

Driving Innovation in Bruce County

Project Innovate

July 2018

Executive Summary

The Bruce County region currently faces an increasing labour shortage, a need for innovation & entrepreneurial spirit, and a decreasing level of collaboration within the community. To address these challenges, Bruce County has established specific, action-oriented objectives along with a detailed roadmap to reach these goals with the hope to build a diverse collaboration network and become an innovative energy supercluster.

Bruce County presently faces three main challenges...



Labour

Between Bruce Power's, "Life Extension Program", and the "Economic Development Innovation Partnership" between Bruce Power and the surrounding region, Bruce County will require thousands of trades people each year for the next 20+ years.



Innovation

The region of Bruce is suffering from minimal innovation, incubation, and commercialization of start-up ideas. To spur economic growth, Bruce County must allocate resources to research, grow its talent pipeline, and incubate business development.



Collaboration

Bruce County's current infrastructure, combined with its absent support network and lack of training programs has created an unfavourable relationship between academia, SME's, LE's, and the extended community.

...but has developed a list of key objectives to address them.

- Grow, attract, and retain talent locally
- Increase economic diversity
- Anchor collaboration
- Improve infrastructure
- Shift cultural mindset
- Become environmental by design
- Obtain global recognition
- Emphasize research

However, to reach these specific objectives, Bruce County must...

In the short-term: 0-6 Months

- ✓ Establish Project Innovate Taskforce
- ✓ Develop a marketing and communication document
- ✓ Identify where and what government funding is available
- ✓ Identify academic institutions to target

In the medium-term: 6-12 Months

- ✓ Target specific enterprises
- ✓ Evaluate alternative industry opportunities

In the long-term: 12+ Months

- ✓ Establish a centre for collaboration, skill training facilities and programs
- ✓ Attracting top talent

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Overview

Overview

Bruce County has a significant opportunity to build a sustainable energy supercluster and utilize existing assets to diversify into alternative industries. To do so, a strategic framework, leveraging Deloitte's Strategic Choice Cascade, was formalized to address the region's governing thought.

Bruce County represents a transformative, global opportunity to become an energy supercluster...

- *Supercluster (n.) - a geographical region that is home to an especially strong industrial cluster or clusters linked through their shared reliance on specialized inputs, including technologies, talent and infrastructure.*
- *As compared to smaller or single-sector clusters, these supercluster innovation hotbeds benefit from stronger connections between firms and research talent, a long-term competitive advantage, global brand recognition, and an outsized impact on job creation and economic growth (GDP).*

The following questions are ones that need answers to set the overarching strategy framework and effectively position the Bruce County region to become a diverse and sustainable energy supercluster...



WHAT ARE OUR GOALS AND ASPIRATIONS?



WHERE WILL WE PLAY?



HOW WILL WE WIN IN CHOSEN MARKETS?



HOW WILL WE CONFIGURE?



WHAT ARE OUR PRIORITY INITIATIVES?

All of the answers to the questions above must support Bruce County's governing thought...

- **Governing thought (n.)** – a strategy that states the answer to the question raised in the readers mind – the single recommendation. It represents a top-down structured approach for the overarching strategic goal of the organization, community or region.
- Bruce County's governing thought – **“TO BUILD A DIVERSE COLLABORATION NETWORK THAT ADVANCES BRUCE COUNTY AS A GLOBAL LEADER & NATIONAL CENTRE IN ENERGY PRODUCTION, RESEARCH AND NEXT GENERATION TECHNOLOGIES.”**

Overview Governing Thought

The purpose of the **Governing Thought** is to state the answer to the questions raised during the information gathering process and to provide the central, over-arching recommendation.

TO BUILD A ***DIVERSE COLLABORATION NETWORK***
THAT ADVANCES BRUCE COUNTY
AS A ***GLOBAL LEADER & NATIONAL CENTRE IN ENERGY PRODUCTION, RESEARCH AND NEXT GENERATION TECHNOLOGIES***





Competitive Landscape

Competitive Landscape

With many successful innovation programs already established in Canada, Bruce County's economy, location, readiness to build, and willing project partners make the area primed and ready to join the movement and become a national and global leader in energy research and innovation.



Strengths

- The Bruce region has a strong reputation in the energy sector, which will allow the area to build a culture and support system that will nurture entrepreneurial spin offs.
- The Bruce Power and Bruce County multi-year partnership that attracts business investment and expansion into local region (Bruce, Grey, and Huron Counties) has created an energy cluster of world class intellectual talent.
- The Bruce County region is well-positioned for a centralized skill training facility and program as a number of locations are available for building development.



Weaknesses

- The absence of a local university and private school system, in addition to the limited relationship between the labour market, local colleges and the public school system has created a gap in the talent pipeline.
- The region is currently suffering from a lack of: entrepreneurial activity, workforce collaboration and integration, and diversity in the workforce.
- The Bruce region's current infrastructure needs to be supported and enhanced in order to attract top talent.



Opportunities

- Bruce Power's multi-year, multi-billion dollar Life Extension Program, announced in 2015, will require thousands of trades people each year for the next 20 years and beyond.
- Community involvement and local government support has been strong thus far, and is expected to continue to be available going forward.
- There are successful frameworks from past innovation strategy programs that have addressed the current challenges faced by Bruce County including the need for innovation, collaboration and talent integration.



Threats

- Bruce Power is currently the anchor for the Bruce County region, and should an unforeseen event affect Bruce Power, Bruce County's reliance on Bruce Power would severely affect the innovation strategy going forward.
- An aging population presents a significant challenge for the Bruce County region as the demand for technological advancement and skills continues to rise, the supply of labour is not growing at the same pace.
- Bruce County is surrounded by several other regions who could pose as competition for potential investments towards infrastructure, labour and talent based movements.

Competitive Landscape Case Studies

Ranging from energy, collaboration, innovation, and labour, a number of supercluster frameworks have been used in Canada, and around the globe, and help to provide Bruce County with a framework to position itself as the next global player to join the movement.

