Micro-credential Toolkit Story Spotlight: Design

Note: This webinar will be recorded

Ross McKerlich
BCcampus
February 8th, 2024, 2024

Territorial Acknowledgement

For thousands of years the səĺilwətaʔɬ təməxʷ (Tsleil-Waututh), Skwxwú7mesh-ulh Temíx̱w (Squamish), W̱SÁNEĆ, and the Esquimalt Nation and Songhees Nation of the Ləkʷəŋən (Lekwungen) Peoples have walked gently on the unceded territories where we now live, work, and play. As both individuals and an organization, we continue to learn and build relationships as we actively respond to the Truth and Reconciliation Commission's Calls to Action.

Thank you to the Ministry

The Micro-credential Toolkit would not have been possible without the leadership, support and funding from the Ministry of Post Secondary Education & Future Skills

Why Toolkit Story Spotlights?

This webinar series allow us to dig deeper into different sections of the toolkit and learn more.
Based on stories but not a repeat of the content.

Our spotlight today

Section: Design
Chapters: Design Considerations, Educational Pathways
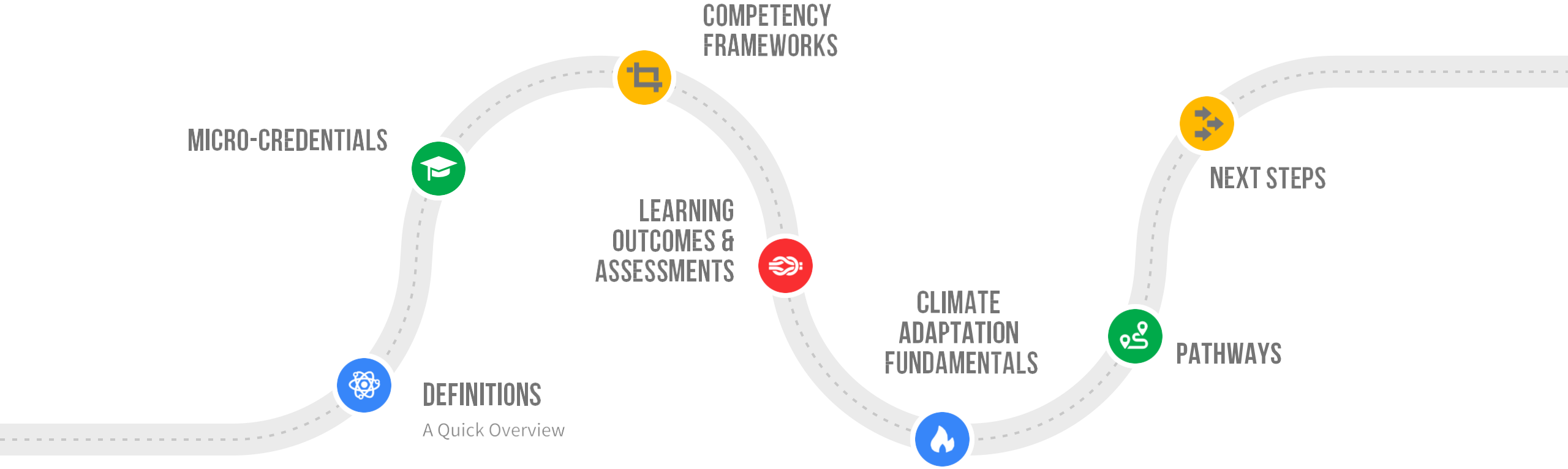Our facilitator today: Zoë Macleod, Royal Roads University.

BCCAMPUS

MICRO-CREDENTIAL TOOLKIT STORY SPOTLIGHT: DESIGN

Zoe MacLeod, PhD

TODAY'S JOURNEY

COMPETENCY FRAMEWORKS

MICRO-CREDENTIALS

LEARNING OUTCOMES & ASSESSMENTS

NEXT STEPS

CLIMATE ADAPTATION FUNDAMENTALS

DEFINITIONS
A Quick Overview

PATHWAYS

"THE ONLY SKILL THAT WILL BE IMPORTANT IN THE 21ST CENTURY IS THE SKILL OF LEARNING NEW SKILLS. EVERYTHING ELSE WILL BECOME OBSOLETE OVER TIME." PETER DRUCKER

DEFINING MICRO-CREDENTIALS IN BC

Micro-credentials are **formal**, **short** duration learning experiences that are **competency-based**, reflect industry, employer and/or community needs and can be **assessed** and **recognized** for employment or learning purposes.

