



Insights from Around the Globe: How Polytechnics Can Solve Canada's Most Pressing Challenges



Institutions are contributing to growth in three important ways.

Expanding the
workforce pipeline

Getting learners into
the workforce faster
and more affordably

Raising knowledge
intensity in small
companies

Polytechnics should be central to Canada's new growth agenda.

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Three methods have helped polytechnics expand the workforce pipeline.



Promoting needed competencies.



During the Covid-19 pandemic

- Government-supported free or heavily subsidized training programs in areas of especial need, particularly in healthcare and tech roles.



Green competencies

- PowerCorpsPHL – training at-risk adults for community-based jobs in green infrastructure and clean energy.
- Digital Academy for Sustainable Built Environment – developing the green competencies of the existing workforce.



Tech competencies

- Developing talent pipeline in programs – can be national in scope (e.g. AI for Workforce) or devoted to local skills development (e.g. NC Tech Paths, Inc.)



Supporting the labour market integration of newcomers.



Strengthened RPL services for newcomers

- Jurisdictional standards.
- Occupationally-savvy translators.
- Publicity campaigns to raise awareness and use of RPL.



Contextualized language learning programs

- Traditional ESL programs have poor retention; contextualized learning focuses on specific skills learners need in their workplaces.



Partnering with immigrant-serving community agencies

- Can reach additional learners through a trusted partner.
- Increasing focus on additional services – meals, childcare, programs for youth, etc.



Developing platforms to support reskillers and upskillers.

- ▶ **Platforms that unite labour market intelligence, training providers, and employment outcomes can benefit polytechnics.**



Australia's National Careers Institute



Reskilling 4 Europe

- ▶ **Achieving maximum value from platforms requires that polytechnics be first in mind for both government and employers.**



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The Seven Qualities of Microcredentials



Enterprise alignment

Microcredentials are designed to fill specific labor market demands at the firm level. Firms articulate specific skill needs, and institutions develop courses and credentials (sometimes including WIL and/or PLAR) to produce ready-to-hire graduates.



Stackability

Microcredentials can stack into regular credentials such as Bachelor's or Master's Degrees. Stackability requires that courses have credit values.



Digital Delivery

Microcredentials are designed to be delivered only in a digital fashion. (This is very common in IT certifications, which can be assessed in an automated fashion (see "competency-based evaluation" below).



Competency-based evaluation

The credential can only be awarded based on assessment of competency based on a transparent standard. This is easiest in IT fields, but Australia has made it a standard across all microcredentials.



Workforce Alignment

Microcredentials are built to meet either a) existing national skills competencies levels (e.g., Australia's "units of competency") or b) industry-wide skills standards developed by Government and industry.



