2013 ASTECH AWARDS

SHAPING THE FUTURE

HONOUREES

ASTech Foundation
Inspiring Innovation

2013 ASTECH AWARDS

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Inspiring Innovation

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2013 MESSAGE FROM THE ASTECH FOUNDATION

SHAPING THE FUTURE

As the world becomes more complex, society increasingly looks to outstanding individuals and companies – like our honourees – to provide leadership to overcome new challenges. ASTech's mission to celebrate Alberta's science and technology achievements is essential to cultivate and grow the innovation the world needs.

ASTech believes that through the celebration of great achievements and by demonstrating what is possible, we inspire the next generation of innovators, scientists and entrepreneurs. Today in Alberta we benefit from the thousands of innovators inspired by the forefathers of innovation, whom we have celebrated over the last 24 years of the ASTech Awards.

ASTech is proud to play a role in shaping the future. We have helped build a tangible community that has a remarkable history and an exciting future – in agriculture, medicine, energy, environment, geomatics and so much more yet undreamed of.

Alberta is a province of enormous wealth in natural resources. Its people are well educated, equipped with the world's leading science and technology.

Because of our privilege of geography and demographics, we have unparalleled opportunities to lead the world in innovation. For example, the oil sands industry's impact on the environment presents tremendous challenges and opportunities for science and technology. And it has the world's attention.

Alberta can determine how that story is written – through the science and technology community's innovation. We can become a world leader in environmental stewardship and technological innovation in all things energy related. And then we can export our technology and expertise to the rest of the world to make industry more sustainable – and to create a better world. It is possible. We can do it. We must do it.

By celebrating our accomplishments through ASTech, we can change the conversation and begin to realize what is possible in Alberta – and the world.

ROBERT TASKER
CHAIR, ASTECH FOUNDATION

SCIENCE FAIR FEATURED STUDENT

MS. CHLOE DEVOY

YOUNG SCIENTIST EAGER TO MAKE A DIFFERENCE.

Thirteen-year-old grade 9 student Ms. Chloe Devoy won the prestigious Canada-Wide Science Fair Junior Gold award for her project *Antibiotic Resistance in our Local Food Supply: Resistance or Pestilence?* The project also received three awards at the Lethbridge Youth Science Fair and won the Genome Alberta Award.

Ms. Devoy's project makes the case for curtailing the overuse of antibiotics, particularly in animals and plants; and helps inform people about antibiotic-resistant bacteria in their food.

DR. STEPHANIE CZUB

CANADIAN FOOD INSPECTION AGENCY

DREAM BIG.

THE SKY IS THE LIMIT.

Dr. Stephanie Czub takes the credit for finding and confirming the first case of bovine spongiform encephalopathy (BSE) in 2003. As Canada's foremost expert in BSE, her immediate and effective actions allowed the Alberta and Canadian governments and the beef industry to respond in a timely fashion while dealing with the devastation of market closures.

Her dedication to the livestock industry and to securing Canadian market access has driven information and science-based policy development in scientific research in prion disease.

“CELLS ARE INCREDIBLY COMPLICATED BIOLOGICAL MACHINES. YOU DO AN EXPERIMENT THAT ANSWERS ONE QUESTION AND THROWS OUT ANOTHER 10 TO ANSWER. THAT’S WHAT DRIVES ME.”

OUTSTANDING LEADERSHIP IN ALBERTA SCIENCE

DR. SUSAN LEES-MILLER

UNIVERSITY OF CALGARY

BE PASSIONATE ABOUT WHAT YOU DO.

Dr. Susan Lees-Miller’s basic research discoveries have been instrumental in advancing understanding of the biological basis of radiotherapy, a cancer treatment that treats cancer by causing DNA damage.

In her role as the Engineered Air Chair in Cancer Research Dr. Lees-Miller founded the Genomic Instability and Aging Research Group, to expand knowledge and build an interdisciplinary team of senior and junior scientists. She teaches at a graduate and undergraduate level, has graduated PhD and MSc candidates and supervised post-doctoral fellows.

