

## Agency Reporting on Post Payment CEWS Compliance Activities

### Recommendation for a consistent approach to Agency reporting across all Branches:

Reporting Requirement	ABS B	LPRAB	CPB	CVB	Agency
Post Payment Reassessment Data in RPS	Yes	Yes	Yes	Yes	Yes
1) Taxpayer requested reassessments	X	X	X	X	
2) CRA audit initiated reassessments	X	X	X	X	
3) Claim that was reassessed	X	X	X	X	
Post Payment Adjustment Data in Integras	No	Yes	Yes	Yes	Yes
1) Workload selection reason, (pilot, TPR, CRPS, referral)		X	X	X	
2) Total adjustments to an employer		X	X	X	
3) Total adjustments by program		X	X	X	
4) Total adjustments by Risk Issue		X	X	X	
5) Total adjustments by Legislative reference		X	X	X	
6) Reassessment control		X	X	X	
Post Payment Audit Effort Data in Integras	No	No	Yes	No	No
1) Audit hours					
2) TEBA					
Post Payment Penalties and Interest Data (source system TBD)	Yes	Yes	Yes	Yes	Yes
1) Total penalties applied		X	X	X	
2) Total interest accrued		X	X	X	

### Rational for recommendation:

Reporting Requirement	Advantage	Disadvantage
Reassessments in RPS	Is the source system of the reassessment to each claim, (# of claims/RP Accounts reassessed).	It is not known if RPS will capture the source program generating the reassessment.
<b>Recommended for Agency reporting on Post Payment CEWS Audits in Integras: YES</b>		
Adjustments in Integras	Is the source system of the adjustments rolled up by claim periods to the employer.	Two source systems required to match employer adjustments in Integras to claim reassessments in RPS, (solution developed to close this gap)
Adjustments in Integras	Provides a adjustment summaries by program, risk issue and legislative references.	Data integrity is subject to monitoring of compliance to program data capture requirements.
<b>Recommended for Agency reporting on Post Payment CEWS Audits in Integras: YES</b>		
Audit Effort in Integras, hours per case	Can capture audit hours on an Integras Case.	Only CPB uses this measure. The horizontal reporting will yield inconsistent outputs on a report.
Audit Effort in Integras, hours per case	Can capture audit hours on an Integras Case.	Only TSO employees can charge time to a case, HQ must use IO numbers. Reports within CPB would be inconsistent.
<b>Recommended for Agency reporting on Post Payment CEWS Audits in Integras: NO</b>		
Audit Effort in Integras, TEBA	Can capture the tax earned by a audit, adjustment to the claim	Only CPB uses this measure. The horizontal reporting will only capture information for CPB in a report.
Audit Effort in Integras, TEBA	Can roll up all of the adjustments into audit result codes to calculate TEBA.	Additional IT development would be required to deliver a solution that has no value as the adjustments already roll up to the employer.
Audit Effort in Integras, TEBA	Captures the reduction of the impact on future income resulting from an adjustment to the claim.	Program making the same a adjustments would yield different outputs because CPB would amounts reduced by future impacts on income.
<b>Recommended for Agency reporting on Post Payment CEWS Audits in Integras: NO</b>		
Penalties and interest	Required to determine the overall fiscal impact of adjustments to CEWS claims.	The process/system for capturing this information is not yet known.
<b>Recommended for Agency reporting on Post Payment CEWS Audits in Integras: YES</b>		

---

# REPORTING ON POSTPAYMENT CEWS COMPLIANCE ACTIVITIES

---

## PURPOSE

The CRA is conducting post payment compliance of CEWS claims using a combination of risk assessment techniques and the Integras audit system to review/audit the eligibility of amounts paid to an employer. A coordinated Agency approach for this workload was chosen to leverage program expertise and to prevent an employer from being contacted multiple times by different CRA officials about one or more claims.

The post payment workload may result in adjustments to claims paid, which would require the repayment of ineligible amounts, plus any penalties and interest that would be applicable.

**At the CEWS Compliance Committee meeting held June 19, 2020**, Agency and Branch reporting requirements for CEWS audits was raised for discussion where it was confirmed that the CRA will require reporting on the outcomes of post payment compliance workload conducted in Integras. A determination is needed to identify who will be responsible for providing reports and what information will be required.

