

**WE SUPPORT
PEOPLE MAKING
DISCOVERIES**

Innovation & Creativity: Alberta in the 21st Century

The Alberta Ingenuity Fund

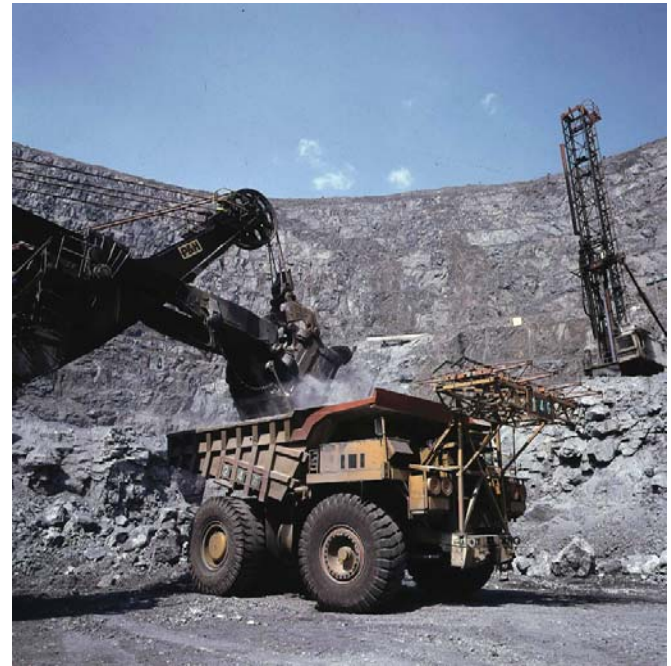


KEY MESSAGES

- **Alberta Ingenuity is positioned to be a key agent for advancing Alberta's strategic plan to build a value-added economy**
- **The endowment approach is great public policy and provides a firm signal to the innovators that Alberta must attract**
- **Alberta Ingenuity has a strong management and governance team and credible plans to advance the provincial agenda**
- **Strong support for Alberta Ingenuity will enable Alberta's future success**

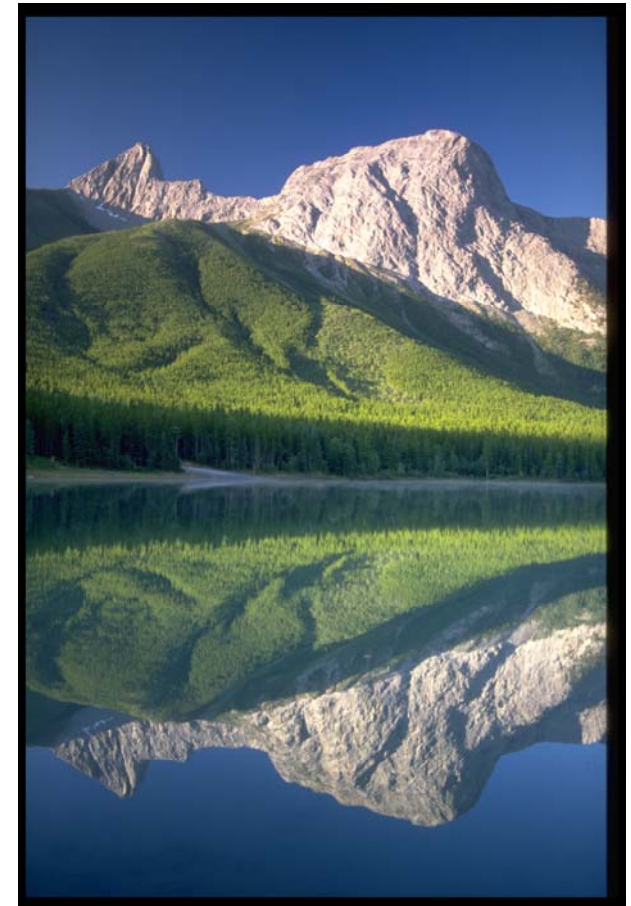
ALBERTAN INGENUITY

- Alberta has a short one hundred year history of development fueled by its abundant natural resources *and* by the ingenuity of the people attracted to the Province
- Alberta's future will be determined by its attractiveness as a home for creative and ingenious people *and* by their ability to build an innovative value-added economy in the Province



ALBERTAN INGENUITY

- **Albertan's face severe global demographic challenges – *only* an innovative value-added economy can provide the capacity to *pay* for a healthy society and a sustainable future**
- **Innovative people and strategic investment in science and engineering research capacity are key to building an innovative value-added economy in Alberta**

