

Discussion Paper on Infrastructure

1 Introduction

1.1 Purpose of Paper

The purpose of this discussion paper is to provide an overview of infrastructure management within the context of the Eastern Cape Department of Education and its obligation to provide facilities for the learners of the Province. The paper thus intends to present the unique aspects of infrastructure planning and delivery, the logistical arrangements required to manage this (in terms of best practice and legislative requirements), and some of the major challenges facing the Department in this regard.

2 Background / Orientation

2.1 Nature of infrastructure vs other assets

Infrastructure provision (and management) differs fundamentally from the procurement of other movable assets such as equipment, books, etc. Each school is unique in some way (topography of the site, soil conditions, access, climatic conditions), and has to be treated as a project. It therefore needs to go through the entire project planning and implementation cycle before it can become functional. Most problems with slow delivery / under-performance can be traced back to a lack of appreciation or understanding of this process, and the consequent inability to factor the inherent constraints into the departmental programmes. This also leads to frustration of stakeholders who have undue expectations of the infrastructure delivery process.

The building industry, on which the Department relies for delivery, performs at its best when there is consistency and predictability in the potential workload. For public sector projects this would come in the form of transparent and reliable indicative infrastructure budgets for each MTEF period.

2.2 History of EC DoE delivery

The Department's infrastructure delivery programme since 1995 has unfortunately suffered a number of setbacks. These have usually been as a result of unfortunate budget cuts, but the most recent disruption (2007 – 2008) was due to a management decision on the delivery model (which has since been reversed).

The infrastructure unit has also been grossly understaffed, a situation that has grown steadily worse over the past few years.

Only a few years ago the Department was acknowledged nationally as a leader in the field of infrastructure delivery, for its record of expenditure and the number of leading edge initiatives it had introduced. Unfortunately this has changed to such an extent (over a period of only some 2 years) that the Department now lags behind most provinces. It is therefore opportune that this initiative to firmly re-establish the infrastructure management competency comes at this crucial stage.

3 Norms & standards for infrastructure provision

The Department has over a number of years developed a set of norms and standards for infrastructure provision. Unfortunately budget levels have prevented the Department from delivering infrastructure at these norms, resulting in massive backlogs as described later herein.

The National Department of Education has very recently gazetted new national norms for the provision of physical facilities. These, however, do not differ significantly from those developed by the Department, and will result in similar backlogs.

4 Status of existing assets

4.1 Current asset stock & condition

The Department currently has 5788 public ordinary schools in the Province, which serve approximately 2,17 million learners. These are accommodated in 54,501 classrooms. The condition of these facilities is set out in the table below.

Condition of Classrooms	Number of Schools	%
Very Weak	1030	18%
Weak	1620	28%
In Need of Repair	2141	37%
Good Condition	637	11%
New Building	276	5%
Being Upgraded	84	1%
TOTAL	5788	100%

4.2 Backlog analysis

Based on the prevailing norms as discussed above, an analysis has been made of the number of learners with insufficient access to the desired level of service, and the cost of providing facilities to this level. This is summarized below at current day (May 2009) rates for the various categories of backlogs.

➤ Facilities Backlog Cost

The facilities backlog cost is based on providing facilities in accordance with the norms and standards of the Department. When this backlog is quantified using prevailing building costs, it yields a backlog cost of some R23,4bn.

➤ **Upgrade Cost**

In this case, “upgrading” refers to the replacement of the existing facility where its condition is such that it is no longer considered functional or economically repairable, eg: mud structure schools / classrooms. Also included herein are the costs of providing services such as electricity, water supply or fencing if these are not provided at an existing facility. The total cost of upgrading (replacing) such facilities is estimated at R1,5bn.

➤ **Repair Cost**

This estimate is based on the condition rating of the buildings. This comes from the EFMS database, the data of which was captured during condition assessments that were undertaken in 2003, and escalated to today’s costs. The current repair (reinstatement) cost is very approximately estimated at R3,6bn.

➤ **Total Backlog Cost**

The total backlog cost (sum of the above) thus amounts to a staggering R28,5bn at current day rates.

