

REPORT OF THE

# Auditor General of New Brunswick

Volume III  
Special Examination

2017

AUDITOR GENERAL  
OF NEW BRUNSWICK



VÉRIFICATEUR GÉNÉRAL  
DU NOUVEAU-BRUNSWICK

AUDITOR GENERAL  
OF NEW BRUNSWICK



VÉRIFICATEUR GÉNÉRAL  
DU NOUVEAU-BRUNSWICK

Speaker of the Legislative Assembly  
Province of New Brunswick

Sir

As required under Section 12(1) of the *Auditor General Act* I am submitting Volume III of my 2017 Report to the Legislative Assembly.

Respectfully submitted,

A handwritten signature in black ink that reads "Kim MacPherson". The signature is written in a cursive, flowing style.

Kim MacPherson, CPA, CA, ICD.D  
Auditor General

Fredericton, N. B.  
November 2017

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# Chapter 2

## Service New Brunswick Residential Property Assessment – Special Examination

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# Service New Brunswick Residential Property Assessment – Special Examination

## Introduction

- 2.1** In June 2017, the Lieutenant Governor in Council requested the Auditor General conduct an independent review related to the integrity of New Brunswick’s real property tax assessment system.
- 2.2** The request, made under subsection 12(1) of the *Auditor General Act*, would focus on facts and circumstances related to inaccuracies and possible errors in Service New Brunswick’s (SNB) calculation of real property tax assessment values for the taxation years 2011 through 2017. A copy of the subsection 12(1) mandate letter can be found in Appendix I.
- 2.3** As a result, Auditor General of New Brunswick (AGNB) examined administrative policies and procedures in place related to the assessment process, as well as significant changes to the assessment process and procedures over the past seven years.

## Results in Brief

- 2.4** Results in brief are presented in Exhibit 2.1.

## Recommendations

- 2.5** A summary of AGNB’s recommendations can be found in Exhibit 2.2.
- 2.6** A list of acronyms AGNB uses throughout this chapter can be found in Appendix II.

## Exhibit 2.1 Results in Brief

## Residential Property Assessment - Special Examination

### What We Found

#### Conclusions

- Service New Brunswick Property Assessment Services' (PAS) Modernization strategy and overall vision was well intended, long overdue and the new technologies were in line with accepted industry practice
- Corporate governance and leadership failed to acknowledge the high risk nature of “fast tracking” key components of the Modernization Program
- “Fast Track” failed because of moving too quickly, poor communication, inadequate tools and lack of collaboration
- PAS' failure to adequately validate the data captured through aerial photography was the primary root cause of the technical issues experienced for the 2017 tax year
- The lack of clear separation between the assessment function and tax policy jeopardizes the integrity of New Brunswick's residential property assessment system
- Creating another independent agency is not necessary to resolve property assessment issues AGNB identified

#### Governance

- Insufficient information was presented to the SNB Board to make informed decisions
- The Board did not appear to thoroughly challenge the Property Assessment branch's "Fast Track" proposal
- Distracted and overwhelmed senior management resulted in a lack of leadership
- PAS Executive Director's statutory obligation to ensure accurate property assessments was not acknowledged nor respected
- Modernization unit operated with little buy-in from the other PAS directors and regional staff

#### Fast Track

- Exchanges between the Premier's Chief of Staff and SNB's former CEO led to “Fast Track”
- Misleading communication within SNB created the perception the Premier requested “Fast Track”
- SNB's former CEO and Board of Directors decided to proceed with “Fast Track” based on poor information
- PAS did not perform a thorough risk assessment and proposed “Fast Track” while IT solution still in design phase

#### Methodology

- AGNB was unable to conclude the use of aerial photography improved the quality of property assessment data
- SNB placed an over-reliance on aerial photography as the sole method of capturing data
- PAS' appraisal models were incapable of predicting accurate and consistent values for the entire population of properties
- “Fast Track” appraisal models did not fall within the bounds of accepted practice

#### Project Management and Quality Assurance (QA)

- Standard project management processes were not followed
- Standard IT development processes were not followed
- During “Fast Track”, QA practices were largely abandoned
- Poor exception reporting process
- Causes of data errors from 2011 through 2017 not tracked to improve accuracy
- “Requests for Review” from property owners inappropriately relied on as a component of QA

Exhibit 2.2 Summary of Recommendations

Recommendation	Department's response	Target date for implementation
<b>Project Management and Systems Development Lifecycle</b>		
<b>2.42 We recommend Service New Brunswick (Property Assessment Services) follow standard Project Management processes to initiate, plan, execute, control and oversee the work of project teams to achieve specific goals and meet specific success criteria.</b>	<i>Management agrees with this recommendation. SNB has a Project Management process that Property Assessment Services will follow for future endeavours.</i>	<i>Immediate</i>
<b>2.43 We recommend Service New Brunswick (Property Assessment Services) require proponents of projects to develop a detailed business case for each project in order to demonstrate its expected value.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.44 We recommend Service New Brunswick (Property Assessment Services) consult with the Project Management Branch in managing major projects.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.45 We recommend Service New Brunswick (Property Assessment Services) conduct lessons-learned analysis subsequent to implementing new technology and incorporate lessons learned.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>

Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<b>Fast Track</b>		
<b>2.72 We recommend Service New Brunswick executive management ensure key risks associated with project proposals are clearly highlighted within the information presented to the Board for approval.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.73 We recommend the Service New Brunswick Board of Directors apply an appropriate level of scrutiny to high-risk project proposals as identified in the corporate risk register.</b>	<i>Management agrees with this recommendation and will bring a proposal to the Board of Directors for consideration.</i>	<i>3-6 months</i>
<b>Methodology</b>		
<b>2.79 We recommend Service New Brunswick (Property Assessment Services) prioritize its efforts to validate Gross Living Area data on the more complicated types of building.</b>	<i>Management agrees with this recommendation.</i>	<i>6-12 months</i>
<b>2.82 We recommend Service New Brunswick (Property Assessment Services) utilize aerial photography as a tool to improve, augment or verify data, not as the authoritative record.</b>	<i>Management agrees with this recommendation and will ensure Aerial Photography is used in accordance with industry standards.</i>	<i>6-12 months</i>

Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<b>2.86 We recommend Service New Brunswick (Property Assessment Services) adequately resource future mass appraisal model development and implementation.</b>	<i>Management agrees with this recommendation and will consult with other jurisdictions that have implemented mass appraisal modelling in order to adequately determine SNB's resource requirements.</i>	<i>As required</i>
<b>2.88 We recommend Service New Brunswick (Property Assessment Services) require peer review for quality assurance when developing new mass appraisal models.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.91 We recommend Service New Brunswick (Property Assessment Services) regularly review the extent to which each property data element has an impact on property value and the benefit of collecting, maintaining and using such data in all future mass appraisal model development.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.92 We recommend Service New Brunswick (Property Assessment Services) capture the quality and condition of properties and properly analyze their impact on property value.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>Errors</b>		
<b>2.95 We recommend Service New Brunswick (Property Assessment Services) develop and document a formal definition of an error in property assessment.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>



Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<b>2.109 We recommend Service New Brunswick (Property Assessment Services) identify, correct, track, and publicly report on errors.</b>	<i>Management agrees with this recommendation and will include information about errors within the PAS section of SNB's annual report.</i>	<i>12 months</i>
<b>2.110 We recommend Service New Brunswick (Property Assessment Services):</b> <ul style="list-style-type: none"> <li>• <b>conduct exploratory analysis on existing property data elements to determine completeness, accuracy and consistency; and</b></li> <li>• <b>formalize and implement a process to monitor the integrity of data.</b></li> </ul>	<i>Management agrees with these recommendations. Once established, the QA functional unit will develop a proposal to address these recommendations.</i>	<i>12-24 months</i>
<b>Quality Assurance</b>		
<b>2.120 We recommend Service New Brunswick (Property Assessment Services) establish a Quality Assurance functional unit. The unit should:</b> <ul style="list-style-type: none"> <li>• <b>report to the Executive Director to maintain independence, avoid any potential conflict of interest, and ensure key information is provided;</b></li> <li>• <b>monitor and report on the quality of project management; and</b></li> <li>• <b>undertake a province-wide program to improve property data quality, with consistent training, tools, and standards in all regions.</b></li> </ul>	<i>Management agrees with this recommendation.</i>  <i>Management agrees with this recommendation.</i>  <i>Management agrees with this recommendation.</i>	<i>6-12 months</i>  <i>6-12 months</i>  <i>12-24 months and then ongoing</i>

Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<p><b>2.132 We recommend Service New Brunswick (Property Assessment Services) enhance quality assurance by:</b></p> <ul style="list-style-type: none"> <li>• <b>developing parameters, policies and procedures for exception reports; and</b></li> <li>• <b>ensuring exception reports are properly followed up.</b></li> </ul>	<p><i>Management agrees with this recommendation.</i></p>	<p><i>2018 billing</i></p>
<p><b>2.133 We recommend Service New Brunswick (Property Assessment Services) discontinue the practice of relying on property owner Requests for Review as a means of quality assurance.</b></p>	<p><i>Management agrees that RfRs are not a means of quality assurance. RfRs are a key component of a mass appraisal system which provides taxpayers the opportunity to question PAS on the assessed value of their property.</i></p>	<p><i>2018 billing</i></p>
<b>Governance</b>		
<p><b>2.139 We recommend the Department of Finance propose to Cabinet that Finance assume responsibility for the administration of all:</b></p> <ul style="list-style-type: none"> <li>• <b>property tax policy changes; and</b></li> <li>• <b>property tax benefit and relief programs.</b></li> </ul>	<p><i>The Department of Finance recognizes that, in order to ensure a higher level of transparency, a separation between the responsibilities for the development and implementation of tax policy and the assessment function, including the first level of appeal, must exist.</i></p> <p><i>The Department of Finance supports assuming the legislative oversight and the appropriate implementation of property tax related policies.</i></p>	<p><i>2019 Taxation Year and beyond</i></p>

Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<p><b>2.145 We recommend Service New Brunswick (Property Assessment Services) issue annual property assessment notices separate from property tax bills that lists the real and true value of the property and explains clearly why the assessed value has changed from one year to the next.</b></p>	<p><i>Management will collaborate with the Department of Finance to determine the feasibility of this recommendation and to establish a strategy for separating annual assessment notices and property tax bills.</i></p>	<p><i>2019 billing</i></p>
<p><b>2.146 We recommend the Department of Finance issue property tax bills separate from the assessment notice and clearly demonstrate how property taxes are calculated, including all the applicable credits, deductions, and exemptions.</b></p>	<p><i>The Department of Finance fully supports the recommendation and will engage the organization responsible for property assessment to further analyze the “assessment-to-billing” process in order to implement this recommendation.</i></p>	<p><i>2019 Taxation Year</i></p>

Exhibit 2.2 Summary of Recommendations (continued)

Recommendation	Department's response	Target date for implementation
<b>2.150 We recommend Service New Brunswick (Property Assessment Services) appropriately engage staff throughout the organization in the development and implementation of major high risk change initiatives.</b>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>
<b>2.155 We recommend Service New Brunswick ensure the Executive Director of Assessment:</b> <ul style="list-style-type: none"> <li>• <b>has adequate time to fulfill his or her statutory obligation; and</b></li> <li>• <b>encourages group cohesion between the units within Property Assessment Services.</b></li> </ul>	<i>Management agrees with this recommendation.</i>	<i>Immediate</i>

Exhibit 2.2 Summary of Recommendations (continued)

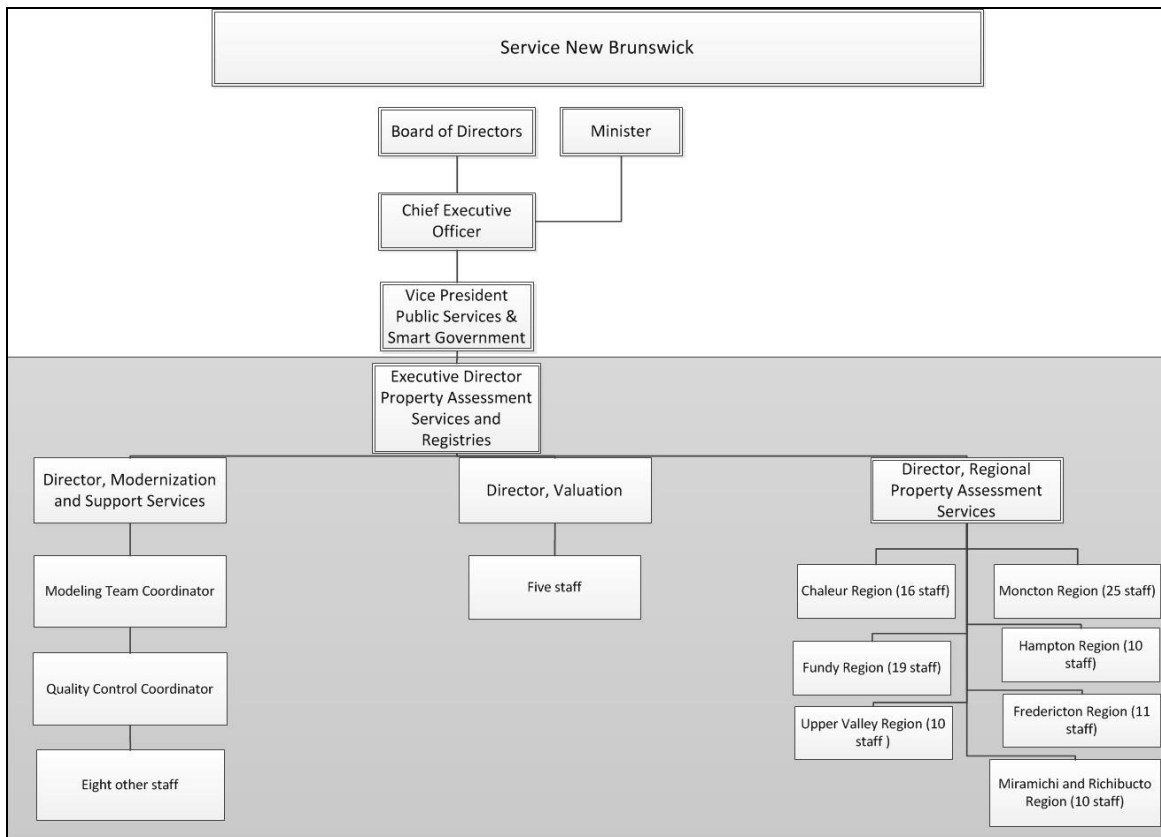
Recommendation	Department's response	Target date for implementation
<p><b>2.156 To ensure the necessary independence to fulfill the Executive Director's statutory obligations, we recommend:</b></p> <ul style="list-style-type: none"> <li>• <b>Service New Brunswick Board of Directors require the Executive Director of Property Assessment Services report directly and independently to the Board;</b></li> <li>• <b>Service New Brunswick Board of Directors have authority for hiring and termination of Executive Director upon recommendation from the CEO; and</b></li> <li>• <b>Performance appraisal and other administrative matters rest with SNB senior management as determined by the CEO.</b></li> </ul>	<p><i>Service New Brunswick will bring this recommendation to the Board of Directors for consideration. Service New Brunswick has a number of similar positions with statutory obligations that will be reviewed with respect to their reporting relationship. Similarly, personnel matters will be reviewed.</i></p>	<p><i>6-12 months</i></p>
<p><b>2.157 We recommend Executive Council Office provide Service New Brunswick's Executive Director of Property Assessment Services full discretion to communicate independently as needed with the public.</b></p>	<p><i>The Executive Council Office supports efforts to ensure that the Executive Director of Property Assessment Services will take decisions and act in the best interests of the public. To that end, the Executive Council Office will allow full discretion to the Executive Director to communicate independently to the public, as needed, in accordance with relevant legislation.</i></p>	<p><i>Immediately</i></p>

## Background

2.7 In New Brunswick, the total provincial assessment base in 2016 was \$62.5 Billion. Property assessment for tax purposes is subject to a high level of public scrutiny because a change in the assessed value of real property (land and buildings) affects the amount of property taxes billed.