<p>Charlotte's Energy Sector (COLLABORATION)</p> <ul style="list-style-type: none"> • Superclusters, such as Charlotte's energy sector, represent a successful framework on how a geographical region can leverage its economy, location, and support system to create shared reliance on specialized inputs, including technologies, talent and infrastructure. • From the local government, to nonprofits, to the private sector, the Charlotte community is investing in initiatives to make more environmentally conscious investments. • Charlotte has become an incubator for startups, creating opportunities for entrepreneurs who are developing clean energy companies, offering degrees and certificates in renewable energy, environmental engineering, sustainable manufacturing and spatial analysis and conducting research and development relating to the generation, delivery and use of electricity for the benefit of the public. <p><small>Source: charlottechamber.com/eco-dev/charlotte-s-energy-sector/</small></p>	<p>Fort Collins Area Chamber of Commerce (LABOUR)</p> <ul style="list-style-type: none"> • The regional workforce strategy implemented by the Fort Collins Area Chamber of Commerce, represents a successful framework on how a group of partners should assess the region's workforce, identify key challenges, and develop a regional talent strategy. • The Fort Collins Area Chamber of Commerce brought together a group of partners with the mission to create, "a dynamic labor market with a strong talent pipeline that supports employers' current and future needs and provides residents with good career options and opportunities to improve their skills." • This vision of a dynamic labor market has created a virtuous cycle within the workforce system, which in turn supports a strong and diverse regional economy through increased access, improved alignment and reduced barriers to enter. <p><small>Source: https://fortcollinschamber.com/wp-content/uploads/2017/02/2017-02-06-Regional-Workforce-Strategy-FINAL.pdf</small></p>
<p>Communitech (INNOVATION)</p> <ul style="list-style-type: none"> • Communitech, a Kitchener-Waterloo based micro-ecosystem for innovation, incubation and commercialization, represents a successful framework on how to leverage community support, academia and available infrastructure to support the development of companies (at all stages), with access to capital, customers and talent. • Originally, Communitech sought out to help generate 2,000 new jobs within startup companies and 5,000 new jobs in existing technology companies. • The Communitech Hub has successfully created an "innovation district", by attracting 65 new companies to the downtown Kitchener, Ontario area, creating close to 4,000 new jobs and attracting \$350 million in equity investments. <p><small>Source: https://www.communitech.ca/press-release/communitechs-107m-digital-strategy-delivering-ahead-of-schedule/</small></p>	<p>Energy Innovation Centre (INNOVATION / COLLABORATION)</p> <ul style="list-style-type: none"> • The Energy Innovation Centre, built in Ellesmere, England, to support innovation ambitions of industry partners represents a successful framework on how to accelerate the discovery, development and deployment of energy innovation and sustainability. • The EIC was built to support innovation ambitions of industry partners from the gas, electricity and renewables sectors by generating groupthink discussion with the intention to find game-changing ideas for energy consumers. • Since inception, the EIC has already managed to broker £1.8M in new investments, establish a community of entrepreneurs and SMEs of almost 2,000 people, and create nearly 500 new business opportunities from innovators and entrepreneurs <p><small>Source: http://energyinnovationcentre.com/</small></p>



Strategy Development

Strategy Development



Bruce County's regional innovation strategy was developed through working sessions, stakeholder interviews, and weekly status updates and was supported by external case study and qualitative and quantitative environmental research.



Working Sessions

Conducted two working sessions with the County and 15 external stakeholders, with experience and backgrounds from different industries – the first to define the general framework for goal-specific strategies and the second to formulize the overarching strategy of the region, which led to informed choices and the foundation for the strategy development.



Stakeholder Interviews

Engaged in a series of stakeholder interviews to gather input and evaluate stakeholder support and alignment on the proposed aspects of the strategy development and strategy formulization.



Weekly Status Updates

Organized 10 weekly discussions with Bruce County leadership team to evaluate stakeholder feedback, review goal-specific strategies and align on project status and timelines.



Case Studies

Applied Deloitte's previous client experience with incubator program design and cluster strategy and supplemented that with current leading practices from other relevant and comparable organizations on the establishment of a regional innovation focus.



Environmental Scan

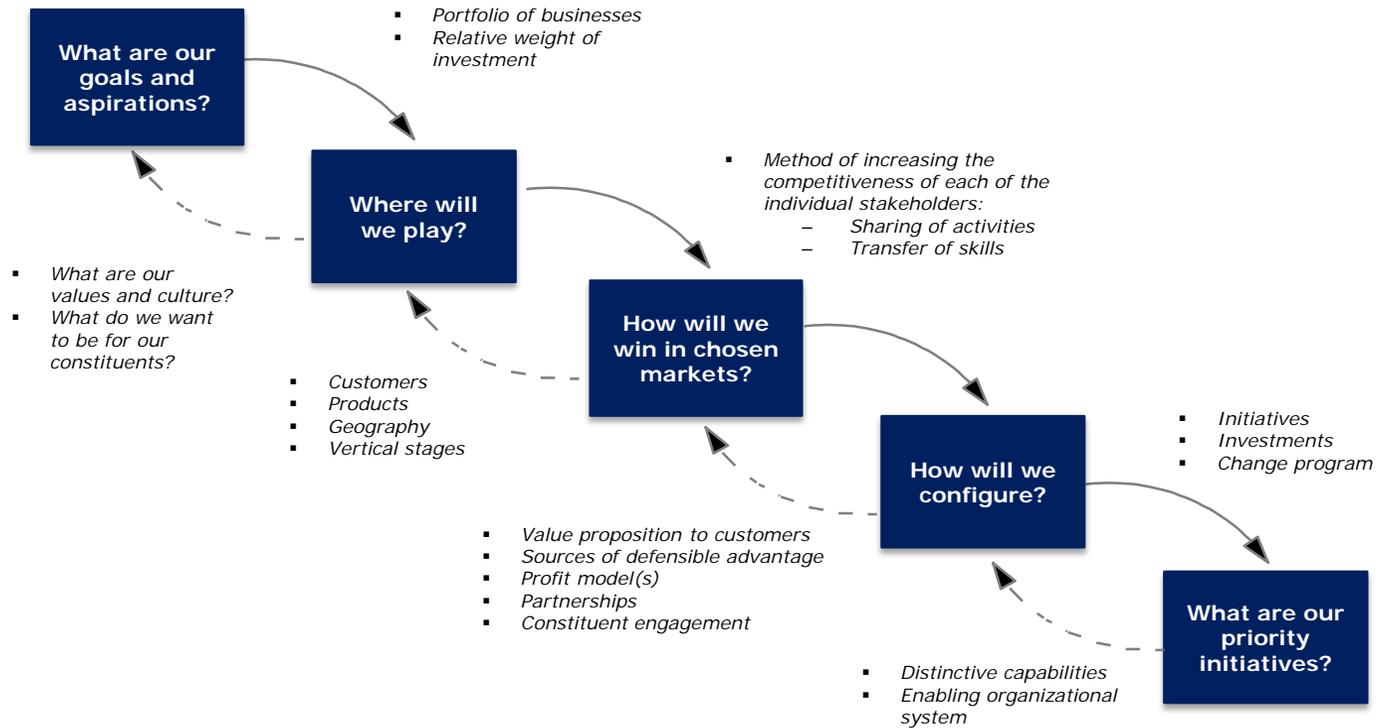
Gathered relevant background documentation for review and analysis, to understand the regional industry and academia structure, capabilities, resources, and external competitive landscape.

Strategic Choice Cascade

The Strategic Choice Cascade is a tool to help the region of Bruce express their innovation strategy as an integrated set of choices, which drives resource allocation, investment decisions, and performance expectations.

Our Definition of Strategy:

A **strategy** is an **integrated** set of **choices** which **positions** the region to create and exploit a **sustainable competitive advantage** relative to the competition.