UNDERSTANDING MICRO-CREDENTIALS

SMALL AND FOCUSED

Micro-credentials are short, focused learning experiences that validate skills and knowledge in a specific area.

FOR LEARNERS

Micro-credentials allow learners to acquire niche, in-demand skills efficiently and showcase capabilities to employers.

FOR INSTITUTIONS

Micro-credentials help institutions reach new audiences, demonstrate value, and build strategic workforce partnerships.

SHAREABLE

Learners can easily share completed micro-credentials through digital badges, certificates and their professional profiles.

STACKABLE

Micro-credentials can be stackable, allowing learners to combine multiple credentials to demonstrate broader capabilities.

BENEFITS OF MICRO-CREDENTIALS

1 **MOTIVATION**
- recognized for achievement
- actively learning

2 **DEMONSTRATION**
- knowledge, skills, abilities
- competency and capability

3 **EXPANSION**
- outside traditional learning
- relevant/timely

4 **DIGITAL**
- accessible/shareable/trackable
- LinkedIn

5 **STACKABLE & SCALABLE**
- continued learning
- engagement +

6 **EMPLOYABILITY**
- enhanced mobility and productivity
- serving workforce
- reskilling/upskilling

7 **ACCESS**
- affordable
- portable
- off-ramp

COMPETENCY FRAMEWORKS

...serve as comprehensive blueprints that outline the specific knowledge, skills, and abilities required for success in a particular field or profession. These frameworks are often developed through extensive research and collaboration with industry experts, professional associations, and employers, making them robust and reliable guides for curriculum development.
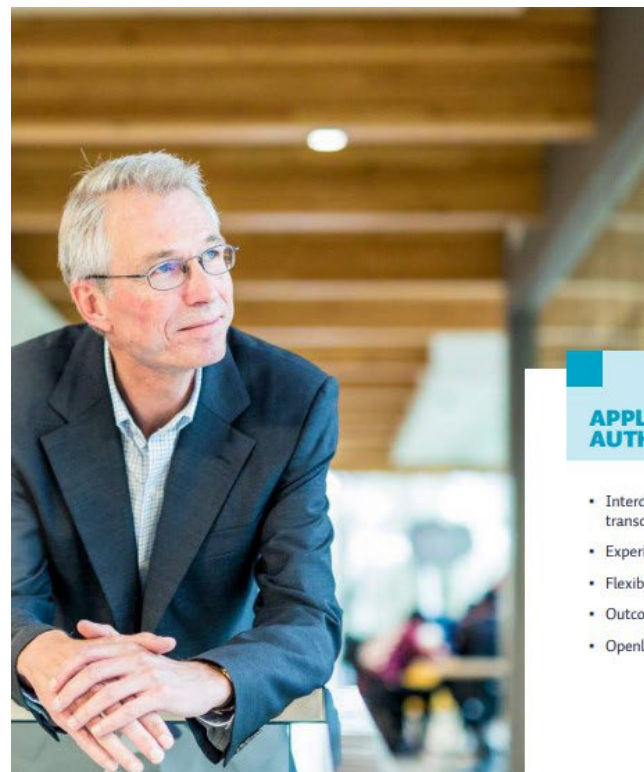
CORE CATEGORIES

This LTRM presents three core categories of values: *applied and authentic, caring and community-based,* and *transformational.* The acronym "**ACT**" expresses what our Royal Roads community perceives as unique and forward-thinking in our learning, teaching, research and services.