2.8 Property assessments involve a level of uncertainty. They cannot be predicted with absolute accuracy. SNB’s Property Assessment Services (PAS) branch employs a team of trained property assessors who apply their professional judgement in determining the value of properties over time through the process of re-assessment. In 2016, SNB (PAS) had a budget of approximately \$18 million and was responsible for the assessment of 466,022 properties within 345 taxing authorities. The organization of SNB (PAS) management structure and regions, as of July 2017, is detailed in Exhibit 2.3.

Exhibit 2.3 Service New Brunswick Organization Chart



Source: Created by AGNB with information provided by SNB

Note: PAS Organization falls within the grey area above

**Legislative and operating framework**

**2.9** In the Report of the Auditor General of New Brunswick 2005 Volume I, AGNB observed that the cycle time for re-assessment was 18 – 21 years. With a longer re-assessment cycle, there is a risk that building characteristics will be out of date and that homes may be valued based on incorrect data. The method of re-assessment used involved assessors performing physical inspections to determine property characteristics. This approach makes it difficult to reduce those cycle times.

**2.10** The *Service New Brunswick Act* provides the legislative framework for SNB to accomplish its mandate. Through the *Assessment Act*, the *Real Property Tax Act* and regulations, the Province has a centralized assessment and collection system for real property taxation. SNB is responsible for annually assessing the value of all real property within the Province for tax purposes. Under this centralized system, the Department of Finance is responsible for billing and collecting real property taxes levied, including those levied by local government bodies. These assessment and billing services are provided to local government bodies who in turn use the applicable property tax funds to provide services to their residents. In unincorporated rural areas, called Local Service Districts (LSDs), the Department of Environment and Local Government acts in place of a municipal government to provide services to residents.

**2.11** On January 1, 2011, the *Assessment Act* was amended to cap the growth of property assessments by 3% for all primary residences in New Brunswick. The 3% cap was introduced for a period of two years. The 3% cap was applied to principal residences, except to the extent that the property contained new construction or major improvements.

**2.12** In September 2012, the Government of New Brunswick released *Improving New Brunswick's Property Tax Systems: A White Paper*<sup>1</sup>. This document contained three recommendations pertaining to the following areas of property assessments:

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<sup>1</sup> Improving New Brunswick's property tax system: A white paper, Department of Finance, Province of New Brunswick, September 2012

- the assessment gap;
- spike protection mechanism (SPM); and
- process improvements to deal with large assessment increases.

**2.13** In December 2012, an *Act Respecting Property Tax Reform* was passed. The 3% cap on assessments was removed and an Assessment Gap (permanent assessment exemption) was applied to those properties that benefitted from the 3% cap. In addition, a 10% SPM was implemented to protect homeowners against large increases in property assessments. New construction and major improvements made to a property were excluded from SPM.

**2.14** In March 2013, SNB developed a high-level Property Assessment Services Modernization Strategy Map (attached in Appendix III) in response to the government directive laid out in the *Act Respecting Property Tax Reform*. This strategy identified 10 projects to be completed over five years and identified future goals, such as:

- public participation;
- accurate assessments; and
- transparency.

The overall goal of the strategy map was for SNB to be a “Leader in Assessment where property values are well understood, equitable and predictable”.

**2.15** The current organizational structure was established in 2015 in response to the strategy map. The key issue was around accountability: “*New Brunswickers are frustrated by property taxes that seem to be out of control and the ways in which all levels of government squabble over who’s really responsible.*”<sup>2</sup>

**2.16** There were three key findings concerning the property assessment system as noted in the *White Paper*:

- “The property assessment system must continue to be

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<sup>2</sup> Improving New Brunswick’s property tax system: A white paper, Department of Finance, Province of New Brunswick, September 2012



based on market value as this provides the most fair and equitable distribution of the overall property tax burden through an objective measure.

- Large unexpected increases, or spikes, in property assessments that occur for a small percentage of properties each year needs to be addressed.
- New Brunswickers want more transparency and more accountability from all levels of government when it comes to their property taxes through a better understanding of how tax bills are calculated and what input various levels of government have on the tax rates.”<sup>3</sup>

**2.17** SNB established a Modernization Unit with the purpose of building capacity within PAS to improve the quality of data and assessed values. This would reduce spikes in property values and criticism from taxpayers around the increase in taxes as envisioned in the *White Paper*.

**“Fast Track”  
project introduced**

**2.18** In June 2016, SNB officially approved the “Fast Track” project to complete re-assessments of 94,000 residential properties, which represents 20% of all properties in New Brunswick. The ability to do this work was attributed to SNB adopting new technology for capturing residential building characteristics, along with a new methodology for predicting the value of property. The re-assessments performed under this initiative in 2016 are for the 2017 tax year. SNB’s original plan was to proceed with a pilot project in only one taxing authority. The decision to expedite delivery and expand to 13 of the 345 taxing authorities stemmed from circumstances discussed later in the “Fast Track” section of this chapter.

**2.19** During 2017, PAS received a particularly high level of media attention and public concern following the implementation of IT solutions and new processes for deriving tax values of residential properties.

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<sup>3</sup> Improving New Brunswick’s property tax system: A white paper, Department of Finance, Province of New Brunswick, September 2012

**Independent agency announced**

**2.20** In April 2017, the Premier announced government would introduce legislation in the Fall session of the legislature to create an agency independent of the provincial government that will oversee property assessment. In June 2017, the provincial government announced it would freeze property tax assessments in 2018. AGNB has included a brief timeline of events related to property assessment changes from 2011 to 2017 in Appendix IV.

**Scope and Approach of AGNB's Work**

**2.21** Our work consisted of examination of PAS':

- project management and systems development lifecycle framework;
- assessment methodologies and technologies used;
- quality assurance framework including analysis of errors; and
- governance, organizational structure, change management and communication.

**2.22** AGNB engaged experts to assist in assessing:

- whether SNB applied generally accepted industry standards in the process of developing the modernization technologies and methodology;
- whether the level of precision of the aerial photography and MRA tools is appropriate to determine the real and true values of New Brunswick residential properties;
- whether estimates and assumptions used were reasonable and supported;
- whether SNB followed standard system development lifecycle processes when developing and implementing the Modernization Program; and
- whether SNB followed standard project management processes when developing and implementing the Modernization Program.

**2.23** AGNB conducted extensive interviews which included:

- the Premier of New Brunswick and his Chief of Staff;
- the former CEO of SNB;
- the Chair of SNB’s Board of Directors;
- SNB’s current CEO and members of management of PAS; and
- PAS staff.

**2.24** In addition, AGNB reviewed preliminary findings included in the transitional notes and supporting documentation provided by the Honourable Joseph T. Roberston, Q.C.

**2.25** Certain statistical and financial information presented in this chapter was compiled from information provided by SNB. It has not been audited or otherwise verified. Readers are cautioned that this financial and statistical information may not be appropriate for their purposes.

## Key Findings and Observations

**2.26** Exhibit 2.4 highlights key findings and observations from AGNB’s work. AGNB discusses these findings and observations in detail in the following sections of this chapter.

*Exhibit 2.4 - Summary of Key Findings and Observations*

Summary of Key Findings and Observations	
Paragraph	Key Findings and Observations
<b>Project Management and Systems Development Lifecycle</b>	
2.31	PAS did not follow standard project management processes
2.33	No organized approach to risk management, scope management, communications and stakeholder management
2.34	IT development processes were informal
2.35	Prototypes used with no rigorous testing
2.37	Electronic Data Capture tablets abandoned without lessons learned analysis
2.38	Desktop Review project launched without appropriate functionality
2.39	GIS mapping and reporting system not used but demonstrated effective use of project management
2.41	Use of untested and not validated components during “Fast Track”

Exhibit 2.4 - Summary of Key Findings and Observations (continued)

<b>Fast Track</b>	
2.48	Conflicting accounts of who initiated “Fast Track”
2.50	AGNB could not determine the Premier requested “Fast Track”
2.51	SNB internal communications implied the Premier requested “Fast Track” based on perception, not direct conversation
2.53	“Fast Track” compressed implementation period from three years to one
2.54	PAS compressed the implementation timeline while IT solution still in design phase
2.56	Key details missing from “business case”
2.58	PAS did not perform a formal risk assessment of “Fast Track”
2.59	PAS compressed the implementation timeline with insufficiently tested preliminary valuation models
2.60	Several key risks not highlighted to former CEO or SNB Board
2.61	Communications on the “Fast Track” approvals were vague
2.63	Premier’s Chief of Staff voiced support but wanted further discussions
2.64	SNB proceeded with “Fast Track” project before Board approved
2.67	Timing of delivery of certain components of “Fast Track” not highlighted to Board
2.68	“Fast Track” decision making lacked supporting analysis and communication of risks
2.70	The Board did not sufficiently challenge the “Fast Track” proposal
<b>Methodology</b>	
2.75	The use of aerial photography is generally accepted industry practice
2.76	AGNB was unable to conclude that the quality of property data including GLAs improved by using aerial photography
2.78	PAS did not analyze existing data to identify categories of residential properties which contained the greatest data inconsistency
2.81	SNB placed an over-reliance on aerial photography as the sole method to capture GLA, which is not in line with industry practice
2.83	The use of MRA is generally accepted industry practice
2.84	PAS’ MRA models were incapable of predicting accurate and consistent values for the entire population
2.84	MRA “Fast Track” implementation does not fall within the bounds of accepted practice
2.85	Modelling unit had insufficient time, resources and mentoring
2.87	Lack of proper quality assurance (peer review)
2.89	Missing data elements to determine property values
<b>Errors</b>	
2.94	What constitutes an error is not defined under the <i>Assessment Act</i> or under PAS’ policies and procedures
2.99	No formal system in place to track data errors over time and report on performance
2.103	There was a major flaw in applying the formula - the data to which the formula was applied should have been verified
2.104	74% or 1,479 of the 1,999 properties AGNB reviewed should not have been categorized as new construction or major improvement
2.105	No policies and procedures in place to correct errors

## Exhibit 2.4 - Summary of Key Findings and Observations (continued)

2.106	Overall error detection is reactive and has less chance of being effective
2.107	PAS' claims of a substantially lower rate of errors in 2017 are unsupported
2.108	PAS' failure to adequately validate the data captured through aerial photography was the primary root cause of the technical issues experienced for the 2017 tax year
2.108	Undetected errors in PAS' database exist
<b>Quality Assurance</b>	
2.113	During "Fast Track", essential QA practices were eliminated
2.114	Oversight for QA processes is not independent
2.118	Data review eventually abandoned and incomplete
2.119	Alarming concerns about data quality ignored
2.122	No documented policies and procedures in place for exception reporting
2.125	Lack of documented policies and procedures, as well as deficiencies in communication contributed to significant failures in the exception reporting process
2.126	Credibility of exception reports is questionable
2.127	PAS inappropriately relied on property owner Requests for Review (RfR) submissions as a component of quality assurance
<b>Governance</b>	
2.135	SNB's Board of Directors appears to have a sound structure
2.136	The <i>Assessment Act</i> provides authority for property assessment to Executive Director of Assessment
2.141	Reasons for property tax increases are not clear on the assessment and tax notice
2.142	Other jurisdictions show clearly the reasons for tax changes on tax notices
2.144	Transparency would be improved by having property assessment notice separate from the tax bill
2.147	Assessment staff lost confidence in the integrity of property data collected with new methodology
2.148	Executive Director slow to address personnel conflicts
2.149	The circumstances around "Fast Track" resulted in a toxic work environment within PAS
2.152	The overwhelmed and distracted executive management resulted in a lack of leadership
2.153	The statutory duties of the Executive Director of Assessment were not fully acknowledged nor respected
2.160	No business case to support the government's intention to create an "independent agency"
2.164	Creating another independent agency is not necessary to resolve property assessment issues AGNB identified - these issues can be resolved within SNB

Source: AGNB

## **Project Management**

- 2.27** According to the Project Management Institute (PMI), the project management process involves initiating, planning, executing, controlling and closing the work of a team to achieve specific goals and meet specific success criteria. Although SNB identified modernization as a strategy, AGNB believes it meets the definition of a program as defined by PMI. AGNB examined the extent to which PAS followed standard project management and system development lifecycle processes to guide the implementation of the projects comprising the Modernization Program (a brief description of the Modernization Program can be found in Appendix V).
- 2.28** AGNB examined the processes followed by PAS using the PMI's Project Management Body of Knowledge (PMBOK) Guide (Fifth Edition) and the Software Extension to the PMBOK Guide (Fifth Edition). The PMBOK Guide is a widely accepted standard, which sets out processes and activities that should be part of most project management methodologies. When consistently applied, they help organizations achieve the intended project objectives.
- 2.29** AGNB measured how PAS managed the Modernization Program overall and its key projects against several critical project management components as defined in PMBOK. The details of these components can be found in Appendix VI. Exhibit 2.5 highlights the results of AGNB's examination, which shows that standard project management processes were not followed for all projects within the Modernization Program.