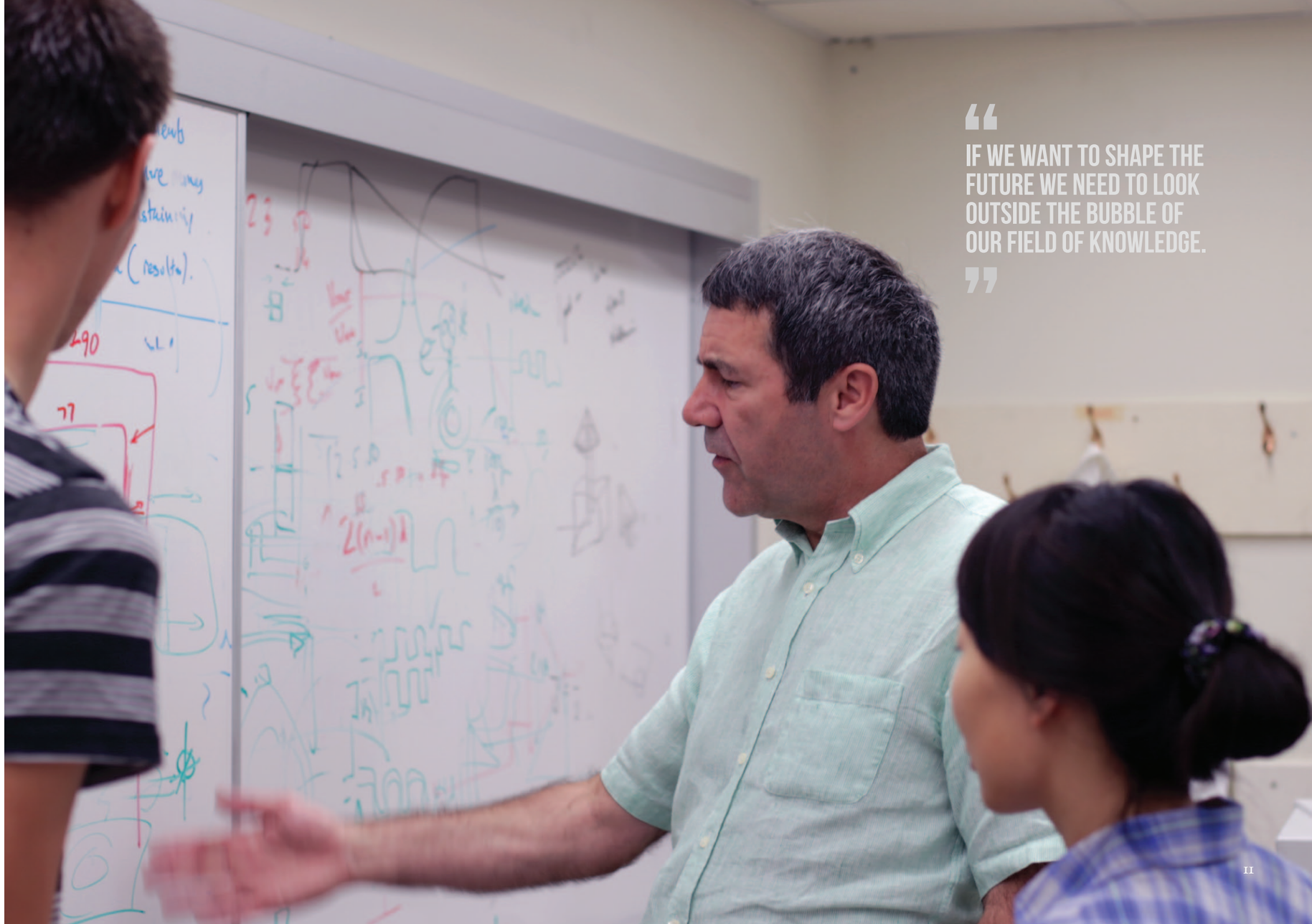
DR. DAVID NAYLOR

UNIVERSITY OF LETHBRIDGE

TALENT, INDUSTRIOUSNESS ADVANCE SCIENCE.

Through the efforts of Dr. David Naylor, the University of Lethbridge has become an international leader and developed a world-class research program in the design, construction and use of Fourier transform spectrometers (FTS) in astronomical research.

His latest exploration is to move astrophysics research to study breast cancer cells – and eventually to other forms of cancer. He's forged links with the medical community and has access to tissue banks of all cancer samples in Alberta to compare diagnoses with what they find using the spectrometer.



"IF WE WANT TO SHAPE THE FUTURE WE NEED TO LOOK OUTSIDE THE BUBBLE OF OUR FIELD OF KNOWLEDGE."

OUTSTANDING LEADERSHIP IN
ALBERTA TECHNOLOGY

DR. PERE SANTAMARIA

UNIVERSITY OF CALGARY

DISCOVERIES COME TO THOSE WHO DARE TO ACCEPT IGNORANCE.

Dr. Pere Santamaria has spent more than 20 years developing a revolutionary therapy that will change the outcome of devastating autoimmune diseases like juvenile diabetes and multiple sclerosis, among many others – for which no effective cure exists.

He led his research team to discover a therapeutic nanomedicine platform technology that uses nanoparticles to stop immune cells from destroying the insulin-producing cells of the pancreas in Type 1 Diabetes or neurons in Multiple Sclerosis. Parvus Therapeutics Inc., a University of Calgary spin-off company founded by Dr. Santamaria, is leading the effort to commercialize the therapy.

OUTSTANDING ACHIEVEMENT IN
APPLIED TECHNOLOGY AND INNOVATION
SPONSORED BY SAIT POLYTECHNIC

HIFI ENGINEERING INC.

DESIGN QUALITY PRODUCTS AND THE REST LOOKS AFTER ITSELF.

Mr. John Hull’s experience as an electrical engineer in open-hole and cased-hole services led him to establish Hifi Engineering in 2008 to develop a cost-effective way to identify the source of leaks in oil and gas wells. The Calgary-based company develops fibre-optic technology for underground well monitoring.

In 2011 Hifi released the MiQro system, which measures specific points in millimetres; and the MaQro system that measures several kilometres simultaneously. Then with the Alberta Research Council, Hifi designed, engineered and commercialized the VentMeter™, the most advanced leak measurement tool in the world and in demand globally.

OUTSTANDING SCIENCE AND TECHNOLOGY START-UP AWARD

SPONSORED BY NAIT

ORPYX MEDICAL TECHNOLOGIES INC.

HUMAN PERCEPTION REDEFINED.

An Alberta-based technology company, Orpyx® Medical Technologies, was established specifically to address the world's growing epidemic of diabetes.

Founded in 2010, Orpyx has created the world's first diabetic insole sensory substitution system. The SurroSense Rx™ collects pressure data from the feet, wirelessly sending that information to the user via an ergonomic wristband display or mobile app. The system allows diabetics to better cope with complications of the disease and improves their quality of life.

"AS THE FIRST MOVERS IN THE FIELD, WE CAN HAVE THE MOST SIGNIFICANT POSITIVE IMPACT IF WE CAN COMMERCIALIZE QUICKLY."