4.3 Maintenance requirements

International industry norms for buildings indicate that annual maintenance budgets should be set at approximately 2% of the replacement value of the assets in question. The estimated replacement value of the Departments assets currently amounts to R40bn, meaning that the annual maintenance budget should be some R800m per annum.

In addition to this, there is a existing maintenance (repair) backlog estimated at R3,6bn as indicated above. To make matters worse, this is very likely a gross under-estimate, as the condition estimates were done some time ago and do not accommodate further deterioration since then.

5 Budgeting

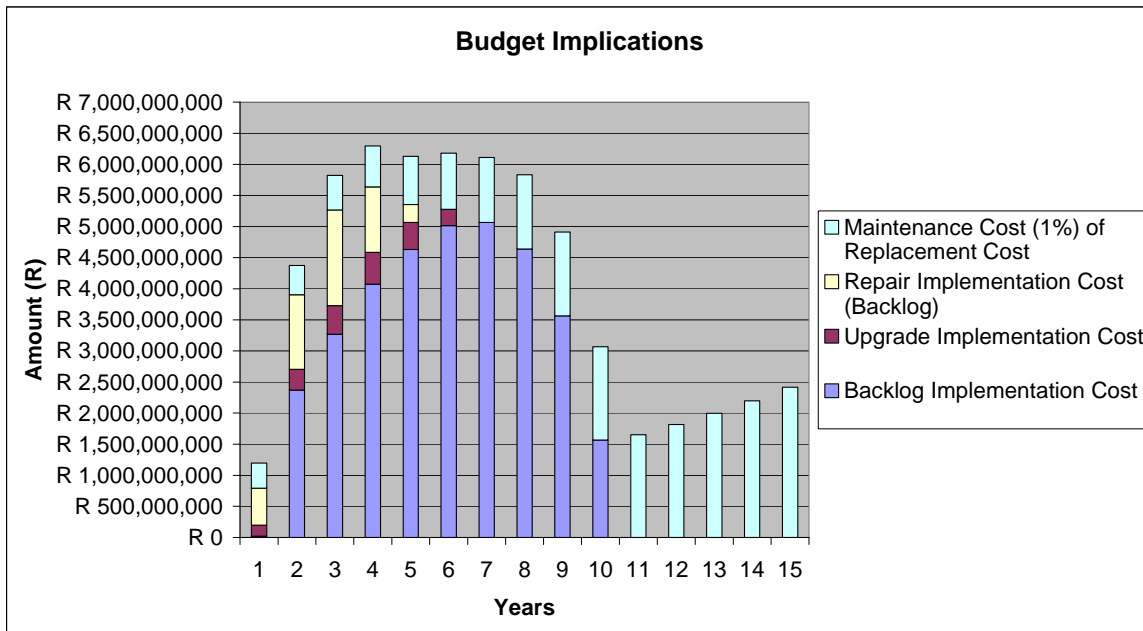
5.1 Extent & nature of current budgets

The Department’s infrastructure budgets have increased substantially over the past number of years, with the current (2009/10) budget being R981m. Last year’s budget was similar (R987m), with previous years being slightly less. As can be seen from the backlogs above (and described further below), these budgets are hopelessly inadequate to eradicate the backlogs in the province.

However, of greater concern is the reliability of the indicative budgets. For example, the indicative budget 2009/10 in the previous MTEF periods for was R 1 299m, but only months before the start of the financial year it was cut by over R300m. This is a major problem as by that time the funds were already committed. Reliability of indicative budgets is crucial for effective infrastructure delivery.

5.2 Required budgets

To eliminate the backlogs as described above within a reasonable timeframe will require a quantum step up from existing budget levels. To illustrate this, the required budgets to eliminate the current backlogs over a 10 year period are shown graphically in the figure below.



The graph above clearly shows that annual budgets in the order of R6bn would be required for a number of years to eliminate the backlogs as described earlier.

6 Alignment of relevant cycles

6.1 Strategic / political cycle

The strategic cycle is aligned with the 5 year electoral cycle, with the newly elected government producing a 5 year strategic plan for its term of office. Such strategic plans are drawn up during the first year in office and apply for the following 5 years.