Exhibit 2.5 Project Management Components Examination – SNB Modernization Program and Key Projects

Project Management Components Examination – SNB Modernization Program and Key Projects						
Project Management Component (PMBOK)	Modernization Program Overall	Electronic Data Capture (EDC)*	Desktop Review	Fast Track		Geographic Information System (GIS)
				Multiple Regression Analysis (MRA)	Mass Appraisal Model (MAM)	
Integration	x	x	x	x	x	√
Scope	x	x	x	x	x	√
Time	x	x	x	x	x	√
Costs	x	x	x	x	x	√
Quality	x	x	x	x	x	√
Human Resources	x	x	x	x	x	√
Communications	x	x	x	x	x	√
Risks	x	x	x	x	x	√
Stakeholders	x	x	x	x	x	√

*Source: Created by AGNB. X: not performed in accordance with PMBOK standards, √: performed in accordance with PMBOK standards*

*\*Development of the interface between EDC and PAS' database involved SNB's project management branch and project management processes were followed*

**2.30** AGNB expected SNB would have assessed project feasibility because this is an important step before proceeding with any major projects, especially the implementation of new technology. Management made a commitment to the SNB Board of Directors in the early stages that each Modernization Program project would have a business case to demonstrate expected value and support the related investments. AGNB did not find evidence of comprehensive business cases for the Modernization Program projects. Further, while the Board received assurances from senior management that it would receive regular financial updates for the Modernization Program, AGNB did not see evidence senior management provided these updates to the Board.

***PAS did not follow standard project management processes***

**2.31** During AGNB’s work, AGNB noted PAS had attempted certain elements of Project Management; however, AGNB found that PAS did not follow standard Project Management and System Development Lifecycle (SDLC) processes in an organized and comprehensive way.

**2.32** AGNB found the following deficiencies:

- no evidence that a project charter for the Modernization Program overall existed;
- no project manager was assigned to the Modernization Program; and
- no steering committee was established for program support.

A project steering committee would have:

- reviewed work performance reports and information on project costs;
- managed scope by considering and approving changes to project management plans; and
- reviewed progress at key milestones and prioritized resources among the different projects within the Modernization Program.

***No organized approach to risk management, scope management, communications and stakeholder management***

**2.33** AGNB did not find evidence of any organized approach to risk management, scope management, communications and stakeholder management. Active management of a program would include tracking and summarizing the progress of individual components against the program’s overall plan. There was no evidence this occurred for the Modernization Program.



***IT development processes were informal***

**2.34** In multiple projects, PAS undertook system development without involving SNB’s IT branch or Project Management branch, in order to minimize costs and meet timeline requirements. AGNB believes the costs were minimized at the expense of functionality and quality. AGNB found no evidence of a formal approach to SDLC. PAS indicated much of the work was done informally and verbally rather than documented.

***Prototypes used with no rigorous testing***

**2.35** AGNB noted a recurring theme throughout the Modernization Program. PAS developed prototypes as “proof of concept” tools for the purpose of performing pilot programs. This is an acceptable practice as part of feasibility study; however, PAS failed to address the recommendations or consider the “lessons learned” from the results of the pilot programs. Subsequently, PAS launched the use of the prototypes in its live environment without rigorous testing. This produced poor results. Rather than conducting analysis on implementation failures, PAS continued with the Modernization Program, incorporating a stream of successive fixes that were only forward looking and failed to correct existing issues. Confidence of the regional assessment staff appears to have been severely compromised because of this approach.

**2.36** A pilot project was undertaken to assess the feasibility of the Electronic Data Capture (EDC) system. The pilot report listed “issues” in the system functionality and described the need for immediate enhancements, continuous improvements and future developments. PAS deployed the EDC tablets to the property assessors in May 2014 and evidence indicates they had difficulties using the hardware component (tablets) in the field. They attributed this to premature implementation of a tool that PAS had built only for piloting and evaluation.

***Electronic Data Capture tablets abandoned without lessons learned analysis***

**2.37** AGNB noted PAS subsequently abandoned the use of the tablets, although the software developed remained in use. AGNB did not find evidence PAS studied the reasons for the failure to identify lessons learned and how it should have changed its processes. AGNB is concerned PAS abandoned the tablets after acquiring them and much effort to build EDC, without fully exploring the issues that accompanied the implementation of the technology. According to AGNB’s experts, hand-held technology has proven to be a cost-effective tool to improve data capture productivity and quality.

***Desktop Review project launched without appropriate functionality***

**2.38** In January 2015, the Desktop Review project pilot report concluded that the conditions required for realizing aerial photography’s full potential were not yet present within PAS. Aerial photography provided high-resolution aerial images to capture physical characteristics of properties. “A *GIS system is required to leverage [aerial photography] to its full potential.*” AGNB noted that Desktop Review was launched as part of “Fast Track” without the functionality required within the GIS system.

***GIS mapping and reporting system not used but demonstrated effective use of project management***

**2.39** The GIS mapping and reporting system, as it existed during the period of AGNB’s work, was the platform for the Modernization Program components and was intended to be further developed prior to the use of aerial photography or MRA. However, this was not being used by PAS during the period of AGNB’s work. The system requires further development in order to perform the functions of Desktop Review and Mass Appraisal Modeling.

**2.40** Unlike the other projects previously discussed, SNB’s Project Management branch was involved in the GIS project. The GIS project demonstrated effective use of standard project management.

***Use of untested and not validated components during “Fast Track”***

**2.41** The evidence was clear that introducing “Fast Track” was extremely rushed, with the use of untested and not validated components. During implementation, evidence shows, as problems arose in the field, attempts were made to fix problems and the revised components were then released into use. That is, the systems were modified while they were in use, as opposed to the changes being tested in a controlled test environment. Modernization staff acknowledged there had not been time to carry out the necessary quality assurance.

***Recommendations***

**2.42** **We recommend Service New Brunswick (Property Assessment Services) follow standard Project Management processes to initiate, plan, execute, control and oversee the work of project teams to achieve specific goals and meet specific success criteria.**

**2.43 We recommend Service New Brunswick (Property Assessment Services) require proponents of projects to develop a detailed business case for each project in order to demonstrate its expected value.**

**2.44 We recommend Service New Brunswick (Property Assessment Services) consult with the Project Management Branch in managing major projects.**

**2.45 We recommend Service New Brunswick (Property Assessment Services) conduct lessons-learned analysis subsequent to implementing new technology and incorporate lessons learned.**

## **Fast Track**

**2.46** “Fast Track” was an initiative to accelerate certain elements of the Modernization Program. PAS proposed to launch the Mass Appraisal Modelling (MAM), Desktop Review and Digital Repository projects; however, the implementation was limited to certain prototypes. AGNB believes “Fast Track” was the central issue, which contributed to the public criticism of the 2017 property tax bills. AGNB began the work by looking into how “Fast Track” was initiated.

## **Events resulting from the aerial photography demonstration to the Premier**

**2.47** On May 6, 2016, SNB held a Digital Lab open house to showcase emerging technologies. As part of the open house, PAS Director of Modernization demonstrated the newly acquired aerial photography and related software (aerial photography). The Premier of New Brunswick (the Premier) attended along with members of SNB’s management executive. Later that day, after the open house:

- The Director of Modernization perceived the Premier was impressed with the new technology.
- The Premier’s Chief of Staff called SNB’s former CEO with follow up questions on aerial photography. Both the Premier and his Chief of Staff indicated to AGNB that they were following up due to communication concerns with the impact of implementing this new technology.
- The former CEO of SNB requested the former VP Public Services & Smart Government to prepare a business case for accelerating the implementation of aerial photography software and related processes.
- The former VP called the Executive Director to delegate the preparation of the business case.

***Conflicting accounts  
of who initiated  
“Fast Track”***

**2.48** It is clear the demonstration to the Premier and subsequent exchanges between the Premier’s Chief of Staff and SNB’s former CEO started the chain of events that led to “Fast Track”. Critical conversations occurred via phone calls. During interviews, AGNB received conflicting accounts of the content of those phone calls. Therefore, AGNB reviewed additional evidence to attempt to determine the extent of the Premier’s Office involvement.

**2.49** The evidence AGNB gathered included emails, testimony and relevant documentation. Upon review, AGNB found:

- There was no apparent urgency in the email correspondence from the Premier’s Chief of Staff to the former SNB CEO regarding accelerating the implementation of aerial photography.
- In an interview, the former CEO of SNB stated that he did not speak directly with the Premier regarding accelerating the implementation of aerial photography.
- In an interview, the Premier’s Chief of Staff indicated the follow up questions regarding aerial photography were prompted by concern about the public reaction to the new technology and the tone was cautionary rather than urgent.
- In an interview, the Premier stated he did not request that SNB accelerate the implementation of aerial photography. Further, he indicated he was not aware of “Fast Track” until March 2017.
- AGNB reviewed a communication, dated August 2016, from the ECO to SNB. The document highlighted and ranked priority initiatives of government. The Modernization Program was not given a high priority and “Fast Track” was not included on the list.
- In interviews with SNB's current CEO and members of Property Assessment Services management, all indicated they did not have direct conversations with the Premier or his Chief of Staff regarding accelerating the implementation of aerial photography.
- The Director of Modernization, who demonstrated aerial photography to the Premier, indicated that accelerating the implementation of aerial photography was not mentioned during the demonstration and no other emerging technologies were demonstrated.

**AGNB could not determine the Premier requested “Fast Track”**

**2.50** Upon review of the evidence gathered, AGNB could not determine the Premier requested “Fast Track”, although it was clear the demonstration and subsequent follow up by the Premier’s Office contributed to SNB’s perceived sense of urgency in implementing aerial photography.

**SNB internal communications implied the Premier requested “Fast Track” based on perception, not direct conversation**

**2.51** SNB internal communications sent to PAS staff indicated the Premier requested “Fast Track”. Exhibit 2.6 contains examples of internal communication used to inform and motivate PAS staff. The one on the left depicts a fictional conversation where the Premier demands a short timeframe to implement the Modernization Program. The one on the right paraphrases a directive from the Premier. AGNB confirmed, through interviews, both of these communications are not direct quotes and incorrectly imply the Premier requested “Fast Track”.

*Exhibit 2.6 Examples of SNB Communications to Staff June 2016*

Examples of SNB Communications to Staff June 2016	
Slide from PAS Training material	Excerpt from SNB PAS newsletter
<p><u>BCD</u> Presentation to the Premier:                      Question: how long until to complete?                      Answer: 3 years                      Demand: I want to see it in half that time.                      Response: <i>FAST</i>track</p>	<p><b>Premier Brian Gallant was recently exposed to Desktop Review; he immediately requested our CEO, [REDACTED], to accelerate PAS’ modernization efforts. A budget of \$922,000 was approved on June 22nd.</b></p>

Source: left side – excerpt from assessor training material provided by SNB

Source: right side – excerpt from SNB PAS internal newsletter provided by SNB

Note: “BCD” refers to Building Characteristics Diagram, which is the technical term for an aerial photography sketch

**2.52** PAS management involved in producing these communication documents admitted that these quotes attributed to the Premier were not based on direct conversations with him. PAS management indicated they believed the Premier had directed SNB to “Fast Track” the Modernization Program. This perception was based on communication among SNB’s former CEO, former VP and the Executive Director of PAS during that time. This perception created intense pressure to complete the implementation of new technologies as quickly as possible. As such, AGNB examined the series of events that lead to the decision to “Fast Track”. AGNB has included a brief timeline of events related to “Fast Track” in Appendix IV.

***“Fast Track”  
compressed  
implementation  
period from three  
years to one***

**2.53** On May 9, 2016, an initial brainstorming meeting between the modernization team, the Executive Director and the Director of Valuation was held to determine how the Modernization Program could be accelerated from a three-year implementation timeframe down to one year.

***PAS compressed the  
implementation  
timeline while IT  
solution still in  
design phase***

**2.54** On May 10, 2016, the Director of Modernization circulated an e-mail indicating the Executive Director of Assessment Services was proposing to compress the implementation timeline for aerial photography and Multiple Regression Analysis (MRA). It was noted that aerial photography would have mainly HR implications and no project or IT implication. Staff e-mails obtained by AGNB indicate some IT solutions, which were required for the use of aerial photography, were still in the design phase at this time.

**2.55** On May 25, 2016, the first version of the “Fast Track” proposal was provided via email to the former CEO. He stated it as being very technical and requested a financial page with costs, time to implement, increased revenue and the timing of revenues. A revised proposal, titled as a “business case” was prepared and submitted.

***Key details missing  
from “business  
case”***

**2.56** The first version of the “Fast Track” proposal highlighted MRA requirements including: develop MRA models and develop interface to review property values. It was noted that, in order to implement MRA, PAS would need to:

- conclude the pilot program;
- complete phase 1 research and development and IT set up; and
- complete the phase 2 solution development and implementation.

In the subsequent “business case”, these details were omitted.

**2.57** In the “Fast Track” “business case”, the increased revenue was largely based on the assumption that implementing MRA would increase the assessment base by 2%. SNB could not provide supporting analysis or documentation to justify this assumption.

***PAS did not perform  
a formal risk  
assessment of “Fast  
Track”***

**2.58** AGNB requested the formal risk analysis performed in consideration of the “Fast Track” “business case”. PAS confirmed that no formal risk assessment was performed due to time constraints. Two project risks noted in the “business



case” summary were as follows:

- resource requirements may impact assessment and IT operational capacity; and
- a contingency plan for sustaining obsolete assessment models is required.

No context was provided for the two risks identified and they were not assessed for likelihood or severity.

***PAS compressed the implementation timeline with insufficiently tested preliminary valuation models***

**2.59** In an email from the Director of Modernization, who was responsible for creating the “Fast Track” “business case” to the former VP, Executive Director and Director of Valuation, the following risks were identified:

- “MRA is a fundamental change in the way we will value properties in NB”;
- “MRA Models are fast tracked by a full year using PAS working prototypes”; and
- “The mass appraisals project will not be able to deliver GIS integration tools”

***Several key risks not highlighted to former CEO or SNB Board***

**2.60** These risks were not in the “business case” presented to the former CEO or the Board of Directors. While justification for capital funding for the “GIS integration tools” was included in the business case, PAS management knew this tool could not be developed in time for “Fast Track”. Instead, PAS intended to implement MRA modelling using the pilot program’s prototype software.

***Communications on the “Fast Track” approvals were vague***

**2.61** AGNB noted email exchanges regarding the “Fast Track” approvals were vague. On May 25, 2016, the Premier’s Chief of Staff followed up with the former SNB CEO on the “Fast Track” proposal: “*Any word [on the Fast Track]?*” The former CEO responded: “*Not yet - will rattle his [the former VP’s] chain*”.

