

SAMS—Social Assistance Management System

1.0 Background

1.1 Social Assistance in Ontario

Social assistance helps people who are in need because they are unemployed and/or have disabilities. It provides:

- financial aid;
- health benefits;
- access to basic education; and
- counselling, training and workshops to help people find and keep a job.

The overall objective of social assistance is to help people become as self-sufficient as possible. Programs are funded and administered by the province and municipalities.

To help improve the administration and delivery of social assistance, the Ministry of Community and Social Services (Ministry) replaced its old information technology system in November 2014 with a new system known as the Social Assistance Management System (SAMS).

About 11,000 ministry and municipal personnel have to rely on SAMS to help them deliver social assistance to approximately 900,000 of the most vulnerable members of society across Ontario. These personnel rely on SAMS to, among other things:

- determine an applicant's eligibility for social assistance;
- calculate and distribute about \$6.6 billion in annual social benefit payments;
- automatically generate letters that are mailed to people to inform them about their social assistance eligibility or about changes to their social benefits; and
- generate reports that provide the information that municipalities and the Ministry need to manage social assistance programs.

1.1.1 Three Social Assistance Programs in Ontario

In Ontario, three programs provide social assistance: Ontario Works, the Ontario Disability Support Program (ODSP) and Assistance for Children with Severe Disabilities (ACSD) (because the Ministry combines information on the latter two programs in much of its reporting, we do the same in this report and include information on ACSD in our discussions of ODSP).

Ontario Works

The *Ontario Works Act, 1997* and its regulations govern the delivery of Ontario Works. Eligible people receive Ontario Works support and services from 238 municipal offices across the province, in

partnership with the Ministry of Community and Social Services (the Ministry).

To be eligible for Ontario Works, a person's net assets, apart from their home and motor vehicle, must be worth less than \$2,500 if the person is single and \$5,000 if the person has a spouse.

Also, a person needs to try to find and keep a job, and participate in activities designed to help him or her do so (such as workshops and programs that help the person finish high school).

Recipients of Ontario Works financial aid receive basic-needs and shelter allowances. Other financial assistance is provided to eligible clients through specific types of benefits, usually provided monthly (examples include the Pregnancy and Breast-feeding Nutritional Allowance and the Special Diet Allowance). Clients are also reimbursed for certain expenses, such as employment-related expenses. Benefits are taxable; reimbursements are not.

The total number of Ontario Works clients as of September 2014, before SAMS was launched, was about 447,000. As per the Public Accounts of Ontario, a total of \$2.6 billion was paid to clients in the year ending March 31, 2015.

Ontario Disability Support Program (ODSP)

The *Ontario Disability Support Program Act, 1997* and its regulations govern the delivery of ODSP. Eligible people receive ODSP support and services from 45 Ministry offices throughout the province.

To be eligible for ODSP, a person must have a substantial physical or mental impairment that has lasted for at least one year. The impairment must restrict the person from at least one daily living activity. Also, the person's net assets, apart from their home and motor vehicle, must be worth less than \$5,000 if the person is single and \$7,500 if the person has a spouse.

Like Ontario Works clients, ODSP clients may also receive a number of other specific benefits and may be reimbursed for specific expenses. For example, they receive compensation for mobility devices, hearing aids and any other devices

or medications that they need because of their condition.

In the year ending March 31, 2015, the Ministry paid a total of \$4.4 billion to ODSP clients. As of September 2014, before SAMS was launched, a total of about 479,000 clients were enrolled in ODSP (including approximately 30,000 children with severe disabilities).

1.1.2 Role of Caseworkers

About 11,000 front-line personnel, most of whom are called caseworkers, provide a full range of Ontario Works and ODSP services. Caseworkers have to rely on SAMS on a daily basis to help them provide these services, which we describe later in this section. Their ability to provide Ontario Works and ODSP is highly dependent on how well SAMS functions and supports them. In other words, for caseworkers to have sufficient time to help their clients, SAMS should:

- correctly determine clients' eligibility for social assistance;
- accurately calculate and distribute social benefit payments; and
- automatically generate letters accurately informing clients of their eligibility and the amounts to which they are entitled, plus other documents.

At the same time, SAMS should have controls to ensure that clients' information is protected and that the amount of risk of fraud and abuse of social-assistance programs is as low as possible.

SAMS should also be easy to use—that is, it should be designed with caseworkers' needs in mind. Necessary features include, for example, a reminder for caseworkers of upcoming daily tasks they need to accomplish so that they can ensure their clients are adequately looked after.

Ontario Works Caseworkers

People seeking help from Ontario Works can apply online, in person at an Ontario Works office or by phone.

The Ontario Works caseworker’s responsibilities begin when an applicant makes contact to schedule an in-person meeting. At that meeting, the caseworker begins the process of determining if the applicant qualifies for assistance. If the applicant does qualify and becomes a client, the caseworker continues to meet regularly with him or her to help the client find and keep a job. The caseworker will also:

- create a formal plan that sets out employment activities the client will be involved in and for how long;
- adjust the plan as the client progresses and as the client’s circumstances change; and
- discuss other programs and supports that can help the client

The caseworker also reviews the client’s financial status and information.

Caseworkers have a number of other responsibilities. For example, they attend hearings when clients dispute their entitlements and they recover overpayments from former clients.

ODSP Caseworkers

People seeking help from ODSP also can apply online, in person at an ODSP office or by phone. These individuals have physical or mental impairments that, to varying degrees, can impact their ability to be involved in the workforce. Some are able to work; some with more severe impairments find it difficult or impossible to work.

An ODSP caseworker’s role varies depending on the particular impairments his or her clients have. If a qualified applicant’s impairment is not severe, the caseworker will meet more frequently with the client and develop a structured employment plan. Caseworkers may meet less regularly with clients who have more severe impairments, as these clients receive benefit payments on a regular schedule through their enrolment in ODSP. Most ODSP caseworkers therefore have higher caseloads than most Ontario Works caseworkers.

The ODSP caseworkers’ main responsibilities are processing their clients’ social benefit payments and

calling clients to check on them and reconfirm their eligibility. Most ODSP clients are unaware of all the ODSP benefits available, so caseworkers often reach out to their clients with this information. Their disabilities are confirmed by their physician or another professional at the application stage. Because most ODSP clients have long-term disabilities, there is no regular reassessment of their eligibility.

1.2 Management of Social Assistance Information

1.2.1 Prior Information-management System Used Between 2002 and 2014

The information-management system used between 2002 and 2014 was called Service Delivery Model Technology (“previous system”). We audited the Ontario Works program in 2002 (see our *2002 Annual Report*) and noted the following with regard to the previous system that had been implemented at that time:

- Caseworkers reported that the system was not easy to use—it had not been designed with their needs in mind.
- The Ministry did not adequately test the system before launching it.
- It could not accurately determine client eligibility and benefit amounts.
- It could not generate certain reports to provide the information needed for decision-makers.
- It did not include adequate controls against fraud.

When we audited ODSP for our *2004 Annual Report*, we found the Ministry had made many changes to the previous system to ensure that it produced consistent and correct information. However, we found that the previous system still “lacked key internal controls, still did not meet certain key information needs of ministry users and recipients of disability support payments, and continued to generate errors and omit information for reasons that could not be explained.”

We again audited both Ontario Works and ODSP for our *2009 Annual Report*, and reported that “despite improvements to the Ministry’s Service Delivery Model Technology information system since its rollout in 2002—many of which were intended to enhance reliability as well as the completeness and accuracy of its information—the system continues to have reliability concerns and known deficiencies.”

1.2.2 New Information-management System Implemented in 2014

Approval and Development of SAMS

In 2009, the Ontario government embarked on an initiative to modernize aging computer technology across the government. The Ministry identified the previous social assistance system as high risk and a priority for modernization. It noted that, among other things, the system’s design was not effective. In addition, the system itself was based on outdated technology and so could not adequately support the business and policy changes coming into effect for social assistance.

The Ministry’s business case stated that the most economical and effective way to “modernize” the previous system would be to replace it with a new “commercial off-the-shelf” system. In other words, it would look for a commercially available system that it could buy as-is, and then customize to meet its business needs.

The government approved the Ministry’s business case in 2009 and provided \$202.3 million in funding, with a deadline of March 2013 to launch SAMS, the new system.

The Ministry set up a competition for commercial off-the-shelf systems, and the Curam Case Management System won in December 2009. This software cost significantly less than estimated in the business case, and as a result, the overall project budget was reduced to \$164.9 million in February 2010.

The Ministry worked with Curam and caseworkers to establish SAMS’ business requirements. SAMS’ development was divided into four parts:

- **Customization of the Curam Case Management System**—this was done by Curam consultants.
- **Reporting features**—this was done by the Ministry.
- **Automatic letters generation feature**—this was done by the Ministry.
- **Interfaces (connections with other computer systems)**—this was done by IBM consultants.

In addition to the software, the Ministry purchased hardware, such as servers to store data, and central processing units to process the data, both from IBM.

Launch Strategy

Late in 2010, the Ministry decided that a “big-bang” launch would be the best way to implement SAMS. This meant that, overnight, SAMS would completely replace the previous system.

Such an implementation is risky. For instance, if from the moment of launch SAMS does not work, or caseworkers do not know how to use it, vulnerable clients who depend on benefits might not receive the money they need to meet basic living expenses such as food and shelter. The Ministry was aware of this significant risk but planned to minimize it by thoroughly testing SAMS to ensure it worked correctly and by training caseworkers in advance.

Since the previous system would no longer be in use when SAMS was launched, this meant that the vast amount of data in the previous system would have to be transferred into SAMS. To minimize the disruption to Ontario Works and ODSP, the transfer would have to occur in as brief a time as possible.

The Ministry contracted with IBM to convert two years of client data from the previous system and transfer it into SAMS, and it procured training materials from IBM to train caseworkers.

Deciding When to “Go Live”

Planning when to launch an information system, and then deciding if the system is really ready to “go live,” are crucial decisions. Launching a system that is not ready can create havoc for the service delivery that the system was designed to facilitate and improve. This risk was especially worrisome in the case of SAMS because that havoc would affect the lives of over 900,000 of the most vulnerable members of society.

The launch date was changed several times because of delays and issues. In October 2014, working toward a launch date of November 2014, the Ministry followed a formal process to assess whether:

- SAMS had been sufficiently tested;
- hardware had been configured, software was working correctly, and all data was ready to be transferred; and
- resources were in place to support caseworkers and manage SAMS after launch.

The Ministry concluded that SAMS was ready, and launched it in November 2014, about a year later than originally planned and about \$40 million over budget. At launch, SAMS had serious defects that caused numerous errors. We explain what happened, and why, in the following sections of this report.

When we completed our audit, the Ministry was still in the process of trying to fix the defects and get SAMS working properly. At that point, the Ministry informed us that this will cost about an additional \$52 million (some of which has already been spent) on SAMS since launch, in addition to the \$238 million spent before launch, for a total of about \$290 million. As the Ministry does not anticipate SAMS will become fully stable until spring 2016, the final cost of SAMS will remain unknown until that time.

2.0 Audit Objective and Scope

The objective of our audit was to assess whether the Ministry of Community and Social Services (Ministry) had effective systems and processes in place to ensure that:

- the development and implementation of the Social Assistance Management System (SAMS) was planned and managed economically, effectively and efficiently, and in compliance with applicable policies and requirements; and
- SAMS was adequately supporting the economic and efficient administration and delivery of Ontario’s social assistance programs.

Senior management of the Ministry reviewed and agreed to our objective and associated audit criteria.

Our audit work was predominantly conducted at the offices of the Ministry, where we interviewed key personnel, including private-sector consultants who worked on SAMS. We also examined pertinent documents and visited six representative Ontario Works offices and three representative Ontario Disability Support Program offices. These offices are located throughout the province, and all use SAMS to support the administration and delivery of social assistance programs. We met with and interviewed front-line workers to obtain their perspective and concerns about SAMS.

We also met with representatives from the Ontario Public Service Employees Union and the Canadian Union of Public Employees, which represent the approximately 11,000 front-line workers who use SAMS daily. We surveyed all Ontario Works offices to estimate the additional costs incurred by municipalities since SAMS was implemented.