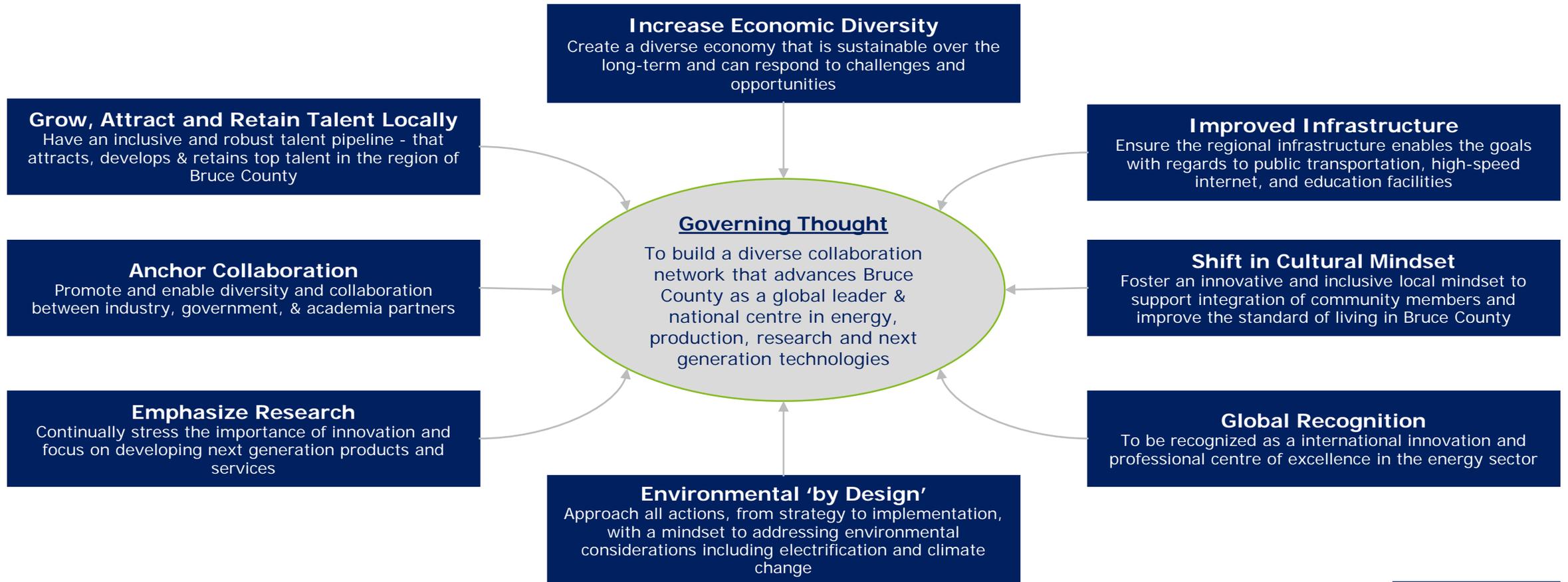
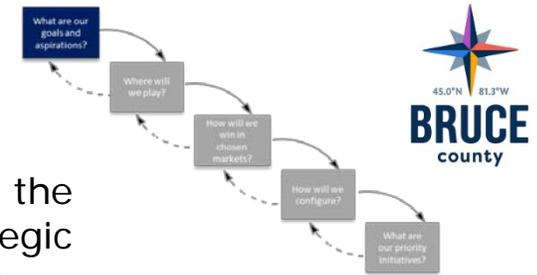
- The Strategic Choice Cascade framework was developed by Roger Martin - a pioneer in strategic thinking, author of *Playing-to-Win*, and previous Partner at Monitor Deloitte
- The framework has been adopted by large Fortune 500 companies worldwide
- At its core, the Strategic Choice Cascade reinforces the idea that strategy is a set of interrelated choices that uniquely positions an organization to create long run sustainable advantage over their competition.
- We leverage this framework to facilitate candid and deliberate conversations about key choices to make to create, develop, and evolve their strategies.
- The illustration demonstrates the set of five key questions used to articulate a clear set of strategic priorities - combining collaborative workshops with analysis to test, refresh, and transform the region of Bruce into the future.



Stakeholder Choices

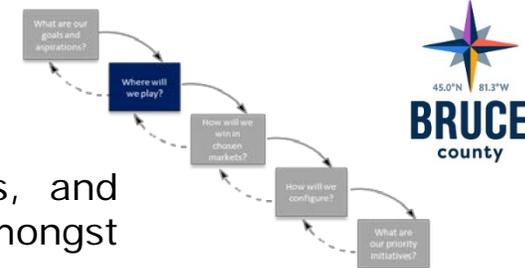
Stakeholder Choices

Establishing the specific innovation **goals and aspiration** for the region of Bruce County creates the foundation for conducting an assessment and developing fact-based hypotheses on areas of strategic focus and developing an actionable roadmap for implementation – both short-term and long-term.



Legend =  Established Goals and Aspirations

Stakeholder Choices

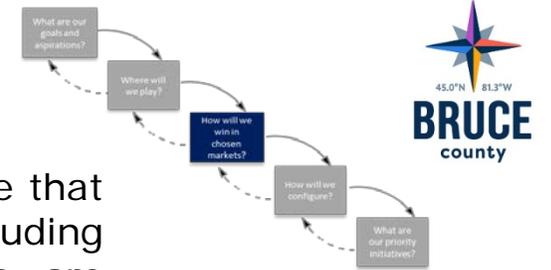


Increased access to skilled workforce, improved integration and collaboration opportunities, and positive economic development are a few of the many impactful benefits that would be shared amongst **the key stakeholders** directly involved with this regional innovation strategy.

	What are their needs?	How will they be impacted?
Academic Institutions University, College, High School, and grade Schools across Ontario and Canada	<ul style="list-style-type: none"> → Attract ambitious, high-caliber students → Collaboration and knowledge exchange with industry → Local opportunities for students and new graduates → Community with risk-taking culture that seeks to cultivate the next generation of entrepreneurs and innovations 	<ul style="list-style-type: none"> → Enhanced ability to attract the best and the brightest → Dynamic local labour markets that provide opportunities for students and graduates → Local network of accomplished entrepreneurs and venture capitalists who can provide opportunities, mentorship, and support
Small-to-Medium Enterprises Independent businesses that employ fewer than 500 employees	<ul style="list-style-type: none"> → Access to resources as they grow and respond to market changes → Close proximity to other SMEs → Access to capital, talent, and affordable / flexible working spaces → Connections with larger, more established enterprises 	<ul style="list-style-type: none"> → Increased availability of space and support (e.g., funds, programming) → Flexible and affordable spaces to innovate and ultimately build and test products → Cross-pollination opportunities with industry leaders and entrepreneurs
Large Enterprises Independent or subsidiary businesses that employ more than 500 employees	<ul style="list-style-type: none"> → Exposure to leading edge and disruptive innovation → Collaboration and cross-pollination with entrepreneurs and SMEs → Opportunities to build strategic partnerships → Access to top talent, new markets, and consumers 	<ul style="list-style-type: none"> → Ability to integrate into growing innovation ecosystem → Exposure to, and opportunities to collaborate with, entrepreneurs and SMEs → Access to top talent and innovative thinking → Ability to serve as mentors and potential investors / business partners
Government Institutions Municipal, Provincial, and Federal organizations	<ul style="list-style-type: none"> → Align with 'Developers' on infrastructure opportunities → Enhanced local, national, and international profile → Compile and maintain key economic data 	<ul style="list-style-type: none"> → Can be advocates for the removal of legislative obstacles to training programs and infrastructure demands → Help build awareness of programs and by gathering testimony for employers/employees utilizing the programs and services
Underrepresented Workforce Including women, indigenous communities, young entrepreneurs	<ul style="list-style-type: none"> → Opportunities for business and community mentorship → A resource for individuals to find opportunities that match their skillset → Support services for women and young entrepreneurs 	<ul style="list-style-type: none"> → Increased access to jobs, space, opportunities and support → Exposure to, and opportunities to collaborate with, entrepreneurs and SMEs
Unions The Power Workers' Union, The Society of Energy Professionals, CUPE, EPSCA, etc.	<ul style="list-style-type: none"> → Continual training and education for their members → Advance partnerships with and collaboration with other organizations → Access to peers and coaches who have gone through similar processes → Space and support to develop and grow ideas 	<ul style="list-style-type: none"> → Increased availability of space and support (e.g., funds, programming) → Access to work space, coaching, and a network of like-minded workers at large enterprises → Ability to stay in the Bruce County region as they become successful and grow
Community Service and Business Organizations Partnerships with existing networks	<ul style="list-style-type: none"> → Jobs and prosperity for residents through economic development → Deliberate acceptance programs & new comer → Supporting families and community members moving/staying in the area → Strong, balanced economy that can withstand market changes 	<ul style="list-style-type: none"> → Positive economic development and growth → Home base for high-growth businesses → Foreign investment, job creation, tax revenue, and improved infrastructure

Stakeholder Choices

The most sustainable strategies create a long-term competitive advantage that help differentiate that specific region. The unique elements of the Bruce region's future value proposition, including increased access to skilled workforce and improved integration and collaboration opportunities, are identified in the **'how will we win'** choices.



