

Adaptive Project Management: A tool for more realistic municipal planning?

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“Reality does not care what your project plan is”
DeCarlo, 2004

ABSTRACT

Municipal developmental projects are typically embedded in complex, dynamic environments involving many unpredictable components with diverse stakeholders and are characterised by a high degree of uncertainty. Most projects fail - largely because conventional project management methodology cannot adequately adjust to a dynamic environment. In a rapidly changing environment a highly adaptive model for planning and managing projects is required.

Managing projects under conditions of complexity and uncertainty challenges the project team to be creative and adaptive. This requires a shift in thinking about projects and how they should be organised and delivered. Also known as “agile” Project Management, Adaptive Project Management (APM) is an approach to projects for which traditional methods are inappropriate. The fundamental concept underlying APM is that scope is variable, and that continuous customer input is key to success.

It is the purpose of this article to explore the potential contributions of APM as a more effective and realistic tool for project planning and execution in a turbulent municipal planning context.

INTRODUCTION

Planning in South African municipalities is done on different political and managerial levels and is highly cyclical in nature - following annual consultative and budgeting processes. Planning is furthermore continuously influenced by political input from a wide variety of stakeholders and role-players – who often change their positions midstream. Due to political dynamics, development complexities, resource constraints and financial risks project managers therefore usually find themselves in a hostile environment where detailed upfront planning and the submission of comprehensive business plans are virtually impossible. Matters are further complicated when the duration of a project transcends the annual planning cycle. Managing projects under conditions of such complexity and uncertainty challenges the project team to be creative and adaptive. This requires a shift in thinking about projects and how they should be planned, organised and delivered.

Conventional project management planning approaches are not effective in situations of high uncertainty. Project managers do not have the tools they need to successfully

plan and manage these projects and are trying to adapt traditional approaches with little success. Adaptive Project Management (APM) is an iterative process designed to embrace situations where the solution is not known and which require frequent change in order to converge on a solution that delivers maximum value. It integrates tools and techniques from both the traditional and extreme approaches to project management. The result is a hybrid approach. An adaptive approach to project planning requires a new mindset - it thrives on change rather than avoiding it since it utilizes “just-in-time” planning. It adapts tools and processes from traditional project management planning in order to adjust immediately to changing municipal conditions. The adaptive approach is more client-focused and client-driven than more conventional approaches to planning. It thus fully engages the client as the primary decision-maker in projects which create shared partnership with shared responsibility.

The purpose of this article is to explore the inherent conflict between existing planning realities in South African municipalities and the more scientific nature of project management planning methodology and to explore the potential for the utilization of adaptive project management methodology for more realistic project planning. Focus falls on the Integrated Development Planning process that municipalities go through to ensure that projects undertaken are in the interests of the community they serve. For purposes of this article capital projects, that are projects that purchase or construct capital assets, are excluded.

THE CONTEMPORARY LANDSCAPE OF PROJECT PLANNING

Project management is about the application of knowledge, skills, tools, and techniques to project activities to meet project requirements (Elliot 2008). To this definition Young (1996) added the fact that projects should achieve some specific results that satisfy the needs of an organisation in a controlled and structured manner. Wilson-Murray (1997) and Kerzner (2003) provide more comprehensive definitions which state that projects are any series of activities and tasks that have a specific objective to be completed within specification; have defined start and end dates; have funding limits; consume human and other resources and are multi-functional. Successful projects are delivering results in time, in budget, in scope, with quality, and in accordance with client expectations.

Conventional project planning methodology

Since the late 1950s a body of knowledge for Project Management as management application emerged, which is currently integrated into a Project Management Body of Knowledge (PMBOK). The PMBOK Guide[®], first published in 1996 by the Project Management Institute (PMI), is the foremost internationally recognized standard for project management. There are, however, various standards with unique methodologies available such as PRINCE2, MPMM, OPM3 and APMBOK.

