



## **First Nations Education Steering Committee**

### **British Columbia Education Student Information System (BCeSIS)**

# **BUSINESS PLAN**

Redrafted October 6<sup>th</sup>, 2006

**October 2006**  
**First Nations Education Steering Committee:**  
**Business Plan**

**1. Project Overview**

This business plan outlines the implementation of the British Columbia electronic Student Information System (BCeSIS) in member schools of the First Nations Schools Association.

**2. Background to Project**

First Nations schools in British Columbia (BC) manage student information in a variety of ways depending on administrative and technological capacity, school size and access to systems. Student information can be characterized as being any or all information which pertains to a student's profile including personal information which impacts on the student's education. Typically student information includes records of attendance, achievement, special needs, contact details, relevant parental information and medical information. Student information is also used to track academic progression and grade transition and is sometimes used to assist with student report writing. Current student information systems in use in First Nations schools include Report Writer, Open Source, ESCAN and HARTS. More commonly paper files are used to collate and retain student data.

In 2003, the BC Ministry of Education distributed a Request for Proposals for a comprehensive common student information system which could be utilized as a single source database in school districts throughout BC. The selected database was the British Columbia (BC) electronic Student Information System (BCeSIS), a product designed by an Ontario based technology company, providing access to a web-based central student registry and permanent student record. Once implemented it is expected that the new system will provide a significant enhancement to current administrative procedures and provide in depth reporting capability. BCeSIS utilizes state-of-the-art architecture that separates the back-end database, the application and the front-end client components. This allows each component to be managed separately and by separate parties if need be.<sup>1</sup> From a First Nations schools perspective this means First Nations schools do not have to concern themselves with any of the technical back-end database or application components – they only have to ensure that users have connection to the internet and a browser.

In 2004/2005 the BC Ministry of Education began its implementation of BCeSIS in school districts throughout BC. The implementation has been met with varying degrees of success depending on the student information systems that were historically in use in

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<sup>1</sup> Cowichan Valley School District 79 BCeSIS Planning and Implementation Report – Page 4

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the school district, the school district size and the administrative resources available within the school district.

An important and enduring issue for First Nations education is the matter of transition of First Nations students between grade levels and their mobility between band schools and provincial schools. Commonly when First Nations students make the transition between a federally funded school located on reserve, and a provincial school, the complete set of information pertaining to that student and his/her academic and personal history does not always follow that student. This also means that students sometimes cannot be traced and can seem to 'disappear' from official records. This can often be attributed to actual attrition due to the difficult transition from the more culturally accepting environment of a band school to a larger less welcoming public school environment. This transition can be difficult for First Nations students and is often cited as a prime motivator for them to 'drop out' of the education system altogether. However, in the absence of any comprehensive data concerning this issue it is difficult to garner any meaningful insight into whether this is a valid contributor to the inequity in retention and graduation rates between Aboriginal and non-Aboriginal students.

Implementing effective data gathering systems regarding education has been a priority for BC First Nations for a number of years. Some of the data initiatives implemented by the First Nations Schools Association (FNSA) have included a Band Funding Analysis and a research project which has highlighted the high level of special needs of some students in First Nations schools. In 2004, the FNSA implemented the School Measures and Data Collection project. A data collection instrument, formulated by First Nations, was distributed to First Nations schools and was completed by 27% of all First Nations schools in BC. The results of the survey were both surprising and pleasing and provided a prime example of how accurate data can negate the many misconceptions which abound concerning First Nations schools, First Nations parents and First Nations students. Having a strong belief in the ability of data to inform and prioritize activity and influence policy, the FNSA at its 2005 Annual General Meeting (AGM) agreed that the BCeSIS system would be an extremely beneficial system to implement in First Nations schools.

The benefits of BCeSIS are twofold in that the system will provide a comprehensive common student information data system which could improve the efficiency and practice of student data collection within First Nations schools. Additionally, the system will also provide a common information system which could more easily facilitate the transfer of student data between First Nations schools and provincial schools. The protocols surrounding the exchange of information between First Nations schools and provincial schools have yet to be determined but would always be respectful of the privacy of the individual student and his/her parents.

It was initially hoped, at the outset of this project, that the implementation of BCeSIS could streamline various data gathering practices such as the FNSA Data Collection project, funding management and reporting (i.e. New Paths/YES) and Club membership (Parents Club/Seventh Generation Club). However, as FNEC has become more aware

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of the realistic functions, capabilities and limitations of BCeSIS, these expectations have been pared back considerably.