Focus on Education Early - Engaging industry with education to capture interest from a young age utilizing multiple approaches/strategies

Cross-Industry and Functional Promotion/Marketing – Communicate opportunities the region has to offer within the energy sector, but also other physical assets, i.e. environment & tourism

Deliberate Acceptance Programs & Diversified Networks – Create a centralized process for the sharing and integration of talent and leading practices across the stakeholders involved in the network

Public and Private Sector Training and Development – Build reliance in other areas outside of academia, in order to generate robust economic development and training programs

Trades and Skilled Workforce Development – Extend the focus beyond the skilled trades and across multiple industries and have centralized skills training facilities and programs that benefits current and future industries in the region

Creating Mentorship/Support/Investor Programs – Generating educational, financial, and network support for entrepreneurs and SME's to incubate new business ideas

Establishing a "Collision Network" – Facilitate collaboration between the people and the community by establishing a culture and network around the idea of sharing best practices on innovation, finance, and market delivery ideas

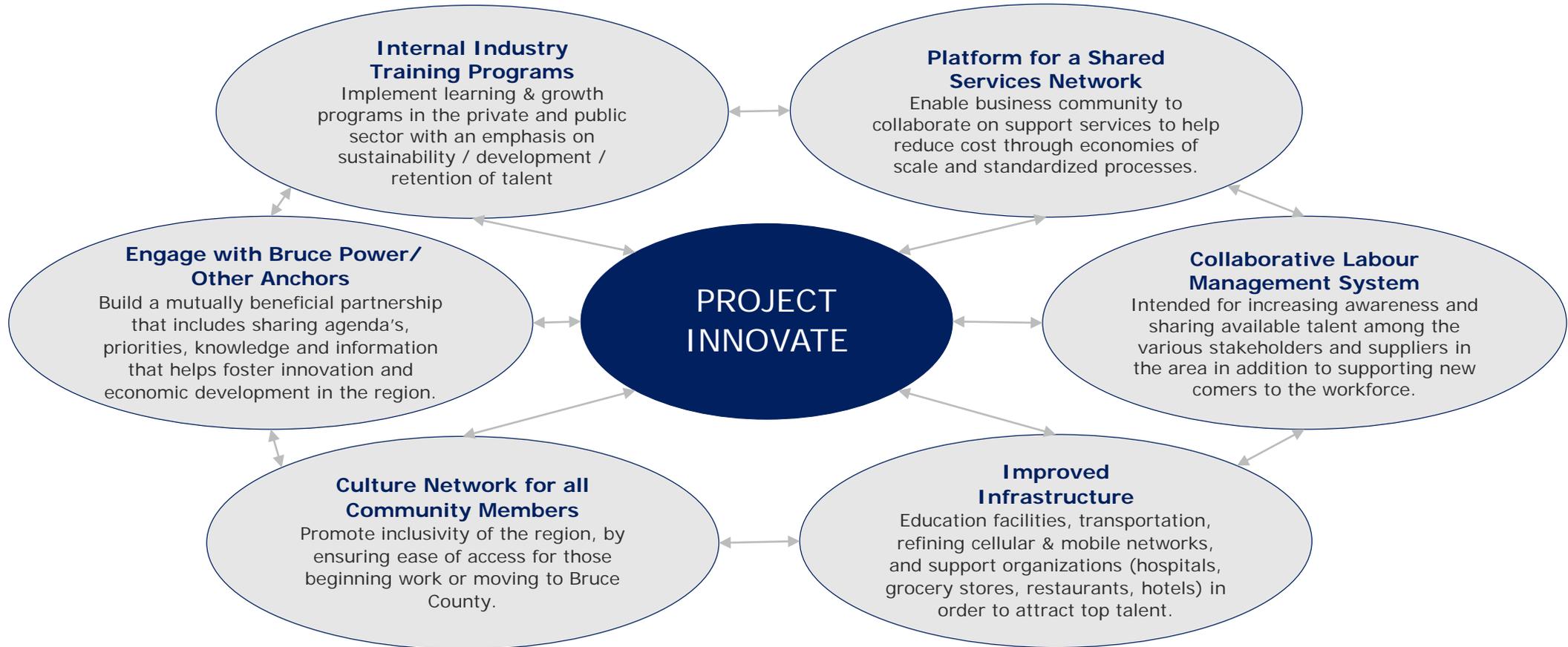
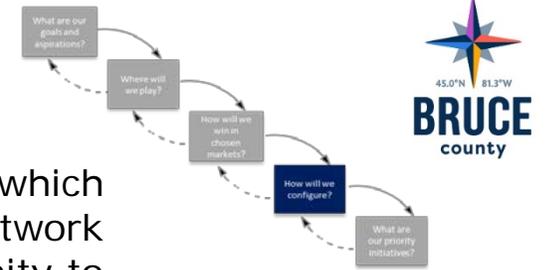
Sample Dashboard and Key Metrics to Measure and Manage Success



- To create a sustainable competitive advantage, it is important to track performance of the region using key metrics.
- Identified metrics include but are not limited to: global talent competitive index, # of academic institutions, community happiness index, growth of the workforce (specifically in women & young entrepreneurs), quality of life, new business registration, direction of property values, etc.

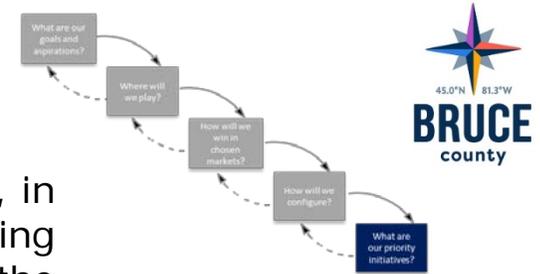
Stakeholder Choices

Building the support and **configuring** the infrastructure around the notion of collaboration, which includes corporate partnerships, thorough internal and external training programs, a strong network of support, and improved overall groundwork can provide the County of Bruce with the opportunity to foster the environment it desires.



Stakeholder Choices

Winning strategies balance informed choices with timely actions. To increase the odds of success, in terms of achieving the defined goals and aspirations, and minimizing the potential risk, establishing a **prioritized set of initiatives** is required to create the sustainable competitive advantage the region of Bruce is looking to achieve.



