Personnel Psychology Centre: Recent Achievements and Future Challenges

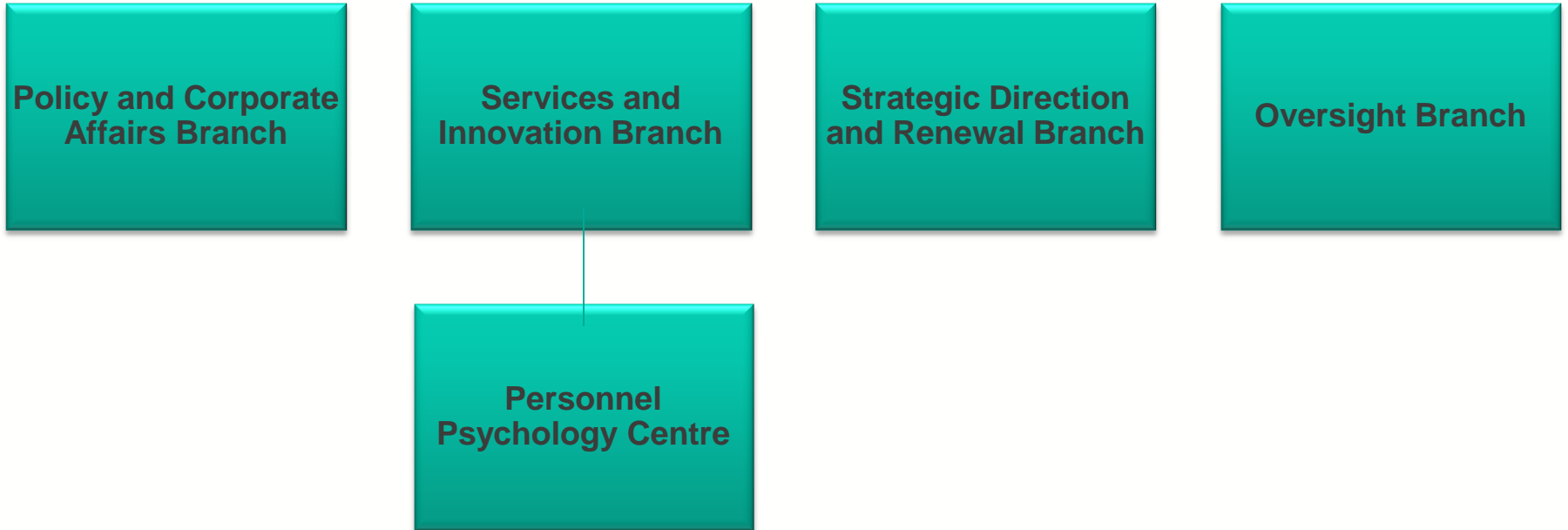PRESENTATION TO THE EUROPEAN ASSOCIATION OF TEST PUBLISHERS

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Canada

The Public Service Commission (PSC)

- Independent agency reporting to Parliament
- PSC safeguards the integrity of staffing and the political impartiality of the public service
- Protects the core values of merit and non-partisanship and the use of both official languages
- PSC has exclusive authority to make appointments to and within the Public Service and to identify appropriate assessment methods

Personnel Psychology Centre within the PSC

| Policy and Corporate Affairs Branch | Services and Innovation Branch | Strategic Direction and Renewal Branch | Oversight Branch |

Personnel Psychology Centre

Personnel Psychology Centre
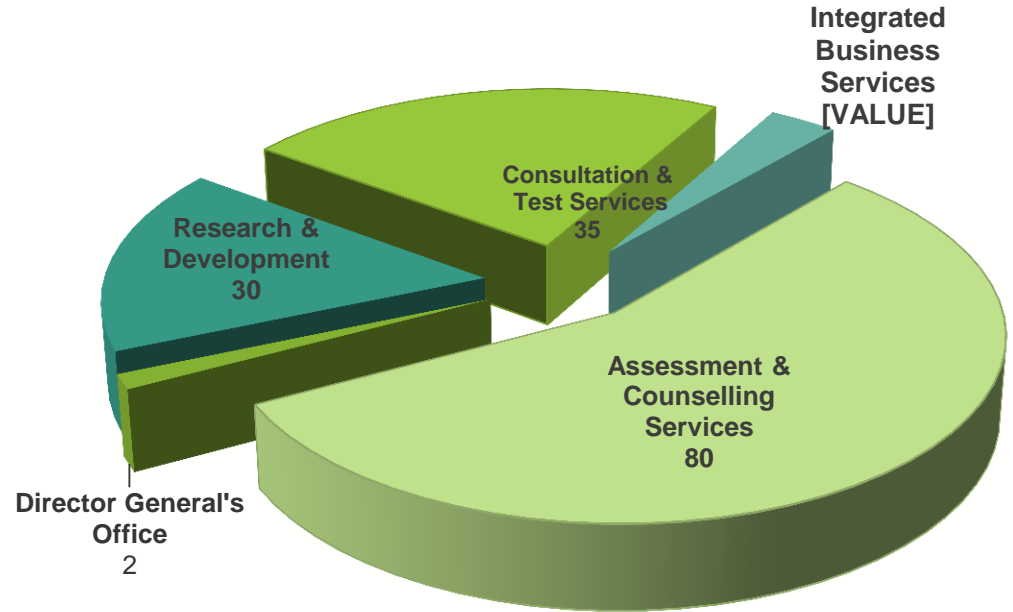## *At a Glance*

