UNLEASHING THE GROWTH POTENTIAL OF KEY SECTORS

ADVISORY COUNCIL ON ECONOMIC GROWTH
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Introduction

In the first wave of proposals submitted to the Canadian government in October 2016, the Advisory Council on Economic Growth recommended several actions to benefit the Canadian economy as a whole: developing a national infrastructure strategy, attracting more foreign direct investment, and increasing and improving our immigration flows. In January 2017, we make additional economy-wide recommendations, including policies aimed at driving more innovation, improving skills for Canadian workers, removing barriers to greater workforce participation, and positioning Canada as a global trading hub.

The Council believes the first step to prosperity is ensuring the right conditions are in place to promote growth in all areas in the Canadian economy. However, we also believe that certain sectors of the economy have significant untapped potential that will require focus and attention to unlock. To realize this potential, the Council suggests an approach that uses carefully selected policy actions to remove obstacles (for example, policy barriers such as excessive regulations, interprovincial trade barriers, and inefficient forms of subsidies; or market challenges such high cost of information acquisition, inadequate physical infrastructure, and shortages in skilled labour), and seize opportunities (for example, by convening private and public actors and setting a sector-wide aspiration). We recommend identifying a few sectors (e.g., 6-8) where Canada has a strong endowment, untapped potential, and significant global growth prospects. We then recommend Canada take a focused approach that removes barriers and galvanizes the sector around a bold growth agenda. Peer jurisdictions like the U.S., the U.K., New Zealand and Australia have begun to move toward this approach, and Canada should do the same.

While this memo does not prescribe sectors, eight stand out as potential candidates: agriculture and food; energy and renewables; mining and metals; healthcare and life sciences, advanced manufacturing; financial services; tourism and education. In this memo, the Council uses the agriculture and food ("agfood")[i] sector to illustrate how the government, in concert with the private sector, can take a targeted approach that would unleash the sector's full potential.

The Canadian agfood sector has great potential, given the large natural endowment of water and arable land, distinctive record of accomplishments in research, and exceptional base of companies and entrepreneurs. This sector also has exposure to favourable global market trends including demand from fast-growing Asian economies where protein consumption is on the rise. These assets, coupled with the scale of the existing obstacles, provide the potential for material economic gains for Canadians while also providing a blueprint for how the government and private sector may work together to unleash Canada's potential in other sectors.

[i] The term "agfood" represents the widest sector definition, colloquially referred to as "field to fork." Agriculture and Agri-Food Canada refers to the agfood sector as "Agriculture and the Agri-Food System." We have used Farm Credit Canada's split of Harmonized System (HS) chapters, whereby *agriculture* encompasses Harmonized System (HS) chapters 01 (live animals), 03 (aquaculture), 06 (live plants, and so on), 07 (edible vegetables), 08 (edible fruit), 10 (cereals), 12 (oilseeds), and 14 (vegetable-plaiting materials); and *agri-food* encompasses HS chapters 02 (meat), 04 (dairy), 09 (coffee), 11 (milled products), 13 (lac, gums, and resins), 15 (fats), 16 (preparations of meat), 17 (sugars), 18 (cocoa), 19 (preparations of cereals), 20 (preparations of vegetables), 21 (miscellaneous edible products), and 22 (beverages).

While the actions we propose will need to be refined with the help of the sector, the potential benefit is substantial. The sector already employs 2.1 million Canadians and accounts for 6.7 percent of GDP, with lots of potential for growth; Canada ranks 5th in agriculture exports and 11th in agfood exports—behind smaller countries like Holland and behind less economically advanced countries like Brazil in both categories.[1] Enabling the sector to move up to *2nd* place in agriculture and to *5th* place in agfood would imply an additional US $30 billion in exports in today's distribution of global export shares, equivalent to nearly 2 percent of current GDP.

In this memo, the Council makes several recommendations that would unleash growth potential:

- Adopt a new and focused approach to sector development, based on removing obstacles and setting bold ambitions in collaboration with the private sector

- Identify a small number of high-potential sectors that would benefit from this approach, based on inclusive growth criteria

- Launch an agfood pilot by convening private and public sector stakeholders, identifying major obstacles to growth, setting an aspiration (a vision and quantified goals), and recommending concrete actions. The Council's recommendations provide a "toolkit" that should be leveraged to support growth – e.g., a federal infrastructure bank, a foreign direct investment agency, and a method for catalyzing "innovation marketplaces"

- Refine and apply this approach to five to seven other sectors

The case for a sector approach

The need for a focused, sector approach to economic development is particularly acute for Canada. Although our economy is advanced, it is small in absolute terms, and particularly small relative to the United States. Achieving global scale and competitiveness requires "clearing the path" to growth in our most promising sectors.

To be sure, the government should first and foremost adopt policies that enable the economy as a whole to succeed, as has been the impetus for all of the Council's recommendations. In practice, however, these policies will meet and take effect *within* sectors—some of which, like agfood, will benefit from additional policy focus and tailoring aimed at removing specific obstacles.

The Council believes that the government and private sector can collaborate effectively to identify within specific economic sectors which obstacles *can* and which barriers *should* be overcome through well-designed policy actions. The private sector's involvement is necessary because it is best placed to identify the genuine obstacles to growth within any specific sector. The government's involvement is equally necessary as it is best placed to determine that removing a particular barrier is genuinely in the public interest.

Note that the Council is not suggesting that growth be pursued at all costs. Some well-designed environmental or labour regulations, for example, may achieve their intended objectives and also reduce growth. In many cases, such regulations are appropriate; in other cases, the regulations are excessive or suboptimal in their design, creating unnecessary barriers to growth. Details within each sector need to be carefully examined.