In the short-term: 0-6 Months

These are the initiatives that must begin immediately starting with the Taskforce

1. Establish Project Innovate Taskforce

Maintain throughout the innovation strategy development, execution, and communication process



2. Marketing and Communication Document

To communicate and highlight the competitive advantages and capitalize on existing assets of the region and engaged with the identified prioritized stakeholders about the mutually beneficial opportunities that will be developed



3. Identifying Where and What Government Funding is Available

In an effort to properly forecast projections and identify potential opportunities and funding availability to launch new ideas and businesses



4. Identifying which Academic Institutions to Target

Ensuring to involve academic institutions from the onset of the process as they are an integral stakeholder to future success



Deloitte.
Private

In the medium-term: 6-12 Months

These are the initiatives that must begin once the short-term priorities have commenced

5. Target Specific Enterprises

Must partner with SME's & LE's to help facilitate the introduction of new industry/entrepreneurs to the area



6. Evaluate Alternative Industry Opportunities

The region of Bruce County must look to develop players in other industries in case of unforeseen industry changes



In the long-term: 12+ Months

These are the initiatives that will take place once the first six priorities are underway

7. Establish a centre for collaboration, skill training facilities and programs

Create a centralized model for expanding skill development and training programs as well as a center for collaboration and thought leadership



8. Attracting Top Talent

Create a brand identity for the region so that people feel a sense of attraction and commitment to the Bruce County community and foster an environment of innovation and support

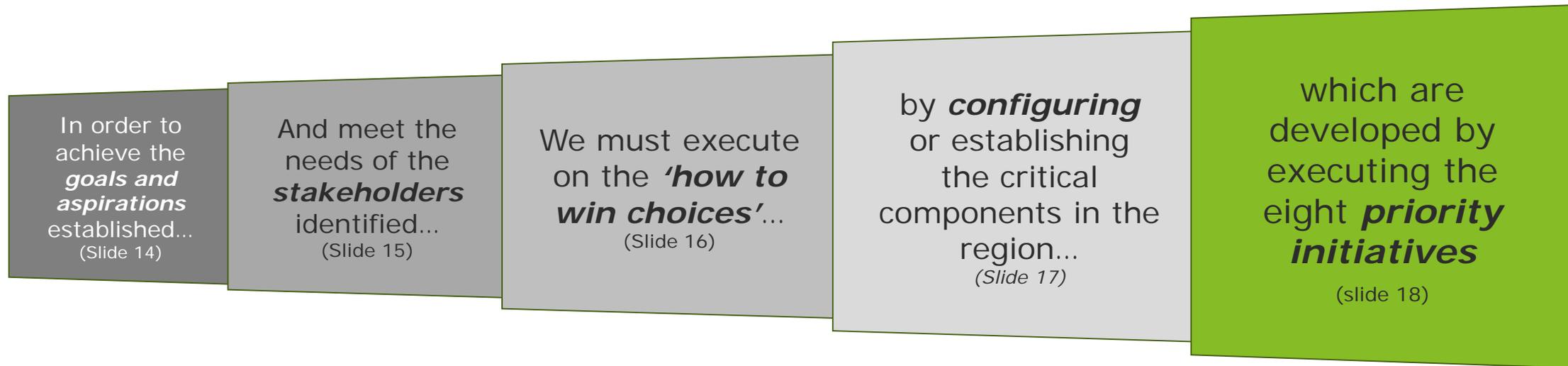


Indicates the **challenge(s)** this initiative is addressing:

-  **LABOUR**
-  **INNOVATION**
-  **COLLABORATION**

Stakeholder Choices Summary

The summation of two working sessions with more than twenty stakeholders, environmental scans and multiple case studies, has formulated this regional innovation strategy and will be the guiding document through the innovation transformation of the County of Bruce.



- Each of the eight priority initiatives must answer the six key areas of focus for implementation (as listed in the following section) and plotted against a time bound roadmap for execution.
- An example of this implementation and planning process has been completed, for the first priority initiative, but this process is required for each of the next 7 priority initiatives.



Moving Forward

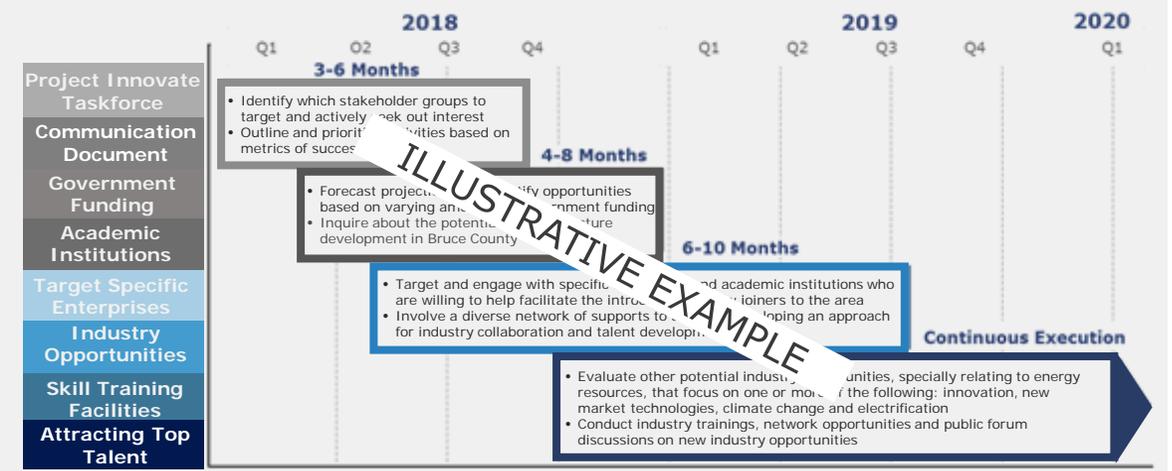
Moving Forward

Each of the **eight** priority initiatives, need to address the six focus areas for implementation and be converted into an actionable roadmap. The first initiative, *“Establish Project Innovate Taskforce”*, is outlined in the following slides, and provides a framework for the first step required to drive the innovation agenda and address both the challenges and opportunities that currently exist within Bruce County.

Six Areas of Focus for Implementation

 <p>Accountabilities</p> <ul style="list-style-type: none"> Who will be responsible for executing on or overseeing key activities? Where are the main centres for control? 	 <p>Required Investments</p> <ul style="list-style-type: none"> What investments will be required? What are the approximate amounts?
 <p>Timing</p> <ul style="list-style-type: none"> How long should each activity take? Which activities can be done concurrently? 	 <p>Measures of Success</p> <ul style="list-style-type: none"> What KPIs are relevant? How will these KPIs be measured?
 <p>Activities</p> <ul style="list-style-type: none"> What are the major steps / projects that must be undertaken? 	 <p>Risks</p> <ul style="list-style-type: none"> What are the potential roadblocks to success? How can these risks be mitigated?

- Below is an illustrative example of a time bound roadmap with innovation initiatives plotted for implementation.
- Aligning the innovation initiatives and supporting activities with the required investment and accountabilities, will allow the team to address the risks and develop key measures of success for execution.



➤ Please note that all information included in the chart above is for illustrative purposes only

Moving Forward Priority Initiative #1 (1 of 3)

Establishing “**Project Innovate Taskforce**” will be the first priority when implementing this regional innovation strategy. Maintaining governance, instilling accountability, and reporting out consistently will be part of the Taskforce main responsibilities.