6.2 Budget cycle

The budget cycle is annual, but covers a 3 year MTEF period each year.

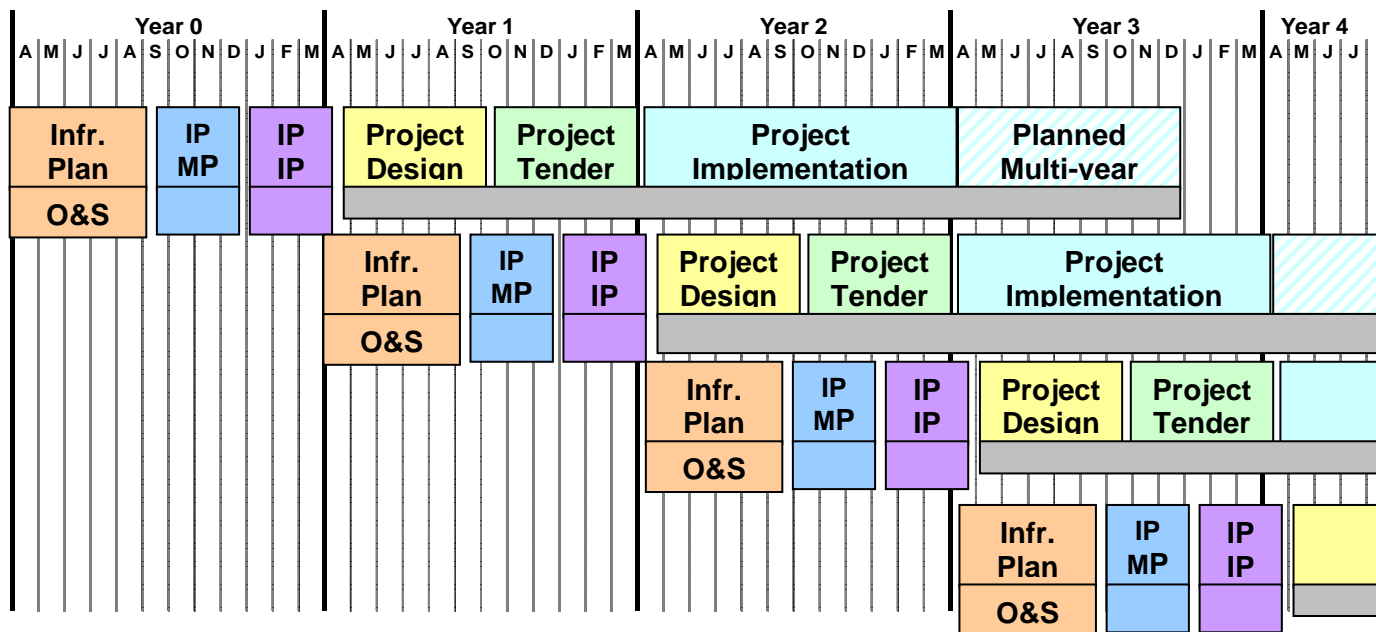
6.3 Infrastructure cycle

The infrastructure cycle covers a much longer period. It includes a large number of activities, as are shown later herein, and many of these must meet legislative requirements (such as the Division of Revenue Act) and go through legislated processes (such as Supply Chain Management). These stages are described briefly below, and shown graphically in the diagram on the next page:

Infrastructure Plan: Drafting and signing off of an updated comprehensive plan for infrastructure delivery by a Provincial Department. This plan must include the project list for the following MTEF period, and must be submitted to Treasury in June of the preceding year.

IPMP: Infrastructure Programme Management Plan – this must be compiled by the Client department, and must detail all aspects of the infrastructure programme and how it is to be managed. A copy of the draft IPMP must be submitted to Treasury in August of the preceding year. The IPMP is issued to implementing agents for them to respond with an IPIP.

IPIP: Infrastructure Programme Implementation Plan – this is compiled by each implementing agent for their respective programme. The IPIP is in response to the IPMP, and indicates how the implementing agent is going to meet the Client’s requirements. Once signed off, it becomes the performance management document. The IPIP must be submitted to Treasury in November of the preceding year.