OUTSTANDING COMMERCIAL ACHIEVEMENT
IN ALBERTA SCIENCE AND TECHNOLOGY

MRF GEOSYSTEMS CORPORATION

MAKING A DIFFERENCE BY FINDING BETTER SOLUTIONS THROUGH INNOVATION.

Under Mr. Gary Zhang, MRF Geosystems has developed a suite of industry-leading GIS products and acquired a customer base with more than 6,000 licenses in over 40 countries. In 2012 the company recorded revenues of $2.9 million.

Among the industry-changing innovations from MRF is a tool that helps convert paper maps into digital maps, reducing the time required for processing a map from about one week to one day.

"YOU NEED TO TAKE RISKS AND WORK HARD TO ACHIEVE TECHNICAL ADVANCES, CUSTOMER SATISFACTION AND COMMERCIAL SUCCESS."

DR. BRIJ MAINI

UNIVERSITY OF CALGARY

THE OUTCOME IS NOT YOURS TO CONTROL, SO FOCUS ON DOING THE BEST YOU CAN.

Dr. Brij Maini is well known as a researcher who took experimental work in oil sands technology to uncharted territory by designing novel equipment that could withstand harsh conditions of high temperatures and pressures.

The University of Calgary professor says that for Alberta, where conventional oil fields are running low, the future lies in bitumen and heavy oil. At the same time, pressure from environmental groups is upping the bar for environmental protection while extracting the resource.

DR. RANDY MIKULA

KALIUM RESEARCH INC.

RESPONSIBLE DEVELOPMENT OF OIL SANDS RESOURCES.

Dr. Randy Mikula's collaborations with industry have helped move early-day laboratory concepts to commercialization, saving oil sands companies millions of dollars and helping improve environmental performance.

Among Dr. Mikula's greatest rewards are his outreach programs that he brings to the general public and school children. He explains the environmental challenges facing the industry and the industry response to those challenges; and he talks about the technological progress made in oil sands extraction methods.

OUTSTANDING ACHIEVEMENT IN ENVIRONMENTAL TECHNOLOGY AND INNOVATION

SPONSORED BY AGRIUM INC.

CLEARFLOW ENVIRO SYSTEMS GROUP INC.

DEDICATED TO MAKING THE RIGHT CHOICES FOR CHANGE.

Led by Mr. Jerry Hanna, a small Alberta technology company is making waves in the water management industry locally, nationally and internationally.

Since its inception in 2005 Clearflow Systems Group has developed and distributed technology that rapidly and safely separates solids from the water column, pulling pollutants, metals and toxic material from water. The finished product isn't potable, but its environmental impact is dramatically reduced.

“WE ARE TRANSFORMING THE WAY PEOPLE MANAGE THEIR WASTE IN THE FUTURE AND WE ARE ALSO TRANSFORMING THE TRANSPORTATION INDUSTRY BY MAKING CLEANER FUEL.”

OUTSTANDING ACHIEVEMENT IN
ENVIRONMENTAL TECHNOLOGY AND INNOVATION
SPONSORED BY AGRIUM INC.

ENERKEM ALBERTA BIOFUELS

WASTE BECOMES FUEL.

THE WORLD BECOMES CLEANER.

With its proprietary thermochemical technology, Enerkem Inc. is transforming non recyclable waste that would otherwise go to landfill into second-generation biofuels and green chemicals.

The Enerkem Alberta Biofuels facility in Edmonton will begin operations in the autumn of 2013. It is the first collaboration between a waste-to-biofuels producer and a metropolitan centre to address its waste disposal challenge. Edmonton is the world’s leader in waste management, diverting 60 per cent of its waste. It has a goal of increasing that to 90 per cent.

INNOVATION IN AGRICULTURAL SCIENCE
SPONSORED BY DOW AGROSCIENCES CANADA INC.

FARMERS EDGE

GROW. MORE. PRECISELY.

Farmers Edge utilizes the convergence of technology and agronomy to improve agricultural production and farm profitability.

Precision Edge platform hosts in-season and historic satellite remote-sensed imagery for analysis to identify and map field variability of agricultural land. GPS-equipped farms gather tremendous amounts of field-centric data and Farmers Edge's introduction of Advanced Geospatial Yield Analysis enables the company to accurately measure and validate the yield data as it relates to field variability and the crop responses to crop inputs.

“I TAKE SATISFACTION FROM CREATING SOMETHING SCIENTIFICALLY THAT INCREASES EFFICIENCIES AND HELPS SOCIETY BECOME MORE PROSPEROUS.”

INNOVATION IN AGRICULTURAL SCIENCE

SPONSORED BY DOW AGROSCIENCES CANADA INC.

DR. IGOR KOVALCHUK

UNIVERSITY OF LETHBRIDGE

IMAGINATION IS GREATER THAN DETAILS.

– ALBERT EINSTEIN

Dr. Igor Kovalchuk is considered to be a visionary in the world of agricultural biotechnology. He is internationally renowned for his expertise in plant epigenetics, plant genome stability and plant agrobiotechnology.

Through his company Plantbiosis, Dr. Kovalchuk developed new varieties of transgenic plants that monitor the environment for pollutants in water and soil. These biomonitors will be an early warning system for potential environmental pollution and prevent exposure to possible bacterial contamination.

DR. DEAN SPANER

UNIVERSITY OF ALBERTA

LEAVE THE WORLD A BETTER PLACE THAN HOW YOU FOUND IT.

This year Dr. Dean Spaner registered two separate varieties of wheat – the first lines developed in Alberta and approved for release since 1997.