Elsewhere in the world, we are now seeing more countries pursue a focused, enabling approach to their high-potential sectors with significant signs of success. Some of the "tiger" economies in Asia have been doing so for years. The United Kingdom is now pursuing this approach, too, as are other European countries. Open and relatively small economies such as Australia, New Zealand, Israel, and Holland have demonstrated success through close collaboration between the public and private sectors in a number of areas, some of which we note in summary case studies below.

Our view is that government and business should work together to identify and remove the unnecessary obstacles to economic growth. Such a partnership would help raise our collective ambition and unleash Canada's real and inclusive growth potential.

Box 1

Australia launches the "Industry Growth Centers Initiative"[2]

In 2015, Australia launched a Aus $250 million initiative to fund "an industry-led approach driving innovation, productivity, and competitiveness by focusing on areas of competitive strength and strategic priority." The expressed intent is to help Australia transition into "smart, high value and export-focused industries."

The federal government has established Growth Centers in the following six economic sectors:

- advanced manufacturing
- cybersecurity
- food and agribusiness
- medical technologies
- mining equipment, technology, and services
- oil, gas, and energy resources

Growth centers are led by a strategic board of industry experts, tasked with setting the long-term strategy for their respective sectors; looking at four broad themes in doing so:

1. Identifying regulations that are unnecessary, or over-burdensome, and suggesting possible reforms
2. Improving engagement between research and industry to achieve stronger commercialisation outcomes
3. Improving the capability to engage with international markets and access global supply chains
4. Improving the management and workforce skills

Box 1

Israel paves the way for global leadership in the medical devices sub-sector

Today, the medical device subsector accounts for more than half of the broader life sciences sector in Israel, demonstrating the country's continued focus on an area of comparative strength over the past two decades. The country of eight million has become a leader in the sector despite the fact that its domestic market for medical devices is relatively immaterial, representing well less than 1 per cent of the US $350 billion global market. Nearly 700 medical device companies operate in Israel today, collectively exporting more than a billion dollars' worth of products every year, and attracting hundreds of millions of foreign direct investment every year. Israel has the highest number of patents granted per capita in the sector, and ranks fourth in absolute terms.

The government has enabled the sector through:

- accelerator funding, international matchmaking[i] and government procurement[ii] for SMEs to address obstacles to scaling inherent in a small domestic market
- effective commercialization of university patents via mechanisms like Hebrew University's technology transfer company (Yissum) that adopt sophisticated licensing to address obstacles in commercializing new technologies
- capitalizing on the immigration of highly educated citizens from Soviet countries in the 1990s and from other European countries in recent years to address the "talent gap"
- a favourable regulatory regime whereby the Ministry of Health approves products that have received foreign approvals

Holland globally ranks third-largest agfood exporter

The Netherlands enjoys numerous advantages as an agricultural producer despite its relatively small size and resource base (compared with Canada): an innovative population with a long tradition of exporting; tracts of flat, arable land; and proximity to major markets and infrastructure nodes. But these advantages alone would not have launched the Dutch agricultural sector into the ranks of the world's best. The government worked with companies in the sector on a range of initiatives to increase its productivity and remove obstacles to growth:

- developing intensive agriculture facilities, such as greenhouses
- organizing well-integrated supply chains and transportation infrastructure
- ensuring a high level of investment in agricultural research and development
- educating the agricultural workforce
- accelerating innovation by fostering connections among businesses, universities, research institutions, and government agencies through agfood hubs such as FoodValley

An emphasis on raising agricultural productivity helped the Netherlands to achieve the highest growth rate in both exports and total factor productivity over the past 50 years, surpassing Canada and Australia. Today, the country is the world's third-largest exporter of agricultural products and agfood in absolute terms and the largest per-capita exporter in both categories. Its sales of poultry, red meat, bakery goods, and cheese products total €2.3 billion, 80 percent of which is exported. The Netherlands has also become a global market leader in equipment for processing agfood.

[i] Provided by the Office of the Chief Scientist (Israel Innovation Authority).
[ii] Particularly through defense and security agencies.

Recommendation: Adopting a new sector approach to growth

The Council recommends a four-step approach to defining and implementing a sector approach to promoting economic growth:

1. Identify high-potential sectors that offer the best prospects for catalyzing inclusive economic growth, by using factors such as the following (See Exhibit 1 for illustrative examples):

- potential to contribute to GDP growth (for example, attracting investment and growing exports)
- potential to create resilient jobs, leveraging of Canada's strengths in human capital and natural resources
- favourable global demand trends
- policy levers—presence of addressable obstacles to growth

2. Identify the most important obstacles to growth in these sectors, and verify that these do not stem from other essential policy objectives.

3. Take clear policy actions to overcome these obstacles, thus improving the sector's competitive position and prospects for growth, taking advantage where appropriate of the new toolkit of policy instruments recommended by the Council (for example, the infrastructure development bank and innovation marketplaces).

4. Galvanize the sector around a growth agenda, and monitor the sector's progress over time to ensure the policy actions have supported economic activity within the sector.

Undertaking these tasks well requires a deeper level of collaboration between business and government than has historically been the case. The private sector must play a central role in defining what obstacles to remove to help the sector grow and to compete globally. The government's role, which is to protect the public interest and to promote national welfare, can be further defined through four main responsibilities:

- convening private and public organizations to diagnose obstacles and set priorities
- setting bold aspirations for the sector at a national level
- enacting coherent, consistent policies and regulations to clear the path to the sector's growth
- gathering and sharing information about the sector's performance and the effectiveness of policies

The next section illustrates the Council's approach to developing a strategy to unlock the growth potential of the agfood sector as an example that could be piloted this year. The Council recommends that the approach be replicated in at least three other sectors over the next three years, and then up to five to seven sectors over time.