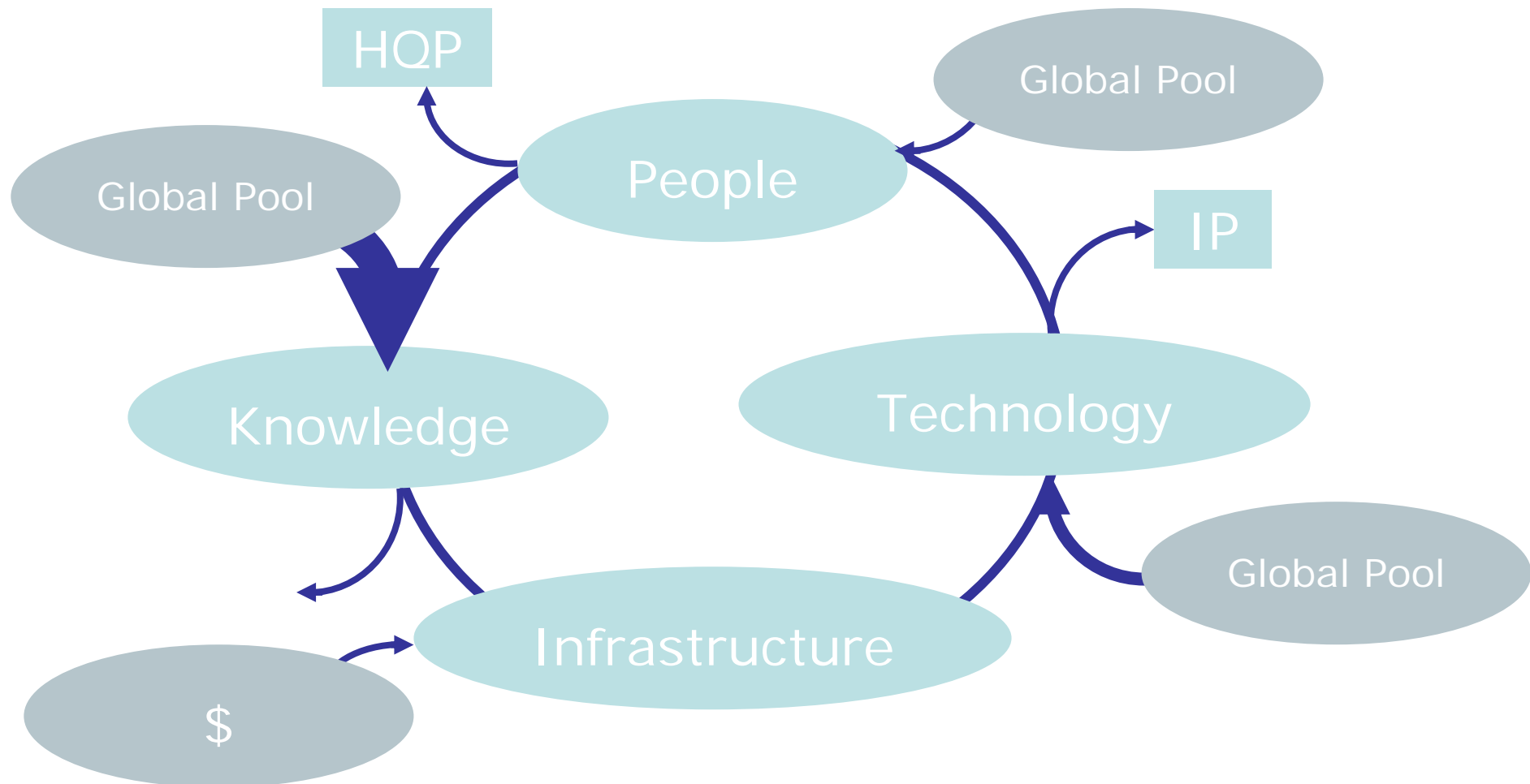




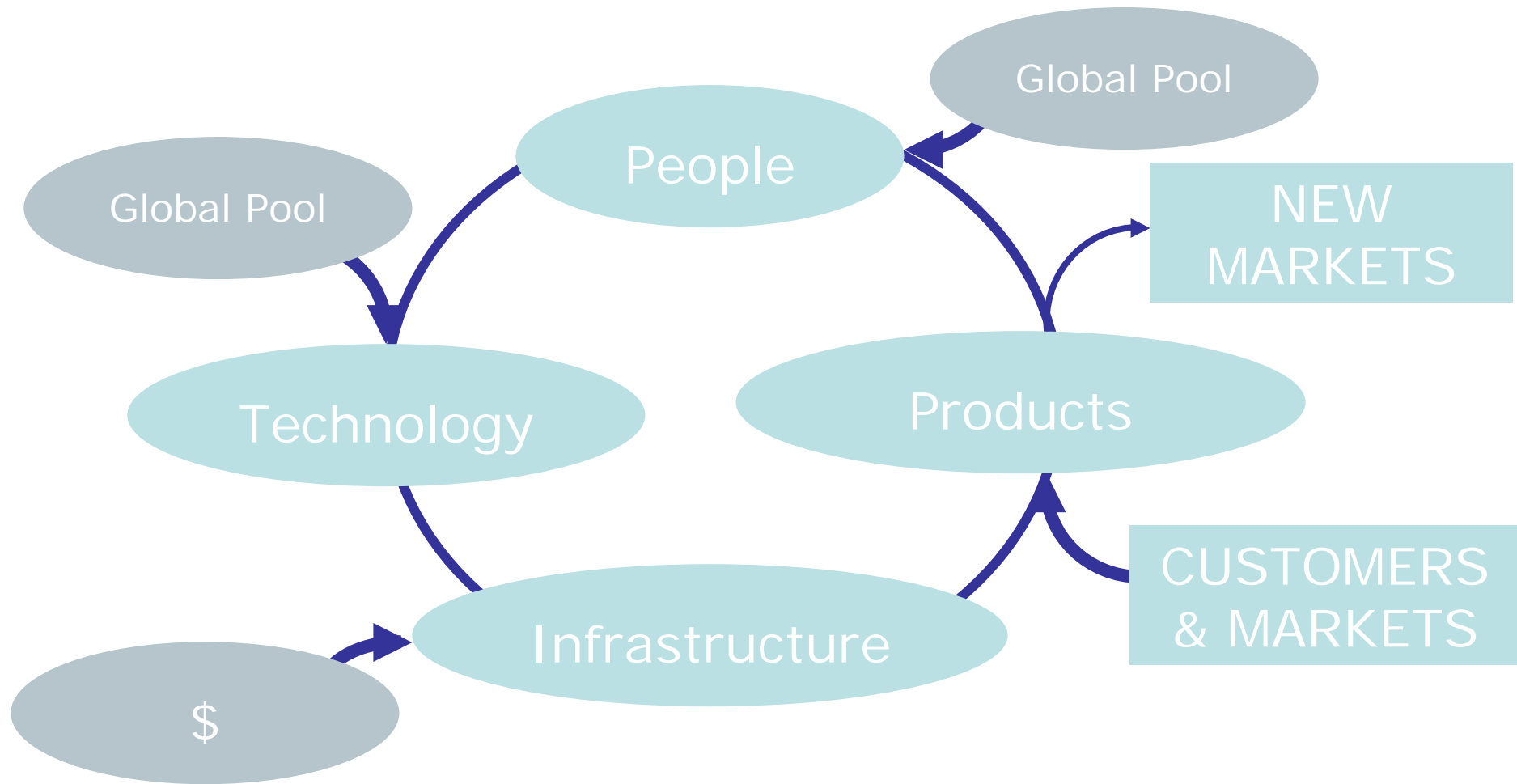
ALBERTA: PATHWAYS TO THE FUTURE

- **Unleashing innovation**
- **Leading in learning**
- **Competing in a global marketplace**
- **Making Alberta the best place to live, work and visit.**

Discovery-driven innovation



Market-driven innovation



ALBERTAN INGENUITY

- **The development of highly qualified entrepreneurial people in key areas of provincial opportunity is an absolutely key success factor for Alberta**
- **Excellent successful people attract other excellent people:**

Success today attracts success in the future

ALBERTA'S OPPORTUNITY

- **Alberta's prosperity today gives it the opportunity to build the key infrastructure for its future:**
The people infrastructure
- **Alberta has the opportunity to *brand* itself as the jurisdiction of choice for key innovators in areas of provincial opportunity**
- **A bold statement of support for innovators will amplify Alberta's opportunity for success**