The generic life cycle of projects, as proposed by PMI, follows linear, incremental phases or steps. The project life cycle serves to define the beginning and the end of a project. Project life cycle descriptions may be very general or very detailed. Highly detailed descriptions may have numerous forms, charts, and checklists to provide structure and consistency. Such detailed approaches are referred to as project management methodologies (Burke 2006:56). The Waterfall model, mainly used in

software development, clearly illustrates the linear approach to conventional project management. This model is a useful approach when the variables and outcomes of a project are known, where the parameters of the project are unlikely to change, and where the host organisation prefers predictability to change.

According to the PMBOK Guide® (PMI 2004:30), the project management life cycle phases can be organised into five groups, namely:

- *Initiating phase*: authorising the project (usually through a project proposal);
- *Planning phase*: defining and refining objectives and selecting the best of the alternative courses of action to attain the objectives that the project was undertaken to address;
- *Executing phase*: co-ordinating people and other resources to operationalise the plan;
- *Controlling phase*: ensuring that project objectives are met by monitoring and measuring progress regularly to identify variances from plan so that corrective action can be taken when necessary; and
- *Closing phase*: formalising the closure the project and bringing it to an orderly end.

Figure 1 below illustrates the linear nature of the phases in the life cycle.

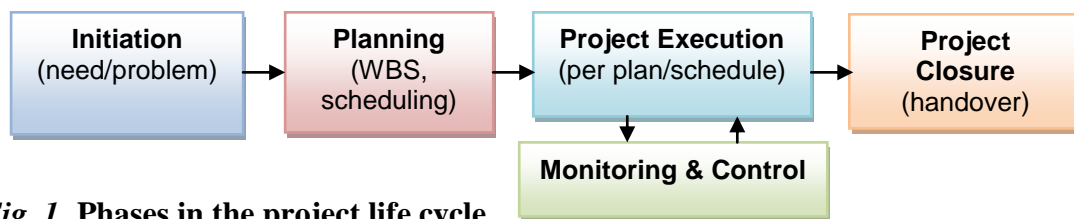


Fig. 1 Phases in the project life cycle

The focus of this article falls on the second phase, namely project planning. It should be noted that these phases are sequential in nature and once the planning phase is completed and a business plan is submitted for approval, there are limited interventions available to amend it. The controlling phase mainly impacts on the executing phase (to make required adjustments) as circumstances change.

Depending on its scope and complexities, various types of planning is possible in projects. This includes:

- Scope planning;
- Resource planning;
- Cost estimating and budgeting;
- Risk planning (including contingency planning and mitigation strategies);
- Quality planning;
- Communication planning;
- Staff planning;
- Procurement planning; and
- Business planning.

The project manager is responsible for coordinating the contributions of all the project role-players to meet the stakeholders' needs and expectations. This, however, could be highly complex in nature and could involve intense negotiations and conflict resolution since different stakeholders could have different expectations. The most appropriate (i.e. cost-benefit) strategy to implement the plan, may also not be followed due to political ramifications and resource constraints. Environment impact assessments and evidence-based feasibility studies may also not be adequately taken into consideration by project decision-makers due to political and other reasons. This, of course, place a significant burden on project managers.

Project planning instruments

Over time, various planning instruments emerged. Below is a brief synopsis of the most commonly utilized instruments or tools for project planning.

Work breakdown structures (WBS) are hierarchical presentations of milestones, activities and tasks associated with the project. It is a technique used to break project work into smaller and smaller pieces until the team establishes a comprehensive profile of the work that needs to be performed (Harrison 1983:20). A work breakdown structure (WBS) is a deliverable-oriented grouping of project elements that organises and defines the total scope of the project: work not in the WBS is outside the scope of the project. It also helps design the architecture of the project (Meredith & Mantel 2000:203) and forms the basis for estimating the time and effort needed for the project.

