



Advanced Applied Physics Solutions Inc. (AAPS)

**Interaction Collaboration Autumn Meeting
31 October 2008**

**Ann Fong
Corporate Secretary**




Centres of Excellence for Commercialization and Research

“Canada must translate knowledge into commercial applications that generate wealth for Canadians”

In order to create:

- An Entrepreneurial Advantage
- A Knowledge Advantage
- A People Advantage



Announced in Budget 2007, the new CECR Program's goal is to create internationally recognized centres of commercialization and research expertise in 4 priority areas:

- Environmental science and technologies
- Natural resources and energy
- Health and related life sciences and technologies
- Information and communications technologies



CECR Program 2007

- Funding Provided through the Networks of Centres of Excellence by NSERC, CIHR and SSHRC
- Total grant \$14,955,575 per successful project
- The CECR grant provides an outstanding opportunity to develop advances in Canadian research into direct benefits for all Canadians



CECR Program 2007

- 125 Letters of Intent submitted
- TRIUMF:
 - 1 of 25 applicants accepted for
Stage 2 - Full Application
- TRIUMF-AAPS 1 of 11 successful applicants
across Canada



THE MISSION OF AAPS

To research, develop and commercialize innovative technologies from TRIUMF and other advanced physics research with potential for social and economic benefit.



AAPS' Business Model

- Mitigate risk through partnerships and support from industry
- Transition Know-how to Canadian industry to establish entrepreneurial advantage
- Create new science based businesses with strong IP and product pipeline



Proposed Business Development

- Develop business strategies for AAPS projects for the benefit of Canadians
- Identify and establish collaborative R&D opportunities
- Develop partnerships for AAPS initiated projects
- Identify and procure complementary IP
- Identify and procure financial sponsorship from public and private sources for AAPS projects and initiatives



Directors and Management

Directors

- Edward Odishaw, Chairman
Chair, Austpro Energy
- *(Geoffrey Ballard
Founder, Ballard Power)*
- Michael C. Burns
Chair & CEO, Naikun Wind Group
- Poul Hansen
Chair, Sperling Hansen
- Howard Kellough
Partner, Davis LLP
- Nigel Lockyer
Director, TRIUMF
- Donald Rix
Founder & Chair, LifeLabs Medical
- Arthur Willms
Pacific Northern Gas, Chair
- Philip Gardner
President & CEO, AAPS

Management

- Philip Gardner, President & CEO
- Paul Schmor, VP & CSO
- Pamela Mooney, CFO
- Ann Fong, Corporate Secretary
- Konstantine Sarafis, VP Business
Development (contract)
- Vinder Jaggi, DLC Senior Engineer
- Chris Campbell, Technical Consultant

