

Strategy **2013-2018** 







# **Table of Contents**

|  | The Case for Change –<br>Ensuring a Prosperous Future for Canada      | 2  |
|--|---|----|
| entoniesen  | NRC – Canada's National Research<br>and Technology Organization (RTO) | 4  |
|  | Our Strategy at a Glance  | 6  |
| 111611   | An Organizational Structure that Paves the Way for Success            | 8  |
|  | Investing for Results   | 11 |
| JAPAN STATE OF THE | Putting Clients First   | 12 |
|  | Enabling Employee Excellence  | 14 |
|  | Underpinning Support Services   | 15 |
|  | What Success Looks Like –<br>Keeping our Eyes on the Future           | 16 |

# The Case for Change – Ensuring a Prosperous Future for Canada



### **Global Context**

We are living in an unprecedented period of global transformation, bringing about economic and social changes that will radically reshape our communities, our livelihoods and our lifestyles. Over the next 20 years, we will see the rise of a new world economic order, with countries once classified as "developing nations" poised to ascend to the top of the global economic hierarchy. We are seeing the effects of dramatic demographic shifts, particularly in emerging nations, with an exploding middle class and the largest urban migration in history. Advances in technology are enabling people and communities to be more interconnected than ever before, leading to a proliferation of new ideas, products and services. The next half century will provide significant opportunities for countries to demonstrate global leadership in this rapidly changing world.

#### The Canadian Situation

Against the backdrop of this global transformation, one of the greatest challenges facing Canada is the ability to maintain our enviable standard of living and quality of life. Studies, statistics and reports all point to the expectation that our relative economic standing will fall over the coming decades. This is due, in part, to steady declines in our global competitiveness, coupled with productivity growth rates lagging those of competitor nations.

Strengthening our global competitiveness requires Canadian industries to be productive, profitable and on a sustainable growth path. Innovation – the conversion of ideas and knowledge into commercially successful products and services – is a universally agreed-upon driver of increased productivity. Effective innovation is what will keep our country globally competitive.

# The Research and Technology Organization (RTO) Solution

The federal science and technology (S&T) Strategy, *Mobilizing Science & Technology to Canada's Advantage*, reinforces that overcoming Canada's innovation hurdles will require an integrated approach and coordinated efforts across the country from governments, private industry, not-for-profits and academia. Specifically, addressing the identified gaps and weaknesses in the Canadian system demands:

- a holistic approach one that is national in scope and global in reach, transcending industrial sectors and research and development (R&D) disciplines;
- a steadfast focus on where innovation takes place – recognizing that the most successful products, profit-wise, are 79% driven by market-pull and only 21% driven by technology-push; and
- experts who can cross the cultural divide between business and science, identifying how business needs can be addressed with R&D based solutions.

Some of the world's most successful innovation-based economies with challenges similar to Canada's have employed critical intermediary research and technology organizations (RTOs) to help drive commercialization and increase business expenditures on R&D. They have proven successful in helping bridge the innovation gap between university-based discovery and industrial commercialization and are focused on delivering the knowledge, equipment, applied research and technical and commercialization services that industry needs to innovate and compete.

The outcomes are high quality jobs and increased national productivity. In this century that has been marked by economic uncertainty and upheaval, now, more than ever, Canada needs a strong national research and technology organization focused on innovation.



# NRC – Canada's National Research and Technology Organization (RTO)



As Canada's RTO, we have taken on the role of Canada's engine for industrial innovation, with a focus on translating research and technology into prosperity for the country. Our new business model provides the holistic approach, industry focus and expertise required to address the Canadian situation.

#### What are RTOs?

RTOs are mission-oriented providers of innovation services to clients, dedicated to building economic competitiveness and, in so doing, improving quality of life. RTOs have been established around the globe to help improve national productivity and competitiveness.