We interviewed senior government officials who were part of the committee that made the decision to launch SAMS, and we researched the use of Curam software and IBM services by government organizations in other jurisdictions.

In addition, our audit included a review of relevant audit reports issued by the province's Internal Audit Division. These reports, the last of which was issued in November 2013, were helpful in determining the scope and extent of our audit work. (We discuss the involvement of the Internal Audit Division in SAMS in **Section 4.4.5**).

We completed our fieldwork at the end of July 2015.

3.0 Summary

Data issues, defects and delays derailed the well-intentioned efforts of the Ministry of Community and Social Services (Ministry) to modernize social-assistance delivery with a new high-performing information-management system.

The Social Assistance Management System (SAMS) was not properly piloted or fully tested during its development. Tests that were done yielded results that were below expectations. The Ministry launched anyway because it considered the risks of delaying the launch greater than the risks of launching a system that was not fully ready. Further, the decision to launch was based on incomplete and inaccurate information about SAMS' readiness.

As of October 2015, the consequences of launching a defective system so far included a total of about \$140 million in benefit calculation errors (consisting of \$89 million in potential overpayments and \$51 million in potential underpayments) generated by SAMS and the issuance of many letters and tax information slips with incorrect information, some of which may never be resolved. In addition, staff spent much of their time performing "workarounds" to deal with complex errors that SAMS was generating, and so spent less time serving clients. SAMS still cannot generate reports with accurate information, which affects the ability of the Ministry and municipalities to administer

Ontario Works and Ontario Disability Support Program. SAMS is also vulnerable to fraud.

The Ministry launched SAMS in a way that makes it impossible to return to the previous system. Since the Ministry must salvage SAMS, it is crucial that it prioritize the allocation of resources to fixing it. Until the issues are resolved, it remains unknown whether SAMS will perform better than the previous system. More importantly without a correctly functioning system, caseworkers cannot provide adequate social service to over 900,000 clients.

Before SAMS was launched in November 2014, the Ministry spent \$238 million to develop it, and about \$11 million to support its implementation. Since launch, the Ministry estimates it will spend an additional \$41 million up to March 2016 on SAMS for a total cost of about \$290 million. As the Ministry does not anticipate SAMS becoming fully stable until spring 2016, until such time, the final cost of SAMS will remain unknown.

The following are some of our key observations:

- **The Ministry had yet to identify many defects, and was not fully testing its software upgrades that fix defects**—As of July 31, 2015, there were 771 serious defects outstanding in SAMS. This number is not complete, however, because many defects had yet to be identified. Furthermore, the Ministry had not made fixing defects a priority. Specifically:
 - The Ministry had a backlog of about 11,500 calls from the help desk that it had not yet reviewed. There was also an additional backlog for processing calls to other help lines. Callers to help lines bring potential new defects in SAMS to the attention of the Ministry. The Ministry also had a backlog in reviewing 439 problems identified through these calls, most of which could end up as defects needing to be fixed.
 - It took the Ministry an average of 40 days to fix a serious defect. Only external consultants, rather than ministry staff, had the skills to fix serious defects, but they were

spending less than half of their time (44%) doing so.

- The Ministry told us in August 2015 that it had fixed a certain defect that makes SAMS vulnerable to fraud. However, caseworkers showed us that this defect was in fact not fixed and SAMS was still vulnerable to fraud when we completed our audit.
- The Ministry had installed software upgrades to fix defects but was not fully testing them. This was partly because it did not know how to test them—just prior to launch, the Ministry did not renew contracts with certain consultants who would have been the most effective in testing the fixes. In July 2015, the Ministry hired eight new consultants to work on fixes but estimated it would take about six months for these new consultants to reach the same level of knowledge as the consultants who had been let go.
- **SAMS is still not functioning properly**—Until most of the serious defects are identified and fixed, and software upgrades are properly tested, SAMS will continue to generate errors. Until defects are dealt with, problems will persist, and SAMS will remain difficult to use, will continue to generate incorrect eligibility determinations and benefit payments, will continue to generate inaccurate reports that the Ministry and municipalities need to properly manage Ontario Works and Ontario Disability Support Program, and will lack controls for reducing the risk of fraud. In addition, caseworkers will continue to have to use time-consuming “workarounds” to deal with these problems.
- **The Executive Committee assumed significant risk when it decided to launch SAMS**—The Executive Committee understood that SAMS did not meet the launch criteria developed by the Ministry and assumed the risk that this entailed. It also understood that the following other requirements for launch (not included in its launch criteria) had not been met and also assumed the risk that this entailed:
 - Pilot testing with data converted from the previous system was never conducted, so it was not known if SAMS would work as fully intended when launched.
 - Sixteen per cent of SAMS’ functions were not tested, and the failure rate of functions that were tested was one in eight.
 - Only some of the government-mandated payment testing was conducted, and many serious payment-related defects were found after launch. According to the Office of the Provincial Controller, SAMS is the only computer system ever connected to the government’s accounting system without passing the government-mandated payment testing.
- **The Executive Committee was not aware of the full extent of SAMS’ pre-launch issues**—While the Executive Committee knowingly assumed risks of SAMS not meeting the launch criteria and other requirements, its decision to launch SAMS was not based on complete information because the project team did not tell the Committee about the following with respect to SAMS’ readiness:
 - that the actual number of serious defects it contained was in fact higher;
 - that less user acceptance tests were actually conducted and their results were lower;
 - that some of the interfaces were not tested;
 - that payment comparisons between SAMS and the previous system was never done for the daily-pay-runs; and
 - that converted data was not fully tested.
- **Questionable shift in roles and reporting relationships, lack of Internal Audit involvement, in critical period up to SAMS’ launch**—In the six months before launch, the testing team’s reporting relationship was abruptly changed and started to report to the Business Project Director instead of

the Technical Project Director, as it had been doing. The Business Project Director had no IT background and limited technical expertise. As a result, the Technical Project Director's expertise surrounding testing was not considered when SAMS' readiness was assessed and the decision to go live was made. During this same time, the Ontario Internal Audit Division (Internal Audit) proposed an audit of SAMS' readiness four months before launch. However, as Internal Audit and SAMS' project leads could not agree on the scope of the audit, it was not done. The Ministry also stated that an audit of SAMS' readiness was unnecessary, given the expertise of the IBM consultants preparing it for launch.

- **IBM was unable to correctly convert data from the previous system on time, and this delayed SAMS' launch**—One project requirement for SAMS was that all client data in the previous system, going back two years, be transferred into SAMS. The Ministry chose IBM for the task of converting the data into a format SAMS could use. IBM failed to meet its deadline on three occasions, and the Ministry extended the deadlines three times. It is true that the Ministry revised its requirements for SAMS on several occasions, while IBM was still doing its work, and this posed challenges for the data-conversion process. In any case, because of the delays, there never was an effective pilot of SAMS using the converted data; the Ministry had to push back the launch date three times, and the project budget rose to \$242 million from \$202.3 million. IBM finally delivered the data in April 2014 and at launch, there were about 114,000 errors in the data that caused SAMS to generate incorrect results for client eligibility and benefit payments.
- **Ministry should have overseen consultants; instead, consultants oversaw other consultants through most of SAMS' development**—The Ministry did not properly oversee

Curam and IBM consultants. It relied on the consultants not only to design and develop most of SAMS, but to also oversee their own work. Consultants billed an average hourly rate of \$190. They were overseen by other consultants who were paid daily rates as high as \$2,000. Many consultants took much longer than anticipated to complete their work, and in some instances billed for time spent on fixing errors in their own work. The Ministry's budget for Curam's consultants more than doubled, from \$14 million in the original budget to \$32 million at launch. The vagueness in consultants' time reporting, and the lack of independent oversight during much of the project, made it difficult to assess how efficiently consultants were working.

- **Ministry training of staff inadequate**—The Ministry provided online SAMS user training between January and May 2014. Caseworkers told us that the training program repeatedly shut down without warning and had many errors. Over half of the caseworkers who completed a survey at the end of the program said they did not feel confident they would be able to use the system for complex real-life situations, and one-third said they did not feel confident they could process the data for every-day tasks. After launch, about 80% of Ontario Works and Ontario Disability Support Program offices reported that caseworkers had to deal with many problems sparked by SAMS, and that there were significant issues with staff morale. Almost one-quarter of these offices reported that they were “unable to continue operations without additional support.”

This report contains five recommendations, consisting of 12 actions, to address the findings noted during this audit.

OVERALL MINISTRY RESPONSE

The Ministry values the work of the Auditor General and appreciates the advice on how to

improve the Social Assistance Management System (SAMS) and future implementations of technology solutions. We agree with all the recommendations and will implement them as outlined in the following responses.

There was a critical need to replace the Service Delivery Model Technology (SDMT), the old computer system that managed social assistance. As the Auditor pointed out in 2009, SDMT had security and control issues. The 14-year old system was unstable, at high risk of failure and had to be replaced.

The Ministry acknowledges that the implementation of SAMS was more challenging than anticipated. We continue to make progress in addressing technical issues and improving the system. In addition, front line staff and delivery partners are working hard to ensure that social assistance clients continue to be well served. Throughout implementation, the Ministry focused on ensuring clients received the support to which they are entitled. As impacts to productivity were anticipated, the Ministry implemented workload mitigation strategies which put on hold certain activities with less direct client impact to ensure social assistance clients continued to be served. We are grateful to front-line staff for maintaining high quality customer service.

In early 2015, the Ministry commissioned an independent review by PricewaterhouseCoopers (PwC) to provide recommendations and advice on how best to move forward. The Ministry incorporated all of PwC's recommendations in the Integrated Transition Plan for SAMS, and in a recent report, PwC confirmed that the plan will effectively position the Ministry to achieve its business recovery objectives.

We appreciate the opportunity to respond to the Auditor General's recommendations and the Ministry is committed to ensuring that SAMS provides the necessary foundation to transform and modernize social assistance service delivery. We will continue working closely with

municipal delivery partners on the ongoing improvement of SAMS.

4.0 Detailed Audit Observations

The Social Assistance Management System (SAMS) launched in November 2014 had serious defects and was not fully functional. **Section 4.1** describes the condition of SAMS at the time we completed our audit. **Section 4.2** describes the progress the Ministry of Community and Social Services (Ministry) had made after launch to fix it. **Section 4.3** explains what went wrong throughout project development. **Section 4.4** presents our concerns with the decision to launch SAMS in the condition it was in.

4.1 SAMS Defective at Time of Launch

At the time it was launched, SAMS contained about 2,400 serious defects that caused many different types of errors in clients' eligibility for benefits and the payments they received. Some of these errors were difficult for caseworkers to identify and correct. These defects were mainly due to poorly programmed software and incorrectly converted data. **Figure 1** shows the breakdown of known defects.

The errors caused by defects included both potential overpayments and underpayments of benefits. In addition, SAMS produced letters and tax slips containing incorrect information.

Given that several hundred defects remained in the system when we completed our audit, we believe that SAMS will continue to calculate incorrect benefit amounts. These errors added up to about \$140 million when we completed our audit, and each subsequent calculation error will increase this total.

At the time of our audit, we noted that caseworkers had tried to intercept and manually correct

Figure 1: Serious Defects* Found in SAMS at the Completion of Our Audit

Source of data: Ministry of Community and Social Services

Errors and Problems Caused by Defects	Known Prior	Found after	Total
	to Launch	Launch	
Eligibility determination and payment amounts not correct, and other system functionalities not working	257	875	1,132
Client data converted from previous system not accurate	38	35	73
Letters to clients not correct	81	221	302
Reports incomplete and inaccurate	156	97	253
Information sent to other computer systems through interfaces not accurate	129	150	279
Overall system performance problems (including speed)	50	178	228
Problems faced by clients while accessing SAMS' online features	26	60	86
Total	737	1,616	2,353

* A serious defect produces the wrong result and may require a workaround to produce the right result.

these errors as they were found. However, given the number of defects that have not yet been fixed, and the complexity of the problem, uncorrected errors remained.

Caseworkers also had to deal with client anger and distress over the errors—all the while trying to learn how SAMS works.

4.1.1 Defective System Caused Difficult-to-Identify Errors

At the completion of our audit, several hundred defects had not been fixed and remained outstanding, as we discuss in **Section 4.2**. Defects cause many different types of errors to clients' benefit eligibility and payments.