- 65 Psychologists

  - Industrial/Organizational;
    Measurement; Neuropsychology,
    Linguistics; Clinical; Counseling

- 45 Language Assessors

- 30 + Operational Support Staff

PPC = 150 staff

Integrated Business Services [VALUE]

Consultation & Test Services 35

Research & Development 30

Assessment & Counselling Services 80

Director General's Office 2

Statutory Role

- Assessment is at the heart of MERIT and staffing values

- PPC supports the PSC's mandate & Deputy Heads with
  - **Services and products that promote merit and staffing values**
  - **Assessment expertise and advice**
  - **Dissemination of assessment best practices throughout the public service in the context of federal public service legislation**

Quality Assessment & Best Practice

Merit, Fairness, Access, Transparency

Qualified and Competent Public Service

PPC Assessment Tools and Services

- **Senior Management & Executives**
  - **Assessment centres**
  - **Standardized reference checks**
- **Middle Managers**
  - **In-baskets**
  - **Simulations**
- **Entry Level**
  - **Paper & pencil tests**
  - **Experience screens**
  - **Board interviews**
  - **Integration tools**
- **System Wide**
  - **Counselling & coaching**
  - **Second and first language evaluation**
- **Guidance & Expertise in Assessment Accommodation**
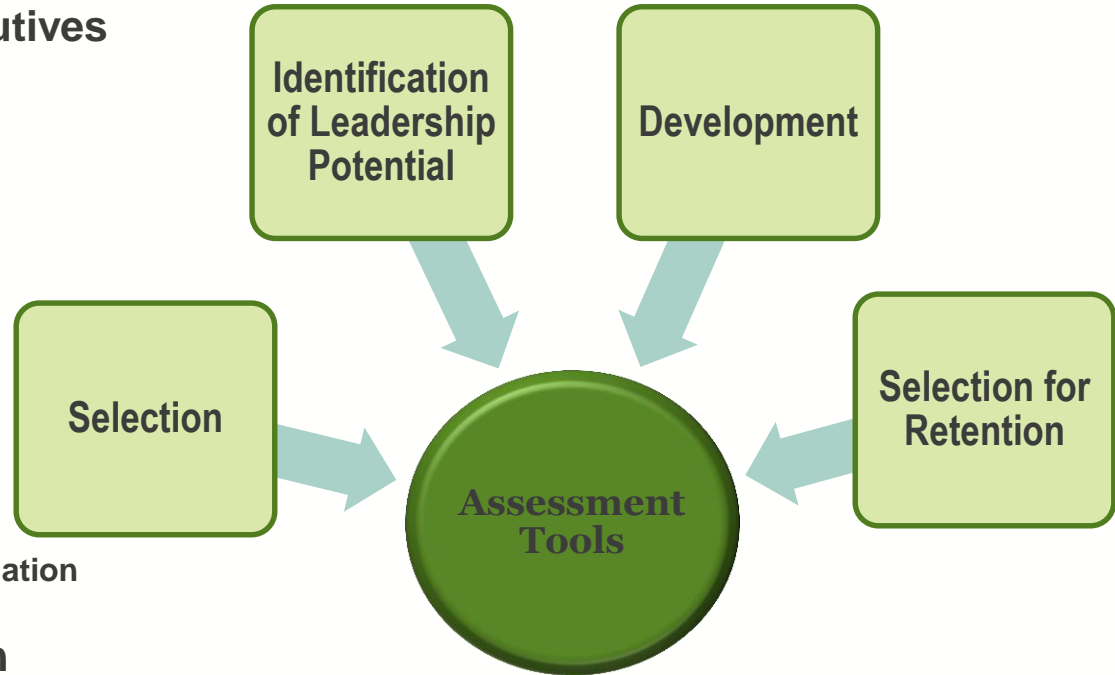
Context