Exhibit 1 **High-potential sectors should be identified in terms of their economic prospects and their strengths relative to global opportunities.**

Priority sectors	Employment contribution Jobs, Direct and indirect	GDP contribution % of Canadian GDP	Growth CAGR, 2010–2015
Agfood	2.1 million	6.7	2.7%
Advanced manufacturing	1.7 million	10.5	3.7%
Energy and renewables	0.9 million	13.7	2.6%
Healthcare and life-sciences	1.8 million	6.8	1.7%

Initial focus areas	Canada's strengths	Global opportunities
Agfood	• Trusted **food safety** • **Resource availability** (e.g., water) and **productivity** (e.g., crop yield) • Arable land position • Strong **clusters** (e.g., U of Guelph)	• Exploding **emerging market demand** for higher-value food (e.g. proteins, functional foods) • Growing **global supply constraints** in land, water, energy, and carbon emissions
Advanced manufacturing	• Robust automotive, aerospace and defense **manufacturing base to build from** • **Strong engineering clusters** (e.g. Waterloo) • Responsible for **nearly half of** all BERD1	• **"4th industrial revolution" in the making** (cyber-physical convergence) • **Cost of labor is a declining factor** in manufacturing global value chains
Energy and renewables	• **Top-4 globally** for hydro-electricity production, LNG, and oil reserves • 430 public companies with **combined assets over $495 billion** • Strong **innovation capacity** (e.g., CAPIA)	• Global energy consumption will grow by **30% between now and 2040** • **Cleantech** to meet climate challenge • Proximity to USA — **North American energy security** and integration
Healthcare and life sciences	• **Domestic demand** via national healthcare system • **10 largest pharma companies have R&D presence,** 1500 medical device firms • World-class **regenerative medicine and stem cell therapy** development	• **Aging population** in most advanced economies • **Productivity imperative to favor innovation and sector growth** (e.g. new healthcare delivery models)

Source: Economist Intelligence Unit; IHS Global Insight; McKinsey Global Institute analysis; Bank of Canada; NRCan; IEA

Piloting the new approach in the agfood sector

The Council recommends that the government begin developing strategies to clear a path for growth of high-potential sectors by studying the endowment, or starting position, of each sector and comparing our strengths and weaknesses with other countries and with significant trends in the market for the sector's products and services. Next, the government can work with its private sector partners to develop possible aspirations for the sector and to identify bold moves for helping it advance toward them quickly.

Canadian endowment and global trends

Endowment. Canada's agfood sector is among the world's largest: the US $26.1 billion of agricultural products Canada exported in 2015 amounted to 5.7 percent of all global agricultural exports and qualified our country as the 5th-largest agricultural exporter in the world. Canada is the single largest exporter of some major commodities, including wheat, canola, and lentils. We are also the 11th-largest exporter of agfood, with US $19.1 billion of these exports in 2015—2.8 percent of the global total, leading the way in niche products like maple-syrup.[3]

The agfood sector, defined broadly, is one of Canada's largest employers and economic engines, contributing 2.1 million jobs and 6.7 percent of our GDP.[4] Widely dispersed across rural and urban areas, these jobs are a force for economic inclusion. Some are increasingly sophisticated as a result of technological progress in the sector, requiring skilled workers with a high degree of digital literacy. The sector has also proven to be a strong employer of New Canadians across the value chain.[5]

Our agfood exports have averaged annual growth of 9.5 percent during the past five years, and the sector enjoys advantages that can sustain or even increase that figure for the foreseeable future.[6] One of these advantages is our stock of basic natural resources: freshwater, long coastlines suited to aquaculture, and much arable land. In fact, Canada's arable land is the least densely occupied, by both livestock and people, of any country in the world. Our per-hectare use of pesticides is among the world's lowest, which should appeal to discriminating consumers.[7]

Canada's agfood companies also operate in favourable business and economic conditions. Our institutions provide a degree of political stability and international goodwill that encourage foreign investment and cross-border trade, notably with the major market of the United States. Companies in the sector have affordable, reliable access to capital and inputs (for example, fertilizers, feed, and seeds)[ii] and a healthy network of R&D facilities at universities across the country. Over the past few decades, the Canadian agfood sector has pioneered and introduced significant and valuable innovations—for example in, canola, pulses, and chilled pork. A sophisticated, ethnically diverse consumer base stimulates processed product development that can find appeal around the world.

Global outlook. Booming demand for food and an expanding global middle class should benefit Canada's agfood sector significantly. By 2050, global demand is expected to rise by 70 percent.[8] The world will need to produce as much food in the next 45 years as in the previous 10,000.[9] A good deal of this demand

[ii] Agricultural and food-processing equipment, on the other hand, is largely imported.

will come from emerging markets, where some three billion people are expected to enter the middle class from 2010 to 2030—particularly in Asia—and to consume considerably more protein than their less wealthy counterparts do today.[10]

Many middle-class consumers also want proof that their food has been produced in a safe and environmentally sustainable way. Land degradation, water scarcity, urban sprawl, climate change,[iii] and political and social instability could make it harder for many countries to produce the food they need and are likely to place a premium on agricultural products from regions where environmental and labour conditions are considered good.

On all these counts, Canada has a strong position. Our potential agricultural output greatly exceeds the requirements of the population, so this country could become an increasingly significant source of high-quality food to feed the world's growing middle class, while ensuring accessibility to affordable, nutritious, and healthy food at home.

Yet, our future as an agfood leader is far from assured. Countries across Africa, Asia, Eastern Europe, and South America could emerge as new sources of agricultural exports subject to sector reforms that include new technology adoption. Meanwhile, established agfood centers, such as the Netherlands, will continue to reap the productivity benefits of advances in data analytics, automation, and genomics to name only a few.