**2.62** Then the former CEO sent an email to the former VP: “*(Chief of Staff)... after me - so need for tomorrow at latest.*” The exchange provided very little context or detail regarding the level of urgency coming from the Premier’s Office. It is reasonable that the former VP may have interpreted the communication from the former CEO as pressure from the Premier’s Office; however, AGNB did not see a strong indication of a high level of urgency in the communications between the Premier’s Chief of Staff and the former CEO.

***Premier’s Chief of Staff voiced support but wanted further discussions***

**2.63** On May 27, 2016, SNB’s former CEO sent a “business case” to the Premier’s Chief of Staff via e-mail indicating it looked like a great opportunity although he indicated he had not spoken to staff on the content of the email yet. The Chief of Staff responded, “*Let’s do it. We should have a chat offline about some of the implementation challenges/ concerns though.*” Although the Premier’s Chief of Staff appears to have endorsed the idea to “Fast Track”, it is clear there were some concerns regarding implementation challenges. They arranged a lunch meeting for May 30, 2016.

***SNB proceeded with “Fast Track” project before Board approved***

**2.64** E-mails subsequent to the lunch meeting indicated they forgot to talk about the “Fast Track” project. In an email, SNB’s former CEO indicated the briefing meeting with PAS to discuss the “business case” would be on June 3, 2016, but he already told them to “go”. AGNB found that SNB proceeded with “Fast Track” before Board approval was obtained. For example, PAS already hired temporary employees on May 30, 2016 to accommodate the additional volume of work.

**2.65** On June 14, 2016, the Executive Director of Property Assessment, supported by the Modernization Director, presented the “Fast Track” project to the SNB Board’s Audit and Finance Committee. The committee resolved unanimously to recommend approval to the Board of Directors.

**2.66** On June 22, 2016, the former VP and Executive Director of Property Assessment presented the “Fast Track” project to the SNB Board of Directors. The Board resolved unanimously to approve the “Fast Track” project and associated acquisition costs.

***Timing of delivery of certain components of “Fast Track” not highlighted to Board***

**2.67** The presentation included the acquisition of a Mass Appraisal Assessment Modeling solution, which was part of the “GIS integration tools” noted previously. The Board approved the purchase; however, PAS knew it would not be delivering this solution within the “Fast Track” timeframe. The timing of this acquisition was not highlighted to the Board. PAS proceeded with implementing an MS Excel and MS Access based prototypes in the meantime.



***“Fast Track”  
decision making  
lacked supporting  
analysis and  
communication of  
risks***

**2.68** AGNB believes key decisions should be supported by comprehensive analysis, taking into consideration all the known risks of each alternative. A comprehensive business case in support of the presentation provided to SNB executive and Board should have included all of the necessary information for them to make informed, prudent decisions.

**2.69** As previously noted in paragraph 2.60, the presentation made to SNB’s Board of Directors did not highlight key risks regarding the status of development of IT solutions and the intention to proceed with the use of prototype technology. In the absence of a formal analysis, several risk areas were not highlighted in the presentations made to executive management and the Board, including the degree of completion of IT solutions and the planned use of prototype technology in a production environment.

***The Board did not  
sufficiently  
challenge the “Fast  
Track” proposal***

**2.70** AGNB found insufficient information was provided in the presentation for the Board to make an informed decision. There was also no evidence of the extent to which the Board challenged the information provided. AGNB believes, a thorough challenge and probing questions on the part of Board members should have uncovered:

- the lack of rigor in risk analysis behind the information presented; and
- the absence of a comprehensive business case supporting the presentation.

**2.71** Further, AGNB examined the corporate risk register presented to the Board prior to the “Fast Track” proposal. The risk register clearly identifies technology changes as a high-risk area. Given the complexity of the changes being proposed, it is unlikely that the board allowed enough time to thoroughly challenge PAS’ proposal.

***Recommendations***

**2.72** **We recommend Service New Brunswick executive management ensure key risks associated with project proposals are clearly highlighted within the information presented to the Board for approval.**

**2.73** **We recommend the Service New Brunswick Board of Directors apply an appropriate level of scrutiny to high-risk project proposals as identified in the corporate risk register.**

**Methodology**

**2.74** Assessed value of each property in New Brunswick is updated annually. This annual requirement, imposed under the *Assessment Act*, is viewed as best practice because some other jurisdictions only update their property assessments on a multi-year cycle. This one-year cycle, however, places an obligation on PAS to seek out methodologies that will achieve accuracy and reliability in a cost effective manner. To achieve this, PAS implemented certain new methodologies: specifically, aerial photography and Multiple Regression Analysis (MRA). These new methodologies were part of the Modernization Program. The overall vision was well intended and long overdue. During 2016, the implementation of these methodologies was limited to approximately 72,000 residential properties within 12 tax authorities, commonly referred to as “Fast Track” areas.

***The use of aerial photography is generally accepted industry practice***

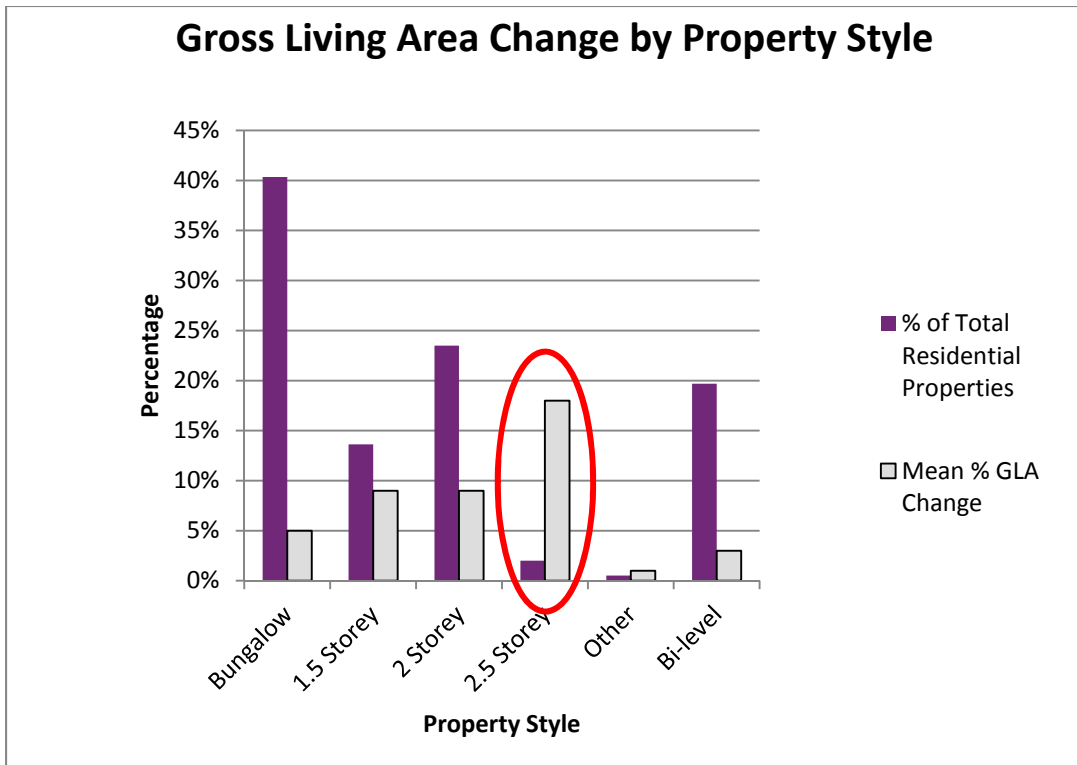
**2.75** The International Association of Assessing Officers (IAAO) publishes the widely recognized industry standards in property assessment. According to AGNB’s experts and the IAAO, aerial photography and related software can and should be incorporated into assessment data capture and validation processes. It is generally accepted industry practice and in compliance with industry standard. This is supported by the effective use of digital imagery by leading assessment jurisdictions. AGNB has included a brief description of aerial photography technology in Appendix VII.

Exhibit 2.7 Snapshot of property sketches through aerial photography



Source: Provided by SNB

Exhibit 2.8 Gross Living Area Change by Property Style



Source: Created by AGNB with information provided by SNB, unaudited

*AGNB was unable to conclude that the quality of property data including GLAs improved by using aerial photography*

**2.76** Following AGNB’s extensive analysis of the data, AGNB was unable to conclude that the quality of property data including Gross Living Area (GLA) improved overall by using aerial photography. Further, evidence shows too much effort was spent on bungalows. Bungalows typically do not have complex rooflines and, as shown in Exhibit 2.8 these properties had the lowest GLA changes (5% increase on average) from data prior to implementing aerial photography. This would indicate the existing GLA data for bungalows were generally accurate and did not require re-measurement through aerial photography.

**2.77** Unlike bungalows, for complicated building styles with more than one storey, or bi-levels, the GLA changes are significant. For example, GLA increased for 2.5 storey properties by 18% on average. Given this, PAS should have prioritized validating these properties; however, AGNB found changes to the 2.5 storey homes were not validated sufficiently. Of the 1,501 houses of this type that were sketched, only six were validated. PAS efforts to improve GLA data should have focused on the more complicated building styles where inconsistency existed.

*PAS did not analyze existing data to identify categories of residential properties which contained the greatest data inconsistency*

**2.78** Unfortunately, AGNB found PAS did not analyze existing data to identify categories of residential properties which contained the greatest data inconsistency prior to implementing aerial photography. This would have allowed PAS to prioritize its efforts. AGNB believes the bungalows, which represent approximately 40% of the population, should not have been included in the initial implementation of aerial photography, especially given the tight timeline of “Fast Track”.

**Recommendation**

**2.79 We recommend Service New Brunswick (Property Assessment Services) prioritize its efforts to validate Gross Living Area data on the more complicated types of building.**

**2.80** In general, measurements from aerial photography and other digital imagery products can be used to validate existing data, identify new additions and construction, and measure outbuildings and certain additions (for example decks and sheds). However, the IAAO is very careful in endorsing aerial photography as a solution for validating area and other details concerning a property. When an assessor is of the opinion that the image does not accurately

reflect the GLA of a property, then the existing GLA should not be altered without proper follow up as determined by the assessor.

*SNB placed an over-reliance on aerial photography as the sole method to capture GLA, which is not in line with industry practice*

**2.81** In contrast, PAS used aerial photography solely to sketch properties, over-wrote existing data and did not allow sufficient time for validation. Although AGNB found the aerial photography tools used by SNB fell within generally accepted industry application of such technology, SNB placed an over-reliance on this technology as the sole method to capture GLA.

*Recommendation*

**2.82** We recommend Service New Brunswick (Property Assessment Services) utilize aerial photography as a tool to improve, augment or verify data, not as the authoritative record.

*The use of MRA is generally accepted industry practice*

**2.83** IAAO guidance confirms the use of MRA as generally accepted industry practice. For those involved in mass appraisal, MRA is an invaluable statistical tool that produces high quality assessment values at a relatively low cost. Failure to adopt MRA to assist in the mass appraisal of properties would be regarded by AGNB’s experts as a fundamental flaw in the approach of any assessment agency charged with assessing at market value. From AGNB’s research, AGNB found two of the largest valuation agencies in Canada, Municipal Property Assessment Corporation in Ontario and BC Assessment in British Columbia both use sophisticated mass appraisal to provide the majority of their valuations for property tax purposes. A general overview of the assessment process, including a description of what comprises property data can be found in Appendix VIII.

*PAS’ MRA models were incapable of predicting accurate and consistent values for the entire population*

**2.84** The MRA models use sales samples to help determine individual property values. For this to be accurate, the sales samples must be representative of their respective population. While some filtering is appropriate for non-arms-length sales, multiple sales within the sale period and new construction, AGNB found PAS inappropriately filtered certain property types prior to calculating its models. A sales sample that is over filtered may only be representative of itself. In the business of mass appraisal, this is referred to as “sales chasing” and is discouraged by the IAAO and other oversight bodies. In AGNB’s view, the sales samples used by PAS became highly uniform through this sales selection process, lacking the variation of the population needed to properly value residential properties. Since PAS’ MRA

*MRA “Fast Track” implementation does not fall within the bounds of accepted practice*

models were developed using sales data that no longer represented the population, they were incapable of predicting accurate and consistent values for the entire population. For these reasons, AGNB concluded that the MRA “Fast Track” implementation does not fall within the bounds of accepted practice.

*Modelling unit had insufficient time, resources and mentoring*

**2.85** The understaffing of the Modelling unit poses one of most significant risks to PAS that the valuation models produce inaccurate results. There was only one dedicated modeller. No launch should have been contemplated without adequate resourcing of this strategic unit. There was insufficient time, resources and mentoring for this implementation.

*Recommendation*

**2.86 We recommend Service New Brunswick (Property Assessment Services) adequately resource future mass appraisal model development and implementation.**

*Lack of proper quality assurance (peer review)*

**2.87** Further, PAS should have considered peer review as an approach to provide quality assurance on the models. In a peer review, others who work in the same field objectively review models. The reviewer should be independent of PAS to be able to provide an unbiased opinion of whether the models meet industry standards and produce accurate results. For a first time modelling effort, there should have been at least one peer review of the work. This was not conducted and may have identified the problems associated with the MRA implementation.

*Recommendation*

**2.88 We recommend Service New Brunswick (Property Assessment Services) require a peer review for quality assurance when developing new mass appraisal models.**

*Missing data elements to determine property values*

**2.89** In addition, AGNB found that PAS spends a great deal of time and effort in identifying the style of home but there are no data elements, which independently describe the quality of the home. According to PAS, quality is captured within the variable “replacement cost new”. PAS recognizes this is not an ideal application of quality. Quality has a significant effect on property value and is best measured by pointing to the major components of the structure based on type and quality of materials and workmanship.

**2.90** Size, frontage, depth, shape, and utility of building lots exist as a single variable in the PAS model but the impact of these attributes cannot be assessed individually. New or refined data elements regarding property characteristics



should be considered when market models are not achieving IAAO standards.

### ***Recommendations***

**2.91 We recommend Service New Brunswick (Property Assessment Services) regularly review the extent to which each property data element has an impact on property value and the benefit of collecting, maintaining and using such data in all future mass appraisal model development.**

**2.92 We recommend Service New Brunswick (Property Assessment Services) capture the quality and condition of properties and properly analyze their impact on property value.**

### **Errors**

**2.93** As previously discussed, PAS’ “Fast Track” implementation of both aerial photography and MRA did not meet industry standards. Errors relating to implementing these new technologies caused the public outcry in 2017. AGNB conducted further analysis to determine PAS’ policies and procedures to identify and correct property assessment errors. AGNB expected PAS would have:

- a definition of what constitutes an error;
- quality control procedures to identify and correct errors;
- policies to address errors on a timely basis; and
- a standardized approach to monitor, analyze and report on errors.