RTOs share several common characteristics. They:

- solve innovative and competitive problems for industry sectors;
- act as technology developers, adapters and transfer intermediaries;
- serve as state-of-the-art technology specialists, providing expertise where needed; and
- supply know-how and fashion multidisciplinary solutions fitted to the needs of various industries and trades in traditional and emerging sectors.

### Our Goal and Approach

Our goal as Canada's national RTO is to spur economic prosperity by delivering technology development programs and specialized national facilities and services, all with an eye to boosting industrial R&D. To realize this goal, we have retooled our approach to ensure:

- we understand the needs of industry and drivers for industry change;
- we have the structures and culture required to quickly assemble cross-functional teams in response to urgent industry challenges;
- we work towards clear, measureable goals and outcomes that are relevant to our clients;
- we plan and execute with client needs in mind, using a market-pull vs. technology push mentality in everything we do; and
- we hire, train and retain the absolute best people and expertise available.

# Our Vision, Mission and Values

#### Vision

To be the most effective research and technology organization in the world, stimulating sustainable domestic prosperity.

Success in attaining this vision will be measured by the extent to which we help contribute to a globally competitive Canadian economy.

#### Mission

Working with clients and partners, we provide innovation support, strategic research, scientific and technical services to develop and deploy solutions to meet Canada's current and future industrial and societal needs.

Through our array of offerings – strategic R&D, technical and advisory services, innovation support for small businesses (the Industrial Research Assistance Program, or IRAP) and scientific infrastructure – we will fill the gaps between early stage R&D and commercialization, developing and deploying solutions that help improve the innovation capacity of Canadian industry.

#### Values

**Impact:** We make a positive difference for our stakeholders.

Accountability: We are responsible for our work and our workplace.

**Leadership:** We value leadership, initiative and the application of best practices in our work.

**Integrity:** We engage fairly and openly to earn credibility and trust.

**Collaboration:** We actively collaborate to engage vital knowledge and expertise and to generate better, more efficient solutions.

We believe that values – and the corporate culture they create – are critically important to organizational success. Values are the foundation by

which we all work together and drive change. They should reflect how we see ourselves and make our commitments to NRC. These values have been integrated into everything we do at NRC, including our outstanding achievement awards and promotion criteria.

# Critical Issues Guiding our Strategic Direction

We recognize that a prosperous future for Canada cannot be achieved without addressing the broader global agenda. We have identified critical issues that are most likely to affect Canada and the world, regardless of how global events unfold. These critical issues are:

- sustainable economic development;
- sustainable natural resources;
- climate change;
- growing health care pressures;
- increasingly complex security challenges; and
- a changing sense of communities.

These critical issues are aligned with key priorities of the federal government, and are generally consistent with the critical issues identified by other organizations and countries. Identifying these issues and their potential implications will provide us with the broader and longer-term strategic context required to make decisions regarding where our resources should be directed and invested.

# Aligning our Services and Expertise with Client Needs

Broadly speaking, our world-class infrastructure, technical expertise and people can be slotted into one of four categories that work together to deliver our programs. These four "business lines" are:

- Strategic Research & Development
   Accelerates commercial develop-
  - Accelerates commercial development timelines in areas of national priority through collaborative research projects undertaken with partners.
- Technical and Advisory Services –
   Assists clients in solving immediate
   technical problems through the
   delivery of specialized fee-for-service
   support (e.g. testing and certifications,
   calibration, prototyping, demonstrations, scale-up and consulting).
- The Industrial Research Assistance Program (IRAP) – Helps Canadian small and medium-sized enterprises (SMEs) grow and succeed by delivering advisory services and financial support. IRAP also serves as an SME referral portal into our full suite of programs and services.
- Scientific Infrastructure Enables
   clients to effectively use some of
   Canada's most specialized, large-scale
   scientific infrastructure, ensuring that
   access is fair and based on merit.