### **3. BCeSIS Benefits for First Nations Schools**

BCeSIS has many features and benefits that will be advantageous to First Nations schools and their student population. The following is a summary of those benefits;

- The system creates a common information platform throughout the province. This will allow for appropriate comparison and analysis of educational trends on a province wide basis.<sup>2</sup>
- The architecture of the software (and database) allows for extensive standard and some ad hoc reporting. These reports will allow First Nations to produce a number of reports, which will lead to increased accountability and more detailed student performance information. These reports will assist schools to report out aggregate information to stakeholders such as Chief and Council and parents.
- The architecture of the software moves the most tedious and technical aspects of this type of application to a centralized area and will allow the First Nation school to focus its resources and attention on the information that can be provided by the system.
- The ‘common system’ highly simplifies software maintenance, upgrading and training.
- The ‘common system’ will allow for unencumbered movement of staff between First Nations schools and provincial schools. Training for the current and future versions will be consistent and easy to deliver across all BC schools.
- The ‘common system’ also allows for easy movement of students from school to school within the local school district and from within participating BC districts.
- The BCeSIS is cost effective. The annual license and maintenance fee is charged per FTE, which is measured on a monthly basis and therefore scales automatically as enrolment changes. Consequently a First Nations school will not be continuously charged for a student if s/he is enrolled in September but leaves the school in December.
- The modern architecture allows for the elimination of many of the costly and tedious peripheral software packages and also allows for easy integration of peripheral packages that are still required.<sup>3</sup>

### **4. What Represents Success for First Nations Schools regarding BCeSIS?**

The successful implementation of the BCeSIS system within First Nations schools will be signified by the following Key Performance Indicators (KPI’s). These KPI’s will measure

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<sup>2</sup> Any comparison of data derived from BCeSIS will require approval by First Nations schools.

<sup>3</sup> Cowichan Valley School District 79 BCeSIS Planning and Implementation Report – Page 5 (adapted)

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the success of the project during project planning and project implementation. For this purpose the project is split into two phases. Phase 1 is concerned with planning and scoping out the potential implementation of BCeSIS for BC First Nations schools, and building capacity at a school level to enable staff of First Nations schools to manage the system. Phase 2 of the project refers to the **actual** implementation of BCeSIS into First Nations schools.

#### **PHASE ONE – KPI's**

1. The approval of the BCeSIS business plan by the FNSA board.
2. The signing of the Memorandum of Understanding (MoU) with the Ministry of Education.
3. The recruitment and appointment of a BCeSIS Project Manager.
4. The selection and approval of First Nations schools for the pilot implementation process.
5. Successful training of two FNEsc/FNSA T3 Trainers (BCeSIS) and/or access to school district/Independent School trainers.
6. The development of a comprehensive Project Implementation Plan outlining timelines, business requirements, risks, expected outcomes and objectives.
7. The creation of two First Nations advisory bodies; the BCeSIS Steering Committee (strategic direction) and the BCeSIS Working Group (technical consultation)
8. A comprehensive communications strategy to continually inform and update stakeholders regarding the BCeSIS project.
9. The development of an implementation plan for First Nations pilot schools.
10. The successful training of administrative/resource staff in BCeSIS within First Nations pilot schools.
11. The approval of the Implementation Plan by the Ministry of Education and the First Nations BCeSIS Steering Committee.
12. Successful conversion or transfer of data from existing pilot systems to the BCeSIS.
13. Efficient and effective service delivery from the Level 1, 2 and 3 helpdesks to the project team and pilot schools.
14. Successful implementation of BCeSIS into the First Nations pilot schools.

#### **PHASE TWO – KPI's**

1. All First Nations schools are designated to a roll-out 'wave' for implementation.
2. First Nations schools who do not qualify, for example, due to the reason of size or internet connectivity capacity, are appropriately communicated to and supported.
3. BCeSIS is successfully -rolled out to First Nations schools in 'waves', as per the Implementation Plan recommendation.
4. Issues regarding BCeSIS implementation from key stakeholders, primarily First Nations schools, are dealt with promptly and effectively by all service providers (FNEsc, FNSA, MoE, Fujitsu Consulting etc.).
5. The process of invoicing for the use of the system is seamless and trouble-free.