## BACKGROUND

### Pre-payment validations

The CRA is using a combination of automated queries, data validations and verification techniques on the initial intake of claims prior to issuing payment. ABSB produces daily reports about the total claims received, including any adjustments and denials by each Branch that result in a reduction of claim amounts paid.

### Post payment audits/reviews

Post payment CEWS audits will be conducted on employers prior to an income tax return being filed. CSD has confirmed that ABSB will not be providing daily reports on the outcomes of post payment CEWS claims.

### Post filing of a return audits

Audits of CEWS income claimed by an employer on a return for a taxation year will not occur until the applicable returns are filed/due to be filed.

## NEXT STEPS

### Agency/Branch Reporting Requirements

- CEWS Compliance Committee Chair, Alix MacLean, will raise reporting requirements at BMC;
- Alix would like to consider a reporting framework that she could take to the AC table for discussion;
- CSD to provide the Compliance Committee Chair with reporting recommendations by Tuesday, June 23 for her consideration;
- Agency reporting requirements to be approved at the next CCC meeting, Friday June 26<sup>th</sup>.

### Program Reporting Requirements

- The program requirements for reporting on CEWS post payment risk assessment feedback loop and workload management are being coordinated through the CEWS Post Payment Working Group with representation from each program area in CPB, CVB and IPAB.





# COVID-19 Canada Emergency Wage Subsidy

Testing Strategy

Production Assurance

v1.0

## Revision History

Version	Date	Author(s)	Revision Notes
0.1	April 10 <sup>th</sup> , 2020	Kim Rodger	Initial Draft document creation.
0.2	June 8 <sup>th</sup> , 2020	Srikanth Adivishnu	Revised to include additional phases
0.3	June 23, 2020	Mike Norkum	Revised with additional details.
0.4	June 23, 2020	Darko Ajzerle	Revised with additional details.
1.0			

# Autho riza tio n

The undersigned have agreed to the guidelines as defined in this document. Any changes to the signed document will require a formal change request and must follow the change request process.

\_\_\_\_\_  
Jeff Bloor, BESD Director General

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jacky Whittaker, Business Suite Assessing Systems Director

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jim Sorofty, Testing & Release Management Division Director

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jean-François Bedard, Production Assurance Director

\_\_\_\_\_  
Date

\_\_\_\_\_

\_\_\_\_\_  
Date

cc:

\_\_\_\_\_

\_\_\_\_\_  
Date

Table of Contents

**Revision History ..... 1**

**Authorization..... 2**

**1. Introduction ..... 4**

    1.1 Purpose..... 4

    1.2 About this document..... 4

    1.3 Overview..... 5

    1.4 Stakeholders and Roles.....10

**2. Testing Approach .....11**

    2.1 Overview.....11

    2.2 Unit Testing (UT).....12

    2.3 Integration Testing.....12

    2.4 User Acceptance Testing.....13

    2.5 Performance Testing .....13

**3. Defect Management.....14**

**4. Testing Timelines .....16**

**5. Risks.....16**

**6. Testing Scope .....17**

**7. Test Status Reporting .....17**

**8. Acronyms .....17**

## 1. Introduction

### 1.1 Purpose

The primary objective of this Testing Strategy is to inform the audience (both management and technical) about the proposed approach to testing the Covid-19 Canada Emergency Wage Subsidy (CEWS) solution as well as any constraints, costs and challenges that increase the risk to delivering a high quality product. Testing Strategies describe the characteristics of the components or project, the timelines, the types of testing planned, as well as potential risks (including components that will be untested, testing constraints, project unknowns, assumptions, funding gaps, etc.).

This testing strategy covers all the changes for Phase 1 of CEWS implementation.

The concepts and methods that are used as part of the Canada Emergency Wage Subsidy Testing Strategy have been developed in keeping with ITB's Best Practices and Directives, as well as lessons learned from other major projects.

### 1.2 About this document

Maintenance of this document	<p>This document will be maintained and distributed by Business and Enterprise Solutions Directorate (BESD) within ITB.</p> <p>It will be updated each time it is required.</p> <p>Comments or questions can be sent to the "PA Business Intake / Service prise en charge des tests AP (CRA-ARC)" mailbox.</p>
Status of the document	This document is in <b>DRAFT</b> status.
Intended Audience	This audience for this document is IT and Business stakeholders including the project team, IT specialists, application, technology and data architects, as well as senior management who may require details regarding the project testing strategy.