If caseworkers are unable to identify and correct errors, some may go unnoticed for months, or may never even be identified and resolved. Social assistance recipients are considerably vulnerable insofar as most are disadvantaged or disabled. Many of them may be unaware of errors in their benefit payments, or lack the confidence to dispute government-issued money or documents.

Some examples of errors included:

- SAMS erroneously created a \$2,900 overpayment on a client's file that was never actually

paid to the client. SAMS proceeded to recover this nonexistent overpayment by deducting \$32 from the client's total benefit payments each month. The client found the mistake and notified the caseworker. However, as stated earlier, many clients are not able, or inclined, to review the details of their payments.

- Two files appeared in SAMS for the same individual, allowing this person to receive twice the legitimate benefit payments for three months, before the caseworker caught it.
- SAMS paid benefits for six weeks to a client who was in jail. Incarcerated clients are not eligible for benefits, but a specific defect meant the caseworker was never notified that the client was in jail.

Caseworkers also told us of an instance where SAMS overpaid benefits to a client with mental disabilities who did not realize the benefit was too high. The individual spent the money, and did not have the means to repay it. Through the Ministry's own collection efforts, the bank froze the client's account, leaving the client without any money. A caseworker had to work around SAMS by issuing cheques by hand to the client.

4.1.2 Documents Containing Incorrect Information Mailed to Clients

SAMS automatically generated an unknown number of documents, such as letters and T5 tax slips, with incorrect information. The Ministry doesn't know how many of these documents were generated, nor how many were caught before they were mailed out.

The Ministry told us that all incorrect T5 slips were corrected before they were sent to clients. However, we saw several instances at our site visits of clients bringing incorrect T5 slips that they had received to their caseworkers after noticing errors. There could be other clients who did not identify errors and so would have reported incorrect information in their 2014 tax returns. This could ultimately affect their eligibility for benefits, the amount of benefits they receive, and the tax they have to pay.

We also saw a number of erroneous letters that clients brought to their caseworkers that would have caused the clients stress and confusion. We found letters that stated that:

- Two clients living together each owed \$8,736 because they had been overpaid (the clients in fact owed only \$664 each). We included one of the two letters these clients received in **Appendix 1**.
- An ODSP file had been put on hold and the client would not receive income support or other benefits because the client did not live in Ontario (the client had never left Ontario).
- The client would receive \$17,129 (the client was in fact never eligible for this payment and was never paid).

Caseworkers also told us that other documents, such as drug cards, also contained incorrect information. Drug cards prove to pharmacies that the holders are eligible for medication coverage. In one instance SAMS printed the name of a deceased child on the parent's drug card and the card was mailed to the parent.

4.1.3 Defective System Required Caseworker “Workarounds,” Taking Time Away from Clients

SAMS was supposed to relieve caseworkers of administrative tasks so they could spend more time helping clients become self-reliant. The Ministry began monitoring the functionality of SAMS as soon as it was launched through daily calls to offices providing Ontario Works and ODSP services. In the first month SAMS was in use, the Ministry identified the following issues, all of which resulted in caseworkers having less time to help clients:

- About 80% of the province's 238 Ontario Works offices and 45 ODSP offices reported that caseworkers had to deal with many problems sparked by SAMS, and that there were significant issues with staff morale. Almost a quarter of these offices reported they were “unable to continue operations without additional support.”
- In contrast, only about 20% of all offices across the province reported that they were able to cope with SAMS. We noted that almost all of these offices were in sparsely populated areas, with relatively fewer clients—and therefore had fewer SAMS' errors to deal with.

In addition, some social-assistance services and activities were reduced, and implementation of policy changes was delayed.

Caseworkers Had Less Time to Help Clients

The errors generated by SAMS shifted the majority of caseworkers' time and effort to performing “workarounds,” when they could have been spending that time on providing the full range of case-management services to clients. A workaround is a series of steps to be used temporarily to deal with a SAMS problem until the problem is permanently fixed. Many workarounds require unusual strategies to coax or force SAMS to generate a correct result.

When SAMS went live, the Ministry had developed 27 workarounds for the defects it already

knew about. More workarounds were developed after launch as caseworkers identified new defects. By December 31, 2014, a little over a month after launch, the Ministry had developed 59 more workarounds. Caseworkers also developed numerous additional workarounds of their own to deal with defects that the Ministry was unaware of (because of the help desk's call backlog, as further explained in **Section 4.2.2**).

The following examples show how time-consuming workarounds can be:

- SAMS incorrectly deemed certain clients ineligible for benefits. The workaround required caseworkers to re-add client address information because it did not convert into SAMS from the previous system. This took 34 steps.
- SAMS incorrectly rejected a client for benefits. The workaround required caseworkers to override SAMS' mishandling of the fact that, in the past, the client had been incarcerated for one day. This took 17 steps.
- SAMS incorrectly processed a pregnancy-related benefit, requiring a 25-step workaround.

Workarounds address not only calculation errors, but also defects in SAMS' functions, such as reminders. The previous system had a "tasks" function that the caseworker could set up to receive reminders of which cases required actions each day. SAMS' equivalent of this feature was defective, generating several hundreds of such reminders. In addition, numerous reminders were irrelevant because they related to cases the caseworker was not responsible for.

To work around this, caseworkers had to either set up their own reminders on other computer programs (Outlook), or keep a spreadsheet file of all their cases and check it daily to ensure they were keeping up with tasks such as following up on documents required to maintain client's benefit eligibility or checking in with clients. Maintaining these duplicate task-reminder systems was time-consuming, and provided no efficient way to ensure accuracy and timeliness.

Caseworkers Met Clients Less Frequently

Two Ontario Works offices we visited tracked appointments with their clients. In one, client appointments dropped from 612 in May 2014, before the launch of SAMS, to 325 in May 2015, after SAMS was launched. In the other, the drop was from 862 to 500 between the same two months. Caseworkers told us that these drops were mostly as result of them having to spend extra time to deal with SAMS problems.

Social Assistance Services and Activities Reduced

While caseworkers focus on case management, other staff with more experience (often former caseworkers) deliver services mandated by the *Ontario Works Act* or provided by specific Ontario Works programs. The services they deliver are designed to help clients become more self-sufficient. For example:

- Employment Co-ordinators coach clients in resolving barriers to employment and self-sufficiency, and in establishing viable goals; and
- Family Support Workers help clients negotiate child and spousal support agreements and pursue those support payments.

Municipalities reassigned these other staffers away from their regular duties so they could help caseworkers deal with SAMS issues.

The Ministry also put certain Ontario Works and ODSP activities required by legislation and regulations on hold. **Figure 2** provides details on the suspended activities.

4.1.4 Defects Forced Caseworkers to Circumvent SAMS Processes, Undermining Data Integrity

SAMS should automatically calculate separate benefit amounts such as shelter or heating costs and then tally them up to issue the client's total monthly payment. However, defects caused SAMS to incorrectly calculate the separate benefit amounts.

Figure 2: Ontario Works and ODSP Activities Suspended by Ministry in December 2014

Source of data: Ministry of Community and Social Services

Suspended Activity*
Ontario Works
Updating clients' employment-activity agreements and outcome plans (legislation and regulation requires these to be updated for benefits to be issued)
Recovering benefits from clients who breached their employment-activity agreements (e.g., by not looking for or keeping a job)
Verifying whether existing clients remain eligible for benefits
Ontario Disability Support Program
Verifying whether existing clients remain eligible for benefits (this includes reconfirming their disability)
Preparing an annual Performance Development and Learning Plan
Collecting overpayments from former clients that are no longer receiving social assistance

* When we completed our audit, the Ministry informed us that it was expecting to resume these activities in fall 2015.

As caseworkers were unable to issue correct payments, they had to work around the problem. Their most common approach was to manually issue a client's monthly payment as an "undefined benefit." When issuing undefined benefits, there is no record of the actual benefit types clients are receiving (such as shelter or heating costs), or the amounts. Ultimately, this circumvention of the normal process undermines SAMS' data integrity.

Originally, the Ministry created the "undefined benefit" as a last-resort option for caseworkers to provide clients with the correct amount of benefits. Caseworkers told us they were advised not to issue "undefined benefits" if they could avoid it, but by July 31, 2015, they had been forced to rely on it almost half a million times to pay out about \$130 million. As a result, the \$130 million can't be traced back to the actual benefits clients are receiving or their amounts.

Although caseworkers were issuing fewer undefined benefits by the time we completed our audit, the overall impact of this approach on SAMS' data integrity could be irreversible.

4.1.5 SAMS Still Unable to Report Correct Information

Caseload information helps the Ministry track its social-assistance programs. If Ontario Works is

succeeding in helping clients get and keep jobs and become self-sufficient, this information should be visible. While many ODSP clients are permanently disabled and will not move off the program, caseload information helps the Ministry track trends in enrolment to help it manage the program.

This information also helps municipalities manage their Ontario Works cases and analyze their effectiveness in administering Ontario Works. This information is further necessary to manage the funding of the Ontario Works program. This is explained in detail in the following subsections.

Monthly Statistics on Social Programs No Longer Available

After SAMS was implemented, the Ministry stopped its regular practice of publishing monthly statistics on the number of clients leaving social assistance. This information would normally help the Ministry's decision-makers identify trends and analyze program effectiveness. We sought this information to assess the high-level impact of the reduction in social-assistance services after SAMS' implementation. Through comparisons to the results before SAMS, we wanted to see if we could determine whether clients stayed longer on social assistance than they would have if the full range of social-assistance services to help them become

self-sufficient had been available after implementation of SAMS.

After several requests, the Ministry provided us with these statistics. It indicated, however, that it has not yet completely validated the process used to extract this information from SAMS, and so has not yet made this information public. We therefore did not rely on this information.

Ministry Could Not Determine Total Reimbursement Amounts to Be Paid to Municipalities

The Ministry and municipalities share the cost of benefits paid to Ontario Works recipients. To obtain the funds they need to deliver Ontario Works, municipalities used to complete a claim form every month detailing the payments issued to clients. They submitted the claim to the Ministry and received a lump sum to cover the Ministry's share of these costs. The previous system generated a number of reports from which municipalities could pull the information needed to complete the claim form.

Since SAMS' reporting function was defective from the beginning, municipalities could not total their payments and claim reimbursements. As a result, the Ministry stopped requesting reimbursement claims from municipalities, instead advancing them the same amount each month (based on rolling averages of the amounts municipalities had claimed for reimbursement in the three months before SAMS was launched). It requested that municipalities simply "advise whether the amounts of the advances are sufficient or need adjusting."

Municipalities Unable to Reconcile Bank Records with SAMS' Records

To help identify potential fraud, municipalities need to reconcile the social-assistance payments their banks issue with the records of those payments in SAMS. However, since SAMS could not accurately report on social-assistance payments, this reconciliation could not be performed.

One smaller municipality we visited attempted to reconcile payments made in November and December 2014. SAMS' reports on the social-assistance payments of this municipality for this period indicated about \$218,000 less in total payments than were indicated in the bank records. The municipality was able to manually trace about \$200,000 of this amount to payments that SAMS had registered but did not include in its reports. The remaining \$18,000 could not be reconciled and justified, meaning that it could be either legitimate but not traceable, or unauthorized; it is impossible to know which until the amount is reconciled.

4.1.6 Policy Change to Improve Social Assistance Delayed

SAMS' problems contributed to a delay in implementing a policy change meant to improve social assistance programs.

The government's April 2014 Budget said a new "Employment-Related Benefit" was supposed to be implemented April 1, 2015 to replace seven existing Ontario Works and ODSP employment benefits. This would also simplify the provision of financial assistance to clients and provide a majority of them with slightly more income assistance. The Ministry informed us that the new benefit was suspended to enable it to focus on fixing SAMS first.

4.1.7 Inadequate Training and Assistance for Caseworkers

Caseworkers were not well trained in the use of SAMS. When they sought help, caseworkers received inadequate support.

Caseworkers Found Training Not Useful

At one point during the development of SAMS, the Ministry planned to launch SAMS in May 2014, and scheduled online training for caseworkers between January and May 2014. Caseworkers informed us that the training program repeatedly shut down without warning and had many errors.