- **Federal Public Service**
  - After years of downsizing, now focusing on recruitment and staffing
  - Demographic factors affecting the workforce (demographic holes)
  - Greater emphasis on innovation and efficiency

- **Public Service Commission**
  - Policy and system changes to streamline staffing processes
  - Emphasis on supporting hiring managers through innovative products and services
  - Capitalize on diversity of Canadian population by enhancing accessibility

Recent Achievements

Achievements
- Computer Generated Testing
- Unsupervised Internet Testing
- Test Security
- Clinical Testing for Correctional Services Canada

Challenges
- Remote Supervised Testing
- Universal Design
- System Rationalization
- Commercial Tests for Selection

Computer Generated Testing (CGT)

- Different versions of exams for each test-taker from large banks of test content

- Minimizes impact of cheating and enables business to respond rapidly to possible test security incidents

- Includes the addition of pre-approved pilot questions in the test

CGT: From Implementation to an Ongoing Item Development Program

- Second Language Evaluation – Test of Written Expression & Test of Reading Comprehension implemented in 2013

- Since implementation, have built an ongoing item development program
  - A continuous cycle of item development, piloting, monitoring and analysis (i.e., validity, reliability and fairness) and finally item inclusion in the tests

Unsupervised Internet Tests (UIT)

- **UITs** are on-line tests delivered to an applicant's computer through the internet. They take the test without supervision, within a specified time-frame

- **UITs are designed to:**

  - Identify the best candidates early

  - Manage large volumes of applicants based on merit

- **Two-step assessment:** Cheating is minimized through a number of measures, including having applicants pass a similar test in a supervised setting

Impact of PSC UITs

- Enhanced test security by reducing exposure to supervised tests
- Improves accessibility and reduces need for assessment accommodations by allowing candidates to use their own adaptive technology from home
- Identifies with minimal effort promising candidates early on in the staffing process, saving time and money

UIT Volumes

- Since 2010, approximately 146,000 UITs have been successfully administered by the PSC in a total of 174 processes
- Popular cost-effective assessment approach for merit-based staffing

Test Security

- Aim is to protect test content

  - Also can prevent and detect cheating

- Test security is an essential component of the PSC's assessment program

  - Test security controls help ensure the integrity of PSC test results and their use in demonstrating merit under the PSEA

- Received more focused attention starting in 2005 following two audits and test security reviews

- In response, the PPC has implemented several measures over the years to enhance test security

PSC Test Security Measures

- Item banking
- Randomization of test items
- Ongoing item development
- Backup & alternate test versions
- IT tracking (e.g., login attempts)
- Item exposure validation & analysis
- Data forensics

- Control & limitations of computer functions accessible to candidates
- Browser access limitations
- Test locking
- Test session expiry
- Web monitoring / web crawling
- Policy & procedures

Clinical Testing for Correctional Services Canada (CSC)

- PPC was asked to assess candidates for Correctional Officer positions across Canada, based on their psychological suitability to perform such jobs

- Pre-selection has been done on abilities, criminal records, etc.;
  - Including PSC tests (WCPT & GCT-1)

- PPC's contribution is the last step before final job offer.

WHAT DID PPC DO?

- Assessment by PPC:

  1. Psychological testing: MMPI-2 & NEO-PI-R
  2. Electronic scoring of tests in Ottawa
  3. Interpretation of tests
  4. Tailored semi-structured interview based on test results (50.9%)
  5. Recommendations
     a. *No Reservations (81.1%)*
     b. *Some Reservations (8.8%)*
     c. *Serious Reservations (10.1%)*
  6. Central PPC quality control for consistency
  7. Discussion with Selection Review Committee at CSC
  8. Feedback to candidates upon request

CSC Innovations

- Risk assessment based on job requirements rather than screen out on 'full' psychopathology
- Trait & item focused approach
  - Statistical basis for item focused approach
- Centralized procedures and decision rendering
- Selection review committee decision input (feedback for ambiguous cases)
- Semi-structured interviews via Webex

Future Challenges

Achievements
- Computer Generated Testing
- Unsupervised Internet Testing
- Test Security
- Clinical Testing for Correctional Services Canada

Challenges
- Remote Supervised Testing
- Universal Design
- System Rationalization
- Commercial Tests for Selection

Remote Supervised Testing (RST)

- Administered via internet to applicants on their own computers
  - Test takers can take the test at a time and location of the convenience within a pre-set testing timeframe
- Supervised via the internet by live proctors
  - Using webcams and screen sharing technology
  - Professional proctors are trained and certified
- One test session, no need for follow-up in-person testing
- Three-pronged approach to ensure test security:
  1. Authentication of test taker's identification
  2. The proctor watches the test taker throughout the test session
  3. The proctor can see what the test taker is doing on their computer