Canada's agfood century will have to be earned.

Obstacles to growth in the sector

While the strengths and trends described in the previous section are considerable, so are the obstacles that stand in the way of growth for Canada's agfood sector. The Council sees obstacles that can be addressed inherent in three major sets of opportunities:

Moving up the agfood value chain. Canada processes only 50 percent of its own agricultural output.[11] Moreover, the country has a US $3.2 billion trade deficit for agfood products, partly because our food-processing sector is underdeveloped. This stems from a historical lack of investment in processing infrastructure paired and often correlated to a challenging regulatory environment (lengthy permitting processes, supply-management boards, etc). Similarly, underinvestment in our transportation infrastructure means that the difficulty to aggregate food-processing supply chains across our vast land mass is compounded (resulting in a greater reliance on commodity trade, which is also hampered or "taxed" by transportation bottlenecks).[12]

Increasing productivity. Several basic factors constrain the productivity of Canada's agfood sector. In some subsectors (dairy, for example), the average size of our farms is relatively small, so few achieve the

[iii] While Canada's prospects for arable land growth through climate change are favourable compared with the rest of the world, higher investment payoffs will be found in (1) improving productivity, and (2) moving up the added-value chain. The notable exception may be in aquaculture, where Canada's untapped coastline endowment is significant.

economies of scale realized in some other exporting countries. Moreover, while new digital technologies like machine learning have the potential to cause step changes in productivity, the lack of a common analytics platform and rural broadband stand in the way of realizing the full potential of these advances in Canada. At a more basic level, too, we could do more to encourage productivity gains: for example, government spending on agriculture, equalling 26 percent of its economic output,[13] flows largely to farmers to smooth volatility and manage risk; it is not contingent on meeting productivity-related requirements, such as adopting new technologies. In the food-processing sector in particular, companies, on average, report that they realize fewer innovations than the manufacturing sector as a whole.[14]

Expanding trade. Canada lacks preferential trade agreements with three of its five highest-potential markets for agfood exports: China, India, and Japan. This stands in contrast with Australia, for example, whose agfood sector benefits from a preferential trade agreement with China implemented in 2015. Furthermore, the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union, which would eliminate nearly all tariffs on trade between the two regions, has yet to be implemented. *Meanwhile*, subsidies for agricultural products around the world distort prices, create difficult competitive conditions, and encourage the use of unsustainable modes of production. Countries across Africa, Asia, Eastern Europe, and South America could emerge as new sources of agricultural exports subject to aggressive sector reforms and subsidies.

Aspiration: Global leadership in agfood

Setting a bold, overarching aspiration to develop the agfood sector would help the government engage the private sector and other stakeholders to define and carry out a strategy to clear the path for growth. A vision statement—such as "Canada will become the trusted global leader in safe, nutritious, and sustainable food for the 21st century"—would reflect the strength of our starting position, as well as the global trends we can exploit.

That goal may sound very ambitious, but Canada's experience with canola production shows how our agfood sector can attain world-leading performance through concerted effort and collaboration among the private sector, research institutions, and government. Canadian researchers bred canola from rapeseed, another oilseed plant, in the early 1970s. They wanted to develop a crop that could serve new markets at a time when Canada's agricultural output suffered from declining prices for wheat. Canola yields increased by more than 150 percent from their introduction to 2015, and Canada's exports of canola oil rose by almost 200 percent from 2003 to 2015, largely because of high demand in China. Today, canola is our second-largest crop by volume.[15]

What would Canadian leadership in global food production look like? Growth objectives can be set in two complementary ways: through a national top-down view of the entire sector, and through bottom-up objectives for individual subsectors (land crops being one example).

Top-down, sector-wide goals. Since Canada has room to increase most categories of agricultural and (especially) agfood exports, the Council recommends that the federal government set national, sector-wide goals for growth. These goals should be quantified, and shaped by analysis that estimates global demand for broad categories of products and tested against Canada's potential to increase agricultural output and agfood processing.

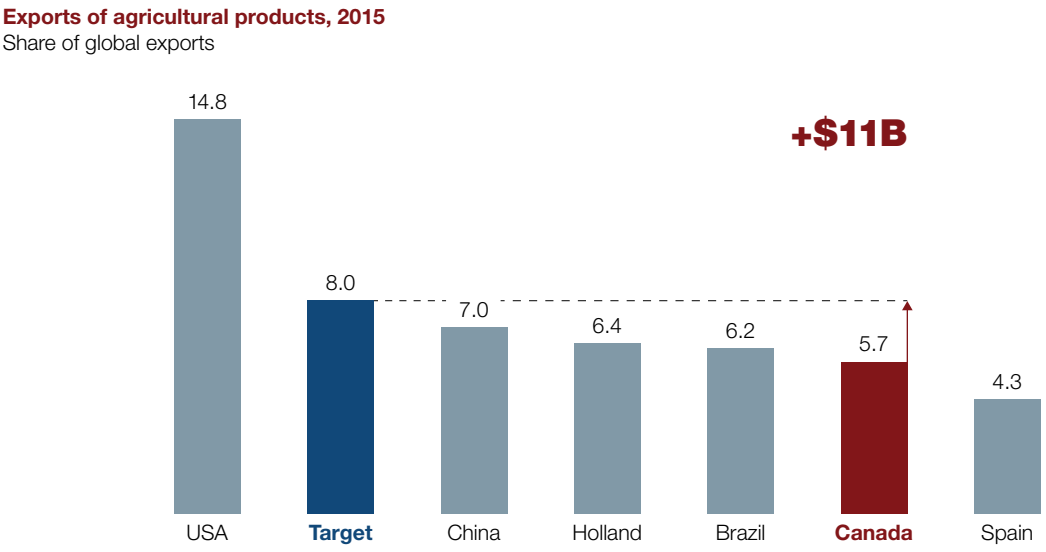
To illustrate the concept, the government may set an ambition to increase Canada's annual agfood exports by US $30 billion over the next five to ten years—equivalent to nearly 2 percent of today's GDP. About one-third of the gains could come from agriculture exports, with the balance from moving up the value chain and expanding our agfood exports:

- **Agriculture:** Increase Canada's share of global agricultural exports to 8 percent, from 5.7 percent (Exhibit 2),[16] so that we would become the world's second-largest agricultural exporter, after the United States, which accounts for 14.8 percent of the total.