Over half of the caseworkers who completed a survey at the end of this training said they did not feel confident they would be able to deal with more complex real-life situations, and about one-third said they did not feel confident they would be able to work on SAMS.

The training proved somewhat questionable anyway because SAMS had not yet been fully developed, so the preliminary version used in training was far different from the final version. This preliminary version also did not contain any converted data to allow for simulation of real-life scenarios. This left caseworkers unprepared to work on SAMS when it was launched.

In the months leading up to the launch, the Ministry provided additional SAMS training for caseworkers. This training was optional and again, converted data needed to simulate real-life scenarios was not used. The Ministry did not track how many caseworkers completed this training.

Help Desk Staff Had No Working Knowledge of SAMS

Staff working the main help-desk right after SAMS was launched had no working knowledge of SAMS and could not directly help caseworkers. While some transferred caseworkers' calls to the Ministry, most just recorded the caller's information regarding the problem and forwarded it to the Ministry. This did not provide most caseworkers' with a resolution when they called, and knowledge of whether their problem would be addressed.

At the time of our audit, the Ministry still had a backlog of 11,500 help-desk calls. After launch, the Ministry had also provided other help lines for specific errors, but those help lines also had a backlog of a few hundred unanswered calls when we finished our audit.

4.2 Ministry Response to SAMS Problems Inadequate

As of July 31, 2015, the Ministry had fixed 1,582 of the currently identified 2,353 serious defects, and

caseworkers were better able to use SAMS than at launch. However, SAMS was still not functioning as it should, with 771 defects remaining outstanding. Also, the Ministry had yet to identify many defects, and had not dedicated all of its resources to fixing defects.

Poor design of SAMS was causing caseworkers to continue to spend an inordinate amount of time processing transactions and performing other activities. We describe all of these findings in this section, and conclude with an analysis of the dollar costs incurred, by municipalities and the province, after SAMS was launched.

4.2.1 Not All Payment Errors Identified

Until such time as serious defects are fixed, SAMS-generated errors will continue to add to the current cumulative total of about \$140 million (consisting of \$89 million in potential overpayments and \$51 million in potential underpayments). This figure includes only those errors from defects that have been fixed; the Ministry can only quantify the dollar-impact error of a defect once it is fixed because that is when SAMS automatically recalculates past incorrect benefits.

For example, SAMS may incorrectly calculate the monthly benefit for a client as \$570, when it should be \$600. After the defect is fixed, SAMS recalculates this amount and reports that the client got \$30 a month less than he or she was entitled to. Such identified potential underpayments and overpayments make up the \$140 million.

The Ministry designed and implemented manual workarounds for caseworkers so a caseworker may already have identified the error and circumvented the normal SAMS process to issue the correct payment, well before the Ministry fixed the defect. In this case, the client would have received the correct amount of money.

However, the Ministry cannot confirm if workarounds were always applied by caseworkers, and as a result, the Ministry does not know what portion of the approximately \$140 million has already

been corrected by caseworkers. Thus, allowing SAMS to adjust the \$140 million of past incorrect benefits could reverse corrections made previously by caseworkers.

In response to this, the Ministry suspended the adjustment of all benefit corrections calculated by SAMS, and told us it is planning to have caseworkers manually review such corrections—starting at an unspecified time in the future.

This means that the Ministry may never know how much of the \$140 million was manually corrected by caseworkers. It also means that people who received less money than they should have in the past (because they or their caseworkers failed to identify the error), may never get a cheque for the shortfall, or likewise overpayments, instances where people received more than they should, may never be collected.

The \$140 million will continue to grow because of the remaining defects, and it will remain an issue until caseworkers start their manual review at an unspecified date.

4.2.2 Ministry Still Does Not Know All Defects

After launch, the Ministry's main source of information on SAMS' defects was caseworkers. Specifically, the Ministry relied mostly on caseworker calls to find out the problems they were experiencing, thereby helping to identify SAMS' defects.

In the first month after launch, the help desk received 12,500 calls from caseworkers. By July 2015, it had received almost 30,000 calls. However, many caseworkers told us they stopped calling the help desk because they found it pointless (as mentioned in **Section 4.1.7**, help-desk staff had no working knowledge of SAMS). Any defects encountered by caseworkers who did not phone the help desk are therefore unknown to the Ministry.

When we completed our audit, the Ministry had a backlog of 11,500 calls from the help desk that it had not yet reviewed. There was also a backlog

for processing the calls made to the additional help lines the Ministry had added.

The Ministry also had a backlog in processing 439 problems identified through these calls, most of which would end up as defects that need to be fixed.

4.2.3 Resources Are Not Sufficiently Dedicated to Fixing Known Defects

At the time of our audit, it took on average 40 days to fix a serious defect, and only Curam consultants, not the Ministry, had the skills to do so. However, according to the most recent report we reviewed on Curam's consultants' time, consultants were spending less than half of their time (44%) fixing serious defects. The remaining 56% was spent developing new enhancements to SAMS' functions, resolving ad-hoc requests and transferring knowledge to ministry staff.

The Ministry informed us that the enhancements will resolve many defects. However, we found that many enhancements were new add-ons to the current system and in fact did not resolve existing defects.

4.2.4 Some Fixes Inadequate

Some defects that the Ministry claimed were fixed still persisted at the time of our audit. Also, some fixes had introduced other problems.

Defect Making SAMS Vulnerable to Fraud Not Adequately Addressed

The Ministry told us in August 2015 that it had fixed 52 of the 57 most serious defects. However, we confirmed that one of the 52, which made SAMS vulnerable to fraud, still existed.

The fix installed a control whereby caseworkers could not make changes to files not in their caseload. However, caseworkers demonstrated to us that they still had unrestricted access to all of SAMS' approximately 900,000 client files.

Caseworkers could change the benefits or personal information such as bank account number for any client. We informed the Ministry of our finding. The Ministry informed us that it will attempt again to fix this defect in November 2015.

Ministry Not Fully Testing Fixes

Ministry staff directly dealing with SAMS after it was implemented told us they were overwhelmed by the sheer number of initial defects. In an attempt to stabilize SAMS in the first 12 weeks after launch, the Ministry installed an average of 10 fixes a day in the form of software upgrades. However, the Ministry was not testing these fixes. The result was that some of these untested fixes caused SAMS to issue \$120,100 in incorrect payments to clients that caseworkers were later assigned to recover.

The main reason the Ministry was not testing its fixes prior to launch was that, due to funding constraints, contracts were not renewed with those consultants best able to test the fixes. In July 2015, the Ministry hired eight new consultants to replace the previous ones; however, only one of the new consultants had any prior experience and knowledge of SAMS. The Ministry estimated it would take about six months for the new consultants to reach the same level of proficiency in SAMS as the previous consultants.

When we completed our audit, the Ministry did not expect to fully test its fixes until early 2016.

4.2.5 Poor Design Not Addressed

In some ways, SAMS was poorly designed, and the Ministry had not addressed this basic flaw at the time of our audit. Until the Ministry addresses this issue in a more substantial way, SAMS will continue to force caseworkers to spend more time dealing with its shortcomings than helping their clients—even after all the defects have been fixed.

For example, SAMS forces caseworkers to enter the name of a school for each child in a family applying for benefits—including children not yet in school. In order to get SAMS to accept the

application, caseworkers type the words “fake school” for children not yet in school. Similarly, caseworkers must enter fictitious address information for clients who are homeless or move frequently. These are not defects; they are design flaws.

In addition, much caseworker time has been taken up with dealing with the design innovations of SAMS, many of which do not actually save much time. For example, inputting client addresses takes about 10 minutes—five times longer than before—because information has to be input into 38 different screens.

Figure 3 shows the results of a time study conducted by one Ontario Works office: seven months after SAMS’ launch, it was taking caseworkers almost twice as long to perform essential daily tasks like entering client addresses. **Figure 3** does not include the fact that caseworkers’ monthly detailed review of benefit-payment accuracy took 20 minutes under the previous system and 2 and a 1/2 hours under SAMS, as the figure only summarizes daily tasks.

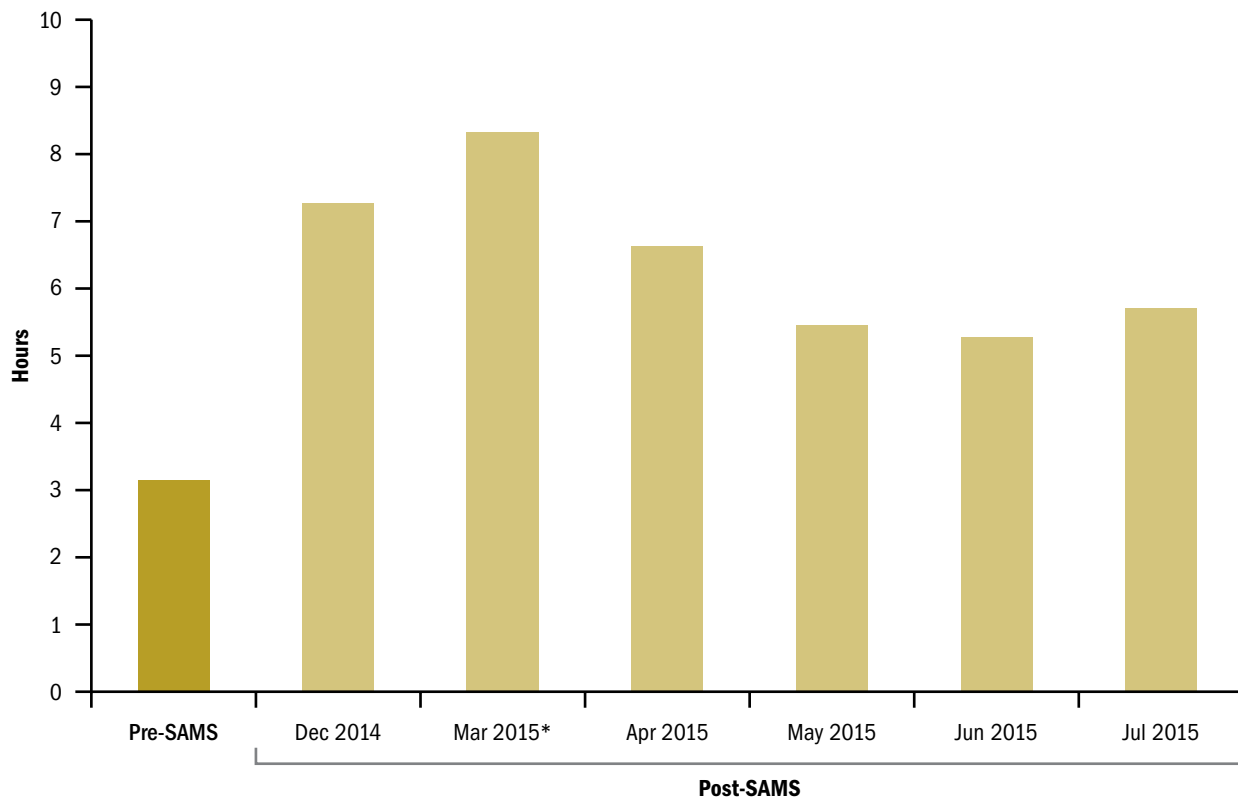
4.2.6 Costs to Stabilize SAMS Will Continue to Increase until Defects are Resolved

The Ministry spent \$238 million to develop and build SAMS, and about \$11 million to support its implementation. The Ministry estimates it will spend about \$41 million up until March 2016 on SAMS for a total cost of about \$290 million. Of the \$41 million, \$20 million has already been spent on stabilizing the system, \$10 million of which was provided to municipalities to help offset some of their SAMS-related costs. However, municipalities incurred significant overtime costs beyond this amount to deal with SAMS’ issues.

We surveyed all Ontario municipalities to determine the total of these costs. About half the municipalities responded to our survey and reported that they incurred \$12.3 million in overtime costs as of June 30, 2015. As the Ministry does not anticipate

Figure 3: Changes in Total Average Time per Caseworker to Perform Daily Essential Tasks Before and After SAMS' Launch

Source of data: One municipal Ontario Works office visited



* Between December 2014 and March 2015, caseworkers started to perform, for the first time, detailed reviews of daily benefit payments, which accounted for the rise in hours in March 2015. This occurred because caseworkers became aware that daily-benefit-payments could contain errors caused by SAMS' defects.