| NRC<br>Business Lines      | Strategic R&D  | Technical and Advisory Services  |  |
|----------------------------|--|--|--|
| Objectives                 | Accelerate commercial development timelines in areas of national priority by engaging in collaborative research projects with partners   | Assist clients in solving immediate technical problems through the delivery of specialized services  |  |
| Strategic<br>Commitments   | We will work collaboratively across research portfolios to ensure partners have access to leading-edge scientific expertise.   | We will provide specialized fee-for-service equipment and platforms that meet immediate client needs (e.g. testing and certifications, calibration, prototyping, demonstrations, scale-up and consulting). |  |
|                            | We will deliver R&D programs that help partners develop technology solutions to national priorities (e.g. natural resources, climate change, health care, security, communities).  | We will ensure our service offerings remain focused on technology commercialization in areas of client and market demand.  |  |
|                            | We will manage large flagship R&D programs that employ<br>novel forms of cost-sharing partnerships and consortia to<br>reduce risk and time-to-market.   | We will ensure that staff and facilities achieve high levels of utilization, demonstrating client relevance and effective, cost-efficient management.  |  |
|                            | We will ensure ongoing market demand and relevance of our programs through the NRC Program Lifecycle process.  | We will increase our industry client base and revenues from industry clients.  |  |
|                            | We will ensure programs deliver impacts for Canada within three to 10 years.   | We will judge our success based on the success of our clients.   |  |
| What Success<br>Looks Like | <ul> <li>Significant industry interest and sharing in NRC program investment, risks and rewards</li> <li>New (company) jobs, sales, R&amp;D investments and commercialized technologies</li> </ul>   |  |  |
| What We<br>Won't Do        | <ul> <li>Pursue research that does not respond to market-pull or client need</li> <li>Invest in programs whose benefits will not remain in Canada</li> <li>Duplicate services already offered by other organizations (e.g. university, private sector)</li> <li>Continue to support programs that do not meet quality, performance or client expectations</li> </ul> |  |  |

| NRC<br>Business Lines      | The Industrial Research Assistance Program (IRAP)  | Scientific Infrastructure   |
|----------------------------|--|---|
| Objectives                 | Help Canadian small and medium-sized enterprises (SMEs) grow and succeed by delivering advisory services and financial support   | Enable clients to effectively use specialized, large-scale scientific infrastructure  |
| Strategic<br>Commitments   | We will deliver advisory services to Canadian SMEs.  | We will effectively manage some of Canada's most specialized, large-scale scientific infrastructure.  |
|                            | We will deliver financial support to Canadian SMEs.  | We will leverage our national perspective, international linkages and experience to efficiently and cost-effectively provide access to some of Canada's specialized, large-scale scientific infrastructure. |
|                            | We will provide SMEs with a single entry point (IRAP Concierge Service) to access government programs and other public resources to help them innovate.  | We will work with Canadian partners to develop and implement a Long Range Scientific Infrastructure framework to ensure Canadian users of NRC-managed facilities have fair and merit-based access.          |
|                            | We will help SMEs access research, technology and business development services at universities, colleges and other non-profit research institutions more quickly through IRAP credit notes.         |   |
|                            | We will act as an SME referral portal into NRC's full suite of programs and services.  |   |
| What Success<br>Looks Like | <ul><li> More competitive Canadian-based firms</li><li> Satisfied clients</li></ul>  | Canada's most deserving researchers able to access the<br>world's best facilities   |
| What We<br>Won't Do        | <ul> <li>Compromise the trust that we have built with SMEs</li> <li>Deviate from our merit-based approach to selecting projects</li> <li>Invest in projects that do not benefit Canadians</li> </ul> | Deviate from our merit-based approach for determining<br>access to NRC-managed scientific facilities  |

6 NRC Strategy 2013-2018 7



We have undertaken a significant organizational restructuring, streamlining multiple silos of research institutes into three integrated R&D divisions. Each division is guided by an advisory body composed of industry leaders. This new structure gives us the ability to quickly assemble cross-disciplinary teams around current industry needs and emerging new markets.

