Signal49 RESEARCH

In partnership with Future Skills Centre | Centre des Compétences futures

From Jobs to Journeys

Rethinking How Canada Forecasts Skills Supply

Based on the report *From Jobs to Journeys: Enhancing Forecasts With the Career Paths and Skill Transformations Model*.

Why this matters

Canadian organizations are navigating rapid labour and technology transitions—automation, demographic aging, digitalization, and shifting educational pathways. Yet our core tools for forecasting skills supply are outdated. Most models assume a worker's skills equal those demanded in their current job, ignoring the skills they've accumulated through education, work experience, or have underutilized during unemployment.

This creates blind spots for CEOs and policy-makers: hidden skills, misdiagnosed shortages, and misaligned training investments. The Career Paths and Skill Transformations (CaST) model redefines how we understand and forecast skills supply.

What CaST is and why it's a breakthrough

A shift from static job titles to dynamic career journeys

CaST models how skills grow, decline, or atrophy along career paths as people move through the labour market—from education into early jobs, through transitions, unemployment, and advancement.

It integrates three components:

1. Educational profiles (six entry pathways aligned with training, education, experience, and responsibilities [TEER] requirements represented by TEER categories).
2. Labour market outcomes and job transitions, driven by skill matching, wage acceptance, and employment probabilities.
3. Skill transformations, shaped by three treatments:
   - growth (skills actively used)
   - decay (skills used less than before)
   - atrophy (skills not used)

Career paths shape skills

CaST treats workers as evolving bundles of skills, not archetypes defined by their job titles. Its dynamic, iterative design means identical starting points can lead to many unique skill profiles and career paths.

A model of distributions, not averages

Instead of assuming all workers in an occupation share identical skills, CaST estimates distributions of skill proficiency by cohort, pathway, and occupation. This allows nuance in understanding:

- emerging shortages
- pockets of unused talent
- where training will have the most impact
- how workers' skills evolve over time even in similar roles

Key insights for leaders

1. **Standard skills forecasting tools underestimate the talent you already have.**

   Conventional models assume workers discard previous skills when they change occupations. CaST shows those skills persist, evolve, or decline—creating hidden strengths or risks inside your workforce.

2. **Skill shortages may be overstated—especially for unemployed workers.**

   Because traditional approaches treat unemployed talent as "zero skilled," they obscure meaningful skills accumulated through prior jobs and education. CaST is built on the assumption that unemployed people often retain strong, job-relevant skills.

3. **Underuse—not age—is the biggest driver of skill loss.**

   Skills decay when underused, not simply because workers age. This has major implications for hybrid work, job design, and retention strategies.

4. **Early career experiences shape long-term supply.**

   CaST shows that early use of skills accelerates growth:

   - early alignment drives consistent skill development
   - poor early fit reduces efficiency and limits future capability

   This makes entry-level job design and graduate recruitment more impactful than previously understood.

5. **Education policy levers have traceable effects on future workforce skills.**

   CaST simulates how increasing post-secondary seats in targeted fields could affect the long-term supply of specific skills across the entire workforce—informing strategic planning in healthcare, tech, trades, and more.

Strategic actions

1. **Strengthen internal mobility by auditing skills that already exist.**

   Identify retained, underutilized, and growth-ready skills to identify internal mobility opportunities, reduce reliance on external hiring, and ensure talent is deployed where it creates the greatest value.

2. **Redesign roles and workflows to keep critical skills active.**

   Rotate work, assign cross-functional projects, and embed microlearning to prevent skill decay, particularly for mid-career employees.

3. **Use targeted upskilling pathways to expand recruitment.**

   Evaluate non-traditional candidates based on skill trajectory rather than job history, and design programs—including work-integrated learning, co-op, and internships—to accelerate skill growth and ensure early career alignment.

   This supports proactive workforce planning—not reactive crisis management.

Bottom line for CEOs

CaST delivers a next-generation approach to understanding skills supply—one that better reflects how people learn, work, and grow. In an era where talent is the competitive frontier, CaST provides the analytical foundation needed to move from jobs to journeys, and from guesswork to evidence-based workforce strategy.

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