Adaptive Project Management

A Tool for more realistic municipal planning?

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ABSTRACT

Municipal developmental projects are typically embedded in complex, dynamic environments that involve 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 complex and uncertain conditions 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 the key to success.

This article aims 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.

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

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. Furthermore, planning is continuously influenced by
political input from a wide variety of stakeholders and role-players – who often change their positions mid-stream. Due to political dynamics, development complexities, resource constraints and financial risks, project managers 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 highly uncertain situations. 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 find 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 utilises “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. Furthermore, it aims to explore the potential for implementing adaptive project management methodology for more realistic project planning. Focus falls on the Integrated Development Planning (IDP) process that municipalities follow to ensure that projects undertaken are in the interests of the communities they serve. For the purpose of this article, capital projects (projects that purchase or construct capital assets) are excluded.

**THE CONTEMPORARY LANDSCAPE OF PROJECT PLANNING**

Project management focuses on 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 entail delivering results in time, within 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 a 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 recognised 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 on a regular basis to identify variances from the original plan, so that corrective action can be taken when necessary.
- **Closing phase**: formalising the closure of the project and bringing it to an orderly end.
Figure 1: Phases in the project life cycle

![Diagram showing the phases in the project life cycle: Initiation (need/problem), Planning (WBS, scheduling), Project Execution (per plan/schedule), Project Closure (handover), and Monitoring & Control.]

Figure 1 illustrates the linear nature of the phases in the 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. 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 are possible in projects. These include:

- 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. However, this could be highly complex in nature and could involve intense negotiations and conflict resolution, since different stakeholders could have different expectations. Furthermore, the most appropriate (i.e. cost-benefit) strategy to implement the plan might not be followed due to political ramifications and resource constraints. Due to political and other reasons, project decision-makers might not adequately take environmental impact assessments and evidence-based feasibility studies into consideration. This, of course, places a significant burden on project managers.
Project planning instruments

Over time, various planning instruments have emerged. Below is a brief synopsis of the most commonly utilised 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 to design the architecture of the project (Meredith and Mantel 2000:203) and forms the basis for estimating the time and effort needed for the project.

Another instrument used in 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 a project schedule status.

Network diagrams are further planning tools that provide a sequential presentation of project deliverables. Network diagrams are used for planning, scheduling and monitoring a project’s 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, as well as 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, namely 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. Therefore, any time delays along the critical path will delay reaching 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 especially used to analyse
the time needed to complete each task, and to identify 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/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, as well as 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, checking for variances and taking action where 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 project management paradigm is essentially mechanistic (Cooke-Davies et al. 2007:51). In simple terms, this implies 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 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 is triggering changes in the environment. These include political demands, economic pressures, statutory and legal obligations, growing international competition, labour unrest, as well
as rapidly evolving technologies. As these complexities increase, managers must have adequate knowledge of the processes and dynamics within the organisation, as well as 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-organising 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 in broad terms 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 the publication of Holling's *Adaptive Environmental Assessment and Management*, its potential as a framework for dealing with complex environmental management problems began to be recognised. Adaptive management, as discussed in contemporary literature, stands in contrast to more conventional ideas of management. Although it shares the general premise of learning-by-doing, it contributes a deliberate and formal dimension to framing questions and problems, undertaking experimentation and testing, critically processing the results, as well as 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, while 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 project practice 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 a means of establishing order.
- Problems are solved primarily through reductionist task breakdown and allocation.
- Projects and risk are adequately predictable and can 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. Furthermore, they call for robust project management methodologies to keep control and stay loyal to the plan. The result is a 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 worldview 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, namely reductionism and control theory. According to these theories one only needs to manipulate the constituent parameters of a complex system in order to achieve an optimal outcomes (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 characterised by high uncertainty, high speed and high complexity, both technical and political complexity, do not fit the traditional reductionist mould”. 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). Therefore, the main benefit of APM is 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 the project-planning phase. 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 that could assist the team decide whether adaptive or more conventional project planning approaches 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.
- 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 on 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 immediately adjusts to change. In fact, it thrives on change rather than avoiding it. It utilises 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 that 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).

A key practice that will help the project succeed is educating the customer at the onset of the project as to why APM will benefit them (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 foster a successful relationship; thus ensuring more successful project delivery (Margoluis & Salafsky 1998). The process includes the iterative and incremental delivery of project milestones, the feedback loops that ensure continuous improvement, as well as a clear definition of the roles and responsibilities of both the team members 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; Ourdely, 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 can adaptive project management planning methodology contribute to make it more effective? In order to successfully answer this question, it is first crucial to provide a brief overview of the current realities and practices associated with municipal planning.