ALBERTA INGENUITY FUND

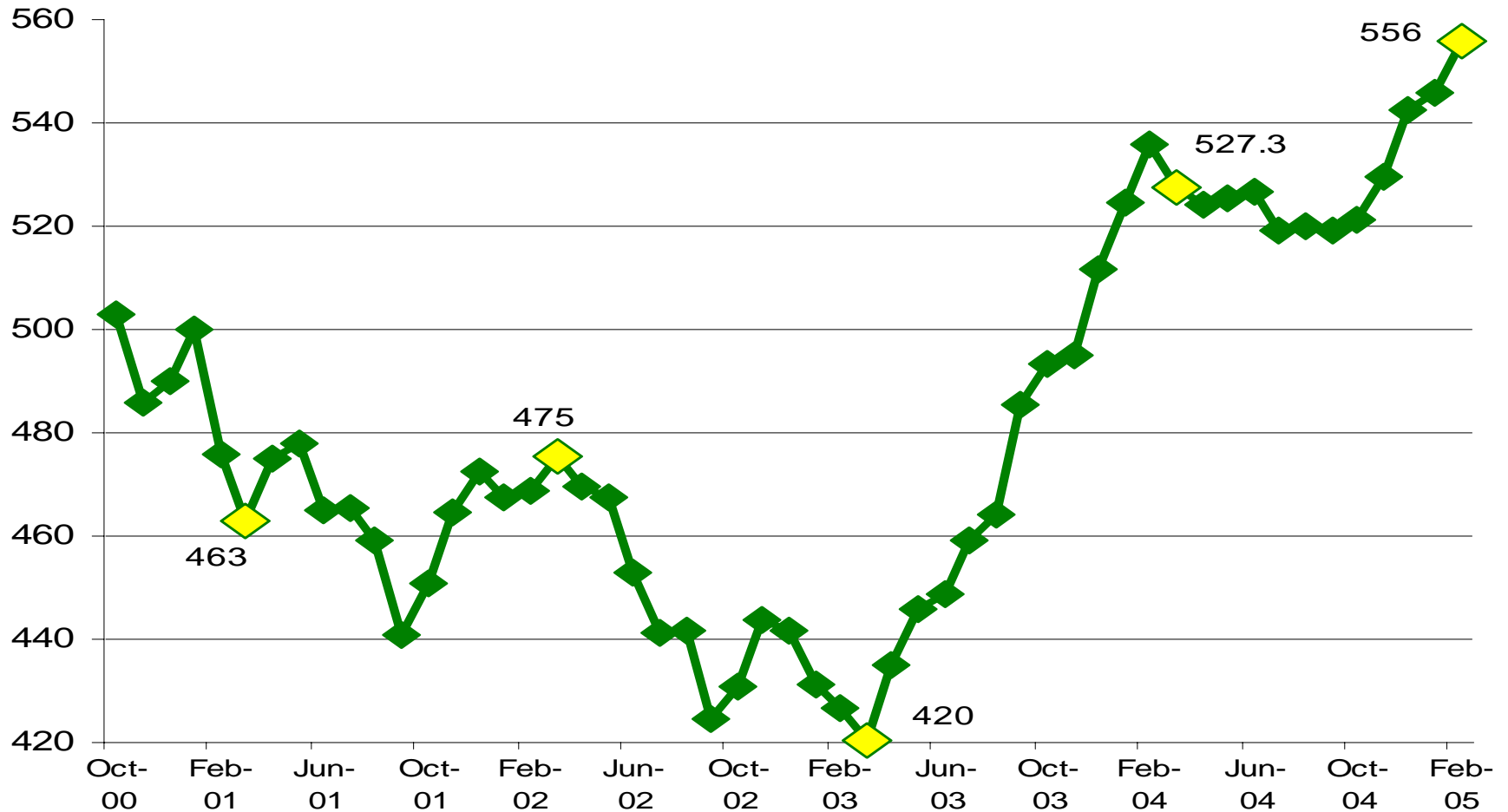
Alberta Ingenuity will use an additional \$500M to:

- **Attract an additional 20 world leading researchers and innovators to the Province**
- **Increase the number of graduate students it supports by fifty percent**
- **More than double the number of Alberta Ingenuity Centres in partnership with industry and other stakeholders**
- **Triple the number of knowledge-based companies in Alberta that it works with**

ALBERTA INGENUITY: PLANNING CONTEXT

- **The strategic context for Alberta Ingenuity is well-defined**
- **The strategic intent of the Government of Alberta has been well communicated**
- **The innovation community is engaged: *Key projects are being defined***
- **Managing expectations and clarity of communications challenge our Board**