### 1.3 Overview

The Government of Canada announced a temporary wage subsidy for a period of 3-months for eligible employers affected by the Covid-19 pandemic, retroactive to March 15, 2020. The subsidy will be equal to 75% of remuneration paid during the period, subject to certain restrictions.

Eligible businesses (or their authorized representative) can apply for the 75% subsidy by accessing the secure Web forms in either MyBA/RAC or from a non-secure Canada.ca Web page.

The subsidy will be requested using a valid Payroll account number, but processed using an associated GST/HST account number in the Rebates Processing System, with the disbursement issued via Standardized Accounting.

The Generic Rebate process will be used to get the applications from employers processed and direct deposits/cheques issued.

The areas potentially impacted have been identified as follows:

- Secure Portals
- Public Affairs Branch (non-secure Canada.ca website)
- GST/HST e-Services
- Infodec
- Paydac
- Business Registration
- GST/HST Rebate Document Capture (RBCap) and Rebates Processing System (RPS)
- Secure Portals
- Public Affairs Branch
- GST/HST e-Services
- Infodec
- Paydac
- Business Registration
- GST/HST Rebate Document Capture (RBCap) and Rebates Processing System (RPS)
- GST/HST Rebate Document Capture(RBCap) and Rebates Processing System(RPS)
- Standardized Accounting
- Revenue Quebec
- Revenue Ledger



- GST Reports
- Audit
- TSAD-B
- ECIS
- BCCS

Detailed business requirements are available in the documents below:-

#### Phase 1



OPI CR-v1.26.docx

The above document outlines the following changes to be implemented in phase 1 as follows:

#### Phase 1 – Part 1

- Eligible businesses (or their authorized representative) can apply for the 75% subsidy by accessing the secure Web forms in either MyBA/RaCor from a non-secure Canada.ca Web page.
- An entry point will be added to the MyBA main page (MYBA-08). When the link is selected, MyBA will pass to GST e-Services the 15-digit Payroll BN selected by the user.
- An entry point will also be added to a Web page located on the Canada.ca Website. When this non-portal entry point is used, the user will be required to enter their Payroll account number and WAC on the input page.
- As part of Phase 1 , only initial applications will be accepted. Adjustments/RAPs will not be accepted
- GST e-Services will validate the application details in real-time with various mainframe systems. If the application is not successfully validated, the messages will be displayed to the applicant. If the application is successfully validated, RPS will generate a confirmation number that will be displayed to the applicant.

#### Phase 1 – Part 2

- The subsidy will be requested using a valid Payroll account number, but processed using an associated GST/HST account number in the Rebates Processing System, with the disbursement issued via Standardized Accounting.

- Real-time validations include a call to Business Number (BN) System to validate the RP and RT accounts; a call to RPS System to verify that the employer has not previously filed for the same monthly period.
- The IP Address of the device (e.g. computer, tablet, phone) connecting to the CRA or Canada.ca web page will be captured and stored in RPS as part of the application/rebate details. protected  
protected
- Applications that do not pass RPS validations will kick out to the RPS Case System (which is actually SA Case). RPS will have the capability to release a the rebate for payment, and to allow staff to make adjustments online to the Claim From Date, Claim To Date, and the Rebate Claimed Amount. Anticipated higher number of SA Case users has an impact on testing strategy.
- RPS will use the existing links to the Standardized Accounting (SA) system, which will issue the disbursement. CEWS disbursements will be marked as an adjustment, and will not be offset in SA or have interest added.
- Per the employer's instructions on the application form, SA will issue the disbursement as a direct deposit or mail a cheque. For cheques, the existing cheque process for GST/HST rebates will be used, and an insert will be included. For direct deposit, no outputs will be sent i.e. a Notice of Assessment (NOA) or letter will not be sent to the employer.
- The Revenue Ledger (RL) system will add the CEWS disbursement as a "non-tax" account.
- RL will create one new expense account . RPS will send transactions to RL using the existing Generic Rebates grids. SA will send transactions to RL using the existing "SA – Accounting Journal (Assessments from another CRA system)" grids.
- GST Reports will be required to provide hourly, daily and weekly status reports on the new CEWS