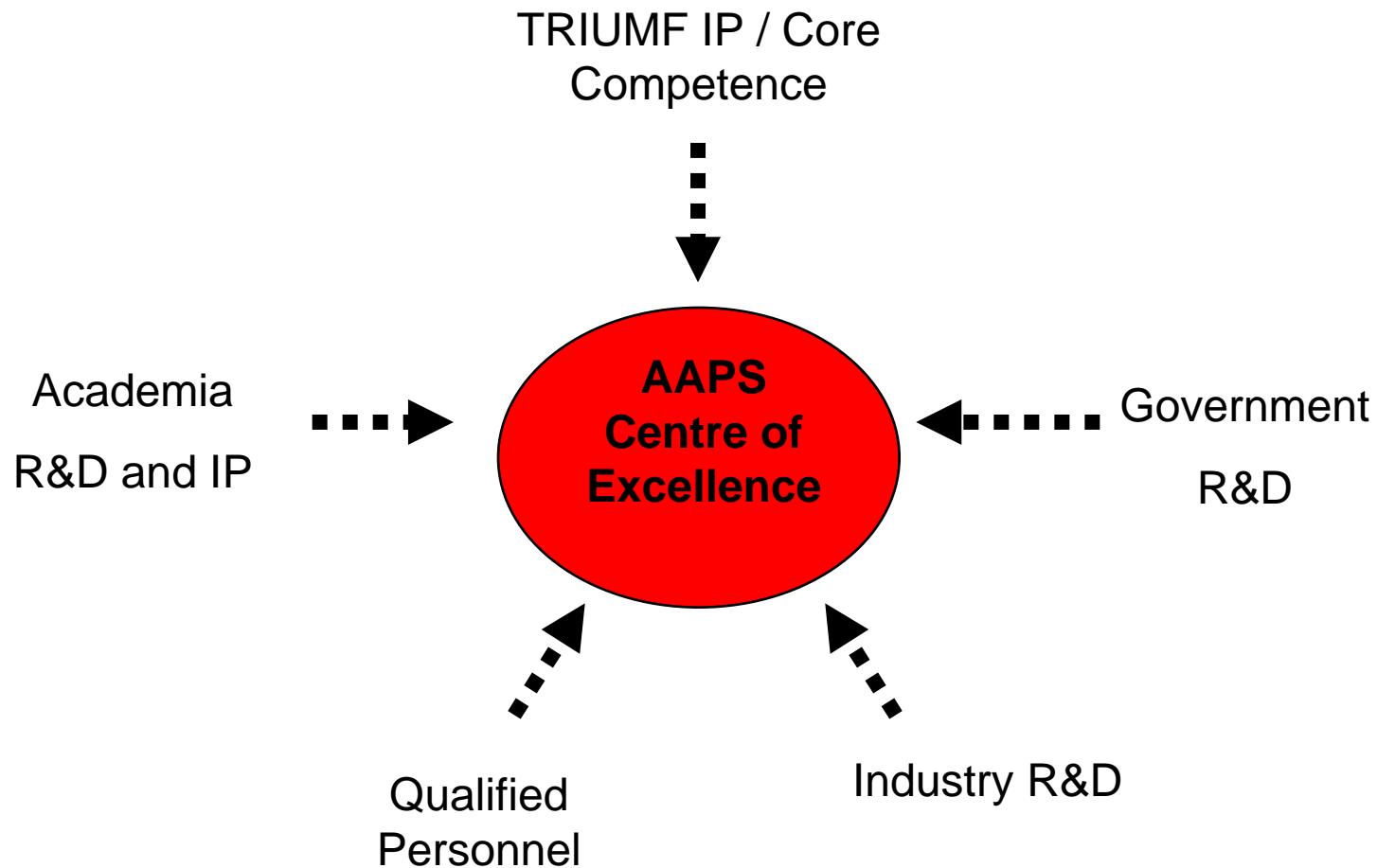


AAPS Objectives

- Build on TRIUMF's internationally recognized expertise
- Accelerate the Commercialization of disruptive and platform innovations
- Optimize existing and newly established collaborations
- Attract international top talent and provide specialized training to highly qualified personnel