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6. The Ministry of Education agree to work with First Nations schools on potential enhancements to the system which might meet the specific needs of First Nations schools.
  7. Successful training of school administrative/resources and FNSA/FNESC staff on BCeSIS.
  8. The creation of a First Nations cohort of Subject Matter Experts (SME) and trainers who can potentially train First Nations school staff as they move through the implementation process and who may function as BCeSIS Helpdesk Support in the future.
  9. Effective and efficient use of BCeSIS within First Nations schools (measured through regular performance evaluations with key stakeholders).
  10. Implementation of a reporting mechanism to measure the success of the improvement in effective transfer of information between federally funded schools on reserve and provincial schools (Ministry and FNESC).

## **5. Communication**

Throughout the BCeSIS project, it will be imperative to communicate the milestones and KPI's outlined in this business plan. It will be the role of the Project Manager to work with the FNESC Communications Officer and FNSA support staff to ensure that participating schools and all member schools are being informed of the progress and success of this project. Key communication mechanisms will be through FNSA/FNESC board updates, newsletters (Education Partners/FNESC/FNSA), websites and email distribution lists. A listserv will be set up as an internal support network for those schools which will participate in the project.

## **6. Support from and Concerns of Partners**

This project requires the support of our Education Partners, in particular the Ministry of Education and the BC Principals and Vice-Principals Association. It will be important for First Nations schools to be able to link with their local school districts to ensure that there is school, district and regional support regarding BCeSIS. The FNESC and the FNSA look to the Ministry of Education for support and guidance on this project with particular regard to governance issues, protocols, systems limitations and shared services i.e. T3 Trainers and Helpdesk services.

In addition, FNESC/FNSA will be looking to the Independent Schools Association (ISA) and the iGroup<sup>4</sup> for its support in this project. The FNESC/FNSA draw a similar comparisons to the independent schools and hopes to access some of the iGroup's second level services and experience in BCeSIS implementation. In addition, there are a number of First Nations schools which have independent school status.

## **7. Project Management and Governance**

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<sup>4</sup> The iGroup is a division of the ISA which is tasked with implementing BCeSIS in independent schools.

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The BCeSIS project will be managed by the FNSA through its administrative agreement with FNEC. FNEC will recruit, appoint and manage the Project Manager who is tasked with the implementing and supporting this project. The Project Manager will be accountable for reporting out to the SchoolNet Coordinator and the Special Projects Coordinator (Contract Managers) who will report to the FNEC/FNSA boards. The funding for the recruitment of the Project Manager, communications and some database analysis has been provided by Indian and Northern Affairs Canada (INAC). It was anticipated that the annual fee of \$20 per student, charged by the Ministry of Education, will be met by the First Nations SchoolNet program. If that program does not proceed past 2006/2007, FNEC will look to INAC to support this project on an ongoing basis. The Project Manager will also be assisted by a Core implementation team. This team will comprise of Lee Gardiner (Special Projects Coordinator), Dayna Anderson (SchoolNet Coordinator), Sue Johnstone (Fujitsu Consulting) and Eric Maitland (BCeSIS). This group will perform the primary functions of planning the implementation of this project and will communicate regularly with their respective organizations, schools and regions on the successes and challenges of the project.

## **8. Database Ownership, Control, Access and Security**

The data which is input into BCeSIS remains in the ownership of the individual First Nations school. The system is set up with multi-level password access so that access to individual student data is restricted depending on the level of security assigned to the person seeking access. This inherent security system is to ensure that access is limited to only those staff members who are authorized to view the information. For example a Principal may have a higher access level than an individual classroom teacher, whose access may be restricted to members of his/her class and then, only to a subset of the information pertaining to the student. An administrator may have only limited access to information in the system such as absenteeism or tardiness. BCeSIS has been selected by the Ministry of Education for its robust security protocols.

## **9. Existing Databases**

The Ministry of Education has advised that it has been rare that school districts have converted their existing student data collection systems to BCeSIS. Such a conversion would involve the creation of an interface program to translate the data from one program to the other. This interface program would vary depending on the type of student information system the school had in place. Instead the majority of school districts have opted to input existing data manually which has proven to be a successful approach. Given the relatively small size of many First Nations schools this is the recommended course of action for this project. This option is more simple and 'cleaner' but does require sufficient administrative resources within the school. The Project Manager will be tasked with making recommendations for each pilot school as to whether data conversion or data re-entry is preferred.

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## 10. Scope of Project

The proposed project described in this Business Plan is envisioned as part of a larger set of activities directed towards improving the quality of information available to First Nations schools on their students. These activities are directed towards improving the tracking of transition by students from First Nations schools to provincial schools, providing better high level collective data around key performance indicators like attendance, transition, achievement etc, and ultimately using BCeSIS to capture data specific to First Nations schools.