7 Infrastructure planning

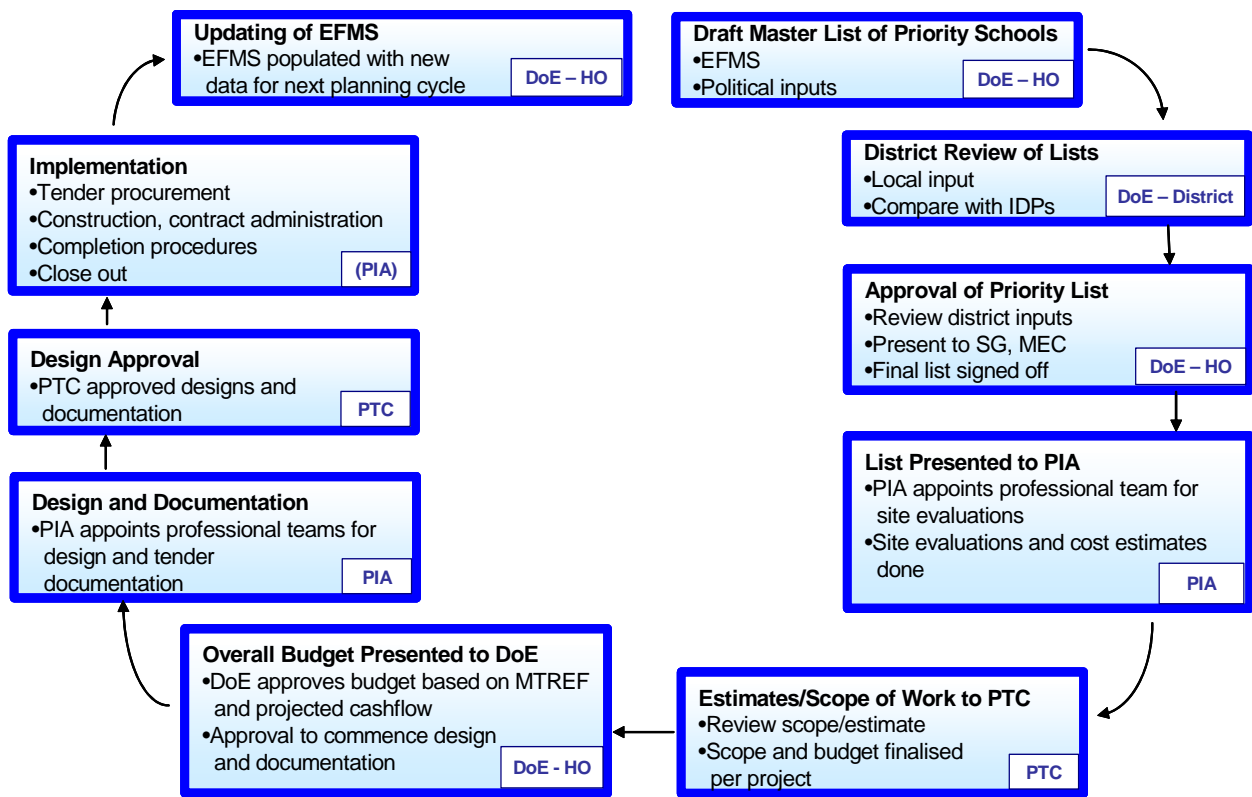
7.1 Planning cycle

The planning cycle involves the first 3 stages of the infrastructure cycle as depicted in the diagram above. The complete delivery cycle is shown in the diagram on the following page, where planning comprises the first 6 activities.

It is evident from the diagram that planning constitutes a significant amount of work. In fact the very first step, that of drafting a master list of projects is in itself a protracted process. It involves extensive consultations with the Districts and other sections within the Department, as well as external stakeholders. This process usually takes months to complete.

Once site assessments have been done there are often numerous adjustments required to the scope of work, and often the projects themselves, as the actual conditions on site may differ from those in databases.

The timeframes involved are in the order of 6 months for all the planning activities, and a further 10 months for design and procurement, thus a total of 16 months (and often longer) before construction can commence on a particular project. This emphasizes the need to complete the planning activities early, as shown in the infrastructure cycle on the previous page.