APPLIED & AUTHENTIC

- Interdisciplinary and transdisciplinary
- Experiential and participatory
- Flexible and individualized
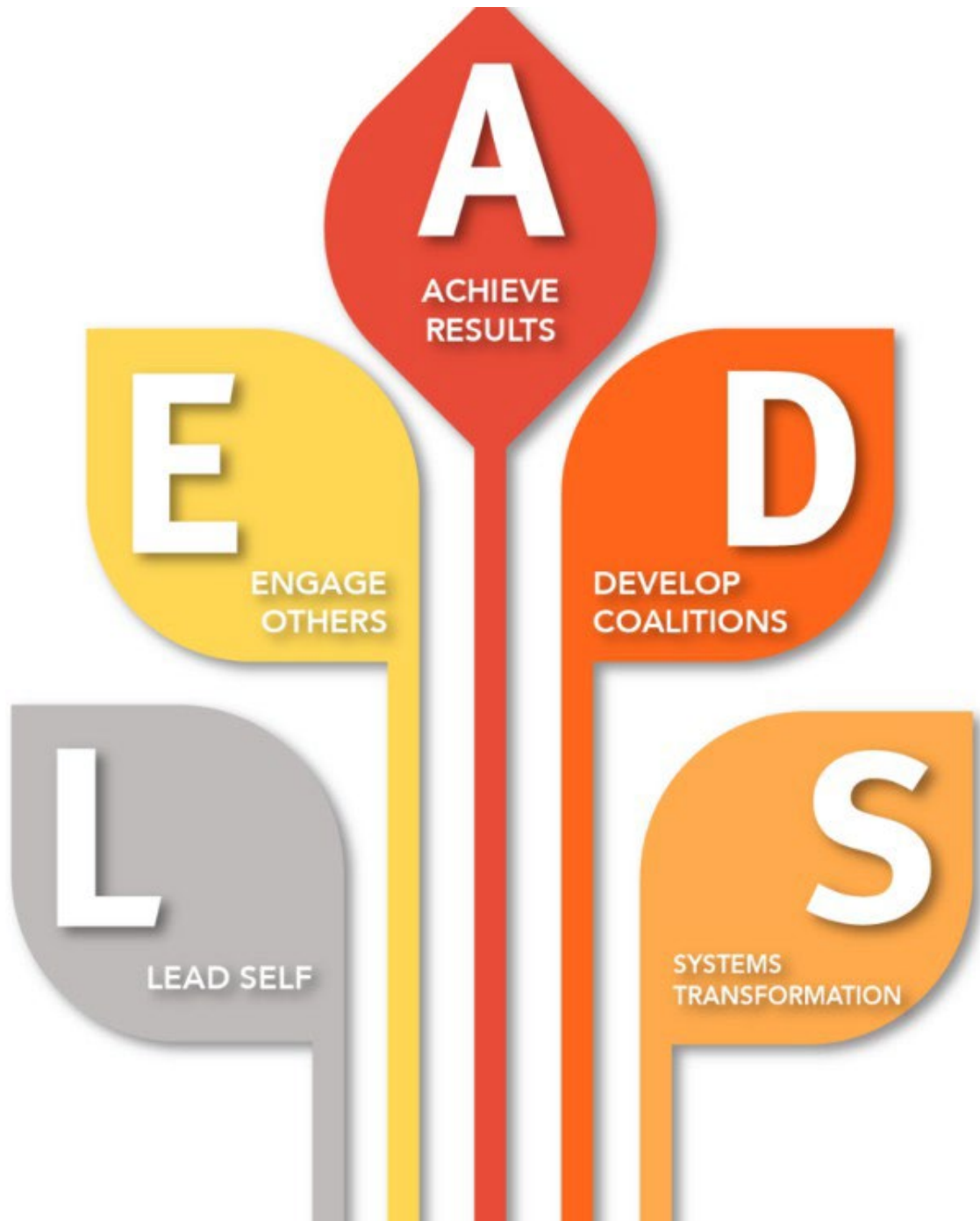- Outcomes-based
- Openly practiced

CARING & COMMUNITY-BASED

- Inclusive and diverse
- Community-based learning
- Supportive
- Team-based
- Co-creative
- Place- and virtual space-based

TRANSFORMATIONAL

- Socially innovative
- Respectful of Indigenous Peoples and traditions
- Impactful
- Reflective

RRU LEARNING TEACHING AND RESEARCH MODEL (LTRM)

LEADS

LEAD SELF
Self-motivated leaders...

Are self aware
They are aware of their own assumptions, values, principles, strengths, and limitations.

Manage themselves
They take responsibility for their own performance and health.

Develop themselves
They actively seek opportunities and challenges for personal learning, character building, and growth.

Demonstrate character
They model qualities such as honesty, integrity, resilience, and confidence.

ENGAGE OTHERS
Engaging leaders...

Foster the development of others
They support and challenge others to achieve professional and personal goals.