#### Safer Skies

Our Working and Travelling on Aircraft program provides technology, tools and solutions to help commercial aircraft operators and manufacturers make flying more comfortable, efficient and safe. We collaborate with industry partners to advance the design, fabrication and testing of innovative new aerospace products that maximize passenger comfort, optimize crew work environments and accelerate the development of new cabins, environmental controls and avionics.

#### **Our R&D Divisions**

Our three R&D divisions, led by Vice-Presidents, have been established with different risk/reward profiles:

# **Emerging Technologies**Objective

To understand, anticipate and build capacity to address emerging markets with technologies essential to Canada's future industrial and societal needs

#### **Life Sciences**

#### Objective

To apply technologies to market opportunities that create prosperity for Canada and quality of life

#### **Engineering**

#### Objective

To apply engineering solutions for industrial sector growth

#### **R&D Portfolios**

Under these three umbrella R&D divisions, we currently have 12 integrated and consolidated portfolios, mostly focused on key industry sectors. Our portfolios represent areas of strategic importance and economic value for Canada, where technology intensity is high and where our R&D capabilities could have a significant impact on industry's productivity and competitiveness. Portfolios can be considered semi-permanent in nature, likely changing only in response to major shifts in our strategy or the Canadian economy.

Our portfolios are led by General Managers (GMs) with strong industry and technology expertise and wide networks. A GM's management focus is to ensure portfolios remain strategically aligned, prioritize and optimize resource utilization and regularly review the performance and outcomes of programs and projects with respect to budgets, schedules, quality and milestones.

# NRC's Division and Portfolio Structure

# **Emerging Technologies**

#### **Portfolios**

- Information and Communications Technologies
- Measurement Science and Standards
- National Science Infrastructure
- Security and Disruptive Technologies

#### **Life Sciences**

#### **Portfolios**

- Aquatic and Crop Resource Development
- Human Health Therapeutics
- Medical Devices

#### **Engineering**

#### **Portfolios**

- Aerospace
- Automotive and Surface Transportation
- Construction
- Energy, Mining and Environment
- Ocean, Coastal and River Engineering

# High Performance Buildings

In partnership with the Canadian commercial building industry, our new High Performance Buildings program aims to transform the country's commercial and institutional building stock into high-performance, energyefficient structures. The goal is to develop and de-risk new technologies that will enable retrofitted buildings to reduce energy use without compromising the health, safety and comfort of occupants. Commercialization of these new technologies will enable Canadian companies to grow their business in the expanding international marketplace.

### Our R&D Programs

A variety of programs fall under each of our portfolios. Unlike portfolios, which are relatively enduring and focus on broad industry sectors, our programs are specialized efforts focused on addressing specific business-identified priorities and challenges. They are time-limited to ensure they achieve pre-identified outcomes.

This means that we will be constantly renewing and updating our R&D investments to remain in step with what matters most to Canadian industry. As an example, our new Foresight and Competitive and Market Intelligence Programs are already in place to identify both short-term, market and technical opportunities and long-term future prospects.

In order to be approved for implementation and investment, programs must be industry-driven and multi-disciplinary, with sufficient critical mass to address the technology needs of existing and emerging sectors. They are expected to deliver economically viable and near-market ready solutions to technical and productivity challenges affecting Canadian industry.

# Turning Carbon into Cash

Our new Algal Carbon
Conversion program will
use algae to turn Canada's
industrial CO<sub>2</sub> emissions into
new products, like animal
feed. Challenges include
developing technologies to
grow, harvest and process
algae cost-effectively and
building affordable photo
bioreactors. Our first demonstration-scale algal bio refinery
facility will be up and running
in 2014 and a full-scale plant
will be built by 2016.