Portability

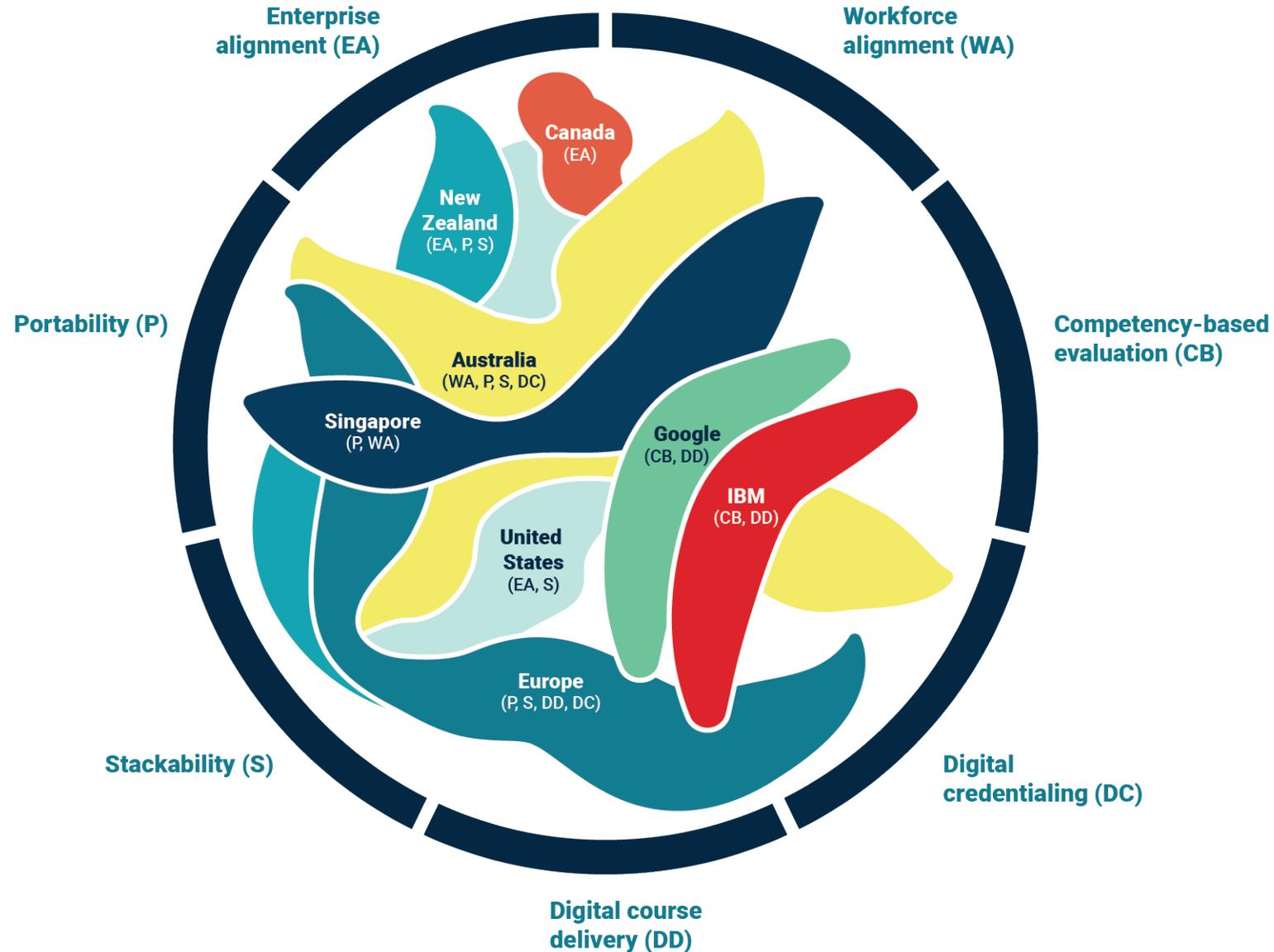
Microcredentials can be taken from one institution to another to permit either laddering of microcredentials or combining courses from multiple institutions in a single microcredential (if combined with concept of stackability). Portability requires a credential framework.



Digital Credentialing

The credentials issued are digital, and usually employ some form of blockchain arrangement.

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Global polytechnics are raising knowledge intensity in small companies.



National research models that privilege polytechnical research.

Targeted outreach to companies for R&D and skills development.

Showcases and outreach illustrating technological solutions and know-how.