Dr. Spaner leads a pioneering research program to develop strategies for organic wheat production on the Canadian prairies. The program lays the groundwork for future research into organic grain production. He has also has trained dozens of graduate students who have gone on to make important contributions to plant breeding and agricultural research.

INNOVATION IN INFORMATION AND COMMUNICATIONS TECHNOLOGY

SPONSORED BY TELUS

DR. SHEELAGH CARPENDALE

UNIVERSITY OF CALGARY

MORE VISIBLE.
MORE EXPLICIT.
MORE ACCESSIBLE.

Dr. Sheelagh Carpendale is an internationally renowned researcher whose work draws upon her combined backgrounds in fine arts, design and computer science, benefiting from the rich cross-fertilization of ideas amongst these fields.

Her approach – combining information visualization, visual analytics and human-computer interaction with innovative interaction techniques – embeds people's work and social practices in technology to aid information work and promote collaboration.

INNOVATION IN INFORMATION AND COMMUNICATIONS TECHNOLOGY

SPONSORED BY TELUS

ICONNECTIVITY

INNOVATIVE INTERFACES.

Led by Mr. Michael Loh, iConnectivity™’s products have revolutionized digital music management for musicians by creating hardware that allows them to add mobile devices and computers to their toolset.

iConnectivity is an early entrant in the music device space with the first Apple-certified, CoreMIDI-compliant product in the market. It allows multiple connections of MIDI instruments and iOS devices at the same time and allows the iOS device to be used as an instrument or a recording device. That gives musicians access to all of their music in one or many places.

SOCIETAL IMPACT AWARD

WARD OF THE 21ST CENTURY

INTERDISCIPLINARY PARTNERSHIPS TO IMPROVE HEALTHCARE.

Dr. John Conly established W21C (Ward of the 21 Century) due to the urgent need for innovation in health care.

W21C functions as a ‘living laboratory’ at the Foothills Medical Centre. It is a research and beta test-site for hospital design, novel approaches to health care delivery, human factors research and innovative medical technologies. It includes industry partners, physicians and other health care providers in addition to specialists from sociology, computer science, business, engineering and anthropology, among others.

AURORAWATCH

LOOKING TO SPACE FOR THE FUTURE.

Through AuroraWatch (www.aurorawatch.ca) – created with the assistance of graduate students and researchers in his team – Dr. Ian Mann is bringing the excitement about the beauty of the Northern Lights and the novelty of space exploration, to the general public.

Using real-time satellite data and automated monitoring algorithms, AuroraWatch presents real-time aurora-watch forecasts on the web and continually monitors the space weather activity – issuing 'aurora-watch alerts' based on the likelihood of observing aurora that night.

SOUTHERN ALBERTA TECHNOLOGY COUNCIL HOSTS

CANADA-WIDE SCIENCE FAIR 2013

FOSTERING THE NEXT GENERATION OF SCIENTISTS.

When the Southern Alberta Technology Council (SATC) received a last-minute request to host the Canada-Wide Science Fair (CWSF) 2013, the passionate can-do organization took on the challenge. CWSF is considered the championship round of the national science fair program, where finalists from grades 7 to 12 are selected from regional science fairs across the country to compete for national honours.

Four hundred science fair projects in Canada were on display. Approximately 2,400 students from schools in Southern Alberta visited the University of Lethbridge.

> “WE BELIEVE THAT MANY MAY STRONGLY CONSIDER CHOOSING LETHBRIDGE AS A DESTINATION FOR POST-SECONDARY SCIENCE EDUCATION AND POSSIBLE CAREERS IN SCIENCE AND TECHNOLOGY IN THE PROVINCE.”

LEADERS OF TOMORROW

SPONSORED BY ALBERTA ENTERPRISE AND ADVANCED EDUCATION

MR. MATTHEW BENESCH

UNIVERSITY OF ALBERTA

ALWAYS FORWARD, NEVER BACKWARD.

Mr. Matthew Benesch is an ambitious academic who is driven to accomplish something no one has done before him. His PhD and an MD from the University of Alberta will help set him up in a thinly populated field. His goal is to be a surgical oncologist. He wants to use his patients' tumour samples to identify biomarkers – biological indicators that identify cancers – to help inform decisions about treatment and progression of disease.

Mr. Benesch's understanding of the challenges facing rural students helped the U of A MD Rural Ambassadors connect to every rural high school by video conferencing, reaching 5,000 students.

LEADERS OF TOMORROW

SPONSORED BY ALBERTA ENTERPRISE AND ADVANCED EDUCATION

MS. MEGAN ENGEL

UNIVERSITY OF ALBERTA

SEEK AND YE SHALL FIND.

– MATTHEW 7.7

Throughout her 23 years, Ms. Megan Engel has been guided by her Christian faith and its basic tenet to love and serve others. She will begin her PhD at Oxford in the fall. There she will continue to work on the frontiers of nanotechnology studying photosynthesis.

Ms. Engel is committed to interdisciplinary study in science and in her life. She is equally dedicated to art and philosophy as to science, and sees them as inextricably intertwined to live a rich and fulfilling life experience.

OUTSTANDING CONTRIBUTION TO THE
ALBERTA SCIENCE AND TECHNOLOGY COMMUNITY

DR. ROBERT J. FESSENDEN

RETIRED, GOVERNMENT OF ALBERTA

SIMPLICITY ON THE OTHER SIDE OF COMPLEXITY.

Dr. Robert J. Fessenden’s 45-year career in science has helped shape the innovation landscape of Alberta and Canada. His life’s work is built on cornerstones of teamwork, collaboration, leadership and dedication.