Possible future related activities include:

- First Nations schools providing high level anonymized data regarding some key performance measures identified by the FNSEA. (Data Collection and School Measures)
- The ability to capture club membership, for example, students who are members of the Seventh Generation Club and to measure whether the club is having an impact on attendance and retention of club members as opposed to those students who are not club members.

## 11. Protection of Privacy

Due to the sensitive nature of student information, the BCeSIS architecture has been framed so that there is the highest level of security. The Project Manager, with input from the Steering Committee will be tasked with assigning each user to an appropriate user group. The user group will determine how much access that user will have to information in the system. The assignment to user groups should be reviewed following implementation to ensure that they are appropriate and allow users the appropriate level of access they require to perform their functions within the school. FNESC/FNSEA will require the Project Manager to develop policy around security of the system which would encompass such items as length of passwords , expiry of passwords, what happens to passwords when an employee leaves, recording of passwords etc.

## 12. Cost Estimates and Sources of Funding – TO RE-DRAFT THIS SECTION

The cost of the BCeSIS implementation for 2005/2006 is outlined below (included is the funding source).

Annual Fee per FTE student	\$38,200 (\$20 per student) (First Nations SchoolNet)
Project Manager	\$50,000 (INAC)
Communications	\$10,000 (INAC)
Database Development	\$25,000 (INAC)
<b>TOTAL</b>	<b>\$123,200</b>

## 13. Implementation Plan

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### **Pilot Project**

It has been recommended to the FNSA that they should proceed with a sample of pilot schools. This sample group will allow FNEESC/FNSA to gain an understanding of the technical conversion and business change issues that will be encountered during implementation. Once the implementation has been undertaken with the pilot group, then it will allow more efficient and comprehensive roll out of BCeSIS to remaining First Nations schools.

### **First Nations Schools**

A call for proposals went out to First Nations schools in August 2005. 24 schools<sup>5</sup> expressed an interest in being involved in the implementation of BCeSIS. These schools reported student numbers of between 14 FTE students to 320 FTE students. The total number of students in schools which submitted a proposal is 1909. The First Nations schools who have applied to be pilot schools sit in 16 different BC provincial school districts. Five schools which have applied to be pilot schools also have Independent school status. Student information systems in use in these schools included paper files, Access, Excel and Turbo School. **The Project Manager**

It was identified early on, that a project of this size would require expert management by a person with experience in both project management, database analysis and systems implementation. FNEESC/FNSA does not have sufficient human resources to meet the demands of this project and so it is proposed that a Contractor is appointed to manage this project until completion. This Project Manager would be tasked with meeting the accountabilities outlined in the Statement of Work<sup>6</sup> and would report to the Special Project Coordinator and the SchoolNet Coordinator. FNEESC has contracted the services of Andrew Smit, who also works with the ISA on the BCeSIS implementation within independent schools in BC. His skill set and experience with BCeSIS will prove invaluable to the FNEESC/FNSA BCeSIS project.

### **Training**

The training for BCeSIS is integral to the success of this project. The Ministry of Education has a training matrix in place which establishes protocols for different levels of trainers depending on their role within the school district. It is imperative to remember that a participating school **MUST** have adequate and appropriate human resources within the school to ensure that the data is properly transferred, that the system is properly implemented, can be used effectively and efficiently and who can train other staff how to use and access the system.

The Ministry of Education has offered to train two T3 Trainers for the FNEESC/FNSA. Additional T3 trainers could be trained at a cost to the FNSA. Additional training credits can be purchased from the Ministry at a cost of \$25 each. The training credits required to train to a T3 level are 176 credits. Given the difficulty that is anticipated around the selection and remuneration of two T3 trainers for FNEESC/FNSA, FNEESC/FNSA is keen

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<sup>5</sup> A full list of schools is outlined in Appendix A which includes reference to their local school district.