KEYS TO DEFINING A TASKFORCE STRUCTURE

- Define a methodology to facilitate a consistent and comprehensive execution of the strategy
- Incorporate lessons learned from previous strategic Taskforces to refine structure and methodology
- Identify strong operators who can manage coordination with the steering committee
- All representatives must be clear on their specific roles and responsibilities towards and be aligned to the vision for the strategy
- Regular status updates must be provided to successfully contribute and understand progress

SAMPLE TASKFORCE STRUCTURE

STEERING COMMITTEE

- Provide strategic objectives and oversight
- Rapidly resolve escalated issues
- Provide final approvals on critical decisions

TASKFORCE OPERATIONS / REPORTING

- Set priorities, roadmap and timing for the strategic initiatives that have been identified and new ones that may arise
- Coordinate activities and dependencies across the strategy and work streams
- Resolve major issues and proactively manage risks
- Approve major decisions and communications
- Track and report separation and progress

FUNCTIONAL AREAS

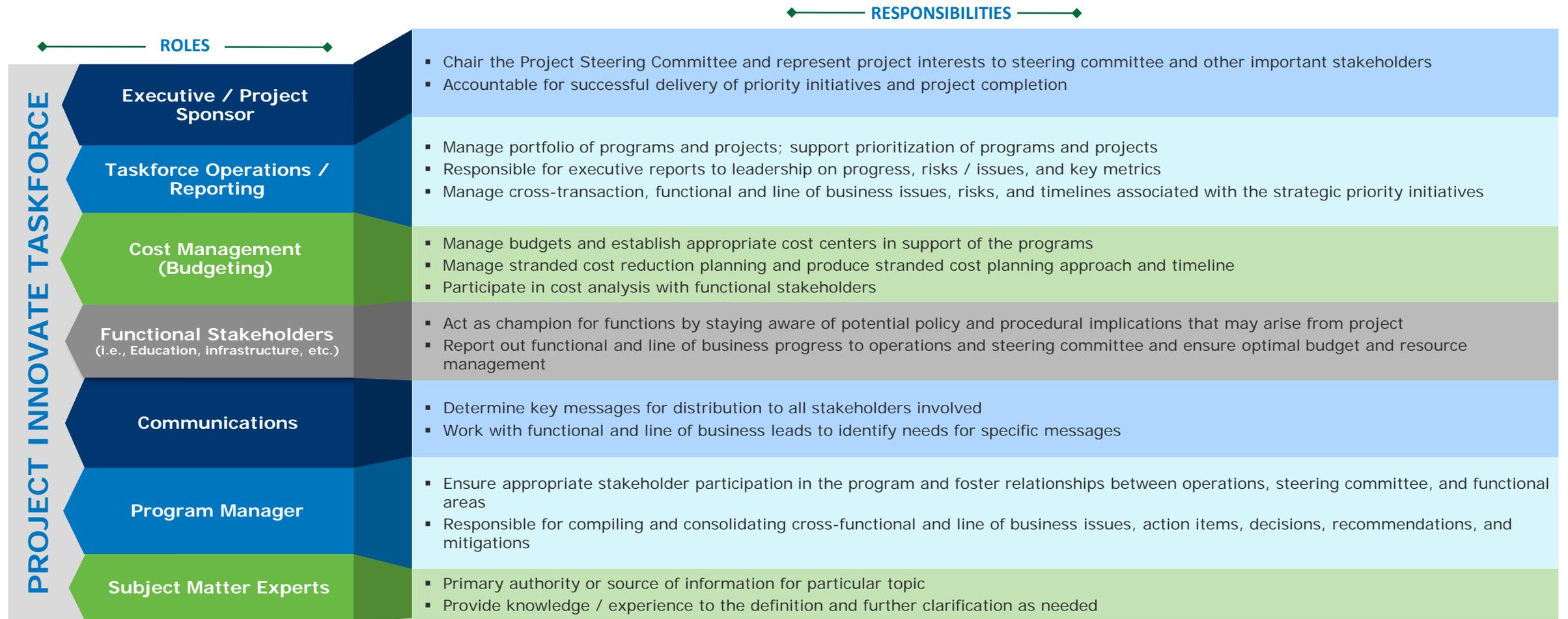
- Lead functional activities across programs
- Coordinate planning and execution activities (e.g., meetings/introductions, reporting to operations, driving relationships)
- Evaluate options (process, technology, organization), develop recommendations and estimate costs of alternatives
- Proactively manage, resolve, and escalate risks

GUIDANCE ON TASKFORCE TEAM RESOURCES

- The Taskforce operations / reporting team has a significant impact on the success of the strategy execution. Some key requirements for the role include:
 - Experienced, well-respected individuals with a reputation for being able to get things done
 - Comfortable with chaos, has a broad knowledge of his or her own organization
 - Strong decision-making ability when presented with incomplete or limited information
 - Provide emotional grounding by navigating political minefields, defusing conflict, and keeping the functional area teams on task
- Teams should be staffed with members that are high performers, who have the skills, experience, and attitude needed to make the right planning and design decisions, and effectively represent their broader organization

Moving Forward Priority Initiative #1 (2 of 3)

It will be critical towards successful implementation of the prioritize initiatives to define, communicate, and understand the Taskforce roles and responsibilities.

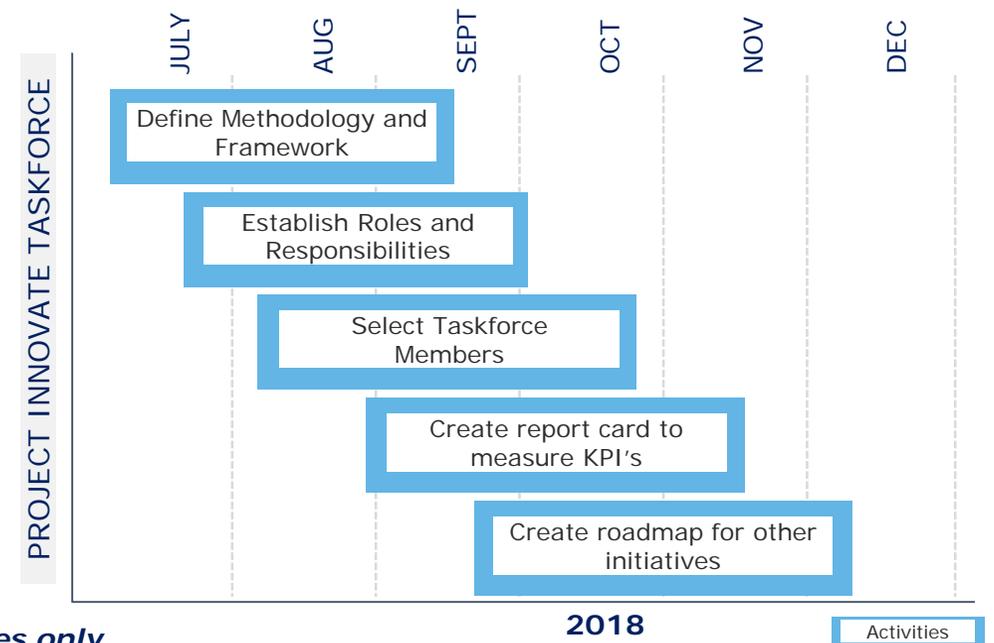


Moving Forward Priority Initiative #1 (3 of 3)

The innovative priority initiatives identified need to address the six focus areas for implementation and be converted into an actionable roadmap to support and drive the innovation agenda and address both the challenges and opportunities that currently exist within Bruce County.