Among his numerous accomplishments, his leadership for the development in 1998 of Alberta’s ICT Strategy laid the groundwork for the creation in 1999 of the Ministry of Innovation and Science and the subsequent development of SuperNet and iCORE.

OUTSTANDING CONTRIBUTION TO THE ALBERTA SCIENCE AND TECHNOLOGY COMMUNITY

DR. GREGORY TAYLOR

UNIVERSITY OF ALBERTA

SEE THE FUTURE AND BUILD IT.

Dr. Gregory Taylor led the University of Alberta's Faculty of Science for a decade. During that time he distinguished himself by promoting interdisciplinary teaching and research in the faculty and the construction of the Centennial Centre for Interdisciplinary Science (CCIS), one of the top interdisciplinary academic science facilities in Canada.

CCIS is a gold-standard teaching and research facility that provides 2,200 new lecture theatre seats, 648 lab seats and 230 computing lab seats, and research space for 100 faculty and their staff. This investment means that the Faculty of Science at the University of Alberta is now able to attract the best and the brightest for research and study.

DISTINGUISHED PATRONS

Agrium

Agrium is a leading agricultural retailer in the Americas and, a global producer and marketer of agricultural nutrients and industrial products. Agrium produces and markets three primary groups of nutrients: nitrogen, phosphate and potash as well as controlled release and micronutrient fertilizers. Agrium is proud to note that ESN, their premiere controlled release product, was created here in Alberta. Agrium's strategy is to grow internationally through incremental expansions, acquisitions and, through the development and commercialization new products and services.

As an industry leader in agricultural products and services, Agrium is a strong participant in research and innovation.

Alberta Innovates

Alberta Innovates is Alberta's aligned research and innovation system consisting of the Alberta Research and Innovation Authority and four publicly funded corporations: Alberta Innovates – Bio Solutions; Alberta Innovates – Energy and Environment Solutions; Alberta Innovates – Health Solutions and Alberta Innovates – Technology Futures. These five new dynamic agencies focus on taking outstanding research and ideas to the next level by creating products, services and processes that will address challenges faced by Albertans and people around the world.

Alberta Innovates salutes the scientists, researchers and innovators of Alberta who are making our province the place to invent, invest, collaborate, research and turn ideas into solutions for a better life.

ALMA
Alberta Livestock and Meat Agency Ltd.

The Alberta Livestock and Meat Agency (ALMA) is a provincial government agency established to help advance the Alberta Livestock and Meat Strategy – a roadmap designed to drive positive change within Alberta's livestock and meat industry.

ALMA's vision is to "be a catalyst in the development of a profitable and internationally competitive Alberta livestock and meat industry." As a catalyst, ALMA provides ideas, information and investment opportunities to the industry and the Government of Alberta. The agency develops policy that drives ALMA investment, directs ALMA strategies and influences public policy related to regulations, legislation, programs, and issues of importance to the livestock and meat sectors. As well, ALMA identifies solutions and engages the industry to foster collaboration and alignment between industry and government priorities.

Bennett Jones LLP

Bennett Jones is recognized by the LEXPERT®/American Lawyer's Guide to the Leading 500 Lawyers in Canada as the leading law firm in Alberta in the field of intellectual property law and has the leading lawyers in Alberta in the fields of intellectual property law, biotechnology law, IT law and technology transactions. Our lawyers continue to be recognized as market leaders by distinguished international legal directories, such as LEXPERT®/American Lawyer's Guide to the Leading 500 Lawyers in Canada, Chambers and Partners and the LEXPERT-Thomson US Guide to Canada's 100 Most Creative Lawyers and Woodward White's The Best Lawyers in Canada.

bio alberta
Association for Life Sciences Industry

Bio Alberta is the central voice and the organizing hub for life sciences in Alberta. We are a private, not-for-profit industry association with activities focused on the following areas: Advocacy; Industry Promotion and Marketing; Increasing access to human resources; Business development and networking opportunities. Alberta's life science industry is a broad field of endeavours encompassing biotechnology, environmental science, medical technology, industrial bioproducts, agriculture biotechnology, bioinformatics, and natural health products.

BioAlberta is a proud patron of ASTech because the organization recognizes creators, innovators, and builders of Alberta's future.

Canadian Breast Cancer Foundation
PRAIRIES • NWT

The Canadian Breast Cancer Foundation is Canada's leading community-driven breast cancer charity dedicated to funding relevant and innovative research; and supporting and advocating for the breast cancer community.

DOW Dow AgroSciences

Dow AgroSciences Canada is a research-based, agricultural sciences company with a diverse product portfolio including weed, insect, and disease management for crops, range and pasture, forestry and industrial vegetation management. The company also has significant investments in plant genetics and biotechnology platforms in canola and corn which focus on a range of input production traits and value-added quality traits. Established field research capabilities across Western and Eastern Canada include a canola breeding station and global trait research facility in Saskatoon, Saskatchewan, and a corn breeding station at St. Mary's Ontario. Significant research and commercial development alliances in Canada include the National Research Council's Plan Biotechnology Institute in Saskatoon, and Agriculture and Agri-Food Canada.

Dow AgroSciences Canada Inc. is an affiliate of Dow AgroSciences LLC, a $3.4-billion global company based in Indianapolis, Indiana. Dow AgroSciences LLC is a wholly owned subsidiary of The Dow Chemical Company. For more information visit www.dowagro.ca.

Dow AgroSciences looks at participation with ASTech as a key investment in the well-being of our community. Society is an enormous beneficiary of the outputs of science and technology, but often, these benefits are just taken for granted. ASTech inspires us to sit up and take notice, and afford us the opportunity to celebrate some of the astounding efforts and results that the technologists and scientists of our region are realizing every day.