Another instrument utilized for project planning is a *Gantt chart* which is a graphical presentation of the main milestones and their schedule. A Gantt chart shows a list of activities and a bar that indicates the start and end dates of each activity. The Gantt chart is derived from the WBS and indicates the scheduling of activities. The project network schedule, also derived from the WBS, serves as the baseline to compare against actual performance. Gantt charts are one of the typical tools used for communicating project schedule status.

Network diagrams are further planning tools which are sequential presentation of project deliverables. Network diagrams are used for planning, scheduling, and monitoring project progress. The network is developed from the information collected for the WBS and is a graphic flow chart of the project plan. The network depicts the project activities that must be completed, the logical sequence, the interdependencies of the activities to be completed, and the times for the activities to start and finish along with the longest path(s) through the network – the critical path. There are two types of network diagrams, activity on arrow (AOA) and activity on node (AON).

In the *Critical Path Method (CPM)*, the “critical path” refers to the longest possible continuous pathway taken from the initial event to the terminal event. It determines the total calendar time required for the project; and, therefore, any time delays along the critical path will delay the reaching of the terminal event by at least the same amount. CPM is used in planning to identify the longest duration of sequential activities as well as ‘float’ or ‘slack’ time (the amount of time that a task in a project network can be delayed without causing an overall delay).

The *Programme or Project Evaluation and Review Techniques (PERT)* is a further instrument mainly used to calculate project schedule (duration of activities through optimistic, pessimistic and most likely estimates). PERT is a model for project management designed to analyse and represent the tasks involved in completing a given project. It is a method to analyse especially the time needed to complete each task, and identifying the minimum time needed to complete the total project.

The final deliverable of project planning is a project *business plan* which is a formal, approved document used to manage and control project execution. It should be distributed as defined in the communications management plan. The business plan enables management to approve resources for the project, delegate authority and responsibility to the project manager and his or her team, and provides a mandate to the team to execute the plan. The effort required to plan the project depends on the amount of management information, and the level of detail, that needs to be understood and documented.

It should be noted that all of these planning instruments or tools are aimed at getting factual, evidence-based, quantitative information to obtain management information for project planning. There are limited tools available for more abstract, “soft”, people-oriented issues in project management - issues that can derail a complex project. Both PMBOK and PRINCE2 are standards for predictive project management. These standards focus on planning the project upfront, executing project as per the plan, check for variances and take action wherever necessary (Ourdev & AbouRizk 2008:122). They work well, as long as the requirements are very stable and the technology is familiar. Although PMBOK and many text books stress the importance of soft skills, the current paradigm of project management is essentially mechanistic (Cooke-Davies et al. 2007:51). In simple terms this means that the discipline is built on the assumption that future outcomes can be predicted accurately based on current information and actions. It is also implicitly assumed that human actions, interactions (and consequences thereof) can be objectively observed and then corrected or controlled (Cooke-Davies et al. 2007:51). Due to these limitations, Melgrati and Damiani (2002) propose that the existing project management framework requires “rethinking”, while Williams (1999) and Pollack (2007:272) argue for the need for new paradigms for complex projects. Koskela and Howell (2002) even go as far as to claim that the underlying theory of project management has become “obsolete”. The question thus arises: what could be done to remedy the situation?

THE DYNAMIC ENVIRONMENT OF PROJECTS: THE ADAPTIVE CHALLENGE

There is little doubt that the 21st century organisation is extremely complex and difficult to manage. A volatile mix of dynamics are triggering changes in the environment such as political demands, economic pressures, statutory and legal obligations, growing international competition, labour unrest, and rapidly evolving technologies. As these complexities increase, managers must have adequate knowledge of the processes and dynamics in the organisation and their suitability to deal with these complexities.