Project Innovate Taskforce - ILLUSTRATIVE EXAMPLE	
 <p>Accountabilities</p> <ul style="list-style-type: none"> The functional support, the operations and reporting team, and the steering committee all have specific levels of accountability, as reported on page 20 	 <p>Required Investments</p> <ul style="list-style-type: none"> Based on individual time Expectations regarding time must be managed at the start Steering Committee = 1 Hour/week Operations = 5 Hours/week Functional Support = 2 Hours/week
 <p>Timing</p> <ul style="list-style-type: none"> Begin defining the roles and responsibilities immediately Each role will have a variable commitment, but that commitment period must be pre-established 	 <p>Measures of Success</p> <ul style="list-style-type: none"> Clearly defined methodology and framework for execution Established roles and responsibilities Develop a time-bound roadmap for each of the short-term priority initiatives
 <p>Activities</p> <ul style="list-style-type: none"> Establish methodology and framework for taskforce Define the roles and responsibilities immediately Initiate a report card to measure KPI's 	 <p>Risks</p> <ul style="list-style-type: none"> Capacity and time – this project is a long-term commitment Alignment with goals – many stakeholders from many different parties will be involved

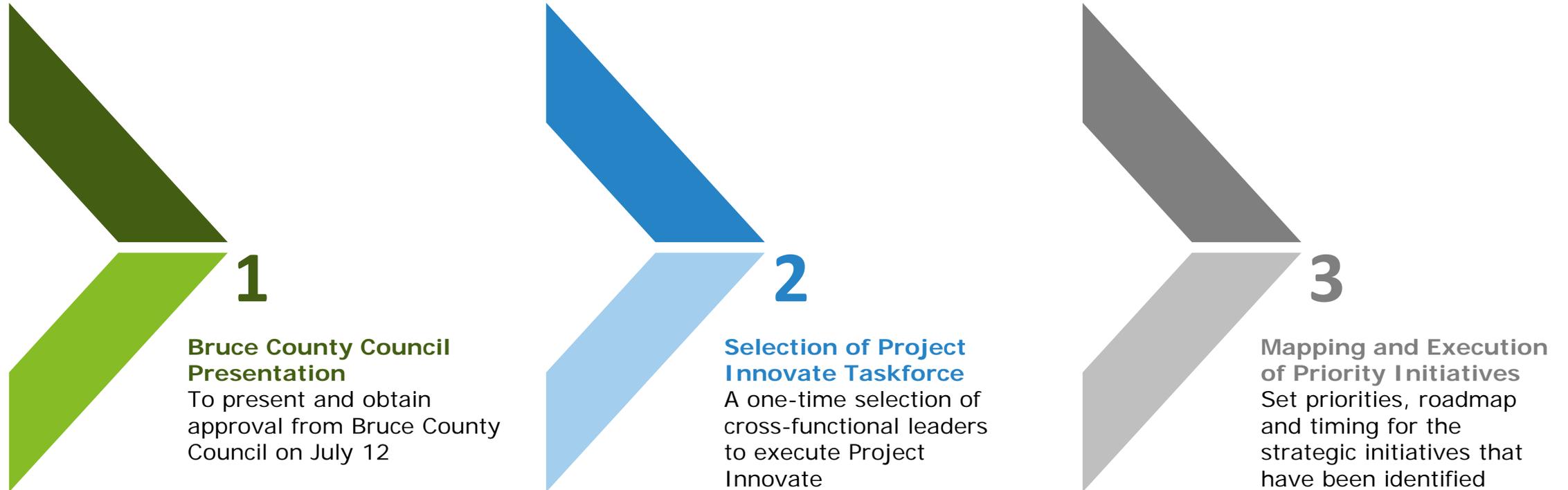
- Below is an illustrative example of a time bound roadmap for establishing the Project Innovate Taskforce with activities plotted for implementation.
- Aligning the innovation initiatives and supporting activities with the required investment and accountabilities, will allow the Taskforce to address the risks and develop key measures of success for execution.



➤ Please note that all information included in the charts above is for *illustrative purposes only*

Moving Forward Next Steps

To build a diverse collaboration network that advances Bruce County as a global leader & national centre in energy research and next generation technologies, action is required and time is of the essence.





Appendix

Appendix – Working Session Participants



The following people attended at least one of the two working sessions held on April 25th and June 8th. We want to thank each of these participants for their valuable contribution during this process.

April 25th, 2018

Name	Organization
Raj Verma	SNC Lavalin
Al Diggins	Excellence In Manufacturing Consortium
Rob Cordell	Bluewater Angel Investor Group
Scott Gray	BWXT
Alison Fernandes	Organization of Canadian Nuclear Industries
Brad Ritchie	Saugeen First Nation
Mary Jane Bushell	Larsen and Shaw
Dan Gray	Superheat
Jason Van Geel	Carlsun Energy Solutions Inc.

June 8th, 2018

Name	Organization
Ron Oberth	Canadian Nuclear Industries
John Larsen	Larsen & Shaw
John D'Angelo	Kinectrics
Sarah Shortreed	Bruce Power
Al Diggins	Excellence In Manufacturing Consortium
Rob Cordell	Bluewater Angel Investor Group
John Bradley	ABS Manufacturing
Scott Gray	BWXT
Ian Trotman	Hatch
Darryl Spector	Promation Nuclear Ltd.
Raj Verma	SNC Lavalin
Brian Boccardi	Rolls Royce

Appendix Case Study

Superclusters, such as Charlotte's energy sector, represent a successful framework on how a geographical region can leverage its economy, location, and support system to create shared reliance on specialized inputs, including technologies, talent and infrastructure.

Case Study – Industry Relevance - Charlotte's Energy Sector

What?

- With alternative energy startups, engineering firms, and multinationals working on nuclear energy projects, Charlotte's energy sector represents a large cross-section of the local economy.
- Anchored by titans such as Duke Energy, Siemens and AREVA, the industry is built on: an ample and able workforce, reliable and affordable energy resources, and a diversified supplier network.
- Charlotte's energy industry remains strong because of the region's high level of specialization and focus on fostering synergy and collaboration.

Why? How?

- Charlotte region's 49 colleges and universities offer dozens of programs leading to careers in energy-related occupations.
- The corporate community works in partnership with the region's universities and community colleges, which offer recognized programs to meet the industry's needs.
- From the local government, to nonprofits, to the private sector, the Charlotte community is investing in initiatives to make more environmentally conscious investments.
- The Charlotte area scores well in categories like air quality, energy use, and water use on a local level, but is slightly behind the national average when it comes to trends including land use and transportation.



Benefits?

- An incubator for startups, CLT Joules works with some of the largest energy companies in the country to create opportunities for entrepreneurs who are developing clean energy companies.
- The Sustainability Technologies program at CCCC (local community college) offers degrees and certificates in renewable energy, environmental engineering, sustainable manufacturing and spatial analysis.
- The Electric Power Research Institute, Inc. (EPRI) conducts research and development relating to the generation, delivery and use of electricity for the benefit of the public.



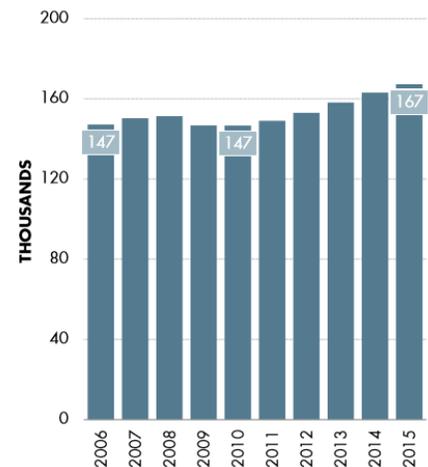
Appendix Case Study

The regional workforce strategy implemented by the Fort Collins Area Chamber of Commerce, represents a successful framework on how a group of partners should assess the region's workforce, identify key challenges, and develop a regional talent strategy.