SAMS becoming fully stable until spring 2016, until such time, the final cost of SAMS will remain unknown.

RECOMMENDATION 1

To ensure that eligible individuals receive the level of social assistance and support to which they are entitled, and to eliminate as best as possible, eligibility and benefit payment errors made by the Social Assistance Management System (SAMS), the Ministry of Community and Social Services should:

- assign adequate resources to review the backlog of information related to potential defects so that defects can be prioritized for fixing;

- allocate its resources so that fixing of defects takes priority; and
- develop a process to reconcile all benefit payment errors generated by SAMS to the eligible amounts that clients should have received and ensure that they are corrected.

MINISTRY RESPONSE

The Ministry agrees with the recommendation and has made significant progress in fixing defects and enhancing system functionality since SAMS was implemented last November and since the auditors' field work completed, for example:

- After go-live, the Ministry implemented an aggressive release schedule to incorporate

fixes and enhancements. More than 90% of priority system issues identified by our staff and delivery partners have been addressed.

- The Ministry has a plan to improve incident management in the short term, including the identification of any additional defects. The Ministry has increased its capacity and expertise to assist staff in expediting the clean-up of the incident ticket backlog, and to triage and resolve new incident tickets more quickly and systematically.

The Ministry has moved to a quarterly release cycle for fixes which allows for additional engagement with front line staff and delivery partners to appropriately plan and carefully consider and prioritize defects/enhancements.

The Ministry has put additional payment controls in place and is undertaking a review of its payment control processes to ensure the controls are effectively targeting issues. Any incorrect payments will be corrected and recovered where applicable.

4.3 Consultant Work Inadequate, Not Properly Overseen by Ministry

IBM consultants were responsible for converting data from the previous system into SAMS, and for designing and developing interfaces to enable SAMS to communicate with other external computer systems. Curam consultants were responsible for writing code to customize Curam's off-the-shelf system to ministry business requirements (IBM bought Curam in December 2011, so from that time forward, all consultants were IBM consultants. However, for the purposes of this report, we continue to refer to Curam consultants as those who developed SAMS, and IBM consultants as those who converted old-system data for transfer to SAMS, and developed the necessary interfaces.) Consultants delivered poor-quality work that contributed to delays and defects. The Ministry did not properly oversee the work of the consultants; it also

made consultants' jobs more difficult by changing its business requirements late into the project.

In the following subsections, we examine this area in detail and outline our concerns.

4.3.1 IBM Missed Crucial Data-conversion Deadlines, Generated Errors in Data

After the Ministry completed most of its planning, the completion date for the project was November 2013, with a revised budget of \$171.4 million. As Figure 4 shows, this deadline was extended three times, with a final approved completion deadline of December 2014, one year later than first planned. Increases to the project's budget were approved with each extension, with a final approved budget of \$242 million. As we discuss in the following subsections, IBM's inability to meet deadlines was a key factor in the project extensions and budget increases.

Data Conversion Critical

For SAMS to correctly make eligibility decisions and process payments, it must have the correct data on clients (for example, correct age, income and family status). One of the most challenging parts of the SAMS project was transferring all the data stored in the previous system going back two years into Curam software.

Curam software could not accept and read the data in the previous system because of the way that data was formatted. The data therefore needed to be converted into a format that Curam software could process before it could be successfully transferred. For example, the previous system stored postal codes in whatever way caseworkers typed them in—sometimes with a space in the middle, sometimes without, and sometimes even with a dash in the middle. That postal-code data could not just be moved into SAMS—it needed to be converted into a standard, pre-defined format for Curam software. All data needed to be thus converted, and this required expert knowledge of Curam software.

Ministry staff did not have this knowledge, so the Ministry issued a request for proposals to outside service providers. Specifically, the Ministry sought a service provider that:

- had the expertise to convert data into Curam software; and
- understood the importance of, and could support, a pilot test of SAMS using the converted data.

The Ministry chose IBM in 2011 in part because IBM's proposal met these requirements. IBM was to be paid on the basis of meeting the terms of its contract, as opposed to consultants being paid by the hour. The contract stated that IBM must inform the Ministry if it could not transfer client data and explain why.

IBM Did Not Provide Adequate Expertise

IBM did not deliver converted data to facilitate the pilot test of SAMS that was scheduled for the summer months of 2013. The pilot was a key project milestone, and the risks of failing to conduct a full pilot with converted data were significant, especially because the Ministry had decided on a “big-bang” approach to implementation. If SAMS could not process clients' data correctly from day one, serious problems would occur. Conducting a pilot in advance of launch was supposed to reduce this risk, as the Ministry would be able to identify and fix any errors identified during the pilot.

IBM representatives and some Ministry staff both told us that one of the reasons IBM could not finish the job in time was partly due to the fact that the Ministry defined some of its requirements much later than expected. As a result, IBM struggled to convert some data for software that was still being developed. This in turn required consultants to change what they needed to do to convert some of the data.

On June 17, 2013, the Ministry served a rectification notice on IBM that it had failed to comply with the terms of its contract. The notice stated that IBM had failed to deliver converted data on time and did not ensure that its personnel had expertise or up-to-date certification with Curam software.

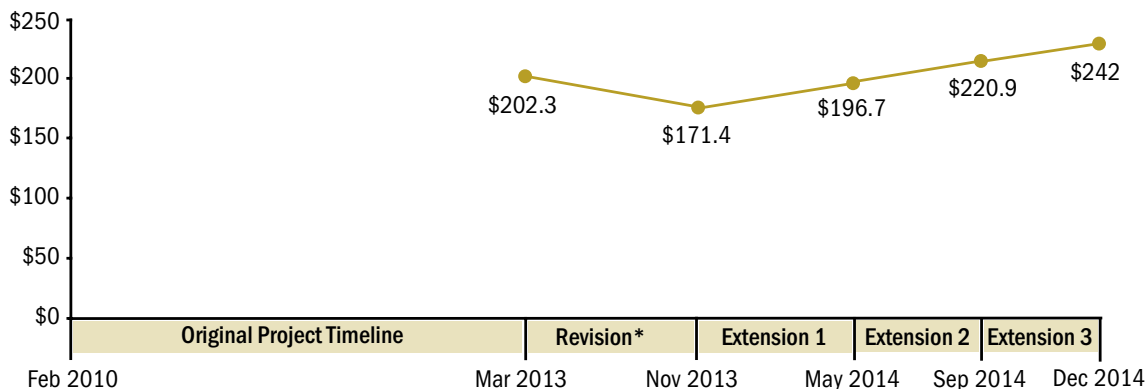
On June 26, 2013, IBM responded, committing to dedicate knowledgeable staff to the project who would deliver the converted data in August 2013. However, the staff still struggled, and IBM again failed to meet the new delivery date.

Since the Ministry had already prepared selected offices for the pilot, it went ahead and conducted a partial pilot without converted data.

With still no converted data from IBM in October 2013, the Ministry asked Treasury Board for a six-month project extension and a \$25.3-million budget increase. It also moved SAMS' launch from November 2013 to May 2014. (This is shown as Extension 1 in Figure 4.)

Figure 4: Project Timeline and Approved Budget, and Subsequent Extensions and Approved Budget Increases (\$ million)

Source of data: Ministry of Community and Social Services



* As a result of further planning, the Ministry revised the original project timeline to November 2013 and the project costs to \$171.4 million.

Essential Pilot Tests Could Not Be Conducted with Converted Data

A pilot of a substantially completed system with converted data would reveal defects that could be fixed before launch. For example, if the caseworkers piloting the system found that it made incorrect benefit-eligibility decisions, calculated the wrong benefit payment amounts or crashed when used, project staff would have months to fix these problems. The pilot would also show if the new system could do daily and monthly pay runs with the correct total payment amounts, matching those being issued by the system currently in use. None of these tests could be conducted in the SAMS pilot because the converted data was not ready.

The Ministry scheduled a second pilot with converted data for later on. However, because data-conversion continued to be delayed, this second pilot was again conducted without converted data. The Ministry did some testing of its own, but as we discuss in **Section 4.4.4**, it was not enough.

SAMS' Launch Postponed for Second Time Because of Data-conversion Delays

On February 18, 2014, about a year after IBM was first supposed to have delivered converted data, the then Deputy Minister of Community and Social Services wrote to the Chairman, President and Chief Executive Officer of IBM. The letter expressed concerns with IBM's inability to abide by the terms of its contract and meet the revised deadlines for delivering converted data. The Deputy Minister stated that IBM's actions were severely impacting the overall project and had forced the Ministry to delay SAMS' launch.

IBM responded with a stronger commitment to finish the job and did deliver converted data in April 2014, but this was far too late to keep to a May 2014 launch. Months would be needed to test it, fix defects and find an opportune time to shut down the system in use for the few days needed to transfer the data over into SAMS.

As a result, in April 2014, the Ministry was forced to yet again ask the government for another

project extension of four months and an additional \$24.2 million to support the project. (This is shown as Extension 2 in **Figure 4**.)

Data Conversion Issues Led to Third Launch Postponement, Budget Increase

In July 2014, it was clear that the converted data IBM delivered in April contained errors and that SAMS had numerous defects. The Ministry reported this to Treasury Board, and requested another project extension of five months and a budget increase of \$21 million. This was needed to conduct more testing, cover additional resources to support the implementation of SAMS and make it stable enough for launch. (This is shown as Extension 3 in **Figure 4**.)

Data Transferred into SAMS Had Thousands of Errors after Launch

After six months of work on minimizing the converted-data errors, the data was transferred into SAMS between November 6 and 9, and SAMS launched on November 11, 2014.

When SAMS was launched, it could not read data for over 5,000 case files because it contained so many errors. The cause of the errors could not be identified.

In addition, the Ministry found after launch that the data for the remaining case files, which SAMS could read, contained 114,000 errors:

- In about 19,000 case files, the data on outstanding overpayment balances, to be collected from clients by the Ministry, was incorrect.
- In about 10,000 case files, the data on trustees (people who manage the payments of ODSP clients who cannot manage their own payments because of a disability) was unreadable. As a result, caseworkers had to manually re-enter the information so that payments could be processed for the affected clients.
- In about 78,000 case files, income information records had been deleted. The Ministry was

alerted to this problem by a caseworker who noticed it for some clients. Clients could lose their eligibility for benefits because these records were missing from their files; to prevent this from happening, the Ministry installed a fix just before the pay run so these clients could still receive their benefits.

- In about 7,000 case files, information on clients who previously received benefits as a married couple but then had separated was mistakenly re-linked. With the erroneous information transferred into SAMS, there were several instances of breach of privacy where, for example, a client's address was disclosed to the client's ex-spouse.

4.3.2 Ministry Did Not Adequately Oversee Consultants

The Ministry was ultimately responsible, as System Integrator, for ensuring that all components needed for SAMS were successfully developed, integrated and tested. However, it relied mostly on Curam consultants to develop SAMS—specifically, to write code to modify Curam's off-the-shelf system so that it met the Ministry's business requirements. Under the contract, the Ministry would pay consultants an average rate of \$190 per hour billed. To mitigate against the risk of consultants claiming expertise they do not actually possess, and purposely delaying work and misinforming the Ministry while charging billable hours, it was essential for the Ministry to have a strategy for staying on top of the project and ensuring it did not spiral out of control. The Ministry did not have such a strategy.

Curam Consultants' Work Mostly Overseen Directly by IBM Consultant

The Curam development team was directly overseen in part by an IBM project manager. This IBM consultant was engaged by the Ministry between March 2010 and April 2013 (when most software development took place) and was paid about \$2,000 per day, for a total of \$1.3 million for the

23-month period. As a result, Curam (owned by IBM) was overseen by an IBM project manager.

Ministry Did Not Have Adequate Controls to Assess Consultants' Effectiveness and Efficiency

The Ministry received timesheets from Curam and IBM, but the information they contained was too vague for the Ministry to know what specific work consultants did for the hours charged; for example, in the sample of timesheets that we reviewed, some consultants stated only that they were “triaging conversion defects and fixing some of them” or “defect fixing.” Given the vagueness of this reporting and the lack of independent direct oversight during much of the project, it was difficult for the Ministry to assess how efficiently consultants were working.