Complexity scientists have studied the collective behaviour of living systems and have discovered that they are complex in that they consist of many autonomous agents interacting with each other in many ways. These complex, self-organizing Complex Adaptive Systems (CAS) are adaptive in that they react differently under different circumstances, and co-evolve with their environment (Lewin 1993). According to Cooke-Davies et al. (2007:53) complexity theory can be defined broadly as the study of how order, structure, pattern, and novelty arise from extremely complicated, apparently chaotic systems and conversely, how complex behaviour and structure emerge from simple underlying rules. As such, it includes those earlier fields of study that are collectively known as Chaos Theory and what Lorenz (1963) labelled as the "butterfly effect" - the discovery of how minute changes can have major and unpredictable consequences in non-linear systems. The most important characteristics of complex adaptive systems are non-linearity, dynamic behaviour, emergence and self-organisation (Harkema 2003:340).

Haber (1964) traced the origins of "adaptive" management to the ideas of scientific management that took root in the early 1900s. The concept has drawn particular attention in natural resource management (Bormann et al. 1999). In 1978, with publication of Holling's *Adaptive Environmental Assessment and Management*, its potential as a framework for dealing with complex environmental management problems began to be recognized. Adaptive management, as discussed in the contemporary literature, stands in contrast to more conventional conceptions of management. Although it shares the general premise of learning by doing, it contributes deliberate, and formal dimension to framing questions and problems, undertaking experimentation and testing, critically processing the results, and reassessing the policy context that originally triggered investigation in light of the newly acquired knowledge. Thus, adaptive management involves more than traditional incrementalism; learning derives from purposeful experimentation that, in turn, derives from deliberate, formal processes of inquiry (Lewin 1993). Continuous feedback enables change and adaption and non-linear systems are continuously adapting when they reach a state of dynamic equilibrium termed the "edge of chaos" (Holling 1978).

Adaptive management and project management

Although the concept of adaptive management has been used in natural resource management since the early 1970s (developed by CS Holling and CJ Walters), it has remained fairly technical and primarily within the command of professional scientists. For this reason, its full integration into the practice of projects has remained elusive. Applied to a project context Cicmil (2006a:28) and Cooke-Davies et al. (2007:50-52) challenge the current linear paradigm of project management. They argue that recent advances in the study of complex systems suggest new ways of looking at the discipline. According to Elliot (2008), conventional or more traditional project management methodology relies on traditional management theory which assumes that:

- Structured processes and procedures are needed to plan;
- Rigid and static hierarchical organisational structures are means of establishing order;
- Problems are solved primarily through reductionist task breakdown and allocation; and

- Projects and risk are adequately predictable to be managed through complex up-front planning.

According to DeCarlo (2004) senior managers understandably desire predictability. They are responsible for results and they respond by establishing strict policies and procedures, and calling for robust project management methodologies to keep control and stay loyal to the plan. The result is loss of flexibility to adapt to new opportunities and threats. Adaptive or agile project management allows management to better balance both predictability and flexibility (DeCarlo 2004). Cicmil et al. (2006b) and DeCarlo (2004) propose that management need to adopt a more quantum world view on projects rather than dictating a deterministic methodology that does not account for the dynamics and fluidity of today's projects. Traditional project management has been said to be too rigid and slow for this fast-paced context (Elliot 2008).

Much of traditional project management is based on two theories. The first is reductionism, and the other is control theory, which hold that, in order to achieve optimal outcomes, one only needs to manipulate the constituent parameters of a complex system (Cicmil et al. 2006c:677; Hass 2008). Only in theory can tools such as the WBS help build a solid project management plan, set a firm schedule and predict how much the project will cost. Hass (2008) argues that while a "reductionist" model may work in programmed, controlled environments (such as the building industry), it does not work for complex projects. Since complex projects have complicated, unpredictable interrelationships and interdependencies, they require a much more flexible and adaptive approach to project management. As DeCarlo (2004) convincingly puts it: "Projects that are characterized by high uncertainty, high speed and high complexity, both technical and political complexity, do not fit the traditional reductionist mold". What is required is a new mindset to plan projects in a dynamic environment.

Adaptive management has thus become a powerful framework for project management. It is a structured and systematic process to continually improve decisions and practices by learning from the outcomes of previous decisions (Virine 2008:9). The main benefit of APM is thus that it provides a framework for better management since the project team can systematically test assumptions and strategies.