### ***What constitutes an error is not defined under the Assessment Act or under PAS’ policies and procedures***

**2.94** What constitutes an error is not defined under the *Assessment Act* or under PAS’ policies and procedures. Section 22 of the *Assessment Act* does provide direction on how to address errors and omissions. The *Act* requires SNB to correct errors in property assessment values and provide amended assessment and tax notice information to tax payers. The risk of not defining an error is PAS may not be able to detect errors consistently across all regions. Further, measurement of PAS’ performance in billing accuracy would be difficult.

### ***Recommendation***

**2.95 We recommend Service New Brunswick (Property Assessment Services) develop and document a formal definition of an error in property assessment.**

**Errors in fact**

**2.96** While SNB does not have a formal definition of an error, it communicated to AGNB in response to our examination that, in its view, there are two main categories of error: errors in fact and administrative errors. Errors in fact arise when incorrect information is used to establish a value, meaning the information on assessment property records does not accurately reflect the actual property characteristics. Using non-factual data leads to establishing an assessed value that is not reflective of real and true value.

**2.97** For example, any error in the physical characteristics of a home, such as miscalculated living area, is an error in fact. An error in fact would typically be rectified by issuing a new Assessment & Tax Notice.

**Administrative errors**

**2.98** Administrative errors are unrelated to the valuation of a property but produce incorrect tax amounts. Administrative errors may include an incorrect:

- application of the Residential Tax Credit;
- tax classification;
- tax rate stemming from property classification (residential, non-residential, timberland); and
- sub-unit or tax authority.

***No formal system in place to track data errors over time and report on performance***

**2.99** PAS provided AGNB with explanations for the causes of known errors from 2011 to 2017; however, the explanations were incomplete. For example, AGNB noted 2012 had the greatest number of known errors at 9,472. PAS was only able to provide specific explanations for 2,458 of the total errors for 2012. AGNB noted there is no formal system in place to track data errors over time in order for PAS to identify trends, specific areas for improvement and report on performance. Without tracking the causes of errors over time, PAS is unable to identify the trends in errors and prioritize its efforts to prevent them. A comprehensive summary of rebilling scenarios for assessment and tax notice errors would be a useful tool in tracking and identifying trends in errors; however, AGNB found PAS did not have such a tool.

***“The formula” hinged on an assumption***

**2.100** PAS indicated to AGNB that the major contributor to errors in 2017 related to an assumption made to determine how much of the real and true increase in property values was due to market increases vs new construction or major improvement changes (NC/MIC). This was done in order



to establish “Fast Track” area properties’ value for taxation. This assumption is commonly referred to as “the formula”.

***Assumption applied for large increases in property value***

**2.101** It is AGNB’s understanding, PAS management recommended the formula to the Executive Director. Subsequently, it was approved and then communicated to staff members in a regional operations meeting in September 2016. The formula assumed a large increase in a particular assessed property value would be a combination of:

- 60% NC/MIC; and
- 40% change in land value

**2.102** PAS decided to take a two-step approach to applying the formula:

Step 1: Apply the formula to properties where:

- the GLA increased by 20% or more; or
- the GLA increased by 200 square feet and the real and true value increased by \$20,000 or more; and

Step 2: Generate a quality control report specific to the formula to enable review of the affected properties and confirm NC/MIC.

***There was a major flaw in applying the formula - the data to which the formula was applied should have been verified***

**2.103** In order to apply assumptions about assessment values using statistical models, input data needs to be objective and verifiable. AGNB believes there was a major flaw in applying this formula as the GLA data is the objective data used by the valuation models. Changes in GLA as a result of new construction are verifiable and should have been reviewed and confirmed by assessors and are not something to which an assumption should have been applied.

***74% or 1,479 of the 1,999 properties AGNB reviewed should not have been categorized as new construction or major improvement***

**2.104** PAS indicated they detected errors related to the formula and sent letters notifying property owners of the issue within two weeks of billing. AGNB reviewed the results of 1,999 known properties to which the formula was applied. Based on the corrected assessment and tax notices issued, 74% or 1,479 of the properties should not have been categorized as NC/MIC. Additionally, a significant number of corrections to GLA indicated that GLA was not properly calculated through the use of aerial photography. Had the GLA data been validated instead of having the assumptions applied, the assessed value of these properties would not

have increased as significantly.

***No policies and procedures in place to correct errors***

**2.105** AGNB inquired with PAS and found there are currently no policies and procedures in place to identify and correct errors in property assessment values. PAS directed staff to correct errors, when identified, if the errors result in a property assessed value greater than its market value. Errors are corrected for current and past years as long as the property has been owned by the same owner. AGNB noted that PAS retroactively corrects bills where identified errors in fact have affected multiple billing years.

***Overall error detection is reactive and has less chance of being effective***

**2.106** AGNB was informed PAS could detect errors in fact through its annual work cycle in past years. PAS also stated it would conduct some analysis using ad hoc variance reports prior to billing in order to detect errors. AGNB could not verify what analysis was performed in prior years as it was not formalized or documented. Without a formalized process, PAS' approach to error identification is largely reactive and not likely to be effective.

***PAS' claims of a substantially lower rate of errors in 2017 are unsupported***

**2.107** In AGNB's testing of residential properties in "Fast Track" areas, AGNB found errors not previously identified by PAS, indicating that claims by PAS of a substantially lower rate of errors in 2017 are unsupported<sup>4</sup>. AGNB views this as a failure of Quality Assurance (QA) process, which is discussed in the next section of this chapter.

***PAS' failure to adequately validate the data captured through aerial photography was the primary root cause of the technical issues experienced for the 2017 tax year***

**2.108** Generally, for any mass appraisal model, the precision of the outcome is dependent on the consistency of processes to capture property data. Unfortunately, AGNB cannot conclude the implementation of aerial photography improved the consistency of residential property data. In fact, AGNB's tests show undetected errors in PAS' database exist. For these reasons, AGNB believes PAS' failure to adequately validate the data captured was the primary root cause of the technical issues experienced for the 2017 tax year.

***Undetected errors in PAS' database exist***

<sup>4</sup> [http://www2.gnb.ca/content/gnb/en/news/news\\_release.2017.04.0416.html](http://www2.gnb.ca/content/gnb/en/news/news_release.2017.04.0416.html)

**Recommendations**

**2.109 We recommend Service New Brunswick (Property Assessment Services) identify, correct, track, and publicly report on errors.**

**2.110 We recommend Service New Brunswick (Property Assessment Services):**

- **conduct exploratory analysis on existing property data elements to determine completeness, accuracy and consistency; and**
- **formalize and implement a process to monitor the integrity of data.**

**Quality Assurance (QA)**

**2.111** AGNB believes an adequate QA framework is essential to mitigate property tax related errors and is an important strategic function for an assessment jurisdiction. Overall, QA in property assessment should strive to contribute to data integrity and property tax billing accuracy.

**2.112** AGNB examined QA related to assessment data integrity and the project management of the Modernization Program. As previously noted in Exhibit 2.5, PAS did not have a formal QA approach related to project management. AGNB also noted numerous deficiencies with PAS' QA related to data integrity.

***During “Fast Track”, essential QA practices were eliminated***

**2.113** A review of the process maps and business process documentation indicated that PAS was developing QA practices. Unfortunately, with the deadline to implement “Fast Track”, those QA practices were largely abandoned. Many of the essential steps associated with quality assurance were eliminated.

***Oversight for QA processes is not independent***

**2.114** Currently, the existing QA coordinator reports to the Modernization Director. This is problematic because QA is charged with reporting on the quality associated with implementing the Modernization Program. It is unlikely that the QA coordinator would be able to present unbiased information regarding program related quality.

**2.115** The starting point for any mass appraisal process is the collection of relevant data for both sold properties and unsold properties. The integrity of this data is the most critical part of an assessment process and, therefore, data should be collected with attention to accuracy and consistency. Data collection requires the most time,

attention, and resources.

**2.116** In mature organizations, there are detailed data collection manuals, extensive staff training programs, process maps, process controls and quality assurance procedures to validate the quality and accuracy of the data. Many of these were found within PAS and, with sufficient time and resources, would have provided effective tools to meet data collection requirements.

**2.117** There were two primary steps to validate properties: data review and value review. After PAS captured property characteristic data through the use of aerial photography, a data review was conducted on selected properties where the GLA had increased significantly. PAS told assessors to validate the data at the rate of two minutes per record. Following the two minute review, if issues were identified assessors were instructed to validate other data elements related to the record. Regional staff AGNB interviewed indicated property sketches captured in the system were often wrong and they were rejecting properties for re-sketching at a rate of 40% to 50%. Staff believed data was corrupt and PAS implemented changes to the assessment process “on the fly” and on a “go forward” basis. While concerns were raised during the validation process, communications had broken down and staff felt helpless.

***Data review eventually abandoned and incomplete***

**2.118** Due to the number of property sketches returned for re-sketching and the limited time for QA, PAS decided to abandon data review before it was complete. Instead, assessors moved from data review to value review, whereby they validated the property values produced by the models. Unfortunately, many of the data errors were not corrected after the data review due to time constraints. Assessors continued to address data errors while also trying to review property value.

***Alarming concerns about data quality ignored***

**2.119** The PAS management decision to tell assessors to abandon data review is, in AGNB’s view, alarming. Implementing the new measurement and assessment process should be gradual, with thorough quality checks, refinements and assessor involvement at every stage.

***Recommendation***

**2.120 We recommend Service New Brunswick (Property Assessment Services) establish a Quality Assurance functional unit. The unit should:**

- **report to the Executive Director to maintain independence, avoid any potential conflict of interest, and ensure key information is provided;**
- **monitor and report on the quality of project management; and**
- **undertake a province-wide program to improve property data quality, with consistent training, tools, and standards in all regions.**

***Exception reporting procedures***

**2.121** PAS developed exception-reporting procedures to detect potential errors in property assessments. An exception report is a type of summary report that identifies any events that are outside the scope of what is considered a normal range. It is an effective tool to detect errors. AGNB found several deficiencies in these exception reports. The exception reporting process failed to detect errors in the 2017 tax notices.

***No documented policies and procedures in place for exception reporting***

**2.122** AGNB found some exception reports were prepared and sent to regions for action. However, no documented policies and procedures were in place, such as:

- What reports are required to be generated and when;
- What the report is for;
- What parameters are required to generate reports;
- Who reports need to be sent to; and
- When to follow up and related deadlines.

**2.123** This resulted in many reports requiring re-work to provide relevant and useful information before they could be sent to assessors to investigate.

**2.124** AGNB also found deficiencies in communication among the PAS management team. As a result, priority of the numerous exception reports was not well defined and the management team did not understand what each exception report contained.

***Lack of documented policies and procedures, as well as deficiencies in communication contributed to significant failures in the exception reporting process***

**2.125** AGNB believes the lack of documented policies and procedures, as well as deficiencies in communication contributed to significant failures in the exception reporting process. For example, PAS modernization team produced an exception report (NC/MIC Catch-up list) on January 3rd, 2017. However, due to poor communication, the list was not provided to assessors to confirm the NC/MIC. Documentation AGNB obtained indicated confusion around the priority of work with regard to this report, as well as confusion around what was contained in the report and what was omitted. The result of the formula was applied to at least 2,022 properties and the original data for NC/MIC was over-written. As per PAS, there were additional properties with this formula applied, however, PAS is unable to identify exactly how many.

***Credibility of exception reports is questionable***

**2.126** AGNB found the credibility of exception reports is questionable. For example, AGNB examined the NC/MIC Catch-up list and found it was incomplete and omitted approximately 286 properties from one tax authority. AGNB believes this oversight was due to the lack of documented policies and procedures surrounding exception reports.

***PAS inappropriately relied on property owner Requests for Review (RfR) submissions as a component of quality assurance***

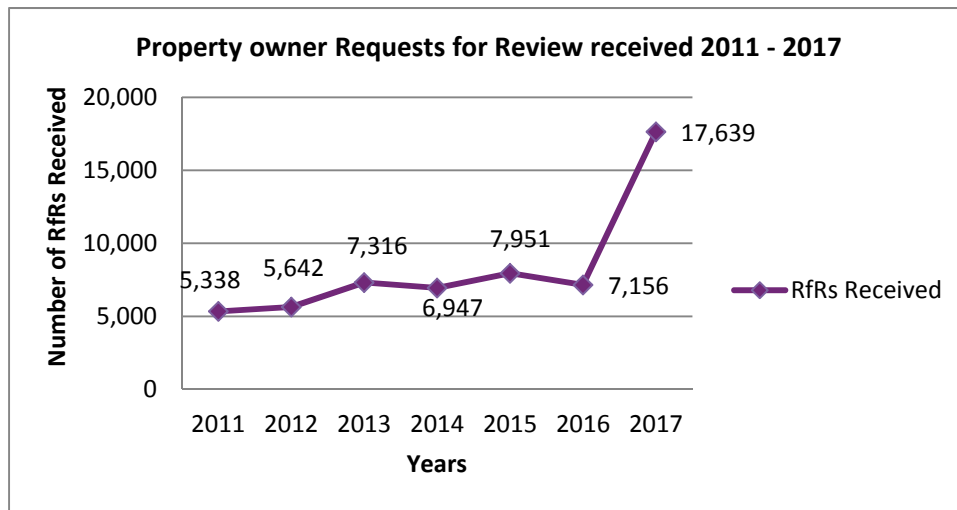
**2.127** AGNB found that PAS relied on the RfR process for QA. There was no other monitoring mechanism for billing errors that AGNB found (internal audit or otherwise). In several communications examined in AGNB’s work, RfR was referred to as a method of detecting billing errors. In AGNB’s view, it is inappropriate to rely on RfR submissions as the only mechanism of QA for billing accuracy. RfRs highlight billing errors where tax bills are unreasonably high; however, the opposite is unlikely. Further, it is inappropriate for PAS to rely on the taxpayers to identify errors. RfRs and re-bills, however, should be considered important indicators of PAS’ performance in delivering property assessment services. Yearly trends in RfRs can be an indicator of the success of PAS’ efforts to ensure high data integrity.

**2.128** AGNB obtained a listing of RfRs for the years 2011-2017. Exhibit 2.9 shows that, as of July 31, 2017, SNB has received a significantly higher amount of RfRs than in prior years. As of July 31, 2017, 9,411 RfRs remained outstanding. Of the RfRs responded to, 53% resulted in a reissuance of the assessment and tax notice (rebill). The

average change in assessed value of these properties was a reduction of 16%. Several factors contributed to the increase in RfRs in 2017:

- errors generated due to “Fast Track”;
- a relatively higher volume of PAS re-assessed properties in 2017;
- the extension of the RfR submission deadline ; and
- the impact of media attention encouraged property owners to file RfRs.

