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Ms Lia Finocchiaro MLA  
Chair Legislative Assembly of the  
Northern Territory Public Accounts  
Committee  
Legislative Assembly  
GPO Box 3721  
DARWIN NT 0801

*12* November 2013

Dear Ms Finocchiaro

**RE: Submission on the Management of ICT Projects**

Thank you for the invitation to make a submission to the Public Accounts Committee inquiry on the management of ICT projects. The Department of Education has prepared the attached submission and hope the information will assist in the inquiry.

Yours sincerely

**Ken Davies**  
Chief Executive

Attachment : Submission by the NT Department of Education to the Legislative Assembly of the Northern Territory, Public Accounts Committee on the Inquiry into Management of ICT Projects.

### Overall Focus for ICT Projects

Information and Communication Technology (ICT) systems development projects in the Department of Education (DoE) are most commonly initiated by the need to increase automation by integrating manual processes and standalone databases and through moving business processes online. Over the last 12 months seven systems development projects have been completed or are in progress. This table provides a summary of the nature, duration and cost of these projects

System	Project Type	Duration	Cost (\$)
<b>SAMS G2</b> – Commercial off the shelf student administration system to be used in all NT Government schools. This centralised web based system will replace the current student administration system which has a separate database for each school.	Major software upgrade	2.5 yrs	1.3 M
<b>Student Services Information System-</b> Custom developed system to manage delivery of assessment and support services to students with special education needs.	New System – replaces a range of separate databases and manual processes	15 mths	450,000
<b>Teacher Recruitment System-</b> Custom developed system where teachers seeking employment in the NT can lodge their details. System provides vetting, interview and selection functions.	New System – replaces existing outdated online recruitment system	12 mths	200,000
<b>Attendance Case Management -</b> Custom developed system to manage interventions and legal sanctions for students who are not attending school regularly.	New System – replaces a range of separate databases and manual processes	6 mths	150,000
<b>Student Achievement Information System-</b> Custom developed system to record and report on student assessment results at class and school level.	New System	15 mths	80,000
<b>VET Results Reporting</b> – Custom developed system that collates student VET results from Registered Training Organisations and makes these available to award the NT Certificate of Education and Training.	New System – replaces manual processes	4 mths	50,000

System	Project Type	Duration	Cost (\$)
<b>Teachers Registration Board Web Services</b> – Extension to existing system providing online registration and payment services.	New module for existing system.	4 mths	45,000

## ICT Governance

The Department of Education has an Information Management Committee that oversees the development and implementation of Information Technology strategy, policy and projects to ensure these initiatives align with the Department’s strategic objectives and priorities. Its charter includes the prioritisation and approval of major ICT projects and monitoring of their progress against agreed features, budgets and schedules. The Information Management Committee is chaired by the Deputy Chief Executive Organisational Services and its members include the executive managers of the business units with significant ICT services and principals representing a cross section of schools.

## ICT Project Governance

Large projects such as the SAMS G2 and the Student Services Information System are managed by a steering committee composed of the project sponsor, project manager, system owner and representatives of the end users. Approvals for large projects and the associated funding are secured by the responsible business units and these are endorsed by the DoE Information Management Committee and approved by the Chief Executive. Status reports for large projects are produced monthly and provide details on progress, expenditure, issues and risks. These reports are circulated to steering committee members.

For smaller projects the steering committee generally comprises the manager of the business unit, the system owner, the project manager and the software developers. The steering committee is responsible for monitoring progress and making decisions on development and implementation issues. Status reports are not normally produced for small projects.

## ICT Project Delivery

Systems development projects are normally managed by the business unit that is responsible for the services. A project manager from the ICT Services unit is assigned to liaise between the business unit and the contracted software developers. The project manager also coordinates the design, acceptance testing, data migration and the setup of the system and database hosting environments. User training and ongoing support is provided by the business unit.

## **ICT Project Management Processes**

For large projects, the approval to proceed is based on a business case that identifies the options and the associated benefits, costs and risks. When the business case is approved by the Chief Executive and funding is allocated by the business unit a project plan is developed that identifies the scope, tasks, schedule, resources, costs and risks. The project is then managed based on the project plan and reports on progress and any deviation to the project plan are provided to the steering committee. Post implementation reviews are generally only carried out if there have been cost overruns or the system has not delivered the required functions.

## **Financial Management**

Funds for projects are allocated by the business unit responsible for the services. The budget and expenditure on projects are managed by the project manager and reported to the steering committee through status reports.

## **Factors Determining the Success or Failure of Projects**

From the experience in systems developments in DoE, the following major factors have been identified as drivers in the success or failure of projects.

The size of the project is the most significant influence on the success or failure of systems development projects. The risk of failure increases exponentially as the size of the project increases. To mitigate this risk projects should be broken down into smaller components that can be delivered in successive phases so that benefits are generated early in the process and end users can verify that the system meets their requirements. By prioritising the order of delivery of functions, this staged approach also delivers best return on investment by focusing on the high value elements first and allowing high cost, low value elements to be left to last or not proceeded with.

A clear definition of the functional requirements and the scope of the project need to be established at the start of the project to ensure the schedule and budget parameters are met. In our experience there is a tendency to commence projects with high level business requirements only and the detailed functional requirements only emerge when systems development is underway and users build a more complete understanding of their needs. This often requires extensive rework and leads to blowouts in schedules and costs. Where it is difficult to define the requirements at the outset, a rapid prototyping approach is preferred so that users can review and refine their requirements with based on practical experience in using elements of the system.

Assigning project managers with expertise in leading systems development projects and experience in the selected technology environment is essential as they play a critical role in coordinating the efforts of the clients, the software development team and the systems integrators. Ideally the project manager will be an agency resource with a good knowledge of the business and existing relationships with the key stakeholders however if this is not possible a contracted project manager should be engaged and they should be placed in the business unit for the duration of the project. When a specialist project manager is not assigned there is a high risk of misunderstanding

between the system developers and the business area, an unwillingness to address issues as they arise and poor quality systems integration and acceptance testing.

Formal project governance processes need to be adopted to ensure projects have appropriate reviews and approvals before they commence. The governance framework should identify the project steering committee members who would normally include the project sponsor, system owner and key stakeholders. The project steering committee should meet regularly to review progress and expenditure, discuss and resolve issues and ensure sufficient effort is devoted to communications, change management and training.

Commitment from the front line users of the system and their early and ongoing involvement in the design, development and acceptance testing is essential to ensure that a practical solution is delivered and it provides benefits to them. When systems are developed under top-down direction without the buy-in and involvement of the end users the result is often long delays in acceptance testing, inefficient business processes and poor quality data capture.

### **Options for Improving ICT Procurement and Management Across Government**

The Department of Education supports the current model for the centralised procurement of commodity ICT services such as computer hardware and data and telephone communications services because the approach maximizes economies of scale and allows dedicated tendering and contract management teams in the Department of Corporate and Information Services to lead the processes. However because of the large numbers of computers in schools it is necessary to have a separate computer support contract to the contract used in other Government agencies because the cost for standard Government computer support service would not be sustainable in schools.

In relation to management of large and complex systems development projects, there may be benefits in engaging independent reviewers to critically examine the progress as each major phase of the project is completed. Typically these reviews would be carried out at the completion of preliminary design, business case analysis, project planning, detailed design, system development and system testing.