Adaptive versus predictive, conventional project planning

In a highly turbulent environment the solution to issues is often not known during project planning. This requires frequent adjustments and changes during project execution in order to converge on a solution that delivers maximum results (Schwaber & Beedle 2002).

Many factors can affect the chosen project planning approach. When evaluating which approach to take, the team should consider whether the project is familiar territory with a predictable path, or a new frontier with uncertain outcomes. Lang (1990) offered a typology of uncertainty which could assist the team to decide whether adaptive or more conventional approaches to project planning will be followed:

- Uncertainty concerning the specific problem (need for the project) and its context;

- Uncertainty about how to address the problem, with respect to both ends and means; and
- Uncertainty concerning what others might do about the problem (This means that dealing with uncertainty must also incorporate collaboration and coordination).

“Certain” or known projects can usually rely upon a predictive method of planning. Predictive planning provides a linear, specific development plan structured around producing a pre-determined end result within a specific timeframe (Baccarini 1996:202). Evolving projects that face changing conditions are best suited for adaptive planning. Adaptive project planning involves breaking a project into small components over an undetermined timeline to allow ultimate flexibility in directing the course of the project. DeCarlo (2004) strongly supports this by stating that the dynamics of extreme projects are “...simply not compatible with traditional project management, which attempts to plan everything up front and then tries to control what happens later to keep it within the confines of the plan. In most cases, the plan is obsolete as soon as it is printed.”

Adaptive project management (APM) is a new way of thinking. It is a dramatic paradigm shift from traditional project management methodology such as PMBOK’s reductionist theory, control theory and traditional change management. APM adjusts immediately to change; it thrives on change rather than avoiding it. It utilizes just-in-time planning and adapts tools and processes from traditional approaches (Wysocki 2003; Shenhar & Dvir 2007). It thus deviates from linear project management methodologies such as Waterfall, PMBOK and PRINCE2 which are more predictive schools of thought. Predictive methodologies promote the creation of chronological stages or phases for up-front business planning, detailed documentation and budgeting. Conventional methodologies are rather prescriptive and tie project teams down to a fixed sequence of phases in a project life cycle and offer limited flexibility (Sommer & Loch 2004:1337).

Educating the customer at the outset of the project as to why APM will benefit them is a key practice that helps the project succeeding (Walters 1986:9). Establishing a clear process for feedback and change management in the contract and with the client at the beginning of the relationship will also help immensely in making the relationship and thus the project delivery more successful (Margoluis & Salafsky 1998). The process includes the iterative and incremental delivery of project milestones, and the feedback loops that ensure continuous improvement, as well as a clear definition of the roles and responsibilities of both the members of the team and the customer. This constant adjustment means that an APM project's course is constantly corrected to ensure the delivery of maximum value (Wysocki 2003; Ourdey, Xie & AbouRizk 2008:121-125).

APPLYING APM TO MUNICIPAL PLANNING

The guiding question for purposes of this article is: What are the current realities and practices associated with municipal planning and how could adaptive project management planning methodology contribute to make it more effective? In order to successfully answer this question, it is first imperative to provide a brief overview of current realities and practices associated with municipal planning.

Municipal planning: current realities and practices

Municipalities can be regarded as complex systems which function in a continuously changing environment. The objects of municipalities, as required by section 152 of the Constitution of the Republic of South Africa Act 108 of 1996, are the provision of sustainable services, the promotion of social development and the promotion of a safe and healthy environment. Municipal planning in this broad sense is also an essential component of the developmental duties of a municipality as laid down in section 153 of the Constitution in terms of which its administrative, budgeting and planning processes must give priority to the basic needs of the community and promote social and economic development. The legislature deemed the planning aspects and the developmental objectives of local government functions so important that they were lumped together and singled out for treatment in chapter 5 of the Local Government: Municipal Systems Act under the heading "Integrated Development Planning" (IDP). A municipality must undertake developmentally-orientated planning so as to ensure that it strives to achieve the objects of local government. Once adopted by Council the IDP is the principal strategic planning instrument which guides and informs all planning and development and all decisions with regard to planning management and development in the municipality.