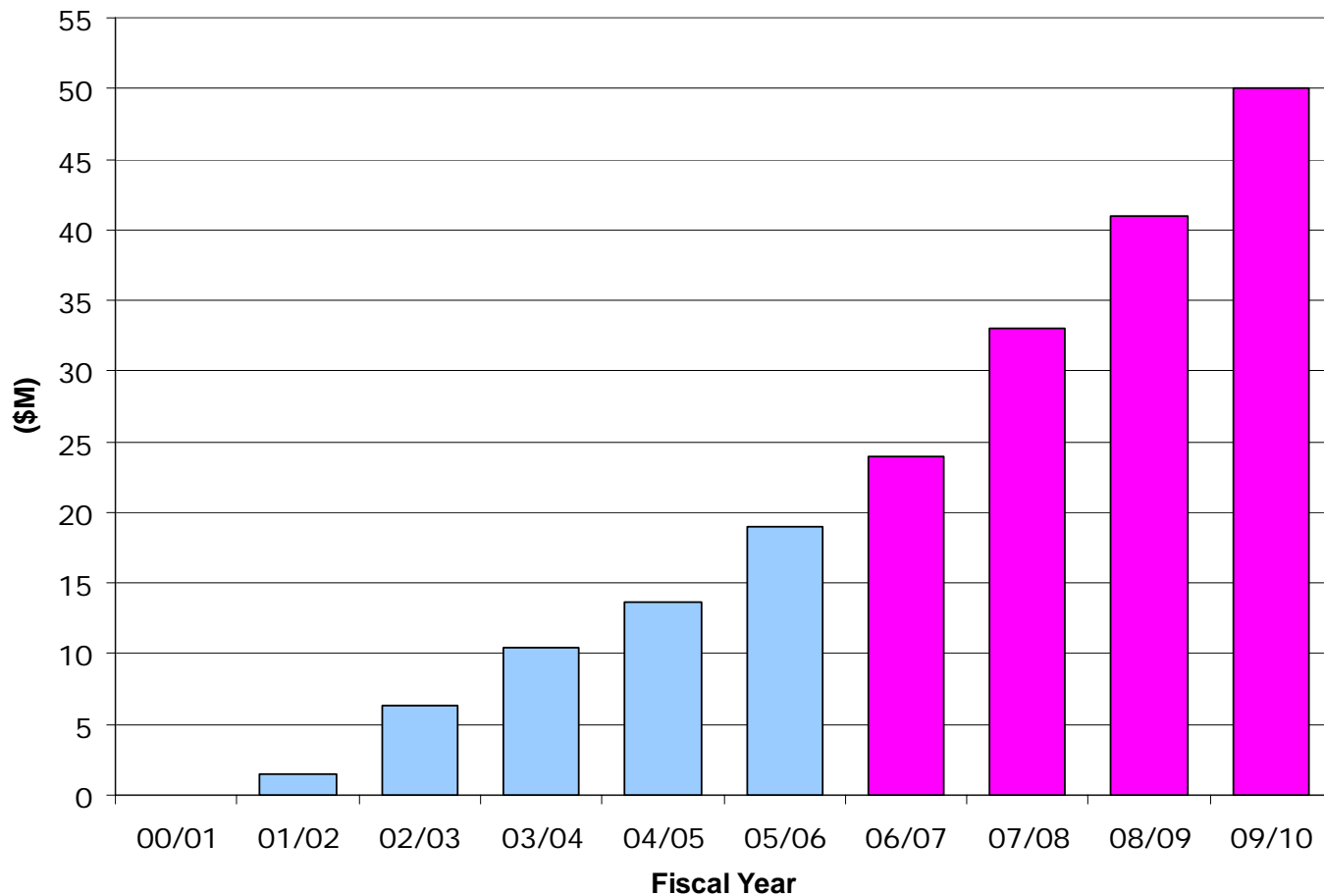
ENDOWMENT PERFORMANCE



CURRENT PROGRAMS - 2005

Program	Length	\$ per year	Total Awarded	HQP Currently Funded
Studentship	Up to 5 years	Up to 23,500	320	233
Fellowship	2 years	55,000	64	45
Industrial Associateship	2 years	55,000	63	54
New Faculty Grant	2 years	Up to 55,000	34	22
Scholar Recruitment Grant	1 year	30,000	5 Grants	-
Scholars	5 years	Up to 1.0M, over 5 years	6	4
Centres	5 years, renewable	1.5 – 2.0M	4 Centres	~120 HQP
Total HQP				~480

ALBERTA INGENUITY: THE OPPORTUNITY





INDUSTRY ASSOCIATES

Alberta Ingenuity Industry Associates work in the following Alberta companies:

Advanced Integrated Microsystems, AgriGenomics Inc, Altachem Pharma Ltd, Applied Nanotools Inc, AVRA Software Lab Inc, Broadsword Corrosion Engineering Ltd, Calgary Scientific Inc, Cementec Industries Inc, ChemRoutes Corporation, Chenomx Inc, Clynch Technologies Inc, CV Technologies Inc, Cytostore Inc, Collaborative Learning Network Inc, HydroQual Laboratories Ltd, Iunctus Geomatics Corp, Komex International Ltd, Matrikon Inc, MBEC Bioproducts, Inc, Micralyne Inc, MRF Geosystems Corp, MTI Meta Tech Inc, Norcada, Inc, Nova Chemicals, NovAtel Inc, Paragon Soil & Environmental Consulting, Prairie Natural Processing Inc, QSV Biologics Ltd, Random Knowledge Inc, Resin Systems Inc, Scanimetrics Inc, SciMed Laboratories Inc., SemBioSys Genetics Inc, Smart Camera Technologies Inc, Symbiotech Research Inc, Taurus Reservoir Solutions Ltd, Terramatics Systems Inc, Virtual Materials Group