FOUNDATION CMG

CMG Reservoir Simulation Foundation (Foundation CMG) supports professors' and students' leading edge research in computer simulation and modelling flow of liquids and gases and bio-chemical reactions in the earth. Improving technology and reducing negative impacts: CO_2 sequestration, oil and gas production, in-situ recovery and other processes with advanced 4D dynamic visualization. Exciting opportunities for engineers and scientists exploring CO_2, oil and gas recovery, coalbed methane, in-situ oilsands, environment remediation and other technologies. Foundation CMG is an industry endowed not-for-profit organization and sponsors researchers and students in universities in Alberta and around the world.

Foundation CMG: Investing in ASTech to celebrate excellence, inspire research teams and expand awareness.

Alberta Government

The Government of Alberta works collaboratively to achieve its vision of an innovative and prosperous province where Albertans enjoy a high quality of life built on a healthy environment, a competitive economy and vibrant communities. To this end, the government is committed to making Alberta the most competitive jurisdiction in North America. Our ongoing support for science and technology will help Alberta maintain a leadership role in the global economy, and attract and develop world class researchers, learners, leaders and innovators. Through support for our world class post secondary education system, Campus Alberta, and the world class research and innovation efforts, we will transform our economy. Our people are natually entrepreneurial, and out great Alberta spirit will do the rest.

The Alberta government proudly celebrates outstanding achievement within Alberta's science and technology community and supports the role of science and technology in our next generation economy.

NAIT is one of Canada's leading polytechnics, providing hands-on, technical education under four programmatic pillars: business; trades; health; and science, technology and the environment. The institute offers 140 programs leading to degrees, applied degrees, diplomas, certificates and trades certification. Programs are employer driven to meet the current and emerging needs of Alberta for highly skilled workers in areas that support economic development, productivity and growth. More than 90 percent of our full-time graduates find meaningful employment within months of graduation.

NAIT partners with industry in applied research that facilitates innovation, encompasses business incubation and advances commercialization of new technologies and products.

Established in 1962, NAIT has more than 179,000 alumni and has provided Corporate and International Training in dozens of countries.

Syncrude
Securing Canada's Energy Future

For more than 30 years, Syncrude has been responsibly producing crude oil from the oil sands of Alberta. And for 45 years, research and development have played a large role in shaping the company's success; it now produces enough crude oil to meet 15% of Canada's needs, is a major contributor to Alberta's economy, and is poised for further growth that is executed in a sustainable way. Syncrude operates the oil sands industry's only dedicated research and development centre, and, in the last five years alone, has spent more than $200 million to find new or improved ways to operate and reduce its impact on the environment. As well, Syncrude collaborates with many universities and research institutes, and is a founding member of the Canadian Oil Sands Network for Research and Development.

SAIT POLYTECHNIC

SAIT's record-setting graduate employment rate of 97 per cent this year is a result of the polytechnic's relationships with employers.

Faculty work with more than 150 external organizations and benefit from the guidance of 1,000 industry professionals on advisory committees.

The polytechnic's seven Centres of Technology, many unique in Canada, were designed and built in association with employers.

SAIT's Applied Research and Innovation Services is industry's point of contact for institutional expertise and resources for innovative projects – projects that enable the advancement and adoption of technology in industry.

SAIT Polytechnic excels in delivering relevant, skill-oriented education to more than 76,000 registrants annually. SAIT offers four applied degrees, 62 diploma and certificate programs, 33 apprenticeship trades and 2,000 continuing education and customized business and industry courses.

TELUS

TELUS Corporation is the largest telecommunications company in Western Canada and the second largest in the country. We provide a wide range of wireline and wireless telecommunications products and services including data, Internet Protocol (IP), voice, video and entertainment services.

Our strategy is to unleash the power of the Internet to deliver the best solutions to Canadians at home, in the workplace and on the move.

We've recently undergone a remarkable transformation. In just seven short years, we've nearly tripled our enterprise value to $27 billion (Cdn) making TELUS one of the world's best performing telecoms.

TRTech

TRTech is Canada's largest and most industry-invested information and communications technology (ICT) R&D consortium. TRTech fast tracks innovation to market by working with its industry partners to discover, develop and commercialize technology. TRTech is also working closely with universities and colleges to transform its traditional R&D agenda toward a market driven commercialization process starting with a market need and including business and technology assessments, applied research, proof of concept, prototyping and technology transfer. TRTech allows students and graduates from all ICT related disciplines to work with local and global industry players who are interested in innovation. Applied Research, Development and Commercialization activity focuses on three themes: Digital Media; eHealth; and Strategic Sectors. TRTech also pursues more creative innovation vehicles, which has resulted in Javelin – a Tech Comm and Entrepreneurship program that combines market driven technology ideas, talented recent graduates, and industry mentors to create technology companies.

UNIVERSITY OF ALBERTA

The University of Alberta is the largest research institution in the province serving nearly 37,000 students in more than 200 undergraduate programs and 170 graduate programs. As one of Canada's top universities for external funding, it received approximately $490 million in sponsored research in 2007-08. The University's international reputation continues to grow with its leading-edge achievements such as "Edmonton Protocol" treatment for Type 1 diabetes; the pioneering work of the National Institute for Nanotechnology; and the world's first antiviral treatment for hepatitis B. Since 1994, University researchers have reported more than 1,260 inventions, received 393 patents, generated more than $33 million in licensing and royalties revenue. The University (through TEC Edmonton) currently has 71 active spin-off companies. Our students learn from some of the brightest scholars in the country and the best teachers; the University of Alberta leads the country in the number of 3M Teaching Fellowships – Canada's top award for undergraduate university teaching excellence. In 2007, twelve University of Alberta professors were named as Fellows of the Royal Society of Canada, which is the highest national academic honour for scholars, artists and scientists.