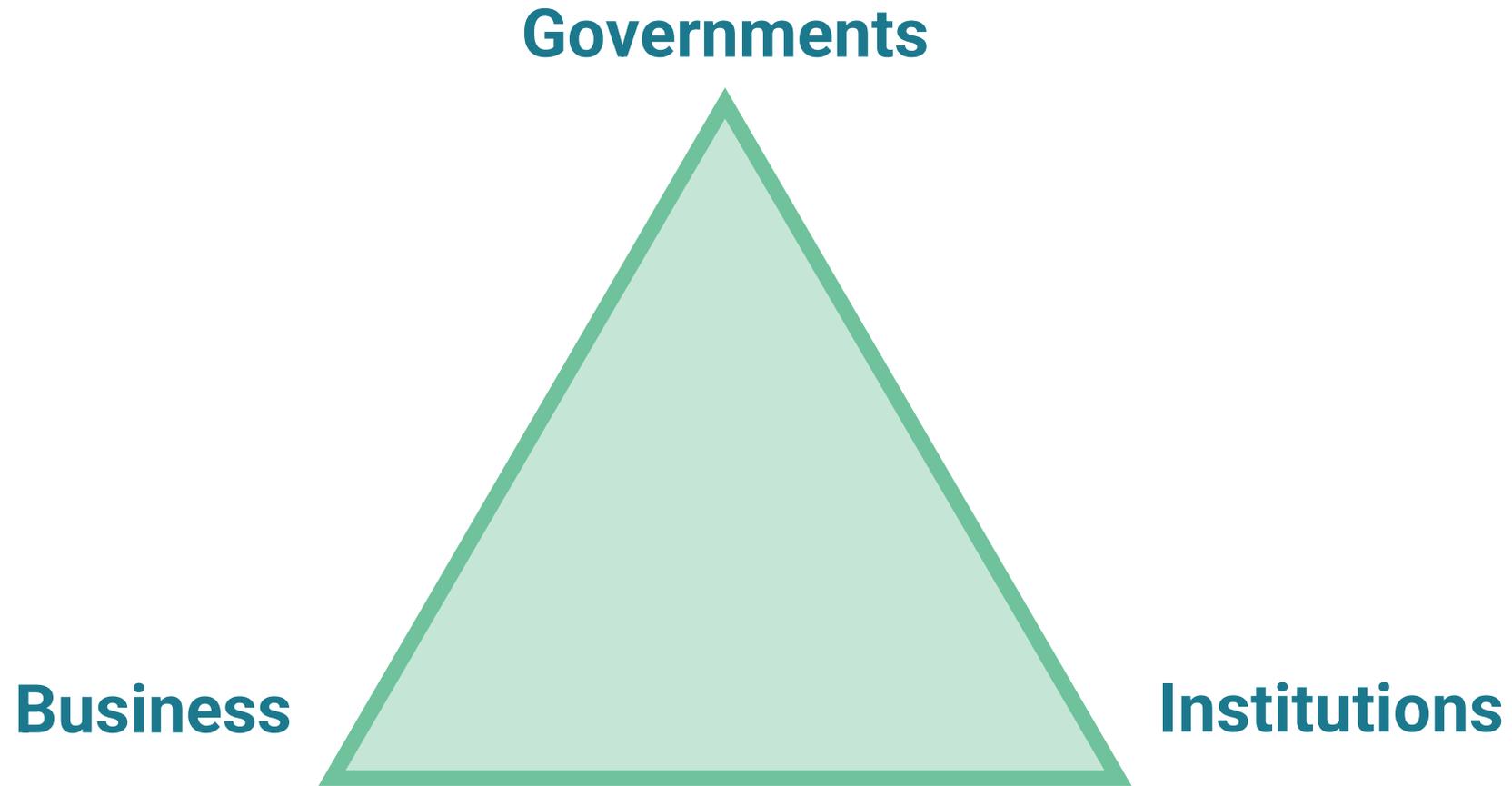
National research supports can privilege polytechnical research in order to aid SMEs.

- ▶ **Key national and regional strategies have placed polytechnics at the heart of national innovation systems**
- ▶ **Enterprise Ireland's Innovation Vouchers and Innovation Partnerships**
 - **Innovation Vouchers**

SMEs receive **€5,000** to assist them in exploring a business opportunity or to solve a problem. They are required to partner with one of Ireland's "registered knowledge providers," the bulk of which are polytechnic equivalent institutions.
 - **Innovation Partnerships**

Enterprise Ireland funds **80% of R&D costs** and the SME provides the rest. Any intellectual property belongs to the participating post-secondary institution but is available for sale at low rates. Helps to significantly de-risk R&D for smaller firms.

National research models require three partners.



Targeted outreach to SMEs supports growth.

- ▶ **Many relevant institutions conduct targeted outreach to companies to identify their skills and R&D needs.**
 - Irish Technology Gateway Network – 16 R&D centres that work with industry to devise and implement tech solutions
 - SMART SKILLS Devon – helps SMEs identify skills gaps and undertake free training



Technological showcases promote knowledge and aid tech adoption.

- ▶ **Polytechnics provide firms with access to recent technological innovations and know-how, often through permanent on-campus showcases.**
 - Future Work Lab at Karlsruhe Polytechnic – facilitates access to recent technological innovations
 - Sustainability Experience Centre at Nanyang Polytechnic – several technological showcases demonstrate the impact on SMEs of sustainable solutions



Thank you.

Please reach out any time if you have any further reflections or questions.

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