Ingenuity in Bio-research: 23 IA's in 19 companies

Abebaw Jemere

Advanced Integrated Microsystems

Ashok Shrawat

AgriGenomics

Brian Eaton and Ruth Eckford

Altachem Pharma

Mike Bristow

Calgary Scientific

Callum Galbraith

Clynch Technologies Inc

Annabelle Shi Shun

ChemRoutes

Pascal Mercier, Kathryn Rankin and

Aalim Weljie

Chenomx

Vinti Goel

CV Technologies

Young Ou

Cytostore

Lydia Hollis

HydroQual Laboratories

Brooke Bennett

Komex International

Lyriam Marques

MBEC Bioproducts

Vanessa Lien

MTI Meta Tech

Jeffrey Battigelli

Paragon Soil & Environmental Consulting

Anna Bakowska

Prairie Natural Processing

Jignesh Padia

QSV Biologics

Amanda Boderio and Suzanne Clark

SemBioSys Genetics

Avinash Bhaskar

SciMed Inc

Ali Quoreshi

Symbiotech Research



Ingenuity in Energy Research: 11 IA's in 8 companies

Chuntao Deng

Broadsword Corrosion Engineering

Benjamin Smith

Cementec Industries

Md. Ali Choudhury

Matrikon

Lee Henderson and Sergio

Guillen-Castellanos

NOVA Chemicals

Howard Huang, Mark Kachmar and Liman Mao

MRF Geosystems

Zhizhao Liu

Terramatics Systems Inc

Jin Wang

Taurus Reservoir Solutions

Andrew Liu

Virtual Materials Group



Ingenuity in ICT Research: 13 IA's in 10 companies

Peng Li

Applied Nanotools

Daqing Hou

AVRA Software Lab

Cheng Hu

Collaborative Learning Network

Ian Chapman

Iunctus Geomatics

Mary Seto

Micralyne

**Miroslav Below, Michael Colgan
and Holly O'Rourke**

Norcada

Anastasia Salycheva

NovAtel

Weiguang Shi

Random Knowledge

Edwin Reid and Mahbub Reja

Scanimetrics

Ibrahim Baykal

Smart Camera Technologies

INGENUITY SCHOLARS: FUTURE CONTEXT

- **Attract 20 research and innovation leaders to the province**
- **New definition of success: Academic excellence, leadership, entrepreneurship**
- **Each scholar to be the best in the world in areas of provincial priority**
- **Each scholar will attract investment and build critical-mass**
- **Each scholar changes the rules of the game and serves as a role model**

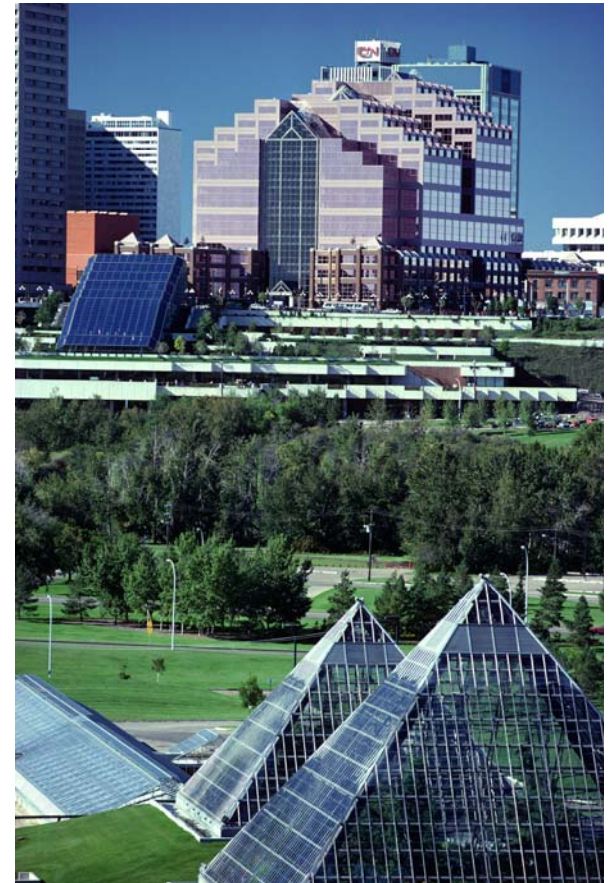


SCHOLARS and CHAIRS: BRANDING ALBERTA

- **Provides strongly positive global branding for the Province of Alberta as the home for the world's leading innovators**
- **This branding will make future progress more assured- success breeds success**
- **A forceful announcement is a determinant and attractor of future success**