The Ministry told us that it mostly relied on the IBM project manager to assess the efficiency and effectiveness of Curam consultants' work. However, when we reviewed the project manager's work, we found the project manager neither tracked the hours Curam consultants spent fixing SAMS' defects nor included this information in his analysis. His analysis therefore did not provide a complete picture of consultants' efficiency and effectiveness.

Curam Consultants Worked Inefficiently Before Launch, Still Not Required to Report Activity to Ministry at Time of Audit

In April 2013, the IBM project manager was transferred out of this role and the Ministry hired an independent consultant to oversee Curam consultants' work. By November 2013, this consultant had improved the way Curam consultants' work was documented and analyzed. Our review of documents maintained by this consultant identified that between November 2013 and March 2014, Curam billed the Ministry 11,500 hours, at an average rate of \$190/hour, for work that was estimated would take about 10,300 hours, indicating that they were working inefficiently.

From March 2014 on, the independent consultant stopped assessing if work was done efficiently or even on time because development of SAMS was essentially complete and consultants were mainly working on fixing defects. The Ministry made a decision not to assess how efficiently this work was being performed.

The Ministry's budget for Curam's consultants more than doubled from the beginning of the project to launch, from \$14 million in the original budget to \$32 million at launch.

At the time of our audit, the Ministry told us it intended to resume assessing consultants' efficiency.

RECOMMENDATION 2

To prevent unnecessary delays in bringing the Social Assistance Management System (SAMS) to full and effective functionality, and to ensure that the consultants still working on SAMS are held accountable for delivering quality results, the Ministry of Community and Social Services should:

- assign its own properly qualified staff to directly oversee consultants;
- ensure that consultants' work is assessed for efficiency and effectiveness; and
- on future projects, work towards reducing its dependence on consultants, and ensure consultants' knowledge is transferred to ministry staff.

MINISTRY RESPONSE

The Ministry agrees with the recommendation and will improve the monitoring of consultants to ensure the desired results are achieved. In doing so, the Ministry will assess the efficiency and effectiveness of work performed by consultants, and take corrective action where necessary to ensure deliverables are provided within specified timeframes and meet quality standards.

The Ministry will assess and ensure an appropriate mix of consultants and

Ministry resources and will require appropriate knowledge transfer as a priority in vendor agreements.

4.3.3 Curam Consultant Billings Remained High Because Ministry Staff Unable to Fix Serious Defects

We found that in customizing Curam software, Curam consultants' work contained errors that created about 5,100 defects. For the most part, the same consultants were the only ones who could fix the defects they created. Furthermore, as mentioned in **Section 4.2.4**, some fixes engendered further errors that also needed fixing. The Ministry was billed for the extensive time consultants spent correcting their own errors.

The Ministry did not ensure that Curam consultants transferred their knowledge to its own staff before launch. At the time of our audit, the Ministry still relied heavily on Curam consultants to fix serious defects.

The Ministry's staff of 11 developers were becoming more knowledgeable when we finished our audit, but we were still surprised at how slowly they were learning to fix even minor problems. Our review identified that in the first nine months after launch, these 11 staff resolved only 257 minor problems. This translates into only 2.5 fixes of minor problems per month per developer.

RECOMMENDATION 3

To ensure that ministry staff can help fix all defects in the Social Assistance Management System (SAMS) in the short term, and maintain SAMS in the long term after consultants have left, the Ministry of Community and Social Services should:

- establish a knowledge transfer strategy for ministry staff which includes outcome targets based on achieving learning objectives; and
- assess and document the progress in achieving these targets.

MINISTRY RESPONSE

The Ministry agrees with the recommendation and, as part of its Integrated Transition Plan, has ensured that a knowledge transfer strategy is in place and that there is appropriate capacity for ongoing maintenance and improvement of SAMS over the long-term. This strategy consists of:

- assessing staff readiness;
- providing the required product training and support tools;
- reviewing relevant SAMS documentation and project artefacts;
- providing staff access to vendor resources (mentors) currently delivering the services;
- assigning development activities to Ministry staff.

We have implemented outcome targets to ensure learning objectives are achieved. Knowledge transfer status and progress is reported bi-weekly at the Executive level and deployment managers meet with their staff on a regular basis to discuss status and feedback collected from mentors.

4.3.4 Curam and IBM “Free Services” to Ministry Not Really Free

The Ministry told us that IBM tried to compensate it for Curam’s and IBM’s poor performance by providing \$12.8 million in “free services.” This consisted of:

- unbilled overtime (some of which was only estimated, not tracked); and
- discounts on consultants’ hourly rates.

The Ministry and IBM could provide us with adequate support for only \$4.3 million in overtime hours that IBM did not bill for.

We rejected the characterization of discounted hourly rates as “free services” because the discounts were negligible, and the Ministry was still paying significant rates per hour. For example, the Ministry counted as “free services” all the hours for which IBM charged \$231/hour instead of its usual rate

of \$275/hour that it could charge otherwise (the usual rate is what IBM would charge other clients for similar work.) The Ministry considered that \$44/hour reduction, multiplied by the number of hours worked, as free services.

We also believe that crediting IBM for free services should be offset by the fact that, despite issues with the quality of IBM’s work, the Ministry reduced IBM’s performance warranty period (for all services except for interfaces). Specifically, when the project missed its May 2014 launch date (as discussed in **Section 4.3.1**), the original contract with IBM had to be extended to the new launch date of November 11, 2014. Because a new contract would have to be signed, IBM had an opportunity to ask for an increase in consultants’ hourly rates, which the Ministry wanted to prevent. The Ministry therefore reduced the original contract’s performance warranty period of 150 days to just 40 days in the new contract, expiring December 21, 2014. In exchange, IBM did not request an increase in the already high hourly rates of its consultants.

The result of the warranty-period reduction was that between December 21, 2014, and April 11, 2015, the Ministry paid consultants to fix defects that would have been covered under the original terms of the warranty. However the specific dollar amounts related to this could not be determined.

4.4 Ministry Overly Optimistic about SAMS’ Readiness for Launch

In early November 2014, the Ministry knew that SAMS was not functioning as it should be for a November 11 launch to be successful. The Executive Committee decided to proceed with the launch anyway, believing that it and project staff knew enough about SAMS’ defects, that caseworkers and other ministry staff would be able to manage the impact of those defects after launch, and that payments to clients would, for the most part, be accurate. We believe this was an unreasonably optimistic viewpoint.

In this section, we present the “go-live” criteria that the Ministry had developed as the final hurdle for SAMS to meet before launch, as well as SAMS’ known performance against those criteria (**Section 4.4.1**); we discuss other important requirements that the Ministry knew SAMS did not meet (**Section 4.4.2**); we review the risks that the Executive Committee told us it weighed to decide to launch given what it knew (**Section 4.4.3**); we present further deficiencies in SAMS that project staff did not tell the Executive Committee about (**Section 4.4.4**); and we consider additional factors that contributed to the Ministry’s faulty assumption that any problems encountered after launch would be fairly easy to manage (**Section 4.4.5**).

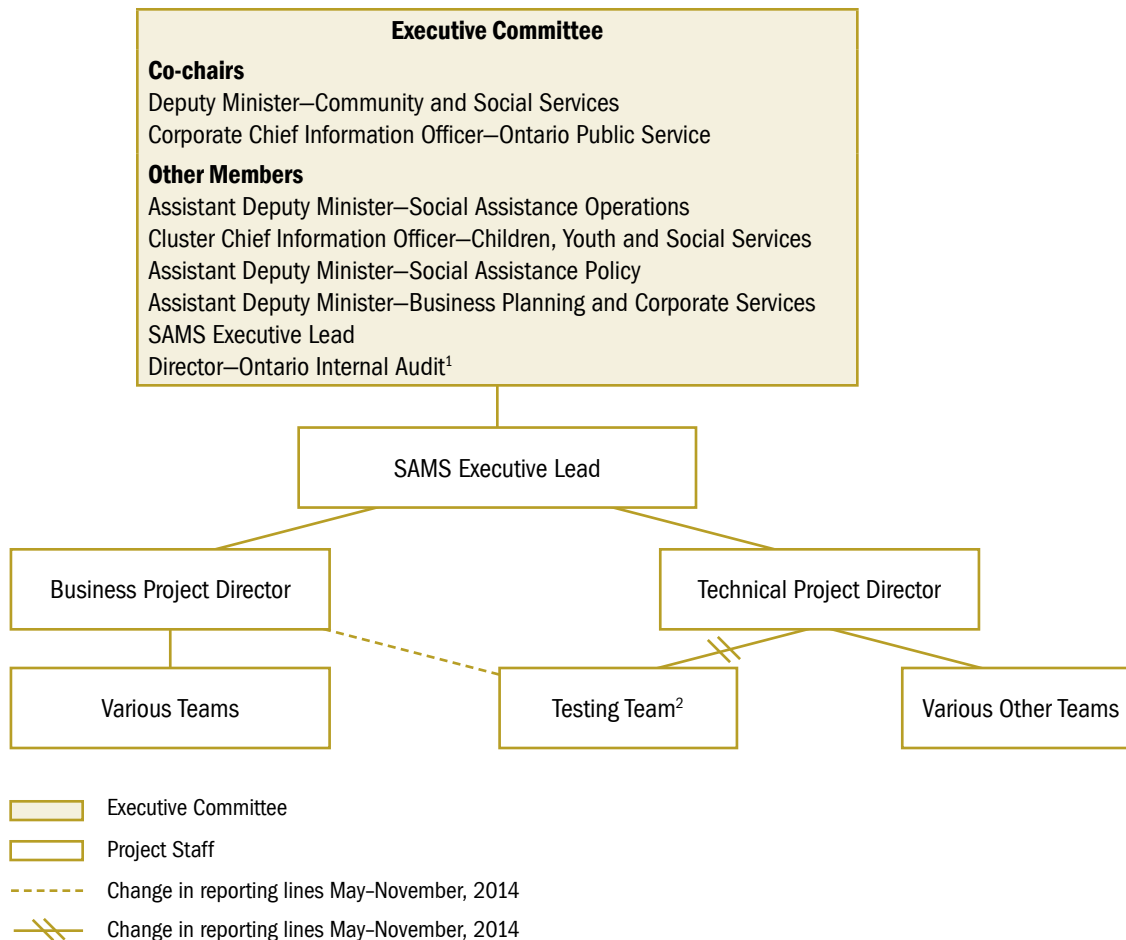
Terminology for This Section

Throughout this section, we will be referring to certain parties shown in **Figure 5**. Specifically:

- **The Executive Committee:** the project’s overseeing body. It made the decision to launch based on information it received from project staff.
- **Project staff:** includes all staff working full-time on the project—the executive lead, the business project director, the technical project director and the members of all teams overseen by the two project directors.
- **The Ministry:** includes all parties in **Figure 5**.

Figure 5: The Key Parties That Developed and Launched SAMS

Source of data: Ministry of Community and Social Services



1. The Internal Audit Director played an advisory role to the Executive Committee. The Internal Audit Director was not a voting member in making the decision to launch SAMS.

2. From May to November 2014 (that is, the six months prior to SAMS’ launch), the testing team reported to the Business Project Director, not the Technical Project Director. After launch in November 2014, the testing team resumed reporting to the Technical Project Director.

4.4.1 Ministry Knew that Go-live Criteria Not Met

Project staff developed go-live criteria against which to check SAMS' performance shortly before launch. This check would enable the Ministry to assess whether SAMS was free from major defects and would function correctly once launched.

Figure 6 lists the criteria and SAMS' performance as reported to the Executive Committee at the

end of October 2014 (two weeks before the planned launch). SAMS met only one of 18 criteria.