### The NRC Program Lifecycle

To ensure all programs provide benefit to Canada, occupy unique positioning in the value chain and have timely deployment paths with targeted client and collaborator relevant outcomes, they must pass through increasingly more demanding stages of the NRC Program Lifecycle before they are approved for investment. Once approved, they are regularly monitored against plans including budgets, schedules, targets and milestones to ensure they contribute to moving Canada to a higher level of innovation performance and increased industry participation. Once completed, a formal mechanism for winding down programs and redeploying the resources is then implemented.

| Step 1  Concept and Value Proposition           | Demonstrates:  • A clear statement of a critical issue or challenge  • Alignment to our role and strategy  • Benefits/impacts for Canada  • Potential for collaboration and partnerships  • Risks and likelihood of success (feasibility)  |
|---|--|
| Step 2  Business Case                           | Provides:  • Market assessment  • Program design  • Program financials for five years (including both the estimated program cost and expected revenue)  • Business and technical risks  • Expected impacts and benefits to clients and Canada  • Exit strategy   |
| Step 3  Business Plan                           | Details:  Commercialization pathway  Program resources required  Program implementation timeline  Performance measurement  Program risk analysis, including a risk management strategy  Program governance and management  |
| Step 4 Implementation Plan                      | Confirms:  • Detailed planning and financial information  • Successful program and project delivery parameters  • Performance management expectations and processes  |
| Step 5  Execution and Reporting                 | <ul> <li>Includes:</li> <li>Work executed as a series of projects that include development and proof of concepts, analysis, test work and technology demonstration</li> <li>Monthly and quarterly reporting on programs and project performance and revenue generation activities</li> <li>Updated plans in response to technical progress and external market and industry factors</li> </ul> |
| Step 6  3-year Review (continuation or closure) | Assesses:  • Program's progress towards milestones, deliverables and performance targets  • Program effectiveness of resource and risk management  • The scientific and technical quality of the program  • A decision on continuation or project/program closure  |
| Step 7 Closure                                  | <ul><li>Presents:</li><li>Program/project final reports</li><li>A transition plan (deployment of resources to new programs)</li></ul>  |

# **Investing for Results**



Like other world-leading RTOs, we are investing strategically in competencies and technology platforms that enable our researchers to remain ahead of the curve in their areas of specialty. As Canada's national RTO, we are also constantly scanning for emerging disciplines for possible future investment, to ensure ongoing relevance and value to Canadian industry.

We have introduced an overarching investment framework that gives us the ability to steer discretionary funding towards R&D investments that have the most reasonable potential to deliver impacts for us, our clients and for Canada. Within this framework, investment targets have been established that take the differing risk and returns profile of our R&D divisions into consideration. This ensures that our investments are appropriately diversified across priority areas, and also recognizes the different times to market and differing levels of technical and business risk across R&D divisions.

### **Ensuring High Returns** on Investment (ROI) for Canada

We are committed to investing in areas only where there is reasonable potential to capture lasting benefit for Canada. As part of investment decisions, all programs are expected to demonstrate the capability to achieve certain target ROI. Economic ROI is measured as the ratio of expected economic benefits to expected costs of our programs.

- Benefits include all new and incrementally generated economic activity based on increased private sector sales or decreased operating costs attributable to new technologies and services provided by the program.
- The costs of our programs are based on carefully estimated expenditures.It is expected that our investment decisions will result in ROI for Canada in the range of 10 up to 20 times our divisional expenditures.





In recognition that stakeholders, particularly clients, are critical to our success as Canada's engine for industrial innovation, we have refined our approach to engaging with and managing relationships with these important external audiences.

# Ensuring a Consistent Client Experience

Client relationships are central to our business and management approach. To this end, we have developed the important role of Client Relationship Leader (CRL). These experienced industry professionals act as the primary interface with our clients and partners. The CRL team, led by Portfolio Business Advisors, work in unison with portfolio managers and clients to help drive our business and meet client needs. Portfolio Business Advisors also help leverage capabilities from across the organization to maximize value and opportunities for our industry clients.