ALBERTA INGENUITY CENTRES

- **Flagship program creates world-class research centres in areas of strategic importance to Alberta**
- **Currently support 4 centres with a commitment of \$29 million**
- **Benefits Albertans by producing new discoveries, new technologies, and new jobs**



ALBERTA INGENUITY CENTRES

- **Centres provide a governance framework to integrate input from stakeholders across the Province**
- **Centres provide a management framework to link research to outcomes in Alberta**
- **Centres allow the development of an integrated pan-Alberta research and innovation capability**
- **Centres build critical mass and train highly qualified people in areas of provincial strength and opportunity**



ALBERTA INGENUITY PRION INITIATIVE

- **A \$35 investment of the Government of Alberta**
- **To be delivered by Alberta Ingenuity as a pan-Alberta virtual institute**
- **Will build an integrated research capacity to address the challenges of BSE and other TSE related diseases**
- **Will attract international research leaders to the Province**

ALBERTA INGENUITY PRION INSTITUTE

Management Board

- **Alan Bernstein**
President, CIHR
- **Marvin Fritzler**
Chair , ASRA
- **Peter Hackett, CHAIR**
President, Alberta
Ingenuity
- **Kevin Keough**
President and CEO, AHFMR
- **Bernie Kotelko**
CEO, Highland Feeders
- **Cornelia Kreslin**
Head, Food Safety, AARD
- **Ben Thorlaksen**
CEO

International Research Advisory Committee (putative)

- **Jean Pierre Deslys**
CEA, France
- **Susan Lindquist**
Head, Whitehead Institute, MIT
- **Richard Johnson**
John's Hopkins
- **Chris Dobson**
Cambridge, UK
- **Bertram Brenig**
IVS, Gottingen
- **Kazuo Yamanouchi**
Nippon Institute for Biological
Sciences

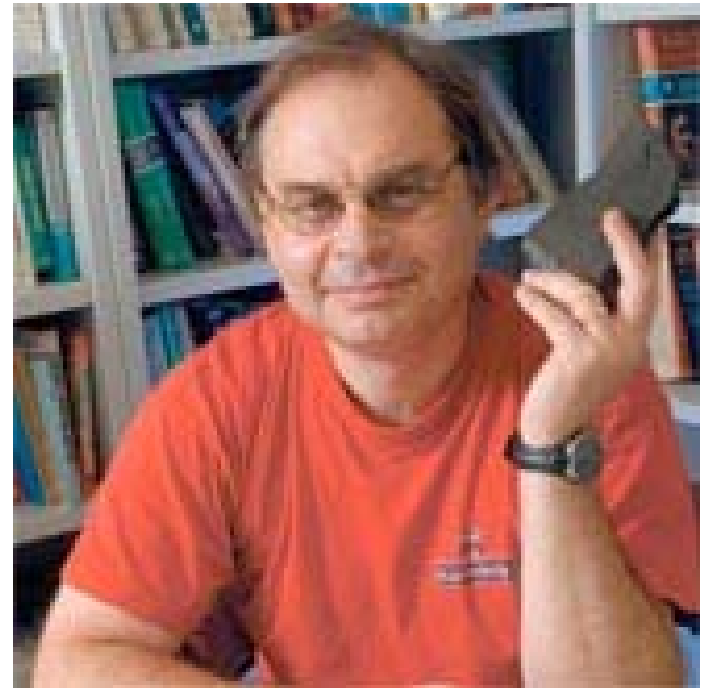
WATER CENTRE

- **Focuses on water-related resources research and management**
- **Trains and nurtures scientists, engineers, economists, and managers of water resources**
- **Established in 2003 with a commitment of \$7.5 million over 5 years**