UNIVERSITY OF CALGARY

The University of Calgary reflects the community that created and supports it – dynamic, innovative and energetic. As one of Canada's leading research universities, these qualities are at the heart of all we do. The U of C has significantly increased its research funding to $252.5 million, which ranks seventh in Canada, and is continuing to move ahead.

University of Lethbridge
FIAT LUX

A leader in research, the University of Lethbridge is a place where world-renowned researchers collaborate amongst the disciplines to address issues of global concern and to provide applicable solutions. For example, in 2005, the United Nations (UN) named the University of Lethbridge the Canadian centre for its Water for Life decade (2005 to 2015) in recognition of the leadership role the institution has taken in water research. The University is also home to the Canadian Centre for Behavioural Neuroscience – a world-class facility where Canada's leading behavioural neuroscience group sheds new light on the brain and behaviour.

Western Economic Diversification Canada | Diversification de l'économie de l'Ouest Canada
Canada

Western Economic Diversification Canada (WD) invested more than $17-million towards 11 innovation projects across the West in 2012-13. This leveraged additional funding of more than $41-million from a variety of partners, including other federal departments and agencies, provincial and municipal governments, universities, research institutes, industry and not-for-profit organizations.

PAST WINNERS

OUTSTANDING LEADERSHIP IN ALBERTA SCIENCE

1991 Dr. Leroy Cogger
1992 Dr. Leonard T. Bruton
1993 Dr. Benno Nigg
1993 Dr. D.L.J. Tyrrell
1994 Dr. Jerry H. Wang
1995 Dr. Robert S. Hodges
1996 Dr. Robert V. Moody
1997 Dr. Timothy R. Mosmann
1998 Dr. Richard E. Peter
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2001 Dr. Terry Allen
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2006 Alberta Ingenuity Centre for Machine Learning (AICML)
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2008 Jacob H. Masliyah
2009 Dr. Linda Pilarski
2010 Dr. Robert Edward Burrell
2011 Dr. Naser El-Sheimy
2012 Dr. Zhangxing (John) Chen

OUTSTANDING LEADERSHIP IN ALBERTA SCIENCE AND TECHNOLOGY

1990 Dr. Ronald G. Micetich

OUTSTANDING ACHIEVEMENT IN APPLIED TECHNOLOGY AND INNOVATION

2002 Saskatchewan Research Council - Pipe Flow Technology Centre
2003 Dr. Miodrag Belosevic
2004 Light Up The World Foundation
2005 IMUS Research Team
2007 Conematic Heating Systems Inc.
2008 DIRTT Environmental Solutions
2009 Airdar Inc.
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2011 Mobile Office Initiative - ASRD
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2012 Innovative Trauma Care Inc.

ASTECH INDUSTRIAL RESEARCH PRIZE

NORTHERN ALBERTA

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1999 Biotools Inc.
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2002 BigBangwidth Inc.
2003 Acrodex Inc.
2004 Virexx Medical Corp.

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1991 ITRES Research Limited
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1998 Canzyme Corporation
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2000 Mentor Engineering
2001 Alterna Technologies Group Inc.
2002 SemBioSys Genetics Inc.
2003 Spartek Systems Inc.
2004 Canadian Bio-Systems Inc.
2005 XSENSOR Technology Corporation
2006 Quadrise Canada Fuel Systems

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UNDER $25M/YEAR

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1992 Westronics Inc.
1993 Valmet Automation (Canada) Ltd.
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1995 Merak Projects Ltd.
1996 Revolve Technologies
1997 SMART Technologies Inc.
1998 Wi-LAN Inc.
1999 EyeWire Inc.
2000 Matrikon
2001 BioWare Corp.
2002 Micalyne Inc.
2003 Upside Software Inc.
2004 Ceapro Inc.
2005 CV Technologies Inc.
2006 Replicon Inc.
2007 Extreme Engineering
2009 Gushor Inc.

OVER $25M/YEAR

1992 Sherritt Gordon Limited, Metals and Coinage Products Marketing
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1994 IDACOM Telecom Division
1995 NOWSCO Well Service Ltd.
1996 Tesco Corporation
1997 PanCanadian Petroleum Ltd.
1998 Syncrude Canada Ltd.
1999 QC Data International Inc.
2001 CSI Wireless Inc.
2002 SMART Technologies Inc.
2003 NOVA Chemicals Corporation
2004 NOVA Chemicals Corporation
2005 NovAtel Inc.
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2009 Computer Modelling Group Ltd.

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SOCIETAL IMPACT

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2006 Alvin Gerald Libin
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2008 Institute for Reconstructive Sciences in Medicine (iRSM)

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1997 Dr. Murray R. Gray
1998 Dr. Don Scott
1999 Waldemar Maciejewski
2000 Dr. Jan Czarnecki
2001 Dr. Donald Sheeran
2002 Dr. Keng H. Chung
2003 Paraffinic Froth Treatment Technology Commercialization Team
2004 Dr. Hassan Hamza
2005 Rodney Ridley and Patrick Dougan
2006 The In Situ Combustion Research Team
2007 AACI Research Team, ARC
2008 Dr. Hong Zhang
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2010 Dr. P.V. Jampana and Dr. S.L. Shah
2011 Dr. Wayne Brown
2012 Dr. Sean Sanders

INNOVATION IN AGRICULTURAL SCIENCE

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2000 Dr. Prem Kharbanda
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2002 Dr. Allen Good
2003 Dr. John O'Donovan
2004 Cold Regions Geoenvironmental Research Facility
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2006 Dr. George Clayton
2007 Dr. Maurice Moloney
2008 Dr. Ronald Howard
2009 Dr. Michael E. Stiles and Dr. Lynn M. McMullen
2010 Dr. Lloyd Dosdall
2011 Dr. David C. Bressler
2012 GrowSafe Systems Ltd.