4.4.2 Ministry Knew Other Important Requirements Not Met

The go-live criteria were only a final check of SAMS' readiness. Extensive testing beforehand had been planned to occur well before the go-live criteria

Figure 6: SAMS' Performance Information Reported to the Executive Committee in October 2014

Source of data: Ministry of Community and Social Services

Requirement Under Go-live Criteria	Reported Status
1. 90% of planned user-acceptance tests done	81% of planned user-acceptance tests done ¹
2. 90% of user-acceptance tests produce right results	86% of user-acceptance tests produced right results ²
3. 0 serious defects in test results	1 serious defect still existed
4. 100% of SAMS-generated payments traceable to previous system	98% of SAMS-generated payments traceable to previous system
5. SAMS generates 100% of payments generated by previous system	SAMS generated 99% of payments generated by previous system
6. 0 discrepancies in payment amounts between previous system and SAMS	5,500 discrepancies in payment amounts between previous system and SAMS ³
7. Daily pay run takes less than 1 hour; monthly pay run takes less than 6 hours	Daily pay run took 11.5 hours; monthly pay run took 11.5 hours
8. 0 serious defects when processing pay runs	0 serious defects when processing pay runs
9. 100% of test scenarios executed	95% of test scenarios executed
10. 100% of test scenarios executed using converted data	0% of test scenarios executed using converted data
11. 100% of interface testing with third parties done	70% of interface testing with third parties done
12. No batches skipped while running all six batch groups; 0 batch groups to exceed expected time frames	Reports batches skipped while running all six batch groups; 3 batches exceeded expected time frames (taking 13 hours, 13.5 hours and 21.75 hours)
13. 100% of routine tasks take 3 seconds or less	75% of routine tasks took 3 seconds or less
14. SAMS takes under 3 seconds to reassess client eligibility after changes made to case	SAMS took between 3 and 10 seconds to reassess client eligibility after changes made to case
15. SAMS takes under 7 seconds to search cases by name and status	SAMS took 8 seconds to search cases by name and status
16. 0 data-conversion errors found in 14 fields checked	Not reported ⁴
17. 0 client's eligibility or payment amount should be impacted by uncorrected data-conversion errors	15,824 clients' eligibility or payment amount were impacted by uncorrected data-conversion errors
18. 0 serious defects in converted data	7 serious defects in converted data

1. As explained in Section 4.4.4, our audit work determined that only 74% of planned user-acceptance tests were done, not 81% as reported to the Executive Committee.

2. As explained in Section 4.4.4, our audit work determined that less than 86% of user-acceptance tests produced right results. Testers did not track the number of times they misrepresented right results, so the percentage cannot be determined.

3. As explained in Section 4.4.4, our audit work determined that there were 52,000 discrepancies in payment amounts, not 5,500 as reported to the Executive Committee.

4. Project staff did not report the number of errors found in the 14 fields checked. Instead, it reported that "all discrepancies are identified and remedial action documented." Our review found that almost 30,000 data-conversion errors were found in the 14 fields. The Ministry's remedial actions were for caseworkers to manually fix these errors.

were assessed. Some of this planned testing did not take place. In addition, the go-live criteria did not include several important requirements that should have been considered. We describe both in the following subsections.

Some Planned Testing Did Not Take Place No Pilot Conducted with Converted Data; Limited “User Acceptance Testing” Identified that More Test- ing Was Needed

As discussed in **Section 4.3.1**, a planned full pilot of SAMS never took place because converted data (from the previous system into SAMS) was not available in time. Thus, the version of SAMS that was launched was never piloted with actual data.

Project staff did conduct what was called “user acceptance testing,” which is similar to a pilot. User acceptance testing would show how SAMS performs certain tasks; however, it would not show, as a pilot would, how SAMS’ performance compares to that of the previous system, which in a pilot would have been run alongside SAMS.

User acceptance testing should be conducted with fully trained caseworkers, performing their actual day-to-day activities. For the SAMS testing, however, the caseworkers were not fully trained on SAMS, and the version of SAMS they tested was incomplete: it was not able to generate payments, generate reports or interface with other computer systems, since these functions were not yet ready and had not been installed.

The ministry staff that helped facilitate this test for caseworkers noted that more testing was needed on all SAMS components, as well as on general performance (how quickly and efficiently SAMS processes information).

16% of 1,772 Business Requirements Not Tested; Test Failure Rate Was One in Eight

SAMS must be able to correctly perform myriad functions, including determining eligibility, calculating payment amounts, generating letters and reports, and interfacing with other computer systems. Of all the business requirements the Ministry defined for SAMS, about one-third related to report and letter generation and interfacing. Project staff tested those functions thoroughly, but did not completely test SAMS’ other functions. It left 16% of the business requirements for those other functions untested.

The overall average failure rate in test results was 13%, or one in eight. **Figure 7** shows these results. In other words, 13% of SAMS’ functions were not working as intended.

Important Criteria Not Included in Go-live Check Go-live Criteria Did Not Specify Overall Acceptable Number of Serious Defects; There Were Hundreds at Launch

The Ministry’s launch strategy stated, “...the solution to be delivered is complex with significant risk to the Ministry if the solution is implemented with defects” and that SAMS should be implemented

Figure 7: Test Results for Different SAMS Functions

Source of data: Ministry of Community and Social Services

Function	Total Tests	Unsuccessful Tests	Failure Rate (%)
Generate a correct report	2,579	700	27
Generate a correct letter	8,574	1,384	16
Interface successfully	4,006	554	14
Other functions (e.g. eligibility determination, calculation of payment and other case management functions)	8,114	293	4
Total	23,273	2,931	
Overall Failure Rate			13

with little to no defects. We noted, however, that the go-live criteria did not specify what “little” meant with respect to defects.

If SAMS were to launch with a lot of serious defects, it would not matter if SAMS met all the other go-live criteria. Given the big-bang approach to implementation, the impact of a large number of serious defects would outweigh any functionality SAMS had. As indicated in **Figure 6**, the go-live criteria specified only the following with respect to serious defects:

- Serious defects found in just the user acceptance testing should be resolved and retested (criterion 3, which was not met: one serious defect still existed at the go-live check).
- There should be no serious defects preventing pay runs from being processed (criterion 8, which was the only criterion met).
- There should be no serious defects relating just to data conversion (criterion 18, which was not met: there were seven serious data-conversion defects).

Project staff told the Executive Committee shortly before launch that, overall, SAMS had 418 serious defects and that they had assessed 217 of them for their impact on caseworkers. Project staff reported that the errors these 217 serious defects would produce could be circumvented by 27 workarounds. No workarounds had been devised for the other 201 serious defects.

In fact, project staff knew of many more serious defects than what was reported to the Executive Committee. We discuss this in **Section 4.4.4** and **Section 4.4.5**. The point here, however, is that, notwithstanding the defects the Executive Committee did not know about, the Executive Committee made the decision to go live with the understanding that there were 418 serious defects and that workarounds had been prepared for only 217 of them.

Government-mandated Payment Testing Not Part of Go-live Criteria: Incomplete Tests Resulted in 28 Serious Defects After Launch

Since 2005, the government has mandated that the computer system for any program that provides

payments must pass certain tests to ensure that payments and cheque stubs are accurate. SAMS was not in a stable enough condition to pass all of these tests, and only some testing was conducted.

This requirement was triggered by an incident that occurred in 2004. About 27,000 Ontario Child Care Supplement cheques for November 2004 were printed with the name, address and Social Insurance Number of the wrong recipient. To prevent something like this from happening again, the government now requires that any computer system that issues direct deposits and cheques through the government’s payment processing system (the Integrated Financial Information System, or IFIS) must undergo mandatory testing.

SAMS interfaces with IFIS for ODSP payments, so it should have undergone the mandatory testing. According to the Office of the Provincial Controller, SAMS is the only computer system ever connected to IFIS that has not done so.

The government’s Enterprise Financial Services and Systems Division (EFSS), who performs this test, did a limited test to ensure that SAMS’ payment file would not crash IFIS and that IFIS would issue the payments. However, EFSS could not perform all of the required tests. As a result, significant risks, such as the risk that a payment could go to the wrong person, remained untested.

When SAMS was launched, the first pay run essentially represented a complete test cycle. During this pay run, 28 serious defects were found, most of which the Ministry labelled as the highest severity that had broad system-wide impacts and resulted in some clients’ not getting paid, duplicate payments being issued, and noticeable errors in printed cheque stubs.

We also noted that after launching SAMS, when major software upgrades are installed, SAMS is required to undergo the same government-mandated payment testing. This is because software upgrades risk making unwanted changes to payment files which can create errors and complications while processing payments. This risk can only be mitigated if the Ministry conducts

testing. Although SAMS has been upgraded several times, we noted that the Ministry did not do these tests prior to installing the upgrades. Without proper testing, such errors are at risk of being re-introduced.

RECOMMENDATION 4

To ensure that the Social Assistance Management System (SAMS) reaches the high level of performance intended and that it functions in compliance with government requirements, the Ministry of Community and Social Services should ensure that SAMS undergoes and passes all government-mandated payment testing.

MINISTRY RESPONSE

The Ministry agrees with the recommendation and recognizes that the strategy taken for this element of payment testing represented a condensed approach to address key risk.

The Ministry will work with the Office of the Provincial Controller, Treasury Board Secretariat and the Ministry of Government and Consumer Services to ensure that current and future SAMS changes requiring government-mandated payment testing will adhere to the full end-to-end process. We will share lessons learned in this regard across government.

4.4.3 Executive Committee's Rationale for Launching an Unready SAMS

The Executive Committee told us that it considered the following risks if it delayed the launch of SAMS to be greater than launching a system that was not fully ready:

- The next available launch date would have been spring 2015. This would be the earliest time that a four-day shutdown of the existing system could be scheduled for data transfer with minimal disruption to Ontario Works and ODSP services. However, Ministry contracts with ODSP caseworkers were due

for negotiation in spring 2015. There was therefore a risk that the launch would be pre-empted by labour negotiations and would have to be delayed even further.

- The Ministry trained caseworkers on SAMS in May 2014, six months before the planned launch. Although the Ministry provided additional, optional online training in the months following the original training and could continue to do so, the Executive Committee believed that delaying the launch to spring 2015 posed a risk that caseworkers would have forgotten their training and would find it much harder to use SAMS than as compared to November 2014.
- Pushing back the launch date would require the Ministry to ask the government for another project extension and more money (the amount requested would be considerable—every three-month extension costs about \$20 million). Because the Ministry had already done this three times and still did not have a fully functioning system, they believed that, coupled with the other factors, there was a possibility that the government could refuse and decide instead to cancel the project altogether, cut its losses and start over again.

Executive Committee members told us that, given their understanding of SAMS' readiness (which included assessing the risks of launching SAMS in its current state), the risks of launching in November 2014 were lower than the risks of delaying.

However, as we explain in the next section, the Executive Committee did not know the whole story regarding SAMS' readiness.

4.4.4 Executive Committee Did Not Have the Whole Story about SAMS Readiness

The Executive Committee was not told the following with respect to SAMS' readiness:

- the number of serious defects in SAMS;

- the actual number of user acceptance tests conducted and their results;
- that not all interfaces were tested;
- the lack of testing done to compare daily-pay-runs in SAMS with the previous system; and
- the lack of testing of converted data

Project Staff Did Not Disclose All Defects to Executive Committee

Project staff told the Executive Committee that SAMS had 418 serious defects, and that 217 of them could be handled by just 27 workarounds. However, we found that SAMS actually had 737 serious defects.

Ministry staff explained to us that the remaining 319 serious defects were not shared with the Executive Committee because they had started developing solutions or fixes for them. They also explained that these fixes were in various stages of development or testing, however they were not fixed before SAMS was launched and therefore continued to have an impact on SAMS.

Project Staff Conducted Fewer Tests than Reported, Results Incorrectly Stated

Project staff told the Executive Committee that 81% of planned test scenarios were executed. Go-live criterion 1 was for 90% of the planned test scenarios to be executed (see **Figure 6**). The Executive Committee felt that missing the criterion by just 9% was an acceptable risk. However, our review of documentation found that only 74% of planned test scenarios were executed.

The Ministry's original test plan included scenarios for testing all of SAMS' functions. However, a number of functions were not ready in time for user acceptance testing. They included the functions around generating a payment file after calculating a client's benefits. The payment file is sent to IFIS, which issues cheques. Because these functions were not ready, the Ministry revised the test plan, reducing the number of scenarios to only those that could be tested. This inflated the test results. While

only 74% of the test scenarios in the original, complete test plan were executed, 81% of the test scenarios in the revised, shorter test plan were executed.