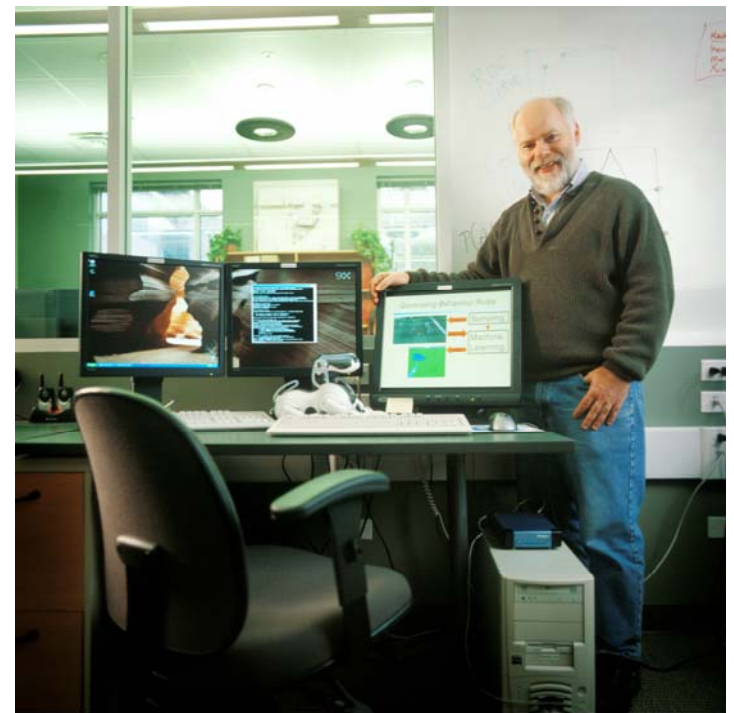
IN SITU ENERGY CENTRE

- **Plays key role implementing Alberta's energy innovation strategy**
- **Will work closely with industry to improve the way the oil sands are produced**
- **Established in 2004 with a commitment of \$7.5 million over 5 years**



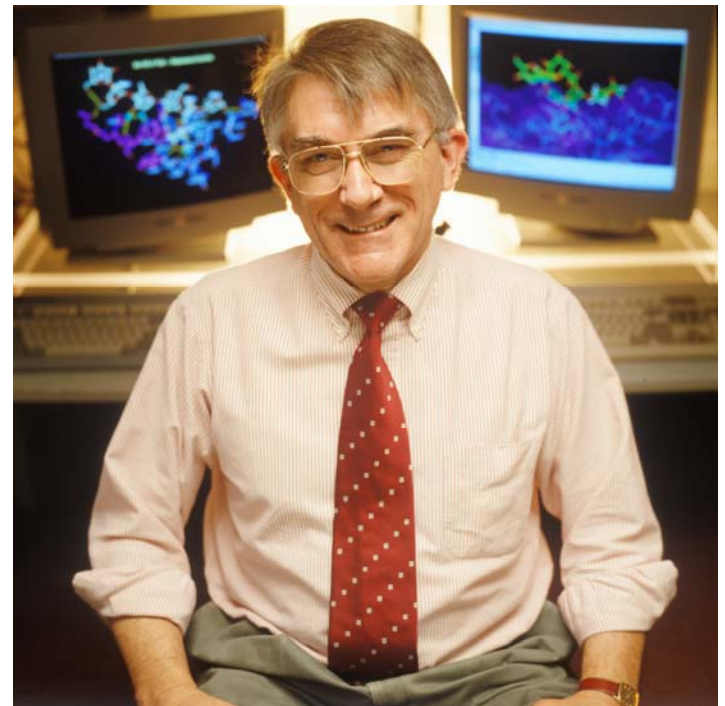
MACHINE LEARNING CENTRE

- **Focuses on creating smarter computers for use in areas such as e-commerce and industrial processing**
- **Established in 2002 with a commitment of \$7 million over 5 years**
- **Will play a key role in new \$1.2 million IBM Centre for Advanced Studies**



CARBOHYDRATE SCIENCE CENTRE

- **A major resource to the pharmaceutical industry for training high-caliber scientists and developing cutting edge technologies**
- **Focuses on researching the chemistry of complex sugars. Research results could lead to the development of new vaccines**
- **Established in 2002 with a commitment of \$7 million over 5 years**



INGENUITY CENTRES: FUTURE CONTEXT

- **Centres in areas of clear provincial priorities – integrating industry and other stakeholders**
- **Centres in areas of emerging potential, e.g., quantum information**
- **Funding and activities to build centre concepts**

ALBERTA INGENUITY: GRADUATE STUDENTS

- Alberta Ingenuity selects an additional eighty (80) graduate students every year
- Unique selection process evaluates the quality of the candidate *and* the research
- Success rate less than twenty percent
- Program supports 220, will grow to 340
- Program selects and supports (~\$750k pa) iCORE students as well
- Program levered through iCORE and NSERC



ALBERTA INGENUITY COMMUNICATIONS

- **Links the ingenuity of those who built the Province of Alberta and today's economic sectors to today's need for ingenuity**
- **Builds support for a culture of innovation in all Albertans**
- **Builds confidence that Albertans can face up to tomorrow's economic and social challenges through reliance upon their own ingenuity and innovation**

BUILDING A CULTURE OF INNOVATION



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