OUTSTANDING ACHIEVEMENT IN ENVIRONMENTAL TECHNOLOGY AND INNOVATION

2008 Patrick Hettiaratchi
2009 Embedia Technologies
2010 Tailings Reduction Operations Team, Suncor
2011 Sustainable Energy Technologies Inc.
2012 Scat Dogs Sniff-out New Answers for Environmental Performance in the Oil Sands

INNOVATION IN INFORMATION AND COMMUNICATIONS TECHNOLOGY

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2009 SMART Technologies ULC
2010 Poynt Corporation
2011 Userful Corporation
2012 Hatsize Learning Corporation

INTEGRATED LANDSCAPE MANAGEMENT

2001 Dr. Stan Boutin
2002 Dr. Brad Stelfox
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EXCELLENCE IN SCIENCE AND TECHNOLOGY JOURNALISM: GENERAL PUBLIC

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2004 Ed Struzik
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EXCELLENCE IN SCIENCE AND TECHNOLOGY JOURNALISM: SPECIALIZED PUBLICATIONS

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1994 Ms.Lois Hammond
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2001 Tony Kryzanowksi
2005 Nickle's New Technology Magazine, Editorial Team

EXCELLENCE IN SCIENCE AND TECHNOLOGY PUBLIC AWARENESS

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1996 WISEST
1997 Discover 'E' Science Camps
1998 Alberta Women's Science Network
1999 Dinosaur Country Science Camp
2000 Edmonton Space & Science Centre
2001 Operation Minerva
2002 Pi in the Sky
2003 U of A (FGSR) Outreach Program
2004 Biotechnology Training Centre Outreach
2005 Shad Valley
2006 Kananaskis Field Stations and G-8 Legacy Chair in Wildlife Ecology
2007 The Alta Project, Dr. James Pinfold, U of A
2008 The Rothney Astrophysical Observatory
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2010 John Acorn
2011 Dr. Mary Anne Moser
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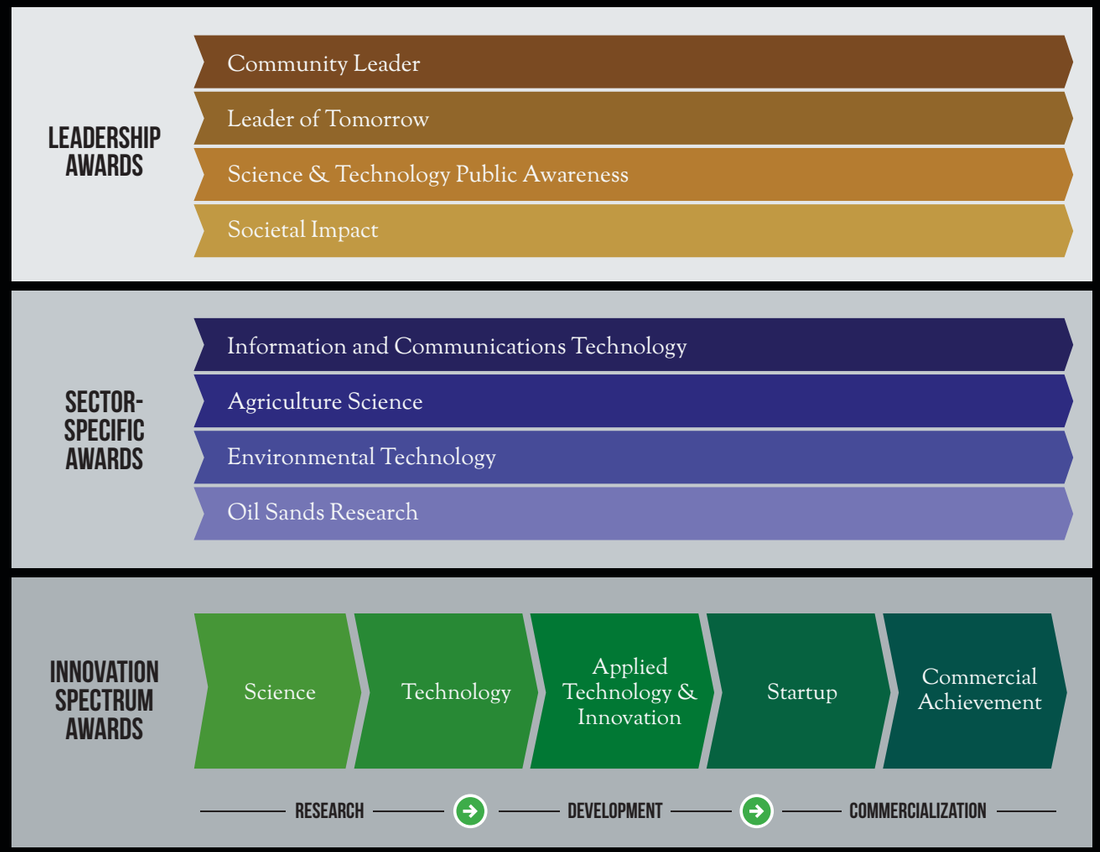

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