This combined expertise supports our portfolios in navigating areas like intellectual property management, technical business analysis, contract management and client management.

Another key objective of this team is to better equip all employees with the skills, training and knowledge required to ensure a consistently superior client experience. By delivering more streamlined and valuable services to our clients, we will realize our goal of becoming increasingly more business and client focused as we grow.

# The Industrial Research Assistance Program (NRC-IRAP)

The NRC-IRAP program provides the technology advice, assistance and services that SMEs need to boost their innovation capacity. NRC-IRAP brings together a diverse network of organizations, services and programs to help Canadian SMEs develop and exploit technologies. Through expert technical and business advice, financial assistance, access to business information, contacts and national and international networks, the program provides customized solutions to some 10,000 Canadian SMEs annually.

In step with the demands of today's SMEs, clients will soon be able to access credit notes that will link them faster than ever before to sources of expertise they require to grow and succeed. In the near future, NRC-IRAP will also provide a concierge service to SMEs that helps clients quickly pinpoint the exact program or service they need.

To strengthen the overall NRC client experience, NRC-IRAP staff are also sharing their unique insights into the needs and demands of Canadian industry with their counterparts working in our strategic R&D programs. This transfer of practices, insights and wisdom is critical to ensuring that the NRC of the future remains focused on meeting client expectations.

### A Focus on Opening International Networks

As the Canadian market is relatively small, successful firms recognize that they must turn their sights to foreign markets in order to grow and compete. We are committed to helping Canadian firms access the foreign markets, technology, capital and talent that is critical to their business, via a recently implemented international framework. This framework includes tools such as membership in international networks like EUREKA, the largest industrial R&D network in the world. By negotiating Canada's entry into this prestigious network, NRC is already helping Canadian industry experience success in signing strategic deals and alliances with European firms.

## Managing Intellectual Property (IP) to Canada's Advantage

We manage our IP to drive socioeconomic benefits for Canada, and strive to extract maximum value from the IP that we develop and co-develop, ensuring that chosen IP protection and commercialization strategies support the current and future needs of Canada and NRC.

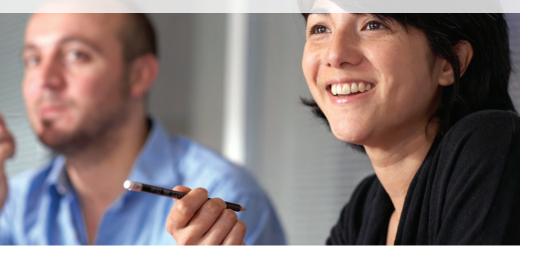
We engage with clients and stakeholders through various types of agreements such as: service agreements, consortium agreements, collaborative research agreements and license agreements. When it is in our best interest, we may agree to transfer or sell our patent rights.

Our IP policy reflects a number of principles that are consistent with our focus and mandate as Canada's national RTO. These principles are:

- Responsiveness: We are responsive in developing, protecting, managing and supporting the commercialization of technologies to maximize user benefits in accordance with the strategic interests of Canada, NRC and our clients.
- Accessibility: We work in cooperation with other organizations to efficiently provide benefits to Canada.

- Transparency: We develop and communicate IP management approaches and policies that are transparent, straightforward and clearly defined for people who work for NRC, our clients and collaborators.
- Timeliness: We support the timely transfer of technology created at NRC for use by our stakeholders.
- Respect: To the best of our ability, we respect Intellectual Property Rights, ensuring that our employees understand their obligations and responsibilities with respect to IP protection and use.
- Fairness: We ensure that our stakeholders are treated fairly and consistently; respecting rules, regulations and practices associated with the management and exploitation of Intellectual Property Rights.