Here is a high level process map:

protected



The below diagram depicts the HLAIV from The CAR v.2

Recommendation – Generic Rebates (Business Suite)  
High Level Application Interface View (HLAIV)





## 1.4 Stakeholders and Roles

Responsibility for the testing process is shared by multiple areas: CRA Business Clients, IT Development teams, Production Assurance and Acceptance Testing Division. Groups providing support, both technical and functional, must be available as required throughout the course of each of the testing phase. The table below provides an overview of the roles and responsibilities for each group involved in the Covid-19 Canada Emergency Response Benefit Testing Strategy.

Stakeholder Area	Roles
IT Development Teams: <ul style="list-style-type: none"> <li>• MyBA/RAC</li> <li>• SA</li> <li>• Revenue Ledger (RL)</li> <li>• Paydac</li> <li>• Infodec</li> <li>• GST e-Services</li> <li>• EC</li> <li>• RPS</li> <li>• TSAD-B</li> <li>• Audit</li> <li>• BI Reporting</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conduct unit testing and integration testing on the solution</li> <li>▪ Provide support and timely response to test teams (PA &amp; ATD) as required</li> <li>▪ Provide testing metrics</li> <li>▪ Provide timely resolution of Incident Reports (IRs)</li> <li>▪ Code migration and monitoring of testing environments</li> <li>▪ Provide test accounts to testing teams if required</li> </ul>
Production Assurance	<ul style="list-style-type: none"> <li>▪ Develop Testing Strategy on behalf of the project OPI</li> <li>▪ Coordinate integration testing with development areas in UT</li> <li>▪ Conduct performance testing</li> <li>▪ Raise IRs and retest IR fixes when required</li> <li>▪ Provide timely response to IT development on issues, concerns or clarifications for resolution of IRs</li> <li>▪ Create or setup test accounts with automated tool if required</li> <li>▪ Report test results</li> <li>▪ Coordinate release to Production as well as signon</li> </ul>
Assessment, Benefit and Service Branch (ABSB) Business Team	<ul style="list-style-type: none"> <li>▪ Communicate test priorities and specify UA Testing Success Criteria</li> <li>▪ Provide sign-off / user acceptance to authorize deployment to Production</li> </ul>
User Acceptance test Planning and Design Section (UATPD)	<ul style="list-style-type: none"> <li>▪ Responsible to plan and design user acceptance testing by adapting a modernized approach consistent with industry best practices and by tailoring testing approached best suited to the application</li> </ul>
Acceptance Testing Division (ATD)	<ul style="list-style-type: none"> <li>▪ Conduct user acceptance testing</li> <li>▪ Raise IRs and retest IR fixes when required</li> <li>▪ Provide timely response to IT development on issues, concerns or clarifications for resolution of IRs</li> <li>▪ Report test results</li> <li>▪ Provide final test status report and recommendation for sign-off</li> </ul>

## 2. Testing Approach

### 2.1 Overview

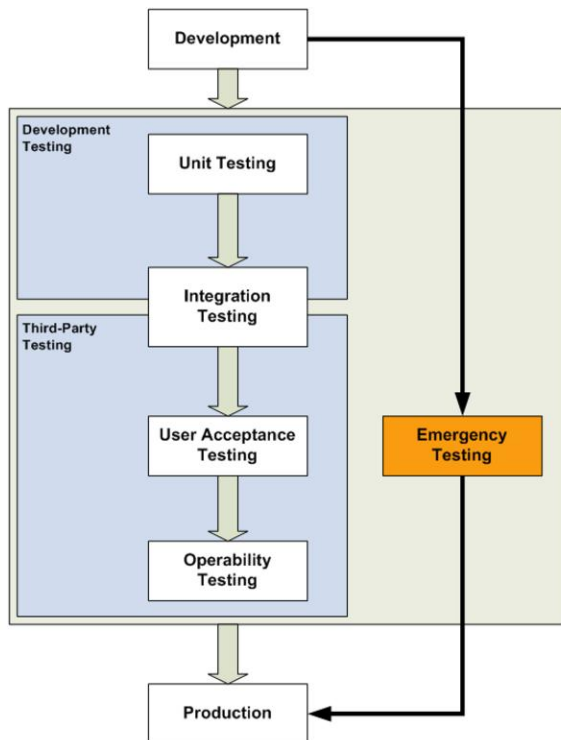
The main testing objectives include:

- to find failures and defects
- to verify that the business requirements were met
- to validate that the software performs as per the high level requirements

Testing will focus on these areas:

1. Public facing – Canadian business owners being able to make a request
2. Payment processing – once a request has been received the steps needed to get money in the hands of Canadian business owners
3. The ability of eligible businesses (or their authorized representative) to be able to apply for the 75% subsidy by accessing the secure portals such as MyBA/RAC
4. The ability of eligible businesses to be able to apply using the secure Web forms from a non-secure Canada.ca Web page.
5. The ability to validate the application with various mainframe systems and display confirmation number when successfully validated
6. The ability to review fallout from automated processing and to subsequently approve or deny claims
7. The ability to view subsidy details and status for both internal and external users; both within portals and to internal CRA applications.
8. The ability of employers to claim subsidy for each payroll account

The testing will follow the CRA Testing Model included in the ITB Testing Directive ([http://infozone/english/protected/itb\\_dgi/bst\\_prcts/documents/cmpl/275-e.asp](http://infozone/english/protected/itb_dgi/bst_prcts/documents/cmpl/275-e.asp)) as per the diagram below.



## 2.2 Unit Testing (UT)

Unit Testing will be performed by the each development area to verify that the application software component's code works according to its requirements and fulfills the new system requirements.

The unit testing is done to validate the source code and will be performed in the UT testing environment or the developers' local workstation or local sandbox server.

## 2.3 Integration Testing

The purpose of Integration testing is to test the combinations of the individual unit test pieces of code. The focus of integration testing is:

- Interface testing between an application's components: Testing to determine whether or not objects within an application (data, software, and hardware) interface properly. This includes, for example, ensuring on line screens contain expected values and that data can be passed between components.
- Interface testing between applications: Testing to determine whether or not applications can communicate with one another. As such, this testing validates the transfer of data (entering, storing, and retrieval of data from databases), creating batch files and passing the data downstream, and end-to-end and system connectivity testing.

- Technical functionality: Testing to determine whether or not the application error messages and conditions are handled as per specifications, and that the security has been put in place. This includes error controls, and security controls testing.



Where applicable, a spreadsheet containing test scenarios will be prepared by PA and saved on the J drive for all participating areas to follow the progress of the end-to-end test, complete their respective testing activities and update their status.

Testing for batch processing of payments, disbursements, accounting / post assessing work and reporting will also be completed by the developers in UA/EA.

## 2.4 User Acceptance Testing

The objective of User Acceptance (UA) testing is to verify that the application has satisfied the business requirements, to provide an acceptance of the applications changes, and to provide an assurance to the business client that the release satisfies functional requirements and can be migrated to Production.



ATD will build test plans and test cases based on the documented system requirements, execute the test plans and test cases, and report all discovered defects to ITB and the Business client. ITB will then investigate, track, and resolve any defects discovered in UA. Test cases will be housed under a project in ATRS. They will be reported in the ATD status report.

## 2.5 Performance Testing



Performance tests or load tests are usually conducted to understand the behaviour of the system under a specific expected load. This load can be the expected concurrent number of users on the application performing a specific number of transactions within the set duration. This test will give the response times of all the important business critical transactions. The database, application server, etc. are also monitored during the test; this will assist in identifying bottlenecks in the application software and the hardware that the software is installed on.

The Operability Testing (OT2) environment will be used to conduct the performance testing. OT is a pre-production test environment that closely matches production.

Production Assurance will conduct the performance tests. Performance scripts will be developed and executed with projected production volume in the OT environment.

A high volume of requests is anticipated when the MyBA/RAC and GST-eServices web form applications go live on April 27<sup>th</sup> and for subsequent eligibility periods so it is imperative that performance testing be performed to ensure the systems can handle the surge.

Mainframe systems that do not support public facing applications are normally not in scope for performance testing. It was anticipated that more than 10 times high number of SA Case users would create unacceptable delays in processing of CEWS applications. Performance testing has been organized and conducted to collect system metrics and ensure systems stability.