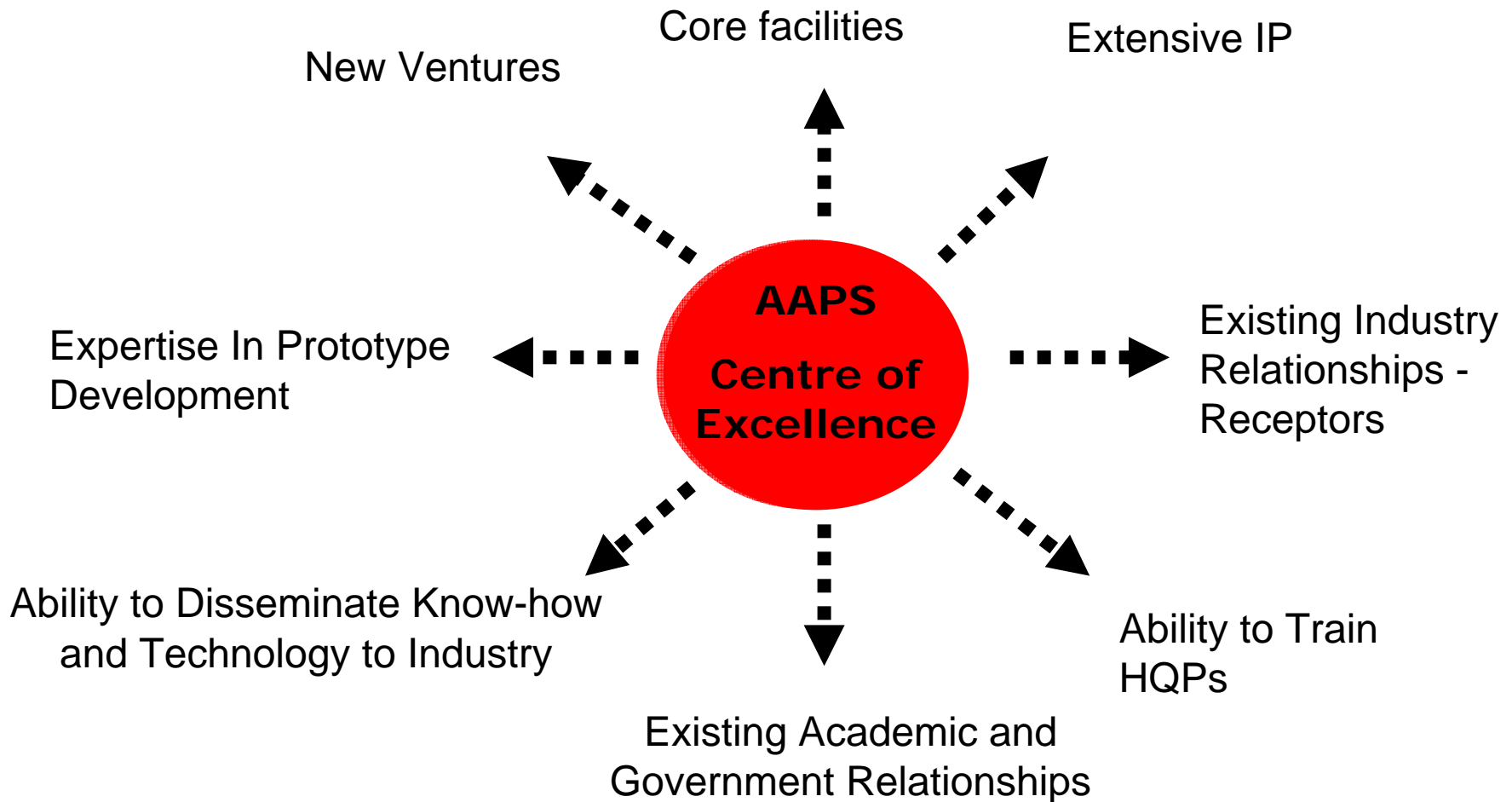


AAPS: Role and Function





AAPS Role and Function





AAPS
Advanced Applied
Physics Solutions



ETPP
Exploitation des Techniques
de Pointe en Physique

Fulfilling Objectives through Specific Projects and Initiatives



Current Proposed AAPS Projects

- 19 MeV Cyclotron
- 8 MeV Superconducting Minicyclotron
- Geological Tomography
- Liquid Xenon Detector
- Diamond Like Carbon
- 30 MeV Cyclotron
- E-linac Moly-99 production
- Detection of Special Nuclear Material



Proposed Project Developments and Outcomes

Medical Cyclotron Development



- Innovative high efficiency cyclotron design
- Core competency in cyclotron development
- Skilled and trained personnel
- Transfer know-how to enable Canadian Industry
- Industry investment and commercial receptor



Proposed Project Developments and Outcomes

Radiography Imaging

- Improved spatial resolution for medical PET imaging
- Innovative geotomographic imaging for mining exploration and security
- Core competency in radiography development
- Skilled and trained personnel
- Transfer know-how to Canadian Industry to create technical advantage