# **Enabling Employee Excellence**



As Canada's largest R&D performing organization, with nearly 4,000 staff and many visiting researchers, we recognize that employees are at the core of NRC and hold the keys to our success. Their attachment to NRC, their behaviour in the workplace and their overall commitment and satisfaction are critical to our organizational brand, the level of service delivered to clients and, ultimately, our clients' satisfaction.

### **Planning for Success**

Commitment to Excellence (CTE) is our primary human resource management program for planning, enabling and recognizing superior performance. As the name implies, the key ingredients of the program are commitment and excellence. CTE is designed and delivered on the belief that NRC and its people are committed to the achievement of excellence and that the success of the organization depends on our individual contributions and how we enable the success of others.

CTE is also NRC's chief vehicle for determining individual accountabilities relative to strategic and business priorities, and is one of the most important avenues for bringing NRC's values to life. Through the establishment of clear

commitments, employees are able to identify and articulate their planned contributions to NRC. Furthermore, the program is delivered in a manner that recognizes that the success of NRC and its people is measured not only by what we do but how we do it. For this reason, the program places considerable emphasis on the incorporation and demonstration of NRC's values and other critical behaviours required to carry out our work.

# Hiring and Training the Best

To meet the constantly shifting priorities of our clients, we recognize that it is essential to hire and train 21<sup>st</sup> century knowledge workers who are not only technical experts, but who also have the behavioural characteristics required to succeed at NRC. This includes: a

proactive, agile and adaptable work style; a client focused mentality; and an ability to be forward looking and future thinking.

We will retain and grow our highly skilled team by being an employer of choice, offering the career development and training opportunities, mentorship, flexibility and mobility that the best and the brightest are looking for.

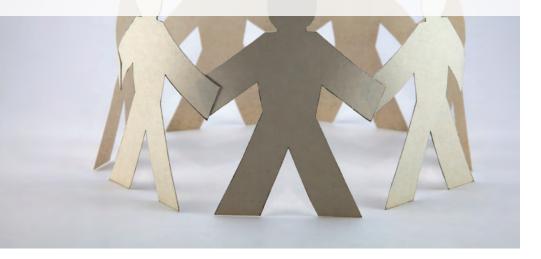
# Incenting and Rewarding Excellence

We are committed to recognizing the difference our employees make for our stakeholders and clients and in our workplace. The purpose of our Outstanding Achievement Awards Program is to:

- reward achievements and behaviours aligned with our values and strategic directions;
- recognize top performers and leaders from across the entire organization who serve as role models; and
- promote scientific and technological advances that benefit Canada and our clients.

The Outstanding Achievement Awards Program is aligned with our values and strategic directions and serves as a public mechanism for rewarding recipients' impacts on our stakeholders as well as their positive influence on our work environment.

# **Underpinning Support Services**



We have updated and transformed much of our foundational "behind the scenes" support services and internal processes to enable our employees to perform daily business in a more private sector-like way. These changes have given us the agility to reallocate resources as industry demand shifts and to interact with our business clients using the best practices they expect.

# **Business-Like** Financial Management

We have moved from a cash-based to an accrual-based financial and accounting system and updated our practices to give staff the tools to understand the true costs of doing business and provide managers with a mechanism to achieve program goals related to quality, cost and scheduling control. This new system will enable us to bring projects back in line with expected performance when needed. It will also enable us to accurately track costs and revenues of projects, contribution margins and total indirect costs on projects.

### **Cost-Effective Common Services**

We have consolidated common services staff and budgets into corporate groups to enable a cost-effective client service culture at NRC to thrive. Key corporate functions such as procurement, property management, finance, human resources, security services and communications have been revamped and reorganized to ensure they align with private sector best practices. A culture of continuous improvement will carry these services into future competitive advantage for NRC as a world-class RTO.

### A Centralized Capital Plan

A capital plan was developed to ensure that our physical assets can be sustainably well-managed and maintained. Metrics associated with all physical assets across the organization will be tracked to gauge whether Canada is getting value out of our facilities and whether operations are being run efficiently.