- **Agfood:** Double our share of world exports, to 5.6 percent, from 2.8 percent (Exhibit 3).[17]

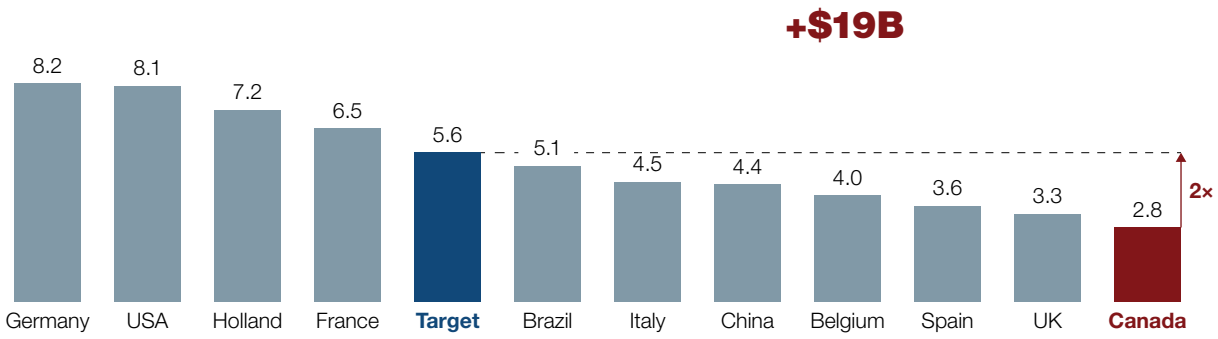
Bottom-up category targets. The Council recommends that the government reconfigure the Value Chain Roundtables established by Agriculture and Agri-Food Canada[18] into new sub-sector action teams focused on major agfood subsectors and oriented for high-impact. Representatives from other sectors (for example health, environment, and technology), bringing new perspectives, should be brought in to support transformational change. Each of these teams comprising the senior-most representatives of relevant companies, government organizations, and academic institutions would set growth targets for their subsector.

Exhibit 2 **Canada could target an 8 percent global market share in agricultural products by 2027.**



Source: World Trade Organization

Exhibit 3 **Canada could aim to double its global market share in agfood products by 2027.**



Source: World Trade Organization

Targets would be bold and take into account not only the subsector's economic potential but also its environmental and social impact. Collectively, the subsector targets should match or exceed the national goals of the entire agfood sector. Illustrative examples of export-growth targets the industry's subsectors might aim for over a five- to ten-year horizon include:

- **Oilseed and pulse crops:** Boost oilseed sales by 20 percent (or US $2 billion) and increase our global market share of pulses to 50 percent (from 38 percent). Do so by removing obstacles to growth in key exports markets (for example, through preferential trade agreements and through investments in physical trade infrastructure focused on the Asia-Pacific), while addressing obstacles standing in the way of capital investment needed to move up the value chain higher-value products (for example, pulse flours and premium organic products).

- **Aquaculture:** Increase global market share to 0.6 percent (from 0.2 percent) and exports by almost US $2.6 billion. Do so by adopting a new, forward-looking Canadian Aquaculture Act combined with an economic-development strategy that reforms ill-adapted traditional fisheries regulations for this emerging subsector to create opportunities for provincial, regional, and aboriginal stakeholders to pursue if they choose.

- **Dairy:** Produce up to six billion more marketable litres of milk annually by progressively reducing obstacles such as rigid provincial quotas that curtail investments in productivity.[19] (Today, in contrast to Canada, New Zealand exports around 97 percent of its milk production and accounts for close to 30 percent of dairy products traded globally.)[20]

- **Technology:** Increase exports of equipment (now US $2 billion) and digital and scientific services (for example, genomics) by US $3 billion to US $5 billion over ten years. We would achieve these goals by tapping into the advanced manufacturing expertise of other Canadian economic sectors and by adopting strategies like those of successful technology exporters, such as Israel and the Netherlands.

Bold moves: Rallying the private sector and government to work together towards bold growth objectives

Conventional strategies for sector-specific economic development often fall into several traps, including placing the government at the center of the strategy with insufficient private sector input, failing to set an ambitious growth aspiration, and lacking a thorough understanding of market conditions and obstacles therein. Failing to coordinate among the government ministries and departments responsible for different aspects of these sector strategies—particularly departments with different priorities—may also limit their effectiveness.

The Council recommends a more integrated, collaborative approach to sector development and one where the private sector is engaged to lead strategy development by identifying those obstacles that hinder growth.

Convening the private sector. In addition to creating the action teams discussed above to set targets and identify obstacles to growth within each agfood subsector, the Council recommends that the federal government stand up a private sector body to nationally represent and champion the Canadian agfood sector as a whole. This would go a long way in positioning the private sector centrally within the design and implementation of a federal sector strategy.