*Exhibit 2.9 Property owner Requests for Review received 2011 - 2017*



*Source: Created by AGNB with information provided by SNB*

**2.129** Further, AGNB compared the number of rebills resulting from known errors to the total number of properties re-assessed. The results show the rebill rates in certain “Fast Track” areas are significantly higher. The details of this are included in Appendix IX.

**2.130** Based on information provided by SNB, AGNB estimates reductions in property tax amounts, as of July 31, 2017, to be approximately \$3 million as a result of RfRs. Additional reductions could be in the range of \$4 million to \$11 million based on the results of AGNB’s work.

**2.131** According to PAS, its goal is to address all RfRs before 2018 property tax billing. Due to the current status of progress made, however, AGNB noted it is possible that some tax payers will experience delays in receiving a



response to their 2017 RfR.

**Recommendations**

**2.132 We recommend Service New Brunswick (Property Assessment Services) enhance quality assurance by:**

- developing parameters, policies and procedures for exception reports; and
- ensuring exception reports are properly followed up.

**2.133 We recommend Service New Brunswick (Property Assessment Services) discontinue the practice of relying on property owner Requests for Review as a means of quality assurance.**

**Governance**

**2.134** In order to maintain fairness among property owners, it is critical that SNB has authority to operate independently in determining the real and true value of properties. SNB is a Crown corporation, which means the decisions on resourcing, organization and delivery of assessment services remain with SNB's Board of Directors and not the government.

***SNB's Board of Directors appears to have a sound structure***

**2.135** SNB's Board of Directors appears to have a sound Board composition and committee structure. The Board appears to be functioning as described in the approved governance manual.

***The Assessment Act provides authority for property assessment to Executive Director of Assessment***

**2.136** AGNB found the *Service New Brunswick Act* and *Assessment Act* gives SNB authority to independently conduct property assessments. The *Service New Brunswick Act* gives the Board authority to administer the business and affairs of SNB, and all decisions and actions of the Board are to be based on sound business practices. The Executive Director of Assessment has the statutory obligation and authority powers under the *Assessment Act* for the execution of the property assessment function. The *Act* also provides the Executive Director with the appropriate powers to properly collect data through on-site inspections and other means such as questionnaires and to enforce these data collection requests with penalties for non-compliance.

**2.137** However, as with any legislation, the government has full discretion to make amendments to SNB's enabling legislation as it sees fit and to set tax policy. Past examples of tax policy changes, where the government exercised its authority to amend legislation include the:



- 3% cap;
- Assessment Gap; and
- 10% Spike Protection Mechanism.

**2.138** As per SNB, each tax policy or legislative change is a drain on PAS resources as they are diverted from day-to-day operations to implementing administrative tax relief benefits, such as Residential Tax Credit, Property Tax Allowance, Farm Land Identification Program, and Spike Protection Mechanism. These changes interfere with PAS' primary responsibility of assessing real and true value. AGNB believes any tax policy related administrative duties should not be the responsibility of PAS. The Department of Finance researches and analyzes tax policy issues. It develops options, provides information, advice and recommendations on tax matters, and implements legislative measures in support of the government's tax policy priorities. In AGNB's view, The Department of Finance is in the best position to take responsibility for administration of tax policy changes and tax benefit and relief programs. This would allow PAS to focus on determining real and true value of properties.

***Recommendation***

**2.139 We recommend the Department of Finance propose to Cabinet that Finance assume responsibility for the administration of all:**

- **property tax policy changes; and**
- **property tax benefit and relief programs.**

***In New Brunswick, about 40% of total property tax revenues go to the Province***

**2.140** The New Brunswick assessment system also has a number of characteristics that sets it apart from other jurisdictions. The Province and local government bodies "share" the property tax field. In most other provinces, the property tax accrues directly to the local government level. In New Brunswick, about 40% of total property tax revenues go to the Province. In 2017, of \$1.2 billion billed, \$700 million was for local government bodies and \$500 million was for the Province. This shared jurisdiction is complex and often means a blurring of accountability. There is often "finger pointing" as to which party is responsible for increases in tax bills.

*Reasons for property tax increases are not clear on the assessment and tax notice*

**2.141** The assessment and tax notice should be clearer in explaining the basis for a tax increase. Many provinces in Canada and most states in the USA require the taxing authority to clearly set out the reason(s) for a tax increase. In these jurisdictions, the property assessment function distributes the budgetary requirements of government according to the assessed value of all rateable properties.

*Other jurisdictions show clearly the reasons for tax changes on tax notices*

**2.142** In jurisdictions where there are such disclosure requirements, the tax bill will set out the amount and percentage change associated with the budget or tax amount. It will also identify the portion of the tax bill associated with an assessment-related change. As an example, AGNB included another jurisdiction's separate assessment and tax notice in Appendix X.

**2.143** Taxpayers should know exactly why their assessment and tax bill has changed from one year to the next. Was the change due to a tax rate change? Was the change due to a general increase in real estate prices or due to a localized situation? Was the change in assessment due to a correction in a particular property attribute such as GLA or some other property characteristic? Unfortunately, this information is not readily available to the taxpayer or the assessor. There is a multitude of reasons as to why a property tax bill has increased, but PAS is often incorrectly blamed for increases not related to property assessment.

*Transparency would be improved by having the property assessment notice separate from the tax bill*

**2.144** Unlike many other jurisdictions in Canada and the USA, taxpayers in New Brunswick are presented one assessment and tax notice. This notice shows the value for tax purposes, which may incorporate certain deductions. This complicates the issue of transparency because it increases the likelihood that two similar properties will show significantly different values. Presenting a real and true value on an assessment notice separate from the tax bill would improve transparency in this area.

*Recommendations*

**2.145** We recommend Service New Brunswick (Property Assessment Services) issue annual property assessment notices separate from property tax bills that lists the real and true value of the property and explains clearly why the assessed value has changed from one year to the next.

**2.146 We recommend the Department of Finance issue property tax bills separate from the assessment notice and clearly demonstrate how property taxes are calculated, including all the applicable credits, deductions, and exemptions.**

*Assessment staff lost confidence in the integrity of property data collected with new methodology*

**2.147** AGNB observed the Modernization Unit operated with little buy-in from the other two PAS functional units; see Exhibit 2.3 for an organizational chart. Assessment staff indicated they often felt left out of the process during the Modernization Program. They did not have confidence regarding the valuation and property data collected using the new technologies and methodologies. Their criticisms of the technologies often lost meaning transferring up through the chain of command. They believed their issues were not taken seriously. AGNB believes assessors and field office management must be involved with the adoption and implementation of any new processes or standards. These subject matter experts can help shape change to suit PAS' current and anticipated needs, identify inefficiencies in their current workflow, and test new standards against exceptional cases and unique properties.

*Executive Director slow to address personnel conflicts*

**2.148** AGNB found PAS had become dysfunctional due to conflicts between the Director of Modernization and the other two directors (the Director of Valuation and the Director of Regional Property Assessment Services). In fact, the conflict had been ongoing for multiple years. The services of a mediator were acquired through the intervention of Human Resources in March 2017. Further sessions of mediation had been postponed due to media coverage of the property assessment issues. The conflict had not been resolved during the course of AGNB's work. We believe the Executive Director should have intervened sooner to resolve the conflict.

*The circumstances around "Fast Track" resulted in a toxic work environment within PAS*

**2.149** While all staff interviewed said they were supportive of the Modernization Program, they believed "Fast Track's" failure has been the result of moving too quickly, poor communication, inadequate tools and lack of collaboration among directors and with staff. AGNB found the circumstances described above have resulted in a toxic work environment within PAS.

**Recommendation**      **2.150 We recommend Service New Brunswick (Property Assessment Services) appropriately engage staff throughout the organization in the development and implementation of major high risk change initiatives.**

**2.151** Poor communication created the perception within PAS that one of the primary reasons to “Fast Track” was to increase tax revenues. Many assessors felt this was a contradiction to their professional ethics.

***The overwhelmed and distracted executive management resulted in a lack of leadership***

**2.152** The latter phases of the Modernization Program, including the adoption of the new technologies and the decision to “Fast Track”, occurred while there were stresses and distractions at the SNB Executive Management level:

- The former CEO of SNB was moved to another portfolio;
- The former VP Public Services & Smart Government was promoted to CEO; and
- The Executive Director of Assessment, who had already been assigned expanded responsibilities, was appointed acting VP Public Services & Smart Government, none of the positions he replaced were backfilled. Additionally, no acting Executive Director was assigned.

The overwhelmed and distracted executive management resulted in a lack of leadership.

***The statutory duties of the Executive Director of Assessment were not fully acknowledged nor respected***

**2.153** It must be emphasized that the “Executive Director of Assessment” is a statutory position under the *Assessment Act*. It is the Executive Director who must ensure all properties are assessed “at real and true value”. The Executive Director is appointed by SNB and may delegate his or her duties. However, the power to delegate does not entitle the Executive Director to abandon his or her supervisory role if delegation does occur. Nor does the Executive Director’s power to delegate entitle SNB’s executive to stretch the Executive Director’s responsibilities to the point where he or she is unable to adequately supervise the delegates. Importantly, the Executive Director is unlike other employees and senior management within SNB. The Executive Director has a statutory job description. It was apparent this statutory obligation was not fully acknowledged nor respected.

**2.154** AGNB believes the independence of the Executive Director is critical to fulfilling his or her statutory

obligations. Currently, the organizational design of SNB has the Executive Director report to a VP. The VP in turn reports to the CEO, who in turn is accountable not only to the Board but to the Minister responsible. This hierarchy poses a threat to Executive Director's ability to exercise authority and operate independently from government as highlighted in the events of May 6, 2016. Additionally, similar to other government departments, PAS external communications flow through the Corporate Communications Division of ECO. This arrangement may have hindered PAS' ability to communicate effectively with the public.

***Recommendations***

**2.155 We recommend Service New Brunswick ensure the Executive Director of Assessment:**

- **has adequate time to fulfill his or her statutory obligation; and**
- **encourages group cohesion between the units within Property Assessment Services.**

**2.156 To ensure the necessary independence to fulfill the Executive Director's statutory obligations, we recommend:**

- **Service New Brunswick Board of Directors require the Executive Director of Property Assessment Services report directly and independently to the Board;**
- **Service New Brunswick Board of Directors have authority for hiring and termination of Executive Director upon recommendation from the CEO; and**
- **Performance appraisal and other administrative matters rest with SNB senior management as determined by the CEO.**

**2.157 We recommend Executive Council Office provide Service New Brunswick's Executive Director of Property Assessment Services full discretion to communicate independently as needed with the public.**

**Announcement of independent agency**

**2.158** On April 3, 2017, the Premier announced the government will introduce legislation in the Fall session of the legislature to create an agency independent of the government that will oversee property assessment in New Brunswick. This new agency is expected to be in place

before the 2019 taxation year.

**2.159** One would expect the decision to be well supported with comprehensive analysis regarding the impacts, risks, costs, etc.

***No business case to support the government's intention to create an "independent agency"***

**2.160** AGNB found no business case to support the government's intention to create this "independent agency". Although they were informed prior to the announcement, SNB board, CEO and the Executive Director of PAS were not consulted in the decision making process. There was very little analysis performed prior to the announcement by the Premier.

**2.161** Following the Premier's announcement, the Executive Council Office (ECO) convened a discussion session with key government departments to brainstorm potential approaches to establishing a new assessment agency. In parallel with this session, efforts were undertaken to gather information about other property assessment agencies, elsewhere in Canada. This jurisdictional scan served as a starting place for more in-depth analysis, which has been continuing since mid-June 2017.

**2.162** As per ECO, further research and analysis have now been conducted, such as:

- consultation with key departments;
- analysis of other independent agencies in NB;
- consultations with legal advisors; and
- consultation with representation from the local government sector.

**2.163** Forthcoming stakeholder consultations include discussions with affected First Nations, the New Brunswick Union, the NB Land Surveyors Association, and the NB Real Estate Association.

***Creating another independent agency is not necessary to resolve property assessment issues AGNB identified. These issues can be resolved within SNB***

**2.164** AGNB believes creating another independent agency is not necessary to resolve the most pressing issues AGNB identified with property assessment in NB. The issues AGNB has outlined with regard to governance, assessment methodology, project management, and quality assurance must be addressed first and foremost. AGNB believes these issues can be resolved within SNB.



## Appendix I: Section 12 Mandate

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### **Appendix A**

#### **Mandate**

Under subsection 12(1) of the *Auditor General Act*, the Lieutenant-Governor in Council is requesting an independent review related to the integrity of New Brunswick's real property tax assessment system.

This review will focus on facts and circumstances related to inaccuracies and possible errors in Service New Brunswick's calculation of real property tax assessment values for the taxation years 2011 through 2017, and will include:

- A comprehensive review of all administrative policies and procedures in place related to the assessment process over the past seven years, including a review of the assessment methodology, factors related to timing and deadlines, and the use of the various technological aids, quality control processes, and the use of formulas to estimate values.
- All significant changes to the assessment process and procedures over the past seven years, how previous assessment errors were corrected and how present assessment errors have or will be addressed.

#### **Deliverables**

The Lieutenant-Governor in Council is requesting that a written report of the review findings be prepared and tabled in the Legislative Assembly on or before November 30, 2017, and that the report include recommendations as to what measures should be taken to reduce the probability of any future assessment errors and to restore public confidence in the real property tax assessment system.

The Lieutenant-Governor in Council is also requesting that the Auditor General provide preliminary observations to the Executive Council Office in advance of her final report to enable to government to consider system improvements prior to the 2018-19 property taxation cycle.