**Municipal planning – current realities and practices**

Municipalities can be regarded as complex systems that function in a continuously changing environment. The objectives of municipalities, as required by Section 152 of the *Constitution of the Republic of South Africa of 1996* (Act 108 of 1996), is to provide sustainable services, to promote social development, as well as to promote a safe and healthy environment. Municipal
planning in this broad sense is also an essential component of a municipality’s developmental duties, 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 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 of 2000 (Act 32 of 2000) (MSA) under the heading “Integrated Development Planning” (IDP). A municipality must undertake developmentally orientated planning to ensure that it strives to achieve the objectives of Local Government. Once adopted by the Council, the IDP is the principal strategic planning instrument that guides and informs all planning and development, as well as all decisions with regard to planning management and development within 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 hierarchies, 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 therefore various layers of planning: the top (strategic) layer can be seen as the 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 consists of functional managers in municipal departments who execute planning for the implementation of the SDBIP.

Planning in South African municipalities is highly cyclical in nature and follow an annual process that 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 planning efforts.
Integrated Development and Community-based Planning

The annual IDP cycle commences in August with the start of the financial year in July. During August three processes are critical: needs assessments of the municipal community, developing community profiles, as well as community meetings to help enrich the pool of process-based information and to legitimise municipal actions. Following these processes, in October municipalities are expected to perform a spatial development and economic development analysis. In November councils refine their strategic priority areas and obtain public input. In December councils formulate sectoral development plans through the work of a technical IDP committee. Once the municipality has identified the best methods to achieve its development objectives, specific projects are identified. For this reason, the IDP should provide the basis for effective project management. Project 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 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 their social, economic and material needs. Furthermore, the Local Government: Municipal Systems Act (MSA) of 2000 includes participation as a central concept of IDP. 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. It specifies 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). This form of planning has a number of benefits such as planning based on outcomes and not problems. Ultimately, this 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 of promoting ward-level plans to promote community action. CBP is based on participation and principles of political democracy. For true participation to take place all stakeholders – Government, communities, business, labour and other sectors of civil society – should be invited to participate.
Although the municipality initiates and coordinates the planning process, 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 reviewing the IDPs. This requires a thorough and systematic community-based approach to ensure that its voice is heard.

The above reasons for participation are virtually not negotiable to maintain vibrant citizenship and to foster local democracy. However, it places an additional burden on managers who are involved in developmental, IDP-aligned projects and 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. However, community participation could frustrate this through prolonged discussions, political debates, and power games. As a result, councils often shift the blame on 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 to elicit questions and suggested improvements, interest and participation.
- Community meetings – to set and agree on priorities and project deliverables.
- 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 APM principles are applied. Figure 2 below illustrates how APM life cycles could be incorporated into municipal planning cycles.

During the public participation processes of the IDP, and particularly during Phase 3 (Projects), project input should as far as possible be aligned with initiatives such as community and stakeholder meetings, surveys and opinion
polls, the IDP Representative Forum, as well as 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 keep these consultative mechanisms active throughout a project’s entire life cycle to continuously gauge opinions and perceptions. Ultimately, the aforementioned should not be restricted to 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. This phase determines which projects are approved, when they are sequenced and the service delivery outcomes that are expected to be realised. Where many municipalities fail, however, is that they seldom revisit those formative processes and decisions unless fundamental changes occur.

What is unique about the APM approach is that, rather than merely continuing with developing the next milestone of the project, an adaptive team
will bring the service/product-to-date to the community as project beneficiary for feedback. Adaptive teams seek their customer’s acceptance of the deliverable after an iteration of development is concluded. It could be argued that because the APM-approach is so customer-centric, the project team should seek their acceptance on a regular basis. This will in all likelihood advance political acceptance and the project’s overall legitimacy. 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) suggest that organisational inertia constrains adaptation (i.e. to move from more conventional to more adaptive project planning practices), and that early learning during the founding period 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, managers’ failure to perceive stimuli related to areas other than their areas of expertise. 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. 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 influence the APM’s success. 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 the planning information and there may also be unintended consequences of certain demands and wishes. Political factions within communities who have conflicting demands may further complicate things.

- **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 on an intuitive level.

CONCLUSION

APM is based on the admission that there are various unknown variables at the start of a project. 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; when outcomes cannot be predicted within sufficient tolerance; and 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 communities review project plans – 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 municipality’s performance and ultimately, much needed service delivery.

Back to the title of this article: Could APM add value to current more conventional municipal planning practices? The correct answer would probable be a qualified “yes”. It must be recognised that the capacity of adaptive management to resolve value-based (socio-political) conflicts might not prove to be more effective than traditional planning approaches. It must first be tested in practice. However, based on the theoretical orientation one could deduce that it will at least facilitate a change in mindset. This will help create 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 developmental IDP-projects, 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 with regard to the potential benefits associated with APM. Hereafter, it is recommended that an evolutionary, incremental or trial-and-error model for implementation should be followed.

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