A body such as an Agfood Growth Council would be comprised of 10–15 visionary, high-profile and respected leaders from the private sector. Members would be champions, passionate about unleashing their sector's growth potential. Collectively, members would represent the broad value chain (growing, processing, logistics, wholesale, and retail). Such a council would report directly to the Minister of Agriculture and Agri-Food Canada, and be supported by a small secretariat.

In terms of responsibilities, an Agfood Council would be responsible for identifying obstacles to growth at a national level, generally affecting multiple provinces and subsectors at once (for example, international market access through preferential trade agreements). Such a council would also contribute to setting top-down targets, such as those presented earlier. Moreover, that Council would play an important role in encouraging sub-sector action teams to set ambitious, bottom-up targets of their own—ensuring reconciliation with the top-down target—and tracking progress over the course of the Council's mandate. The Agfood Council would also look to enable, synchronize, and link the major proposals to reduce obstacles put forward by sub-sector action teams. The Council would also serve to champion the implementation of its own recommendations adopted by government, helping to rally the private sector, academic institutions, and other organizations around bold initiatives that could dramatically increase economic growth for the sector.

Collaboration across federal ministries and departments. For the purposes of removing obstacles, the government should also consider an interdepartmental task force on agfood, chaired by the minister of Agriculture and Agri-Food Canada and supported by the Prime Minister's Office, to share implementation

Exhibit 4 **The federal government should adopt a new, bold approach in developing and implementing a sector growth strategy**

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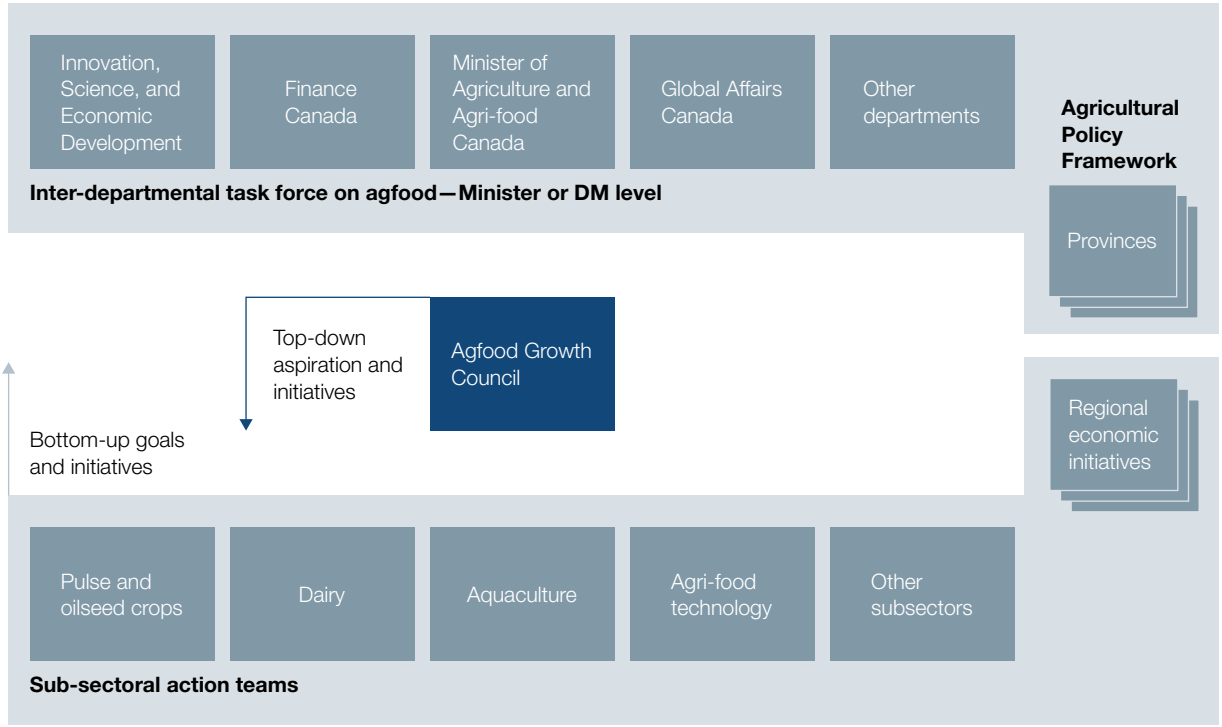

responsibilities and accountability across departments (for example, Health Canada, Infrastructure Canada, and Innovation, Science and Economic Development Canada) for meeting sector growth aspirations.

Working with the provinces. Provinces play a critical role in the agfood sector as in others.[iv] The Council recommends that the federal government continues to pursue collaboration with the provinces through the Agricultural Policy Framework to coordinate the delivery of business risk, research, and other programming. However, in the future, the scope of the Framework could be expanded to include growth-oriented objectives and initiatives stemming from future outputs of an Agfood Growth Council and sub-sector action teams. Interprovincial barriers to trade in the sector, as an example, should thus be further addressed. Provincial representation may also help in some of the subsector actions teams.

Growth through pilot projects. In implementing bold moves, both the government and the Agfood Council should consider innovative pilot projects to deliver economic impact that could be rapidly scaled. One such type of pilot project could be the creation of four to six world-class agfood processing hubs across the country to ease entry and scaling hurdles faced by small and medium-sized enterprises. Food hubs are

[iv] The Council is encouraged by recent policy developments as in the case of Saskatchewan's agfood strategy orientation.

both physical and virtual: physically, a hub provides a zone with shared state-of-the-art infrastructure that provides better quality at a lower cost than individual processing investors could afford (road/rail/port connections, crop aggregation and marketing facilities, high speed Internet, low-cost and alternative energy, "one-stop registration centers" etc); virtually, the hub provides an organizing body to collectively market (including identifying international outlets and building a strong brand), encourage innovation (providing immediate opportunities to pilot and scale new technologies), providing financial services, and by promoting growth-oriented policies (such as tax incentives, streamlined regulations, and rapid technology registration). The hubs are often anchored by one or several large players, which help to attract and grow other potential players in the sector.