### **Consistent Policies** and Practices

To achieve a consistent client experience we have implemented uniform business policies and practices (e.g., pricing, intellectual property policies).



# What Success Looks Like – Keeping our Eyes on the Future



We will measure our impact based on our relevance to clients, ultimately our business clients. At a micro level, success measures will include tangible factors for businesses like: more patent licenses, greater sales and increased exports or presence in foreign markets. From a macro perspective, success will be measured by: increased Canadian productivity, economic growth and a higher standard of living. To maintain our relevance, we are investing in a foresight function to identify emerging trends and insights that will enable us to anticipate the future requirements of Canadian industry.

# **Monitoring Performance**

Identifying, tracking and measuring indicators of success at every level of the organization is critical to staying on course to meet our objectives. To this end, we have developed a performance measurement framework that will help us gauge our performance on four different priorities:

- the ultimate long term impacts we have on clients;
- how we stack up against other RTOs around the world;
- the progress we've made in achieving our goals; and
- how successfully we are managing the business at an operational level.

#### **Strategy Performance**

NRC Impacts for Clients & Canada: Enhanced Productivity, High Quality Jobs, Sales of Technologies, Increased Business Expenditures on R&D (BERD), Economic Growth & Sustainability, Improved Performance in Areas of National Priority

#### **Global RTO Comparisons:**

Revenues & Clients, Science & Collaboration, Culture, Efficiency

#### **Operational Performance**

# Quarterly Key Performance Indicators (KPIs)

Safety, Clients, Employees, Overhead Efficiency, Business Efficiency, Project Management To track progress against our strategy performance, assessments and studies take place every three to five years, aligned with the timing of our program reviews and portfolio evaluations. These studies will focus on client impacts and on economic return on investment.

To track progress against our operational performance, measures will be reported annually and six Key Performance Indicators will be monitored quarterly to identify whether NRC is on track to deliver on operational objectives in key areas: safety, clients, employees, efficiency and project management.

From a national perspective, we will recognize success when we see an increase in:

- Productivity a signal of globally competitive Canadian industrial sectors that can attract investment.
- High-quality jobs important for the standard of living of Canadians.

- Sales from commercialized technologies - evidence from the marketplace that the outputs being generated are valuable.
- Business enterprise expenditures on R&D in strategically important areas – an indicator of the growing willingness of our clients to invest in technology and innovation.
- Global participation and market share in targeted sectors – confirmation that Canada is a strong player on the world stage.

### **Foresight**

Foresight is the systematic exploration of the long-term future that takes into account known and unknown future factors, forces, trends and uncertainties with the view to taking specific actions today. At NRC, we use foresight to explore the global environment so that we can better understand the nature and pace of change, as well as identify potential risks, challenges and disruptions that may affect, or even alter, our priority areas. The process uses diverse tools including macro-level environmental scanning, trend analyses, forecasting, modeling and scenario-building to look 10 to 20 years into the future. Through consultations and scenario-building exercises, foresight at NRC enables us to improve our strategic, long-term decision-making ability and, as a result,

improves outcomes for our programs by providing advance warning of any uncertainties, challenges, threats and opportunities.

#### The End Game

In our world that is increasingly being marked by economic uncertainty and upheaval, agility, ingenuity and innovation will separate world leaders from laggards. If Canadian businesses are to stand shoulder to shoulder with the world's best and brightest, the responsibility for promoting a culture of innovation in Canada must be taken seriously. We are confident that our role as Canada's national RTO will result in sustainable growth of Canadian businesses, translating into jobs, prosperity and an enviable standard of living for all Canadians.





Telephone: 613-993-9101 Toll-free: 1-877-NRC-CNRC or

1-877-672-2672

TTY: 613-949-3042
Fax: 613-952-9907
Email: info@nrc-cnrc.gc.ca