Case Study – Opportunistic Relevance – Regional Workforce Strategy

FIGURE 1. TOTAL EMPLOYMENT

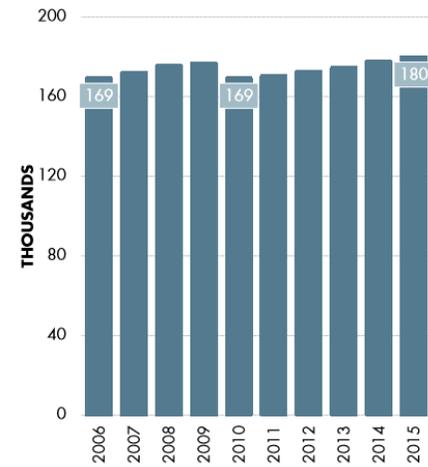
FORT COLLINS – LOVELAND MSA, 2006-2015



Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed.

FIGURE 2. CIVILIAN LABOR FORCE

FORT COLLINS – LOVELAND MSA, 2006 - 2015



Source: US Bureau of Labor Statistics via Moody's Analytics.

What?

- The Fort Collins Area Chamber of Commerce brought together a group of partners to assess the region's workforce, identify key challenges, and develop a regional talent strategy.
- The vision: "A dynamic labor market with a strong talent pipeline that supports employers' current and future needs and provides residents with good career options and opportunities to improve their skills."

Why?

- Over the last five years, the local economy added almost 20,000 jobs but only 11,000 workers. This imbalance, combined with low unemployment and high underemployment, has resulted in many employers having difficulty finding the talent they require.
- Almost 25% of all workers in the area are 55 or older. With the upcoming wave of retirements, employers will need to start succession planning now in order to prepare for the loss of those key individuals.
- Over the next five years, employers will have at least 28,000 openings to fill. The labor force adds only about 2,000-3,000 workers each year. As a result, the labor market will likely tighten.

Benefits?

- This vision of a dynamic labor market creates a virtuous cycle within the workforce system, which in turn supports a strong and diverse regional economy.
- **INCREASE ACCESS.** Actively support employers in finding, attracting, and retaining the talent that they need.
- **IMPROVE ALIGNMENT.** Align education and workforce resources more closely with the business community and the local talent pool.
- **REMOVE BARRIERS.** Collectively address structural issues that serve as barriers to a secure talent pipeline.

Appendix Case Study

Communitech, a Kitchener-Waterloo based micro-ecosystem for innovation, incubation and commercialization, represents a successful framework on how to leverage community support, academia and available infrastructure to support the development of companies (at all stages), with access to capital, customers and talent.

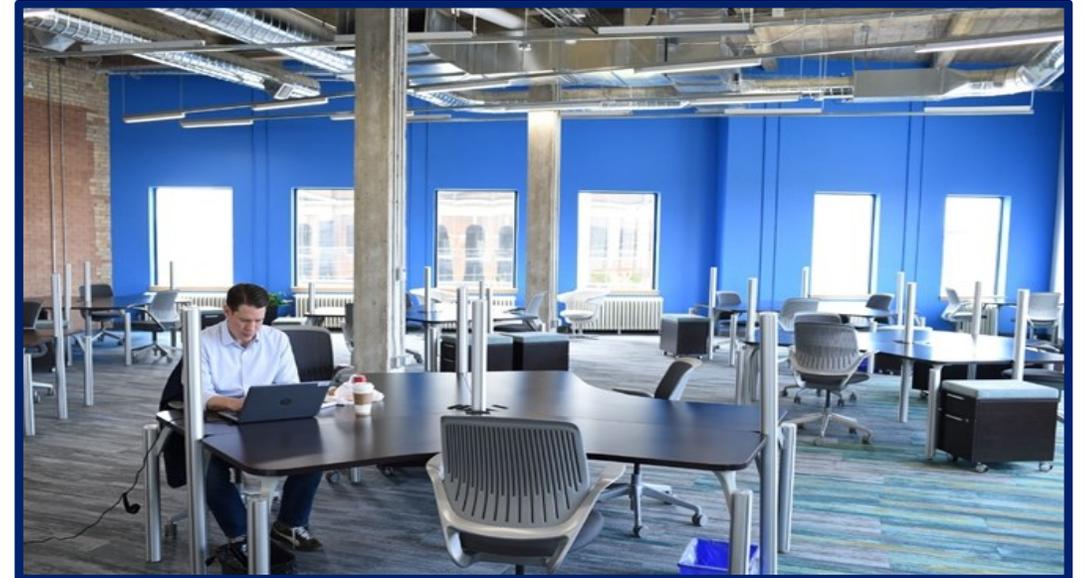
Case Study – Regional Relevance - Communitech

What?

- In mid-2009, the Waterloo Region-based Communitech set out to build an innovation hub that supports a community of more than 1,400 companies — from startups to scale-ups to large global players.
- Communitech sought out to help generate 2,000 new jobs within startup companies and 5,000 new jobs in existing technology companies.
- Part of it's mandate was to support the creation of 100 new digital media companies.
- In addition, Communitech's goal was to attract more than \$100 million in equity investments to digital media and mobile companies.

Why? How?

- Communitech has built a micro-ecosystem for innovation, incubation and commercialization of start up ideas by facilitating training for skilled labour to keep up with demand and by creating an ecosystem of helping companies at all stages with access to capital, customers, and talent.



Benefits?

- The Communitech Hub has created an “Innovation District”, by attracting 65 new companies to the downtown Kitchener, Ontario area.
- Since 2010, 863 new startup companies have been created and 1,600 new startup jobs have been generated.
- In total, close to 4,000 new jobs have been created in existing tech firms and companies have attracted \$350 million in equity investments.

Appendix Case Study

The Energy Innovation Centre, built in Ellesmere, England, to support innovation ambitions of industry partners represents a successful framework on how to accelerate the discovery, development and deployment of energy innovation and sustainability.

Case Study – Industry Relevance - Energy Innovation Centre

What?

- The Energy Innovation Centre (EIC) was launched in Ellesmere, England in 2008 to accelerate the discovery, development and deployment of innovation among the transmission and distribution network operators that power our homes and businesses.

Why? How?

- The energy world is rapidly changing - gas and electricity network operators have an important role to play in our transition to a low carbon future. This change creates unprecedented challenges and opportunities and as a result, the energy industry needs to become more customer centric, competitive and efficient.
- The EIC was built to support innovation ambitions of industry partners from the gas, electricity and renewables sectors by generating groupthink discussion with the intention to find game-changing ideas for energy consumers.

Benefits?

- The EIC has already realized a lot of benefits which include, but are not limited to:
 - £1.8M investments brokered by EIC 2016/17
 - 1,965 innovation community of entrepreneurs and SMEs
 - 30 projects developed for Industry in 2016/17
 - 489 business opportunities from innovators and entrepreneurs



Network Innovation Allowance (NIA) – a set allowance that each of the network operators will receive to fund small-scale innovation projects.

Network Innovation Competitions (NIC) – a series of annual competitions for electricity and gas, where network companies compete for funding for research, development and trialing new technology, operating and commercial arrangements.



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