Similar hubs have proved successful in Brazil, Denmark, South Korea, Sweden, and other countries. As a practical matter, agfood hubs could be established and administered in conjunction with the private sector, provinces, and host municipalities. These hubs would soon become centers for excellence and innovation in agfood, much as Silicon Valley is for high technology.

Capturing broader opportunities. In addition to pilot projects such as the agfood processing hubs, a government taskforce on agfood could launch the following series of bold initiatives to remove obstacles based on the Advisory Council's other recommendations to government:

Competitive markets and trade

- **Trade agreements:** Seek preferential trade agreements with key agfood export markets, prioritizing China, India (currently in negotiations), and Japan; further harmonize agfood regulations (such as those related to DNA barcoding and genetically modified organisms) with the United States and the European Union.[v]

- **Branding:** Enhance Canada's reputation as a source of "trusted food" through international marketing in collaboration with the private sector, under a future National Food Strategy emphasizing the safety, accessibility, affordability, sustainability, nutritional quality, and health attributes of our agfood products.

- **Foreign investment**[vi]**:** Make the agfood sector a priority of the new federal agency the Council proposed for attracting foreign direct investment, with coordinated messages from senior government leaders, including the Prime Minister; provide foreign agfood companies with incentives to source and process Canadian agricultural products and to conduct their research and development in Canada.[vii]

- **Regulatory levers:** Coordinate and combine special economic and export-zone incentives from federal, provincial, and municipal authorities; for example, eliminate import tariffs on agfood's manufacturing ingredients[21] and offer tax incentives for capital investments by food processors.

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[v] See the Council's "Positioning Canada as a global trading hub" recommendation.

[vi] See the Council's "Bringing foreign investment to Canada" recommendation.

[vii] The Netherlands provides an example of what is possible: 12 of the world's 40 largest food-and-beverage companies have a major production site or R&D facility there.

Infrastructure and capital investment

- **Infrastructure**[viii]**:** Use the newly proposed infrastructure-development bank for "hub and spoke" infrastructure projects connecting agfood hubs with one another, with food-producing regions, and with domestic and international markets; offer incentives to private investors for projects to help decongest our rail networks, for advanced logistics solutions, and for first- and last-mile infrastructure (for example, elevators and storage).[ix]

- **Digital connectivity:** Launch a national plan to provide high-speed Internet access (for example, 5G standard) for Canadian farms and agfood companies, so they can share and use big data more easily (as described below).

- **Capital investment**[x]**:** Reform regulations that stifle or deter investments in agfood assets, such as greenhouses and aquaculture systems; streamline complex permitting processes (for example, by offering preapprovals for common areas of investment within agfood hubs).

Talent and labour markets

- **FutureSkills Lab**[xi]**:** Encourage pilots for "future of agfood" training and reskilling programs (including apprenticeships) to meet the current and future labour requirements of agfood companies (and aging farmers), and to mitigate the problems caused by increasing automation—for example, by offering voluntary training on digitization for dairy farmers or on aquaculture for wild-catch fishermen and coastal aboriginal communities. New Zealand's business led, government-partnered Te Hono Movement provides an innovative example of how inspirational training can be provided at the leadership level of a sector, too. The program convenes agfood business leaders for a week of training every year at Stanford University on themes aimed at boosting the competitiveness of New Zealand's agfood sector.[22]

- **International talent**[xii]**:** Attract and retain top international talent in agfood R&D by expediting visa applications for skilled workers and investing in fellowships and exchange programs for university and graduate students in top agricultural technology and science programs abroad.

- **Cross-sector talent:** Attract talent from adjacent fields and sectors (for example, health and life sciences, technology, analytics, and advanced manufacturing) to accelerate the development and commercialization of innovative, superior technologies for farming and food processing.

Innovation

Innovation Marketplace[xiii]**:** Encourage the development of a private-sector led Innovation Marketplace centered on raising agfood productivity by connecting start-ups with established companies across the country, drawing commercial concepts out of university research centers, and providing initial funding to

[viii] See the Council's "Unleashing productivity through infrastructure" recommendation.
[ix] Canada's ranking in the World Bank Group's Logistics Performance Index slipped from 9th in 2007 to 12th in 2014.
[x] See the Council's "Boosting growth with productivity-enhancing business investment" recommendation.
[xi] See the Council's "Building a highly skilled and resilient Canadian workforce through the FutureSkills Lab" recommendation.
[xii] See the Council's "Attracting the talent that Canada needs through immigration" recommendation.
[xiii] See the Council's "Innovation—Chapter 1: Build innovation marketplaces" recommendation.

help offset the risk of pilot projects. “Grand Challenges” could be launched as public–private partnership competitions to develop breakthrough solutions to major issues (for example, improving nutrition to lower the incidence of chronic diseases, thus improving quality of life and reducing healthcare costs, or producing food while coping with climate change and actually enhancing eco-systems).

- **Commercialization:** Implement a patent-box regime (taxing patent revenues at a preferential rate) to accelerate the commercialization of Canadian intellectual property; use federal procurement to support technologies that would have significant benefits if implemented on a national scale.

- **Approvals:** Modernizing regulations to streamline approvals and remove barriers to bringing new solutions to market by involving organizations like the Canadian Food Inspection Agency within the sector action teams.

- **Growth capital**[xiv]**:** Encourage Canada’s leading banks and institutional investors to establish funds providing fast-growing small and midsize enterprises with patient capital in the form of minority equity stakes or equity-like loans. Complement these efforts by enabling agfood hubs to access the financial expertise of institutions such as Farm Credit Canada (sector knowledge), the Business Development Bank of Canada (venture capital), and Export Development Canada (export intermediation).

