



CRI

Centre for Regulatory Innovation

Regulatory Experimentation Expense Fund

Electronic Personnel Licensing

OVERVIEW

Organization:

Transport Canada

Timeline:

Sep 2022 – Mar 2024

Funding:

Phase 1: \$264,000

Phase 2: \$525,694

ABOUT THE REEF

CRI's Regulatory Experimentation Expense Fund (REEF) helps federal regulators conduct regulatory experiments and pilot projects, enabling them to test new approaches and technologies in real-world scenarios.

Purpose

The experiment aimed to address inefficiencies in the issuance and management of paper-based aviation licenses by developing a digital Electronic Personnel License (EPL) solution. This approach aligns with International Civil Aviation Organization (ICAO) standards and supports modernized regulatory practices.

Context:

Under Canadian Aviation Regulations, aviation personnel must carry a valid Aviation Document Booklet. The existing system is costly, time-consuming, and prone to delays, exacerbated during the pandemic, leading to adverse effects on licensing timelines, employment opportunities, and operational planning. Industry stakeholders advocated for digitization to improve efficiency, reduce administrative burdens, and enhance compliance.

Learning objective:

The experiment sought to determine:

- Whether a digital EPL could reduce the three-month performance standard for updating and issuing licenses.
- If EPL would enable efficient license validation by key stakeholders (inspectors, employers, and staff)
- Whether it would allow operators to integrate data for better compliance tracking

Experimental design:

Duration:

- **Phase 1:** Sep 30, 2022 – Mar 31, 2023
- **Phase 2:** Dec 6, 2023 – Mar 8, 2024

Participants:

- **Phase 1:** 30 air traffic controllers from Nav Canada and Transport Canada personnel.
- **Phase 2:** 41 participants, including 27 Canadian North pilots, 11 Transport Canada pilots, and 3 air traffic controllers.

Approaches:

1. **Digital Prototype Deployment:** Participants accessed an EPL using a secure platform (e.g., MS Authenticator).
2. **Data Verification:** Real-life field tests at airports to evaluate license validation using QR codes by inspectors.
3. **Digital Data Sharing:** Pilots were equipped to share licensing data digitally with employers and inspectors.



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Evaluation Methods:

- Time tracking for license updates versus paper-based processes.
- Usability surveys, Net Promoter Score, and System Usability Score.
- Observational studies of data validation and integration processes.

Outcome:

- Reduced license update times from 10 days to minutes, enabled real-time access and validation, and demonstrated potential 99% compliance cost savings.
- Trials identified needed regulatory updates and system improvements to support wider implementation and international compatibility.

Lessons learned:

System Modernization:

Digital transitions require comprehensive backend updates for effective integration

User Focus:

Stakeholder testing and feedback drive technology adoption and usability

Regulatory Evolution:

Policy and regulatory adjustments are critical to enable full implementation of innovative solutions like digital credentials.

Agile Management of Government

Requirements:

Early integration of common federal procedures – staffing, funding, IT architecture, and cybersecurity – was essential for project success.

By testing innovative solutions in real-world settings, regulatory experiments provide actionable insights that drive policy evolution, improve stakeholder outcomes, and enhance competitiveness in a global landscape.