<sup>6</sup> Appendix B outlines the Statement of Work for the BCeSIS Project Manager

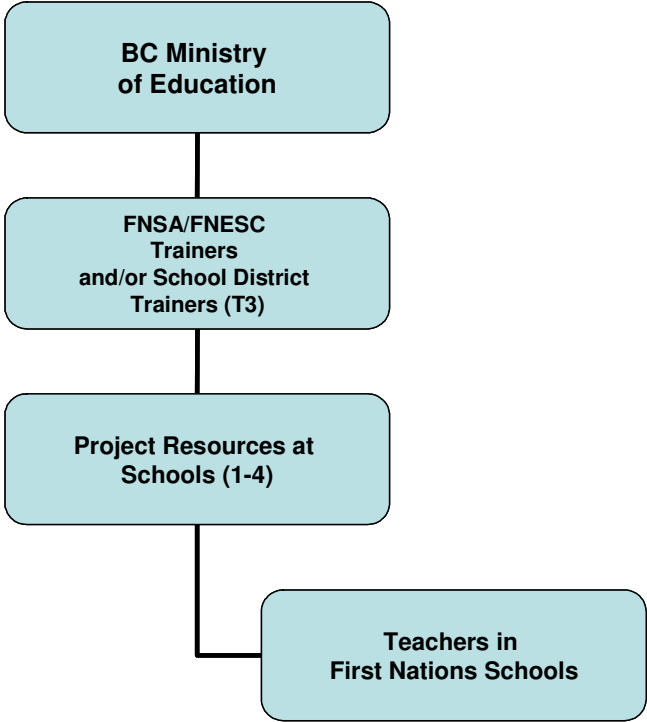
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to access the T3 trainers already in place in the school districts and also in the iGroup. These trainers are already in place, as in many school districts, training has already been completed. It would also be of mutual benefit for First Nations schools and Provincial school districts to work together to build capacity in this area. This is in line with the mandate of the BC Education Partners group and has already been approved, in principle, by the Ministry as a feasible means by which it can offer support to First Nations schools for this project.

The BCeSIS training process is established by the Ministry and has been developed to reflect the specific needs of BC schools. The objective of the training is to provide a number of training ‘experts’ within school districts, who have a comprehensive knowledge of BCeSIS and its functionality, who would in turn develop local expertise within schools. This is the framework which is recommended for First Nations schools but as noted above, hopefully with access to established T3 trainers within provincial and independent schools.

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# BCeSIS Training Flowchart



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## **Data Conversion & Software Implementation Strategy**

The technical aspects of the project includes the following areas of accountability for the Project Manager;

1. Perform a 'systems' walk through at all pilot schools and document key business processes that will be impacted by BCeSIS software.
2. Develop a new set of business practices that maximize the effectiveness and efficiency of the BCeSIS.
3. Develop a change management plan that will provide the blueprint for moving administrative processes from the old to the new system.
4. Examine the databases at all of the pilot schools and compare to the BCeSIS tables to determine:
  - a) Which fields in the existing tables will need to be converted to the BCeSIS tables.
  - b) What data in existing tables will need to be 'cleansed' (specific policy decisions will have to be made at this point regarding data format)
  - c) What data needs to be keyed into the BCeSIS tables that do not currently exist in the legacy tables.
5. Develop detailed conversion plan for all schools legacy software or systems and make recommendations as to whether re-entry of information is the most efficient method for each schools (based on school size, years to be converted and completeness and accuracy of data).
6. Review all peripheral systems and develop a conversion/integration plan as required.
7. Review requirements and procedures for upload of converted data to the provincial database.<sup>7</sup>

## **14. Next Steps**

The next step in this project is to select and appoint a Project Manager to provide more detail to the framework outlined in this business plan. The Project Manager will be tasked to work with the BCeSIS Steering Committee and make some critical decisions about moving this project forward for First Nations schools. Some of the first considerations and actions will be as follows;

1. To secure approval of this Business Plan from the FNSA board.
2. To make recommendations regarding the proposed Memorandum of Understanding with the Ministry of Education and facilitate the signing.
3. To work with the Steering Committee on the selection of pilot schools.
4. To work with the Ministry of Education on shared services such as

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<sup>7</sup> Cowichan Valley School District 79 BCeSIS Planning and Implementation Report – Page 10 (adapted)

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- access to T3 Trainers, helpdesk resources and end-user training opportunities.
5. To develop a comprehensive project plan in MS Project or similar outlining key milestones and accountabilities.
  6. To develop a Communications Plan for the selected Pilot schools and wider stakeholders including the FNSA and FNEC Boards, FNEC/FNSA membership and the BC Education Partners group.

## **15. Summary**

The purpose of this Business Plan is to inform the FNSA membership and other stakeholders of the purpose and desired outcomes of the BCeSIS implementation and to provide some framework for the commencement of the project. More details, project outlines, timelines and accountabilities will be developed by the Project Manager during the course of the project.

The FNEC and the FNSA are excited by the potential that BCeSIS has to assist First Nations schools in streamlining administrative procedure, enhancing reporting and data gathering capacity and providing a common student information system for all BC First Nations schools.