Project staff told the Executive Committee that SAMS produced the right result in 86% of the test scenarios executed. Go-live criterion 2 was for 90% of test scenarios executed to produce the right results (see **Figure 6**). The Executive Committee felt that missing the criterion by just 4% was an acceptable risk. However, we learned in interviewing the testers that wrong results were counted as right results as long as the wrong result was caused by a known defect. Testers were also not asked to record how many results they did this for, so the actual percentage of test scenarios producing the right result is not known.

Project staff told us that in these cases, they knew why the wrong result occurred and once the defect was fixed, SAMS would produce the right result. This view might be defensible if the Ministry had fixed all defects before launching SAMS, but it did not.

Executive Committee Did Not Know One in Eight Interfaces Not Tested

Interface testing with third parties determines if client data transfers correctly between SAMS and external computer systems. Project staff did not test 11 of the 85 interfaces, or about one in eight, and the Executive Committee did not know this.

One interface that was not tested informs caseworkers of individuals who are serving a prison sentence and should not receive benefits. As this interface did not function properly, caseworkers would not receive this information promptly to stop benefit payments to incarcerated clients. The Ministry issued a workaround for the problem and notified caseworkers about it in May 2015. By this time, however, SAMS had communicated incorrect information in more than 25,000 notifications regarding incarcerated clients. As a result, there was a high risk that payments to incarcerated clients had not stopped. While some of these payments may have been stopped because caseworkers

became aware of the incarcerations through other means, we found several cases during our site visits where the payments had not been stopped. For example, one prisoner received \$466.58 in benefit payments while incarcerated that would take 16 months to recover.

The 74 interfaces that were tested were divided into 17 test groups. Before launch, almost half of the groups had either not been completely tested or had unresolved transmission errors. One interface enabled client information to be transferred to external service providers that help ODSP recipients find jobs. Since this interface had several transmission errors when SAMS was launched, service providers faced the risk of not having the right information to contact these ODSP clients on time.

Executive Committee Did Not Know that Pay Runs Not Fully Tested

The Ministry tested SAMS’ ability to issue correct payments several times prior to implementation by comparing its payments with those issued by the previous system. The last test was of the monthly pay run in October 2014, one month before launch. The monthly pay run issues 616,000 payments to clients, or about 77% of all client payments. These are for the many recurring benefits issued in set monthly amounts.

The remaining 23% of payments are issued in a daily run and include one-time benefit payments for things like medical supplies and advance payments. About 186,000 daily-run payments are issued per month, totalling about \$78 million.

The Executive Committee thought both runs had been fully tested before launch. It did not know that only the monthly pay run - and not the daily pay run - was fully tested, and that project staff were, therefore, not fully aware of what the results would be when SAMS did the first live daily pay run (although daily and monthly pay runs can issue similar payments, certain payments are issued only during the daily pay run).

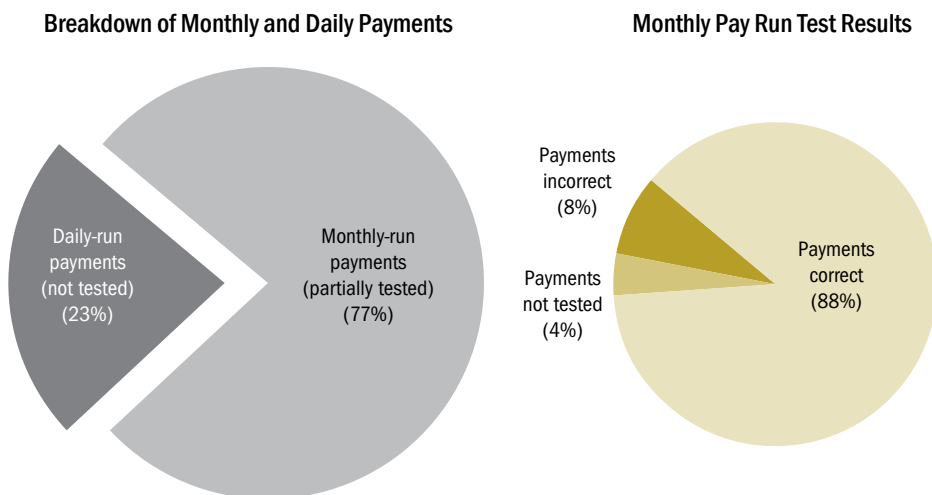
The Executive Committee also thought the monthly pay run had been fully tested, but it was not. Because some interfaces and the function that suspends payments under certain conditions were still not functioning in October 2014, about 26,000 payments in the monthly run were excluded from testing.

Of the about 590,000 monthly-run payments that were tested, about 52,000, or 8% of the run, were incorrect because of defects in SAMS (that is, SAMS incorrectly issued overpayments, underpayments, or no payments at all).

Figure 8 shows a detailed breakdown of the testing and the results.

Figure 8: Breakdown of Pay Runs into Monthly and Daily Payments, and Testing Results, October 2014

Prepared by the Office of the Auditor General of Ontario



The Executive Committee thought that testers had found only about 6,000 discrepancies (that related to SAMS' defects) between the actual monthly pay run of the existing system and SAMS' test run. It believed that case workers would be able to work around these discrepancies when SAMS did its first live pay run and ensure clients received the correct benefits.

However, testers actually found about 52,000 discrepancies, which caseworkers had little hope of managing in the first pay run.

Project staff told us it fixed some of the defects causing incorrect payments before launch but did not have time to retest the pay run to confirm the fixes worked. However, as discussed in **Section 4.2.4**, the adequacy of fixes had been shown to be far from certain, and can only be assured through testing. We also found that one of the defects that the Ministry told us had been fixed before the pay run test was conducted, had in fact not been fixed and continued to generate incorrect payments.

Executive Committee Did Not Know that Converted Data Was Not Fully Tested And How Many Errors It Contained

The Ministry specifically identified data in 51 screen fields that should be cleaned up from the previous system so that when this data is transferred into SAMS, it does not cause errors in processing clients' eligibility and benefit payments. Ideally, converted data should be checked in all 51 fields. However, the Ministry tested converted data in only 14 prioritized fields. The Executive Committee did not know this.

In the 37 fields that were not tested, caseworkers found errors after launch that led to:

- **Breaches of client privacy:** Whether a client's address was correctly converted into SAMS was not tested. Caseworkers told us of several instances where improperly converted data led to client addresses being disclosed to people who should not have access to this

private information. For example, the Ministry estimated that in about 7,000 cases, IBM data converters mistakenly re-linked together the files of previously-linked individuals such as divorced couples. When their data was transferred into SAMS, the ex-spouses' personal information was available to one another. In one example, an abusive ex-husband gained access to his ex-wife's address when he applied for social assistance.

- **Deletion of 78,000 income records:** Whether clients' historical income information was correctly converted into SAMS was not tested. As mentioned in **Section 4.3.1**, IBM data converters incorrectly deleted 78,000 such records when transferring them to SAMS clients whose records were lost would not have been eligible for benefits, and SAMS would automatically suspend their accounts. To prevent this from happening, the Ministry installed a fix just before the pay run so these clients could still receive their benefits.

In the 14 fields that were tested, about 29,000 errors were found (these were discussed previously in **Section 4.3.1**).

4.4.5 Project Staff and Executive Committee Assumed a High Degree of Risk

As mentioned in **Section 4.4.3**, the Executive Committee told us it thought in October 2014 that it was too risky to ask the government for permission to postpone the launch of SAMS because SAMS was not ready. It worried that the government might finally put a stop to the project, which was increasingly over-budget and had already been repeatedly postponed. However, launching SAMS before it was ready was also very risky. As this report has described, it resulted in the following problems, none of which had been fully solved when we completed our audit:

- mistakes in payments and information sent to clients;

- reduced service to clients because of the time taken to identify, work around and/or correct these mistakes;
- inaccuracies in SAMS generated reports; and
- issues with integrity of the data in the system.

In this section, we highlight two factors that magnified the risk that project staff and the Executive Committee assumed. In our view, they contributed to what proved to be an unjustified optimism that the SAMS launch would go reasonably smoothly and that any problems would be manageable.

Roles and Responsibilities Shifted Just Prior to Launch

Six months before launch, there was a shift in the roles, responsibilities and reporting relationships of the business and technical teams. The technical staff testing the readiness of SAMS moved from reporting to the Technical Project Director to reporting to the Business Project Director.

The Ministry informed us that the change in testing responsibility was made to resolve workload issues. However we noted that both the business team and the technical team were equally occupied with preparing for launch. We also noted that after the launch of SAMS, the testing team went back to reporting to the Technical Project Director.

The result was that the expertise of the Technical Project Director was not considered with respect to test completion and test results when SAMS' readiness was assessed and the decision to go live was approved. The Business Project Director who oversaw the technical staff conducting the last six months of testing before launch did not have the Technical Project Director's technical expertise. This six-month period of changed roles and responsibilities was critical, because information about the tests conducted on SAMS and their results was gathered and shared with the Executive Committee during this time to support the decision to launch SAMS.

Internal Audit Did Not Audit SAMS' Readiness for Launch

All ministries are served by an internal audit team that is part of the Ontario Internal Audit Division (Internal Audit). Internal Audit's mandate is to help ministries achieve their business objectives by proactively consulting on, evaluating and improving risk management, controls and governance.

Four months before launch, Internal Audit met with SAMS' project leads and proposed that they audit SAMS' readiness for launch. However, Internal Audit and the project leads could not agree on the scope of the audit. Internal Audit told us that the Ministry believed the IBM consultants on the project team had all the expertise needed to advise on SAMS' readiness for launch. It suggested that Internal Audit's scope of work should rather focus on SAMS after launch.

Internal Audit did conduct audit work on the SAMS project, but the last report it issued, in November 2013, was a full year before launch. When we completed our audit that was the last audit they had conducted.

Executive Committee Accepted the High Degree of Risk Based on Risk Assessment Conducted in October 2014

The project team (with technical testing still reporting to the Business Project Director) and an IBM senior executive conducted a risk assessment during the last two weeks of October 2014. They concluded that the risks of launching a system that did not fully meet the go-live criteria should be accepted and launch should go ahead.

Senior project staff and other members of the executive committee presented the results against the go-live criteria and the accompanying risk assessment to the co-chairs of the Executive Committee, whose approval was needed to launch SAMS.

The Executive Committee accepted the risk assessment's recommendation and on October 31, 2014, approved the November 11, 2014, launch.

RECOMMENDATION 5

In order to improve the decision-making process used to launch a major information system, the Ministry of Community and Social Services should:

- ensure that the decision to launch an information technology system is based on relevant criteria and information that provides decision-makers a complete and accurate status of system readiness; and
- have Internal Audit independently review key information used in assessing the system's state of readiness while making the decision to launch.

MINISTRY RESPONSE

The Ministry agrees with the recommendation and will ensure that all information that is provided to decision makers will include a complete and accurate status of system readiness that is independently assessed by an internal audit. In addition, the Ministry will ensure an increased role for internal audit in assessing the readiness of major information systems prior to making a decision to launch a system. This would be in addition to the advisory role played by the Executive Committee and internal audit on specific engagements earlier in the project lifecycle of SAMS.


Appendix—Example of a Letter with Incorrect Information Sent to an ODSP Client

Source of data: One ODSP office visited

Ministry of Community
and Social Services

[REDACTED]

[REDACTED]



March 30, 2015

[REDACTED]

[REDACTED]

[REDACTED]

Dear [REDACTED]:

I am writing to you about your income support from the Ontario Disability Support Program (ODSP).

As you know, you owe \$8,736.02 for your overpayment. An overpayment happens when you receive more money than you are eligible to receive.

How to pay back your overpayment

Please call your local office by April 13, 2015 to talk about a plan to pay back your overpayment.

You have an obligation to pay this debt

If we do not receive payments, your overpayment may be referred to the Canada Revenue Agency Refund Set-Off Program. Under the program, your tax refunds and GST rebates may be used to pay back the money you owe.

If you re-apply and receive assistance from ODSP or Ontario Works and have not paid back your full overpayment, we will deduct money from your monthly income support or financial assistance to pay for it.

If you have any questions or need more information

If you would like to talk to someone about this letter or your case, please contact [REDACTED] by calling [REDACTED].

You can find more information about social assistance on the ministry's website at www.ontario.ca/community.

Sincerely,

[REDACTED]
for the Director of the Ontario Disability Support Program

Legislative Authority

Section 14 of the ODSP Act

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