Accepted municipal planning practices, supported by theorists such as Silberstein and Maser (2000) and Phahlamohlaka (2008), indicate that planning can – and should – be done on various managerial levels or hierarchy, in various time horizons as well as in various functional fields. As far as the first is concerned, authors differentiate between strategic planning (senior management cadre), tactical planning (middle management) and operational planning. From a functional planning point of view one could differentiate, for example, between financial planning during the budgeting cycle, human resource planning, urban or city planning, infrastructure development planning, and so forth. There are thus various layers of planning: The top (strategic) layer can be seen as council in conjunction with the IDP Unit which are responsible for long term planning (spatial, infrastructure, development, economic, etc.) and the alignment of service delivery projects to the IDP. The middle (tactical) layer can be regarded as the heads of department who use Service Delivery and Budget Implementations Plans (SDBIPs) to operationalise the IDP. It is also typically this layer of functional managers who act as project managers and perform project planning. The bottom (operational) layer is made up by functional managers in municipal departments performing operational planning for the implementation of the SDBIP.

Planning in South African municipalities is highly cyclical in nature and follow an annual process which is congruent with the Cabinet Lekgotla (January), the State of the Nation Address (February), the Budget Speech by the Minister of Finance (February), the Government's Programme of Action, the Medium Expenditure Framework (MTEF) as well as the Medium Term Planning Framework (MTPF). The cycle is furthermore synchronised with provincial planning where Budget Management Local Government Units (BMLGU) at the respective provincial treasuries assist municipalities in their planning efforts.

Integrated Development and Community-based Planning

The annual integrated IDP cycle annually commences in August with the start of the financial year in July. During August three processes are critical: the first is a needs assessments of the municipal community, the development of community profiles, and community meetings to obtain input to the process and to legitimize municipal actions. Following these processes, in October municipalities are expected to perform a spatial development analysis as well as an economic development analysis. In November councils refine their strategic priority areas and obtain public inputs. In December councils formulate sectoral development plans through the work of a technical IDP committee. Once the municipality has identified the best methods to achieving its development objectives, it leads to the identification of specific projects. The IDP should thus provide the basis for effective project management. Projects management should be seen as the “doers” of implementation. Project planning is necessary to ensure that the appropriate capacity and resources are in place to implement the plan.

Section 152, of the Constitution of the Republic of South Africa Act 108 of 1996, states that local government should provide “democratic and accountable government” and encourages the “involvement of communities and community organisations in the matters of local government”. The White Paper on Local Government, 1998, also established the basis for a new developmental local government system. This new system is committed to working with communities to meet the social, economic and material needs of the communities. The Local Government: Municipal Systems Act (MSA), 2000, further has participation as a central concept of Integrated Development Planning. Chapter 4 of the MSA outlines processes, mechanisms and procedures for community participation. For example, section 16(1) states that a municipality must “develop a culture of municipal governance that complements formal representative community”. Section 29(b) of the Act discusses the process to be followed in developing an IDP specifying that the local community must be consulted on the development needs and priorities of the IDP as well as participate in its drafting.

Section 16(1) of the MSA introduced Community-Based Planning (CBP) which has a number of benefits including planning based on outcomes and not problems, which could lead to more realistic and creative planning. A further advantage is that plans are more targeted and relevant to addressing the priorities of all groups, including the most vulnerable. CBP is an effective way to promote ward level plans to promote community action. CBP is based on participation and principles of political democracy. Participation requires that all stakeholders are invited to participate, including government, community, business, labour and other sectors of civil society.

