Majka (2003) claim that continuous financial planning processes are commonly built on goals formulated in strategic plans like the establishment of capital structures appropriate to an organisation's current competitive and strategic position. They also observe that continuous financial planning should involve a capital allocation process that forces an organisation to prioritise capital spending decisions in such a way which will improve services provided while also protecting long-term financial capacity (Wareham and Majka, 2003). Furthermore, marketing plans provide measurable targets to match and monitor progress and set achievements on endless basis (Butler, 2012). In reference to business planning, Rickards and Ritsert (2012) have discussed rolling forecasts and budgets. The foremost important characteristics of rolling plans compared to traditional forecasts and budgets are- a sustained horizon independent of the fiscal year, periodicity (the rule of quarterly preparation), planning is more detailed in early periods and fewer detailed in later periods. planning focuses mainly on monetary and non-monetary business drivers that influence monetary results (revenues and costs). Consistent with Rickards and Ritsert (2012), rolling forecasts and plans (relating mainly to budgets) are commonly performed over a period typically spanning five quarters to eight quarters. Furthermore, they claim that a lot of enterprises that utilise rolling forecast and budgets use them together with a standard budget plan. This approach determines to use the lower boundary of 5 quarters because at latest, at the start of the fourth quarter (ortwelfth month), forecasts and budget values must completely cover subsequent fiscal year. Rolling revisions of plans make sure that, the length of the period of time covered is consistently evaluated in order that new information is integrated into plans. By doing so, more detailed forecasts and budgets are often made for upcoming quarters both near and much within the future.

## 2. LITERATURE REVIEW:

Planning is often understood as consisting of two things: actions and forecasts (i.e., expected outcomes). Whereas forecasting can relate to technology or market trends, planning can relate to products, product lines, resources, or a whole company (Van de Weerd et al., 2010). Continuous planning involves implementing planning practices continuously, not even as a part of a top-down annual event (e.g., Hope and Fraser, 2003). Planning should be done continuously in order for the complete scope of development be presented at any time (Westkamper and von Briel, 2001). Fitzgerald and Stol (2014) define continuous planning as a holistic effort that involves multiple stakeholders from business and software areas. Planning is known as a dynamic, open-ended process that evolves in response to changes during a business environment and thus involves the tight integration of designing and execution. In terms of software development, continuous planning refers to the organisational capacity of conducting planning in rapid parallel cycles (in hours, days, weeks, or months) based on the extent of planning.

Myers (1999) has stated that continuous planning is required in today's organisations which will be increasingly important for the future. The continual operations of organisations have necessitated the capability to fabricate open-ended plans that develop and evolve in reference to the dynamics of an environment. Furthermore, incremental planning techniques have also been required to reply to changing situations. In response to those requirements, Myers's (1999) developed CPEF, which sought to merge plan-generation and plan-use capabilities to unravel complex tasks in unpredictable and dynamic environments. Continuous planning is taken within the CPEF to be driven by the 2 following notions: first, plans should be understood as dynamic and open-ended which evolve in response to ever-changing environments. Second, users are understood as integral to the general planning process in terms of providing inputs which will influence the plan that's generated, the amount of options to think about, failure assessments and plan-repair strategies. With adoption of agile and lean development practices, the practice of continuous planning evolved toward constant planning in small increments and with more people than is typical of traditional software development methods. Shalloway et al. (2009) have presented endless planning process associated with software releases performed before each iteration and through daily stand-up meetings. Continuous planning at the project level is completed in reference to what is known (e.g., looking two to four weeks forward), the plan is for subsequent iteration and therefore the work which will be for today. However, while planning is often undertaken at regular intervals, the horizon of the longer term isn't fixed. Company planning is usually performed looking just one to 2 releases ahead, with planning for the near future given greater detail than for the remote future, which is merely roughly outlined.

It has been realised, only recently that planning should be examined from a broader, even more continuous perspective. Continuous planning isn't only a project- or team-level activity, but involves higher-level planning also (e.g., strategy level planning). within the software development context, consistent with Fitzgerald and Stol (2014), the sole sorts of continuous planning have emerged from agile development approaches and are associated with sprint iterations, or at the best, software releases. They conclude that continuous planning isn't widespread throughout organisations within the context of software development. Recently, Heikkilä et al. (2013) adopted a three level planning model, including strategic planning, release planning and operational planning for a large scale software development organisation. Strategic planning involves interaction between business, management and development and is performed over the long term. Release planning refers to the feature content of subsequent release and to plan getting to create content efficiently. Operational planning concerns the implementation of features on daily basis. Heikkila et al. specialise in release planning, however, without going into detail on strategic or operational planning. Hence, their understanding of continuous planning lacks a broader perspective.

Several factors of continuous planning are often found within the literature. Koenigsaecker (2009) discusses governance together of the key issues during a lean organisation's planning process. An organisation's planning process should cycle through each level of leadership returning to the primary level of the organisation. Bogsnes (2008) considers organisational getting to be about leadership and creating conditions for better performance to transpire, which require an environment of trust and transparency. Accordingly, leaders should work to determine clarity, capability and commitment among their employees. Roadmaps are often used as guides for skill and competency development also as for human resources in terms of building competencies that are beneficial to a company's future. In summary, the factors of continuous planning found within the literature include governance, leadership, transparency and competency development.

## 3. OBJECTIVE:

Continuous planning is tightly linked with the implementation of Agile and Lean methodologies, flexible plans which both advocate short, which will be adapted to changing circumstances. Whilst most studies specialise in the team level, continuous planning has benefits at all levels of the organization, including the strategic, portfolio, and merchandise levels. Since Continuous planning proposes to exchange the classic predefined and regular planning occasions with endless implementation of the design in rapid parallel cycles, Planning is not any longer triggered by a given date within the calendar, but by internal and external events as they occur.