Benefits of RST

- More accessible than on-site supervised testing for many candidates
  - Flexible testing times
  - Eliminates need for travel to supervised testing
- Greater accessibility for persons with special needs and disabilities
  - Test takers can use their own systems with ergonomic hardware and adaptive technology
  - May eliminate the need for test accommodations for some candidates
- More efficient for hiring managers and human resources
  - Timely testing sessions
  - Test administration and proctoring is outsourced
  - Rigorous proctoring controls cheating
  - Some vendors provide options for candidates to self-schedule

Universal Design

"Rather than focusing on users with specific disabilities, universal design (UD) creates solutions that will work for everyone, regardless of age, mobility, visual, auditory or mental ability."

Rachel Zimmerman Brachman – Inventor and universal design specialist
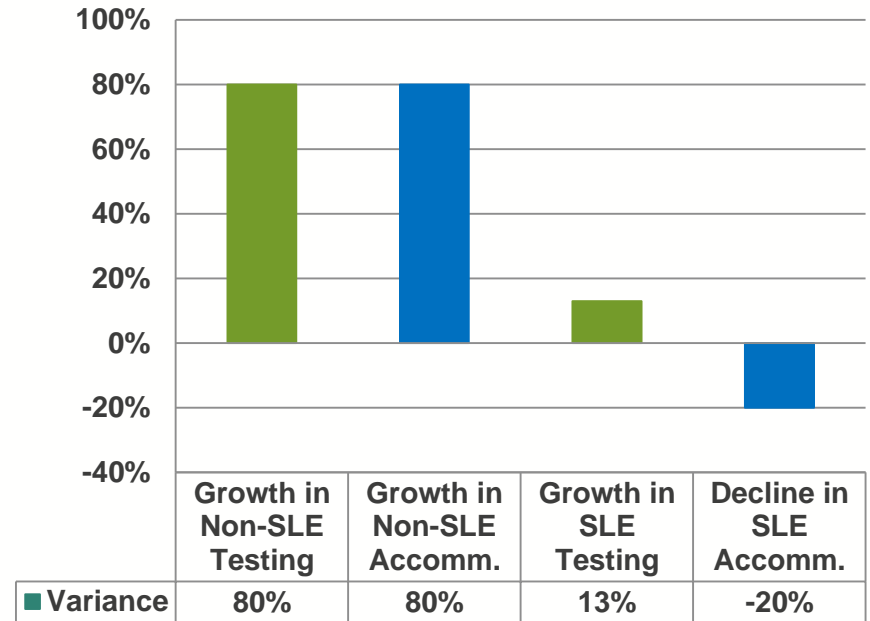

Stair/ramp designed by Cornelia Oberlander and Arthur Erikson in Robson Square, Vancouver

Universal Design Applied to Assessments

- Increased application of universal test design to PSC standardized tests

- Assessment tools and processes guided by principles of Universal Design are designed from the outset to make tests accessible to a diverse range of individuals

- They can reduce the need for test accommodations

Universal Test Design: Data

- Between 2012-2013 and 2013-2014, testing increased by 80% for non-Second Language tests (SLE). Assessment accommodation for these tests also increased by 80%

- Over the same period, SLE testing increased by 13%. However, SLE related assessment accommodation decreased by 20%

- Although data is preliminary, it is quite suggestive

	Growth in Non-SLE Testing	Growth in Non-SLE Accomm.	Growth in SLE Testing	Decline in SLE Accomm.
■ Variance	80%	80%	13%	-20%

System Rationalization

- Comprehensive assessment system
  - Ordering tests and services
  - Inventory control
  - Test scoring
  - Manage candidate results

Specific Challenges of Rationalization

- Difficulties with the IT testing environment
- Capacity to demo new system elements
- Business/IT capacity
- Clustering of user acceptance testing for business at year-end

Commercial Tests For Selection

- Exploring approaches to providing commercial tests developed by the private sector to our clients

- Modernize some of our tests that assess generic skills or to measure constructs outside of PPC immediate area of expertise

- Needs include, personality measures, direct measures of written communication, and office skills tests

Next Steps in Offering Commercial Tests for Selection

- Contracting solutions
- Professional standards
  - Validity
  - Reliability
  - Fairness (e.g., French & English, Employment Equity Groups)
- Test accommodations
- Complaints

Conclusion

The PSC must maintain our momentum on innovation in assessment tools, methods and systems to achieve our vision:

 "Building the public service of tomorrow, today: modern, impartial, and fair"

Questions and Discussion

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