Contribute to the creation of healthy organizations
They create engaging environments where others have meaningful opportunities to contribute and ensure that resources are available to fulfill their expected responsibilities.

Communicate effectively
They listen well and encourage open exchange of information and ideas using appropriate communication media.

Build teams
They facilitate environments of collaboration and cooperation to achieve results.

ACHIEVE RESULTS
Goal-oriented leaders...

Set direction
They inspire vision by identifying, establishing, and communicating clear and meaningful expectations and outcomes.

Strategically align decisions with vision, values, and evidence
They integrate organizational missions and values with reliable, valid evidence to make decisions.

Take action to implement decisions
They act in a manner consistent with the organizational values to yield effective and efficient public-centred service.

Assess and evaluate
They measure and evaluate outcomes, compare the results against established benchmarks, and correct the course as appropriate.

DEVELOP COALITIONS
Collaborative leaders...

Purposefully build partnerships and networks to create results
They create connections, trust, and shared meaning with individuals and groups.

Demonstrate a commitment to customers and service
They facilitate collaboration, cooperation, and coalitions among diverse groups and perspectives aimed at learning to improve service.

Mobilize knowledge
They employ methods to gather intelligence, encourage open exchange of information, and use quality evidence to influence action across the system.

Navigate socio-political environments
They are politically astute, and can negotiate through conflict and mobilize support.

SYSTEMS TRANSFORMATION
Successful leaders...

Demonstrate systems / critical thinking
They think analytically and conceptually, questioning and challenging the status quo, to identify issues, solve problems and design and implement effective processes across systems and stakeholders.

Encourage and support innovation
They create a climate of continuous improvement and creativity aimed at systemic change.

Orient themselves strategically to the future
They scan the environment for ideas, best practices, and emerging trends that will shape the system.

Champion and orchestrate change
They actively contribute to change processes that improve health service delivery.

LEADS LEADERS

LEADS capabilities apply to all individuals regardless of role or formal position in the health system.

All leaders – regardless of their role, or position in the health system – must be able to lead themselves, engage others, achieve results, develop coalitions, and lead systems transformation to create the Canadian health system of the future.

For each of the five LEADS domains, 'leader effectiveness' differs, depending on the unique attributes of each individual and the context in which the leader exerts influence. In different contexts, capabilities differ in expression.

LEADS creates a culture of distributed leadership, where each person in the system, regardless of position or title, has the necessary leadership skills and feels empowered to exercise leadership when it is required.

THE ROLE OF COMPETENCY FRAMEWORKS

COMPETENCY FRAMEWORKS PROVIDE RELEVANCY

Competency frameworks outline the knowledge, skills, abilities, and behaviors required for success in specific occupations or industries.

ALIGN LEARNING OUTCOMES

Use competency frameworks to identify competencies and define measurable learning outcomes for micro-credentials.

GUIDE CONTENT DEVELOPMENT

Let competency frameworks guide the development of micro-credential curriculum and assessments.

VALIDATE AND RECOGNIZE LEARNING

Competency-based micro-credentials allow learners to validate and get recognition for skills and knowledge.

SUPPORT CAREER DEVELOPMENT

Competency frameworks help learners identify skills gaps and select micro-credentials to support career development.

ENHANCE CREDIBILITY

Learners can be confident that they are acquiring skills and competencies that are valued and recognized by industry professionals and employers
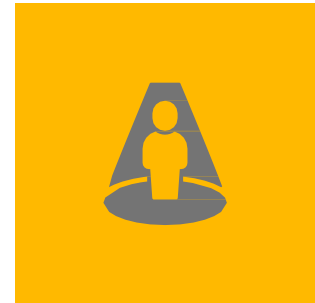
ALIGNING LEARNING OUTCOMES

COMPETENCIES CLARIFY EXPECTATIONS

Aligning outcomes to competencies makes it clear what learners should be able to do after completing the micro-credential.

OUTCOMES DEMONSTRATE MASTERY

Well-defined outcomes aligned to competencies allow learners to demonstrate mastery of skills that matter.

TAILOR LEARNING JOURNEYS

With aligned outcomes, micro-credentials can be tailored to target specific competencies and close skill gaps.

ALIGNING LEARNING OUTCOMES TO COMPETENCY FRAMEWORKS ENHANCES MICRO-CREDENTIALS BY CLARIFYING EXPECTATIONS, GUIDING ASSESSMENT, AND ENABLING PERSONALIZED LEARNING.