## 4. DISCUSSION:

Tieto is an IT service company which provides IT services, R&D and consulting services. With approximately 18,000 experts, it's among the leading IT service companies in northern Europe and are a global leader in certain areas of the sector. This study focused on the sustainability intelligence R&D team (SI team) at Tieto. The research data of the Tieto case was collected mainly in 2010–12. Between 2010–11, six one-day workshops and three follow-up meetings that used the value-stream mapping conducted by Abdulmalek and Rajgopal in 2007. Within the workshops, the team members chose the foremost critical processes from their perspective, described the present state and identified bottle-necks and improvement actions for the chosen processes. From their identified improvements, they then drew a future-state map of the chosen processes. Within the follow-up meetings, which were conducted between

the value-stream mapping workshops, the chosen processes and practices were modified by the team when needed. Additionally, six team members were interviewed within the spring of 2011. These interviews focused on exploring what the event methods of the team were and the way the team developed the new cloud service. These interviews also revealed underlying needs for continuous planning. Finally, within the beginning of 2012, three two-hour workshops were organised during which the team members improved the processes to align with the thought of continuous planning. Initially the team used an agile method (Scrum) and later adopted lean principles. After adopting these lean agile practices, the team recognised that the time-boxed and static backlog for sprints were not working optimally. When it had been realised that urgent tasks were continuously being presented to the team, this forced them to think about root causes for this and actions to be taken so as to regulate its work. As a Result, the team headed towards implementing continuous planning; in parallel with their development activities, the team members also contributed to business planning and strategic planning by introducing new and innovative services to the company's portfolio. Here, continuous planning was done at the team level. The team level planning is illustrated in Figure 1.



**Figure 1. Team level Planning**

The continuous planning approach in this study was comprised of the subsequent main activities: business iteration, consumer value analysis, the project's management and planning by a project steering group and implementation. Additionally, some dedicated team members actively participated in business iteration and consumer value analysis, which helped the team to stay up-to-date in terms of service development. While the team were informed of latest requirements in terms of companies and consumers values and preferences, they might merge the team's new ideas into business plans. Most team members also participated within the project steering group meetings. Business iteration activities involve a series of sprints (i.e., it considers a timeframe that's long enough to enable the assembly of a release plan that's useful to a business). Business iterations aim at fulfilling business goals and involve results being reviewed and adapted to a bigger, business-oriented plan. Consumer value analysis contains three phases:

- The survey of consumer values and preferences during a given business context. The intended output of this phase is to make persona dimensions (i.e., personas) and customer profiles. Additionally, descriptions of the consumer profiles/personas are often used as criteria for tailoring value proposition, fine-tuning marketing messages and improving user experiences.
- Design implications (i.e., design for end users), which aims at understanding what personas and market segmentation (based on values) mean for a company's design processes, marketing messages and experience creation.
- Mapping product-related customer value (i.e., design with end users), which aims to know end users' desired, expected and received value associated with a service under development.

A project steering group may be an administration of a project that meets once during each quarter of the year. Group reviews accepts and rejects the products of business iterations and consumer value analysis. Participants within the group include a product owner, a user-experience specialist, a solution specialist/manager, a technical manager, An agile/lean mentor, a consumer value analysis team and a Scrum master. The project steering group organises its activities of greatest effectiveness for the project. The group performs problem-solving by informing upper levels of a company of possible problems if the group itself cannot solve them itself. Lastly, implementation work is conducted in two-week sprints following general Scrum practices, like sprint planning, daily meetings, sprint reviews and demos, sprint retrospectives and continuous integration. The need for continuous planning practises also relates to transparency so as. Within the above case, they only implemented Strategic and Business planning. Due to this, the time frames of the project and financials are affected as completing a project involves many teams in a corporation, Organizational transparency is vital to stay the project flow optimal and time frames not deviating and financials in restraint.



**Figure 2. Onion Planning**

It had been realised that the transparency and continuous planning of all the activities throughout the organisation were needed. The company needs continuous visibility of its development and operations to share and provide information with all employees. On one side, operational transparency is related to increasing the visibility of the performed work, plan and executed actions in relation to the fulfilment of one set of defined criteria. On the opposite side, development transparency identifies the potential technological and cultural barriers to implementing increased transparency and improving learning in connection to needs that arise due to increased transparency. Knowledge sharing is also important inside the company.

## 5. FINDINGS:

It had been realised that the transparency and continuous planning of all the activities throughout the organisation were needed. The company needs continuous visibility of its development and operations in order to share and provide information with all employees as to implement Continuous Planning effectively as in the above case when initially the team used an agile method (Scrum) and later adopted lean principles. After adopting these lean agile practices, the team recognised that the time-boxed and static backlog for sprints was not working optimally. the team headed toward implementing continuous planning; in parallel with their development activities, the team members also contributed to business planning and strategic planning by introducing new and innovative services to the company's portfolio. Here continuous planning was done at the team level. This impacted their time-frames and financials of the project.

## 6.CONCLUSION:

Continuous planning is tightly linked with the implementation of Agile and Lean methodologies, which both advocate short, flexible plans which will be adapted to changing circumstances. While most studies specialise in the team level, continuous planning has benefits in all the levels of an organization, including the strategic, portfolio, and merchandise levels. To effectively implement continuous planning, we should start with defining the organizational

level and timeframes of a plan, strategic planning to form an overall plan of an organisation and business planning to establish a budgeting frame for a plan.

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