### 3. Defect Management

Any defects discovered in the user acceptance and performance testing phase will be reported using protected These will be prioritized and scheduled into subsequent code migrations.

Defects are assigned a severity level by the test team. Below is an outline of the severity values to be used in the Covid-19 Canada Emergency Wage Subsidy project. Due to the very short timeframes for testing, the expected turnaround time for each severity level as been decreased significantly.

Severity	Description
<p><b>Critical</b></p> <p>This level includes any 'showstoppers' where testing cannot continue.</p>	protected
<p><b>High</b></p>	

<p>This level includes any defects/incidents where functionality is significantly impaired.</p>	<p>protected</p>
<p><b>Medium</b></p> <p>This level includes external cosmetic defects/incidents which are limited in scope or easily corrected.</p>	
<p><b>Low</b></p> <p>This level includes cosmetic problems.</p>	

## 4. Testing Timelines

As this initiative relates to a Government-wide priority, deployment needs to be completed by April 27<sup>th</sup>, 2020. The table below lists the planned start and end date for each of the testing phase. Due to the very short timeframes, testing phases will overlap and/or will be conducted in parallel.

Phase	Testing Phase	Testing Environment	Planned Start Date	Planned End Date
Phase 1 Part 1	Unit Testing	UT	April 10, 2020	April 15, 2020
	Integration Testing	IUT	April 15, 2020	April 17, 2020
	User Acceptance Testing	UA	April 17, 2020	April 25, 2020
	Performance Testing	OT	April 17 <sup>th</sup> , 2020	April 25, 2020
	Production-signon	Prod	April 26, 2020	April 27, 2020
Phase 1 Part 2	Unit Testing	UT	April 20, 2020	April 23, 2020
	Integration Testing	IUT	April 23, 2020	April 25, 2020
	User Acceptance Testing	UA	April 25, 2020	May 2, 2020
	Performance Testing	OT	April 25, 2020	May 2, 2020
	Production-signon	Prod	May 3 <sup>rd</sup> , 2020	May 4 <sup>th</sup> , 2020

## 5. Risks

The following risks may impact the testing:

- Limited availability of developers and testers due to COVID-19
- Limited resources availability and strain on CRA infrastructure (tax filing season, high volumes of Canadians applying for the benefit and CRA resources working from home)
- Undefined, unclear or changing system requirements due to the urgency of the initiative
- Very short timeframes for development which could reduce testing timeframes
- All OCIs and interfacing applications may not be included in testing environments
- Test environment availability [protected]
- Scheduling migrations, deployments and testing between competing critical priority projects
- Expanding CRA standard scope of testing due to extraordinary volumes
- Create delays on other testing projects [protected]
- Test accounts availability

## 6. Testing Scope

This testing strategy does not cover regular maintenance and enhancements that will continue to be made in future releases.

Unit testing, system integration testing, user acceptance testing and performance testing are all in scope. Testing in the TR (training) and MT (macro testing) environments are out of scope.

protected

## 7. Test Status Reporting

In order to ensure all stakeholders are aware of any issues encountered with testing, a daily status meeting chaired by Production Assurance will be held over teleconference. Outstanding issues will be discussed during the daily meeting. ATD will provide their status in the ATD status report.

## 8. Acronyms

For quick reference, here is a list of acronyms that are used in this document.

Acronym	Definition
ABSB	Assessment, Benefit and Service Branch
AMS	Authentication Management System
ATD	Acceptance Testing Division
ATRS	Acceptance Testing Reporting System
BESD	Business and Enterprise Solutions Directorate
BSRP	Benefits System Renewal Project
CERB	Canada Emergency Response Benefit
CEWS	Canada Emergency Wage Subsidy
CMS	Credential Management System
DBR	Details Business Requirements
DETS	Disbursements Enquiry and Tracking System
EA	Emergency Acceptance (testing environment)
EAA	Electronic Authorizations and Authentications
eBCI	E-Business Computing Infrastructure
EI	Employment Insurance
IR	Incident Report (referring to <span style="background-color: black; color: black;">protected</span> defect tickets)
ITB	Information Technology Branch
IUT	Integrated Unit Testing
IVR	Interactive Voice Response



protected	
MT	Macro Testing (environment)
MyBA	My Business Account
OCI	Office of Complementary Interest
OT	Operability Testing
PA	Production Assurance
PSPC	Public Services and Procurement Canada
RAC	Represent a Client
RPS	Rebated Processing System
RL	Revenue Ledger
SA	Standardized Accounting
TMS	T1 Master Select
TR	Training (environment)
TSAD-B	Taxpayer Services Agent Desktop –for Business
T1 Ident	T1 Identification
UATPD	User Acceptance test Planning and Design
UA	User Acceptance
UT	Unit Testing
WAC	Web Access Code