Proposed Project Developments and Outcomes

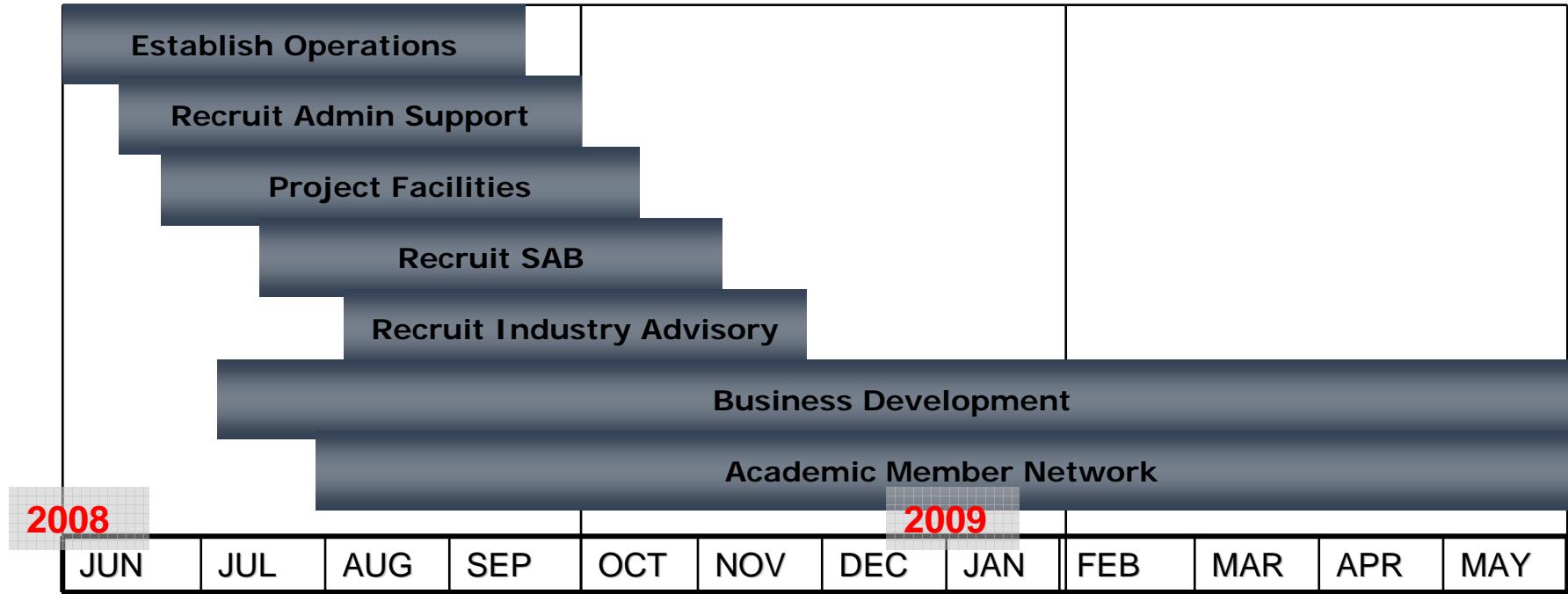
Diamond Like Carbon Thin Films

- Superior stability, purity and performance
- Radioisotope production
- Industrial applications (semi-conductors, optics)
- New Canadian Company
- Skilled and trained personnel

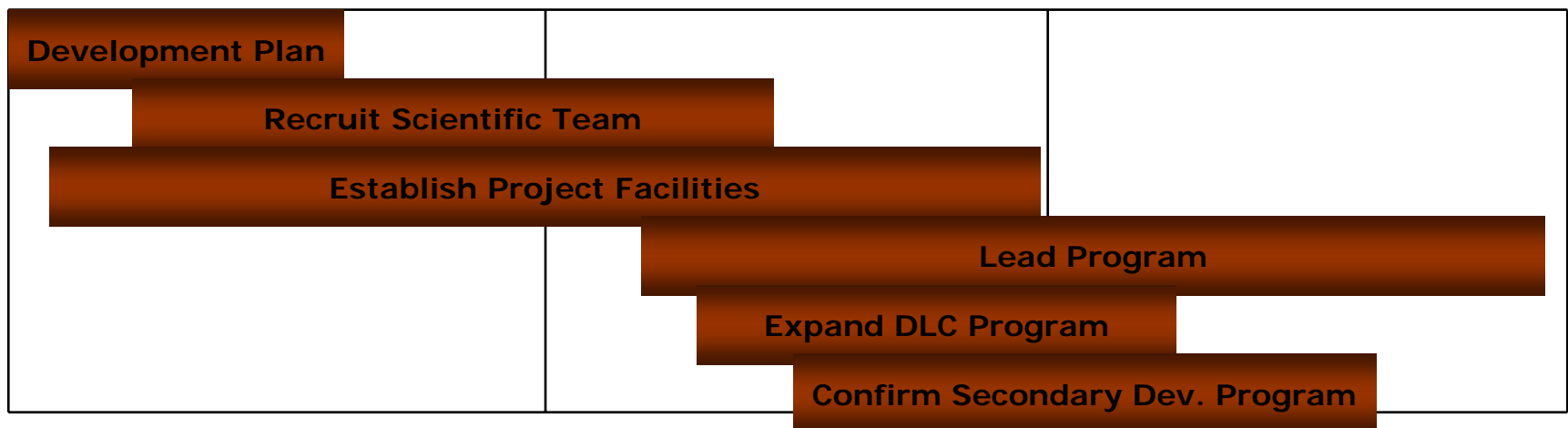


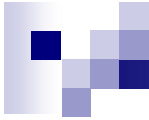


Corporate Development Timelines



Research and Development





An Optimistic Projection of AAPS in 2015

- 7 Divisions:

- Cyclotron manufacturing
 - Life Sciences
 - Detectors
 - e-linac accelerators
 - Environmental sciences
 - Training and consulting services
 - Administration

- 80 staff

- Annual revenues of ~C\$50 million

- Asset value ~C\$ 75 million

- 6 companies spun out



Synergy of AAPS with TRIUMF's Five Year Plan

- 8 MeV SMC development will fit with TRIUMF's Life Science research in micro-fluidics
- AAPS will be a synergistic tenant in TRIUMF's new Life Sciences building
- AAPS' accelerator projects will train many 'next generation' accelerator experts, project engineers and technicians at TRIUMF



Synergy of AAPS with TRIUMF's Five Year Plan

- Liquid Xenon detector development could have major application in PET/SPECT/MRI imaging
- Diamond Like Carbon and Thin Film development should have significant benefit for accelerators
- AAPS' off-shore collaborations can provide highly qualified students and staff for TRIUMF

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Thank You

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