

# CANADA'S INNOVATION AGENDA

## **VISION:**

**To build Canada as a global centre for innovation**

## **SIX AREAS FOR ACTION:**

- 1. Promoting an entrepreneurial and creative society**
- 2. Supporting global science excellence**
- 3. Building world-leading clusters and partnerships**
- 4. Growing companies and accelerating clean growth**
- 5. Competing in a digital world**
- 6. Improving ease of doing business**

## **APPROACH:**

**Handpicked Innovation Leaders, round table discussions and interactive website are in place to solicit ideas from Canadians as to how we and the government can support the six areas for action to achieve the stated vision.**

<http://news.gc.ca/web/article-en.do?nid=1084739>

## **OPENING COMMENTS:**

All governments want economic growth and many see innovation as the catalyst to achieve sustainable growth which directly impacts employment, productivity, a high standard of living and overall prosperity.

It should be noted that economic growth could be the result of effective innovation policy and should not be confused with economic development policy which is often the case with governments.

Governments also confuse research and development, scientific articles, patents, entrepreneurship, start-ups, commercialization and creativity with innovation. These areas may sometimes contribute to innovation however they are not innovation and/or an accurate measure of innovation.

[www.timfoundation.org/product/tim-innovation-guideline-1-0](http://www.timfoundation.org/product/tim-innovation-guideline-1-0)

No country can take claim to being an Innovation Nation; in fact most government policy and programs have failed to stimulate effective and sustainable innovation, only to see small pockets of innovation

and a negative return on investment. Some government policies and programs have turned out to have the opposite effect of their well-intended purpose.

It should be noted that government business innovation stimulus programs are typically devised by academics and economists. This combination usually leads to an emphasis on R&D and tech. start-ups, not innovation.

### **WILL CANADA BE DIFFERENT?**

Previous governments have failed, will this government get it right, obviously time will tell. It is good to have an innovation agenda, open consultations and idea sourcing providing there is a willingness from government officials to listen, unlearn and change.

The vision “To build Canada as a global centre for innovation” is more of an objective than a vision. I would have preferred to see a shared vision for Canada to be achieved through innovation, or in other words what will Canada look like in 5-10 years based on successful innovation policy and programs.

The scripted six areas for action seem to lean towards economic development; do not address the need for innovation in existing businesses and within government operations, procurement and the supply chain, etc.

The selected or appointed Innovation Leaders are heavily weighted towards the academic side. This may lead to more text book R&D spending and programs based on academic theory versus the actual mechanics of innovation.

### **SUGGESTIONS FOR CANADIAN INNOVATION:**

Be bold and be different, don't try to replicate other country's attempts to stimulate innovation (different cultures, populations, resources, politics, etc.) and stop repeating past failures of misguided R&D investment and other programs that may address only some of the parts of innovation.

#### **1. Innovation Education and a Common Language**

Globally there is a general lack of understanding and confusion as to what is innovation? (the various parts and mechanics) and how it's implemented (in an effective and sustained manner).

This situation is compounded by “Cognitive Dissonance” a term coined by Psychologist Leon Festinger. He was referring to man's tendency to reject or deny information that challenges his preconception. We don't want to hear things that may upset our carefully worked out structure of beliefs, as it threatens to undermine our rationalized style of life.

In order to promote and spur innovation there needs to be a common language and understanding of innovation that is consistent throughout the public and private sectors. This can be achieved by adopting and nationalizing an Innovation Management Standard.

A National Innovation Management Standard provides:

- A common language and definition of innovation
- Consistent content for developing and implementing education and training
- The bases for developing innovation capabilities (Maturity Model)
- An instrument for transferring requirements, etc.
- A basis for achievement through maturity (5 levels)

There are three basic types of Management Standards:

“A” Type – Management System Requirements Standards

*These standards specify the minimum requirements (Elements, clauses and sub-clauses) for developing and implementing a management system. An organization would either conform or comply to the requirements (Achievement). They are commonly known as a governing standard.*

*Requirements standards may have a supporting accreditation and certification program.*

“B” Type – Management System Guidance Standards

*Guidance standards (Specifications) are typically descriptions of best practices used for general guidance purposes. There would be no supporting accreditation and certification program.*

“C” Type – Management Systems Related Standards

*These standards are intended for reference purposes (e.g. List of Definitions).*

Three Innovation Management Standards:

STANDARD	STANDARDS BODY	STANDARD TYPE	SUPPORTING PUBLICATIONS	INTENDED REGIONS	ACCREDITATION AND CERTIFICATION	STATUS
TIM-PD-001-STD	TIM Foundation	Type “A”	Yes	International (50% Canadian content)	Yes (Maturity Model)	Current
PD CEN/TS 16555-1	European Committee for Standardization	Type “B”	Yes	Europe (0% Canadian Content)	No	Current
ISO/AWI 50501	International Organization for Standardization	Type “B”	Yes	International (1-2% Canadian Content)	No	Draft

It can be argued as to why a Standards Body would develop a Type “B” standard for a management system standard, no consensus on elements and requirements, etc. Most “B” standards are a collection of best practices and what works in one organization may not work in another.

Canada has a history of adopting and nationalizing Type “A” Standards through the Canadian General Standards Board (CGSB).

## **2. Government Led Innovation**

If innovation is so important to a government, shouldn't government lead by example wherever possible? 1st; Develop a capability to innovate (adopting and implementing the Innovation Management Standard) in the appropriate Agencies and Crown Corporations.

Examine and implement new and innovative ways to provide and deliver government services in addition to adopting digital technologies.

2nd; Take the lead in a national program for specific innovations (similar to the US DARPA, but better defined and not focused on defence research).

For example climate change is a top agenda item for Canada. Carbon capture and renewable energy storage technologies are two key areas of focus that could be government led in Canada.

## **Community Driven Innovation**

All communities have current, changing and future requirements, needs and wants. For some communities these issues are more urgent than others and require immediate action to stop and reverse current trends of economic and social decline, deterioration or stagnation.

Community Driven Innovation (CDI) is a bottom-up approach designed for community economic and social revitalization, sustainability and prosperity through community member engagement, collaboration, advocacy and innovation.

Canadian Indigenous communities are a prime example where Community Driven Innovation programs are needed now. Rural Nova Scotia, Alberta and some of our northern communities, and communities directly affected by lost manufacturing are some other examples where CDI is needed.

## **4. Incentive Programs**

The existing patchworks of business incentive programs offered by the government do not work and none of them address the three core phases of innovation in one program, Discovery, Development and Deployment.

A re-focus and reform is required. All incentive programs should be transparent and measurable and no organization should receive funding without having a demonstrated capability to innovate.

Policy should also include that anything developed in Canada with government assistance should also be built in Canada when feasible.

There are 3 key areas for government support:

A/ Innovation education and training

B/ Assist organizations to develop an innovation capability (IMS)

C/ Support well vetted high risk innovation projects

## **5. Research and Development**

A bigger emphasis on Applied R&D is needed versus Basic R&D. Applied R&D should be treated as a component of innovation.

Government funded Applied R&D Projects require a better focus on what's funded, project approach, how it's monitored and managed and how it's concluded.

Hypothesis:

The project hypothesis requires vetting, similar to an innovation concept or idea. (e.g. level of risk, deployment possibilities, has the sample or similar R&D been implemented or is currently being implemented, etc.)

Approach, Monitoring and Management:

Projects should have defined IP sharing, methodologies, milestones, estimated timelines and progress reporting. Estimated budgets for each milestone and for the overall project should be defined.

Regular government reviews should be implemented to determine project rate of progress, efficiency, likelihood of staying in budget and timelines, and to decide continuance with possible changes or not.

Conclusion:

Upon the successful conclusion of the project it should be managed for quick deployment, which may be commercialization with pre-defined possible partnerships.

Un-successful projects should have a full post-mortem and reported lessons learned.

## **6. Start-ups**

There is too much focus on tech start-ups and not enough emphasis on the sectors such as manufacturing (smart manufacturing).

We use to build factories and now we build warehouses for imports, many of which we used to make.

Academics can teach business 101 essentials, however entrepreneurs should be teaching entrepreneurship methodologies and there is an un-tapped abundance of middle age and seniors available to mentor start-ups.

All start-ups should develop an innovation capability (effective and sustained) from the start so as not to rely on building a business on a single idea that may or may not work.

There are 3 key areas for government support:

A/ Encourage and support start-ups equally in other sectors besides tech

B/ Assist start-ups to develop an innovation capability from the start

C/ Support entrepreneurship training and mentoring

I agree when it comes to innovation government can't do everything. These suggestions would put Canada on the right track to improving innovation at a national level.

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