7.2 Consultation process

As alluded to in the previous section, there are extensive consultations required before the project list can be signed off. This involves drawing up a master list based on prioritization criteria set by the Department, which are in turn based on strategic imperatives. The projects thus identified need to be confirmed by the Districts and other stakeholders, before endorsement by the Head of Department and MEC.

The criteria used and the basis for identifying new projects must be transparent to ensure universal support for the project list. This is of paramount importance. However, the process is

time consuming, and should therefore be done well in advance of implementation to avoid delays.

Beneficiaries therefore need to realize that there is a significant time period (up to 2 years) between project identification and commencement of construction.

This is a reality of infrastructure delivery, and is a consequence of the unique attributes of each project, the nature of the building industry, and the obligations of meeting legislative requirements.

8 Delivery management

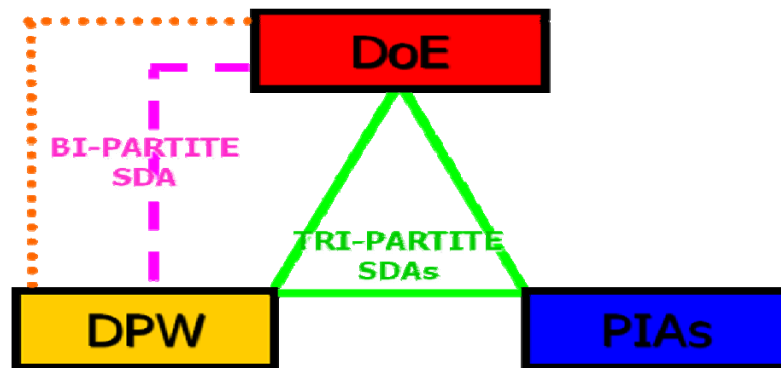
8.1 Service delivery model & implications

The provincial delivery model, as approved by the Executive Council in February 2008 and confirmed by the Premier in her State of the Province address in May 2009, is centered on delivery through the Department of Public Works (DPW). This means that the Department of Education is responsible for planning functions, and for client-side delivery management. The DPW is responsible for delivery, either with their own resources or, where these are insufficient, by contracting various external implementing agents.

This model is very in line with the approach adopted by the Department to date, with the exception that the Department enters into tri-partite agreements with the DPW and each of the respective external implementing agents utilized.

8.2 Phasing & capacitation

The model as described above will need to be phased in while the necessary capacity is built within the DPW. This being the case, the current approach, as shown in the diagram below will be utilized in the interim.



There is a Memorandum of Understanding between the department and the DPW (setting the objectives and tone of further agreements) as well as a bi-partite Service Delivery Agreement (SDA) for the projects implemented directly by the DPW. Then there are the tri-partite SDAs with other implementing agents – currently there are four other IAs employed by the Department.

There are provisions in current legislation that will facilitate the interim arrangements. For example the Division of Revenue Act provides for a Client department to utilize up to 4% of its capital budget to provide capacity for delivery, either internally or within the implementing department. Also the Construction Industry Development Board (CIDB) in its Practice Notes recommends tranche payments to implementing agents as a best practice methodology. This will facilitate payment of service providers.

9 Challenges

9.1 Capacity

A lack of capacity, both within the Department and the DPW, is the greatest constraint to effective and efficient delivery. Over the past number of years both departments have lost staff that have not been replaced – a situation which is particularly bad within the Department's infrastructure unit. Although there have been a number of recent appointments, the Department still needs to commit itself to budgeting for and implementing a comprehensive capacitation plan that seeks to provide not only personnel, but also the necessary skills, systems and procedures to meet the requirements of effective delivery.

This is one of the key components of the Infrastructure Delivery Improvement Programme (IDIP), in which the Department is a participant. The Department therefore needs to give its active support to this programme, and ensure that it effectively utilizes the resources that have been put at its disposal by the IDIP programme.

9.2 Budgets

As set out earlier herein, the current budget levels for infrastructure provision and maintenance are wholly inadequate. A serious effort needs to be made to source redress funding to address the backlogs within an acceptable timeframe. Given the magnitude of these backlogs, this will require a major political intervention from a national level.