ALIGNING LEARNING OUTCOMES

IDENTIFY COMPETENCIES

MAP OUTCOMES

ALIGN ASSESSMENTS

VALIDATE ALIGNMENT

Review competency frameworks like Bloom's Taxonomy to identify core competencies that align with course learning outcomes.

Map specific course learning outcomes to the identified competencies to visualize alignment.

Ensure assessments test for the aligned learning outcomes and competencies.

Have subject matter experts review alignment between learning outcomes, assessments, and competencies.

DESIGNING ASSESSMENTS

ALIGNMENT WITH COMPETENCIES

Assessments must be designed to assess the identified competencies for the credential

AUTHENTIC ASSESSMENTS

Assessments should simulate real-world tasks and problems learners will encounter

VARIETY OF FORMATS

A mix of assessment formats like projects, presentations, portfolios allows evaluating different competencies

CAREFULLY DESIGNED ASSESSMENTS ARE CRITICAL TO EVALUATE COMPETENCY ACHIEVEMENT AND ENSURE CREDENTIAL VALUE.

DESIGNING ASSESSMENTS

FORMATIVE ASSESSMENT

Short, frequent, low-stakes assessments to gauge learner progress and provide ongoing feedback.

SUMMATIVE ASSESSMENT

Evaluates learner achievement at the end of a module or course to measure competency.

AUTHENTIC ASSESSMENT

Evaluates ability to apply knowledge and skills to real-world tasks and problems.

SELF ASSESSMENT

Learners assess their own learning progress, allowing reflection and ownership.

PEER ASSESSMENT

Learners assess each other's work, building evaluative skills and perspective.

EPORTFOLIO ASSESSMENT

Learners curate artifacts demonstrating competencies, skills, and achievements over time.

DESIGNING ASSESSMENTS

CASE STUDIES

Assign students real-world case studies to apply course concepts and demonstrate competencies.

PERFORMANCE

Evaluate learners' ability to perform specific tasks or demonstrate particular skills in real-world contexts like role-plays, presentations, and hands-on exercises.

PORTFOLIO REVIEWS

Review a curated collection of students' work to assess competency and progress over time.

SIMULATIONS

Immerse students in realistic scenarios to demonstrate and apply skills.

CAPSTONE PROJECTS

Have students complete a culminating project applying all they've learned.

CASE STUDY: RRU'S MICRO-CREDENTIAL IN CLIMATE ADAPTATION FUNDAMENTALS

Royal Roads University's Micro-Credential in Climate Adaptation Fundamentals is an innovative program that provides learners with essential knowledge and skills related to climate change impacts and adaptation solutions.