# Data Science Working Group Meeting Agenda

Friday, July 10, 2020

2:00PM – 3:00PM

## Meeting minutes – June 9, 2020:

- Introduction and purpose for the Data Science Working Group
- ITB presented a proposal for a possible shared data mining environment; a follow up meeting will take place with CVB to obtain more details
- All were in agreement to have a multi-branch group at the working level

## Agenda:

- |  |                  |
|--|------------------|
| 1. Introduction/Opening remarks              | Maggie Moscovoy  |
| 2. Update on data mining environment and PSL | ITB              |
| 3. Overview of current CEWS/CERB/CESB work   | Each directorate |
| 4. Possible data projects and next steps     | All              |
| a. Discussion paper                          |                  |

  
Analytics Data  
Science WG CEWS.CE

000215

## Discussion Paper

### **Analytics & Data Science Working Group - Canada Emergency Wage Subsidy (CEWS), Canada Emergency Response Benefit (CERB), Canadian Emergency Student Benefit (CESB)**

#### **Background**

A number of different measures have been enacted by the Federal Government as income supplements in order to assist Canadian employers, employees, and students who have been affected and lost income as a result of COVID-19. These include the CEWS, the CERB, and the CESB programs.

#### **Purpose**

The purpose of this draft discussion paper is to propose the elements and workloads required for a post-payment analytics and data science working group (WG) initially for the CEWS but also for the CERB, and CESB which will include data analyst representation amongst different branches including CPB, CVB, LPRAB (Charities), ABSB, and ITB.

#### **Analytics and Data Science**

Analytics refers to the discovery, analysis, and communication of meaningful trends and patterns in data. Analytics can inform a better understanding of data that will lead to enhanced and effective decision making in an organization. The CRA has various research and analytics teams spread across various branches with data analysts/scientists (ES group/level) who are skilled in analyzing Agency databases accessible in data mining environment workspaces (pure data appliance or PDA).

#### **Proposal:**

Create a WG (Lead: HNWCD Maggie Moscovoy, Steve Shalaby). Through the use of analytics software such as R, SAS or SPSS to query the CEWS claims (to be followed by CERB and CESB) and by applying statistical and data science concepts, we can leverage a combination of complex data lookups and state of the art algorithms to detect trends, patterns etc. to identify potential fraudulent transactions. In addition, by accessing the PDA, data analysts can complement and combine CEWS/CERB/CESB data to other CRA databases with one goal to better inform our overall risk assessment and detection strategies. Another goal could be to apply data analytics to better understand the composition of CEWS/CERB/CESB data and/or make predictions.

#### **Tasks to be completed**

A list of specific tasks and workloads will need to be identified for this working group. As indicated above, analytics and data science could bring new ways and techniques of understanding and detecting trends or patterns in CEWS/CERB/CESB data. Once agreed upon, specific tasks could be carved out to smaller data analyst groups. Some preliminary ideas to highlight the power and skill set of analytics and data science (**using the CEWS as an example for now**) could include:

protected

NOTE: There is currently CEWS BI WG in charge of developing automated risk issues and algorithms for the CEWS post-payment audit program. Thus, it is important that this WG not duplicate any risk outputs, but (if applicable) complement risk issues / risk algorithms identified by the CEWS BI WG.

# Canada Emergency Wage Subsidiaries (CEWS) Analysis

Business Intelligence Division

June 2020

000218



# Overview

000219

# Overview of CEWS (as of June 17, 2020)

- Total # of distinct CEWS applicants: 244,989
- Distribution of CEWS applicants by # of claims

protected

000220

Pages 000221 to 000245 are protected