9.3 Rural development / logistics

The Eastern Cape is characterized with a large rural population, living in a scattered area with often very difficult access to some communities. This makes for costly infrastructure provision and challenges for effective education in small schools with multiple grades in a classroom.

9.4 Rationalization process

The rationalization process has been under discussion for some time, but to date no firm criteria have yet been set for rationalizing schools. Understandably this is a very sensitive process, and each case has its own merits that need to be considered. However, it is a statistical fact that rural areas are depopulating, and a resolution is required to avoid the provision of infrastructure that will soon become under-utilised.

9.5 Scholar transport

Scholar transport is employed to link learner demand with the supply of learning space, thus complementing the infrastructure programme by utilizing learning space more effectively. However, it is critical that the integration of these two components be optimized to the greatest extent possible. This is often not the case.

Scholar transport and the provision of hostels are key aspects of the rationalization process, and a concerted effort is required to ensure that the most cost effective options are exercised, both for the short and the longer term.

9.6 Maintenance pressures

The Department has an obligation to maintain all its assets in a condition that render them fit for their intended purpose. As stated earlier the industry norm of budgeting 2% of replacement value annually for maintenance would mean that 80% of the current annual budget should be utilized for maintenance, not even to mention the maintenance backlog. Historically the Department's more valuable assets are in the more privileged areas, meaning that these also generate the biggest maintenance demand, hence need for budget. On the other hand, the facilities backlog is so great in the formerly neglected areas that it demands a large portion of the budget as well. This is a major challenge to deal if budget levels are inadequate.

Ultimately it is irresponsible for the Department to build infrastructure which it is not going to maintain adequately. This aspect therefore needs serious attention, as the current approach is certainly not sustainable.

9.7 Monitoring & evaluation

Due largely to the current lack of capacity, the aspects of monitoring, evaluation and research do not receive the attention they require. The Department needs to ensure that its facilities and the manner in which they are constructed are effective and optimized for their purpose. At the moment this is a risk area which needs to be addressed.

10 Way forward

10.1 Obligations of the Department & infrastructure unit with respect to infrastructure management & legislative compliance

Besides being responsible for providing learning space for all the learners in the Province in terms of the South African Schools Act, the Department has a number of other obligations with regard to infrastructure delivery and management. These include the financial accountability for budget utilization in terms of the Public Finance Management Act, and submission of reports and planning documents (as described earlier) in terms of the Division of Revenue Act. It also has a responsibility to cover the risk of its implementing agents not meeting all building

related regulations. In the past the Department has often received qualified audits due to non-compliance within its infrastructure programme.

These shortcomings can all be related back to a lack of adequate capacity, i.e. shortage of staff, personnel not being fully conversant with all the requirements of their functions, and a lack of systems to provide the necessary audit trails for compliance. Addressing these issues, and ensuring that all other senior officials understand the obligations of the infrastructure unit, must become a priority for the immediate future.

10.2 Commitment to IDIP principles and objectives

As stated earlier, the Department is participating in the Infrastructure Delivery Improvement Programme (IDIP). This is a national initiative to build capacity and institutionalize best practices for infrastructure planning and delivery within provincial government departments. It is clear from the foregoing section that this is now a priority for the Department.

The Department has therefore committed itself to the IDIP programme, and the infrastructure unit has set itself the goal of making the Department one of the leaders again nationally in the field of infrastructure management.

10.3 Vision for the future of infrastructure management

The Infrastructure Chief Directorate would like to see that the entire Department gains a greater understanding of infrastructure delivery, and that all sections assist the Chief Directorate in ensuring that the Departmental Infrastructure Plan represents all their aspirations for effective delivery of learning facilities.

The Chief Directorate is also striving, as stated above, towards the introduction of best practices and institutionalizing these. To this end it is also trying to operationalise its Education Facilities Management System among all the role-players as soon as possible.

Despite its many challenges, the Eastern Cape Department of Education's infrastructure programme and the number of initiatives it introduced resulted in it being seen as a leader among the provinces. The Chief Directorate is striving to see the Department regain its status as a leading player nationally in the field of effective & efficient infrastructure delivery.