CLIMATE ADAPTATION COMPETENCY FRAMEWORK (CACF)
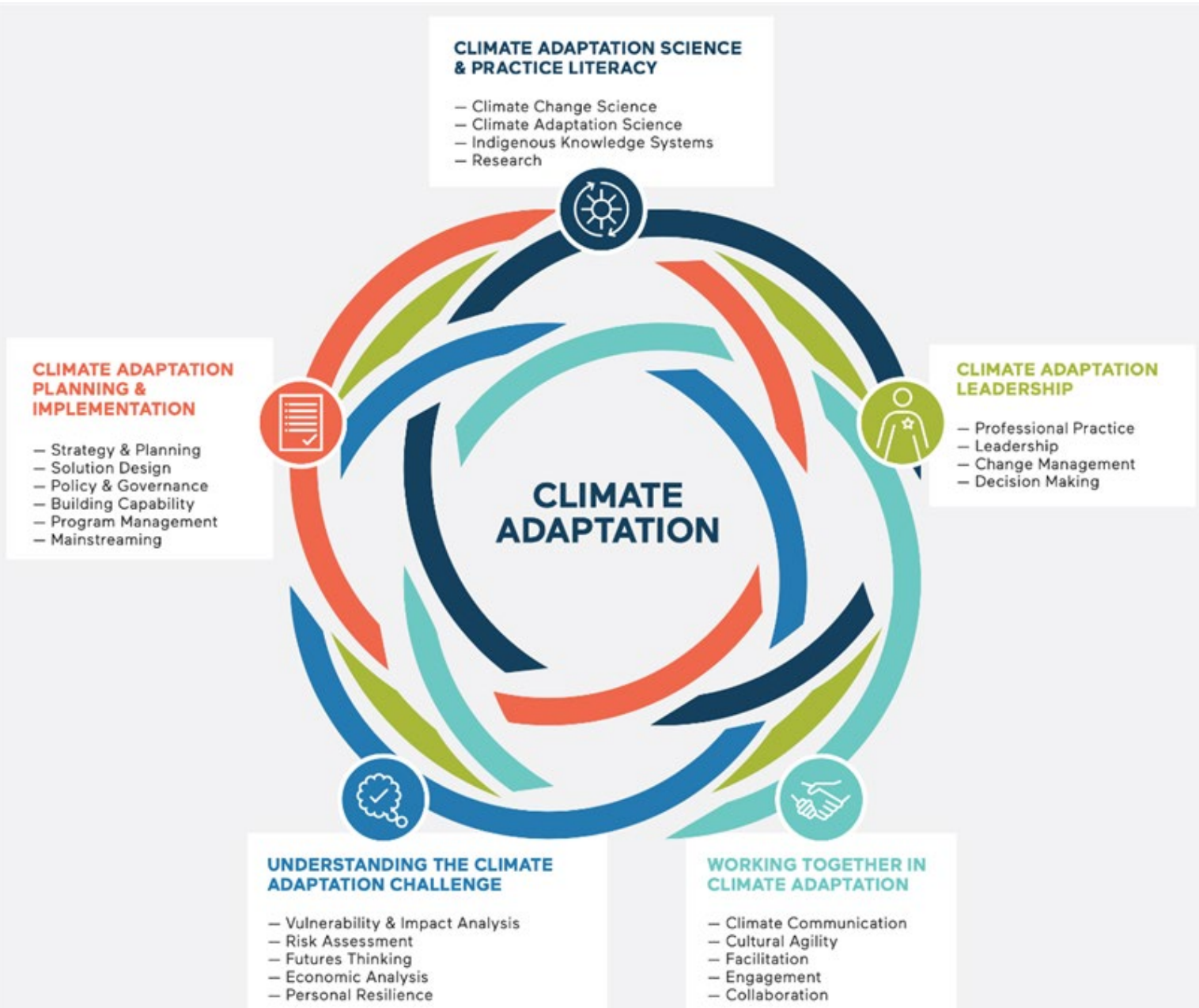
The Adaptation Learning Network (ALN) designed a draft climate adaptation competency framework in 2021.
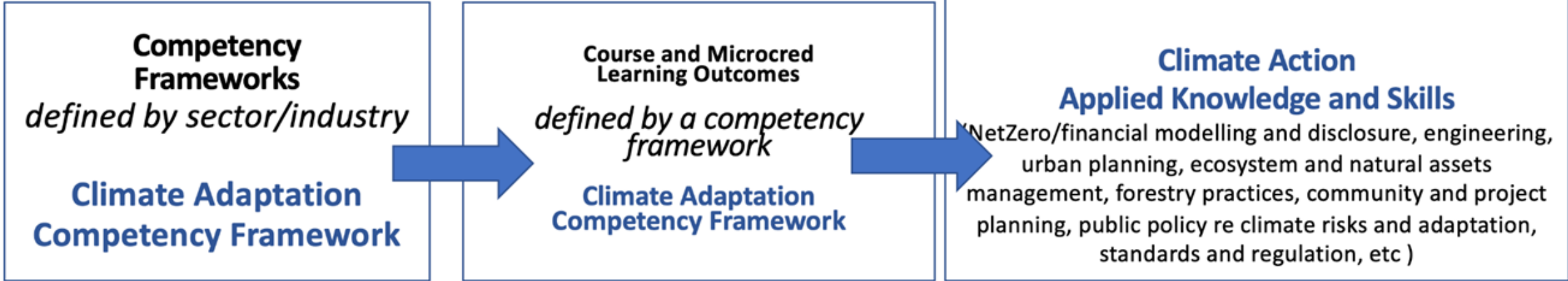
The draft framework was intended for prototyping courses and resources targeted at capacity building for working professionals

Micro-credentials were identified as an innovative method for the delivery of short-duration training, assessed and certified using the Climate Adaptation Competency Framework (CACF)