Although the planning process is initiated and co-ordinated by a municipality, to be effective, the plan needs to be owned by the ward, represented by the Ward Committee. Municipalities empower their ward councillors and committees to facilitate a planning process that will “enable each committee to generate a mandate for its term of office”. The MSA further stipulates that a municipality must develop a culture of municipal governance that complements formal representation. Kovacs (2009:54) refers to this as “cultural mapping”. This means that a municipality must create conditions for the local community to participate in its affairs – including preparation, implementation and review of the Integrated Development Plans (IDPs).

This requires a thorough method and systematic approach by the community to ensure that its voice is heard.

Although the above reasons for participation are virtually unnegotiable to maintain vibrant citizenship and to foster local democracy, it places additional burdens on managers involved in developmental, IDP-aligned projects who often lack the time, will and skills to facilitate participation in municipal projects. Time is money in project management and the project manager wants to see to it that milestones are implemented as per approved schedule. Community participation, however, could frustrate this through prolonged discussions, political debates, and power games. Councils then often shift the blame to project managers if projects are over schedule or over-budget. In cases where projects are outsourced to third parties, it further places a burden on contract administration, service level agreements, and payments to service providers. Often external service providers are unable to execute projects on schedule and to produce the contracted deliverables due to prolonged community consultative processes.

Feedback is important so that the community is kept up to date with progress and challenges. CBP requires continuous feedback and interaction so that everyone is updated on the progress and if necessary to find solutions to challenges. Feedback is important at all stages:

- the pre-planning phase to increase community awareness and elicit questions and suggested improvements, interest and participation;
- community meetings to set and agree on priorities and project deliverables; and
- regular public meetings to report back and monitor implementation.

It can be argued that this feedback process can only be effectively incorporated into the life cycle of projects if the principles of APM are applied. Figure 3 below illustrates how APM life cycles could be incorporated with municipal planning cycles.

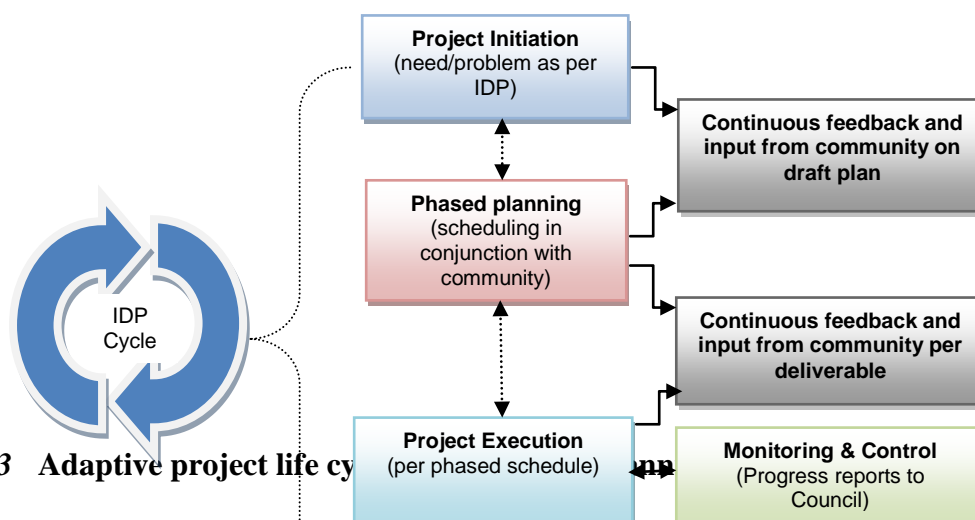


Fig.3 Adaptive project life cycle

During the public participation processes of the IDP, and particularly during Phase 3 (Projects), project input should be aligned with initiatives such as community meetings, stakeholder consultations, surveys and opinion polls, the IDP Representative Forum, and public debates. To obtain the necessary detail, project formulating task teams design project proposals and draft sector plans. In applying adaptive project principles, a municipality should thus keep these consultative mechanisms active right through the life cycle of projects to continuously gauge opinions and perceptions, and not only during the appropriate phases of the IDP cycle.