#### **Experts and Resources**

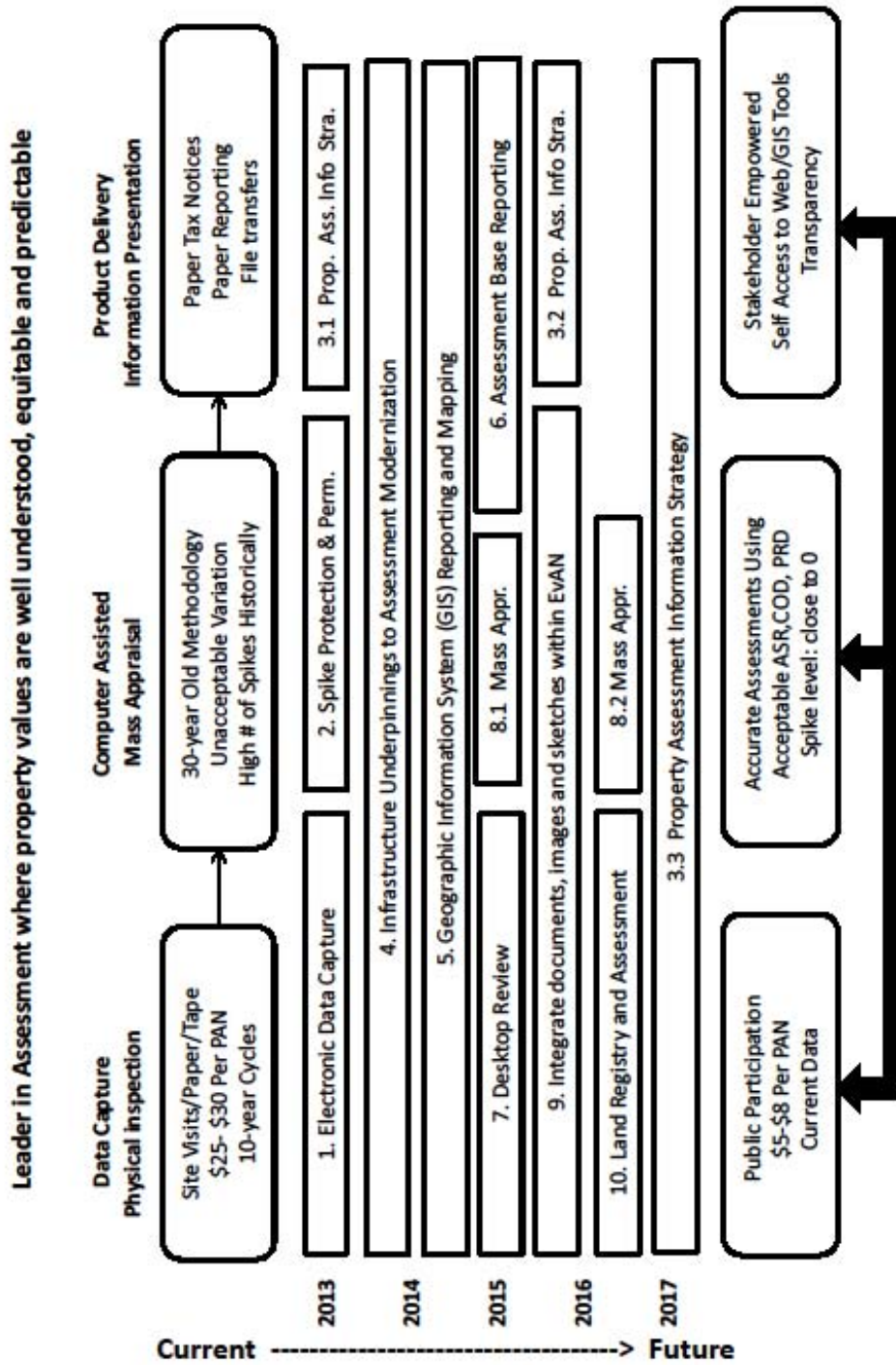
Under subsection 12(2) of the *Auditor General Act*, the Auditor General has, in relation to this review, the powers of a commissioner under the *Inquiries Act*. The Auditor General is authorized to retain and coordinate the efforts of any experts required. Under subsection 9(6) of the *Auditor General Act*, the Auditor General will charge reasonable fees to the Executive Council Office as recovery for the costs of this review.

## Appendix II: Acronyms

Acronym	Expansion
AGNB	Auditor General of New Brunswick
ASR	Assessment Sale Ratio
BCD	Building Characteristic Diagram
ECO	Executive Council Office
EDC	Electronic Data Capture
GIS	Geographic Information System
GLA	Gross Living Area
IAAO	International Association of Assessing Officers
LSD	Local Service District
M&S	Marshall and Swift (versions include CE7 and MVP)
MAM	Mass Appraisal Model
MAF	Market Adjustment Factor
MDA	Model Deficiency Adjustment
MRA	Multiple Regression Analysis
NCMIC	New Construction / Major Improvement Change
PAS	Property Assessment Services, Service New Brunswick
PATS	Property Assessment and Tax System (replaced by PMCS)
PM	Program manager or program management
PMBOK	Project Management Book of Knowledge
RCN	Replacement Cost New
RfR	Request for Review
SDLC	Software or system development lifecycle
SNB	Service New Brunswick
SPM	Spike Protection Mechanism
TA	Taxing Authority

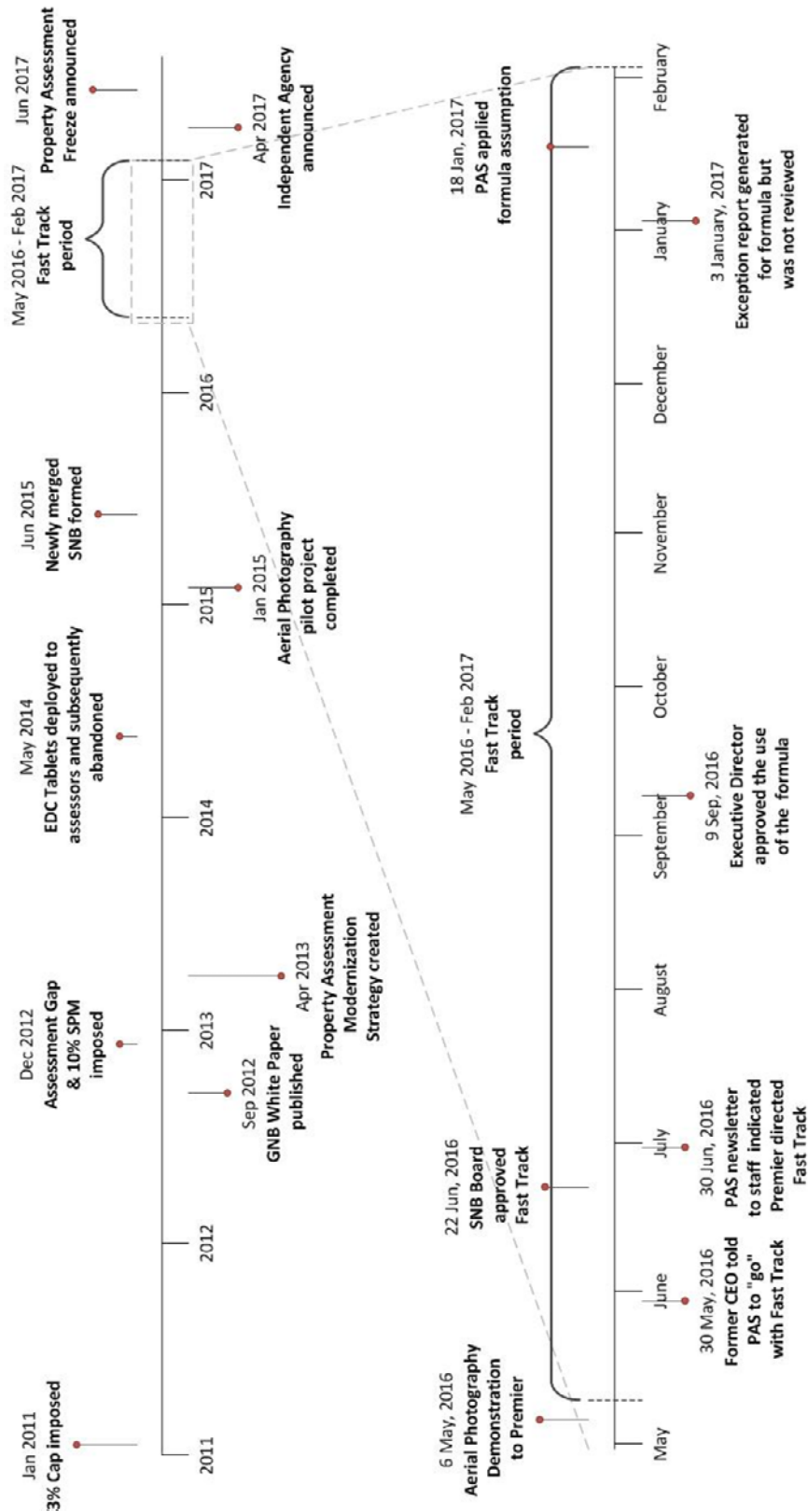


## Appendix III: Strategy Map



Source: provided by SNB

## Appendix IV: Timeline of events



Source: Created by AGNB with information provided by SNB

## Appendix V: A Brief Description of Modernization Program

<b>Modernization Program overall</b>	The Modernization Program refers to the overall plan to update technologies used by SNB’s Property Assessment Services branch. A program is a group of projects that should be managed to achieve a larger organizational strategy. It includes additional considerations around coordination and prioritization of component projects.
<b>Desktop Review</b>	The Desktop Review project was to permit assessors to verify external attributes of property using aerial photography. This offered potential advantages in avoiding travel and in quality control. The project involved the use of “ad hoc” appraisal capabilities. It is important to note that this “ad hoc” system, using what the Modernization Unit termed “prototype” software, is what PAS put into operation during the “Fast Track” project. PAS developed the temporary solution for Desktop Review in-house.
<b>Electronic Data Capture (EDC)</b>	Electronic Data Capture (EDC) included the introduction of tablets and related software to allow assessors to electronically record data in the field. This was intended to facilitate inspections. Uploading the data into Property Assessment’s database would avoid the need for manual entry of the information from paper-based field cards. PAS developed the software in-house.
<b>Multiple Regression Analysis (MRA)</b>	Multiple Regression Analysis (MRA) is a statistical technique that PAS evaluated for use in valuing property and eventually put into use in the “Fast Track” project. The intent, according to the Residential Valuation Model Alternatives Research Pilot Project report, was to improve the effectiveness and efficiency of valuation. This would be done by using MRA in the Mass Appraisal Model (MAM).
<b>Mass Appraisal Model (MAM)</b>	The Mass Appraisal Model (MAM) was to be the application of MRA to the data captured using Desktop Review. Initially, SNB assigned a project manager to the MAM project; however, after carrying out preliminary planning, SNB moved the project manager to other projects within SNB and Project Management Branch did not play a significant role following this point. It should be noted the overall “road map” that Project Management Branch prepared for MAM showed completion late 2017 or early 2018. It should also be noted MAM was not delivered within the “Fast Track” timeframe of implementation.
<b>Fast Track</b>	“Fast Track” was a project that expedited the implementation of several modernization components. It was meant to include Mass Appraisal Modelling, Desktop Review and a Digital Repository. However, the implementation was limited to prototype versions of MRA models and Desktop Review.
<b>Geographic Information System (GIS)</b>	Geographic Information System (GIS) mapping and reporting was intended to be the foundation for most elements of modernized property assessment. Functionality within this system would incorporate Desktop Review and MAM processes. During the period affected by “Fast Track”, the GIS system was not yet in use, as PAS had not developed the required functionality.

## Appendix VI: PMBOK Components of Project Management

<b>Term</b>	<b>Definition</b>
<b>Manage project integration</b>	This relates to management's role in coordinating the activities and involves supervision of the other areas
<b>Manage project scope</b>	This includes setting requirements, determining work products and deliverables, use of a change management process, and progress and variance management
<b>Manage project time</b>	This relates to scheduling activities, sequencing, and managing dependencies
<b>Manage project costs</b>	This involves analysis and estimation of costs and costs control
<b>Manage project quality</b>	This includes quality planning, quality assurance, exception handling and validation of deliverables
<b>Manage project human resources</b>	This relates to planning resource requirements (people and time) and assignment to tasks, as well as development and training
<b>Manage project communications</b>	This focuses on internal communications, including planning and managing communications and provision of project information
<b>Manage project risks</b>	This is about risk identification, analysis and response
<b>Manage stakeholders</b>	This focuses on external stakeholders and includes plans and activities to inform and engage stakeholders

*Source: PMBOK Guide (5ed) and Software Extension to the PMBOK Guide (5ed) knowledge areas*

## Appendix VII: Aerial Photography

### Aerial Photography

Software used by Service New Brunswick Property Assessment Services utilizes three-dimensional aerial photographs to view high-resolution images of buildings in their entirety.

In brief, aerial photography provides two types of images:

- Oblique Imagery
- Orthogonal (Ortho) Imagery

**Oblique Imagery** is aerial imagery captured at an angle of 40 to 45 degrees, designed to provide a more natural perspective and make objects easier to recognize and interpret. Oblique aerial images captured from the north, south, east, and west directions offer a 360-degree view of every property and parcel.

**Orthogonal Imagery** provides a true top-down view and is rectified to align to a map grid.

Various International Association of Assessing Officers (IAAO) guidance and publications confirm that aerial photography is relevant and helpful to assessing agencies. However, it should be added that these imagery products must be used with care. IAAO also states that there must be an initial physical inspection and a well-maintained data collection and quality-management program in place before implementing a computer-assisted, desk-based review.

The IAAO states: “*A physical inspection is the best way to obtain initial property characteristics data and, at a minimum, should include a comprehensive exterior inspection.*” However, there are several data collection options:

- Use of previously captured data (data conversion)
- Field canvasses
- Targeted inspections (properties with building permits, sold properties, properties under appeal)
- Imagery (e.g., aerial, oblique, and street level photography)
- Returns submitted by property owners or taxpayers.

As aerial photography is only one of the data collection options, AGNB engaged experts to test whether Aerial photography rendered dimensions and area should be the de facto authoritative record or used as a check against other methods.

## Appendix VIII: Overview of the Assessment Process

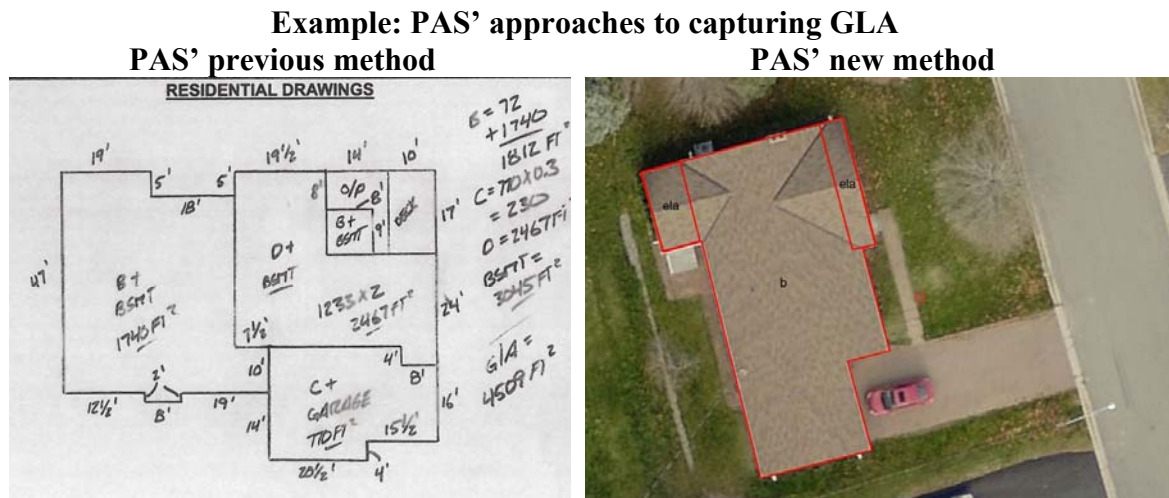
In general, the Assessment Process involves three main stages:

1. The collection of property data
2. The adjustment and analysis of the data collected
3. The valuation of all taxable properties based upon the analyzed data

### Collection of Property Data

There are two key types of property data that are required in order to provide valuations for property tax purposes:

1. Property attribute data, e.g. the physical characteristics of taxable properties (location, type, size, age, etc.)



2. Property market data, e.g. details of transactions relating to properties that were sold or rented (e.g. sale price, date of sale, rent paid, terms of lease, etc.)