THE CLIMATE ADAPTATION COMPETENCY FRAMEWORK (CACF) WAS USED TO DEFINE LEARNING OUTCOMES FOR THE MICRO-CREDENTIALS
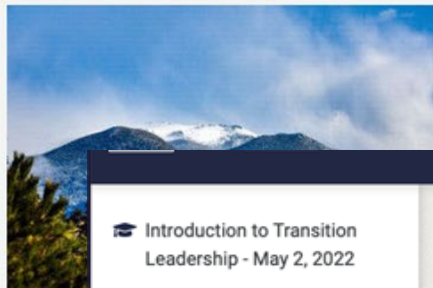
Resilience by DesignLab

Competency Frameworks
defined by sector/industry

Climate Adaptation Competency Framework

→

Course and Microcred Learning Outcomes
defined by a competency framework

Climate Adaptation Competency Framework

→

Workforce Readiness
Sector and Organizational capability and capacity-building through microcred upskilling

Climate Action Applied Knowledge and Skills
(NetZero/financial modelling and disclosure, engineering, urban planning, ecosystem and natural assets management, forestry practices, community and project planning, public policy re climate risks and adaptation, standards and regulation, etc)

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HOME / CERTIFICATE PROGRAMS / MICRO-CREDENTIALS / CLIMATE ADAPTATION FUNDAMENTALS MICRO-CREDENTIAL

Climate Adaptation Fundamentals Micro-Credential

The data is clear: climate change is here, and the time for climate action is now. The Intergovernmental Panel on Climate Change (IPCC) reports that human activity has been an "unequivocal" catalyst in warming trends compared to pre-industrial levels. Over the last century, temperatures have increased in Canada, sea levels have risen, Arctic ice and permafrost have melted, and atmospheric rivers are intensifying. Climate change will continue to escalate the severity of natural disasters and hazardous events.

For more information about this course please contact Professional and Continuing Studies

Climate Adaption Fundamentals
Royal Roads
UNIVERSITY
2022

Introduction to Transition Leadership - May 2, 2022

DASHBOARD / MY COURSES / INTRODUCTION TO TRANSITION LEADERSHIP - MAY 2, 2022

- Introduction to Transition Leadership - May 2, 2022
- Participants
- Grades
- Welcome to Introduction to Transition Leadership
- Module 1 - What is Transition Leadership?
- Module 2 - Cultivating Inclusive Mindsets and Pathways
- Module 3 - Convening Dialogue: From Possibility to Action
- Module 4 - Fostering Resilience
- Course Drafts
- Media Gallery

◀ Module 2 - Cultivating Inclusive Mindsets and Pathways   Module 4 - Fostering Resil

Module 3 - Convening Dialogue: From Possibility to Action

In the face of growing uncertainties, talking about complex change like addressing our climate future can often lead to fe powerlessness and inaction. In this third module, we will experiment with futures thinking and a simple framework called Three Horizons. Not only does the framework consider what's possible in the future, it provides a structure for considerin actions are needed (and changes needed) in order for the new future to emerge.

The CACF competencies mapped to this content in Module 3 include:

CLIMATE ADAPTATION LEADERSHIP   FACILITATING ADAPTATION CONVERSATIONS   FUTURES THINKING

- Module 3 Course Content
- Module 3 Learning Goals

The Climate Action Competency Framework v.2

WORKING TOGETHER
Collaboration
Communication
Cultural Agility
Facilitation
Engagement
Conflict Resolution
Professional Practice

LEADERSHIP
Climate-Informed Decision Making
Climate Action Policy
Climate Action Strategy & Planning

CAPACITY BUILDING
Mainstreaming
Education/Teaching Others
Lifelong Learning/Professional Development

CLIMATE RISK ASSESSMENT
Climate Risk management
Climate Data and Information Analysis
Climate Action Research
GHG Accounting

SOLUTION DESIGN
Creativity/Innovation
Critical Thinking/Problem Solving
Climate Finance
Solution Development

EFFECTING CHANGE
Adaptability
Change Management
Implemention
Monitoring & Evaluation

