



Canadian Food Processing
Innovation &
Prosperity Cluster

Agriculture and Agri-Food Canada AgriInnovation Program Goals

- ▶ Accelerate the pace of innovation
- ▶ Enhance economic growth
- ▶ Enhance productivity
- ▶ Enhance competitiveness
- ▶ Enhance adaptability and sustainability
- ▶ Assist in capturing opportunities for the sector in domestic and international markets



Canada's Private Sector Innovation Situation

- ▶ Canada is ranked 26th on private sector capacity for innovation - a major factor in our overall declining competitiveness
 - ▶ Canadian business spending on R&D ranks 22nd among OECD countries (% of GDP)
 - ▶ Canadian business productivity is ranked 17th among OECD countries - almost 30% lower productivity levels than U.S. businesses
- ▶ Source: World Economic Forum, OECD

Canada's Food & Beverage Processing Innovation Ecosystem Notable Strengths & Weaknesses of Ecosystem

Strengths

- ▶ High quality human resources
- ▶ Scientific and technical expertise
- ▶ Entrepreneurial individuals
- ▶ Wealth of basic science knowledge
- ▶ Strong research infrastructure in universities
- ▶ Strong emergence of entrepreneurs and SMEs focused on innovation
- ▶ Well positioned and adaptive in operations
- ▶ In-house innovation capabilities amongst some large processors
- ▶ Able to manage risk while scaling innovation

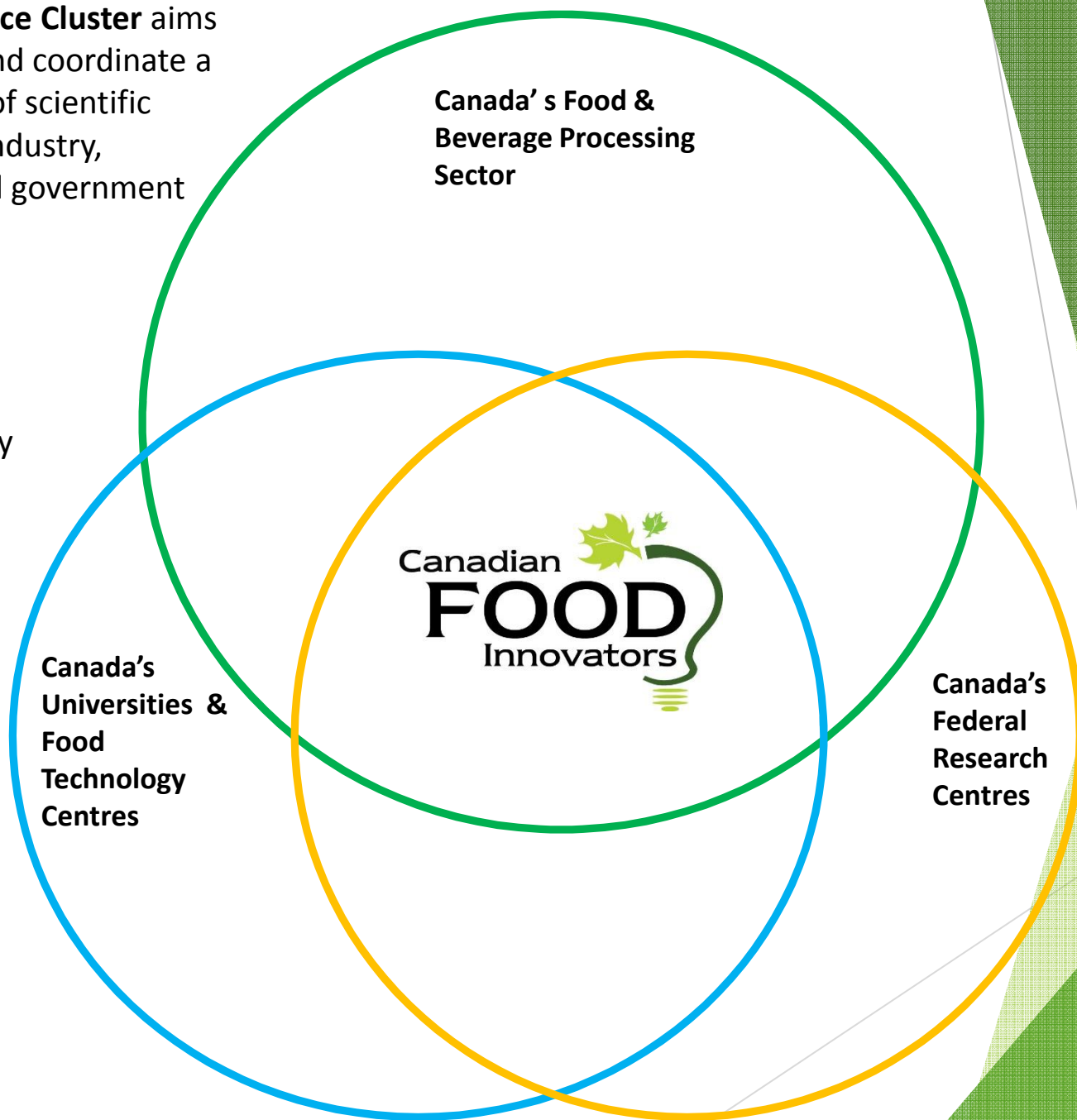
Weaknesses

- ▶ Limited availability of resources to navigate Innovation Ecosystem
- ▶ Pursue iterative vs. radical innovations
- ▶ Missed opportunities for commercialization
- ▶ Branch-plant mentality limits information sharing
- ▶ Difficulty in justifying innovation due to traditional metrics of success (ROI)
- ▶ Funding structures do not span crib-to-grave

Source: ISED, KPMG

An Agri-Science Cluster aims to mobilize and coordinate a critical mass of scientific expertise in industry, academia and government

It will address several themes that are priorities to the industry



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The CFI Food Processing Cluster

- ▶ 10 projects meeting AAFC criteria
- ▶ 20+ companies / research organizations involved
- ▶ 40+ scientists / researchers involved
- ▶ Durations range from 18 months to 5 years
- ▶ \$6.5 million total budget
- ▶ Themes:
 - ▶ Mitigate food safety risk factors
 - ▶ Expand sustainable practices in the value chain
 - ▶ Advance health and wellness attributes
 - ▶ Add more value to raw agricultural inputs
 - ▶ Enhance quality in line with customer or consumer need



Project Examples

- ▶ Log Salmonella reduction study on meat products
- ▶ Anti-microbial protection of frozen vegetables and fruit which have been partially dried before freezing by coating and spraying
- ▶ In vitro and in vivo studies for characterization and health effects of newly developed purple wheat products
- ▶ Development of eggshell powder as a functional food ingredient
- ▶ Development of protein hydrolysates and ginseng extracts via high hydrostatic pressure-enzymatic hydrolysis (HHP-EH) technology
- ▶ Development of innovative food products using cavitation technology
- ▶ Development and commercialization strategies for foods enhanced with barley grain ingredients that are produced through a cost efficient dry processing technology

Next Areas of Focus for CFI

Innovative applications of:

- ▶ Automation, robotics and sensor technology
- ▶ Flexible manufacturing techniques
- ▶ Water efficient technologies
- ▶ Sanitation technologies that minimize pathogen risk
- ▶ Packaging technologies to reduce non-renewable materials, enhance food safety, and maximize integrity including shelf life

Thank you

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