### Property Attribute Data

The type of data to be collected will depend upon the legislation governing the property tax system in the jurisdiction concerned. On the assumption that the legislation prescribes that the basis of valuation is to be “market value”, all factors that may influence market value need to be collected and recorded in a systematic way which will enable the data to be used in the valuation process.

The data to be collected will also reflect the valuation method that will be used for the type of property concerned (i.e. whether the sales comparison, income or cost approach is to be used) and any classification system that may be in place (i.e. different tax rates for different types/uses of property).



## Appendix VIII (continued)

It should be noted that collecting and maintaining up to date records relating to property attribute data is usually the most expensive part of any property tax assessment system.

The IAAO publication “Guidance on International Mass Appraisal and Related Tax Policy” lists the following important characteristics for three common property types.

### *Residential property characteristics:*

- Type of dwelling (detached, row, terrace, apartment, etc.)
- Living area
- Construction quality or key components thereof (style or design, exterior wall type, etc.)
- Effective age or condition
- Secondary areas such as basements, garages, or balconies
- Land size in the case of detached structures
- Available utilities (sewer, water, electricity)
- Market area, zone, or neighbourhood
- Location amenities, such as water frontage
- Location nuisances, such as heavy traffic.

### *Commercial property characteristics:*

- Property type or use
- Size
- Location
- Construction quality
- Effective age or condition
- Ratio of land area to the main floor area.

### *Unimproved land characteristics:*

- Permitted use or zoning
- Plot size
- Plot shape and usability
- Location
- Available services.

The IAAO guide goes on to say: “A data collection program requires clear and standard coding and careful monitoring through a quality control program. The development and use of a data collection manual is essential in achieving accurate and consistent data collection. The data collection program should result in complete and accurate data.”

The IAAO guide notes (at paragraph 6.2.1) that there are various ways in which this data can be collected, including the use of imagery (e.g. aerial, oblique, and street level photography).

## **Appendix VIII (continued)**

Increasingly, in an effort to collect data in the most cost-effective manner, many assessing agencies are using desk-based facilities such as imagery to reduce the need for, and cost of, field inspections.

### **Property Market Data**

As indicated above, assuming that the basis of valuation is market value, the assessing agency will need to collect relevant property market data which will be used to determine levels of value of all properties within the jurisdiction.

The most useful type of property market information is likely to be sale prices. In addition to the price paid for a particular property, the data required for analysis of the sale will include the date of the transaction, whether or not it was at “arm’s-length”, and any associated terms and conditions that may have influenced the price paid.

In addition to sale prices, the assessing agency will need to collect information concerning leases of properties. The rent paid for a particular property is likely to affect its market value and the assessing agency will need to collect information about when the lease was granted, the length of the lease, any rent review provisions, responsibility for repairs, insurance and other expenses associated with the property, etc.

If property that is subject to a lease or leases has been sold, the assessing agency will analyze the sale price to ascertain the “capitalization rate”, in other words, the relationship between the gross or net rental value of the property and the capital value, i.e. the price paid. This information will be of particular relevance for properties that are normally valued by using the income approach.

The other main source of potentially helpful data that needs to be collected by the assessing agency is information about the construction cost of different types of property. This data is required in connection with the valuation of properties using the cost approach which, in broad terms, involves estimating the cost of reconstructing a property, allowing for depreciation, and adding the value of the land on which the existing building stands. The costs of developing different types of building can be obtained from commercial cost and depreciation manuals, but it is helpful to supplement that data with information about the cost of actual construction within the jurisdiction.

### **Valuation of all Taxable Properties Based on Analyzed Data**

The objective of data collection, adjustment and analysis is to provide a reliable foundation upon which individual valuations of all taxable properties can be based, using a consistent and uniform approach. This includes the properties all being valued at the same valuation date.



## **Appendix VIII (continued)**

Although different methods of valuation may be used, they must all be seeking the same objective, i.e. to ascertain the open market sale price of the taxable property at a common date.

The importance of consistency and uniformity is to ensure that the overall tax base for the jurisdiction (i.e. the total value of all the individual property valuations) provides a fair distribution mechanism for the property tax which will vary from one property to another dependent upon their respective values.

It is not practical or cost-effective for assessing agencies to undertake individual valuations for all the properties within a jurisdiction. Some unique properties may require an individual valuation to be prepared, but the vast majority of properties can be valued to an acceptable degree of accuracy through use of a mass appraisal technique.

To assist in ensuring consistency and uniformity, assessing agencies use valuation models when valuing most property types, particularly for residential properties, which seek to reflect the value-significant differences between them.

The accuracy of the outcome of using a valuation model for mass appraisal will depend partly on the reliability of the data (as outlined above) and partly on the reliability of the particular model (or models) developed by the agency.

IAAO states: “Mass appraisal (valuation) is required when many properties need to be valued economically and en masse for a purpose such as annual property taxation.” It goes on to define: “Mass appraisal is the process of valuing a group of properties as of a given date using common data, standardized methods, and statistical testing.” When market value is the goal, values for individual parcels should not be based solely on the sale price of a property; instead, valuation schedules and models should be consistently applied to property data that is correct, complete, and current. Mass appraisal models attempt to represent the market for a specific type of property in a specified area. Mass appraisal modellers use MRA statistical analysis to fine-tune the models and ensure they can reasonably predict the value of homes using the property data.

## Appendix IX: Rebill Statistics "Fast Track" areas as of August 2017

<b>Rebill Statistics "Fast Track" areas as of August 2017</b>			
<b>"Fast Track" area</b>	<b># properties re-assessed</b>	<b># Rebills resulting from known errors**</b>	<b>Rebill rate*</b>
St Andrews	777	59	7.6%
Rothesay	3,646	268	7.4%
Saint John	14,888	888	6.0%
Dieppe	5,636	268	4.8%
Hampton	1,269	52	4.1%
Sackville	1,739	65	3.7%
Quispamsis	5,597	182	3.3%
Fredericton	14,002	301	2.1%
Oromocto	1,590	21	1.3%
Woodstock	1,446	19	1.3%
Moncton	16,242	121	0.7%
Riverview	5,519	37	0.7%
<b>Totals</b>	<b>72,351</b>	<b>2,281</b>	<b>3.2%</b>

*Provided by SNB, unaudited*

*\* Rebill rate is the # of rebills resulting from errors as a % of properties re-inspected*

*\*\* Errors refers to rebills which could relate to an error in the property record information (GLA, new construction).*

*AGNB note: at the time of the information above, SNB had completed approximately 53% of its request for review work.*

# Appendix X: Sample of Assessment Notice and Tax Bill From Another Jurisdiction



**IMPORTANT INFORMATION FOR PROPERTY IDENTIFICATION**

**Area:** 01 - Capital  
**Jurisdiction:** 308 - District of Saanich (SD61)  
**Roll:** 51-9500-059

Bulk Mail: BMC1234  
 School District: 61 - Saanich  
 Neighbourhood: 051 - Wilkinson-Interurban

Confidential Pin: 0123

## 2017 PROPERTY ASSESSMENT NOTICE

### Property Location & Description

**Location:**  
 1234 Anywhere Street  
 LOT 5, PLAN VIP4888, SECTION 98, LAKE LAND DISTRICT  
 PID: 012-345-678

**This Is Not a Tax Notice. Tax Notices Are Issued by Your Local Government.**

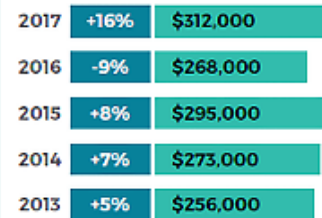
This notice contains important information about your property. Please review and keep for your records.

No action is required unless you disagree with your assessment.

2017 Assessment – represents your property value as of July 1, 2016

	VALUE	CLASS
LAND	112,000	
BUILDINGS	200,000	
2017 ASSESSED VALUE	\$312,000	RESIDENTIAL
TAXABLE VALUE	\$312,000	

### YOUR PROPERTY VALUE HISTORY



### Important messages about your Assessment

- A copy of this Property Assessment Notice is sent to all owners
- Your property value has changed due to new found construction in the last year. This may result in a change to your property taxes in 2017.
- A residential questionnaire was sent to you in 2016 and no response was received. Please go to [valueBC.bcasessment.ca](http://valueBC.bcasessment.ca) to review and confirm or update your property details.

### IMPORTANT DATES

- July 1, 2016**  
Assessed value is estimated for most types of properties as of this date.
- October 31, 2016**  
Assessed value reflects property's physical condition and permitted use as of this date.
- January 31, 2017**  
Deadline for filing a Notice of Complaint (Appeal). Important information about the appeal process can be found on the back of this Notice.

### The Assessment Office for this property is:

Victoria Assessment Office  
 102-3350 Douglas St  
 Victoria BC V8Z 7X9  
 01-61-308-51-9500-059

### The Owner/Lessee of this property is:

John Doe 515685  
 123 Main Street  
 Victoria, BC V9V 9V9

### CONTACT US

For more information go to [bcassessment.ca](http://bcassessment.ca)  
 Review your property details and compare your assessment to others with our popular **e-valueBC** service.  
 Call us at **1-866-valueBC** (1-866-825-8322) or 604-739-8588. Fax us at 1-855-995-6209.

Source: [https://www.bcasessment.ca/services-and-products/Pages/Assessment\\_Notice\\_Help\\_-\\_Residential.aspx](https://www.bcasessment.ca/services-and-products/Pages/Assessment_Notice_Help_-_Residential.aspx)

# Appendix X (continued)

## How to read your Property Tax Notice



**City of Richmond**  
 6911 No. 3 Road, Richmond, BC V6Y 2C1  
 Tel: 604-276-4145 Fax: 604-276-4128  
 Office Hours: 8:15 a.m.–5:00 p.m.  
 www.richmond.ca

### 2013 PROPERTY TAX NOTICE

**DUE DATE: Tuesday, July 2, 2013**



41885

**5 % PENALTY IF NOT PAID OR GRANT NOT CLAIMED BY JULY 2, 2013  
 ADDITIONAL 5% PENALTY ADDED TO ANY CURRENT TAXES OUTSTANDING AFTER  
 SEPTEMBER 3, 2013**

SMITH, J.  
 1234 MAIN ST  
 RICHMOND BC V1A 1A1

You will need this information to claim your Home Owner Grant online

LEGAL DESCRIPTION			
LT0 SEC 00 BLK 0A RGE 0A NWD PL 00000			
TOTAL NET ASSESSED VALUES FOR TAXATION PURPOSES			
CLASS	GENERAL	SCHOOL	HOSPITAL
1 - Res	848,000	848,000	848,000

FOLIO NUMBER	ACCESS	RATES	COLUMN A NO GRANT	COLUMN B BASIC GRANT	COLUMN C ADDITIONAL GRANT
123-456-789	11223344	1.56950	1,330.94	1,330.94	1,330.94
Less: Home Owner Grant				-570.00	-845.00
<b>NET SCHOOL TAXES</b>				<b>760.94</b>	<b>485.94</b>
BC Assessment			50.80	50.80	50.80
Metro Vancouver			48.90	48.90	48.90
MFA			0.17	0.17	0.17
TransLink			275.09	275.09	275.09
Sewer Debt				32.84	32.84
<b>NET OTHER GOVERNMENT TAXES</b>				<b>407.80</b>	<b>407.80</b>
General Municipal				973.52	973.52
City Policing				373.17	373.17
Fire Rescue				310.84	310.84
Storm Drainage / Dyking				39.55	39.55
<b>NET MUNICIPAL TAXES</b>				<b>1,697.08</b>	<b>1,697.08</b>
<b>TOTAL CURRENT TAXES</b>				<b>2,590.82</b>	<b>2,590.82</b>
Tax Instalments					
<b>TOTAL TAXES PAYABLE</b>					
Payments accepted in person					
CLAIM YOUR HOME OWN					
You are not currently enrolled					
your estimated monthly paym					

Taxes determined by and collected for other taxing agencies

**Column A**—This is your column if:  
 • you are the registered owner and do not live in this property  
 • you do not qualify for a grant

**Column B**—This is your column if:  
 • you are the registered owner  
 • you are under age 65 and living in this property  
 • there is a grant available and you meet the qualifications under section 1 on the back of the Home Owner Grant Application form  
 Please submit a grant application and pay **Column B**

**Column C**—This is your column if:  
 • you are the registered owner  
 • you are age 65 and older and living in this property  
 • there is a grant available and you meet the qualifications under section 2 on the back of the Home Owner Grant Application form  
 Please submit a grant application and pay **Column C**

**Tax Instalments**  
 This is on your bill if you are on the preauthorized withdrawal plan or have made a prepayment. Please submit a grant application if applicable.

Customer Copy

**AMOUNT DUE JULY 2, 2013**

A - NO GRANT	B - BASIC GRANT	C - ADD'L GRANT
\$3,435.82	\$2,865.82	\$2,590.82

2013 CITY OF RICHMOND TAX NOTICE  
 Payable at Most Financial Institutions  
 See Reverse For Additional Payment Instructions

A	B	C
No Grant	Grant: 570.00	Grant: 845.00
\$3,435.82	\$2,865.82	\$2,590.82

Amount Paid

**FOLIO** 123-456-789  
**PID** 555-000-123  
**CIVIC** 1234 MAIN ST  
**OWNERS** SMITH, J.  
 1234 MAIN ST



Source: [https://www.richmond.ca/\\_shared/assets/howtoreadyourpropertytaxbill35617.pdf](https://www.richmond.ca/_shared/assets/howtoreadyourpropertytaxbill35617.pdf)