Climate-Informed Decision Making

Climate Action Policy

Climate Action Strategy & Planning

COMPETENCY AREAS

DOMAIN

LEADERSHIP

EFFECTING CHANGE

CAPACITY BUILDING

WORKING TOGETHER

SOLUTION DESIGN

CLIMATE RISK ASSESSMENT

LADDERING INTO FURTHER EDUCATION

1 — IDENTIFY RELEVANT CREDIT PROGRAMS AND ADMISSION REQUIREMENTS

2 — DETERMINE WHICH MICRO-CREDENTIALS COULD MEET ADMISSION REQUIREMENTS THROUGH PLAR

3 — DEVELOP CLEAR PATHWAYS FOR STUDENTS TO PROGRESS FROM SPECIFIC MICRO-CREDENTIALS TO CREDIT PROGRAMS

4 — PROMOTE LADDERING OPPORTUNITIES TO STUDENTS DURING AND AFTER MICRO-CREDENTIAL COMPLETION

5 — PROVIDE ADVISING TO SUPPORT STUDENTS IN NAVIGATING LADDERING PATHWAYS

6 — PARTNER WITH CREDIT PROGRAMS TO STREAMLINE PLAR PROCESSES FROM MICRO-CREDENTIALS TO CREDITS

WORK IN PROGRESS... ALWAYS

- ✔ DEFINE LEARNING OUTCOMES
- ✔ DEVELOP ASSESSMENT TOOLS
- ✔ PILOT WHERE POSSIBLE
- ✔ EVALUATE
- ✔ IMPROVE
- ✔ REPLICATE
- ✔ SCALE

REPLICATING THE MODEL

DEVELOP RRU MICRO-CREDENTIALING BLUEPRINT

Work with industry partners to identify skills gaps and develop a blueprint for micro-credentialing programs that provide targeted training.

ONBOARD ACADEMIC PARTNERS

Collaborate with peer institutions and faculty to develop micro-credentialing courses aligned to the blueprint.

INTEGRATE INDUSTRY FEEDBACK

Solicit ongoing feedback from employers to iterate on micro-credentialing programs and ensure their relevance.

SHARE BEST (LEADING) PRACTICES

Host workshops and share resources to support other institutions in developing micro-credentialing programs.

PURSUE JOINT MICRO-CREDENTIALING

Partner with industry and institutions to co-develop micro-credentials combining academic and workplace training.

LEADING PRACTICES AND CONSIDERATIONS

ALIGN TO COMPETENCIES

Ensure micro-credentials are mapped to competencies critical for role success

INTEGRATE WITH SYSTEMS

Integrate micro-credentials into existing systems like LMS, HRIS, etc.

PROMOTE ADOPTION

Market benefits to learners and leaders to drive adoption

SHARING EXPERIENCES AND GOOD PRACTICES WILL ENABLE US TO MAXIMIZE THE VALUE OF MICRO-CREDENTIALS FOR COMPETENCY-BASED LEARNING.

LEADING PRACTICES AND CONSIDERATIONS

ALIGN TO INDUSTRY NEEDS

Ensure micro-credentials align to in-demand skills and competencies required by industry.

MODULAR DESIGN

Break courses into small, stackable modules that demonstrate mastery of discrete skills.

COMPETENCY-BASED

Assess and credential based on demonstrated competencies, not just seat time.

ACCESSIBLE AND AFFORDABLE

Design programs that are accessible to diverse populations of learners at an affordable cost.

CLEAR LEARNING PATHWAYS

Provide transparent pathways to stack credentials and transition to further education and career opportunities.

QUALITY ASSURANCE

Establish robust quality assurance through industry input, assessments, and credentialing transparency.

A FEW ISSUES (OPPORTUNITIES!) TO WORK THROUGH

- **INFRASTRUCTURE**
  - People
  - Processes
  - Platform
  - Policies

- **FUNDING**
  - Tuition/Government
  - Development (SMES/Faculty)

- **RELATIONSHIPS**
  - Building industry partnerships takes time
  - Current understanding in sector

- **COMPETITION**
  - Everyone online
  - Other HE
  - Industry

- **PORTABILITY**
  - National Skills Framework
  - Provincial PSI Collaboration
  - Competency Dictionary (RRU)

- **CHANGING LANDSCAPES?**

  EVERYTHING. ALL AT ONCE.. ALL OF THE TIME.

THANK YOU AND...
QUESTIONS?

ZOE.MACLEOD@ROYALROADS.CA

We Would Like To Hear From You!

Post Webinar Survey - Micro-credential Toolkit Story Spotlight: Design