POTENTIAL VALUE OF APM IN MUNICIPAL PLANNING

Based on the State of Local Government Report (Cogta 2009:34-36) it seems that most municipalities are relatively effective at establishing and executing processes during the project selection and approval phase of annual planning that determine which projects are approved, when they are sequenced and the service delivery outcomes that are expected to be realized. Where many municipalities fail, however, is that they seldom revisit those processes and decisions once made unless a fundamental change occurs.

What is unique about the APM approach is that rather than just continuing with developing the next milestone of the project, an adaptive team will bring the service/product-to-date to the community as beneficiary of the project for their reactions. Adaptive teams seek their customer's acceptance of the deliverable after each iteration of development. It could be argued that because the APM-approach is so customer-centric, the project team should seek their acceptance regularly. This will in all likelihood advance political acceptance and the overall legitimacy for the project. With adequate governance structures and participation mechanisms the community could indicate that something is wrong which could enable proactive adjustments to the original plan.

It should be noted that each type of municipal project has its own set of management challenges. Some of the potential challenges associated with the utilisation of APM in municipal planning may include the following:

- *Organisational inertia:* Hannan and Freeman (1989:86) suggested that organisational inertia constrains adaptation (i.e. to move from more conventional to more adaptive project planning practices), and that early learning during the period of founding is a cause for inertia. Research by Beyer et al. (1997:718) further suggests that managers' functional backgrounds may also lead to selective imperception - that is, failure to perceive stimuli related to areas other than the one managers have expertise within. Therefore, project managers may ignore other sources and types of information they receive, and they may only use information relevant to their project.
- *Consultant-driven municipal projects:* Project team must be responsible for performing effective adaptive management. Consultants may not appreciate local conditions and as a result, the project may not fit local conditions.
- *Municipal legitimacy:* Distrust between the community and the municipality may negatively impact on APM since input cannot adequately be obtained.
- *Consultative processes:* A lack of adequate mechanisms to facilitate community feedback during project implementation to ensure continuous interaction, testing of assumptions, etc. may seriously impact on the success of APM. There are also significant time and budget implications associated with continuous consultation which could delay project delivery. APM requires an investment of money, resources, and especially project time. It is expensive to hold community meetings.
- *Low literacy rate of communities:* Especially in rural areas the low literacy could further hamper the quality of community input to projects. They may not have access to all planning information and there may also be unintended consequences of certain demands and wishes. This could be further complicated by political factions within communities which may have conflicting demands.
- *Guilt of indecisiveness:* Municipalities expect project managers to make decisions, even if they do not have the information required to make these decisions. Instead of collecting information and analysing data, which may give the appearance of indecisiveness, project managers make irreversible decisions intuitively.

CONCLUSION

APM is based on the admission that various variables at the start of a project are not known. Even more certain aspects are subject to revision as the project is implemented. APM adds value by providing a framework for project managers to utilise when processes are not stable, and outcomes cannot be predicted within sufficient tolerance; situations where more conventional planning techniques that rely on predictability are not effective. Due to the dynamic nature of municipal projects and to adhere to statutory obligations for participation, it is vital that project plans are reviewed by the community, even when projects are well underway. Bad decisions at this level (or the failure to make a decision) can have profound financial and political implications for the performance of the municipality – and, eventually, much needed service delivery.

Back to the title of this article: Could APM add value to current more conventional municipal planning practices? Probably the correct answer is a qualified “yes”. It must be recognized that the capacity of adaptive management to resolve value-based (socio-political) conflicts might prove not more effective than traditional planning approaches. It must first be tested in practice, but based on the theoretical orientation one could deduce that it will at least facilitate a change in mindset; creating a more realistic project management environment and a more forgiving attitude towards project failures due to unpredictable variables and political dynamics. It could further add value by incorporating the customer (community) in IDP-projects of a developmental nature, but a municipality needs to address potential challenges associated with it. In applying it in a municipal environment it is recommended that project managers sensitise all stakeholders about the potential benefits associated with APM and then to follow an evolutionary, incremental or trial-and-error model for implementation.

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