- **Big data:** Develop a data strategy for the agfood sector in Canada to securely collect agronomic and economic data from farmers and food processors, provide them with enhanced decision-making tools to enhance yield, crop quality, and competitiveness, foster system-wide transparency and traceability, and furnish researchers with data for their work–all through partnerships with analytical platform providers and scientists.

A proposed road map for sector impact

With this memo, the Council has proposed a framework the Government of Canada can use to accelerate the growth of high-potential sectors by removing unnecessary obstacles that stand in their way. Developing and successfully implementing these strategies requires a new approach to sector development, particularly as it relates to the collaboration between the government and the private sector. This approach would allow stakeholders in a target sector to jointly define aspirations and quantifiable targets, to identify potentially beneficial initiatives, to make policy recommendations, and then to spearhead implementation. Here is an outline of how this approach might unfold:

Phase 1 – Convening

- Establish a national sector working group, for example an Agfood Growth Council, led by the private sector, with a two-year mandate to overcome existing obstacles. For the agfood sector, this Council would include leading growers and processors, agricultural innovators, multinational corporations, supply-chain operators, and representatives from adjacent sectors (such as life sciences, environment, and technology).

[xiv] See the Council’s “Innovation—Chapter 2: Scaling our high-potential businesses” recommendation.

- Pilot the transformation of two to three reconfigured value chain roundtables representing major subsectors (for example, agfood processing) into sub-sector action teams with clear growth targets.

Phase 2 – Setting the ambition

- Develop the national-level vision for the sector in tandem with the Agfood Growth Council.
- Encourage a call to action from the Prime Minister and other senior levels of government to rally the private sector and government to work together, while encouraging capital investment (domestic and foreign).
- Quantify a bold aspiration for growth over a defined period of time top down—through the Agfood Growth Council—and from the bottom-up, through sub-sector action teams.

Phase 3 – Paving the way for growth

- Enable the sector action teams to identify and assess the most significant obstacles and challenges limiting growth within their subsectors.
- Advise the government on continuing, modifying, or terminating existing policies, regulations and programs (for example, streamlining cumbersome approval processes for new products).
- Design and launch pilot projects through public-private partnership (for example, the agfood hubs).
- Focus R&D efforts on areas with promising commercial applications by sharing business problems in the agfood innovation marketplace.
- Draw on new economy-enabling entities like the foreign direct investment attraction agency and the infrastructure-development bank to focus and synchronize efforts.

The agfood sector represents a distinctive opportunity for Canada to boost inclusive economic growth based on a rich natural endowment that should be combined with an integrated approach to innovation, competitive markets and trade, talent and labour, and infrastructure and capital investment. From a national economy-wide perspective, the Advisory Council believes that sector strategies can help Canada's businesses and households realize the potential of our country's natural endowments and latent strengths as sources of inclusive growth and prosperity. ■

[1] "Canadian agriculture's productivity and trade," Farm Credit Canada, November 29, 2016, fcc-fac.ca.
[2] "Industry Growth Centers," Australian Government—Department of Industry, Innovation and Science, consulted January 2016, https://www.industry.gov.au/industry/Industry-Growth-Centres/.
[3] "Statistics and market information," Agriculture Canada and Agri-Food Canada, September 29, 2016, agr.gc.ca, and "Canadian agriculture's productivity."
[4] "An Overview of the Canadian Agriculture and Agri-Food System 2016," Agriculture Canada and Agri-Food Canada, http://www.agr.gc.ca/.
[5] Interviews with industry experts—examples provided range from farm workers producing okra around the GTA, to processors producing Caribbean-style hot sauces.
[6] Interview with Agriculture Canada and Agri-Food Canada.
[7] Interviews with industry experts.
[8] Over 2009 levels, according to *Global agriculture towards 2050*, UN Food and Agriculture Organization, October 2009, fao.org.
[9] National Press Club—presentation by Dr Megan Clark (September 2009).
[10] Homi Kharas, *The emerging middle class in developing countries*, Brookings Institution, June 2011.
[11] "An Overview of the Canadian Agriculture and Agri-Food System 2016," Agriculture Canada and Agri-Food Canada, http://www.agr.gc.ca/.
[12] Interviews with industry experts.
[13] "An Overview of the Canadian Agriculture and Agri-Food System 2016," Agriculture Canada and Agri-Food Canada, http://www.agr.gc.ca/.
[14] Ibid
[15] "Canada at a glance," Agriculture Canada and Agri-Food Canada, http://www.agr.gc.ca/.
[16] 2015 market share figures drawn from *Canadian agriculture's productivity and trade*, Farm Credit Canada, November 29, 2016, fcc-fac.ca.
[17] Ibid.
[18] See "Value chain roundtables," Agriculture and Agri-Food Canada, November 15, 2016, agr.gc.ca.
[19] According to a 2014 Conference Board Report on supply management reform in the dairy sector, "The moderate growth scenario would see Canada add around six billion more litres of milk annually by 2022 to meet international demand, whereas the aggressive growth scenario sees Canada produce about 12 billion more litres annually." Grant et al, *Reforming Dairy Supply Management: The Case for Growth*, The Conference Board of Canada, 2014.
[20] Ibid.
[21] As announced in Budget 2016, see "Government of Canada consults on eliminating tariffs in vital agri-food processing sector," Department of Finance Canada, http://www.fin.gc.ca/n16/16-056-eng.asp.
[22] "Stanford Bootcamp", Te Hono Movement, http://www.tehono.co.nz/stanford-bootcamp, consulted January 2017.